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Withheld pursuant to/removed as

s.12 ; s.13

MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION

BRIEFING NOTE FOR INFORMATION

PREPARED FOR: Honourable Josie Osborne, Minister of Energy, Mines and Low Carbon Innovation

ISSUE: Pacific Northern Gas Pipeline

SUMMARY:

The natural gas pipeline that serves the northwest portion of the province requires significant maintenance work to maintain reliability and meet regulatory requirements. This work could result in upward pressure to rates paid by customers.

BACKGROUND:

Pacific Northern Gas Ltd. (PNG) owns and operates the Western Transmission Gas Line in northern British Columbia. Built in the 1960s, the line transports natural gas from Summit Lake near Prince George to Kitimat and Prince Rupert on the coast, providing service to approximately 42,000 commercial and residential customers in communities along the way (see Appendix 1). The Western Transmission Gas Line is a critical part of PNG's system, linking natural gas service from community to community. For more than a decade though, it has been transporting gas well below its capacity due to several large industrial customers closing their operations.

Recently, PNG signed agreements with new industrial customers. To meet service requirements, PNG commenced a Reactivate Capacity Project (ReCap) to restore portions of the system currently not in use, upgrade other components and add additional compression. The primary new customer for PNG would be Port Edward LNG. At the same time, PNG commenced a project that involves a range of maintenance work to ensure the integrity of the Western Transmission Gas Line called the Terrace to Salvus (T2S) project.

At the same time, the BC Oil and Gas Commission (OGC) undertook an extensive review of the Western Transmission Gas Line to ensure integrity and protection of the environment. The review identified that PNG's line needs significant work to meet regulatory requirements.

DISCUSSION:

Attached is an Issue Note from the OGC that details the work underway with PNG.

With the Western Transmission Gas Line operating well below capacity its residential and commercial customers have been having to shoulder higher per capita energy costs: customers served by PNG in the northwest of the province pay more than double per gigajoule of natural gas than customers in the Lower Mainland. As natural gas is the primary source of heat for many people in communities such as Terrace, Kitimat, and Prince Rupert these extra costs not

only put increased pressure on household budgets but also can impede economic development. Furthermore, natural gas supplied by PNG's pipeline also serves as the backup source to generate electricity for the northwest of the province if there were to be an issue with the single transmission line that connects these communities to the BC Hydro grid.

s.13; s.17; s.21

CONCLUSION:

PNG's Western Transmission Gas Line plays an integral role in supplying energy to communities from Summit Lake near Prince George to Kitimat and Prince Rupert. The pipeline requires significant maintenance work

s.13; s.17; s.21

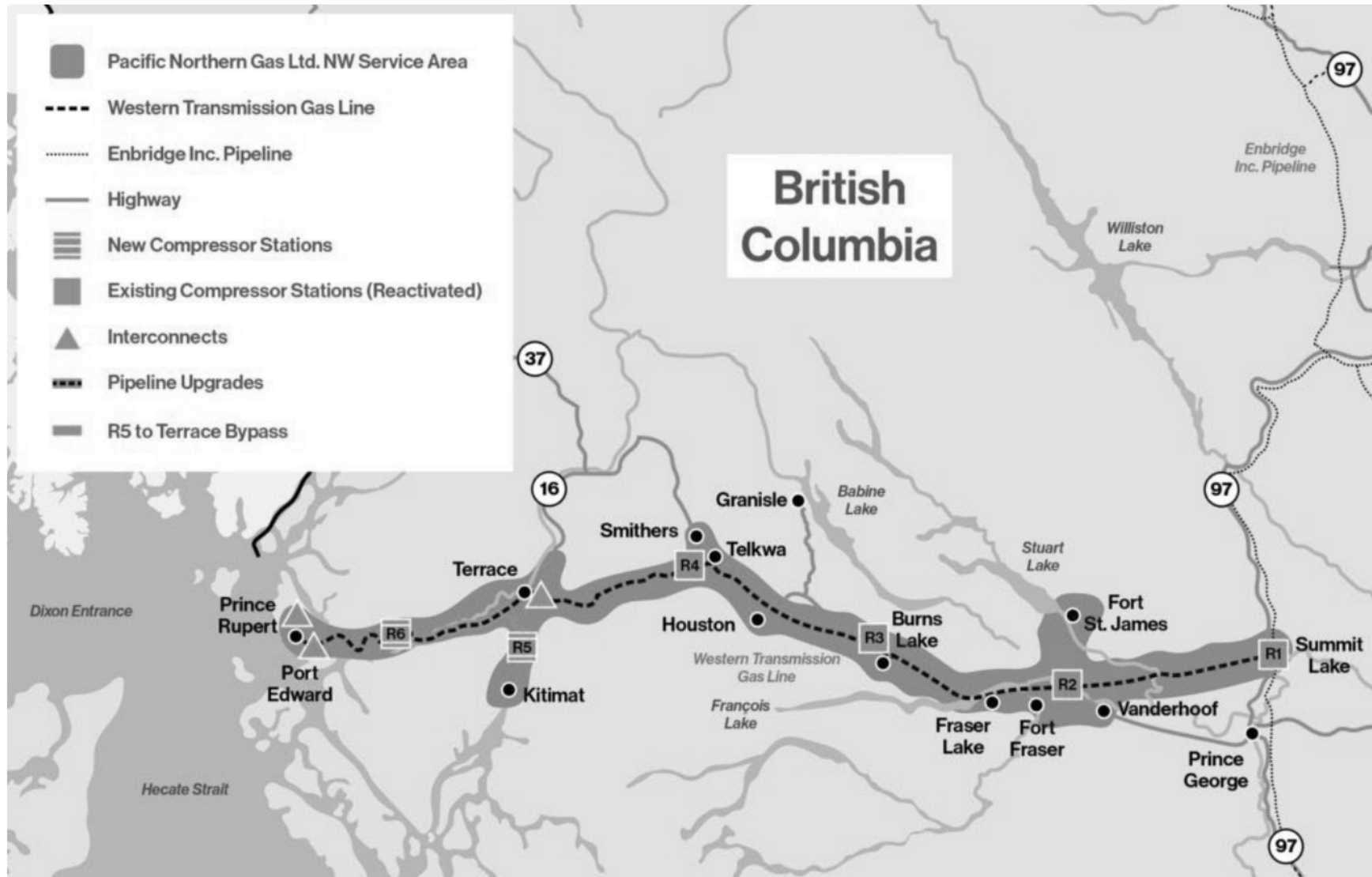
Adjustment of rates would be subject to application and review by the BC Utilities Commission.

Attachment: Map of PNG's Western Transmission Gas Line

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Map of PNG's Western Transmission Gas Line



July 22, 2022

Updated Dec. 5 & 14, 2022

ISSUE NOTE

I. PREPARED FOR: BC Oil and Gas Commission, FOR INFORMATION

II. ISSUE: Risks to aging PNG pipeline and customer supply.

III. MESSAGING:

- In recent years, the BC Oil and Gas Commission (Commission) undertook an extensive review of British Columbia's aging pipelines to ensure their integrity and protection of the environment.
- That review and subsequent audit identified the 1969 Pacific Natural Gas (PNG) pipeline running from Summit Lake north of Prince George to Prince Rupert as needing significant work to meet regulatory requirements.
- The company has complied with all Commission orders, to reduce the pipeline's operating pressure to deal with potential safety issues.
- The colder weather this winter combined with reduced operating pressure in the pipelines, could result in potential service disruptions.
- The Commission will continue to work with PNG to minimize impacts, including the possibility of trucking in gas until required work on the line can be made.
- The Commission will not compromise on public safety and will ensure all steps needed to ensure the integrity of the pipeline are undertaken as expeditiously as possible.

IV. BACKGROUND:

Dec. 14, 2022 Update:

- PNG has done significant work to assess the Stress Corrosion Cracking (SCC) on the Terrace to Prince Rupert portion of the pipeline, including engaging outside expertise.
- Since January 2021, PNG has been complying with the Order requirements to maintain reduced pressures on the pipeline.
- The operating pressure was further reduced as required by a Commission Order issued on Dec. 2, 2022, to ensure safe operations. The reductions had proactively been put in place by PNG and were, at the Commission's request, confirmed by engineering review.
- On Dec. 14, 2022, the Commission amended the Order to allow PNG to temporarily increase pressure on a portion of the pipeline (generally, from Summit Lake to Vanderhoof) to ensure adequate gas supply. Those operations will be undertaken with increased monitoring in place and PNG

has been required to undertake an engineering assessment.

- At the current restricted operating pressures, the pipeline is unlikely to fail; however, the risk of a leak is still present. For one portion of the pipeline, increased monitoring and reporting have been required by the Commission and put in place by PNG.
- Also, given the reduced pressure, PNG may be challenged to maintain supply to customers, particularly during extreme cold weather, and may need to supplement with trucked gas.

- PNG operates a natural gas transmission and distribution system in central British Columbia that provides gas service to residential, commercial and industrial customers in northeast and northwest B.C. The Commission regulates high pressure pipelines within the PNG transmission system. As a utility, PNG is also regulated by the British Columbia Utilities Commission (BCUC).
- PNG's assets include the Summit to Rupert transmission pipeline that runs from Summit Lake (north of Prince George) to Prince Rupert. Construction of this pipeline was completed in 1969.
- s.17; s.21
- In more recent years, the company has increased its planning and execution of integrity management work, maintenance, repairs and upgrades.
- The Commission has identified significant work required to comply with regulatory requirements.
- In 2014, PNG received findings of an audit conducted by the Commission, identifying necessary improvements to segment-by-segment pipeline risk assessments, aged pipeline condition assessment, management of change processes, integrity management planning and continual improvement processes.
- In February 2020, the Commission's risk-based selection identified PNG for a full and formal audit (including aged infrastructure).
- In August 2020, PNG provided information requested by the Commission to evaluate the condition, maintenance activities and oversight of the pipeline. Following review, the Commission noted, in part, systemic improvements were required for PNG's Stress Corrosion Cracking Management Program and Geohazards Management Program.
- In December 2020, PNG presented its Stress Corrosion Cracking management plan to the Commission. Stress corrosion cracking is a form of corrosion from small cracks (caused by various factors, including environmental). SCC tends to propagate as crack clusters or "colonies" as pipeline stress opens cracks that are subject to corrosion, weakening the

pipeline metal by further cracking.

- In January 2021, PNG complied with a Commission Order (GO 2021-0115) to lower pressure on the pipeline (to no more than 80 per cent of licenced maximum operating pressure) and provide a declaration from a senior official the pipeline was safe to operate.
- In June 2022, the Commission reviewed recent pipeline inline inspection data submitted by PNG, which indicated the company had located and repaired a Category IV (highest level) stress corrosion crack. In July 2022, the Commission amended the earlier order to require further pressure reductions on the pipeline (between mileposts 209 to 245) due to risks associated with potential further SCC. Further pressure reductions were put in place by Order on Dec. 2, 2022 (GO 2021-0115-02) to ensure safe operations.
- PNG has complied with Order requirements and continues to meet with and respond to the Commission to review additional inspection findings and information.
- PNG has continued planned work to execute tests and repairs. This has included expediting certain work on the pipeline segment between Burns Lake and Telkwa (R3-R4 NPS10) to support PNG's winter resiliency plan. Despite progress, significant delays in successfully executing the planned work could have serious consequences.
- PNG has communicated it has plans to access an alternate gas supply (trucked) to serve its customers in the event of any pipeline service disruption. However, current or further reductions in pressure or full shut in to address safety issues could potentially result in some service disruptions this winter – the PNG line serves approximately 20,400 customers.
- The Commission continues to review progress on these matters, including meetings with PNG technical staff, review of submission information/data, and Executive level meetings. The next Executive Level meeting is being planned for December 2022/January 2023.

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MINISTRY OF ENERGY, MINES AND LOW CARBON INNOVATION

BRIEFING NOTE FOR DECISION

PREPARED FOR: Honourable Josie Osborne, Minister of Energy, Mines and Low Carbon Innovation

ISSUE: Amendment to Direction 5 Woodfibre-specific tariff supplements to Rate Schedule 50

BACKGROUND:

Woodfibre LNG Limited (Woodfibre) is proposing a 2.1 million tonnes per annum facility on privately owned land in Howe Sound that will utilize electrically driven liquefied natural gas (LNG) trains.

The Project is owned and operated by Woodfibre LNG Limited, a privately held Canadian company headquartered in Vancouver. The company is a subsidiary of Pacific Oil and Gas Limited, which is part of the Singapore-based Royal Golden Eagle group of companies.

Woodfibre has environmental approvals from the BC Environmental Assessment Office, Canadian Environmental Assessment Agency, and a Squamish Nation Environmental Assessment Agreement. The project has received its facilities permit from the BC Oil and Gas Commission and has approval on major federal permits.

Woodfibre issued a Notice to Proceed (NTP) April 14, 2022 and has announced approval of a pre-construction budget of \$600M. Woodfibre is also in an active partnership negotiations with Enbridge which is expected to conclude by the end early Q3.

Woodfibre will require more feed gas than the current system can deliver. In order to serve Woodfibre, FortisBC (Fortis) plans to expand a portion of its existing natural gas transmission system, with the Eagle Mountain Pipeline project (EGP). The EGP will involve the construction of approximately 47 kilometres of gas pipeline, beginning north of the Coquitlam watershed and ending at the proposed Woodfibre site. Fortis' Eagle Mountain Pipeline has announced a limited NTP and a contract valued at \$341M for the tunnel components of the pipeline project.

The province has historically been interested in the development of an LNG industry because of the benefits to British Columbians and the sustained and predictable revenue stream to multiple levels of government, First Nations and communities.

In order to realize the potential benefits of development while managing its potential impact on ratepayers, the province provided regulatory support for the sector. This included setting the relevant tariffs for LNG development in the lower mainland through Direction 5 in 2012 and 2014.

Since 2012, Fortis tariffs for LNG production in the lower mainland have been supported by Direction 5 to the British Columbia Utilities Commission (BCUC). Direction 5 also supported LNG development at Woodfibre by:

- Establishing a liquefaction tariff and providing exemptions from Certificate of Public Convenience and Necessity for EGP upgrades to serve Woodfibre and;
- Fortis Coastal Transmission System (CTS) upgrades to serve Woodfibre and Fortis Tilbury Phase 1B.

In 2014, the province amended Direction 5 to include a new natural gas transportation tariff, Rate Schedule 50 (RS50), for large industrial gas customers on the CTS. RS50 included a Transportation Service Agreement (TSA) setting out the terms and conditions under which Fortis agrees to provide firm transportation service to its customers.

Fortis and Woodfibre have been negotiating on natural gas supply and have executed a series of agreements. RS50, Construction Security Agreement (CSA), and two TSAs. These agreements dictate the relevant terms for construction and operation of the EGP between Fortis, Pacific Energy Corporation (PEC) the gas owner, Woodfibre and a new partner Enbridge.

Agreement	Notes	Status
RS 50 Rate Schedule 50	<ul style="list-style-type: none"> • FortisBC's tariff for long-term, large volume industrial transportation. 	☑ BCUC Order Received
CSA Construction Security Agreement	<ul style="list-style-type: none"> • Defines important terms for construction and operation of the EGP, specifically: • Defines funding obligations through construction. • Sets out when PEC's capital contributions (CIAC) would be received and trued-up. 	☑ Signed and Executed
TSA 1 Transportation Agreement 1	<ul style="list-style-type: none"> • The primary transportation agreement that defines the terms under which FortisBC will transport and deliver gas to WLNG through the EGP. • Base Contract Demand: 260,000 GJ per day. • Defines Security and Security Reduction Conditions. 	☑ Signed and Executed September 13, 2021
TSA 2 Transportation Agreement 2	<ul style="list-style-type: none"> • Defines the terms under which FortisBC will transport and deliver gas to WLNG using existing pipeline capacity. • Base Contract Demand: 40,000 GJ per day. • TSA 2 capacity was formerly reserved for BC Hydro Island Generation power plant but has been terminated by BC Hydro. 	☑ Signed and Executed May 10, 2022

However, construction on EGP cannot proceed until the BCUC approves TSA1, TSA2, and amendments to RS50. Woodfibre and Fortis have asked the Province to consider a direction to the BCUC to approve these agreements and amendments.

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RECOMMENDATION:

s.13

Approved / Not Approved

Honourable Josie Osborne, Minister
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Date

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Attachment: s.13; s.17

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