IN THE MATTER OF

PACIFIC NORTHERN GAS (N.E.) LTD.

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
TO ACQUIRE, CONSTRUCT, OWN AND OPERATE
A COMPRESSED NATURAL GAS PIPELINE BETWEEN THE
COMMUNITIES OF DAWSON CREEK AND TUMBLER RIDGE

DECISION

March 5, 2014

Before:

B.A. Magnan, Panel Chair/Commissioner
L.A. O'Hara, Commissioner

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EXECUTIVE SUMMARY

On July 17, 2013, Pacific Northern Gas (N.E.) Ltd. (PNG(N.E.)) applied to the British Columbia Utilities Commission (Commission) for a Certificate of Public Convenience and Necessity (CPCN) to acquire, construct and operate a permanent compressed natural gas (CNG) trucking service from Dawson Creek to the Tumbler Ridge Service Area that would serve as a "Virtual Pipeline" between the two communities (Application; Project). The Project consists of natural gas compression and dispensing facilities in Dawson Creek, receiving and injection terminals in the Tumbler Ridge Service Area, and specialized trailers to transport CNG between the facilities in Dawson Creek and terminals in Tumbler Ridge. The capital cost of the Project is approximately $3.842 million.

PNG(N.E.) also seeks approval for a proposed new Bulk CNG Service (RS 30) tariff for Dawson Creek to provide CNG fuelling service to customers including the Tumbler Ridge Service Area. Further, PNG(N.E.) requests approval for the disposition of costs deferred under the Quintette Security Supply Agreement (SSA) that provided temporary CNG supply for the winter of 2012-2013, including the transfer of $43,180 in costs to the capital costs of the Project and the recovery of the remaining costs of $286,586 in Tumbler Ridge customer rates over a period of five years.

In an Evidentiary Update, filed September 20, 2013, PNG(N.E.) informed the Commission that there was a reduced urgency for a permanent CNG supply solution because the Quintette Mine announced a decision to delay going into production until market conditions improved. PNG(N.E.) indicated it will continue to provide CNG supply to Quintette on a temporary basis for the 2013-2014 winter.

The Evidentiary Update also included a request for approval for the inclusion of $3,203 accumulated in a Studies Deferral Account, and $18,613 for a "Sweet Gas Supply Options" Study into the Tumbler Ridge capital costs of the Project.

The primary reason PNG(N.E.) proposes the CNG Virtual Pipeline is to provide additional natural gas supply to the Tumbler Ridge Service Area to enable the provision of firm service to large industrial

customers in the face of existing constraints on PNG(N.E.)'s Service Agreement with Canadian Natural Resources Ltd. (CNRL), PNG(N.E.)'s sole gas supplier in the Tumbler Ridge Service Area. Under the Service Agreement, gas service to any of PNG(N.E.)'s customers that take, or are expected to take, more than 20,000 GJ per year is interruptible and subject to curtailment ahead of CNRL or firm sales customers. These provisions constrain PNG(N.E.) from serving large customers such as Quintette Mine on a firm basis.

PNG(N.E.) submits additional justification for the CNG Virtual Pipeline, including providing increased security of supply for the Tumbler Ridge Service Area by providing a supplementary source of gas supply, as well as the potential for the CNG Virtual Pipeline to provide ancillary CNG dispensing services such as Bulk CNG sales and a Natural Gas Vehicle (NGV) fueling service in the Dawson Creek Service Area.

The Commission Panel accepts that the current terms of the Service Agreement with CNRL prevents PNG(N.E.) from offering the firm service that Quintette Mine has requested, without some ancillary source of supply or a change in the CNRL Service Agreement.

However, the Commission Panel is concerned that there will be insufficient demand to warrant the long-term commitment to capital costs of the Project, which would result in negative impacts on the existing Dawson Creek and Tumbler Ridge consumers. Therefore, the Panel requires that certain conditions be put in place to mitigate the risk of lower than forecasted demand.

The Commission Panel approves PNG(N.E.)'s request to construct, own and operate the CNG Virtual Pipeline, subject to the following six conditions, all of which PNG(N.E.) must meet on or before December 31, 2016:

1) **PNG(N.E.) must provide evidence that there is sufficient firm commitment from a customer (or combination of customers) for take-or-pay service for a minimum of 60 percent of the total forecast CNG demand for the Tumbler Ridge Service Area of 140,000 GJ. This take-or-pay contract (or combination of contracts) must be set for a minimum seven year period, effective from the in-service date of the CNG Virtual Pipeline;**

2) **PNG(N.E.) must calculate the rate charged under the minimum 60 percent take-or-pay contract(s) in Condition 1 based on the rolled-in cost of the existing Tumbler Ridge natural gas system with the incremental cost of the CNG Virtual Pipeline;**

3) **PNG(N.E.) Dawson Creek Division must obtain a minimum volume commitment from the PNG(N.E.) Tumbler Ridge Division of 60 percent of the forecast deliveries of CNG to Tumbler Ridge of 140,000 GJ for a minimum seven year period, effective from the in-service date of the Project;**

4) **PNG(N.E.) must file the minimum take-or-pay contracts which collectively satisfy Conditions 1–3;**

5) **PNG(N.E.) is further directed to file a rate proposal and accompanying rate schedule for Quintette Mine and other potential customers of the CNG Virtual Pipeline which contemplates the cost recovery mechanisms in Conditions 1 and 2; and**

6) **PNG(N.E.) must file with the Commission the RS 30 Tariff at the same time as it files the take-or-pay contracts and rate schedules in Conditions 4 and 5.**

The Commission Panel approves certain other requests made by PNG(N.E.) in the event the utility meets the 6 Conditions for approval of the CPCN. These include approving:

(a) **PNG(N.E.)'s request to transfer $43,180 from the Quintette SSA Deferral Account as follows:**
   (i) **$27,140 to the Dawson Creek portion of the Project capital costs; and**
   (ii) **$16,040 to the Tumbler Ridge portion of the Project capital costs;**

(b) **PNG(N.E.)'s request to include the $18,613 incurred for the Sweet Gas Supply Options Study in the Tumbler Ridge portion of the capital costs of the Project; and**

(c) **The proposed new seasonal Bulk Compressed Natural Gas (CNG) (RS 30) tariff for Dawson Creek as applied for in the Application.**

PNG(N.E.) is to confirm acceptance of the conditions through a compliance filing by April 30, 2014. **If PNG(N.E.) does not confirm acceptance of the six conditions and meet all six conditions by December 31, 2016, the CPCN approval shall be cancelled.**

In the event that PNG(N.E.) does not meet the conditions for CPCN approval, the Panel determines that the $43,180 which PNG(N.E.) requests to transfer to Project capital costs shall remain in the Quintette SSA Deferral Account.

While maintaining Quintette Mine as a customer provides some benefit to all Tumbler Ridge ratepayers, the Commission Panel considers that the primary beneficiary of the temporary security of supply arrangement is Quintette Mine itself. **Therefore, the Commission Panel does not approve PNG(N.E.)'s request to recover the Quintette SSA Deferral Account from Tumbler Ridge ratepayers.**

The Commission Panel denies PNG(N.E.)'s request to include the $3,203 Studies Deferral Account as part of the capital costs of the Project.

The Commission Panel also directs PNG(N.E.) to undertake a comprehensive and detailed technical study of the sweet raw gas supply sources in the Tumbler Ridge region and to file this long-term supply study with its next PNG(N.E.) Resource Plan, which is due on or before April 18, 2015, as per Order G-60-13.

1.0 INTRODUCTION

On July 17, 2013, Pacific Northern Gas (N.E.) Ltd. (PNG(N.E.)) applied to the British Columbia Utilities Commission (Commission) for a Certificate of Public Convenience and Necessity (CPCN) to acquire, construct and operate a permanent compressed natural gas (CNG) trucking service from the Dawson Creek Service Area to the Tumbler Ridge Service Area that would serve as a "Virtual Pipeline" between the two communities (Application; Project). The Project consists of natural gas compression and dispensing facilities in Dawson Creek, receiving and injection terminals in the Tumbler Ridge Service Area, and specialized trailers to transport CNG between the facilities in Dawson Creek and terminals in the Tumbler Ridge Service Area. The purpose of the establishment of the CNG Virtual Pipeline is primarily to provide additional natural gas supply to the Tumbler Ridge Service Area to enable the provision of firm service to large industrial customers and secondarily to provide the Tumbler Ridge Service Area with a supplementary source of gas supply.

There is also the potential for the CNG Virtual Pipeline to provide ancillary CNG dispensing services such as Bulk CNG sales and a Natural Gas Vehicle (NGV) fueling service in the Dawson Creek Service Area.

1.1 The Applicant

PNG(N.E.) is a natural gas distribution utility providing gas sales and transportation services to residential, commercial and industrial customers in the Northeastern British Columbia communities of Fort St. John, Dawson Creek and Tumbler Ridge. PNG(N.E.) is a wholly-owned subsidiary of Pacific Northern Gas Ltd. (PNG). In turn, PNG is a wholly-owned subsidiary of AltaGas Utility Holdings (Pacific) Inc., which is wholly-owned by AltaGas Ltd.

PNG(N.E.) is requesting the CPCN as the regulated utility that will acquire, build and operate the infrastructure for the CNG Virtual Pipeline.

1.2 Key Stakeholders

The key stakeholders of the Project are the Tumbler Ridge Service Area ratepayers, including District of Tumbler Ridge residents, Quintette Mine and Canadian Natural Resources Ltd. (CNRL) and the Dawson Creek Service Area ratepayers, including potential new CNG dispensing service customers.

CNRL is a crude oil and natural gas producer with assets and operations in Northeastern British Columbia, as well as internationally. CNRL has a supply contract with PNG(N.E.) in which CNRL exclusively supplies PNG(N.E.)'s Tumbler Ridge processing plant with raw gas, and then takes back approximately 80 percent of the plant's output as a transportation service customer of PNG(N.E.) for use in CNRL's field operations and production facilities (Exhibit B-1, p. 22).

Quintette Mine, a metallurgical coal mine owned by Teck Coal Limited (Teck Coal), is located approximately twenty kilometres south of the town of Tumbler Ridge. Quintette Mine was in operation for eighteen years until 2000. Teck Coal is currently in the process of re-commissioning mining operations, though in 2013, Teck Coal decided to delay reopening Quintette Mine due to insufficient demand for steelmaking coal. Quintette Mine is projected to increase demand in the 2015-2016 gas year and remain at this level into future years. (Exhibit B-1-1, p. 40)

1.3 Specific Orders Sought

The approvals sought in this Application would provide PNG(N.E.) the authorization needed to acquire, construct and operate the infrastructure necessary for the Project. It would also set the necessary rate structures and approval for PNG(N.E.) to meet service requests from current and potential customers for firm service in the Tumbler Ridge Service Area. In addition, PNG(N.E.) is looking to offer ancillary services such as bulk local CNG sales and natural gas vehicle (NGV) fuelling service in the Dawson Creek Service Area.

Specifically, PNG(N.E.) seeks the following approvals:

(i) A CPCN for the acquisition, construction and operation of a CNG Virtual Pipeline service from the Dawson Creek Service Area to the Tumbler Ridge Service Area, described in the Application, pursuant to sections 45 and 46 of the *Utilities Commission Act* (UCA);

(ii) Approval of a new Bulk CNG Service (RS 30) tariff for Dawson Creek to provide CNG service to customers, including CNG supply for the Tumbler Ridge Service Area under sections 59 through 61 of the UCA;

(iii) Subject to the approval of (i) and (ii), approval for the disposition of deferred costs under the Quintette Security of Supply Agreement (SSA), including the transfer of $43,180 in deferred costs to the capital cost of the CNG Virtual Pipeline and the recovery of the remaining deferred costs of $286,586 in Tumbler Ridge customer rates on a straight-line basis over a period of five years; and

(iv) Subject to the approval of (i) and (ii), approval for the inclusion of costs accumulated in the Studies Deferral Account totaling $3,203 and of the cost associated with the Sweet Gas Supply Options Study of $18,613 to be included in the Tumbler Ridge site preparation, mobilization and commissioning project capital cost.

1.4 Regulatory Process

PNG(N.E.) filed the Application with the Commission on July 17, 2013. By Order G-119-13, dated August 8, 2013, the Commission established a Written Hearing process and Regulatory Timetable to review the Application. Following the first round of Information Requests (IR), PNG(N.E.) submitted an Evidentiary Update on September 20, 2013 due to a variety of factors, including the postponement by Teck Coal in placing its Quintette Mine into production, which reduced PNG(N.E.)'s urgency for a permanent CNG supply solution for Tumbler Ridge (Exhibit B-1-1, p. 1). Subsequently the Commission made revisions to the Regulatory Timetable (Orders G-137-13 and G-157-13) such that the regulatory process included two further rounds of IRs from the Commission and Registered Interveners.

Registered Interveners in this hearing are:

- The District of Tumbler Ridge (DTR);
- The British Columbia Pensioners' and Seniors' Organization et al. (BCPSO); and
- FortisBC Energy Utilities (FEU).

BCPSO was the only intervener to submit IRs, while both BCPSO and DTR submitted Final Arguments.

2.0 REGULATORY FRAMEWORK

The Commission regulates the construction and/or operation of new facilities by public utilities through its power to grant a CPCN pursuant to sections 45 and 46 of the UCA. In exercising its CPCN granting powers, the Commission, among other matters, must consider certain provisions of the *Clean Energy Act*, SBC 2010, c. 22 (CEA).

2.1 Certificate of Public Convenience and Necessity

Sections 45 and 46 of the UCA govern CPCN Applications.

Specifically, subsection 45(8) states:

> "The commission must not give its approval unless it determines that the privilege, concession or franchise proposed is necessary for the public convenience and properly conserves the public interest."

Further, subsection 46(3) states:

> "Subject to subsections (3.1) to (3.3), the commission may, by order, issue or refuse to issue the certificate, or may issue a certificate of public convenience and necessity for the construction or operation of a part only of the proposed facility, line, plant, system or extension, or for the partial exercise only of a right or privilege, and may attach to the exercise of the right or privilege granted by the certificate, terms, including conditions about the duration of the right or privilege under this Act as, in its judgement, the public convenience or necessity may require."

The relevant sections of the UCA are contained in Appendix A.

By Order G-50-10, the Commission provided guidelines to assist public utilities and other parties wishing to construct or operate utility facilities in preparing CPCN applications to facilitate the Commission's review of such applications (CPCN Guidelines).

2.2 *Clean Energy Act* and Other Policy Initiatives

Section 46(3.1) of the UCA requires that the Commission consider the applicability of British Columbia's energy objectives. These objectives are set out in section 2 of the *Clean Energy Act* (CEA).

Since natural gas is considered a lower carbon fuel than other alternative available fuel sources such as propane or fuel oil and, because the compression infrastructure that would be installed as part of the proposed CNG Virtual Pipeline has the potential to provide a platform for PNG(N.E.) to offer natural gas vehicle (NGV) fueling, the Panel specifically considers the following objective in this proceeding: " (2) (h) to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia."

Section 46(3.1)(c) of the UCA requires the Panel consider: "The extent to which the application for the certificate is consistent with the applicable requirements under sections 6 and 19 of the *Clean Energy Act."* Section 6 of the CEA deals with 'Electricity Self-sufficiency' and section 19 with 'Clean or renewable resources.' The Panel considers neither of these sections relevant to this Application.

The Panel also considers the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR), Order in Council 295 (OIC 295), which provides additional incentives to encourage the adoption of NGVs. In its Application, PNG(N.E.) submits that the CNG Virtual Pipeline presents the possibility of PNG(N.E.) offering vehicle conversion grants under OIC 295 to further facilitate the implementation of NGV fuelling service (Exhibit B-1, p. 19).

Therefore, the Panel considers section 2.1(a) of the GGRR by which a public utility can provide grants or zero-interest loans to convert to NGVs, and section 2.2(a) by which a public utility may

undertake to construct and operate a compressed natural gas fueling station, including storage, compression and dispensing equipment and facilities for the purpose of providing CNG fuel and fuelling services to owners of NGVs to be part of the consideration of this Application.

The relevant sections of the GGRR are contained in Appendix A.

2.3 Long-Term Resource Planning

The Application also raises several long-term supply issues, which have an impact on PNG(N.E.)'s present and future Long-Term Resource Plan. This is governed under section 44.1 of the UCA (See Appendix A). Any issues around Resource Planning will be dealt with in section 6.3 of this Decision.

2.4 Setting of Rates

The Commission Panel will address the proposed rate design and setting of rates under sections 59, 60 and 61 of the UCA.

These sections, which can be found in their entirety in Appendix A, require the Commission to set rates that are not unjust or unreasonable, as defined by section 59(5) of the UCA. A rate is unjust or unreasonable if it is:

> "(a) more than a fair and reasonable charge for service of the nature and quality provided by the utility,
>
> (b) insufficient to yield a fair and reasonable compensation for the service provided by the utility, or a fair and reasonable return on the appraised value of its property, or
>
> (c) unjust and unreasonable for any other reason."

3.0 APPLICATION CONSIDERATIONS

The following sections examine the CPCN application criteria in detail and provide determinations in each area including: public interest and project need, project alternatives, project risk and consultation.

3.1 Project Description and Background

Background

In its 2012 Resource Plan, PNG(N.E.) identified potential forecast demand increases in the Tumbler Ridge Service Area related to increased mining activity in the region. The 2012 Resource Plan also highlighted a number of constraints to meeting this increased demand under current gas supply arrangements with PNG(N.E.)'s sole provider of natural gas supply for the Tumbler Ridge system — CNRL (Exhibit B-1, p. 1).

The Service Agreement in place between CNRL and PNG(N.E.) recognizes that CNRL is both a supplier and a customer of PNG(N.E.). In section 3.3 of the Service Agreement, PNG(N.E.) agrees that gas service to any of its customers that take, or are expected to take, more than 20,000 GJ per year is interruptible and subject to curtailment ahead of the Shipper (CNRL) or firm sales customers (Exhibit B-1-1, p. 30). These provisions constrain PNG(N.E.) from serving large customers such as Quintette Mine on a firm basis.

Quintette Mine, a metallurgical coal mine owned by Teck Coal, is located approximately 20 kilometres south of Tumbler Ridge. Quintette Mine was in operation for 18 years until 2000. Teck Coal is currently in the process of re-commissioning mining operations and submitted a formal request to PNG(N.E.) for firm natural gas supply (Exhibit B-1, p. 20).

Quintette Mine uses natural gas for space heating. PNG(N.E.) submits that firm supply is critical to the ongoing operations and safety of the mine and, due to the prospect of future service

curtailment, there is a "distinct possibility" that Quintette Mine would switch to propane if PNG(N.E.) cannot provide firm natural gas supply (Exhibit B-1, Appendix A, p. 1).

In November 2012, PNG(N.E.) filed an application with the Commission to enter into the Quintette Security Supply Agreement (SSA) with Teck Coal in order to provide a supplemental source of gas supply for a three month period during the winter of 2012–2013 (Exhibit B-1, p. 1). The Commission approved the Quintette SSA under Order G-183-12. This temporary solution involved outsourcing a trucking company to deliver CNG to the Tumbler Ridge Service Area (Exhibit B-1, Appendix A, p. 1).

In 2013, Teck Coal decided to delay reopening Quintette Mine due to the present market situation for steelmaking coal. PNG(N.E.) indicated it will continue to provide CNG supply to Quintette Mine on a temporary basis for the 2013–2014 winter through a renewed Security of Supply Agreement with similar terms to those per the 2012/2013 Quintette SSA (Exhibit B-1-1, Evidentiary Update, p. 4).

PNG(N.E.) projects that Quintette Mine will reach full production by the end of 2015 (Exhibit B-1-1, p. 3).

Project Description

PNG(N.E.) proposes a permanent CNG Virtual Pipeline between Dawson Creek and Tumbler Ridge. PNG(N.E.) plans to compress natural gas from a secondary source of supply at a site in Dawson Creek and then transport the CNG 126 kilometres along the John Hart Highway and Highway 52 to Tumbler Ridge. (Exhibit B-1, p. 6)

The CNG Virtual Pipeline consists of three capital components:

1) A natural gas compression and dispensing facility situated on Lot A — a currently vacant, industrial-zoned site in Dawson Creek;

2) Two receiving and injection terminals located in Tumbler Ridge, the main terminal located at the Quintette Mine gate station and a back-up terminal located within PNG(N.E.)'s industrial park; and

3) Two specialized, high-capacity CNG trailers for trucking CNG between Dawson Creek and Tumbler Ridge. (Exhibit B-1, p. 6)

PNG(N.E.) has entered into an offer to purchase a four acre industrial-zoned site (Lot A), from British Columbia Railway Company (BC Rail), located at the corner of Imperial Road and 21 Street in the northeast corner of Dawson Creek (Exhibit B-1, p. 8; Exhibit B-4, BCUC 1.55.1, Exhibit B-6, BCUC 2.54.1). The site, which is located next to a high-pressure natural gas line (under construction by PNG(N.E.)), offers direct access to major transportation routes, including the John Hart Highway. The abutting areas are zoned by the City of Dawson Creek as "light industrial", "parks and recreation" and "single and duplex residential." The area directly north of Lot A is considered outside of the City of Dawson Creek and is zoned as "agricultural land reserve" by the Peace River Regional District. (Exhibit B-8, BCUC 2.54.1) The natural gas compression and dispensing station infrastructure, including an integrated cascading buffer storage, will be built on a two acre portion of Lot A, and designed to accommodate the turning radius required for the CNG trailers (Exhibit B-1, p. 9).

PNG(N.E.) proposes to purchase two "Type III" technology trailers, which are 53 feet long and feature aluminum cylinders with carbon fiber wrap with a standardized ISO container. Until such time as PNG(N.E.) considers it to be economical to own the trucks for the transport of the trailers, PNG(N.E.) proposes to contract a local transportation company to truck the trailers to Tumbler Ridge (Exhibit B-1, p. 13). The CNG will be unloaded at either of the two receiving and injection terminal locations, on the distribution side of the regulator. Therefore, the gas is delivered at distribution pressure at a rate determined by the flow in the delivery system. (Exhibit B-1, p. 11)

In addition to becoming a source of supply to the Tumbler Ridge Service Area, PNG(N.E.) submits that the CNG Virtual Pipeline project will also become a source of supply to future bulk CNG

customers and to NGV fueling customers in the Dawson Creek Service Area (Exhibit B-1-1, pp. 19-20).

3.2 Public Interest and Project Need

The intent of the Project is to address security of supply concerns and ongoing supply constraint issues in Tumbler Ridge, as well as to meet the increasing needs of residential and industrial customers in the Tumbler Ridge service area. (Exhibit B-1, p. 6)

PNG(N.E.) expects that Fort St. John/Dawson Creek natural gas customers, and the northeast region in general, will benefit from the infrastructure put in place to operate the CNG Virtual Pipeline, as PNG(N.E.) is proposing to utilize surplus capacity at the Dawson Creek CNG dispensing facility to provide ancillary services to third parties, including NGV fuelling and bulk CNG sales. PNG(N.E.) submits that the increase in system throughput from gas volumes sold under these ancillary services will result in lower rates for all Fort St. John/Dawson Creek customers. (Exhibit B-1, p. 6)

To determine Project need, it is important to analyze PNG(N.E.)'s assumptions regarding future demand in both the Dawson Creek and Tumbler Ridge Service Areas, supply constraints in the Tumbler Ridge Service Area, and potential Tumbler Ridge processing plant capacity constraints.

3.2.1 Demand

This section reviews the Project need from the perspective of the additional demand from Tumbler Ridge industrial gas customers. Additionally, PNG(N.E.)'s submission regarding potential project benefits are examined in the context of the potential increase in demand through the offering of ancillary CNG and NGV fuelling services to third party customers in the Dawson Creek Service Area.

3.2.1.1 Industrial Gas Demand in Tumbler Ridge

The Application states that Quintette Mine is in the process of re-establishing mining operations, and has filed a formal request for firm gas service that PNG(N.E.) forecasts at 100,000 GJ in 2014 and 160,000 GJ per year starting in 2015 (Exhibit B-1, pp. 20, 41). In addition, under its present supply contract with CNRL, its sole gas supplier for the Tumbler Ridge area, PNG(N.E.) cannot commit to a firm supply of more than 20,000 GJ to any one customer other than CNRL. Meeting this new demand as well as certainty of the demand is the subject of the Application.

Subsequent to the filing of the Application, PNG(N.E.) advised of a delay in the final decision to put the mine into production until market conditions improve (Exhibit B-3, p. 1). Through the filing of its Evidentiary Update to reflect this new information, PNG(N.E.) revised its forecast demand for Quintette Mine downwards to 40,000 GJ in 2014, 100,000 GJ in 2015 and 160,000 GJ per year starting in 2016 (Exhibit B-1-1, Table 6-1, p. 41).

The Evidentiary Update also states that PNG(N.E.) has received a formal request from HD Mining International Ltd (HD Mines) for gas service for 555,000 GJ, effective 2015 (Exhibit B-1-1, p. 21). The Applicant is therefore looking to have capacity in place by the 2015 heating season to meet projected increased demand from industrial customers.

In support of the Application, PNG(N.E.) submits:

> "the evidence on the record in this proceeding in regard to increased demand for firm natural gas service in Tumbler Ridge and the resulting need for supplemental natural gas supply in Tumbler Ridge is compelling. This need is manifested in formal requests for firm service from Quintette Mine and HD Mining..." (PNG(N.E.) Final Submission, pp. 3, 4)

BCPSO submits:

> "...the demand from these mines in the Tumbler Ridge division seems far from certain….

> …Given the uncertainty, BCPSO submits that it is unclear why PNG(N.E.) could not keep servicing the needs of industrial customers in Tumbler Ridge in the same manner as was done for the 2012/13 three-month SSA, and will be done for the 2013/14 SSA for the time being…
>
> …Given the uncertainty/fluctuation of demand even since the initial filing of this application, BCPSO is unable to support the assertion that a permanent CNG Virtual Pipeline is necessary at this time." (BCPSO Final Submission, pp. 2–3)

PNG(N.E.) responds that the Project attempts to address fundamental supply issues as well as respond to a service request from a large commercial customer who is important to keep on the system. (PNG(N.E.) Reply Submission, pp. 4–5)

PNG(N.E.) further submits that the temporary CNG trucking solution is not sustainable, and that it eliminated this option based on a preliminary evaluation of the impact on all customer rates. Alternatively, if the costs were borne by Quintette Mine alone, the cost of CNG would be comparable to the cost of propane and Quintette Mine would choose propane supply. (PNG(N.E.) Reply Submission, p. 6)

3.2.1.2 Dawson Creek CNG and NGV Fuelling Service Demand

PNG(N.E.) submits that the Project will allow it to meet a demand for CNG in the Dawson Creek Service Area.

> "In addition, approval of the Application will enable PNG(N.E.) to offer services such as Bulk CNG sales and a NGV fuelling service; both of which support the objective of reducing greenhouse gas emissions that has been entrenched in the British Columbia Clean Energy Act." (PNG(N.E.) Final Submission, p. 4)

In the Application, PNG(N.E.) states that it has obtained letters of support from the City of Dawson Creek and School District 59 indicating their interest in CNG for NGV fueling. PNG(N.E.) estimates that the potential initial demand for CNG for NGV fueling may be as high as 42,000 GJ (Exhibit B-2, p. 19). PNG(N.E.) has also held discussions about bulk CNG sales with a customer for an initial volume of 45,000 GJ per year, increasing to as much as 120,000 per year (Exhibit B-1, p. 20).

PNG(N.E.) filed a Memorandum of Agreement for bulk CNG sales (Exhibit B-2). PNG(N.E.) forecasts 77,000 GJ per year of CNG demand and characterizes this demand as bulk CNG sales (Exhibit B-1, p. 40).

3.2.2 Tumbler Ridge Supply

PNG(N.E.) currently obtains gas supply for the Tumbler Ridge Service Area from a sole supplier; CNRL. PNG(N.E.) submits that the CNG Virtual Pipeline is necessary to address various limitations to meeting the increasing demand in the Tumbler Ridge Service Area. The primary limitation, and main driver of the necessity of the CNG Virtual Pipeline, is the contractual constraints of the existing Service Agreement with CNRL. (Exhibit B-1, pp. 20, 22)

In addition, PNG(N.E.) identifies several other limitations to supply the growing demand of the Tumbler Ridge Service Area, including physical supply constraints, security of supply constraints and processing plant constraints. PNG(N.E.) indicates that the ability of the CNG Virtual Pipeline to alleviate some of these supply constraints provide additional justification for the Project.

3.2.2.1 CNRL Contract Constraints

PNG(N.E.) states that the impetus for the CNG Virtual Pipeline are the constraints in its Service Agreement with CNRL. Under the Service Agreement, dated January 1, 2007, CNRL provides raw gas to PNG(N.E.)'s Tumbler Ridge plant and PNG(N.E.) returns approximately 80 percent of the residue gas to CNRL as fuel for CNRL's gas production operations (Exhibit B-1, Appendix F; Exhibit B-1-1, p. 29). Section 2.4 of the Service Agreement states:

> "Shipper Service - Shipper (CNRL) shall, on a best efforts basis, supply sufficient quantities of raw gas to PNG to enable PNG to each Day supply to its Tumbler Ridge customers their daily residue gas requirements subject to the curtailment of gas service provisions set forth in Article 3." (Exhibit B-1, Appendix F, p. 3)

In Section 3.3 of the Service Agreement, PNG(N.E.) agrees that gas service to any of its customers that take, or are expected to take, more than 20,000 GJ per year is interruptible and subject to

curtailment ahead of the Shipper (CNRL) or firm sales customers (Exhibit B-1-1, p. 30). These provisions constrain PNG(N.E.) from serving new or expanding large customers such as Quintette Mine on a firm basis.

3.2.2.2 Tumbler Ridge Physical Supply Constraints

In addition to constraints of the Service Agreement, PNG(N.E.) identifies insufficient supply in Tumbler Ridge as another reason the Project is needed. Current gas supply to Tumbler Ridge depends on the Tumbler Ridge processing plant and a single transmission line (Exhibit B-1, pp. 22–23). PNG(N.E.) submits that it has sized the CNG Virtual Pipeline to meet the deficiency in Tumbler Ridge peak day supply, net of the supply that PNG(N.E.) expects to be available from CNRL via the Tumbler Ridge processing plant (Exhibit B-8, BCUC 2.23.1).

PNG(N.E.) provides evidence regarding the forecast peak day raw gas demand for the Tumbler Ridge Service Area, as well as detailed information of the supply currently available from CNRL. This is further discussed in section 6.3.

3.2.2.3 Tumbler Ridge Processing Plant Capacity

PNG(N.E.) indicates that the CNG Virtual Pipeline is also necessary because, even if the quantity of gas in the Tumbler Ridge area is sufficient, the quality of gas available in the area limits the amount of suitable raw gas that can be processed at PNG(N.E.)'s Tumbler Ridge processing plant. PNG(N.E.) submits that the amount of raw gas that it can process through the Tumbler Ridge Plant is limited by the current equipment in the plant and the plant's maximum allowable amount of sulphur emissions, expressed as SO_2. (Exhibit B-1, p. 22–32) This is further discussed in section 6.2.

3.2.2.4 Tumbler Ridge Security of Supply

In the Application, PNG(N.E.) indicates that a benefit of the Project is supply diversification, as it would not be solely reliant on CNRL for gas supply to the Tumbler Ridge division, and states:

> "2) Supply security – CNRL has advised that existing supplies are depleting with some wells forecast to be exhausted as early as 2014. In addition, CNRL has stated that it is unable to supply gas at Station 2 prices and that it will institute a facilities charge based on the JP05 calculation beginning November 2013 (in effect a bypass rate for the delivery of the gas to the plant gate);
>
> 3) Supply security – in the event of a gas supply interruption or that a shutdown of the gas processing plant was required, PNG(N.E.) would be able to provide back-up supply to the Tumbler Ridge division;" (Exhibit B-4, p. 23)

DTR does not endorse this Application as a means of addressing the supply security issues. DTR states:

> "We continue to consider any apportionment of direct industrial costs to the remaining non-benefiting local sectors to be both inequitable and unacceptable." (DTR Final Submission, p. 1)

BCPSO questions whether the Project is really intended to address security of supply:

> "The Commission's Reasons for Decision in PNG(N.E.)'s 2012 Resource Plan filing (the 'Resource Plan Decision') highlights that the project is specifically aimed at retaining/attracting industrial customers. It is not primarily aimed at ensuring security of supply for the community of Tumbler Ridge en masse..." (BCPSO Final Submission, p. 2)

However, BCPSO also states:

> "We are also sympathetic to the desire to secure a backup supply source not owned by CNRL. This is clearly a major drawback of the options involving altering contractual arrangements with CNRL (even if CNRL were amenable to that proposition) or connecting to a sweet gas supply (i.e., given that the nearest sweet gas pipeline is owned by CNRL)." (BCPSO Final Submission, pp. 3, 4)

PNG(N.E.) submits that the proposed CNG facilities have system-wide reliability benefits to minimize service disruptions to customers during scheduled and emergency outages, and that PNG-West used CNG tankers for this purpose twice in 2013 (PNG(N.E.) Final Submission, pp. 7–8).

Commission Determination

The Commission Panel accepts that the current terms of the Service Agreement with CNRL prevent PNG(N.E.) from offering firm supply of gas to large industrial customers, such as Quintette Mine, without some ancillary source of supply or a change in the CNRL Service Agreement.

PNG(N.E.) raises valid concerns about the difficulties in retaining Quintette Mine as a gas customer; however the Panel has concerns regarding the certainty of Quintette Mine's demand, given the mine's postponement of operations by another year. The Panel's concerns are further discussed in section 3.4.

In addition, PNG(N.E.)'s argument that the CNG Virtual Pipeline will serve as a secondary gas supply, thereby improving security of supply has some merit even though the CNG Virtual Pipeline will only be able to provide supplementary supply. Security of supply is further discussed in section 6.3.

The Commission Panel also recognizes that the Application provides an opportunity for PNG(N.E.) to provide ancillary services through bulk CNG sales and NGV fuelling services at the compression and dispensing station to be located in Dawson Creek.

In light of the issues identified by PNG(N.E.) regarding constraint on supply and the inability of PNG(N.E.) to provide firm service to meet the increasing demand of industrial customers, the Commission Panel finds that the need for the Project has been established, subject to PNG(N.E.) meeting certain conditions. The conditions are described in sections 3.4 and 5.3.

The Commission Panel recognizes that the CNG Virtual Pipeline provides only a supplemental supply source for Tumbler Ridge and that through the course of the proceeding the issue of long-term supply in Tumbler Ridge has been raised and warrants further consideration. As the issue of long-term security of supply is not directly linked to the approval of the Project, the Panel has included a separate discussion of this issue in section 6.

3.3 Project Alternatives

Several gas supply alternatives were presented and evaluated in the Application. In addition, another option was raised during the Application review.

3.3.1 Alternatives

PNG(N.E.) evaluated four alternatives in its Application:

- CNG Virtual Pipeline;
- Changes to the CNRL Service Agreement;
- Expand the Tumbler Ridge Plant; and
- Sweet Gas Pipeline to another Source.

During the Proceeding, PNG(N.E.) was questioned about a fifth alternative not considered in the application:

- Interconnection with a Marketable Gas Supply Source.

As the following section will discuss, these options differ with respect to whether the option is a supplemental or total supply solution for Tumbler Ridge and whether it addresses concerns about long-term supply reliability.

3.3.1.1 CNG Virtual Pipeline

This alternative is PNG(N.E.)'s preferred option and the subject of the Application. PNG(N.E.) submits this is the most flexible alternative. However, since this alternative is only a supplemental gas supply that still depends on the continuation of supply from CNRL and the Tumbler Ridge plant, it does not address long term reliability of supply.

3.3.1.2 Changes to the CNRL Service Agreement

This alternative involves successfully negotiating with CNRL to remove the restriction in the Service Agreement that prevents PNG(N.E.) from offering firm service to customers whose firm demand requirements exceeds 20,000 GJ per year. PNG(N.E.) identifies this as the most practical alternative to allow it to provide firm service to its large customers, but submits that, to date, CNRL has not been receptive to removing this restriction. (Exhibit B-1, p. 30)

3.3.1.3 Expand Tumbler Ridge Plant

Another option PNG(N.E.) identifies is to upgrade the Tumbler Ridge plant so that higher H_2S content raw gas can be processed. PNG(N.E.) states that the vast majority of the producing gas fields in the Tumbler Ridge area are becoming increasingly sour (higher H_2S content). PNG(N.E.) estimates that $7 to $10 million of capital expenditures for emissions handling equipment would be required to upgrade the plant such that it can process more sour gas. PNG(N.E.) notes that an expansion of plant capacity or sulphur emissions would trigger a re-permitting process (Exhibit B-1, pp. 32–34).

3.3.1.4 Sweet Gas Pipeline to Another Source

PNG(N.E.) identifies the Sweet Gas pipeline as another potential alternative, which would involve constructing an interconnection from the Tumbler Ridge processing plant to the nearest sweet raw gas source of supply (Exhibit B-1, p. 34; Exhibit B-1, Appendix J, Section 7.2). PNG(N.E.) ranked this alternative highest after the CNG Virtual Pipeline.

In exploring this alternative, PNG(N.E.) commissioned an “Alternative Pipeline Study” by Solaris. The terms of reference for this study were to identify sweet gas sources to augment existing supply for the purpose of adding additional firm load to customers over the 20,000 GJ per year restriction. The Solaris study evaluated the top five potential interconnections to sweet gas pipelines at a high level. All five wells are currently owned by CNRL.

The closest option identified is 14.7 km away, with an estimated cost of $6 million (Exhibit B-1, Appendix J, Section 8.0). PNG(N.E.) determined on the basis of the lowest levelized cost over five years that the Sweet Gas Pipeline alternative was not the most cost-effective solution. In the longer term, somewhere between 10 and 20 years, this option may be the most cost-effective solution depending on "assumptions regarding the life of the reserves that the supply line is connected to" (Exhibit B-8, BCUC 2.28.1).

Although the Sweet Gas Pipeline alternative is not PNG(N.E)'s first choice in this Application, PNG(N.E.) notes that this alternative is the one it would turn to next in the event the current CNRL supply arrangement started to fall short. This issue of long-term supply is further discussed in section 6.3.

3.3.1.5 Interconnection with Marketable Gas Supply

This alternative is a marketable gas pipeline connection from the existing Spectra Pine River gas plant to the Tumbler Ridge Service Area. PNG(N.E.) did not identify or analyze this option nor provide a cost estimate for such a pipeline. However, PNG(N.E.) did respond to several IRs regarding this potential alternative.

PNG(N.E.) indicates the alternative would provide access to marketable gas for decades and do so at market prices (Exhibit B-8, BCUC 2.7.3). PNG(N.E.) explains that by obtaining gas supply from Pine River it would not need to be concerned with the gas composition of any particular group of wells (Exhibit B-8, BCUC 2.7.3). According to PNG(N.E.), Spectra estimates the remaining life of its gathering and processing system has a remaining useful life of eighty years (Exhibit B-8, BCUC 2.7.3.2).

3.3.2 Evaluation of Alternatives

3.3.2.1 Comparison Matrix based on Resource Planning Objectives

PNG(N.E.) used the six resource planning objectives detailed in its 2012 Resource Plan to develop an evaluation framework by which to assess the four gas supply alternatives. The objectives and the relative weight that PNG(N.E.) assigned each objective is as follows:

	Objective	**Weighting**
(i)	Provision of safe, reliable service	30%
(ii)	Provision of least cost service	30%
(iii)	Economic viability of the utility	10%
(iv)	Stability of rates	10%
(v)	Environmental and socio-economic impacts	10%
(vi)	Alignment with the B.C. government's energy objectives	10%

(Exhibit B-1, p. 27)

Since the alternatives were developed to address the issue of supply constraint concerns for the Tumbler Ridge Service Area and improve security of supply, PNG(N.E.) assigned a greater weight to Objectives (i) provision of safe, reliable service and (ii) provision of least cost service.

For each objective, PNG(N.E.) selected the attributes and corresponding measures in the 2012 Resource Plan that it deemed relevant to the four alternatives (Exhibit B-1, p. 26). For each attribute, PNG(N.E.) scored the alternatives relative to each other, using a three point scale:

0= No
1= Indifferent[1]
2= Yes

Since some objectives had more attributes than others, PNG(N.E.) normalized the weightings by taking the average score for each attribute within a category, before applying the weighting. The total scores for each alternative, as presented in the Evidentiary Update[2] were as follows:

[1] For some attributes a score of "indifferent" was not applicable

[2] In the Evidentiary Update (Exhibit B-1-1, p.5) PNG(N.E.) revised its evaluation of the "load diversification" attribute under Objective (ii) (Least Cost Service).

Priority / Objective / Attribute	Measure (Yes / Indif. / No)	Recommended: CNG Virtual Pipeline			Option One: Contractual Changes			Option Two: Expand Gas Plant Capacity			Option Three: Sweet Gas Interconnection		
		Evaluation	Weight	Score	Evaluation	Weight	Score	Evaluation	Weight	Score	Evaluation	Weight	Score
1) Safe, reliable service													
- adequate capacity	Contingent capacity	Yes = 2			No = 0			Yes = 2			Yes = 2		
- diversification of supply portfolio	Additional supplier options	Yes = 2			No = 0			No = 0			No = 0		
- improve system reliability	Improved security of supply	Yes = 2			No = 0			No = 0			Yes = 2		
	Average:	2	30%	0.60	0	30%	0.00	0.67	30%	0.20	1.33	30%	0.40
2) Least cost service													
- low cost of service	Low levelized cost of service	Yes = 2			Yes = 2			No = 0			No = 0		
- diversification of supply portfolio	Competitive supplier options	Yes = 2			No = 0			No = 0			No = 0		
- load diversification	Increase system load factor	No = 0			No = 0			No = 0			No = 0		
	Average:	1.33	30%	0.40	0.67	30%	0.20	0	30%	0.00	0	30%	0.00
3) Economic viability of utility													
- stable or increasing throughput	Increased system throughput	Yes = 2			No = 0			Yes = 2			Yes = 2		
- minimized shareholder risk	Earn return on ratebase	Yes = 2			Indif. = 1			Yes = 2			Yes = 2		
	Average:	2	10%	0.20	0.5	10%	0.05	2	10%	0.20	2	10%	0.20
4) Stable rates													
- low sensitivity of forecast rates	Low range of cost of service impacts	Yes = 2			Yes = 2			Yes = 2			Yes = 2		
	Average:	2	10%	0.20	2	10%	0.20	2	10%	0.20	2	10%	0.20
5) Environmental and socio-economic impacts													
- low emissions	Low air quality impacts	Yes = 2			Yes = 2			No = 0			Yes = 2		
- low hydrologic/fisheries impacts	Low water quality impacts	Yes = 2			Yes = 2			Yes = 2			No = 0		
- minimal acheological/heritage impacts	Low First Nations impacts	Yes = 2			Yes = 2			Yes = 2			No = 0		
- positive economic impacts	Other stakeholder support	Yes = 2			Yes = 2			Yes = 2			Yes = 2		
	Average:	2	10%	0.20	2	10%	0.20	1.5	10%	0.15	1	10%	0.10
6) Alignment with BC Government Energy Objectives													
- reduction in GHG emissions	Reduction in GHG emissions	Yes = 2			Indif. = 1			Indif. = 1			Indif. = 1		
- promote CNG as an alternative fuel	CNG infrastucture	Yes = 2			No = 0			No = 0			No = 0		
	Average:	2	10%	0.20	0.5	10%	0.05	0.5	10%	0.05	0.5	10%	0.05
				1.80			0.70			0.80			0.95

Evaluation
Yes = 2; Indifferent = 1; No = 0

According to PNG(N.E.)'s assessment, the CNG Virtual Pipeline is the most favourable of the four alternatives. PNG(N.E.) submits that the implementation of a CNG Virtual Pipeline is the most prudent, cost effective solution. (Exhibit B-1, p. 36) In PNG(N.E.)'s evaluation, the CNG Virtual Pipeline is the best option for diversifying the supply of Tumbler Ridge, in addition to increasing capacity of supply to Tumbler Ridge (Exhibit B-1, pp. 23, 28, 36–37). In PNG(N.E.)'s evaluation, the CNG Virtual Pipeline also scored most favourably in terms of least cost service, in part because it offers a competitive supplier option (Exhibit B-1-1, p. 5).

PNG(N.E.) submits that the renegotiation of the CNRL Service Agreement alternative could potentially address the restriction on service to Quintette Mine, but does not address concerns about long-term supply security for the Tumbler Ridge Service Area (Exhibit B-1, p. 31). PNG(N.E.) also submits that renegotiating the existing service agreement with CNRL would be the most practical alternative (Exhibit B-1, p. 30) despite this option having been rated the lowest of the four alternatives.

In a series of Information Requests, PNG(N.E.) was asked to contemplate several modifications to the evaluation framework. PNG(N.E.) states:

> "PNG(N.E.) is receptive to improvements to the Resource Planning Objectives and, as this Application represents PNG(N.E.)'s initial application of identified objectives and criteria to a formal evaluation of a new investment in supply resources, PNG(N.E.) has found the Commission's questions, comments and suggestions insightful and helpful for future evaluations" (PNG(N.E.) Final Submission, p. 10).

PNG(N.E.) expressed agreement with the suggested modifications in the way some of the attributes and measures are scored. For example, for scoring the measure "levelized cost of service" PNG(N.E.) originally used the yes/no (2 or 0) scale, in which the "indifferent" score of 1 was not applicable. However, since the evaluation is a relative assessment, and the capital costs for the CNG Virtual Pipeline are less than alternatives 2 and 3, but greater than the no cost option of alternative 2, a scale of low=2, medium=1, and high=0 would be more reflective. PNG(N.E.) noted, however that this change would not change the overall ranking of the alternatives. (Exhibit B-8, BCUC 2.48.1)

PNG(N.E.) is also receptive to altering the measure for the "diversity of supply portfolio" under Objective (i) (Safe, reliable service) so that it only considers whether the project increases the number of physical interconnections to gas supply sources, and not whether the alternative increases the number of suppliers, which is already considered under the

> "diversity of supply portfolio" measure under Objective (ii) (Least Cost Service). PNG(N.E.) submits that applying the modified scoring for the attribute "results in a score of 'Yes' (2) for the CNG Virtual Pipeline and Alternative Three (Sweet Gas Interconnection), and a score of 'No' (0) for Alternatives One (Contractual Changes) and Two (Expand Gas Plant Capacity)" (Exhibit B-8, BCUC 2.48.8, BCUC 2.48.8.1).

Several attributes, namely "load diversification- increase system load factor," "low sensitivity of forecast rates- low range of cost of service impacts" and "positive economic impacts- other stakeholder support," scored the same across each of the alternatives. While PNG(N.E.) maintains that each of its attributes are useful in differentiating between the alternatives (PNG(N.E.) Final Submission, p. 10), the relative ranking of the alternatives remains the same when these criteria are omitted from the analysis.

To capture the fact that only the CNG Virtual Pipeline can provide additional security of supply to the other distributions system of PNG and PNG(N.E.), "PNG(N.E.) added an additional attribute 'security of the entire PNG system' under Objective (iii) (Economic Viability of Utility), giving a score of 'Yes' (2) to the CNG Virtual Pipeline, and 'No' (O) to the alternatives. (Exhibit B-8, BCUC 2.47.1)

As noted by PNG(N.E.), although these modifications may result in a revised total sum for each alternative, they do not alter the selection of the CNG Virtual Pipeline as the appropriate project. (Exhibit B-8, BCUC 2.48.3)

3.3.2.2 Net Present Value Comparison

PNG(N.E.) did not provide a Net Present Value (NPV) comparison of the alternatives as part of its Application. However, in response to BCUC IR 2.28.1, PNG(N.E.) provides a high level analysis of the net present values of the incremental costs and benefits of the CNG Virtual Pipeline as well as the Sweet Gas Pipeline and Expansion of the Tumbler Ridge Processing Plant alternatives (Exhibit B-8, pp. 75–77). In its NPV analysis, PNG(N.E.) assumes that the CNG Virtual Pipeline facilities will have a salvage value equal to their remaining undepreciated cost (book value). No residual value was assumed for site preparation costs (Exhibit B-8, BCUC 2.26.4, 2.28.1). PNG(N.E.) used depreciation rates of 6.67 percent for the trailers and 3.33 percent for the CNG compression and dispensing facility, indicating service lives of 15 years and 30 years, respectively (Exhibit B-4, BCUC 1.45.4). PNG(N.E.) also submits that the facilities required for the CNG Virtual Pipeline would have greater salvage value than those installed for other alternatives (Exhibit B-8, BCUC 2.28.1).

Based on this analysis, PNG(N.E.) found the CNG Virtual Pipeline to be the most cost effective option over a five-year discount period, and to be comparable to the other alternatives over a 10-year period. Over a 20-year period, the CNG Virtual Pipeline may be most cost effective, depending upon the assumptions regarding the life of the reserves that the supply line is connected to, and on the incremental capital and operating costs of the processing plant. PNG(N.E.) identifies the assumptions used in the analysis, but did not provide a schedule or spreadsheet showing the calculation of the NPV amounts (Exhibit B-8, BCUC 2.28.1).

Commission Determination

The Commission Panel accepts that the CNG Virtual Pipeline facilities have significant salvage values, compared to a pipeline or plant expansion. However, it is not clear why the NPV analysis assumes that PNG(N.E.) would realize a benefit equal to the CNG Virtual Pipeline salvage value at the end of the five-, 10- and 20-year periods. Given the fact that PNG(N.E.)'s NPV analysis was provided only at a high level of detail, the Commission Panel concludes that it can give only very minimal weight to the NPV comparison of alternatives. The Commission Panel is also concerned that the alternatives evaluation matrix needs to be more in depth to provide a better evaluation of the various alternatives.

The Commission Panel agrees that the objectives of "safe, reliable service" and "least cost service" are important considerations and accepts PNG(N.E.)'s weighting of these two objectives more heavily than others over when evaluating the alternatives. The Commission Panel agrees that the CNG Virtual Pipeline alternative will provide increased capacity and enable PNG(N.E.) to provide reliable firm service to new or expanding industrial customers such as Quintette Mine. The Panel acknowledges that the CNG Virtual Pipeline alternative offers PNG(N.E.) more competitive supply options, although the Panel notes that this is only for incremental supply. Under this alternative PNG(N.E.) will still be reliant on CNRL. The Panel agrees that the CNG Virtual Pipeline is significantly less costly than both the Sweet Gas Interconnection and Expand Tumbler Ridge Plant alternatives.

From the information provided by PNG(N.E.), it appears that CNRL is not amenable to revising the curtailment provisions of the Service Agreement at this time.

The Commission Panel is not convinced that the processing plant capacity has been fully utilized. This is further discussed in section 6.2. The true issue appears to be the Service Agreement with CNRL and the quantity and quality of the raw gas that CNRL will supply under the agreement. Expanding the plant would require a detailed evaluation of the sour gas supply and reserves in the

area, negotiation with CNRL to obtain long-term access to this raw gas, and confirmation of the feasibility and cost of the facilities required. Further, the Expand Plant alternative would still require removal of the 20,000 GJ per year restriction in the Service Agreement, in order to serve Quintette Mine. Therefore, the Commission Panel agrees that the Expand Plant option is not a suitable alternative at this time.

The Sweet Gas Interconnection alternative provides increased capacity as well as additional interconnection options, but at a very high cost to ratepayers. Furthermore, the top five wells identified for interconnection are owned by CNRL, which would not increase PNG(N.E.)'s security of supply, at least from a competitive standpoint. There appears to be sufficient supply to meet the increased demand for some years. This is further discussed in section 6.3. Therefore, the Commission considers the expense of this alternative to be unnecessary at this time.

For the foregoing reasons, the Commission Panel agrees with PNG(N.E.)'s conclusion that the CNG Virtual Pipeline is the preferred alternative at this time. Therefore, the Commission Panel approves PNG(N.E.)'s request to construct, own and operate the CNG Virtual Pipeline, subject to PNG(N.E.) meeting the conditions described in sections 3.4 and 5.3 before the Project proceeds. The conditions are intended to address certain risks to the Project that the Panel considers have not been adequately addressed and mitigated by PNG(N.E.).

3.4 Project Risk

As part of its Application, PNG(N.E.) did not specifically identify any Project Risks. However, through the IR process, certain Project Risks were identified and explored.

3.4.1 Lower than Anticipated Load

The Application states that Quintette Mine is in the process of re-establishing mining operations, and has filed a formal request for firm gas service, which PNG(N.E.) forecasts at 100,000 GJ in 2014 and 160,000 GJ per year starting in 2015 (Exhibit B-1, pp. 20, 41; Exhibit B-1-1, p. 41).

Subsequent to the filing of the Application, PNG(N.E.) advised the Commission of Teck Coal's delay in the final decision to put the mine into production until market conditions improve (Exhibit B-3, p. 1). Through the filing of its Evidentiary Update to reflect this new information, PNG(N.E.) revised its forecast demand for Quintette Mine downwards to 40,000 GJ in 2014, 100,000 GJ in 2015 and 160,000 GJ per year starting in 2016 (Exhibit B-1-1, Table 6-1, p. 41).

PNG(N.E.) submits that the CNG deliveries to Tumbler Ridge to service Quintette Mine and other potential customers represent a supplemental source of baseload supply to ensure firm service to all customers, and in particular those customers such as Quintette Mine whose forecast demand exceeds 20,000 GJ per year (Exhibit B-1-1, p. 40). Therefore, as the below table illustrates, the load forecast for CNG supply to the Tumbler Ridge Service Area for years 2014 through 2022 represents the projected demand from Quintette Mine less the 20,000 GJ of firm service provided to Quintette through natural gas supplied by CNRL.

Table 1: Forecast Demand for the Tumbler Ridge Service Area (Terajoules)

Tumbler Ridge (REFERENCE)		2012 (Act)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Residential		95	95	103	106	109	111	111	110	109	110	110
Small Commercial		48	49	51	52	52	53	53	54	54	55	56
Large Commercial Sales		40	28	22	22	22	22	22	22	22	22	22
Industrial Sales (Quintette)		47	25	40	100	160	160	160	160	160	160	160
Industrial Sales (HD Mining)		-	-	-	-	-	-	-	-	-	-	-
Industrial Sales (Peace River Coal)		-	-	-	-	-	-	-	-	-	-	-
Industrial Transport (CNRL)		794	800	818	818	818	818	818	818	818	818	818
Total Deliveries		1,024	996	1,033	1,098	1,161	1,164	1,164	1,164	1,163	1,164	1,165
Company Use												
Process Plant Fuel+Lineheaters	6.48%	24	24	24	24	24	24	24	24	24	24	24
Blowdowns and Losses	0.01%	0	-	-	-	-	-	-	-	-	-	-
UAF	0.00%	(4)	-	-	-	-	-	-	-	-	-	-
Total Tumbler Ridge		1,044	1,021	1,058	1,122	1,185	1,188	1,188	1,188	1,188	1,189	1,190
CNRL Supply		1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044	1,044
CNG Supply		-	-	14	78	141	144	144	144	144	145	146
Number of Deliveries per day (Average Annual)		-	-	0.1	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Number of Deliveries per day (Oct 1 - May 31)				0.1	0.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Number of Trailers required		-	-	2	2	2	2	2	2	2	2	2
Number of Trucks required		-	-	1	1	1	1	1	1	1	1	1

(Source: Exhibit B-1-1, Table 6-1, p. 41)

In the Evidentiary Update, PNG(N.E.) also states that it received a formal request from HD Mines for gas service for 555,000 GJ effective 2015 (Exhibit B-1-1, p. 21). PNG(N.E.) is therefore looking to

have capacity in place by the 2015 heating season to meet projected increased demand from industrial customers.

BCPSO is of the view that PNG(N.E.)'s focus on the salvage value of the CNG Virtual Pipeline facilities raises questions about the duration of the increased demand, stating:

> "BCPSO questions whether the emphasis on this benefit of the CNG Virtual Pipeline option speaks to PNG(N.E.)'s view on the probable duration of increased demand in the Tumbler Ridge division. PNG(N.E.) acknowledges in its application the possibility that demand projections for Tumbler Ridge may not materialize. If the goal is truly to minimize the risk of stranded assets, BCPSO submits that continuing to rent the equipment would be the best solution" (BCPSO Final Submission, p. 5).

In addition to the potential industrial gas need in the Tumbler Ridge Service Area, PNG(N.E.) forecasts 77,000 GJ per year of CNG demand in the Dawson Creek Service Area, and characterizes this demand as bulk CNG sales (Exhibit B-1, p. 40). However, the majority of the forecast CNG demand is related to the CNG that is planned to be trucked to the Tumbler Ridge Service Area to provide Tumbler Ridge with a supplemental baseload supply source. This is illustrated in the below table which splits the forecast demand for CNG in Dawson Creek into two categories: the forecast 77,000 GJ to service bulk CNG customers, and the forecast CNG to be trucked to Tumbler Ridge. The forecast CNG to be trucked to Tumbler Ridge equates to the forecast demand from Quintette Mine less the 20,000 GJ of firm service provided to Quintette Mine through PNG(N.E.)'s traditional natural gas supply. (Exhibit B-1-1, pp. 40–41)

Table 2: Forecast CNG Demand for the Dawson Creek Service Area (Terajoules)

Dawson Creek CNG Only	2012 (Act)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CNG deliveries to Tumbler Ridge	-	-	14	78	141	144	144	144	144	145	146
Local CNG Deliveries	-	-	77	77	77	77	77	77	77	77	77
Total CNG	-	-	91	155	218	221	221	221	221	222	223

(Source: Exhibit B-1-1, Table 6-1, p. 41)

In the Application, PNG(N.E.) states that it has obtained letters of support from the City of Dawson Creek and School District 59 indicating their interest in CNG for NGV fueling. PNG(N.E.) estimates that the potential initial demand for CNG for NGV fueling may be as high as 42,000 GJ (Exhibit B-2,

p. 19). PNG(N.E.) has also held discussions about bulk CNG sales with a customer for an initial volume of 45,000 GJ per year, increasing to as much as 120,000 GJ per year (Exhibit B-1, p. 20). PNG(N.E.) filed a confidential Memorandum of Agreement for bulk CNG sales (Exhibit B-2, Memorandum of Agreement).

PNG(N.E.) does not propose that Tumbler Ridge or other RS 30 CNG sales customers commit to a minimum annual take-or-pay quantity or minimum annual bill beyond the minimum qualifying volume of 10,000 GJ annually. PNG(N.E.) believes that the proposed R S30 provides a balanced risk profile. At the same time, PNG(N.E.) does not believe that its shareholder should be at risk for long-term shortfalls in RS 30 deliveries (Exhibit B-8, BCUC 2.34.1, 2.34.2, 2.34.3).

3.4.2 Stranded Asset Risk

PNG(N.E.) states that the CNG Virtual Pipeline presents a low risk for stranding of capital investments. PNG(N.E.) submits that the proposed CNG facilities are mobile and can be re-deployed or sold with relative ease (Exhibit B-1, p. 24).

BCPSO questions PNG(N.E.)'s assertion that the Project has a low risk of stranded assets, noting that PNG(N.E.) has not identified either potential buyers or potential areas of redeployment if the demand in Tumbler Ridge is lower than forecast (BCPSO Final Argument, p. 5).

PNG(N.E.) submits that it has the ability to deliver CNG at the proposed baseload level in perpetuity without impacting rates significantly and without having to realize significant growth to justify maintaining this service. PNG(N.E.) further submits that, while not discussed in detail in the evidence on record, it has had discussions with parties that have expressed an interest in acquiring trailers for bulk CNG transport, including Heritage Gas in Nova Scotia, a sister company of PNG(N.E.) and a subsidiary of AltaGas Ltd., which presently operates a CNG virtual pipeline. (PNG(N.E.) Reply Submission, p. 8)

Commission Determination

The primary need for the CNG Virtual Pipeline Project is to provide firm gas service to new or expanding industrial customers, Quintette Mine in particular. However, the Commission Panel agrees with BCPSO's point that the demand from these customers is presently far from certain. The Panel believes that formal requests for firm service must be accompanied by firm contractual commitments to use the service, in order to justify significant capital expenditures by PNG(N.E.). Anything less leaves PNG(N.E.) and existing ratepayers exposed to significant risk in the event the new contracts are not forthcoming. Quintette Mine's delay in commencing operations illustrates this risk.

The CNG Virtual Pipeline is a supply resource that involves a considerable capital expenditure as well as a high annual operating cost. As Table 2 illustrates, PNG(N.E.) forecasts an annual demand for CNG deliveries from Dawson Creek to Tumbler Ridge starting in 2016 of 140,000 GJ based on the request for firm service from Teck Coal for its Quintette Mine (Exhibit B-1-1, p. 40). As Table 1 illustrates, the Industrial Sales Demand forecast starting in 2016 is 160,000 GJ and is solely attributable to the one industrial sales customer Quintette Mine. Of this 160,000 GJ of forecast demand, 20,000 GJ of firm service will be supplied through PNG(N.E.)'s traditional natural gas supply source. Thus, the forecast demand attributable to the CNG Virtual Pipeline is the remaining 140,000 GJ required by Quintette Mine.

The Panel considers it necessary, as a risk mitigation measure, for PNG(N.E.) to obtain a firm commitment from customer(s) to show that the service will be used and will generate revenue that is consistent with the cost of service estimates and demand forecasts used to justify the Project.

The Panel is cognizant of the need to recover the Project's capital costs over a reasonable period of time. As the vast majority of the project costs are for the purpose of providing firm supply to users of more than 20,000 GJ/year, the relationship between the viability of the project and the supplying of gas to these customers over a period of time is apparent. A firm commitment from these users of at least four to seven years is needed to recover these costs and any deferral account balances. To minimize the potential impact on the regular ratepayers of the Tumbler

Ridge Service Area, it is deemed that a longer period of firm commitment is necessary. In considering the evidence, the Panel believes that a contract period of a minimum of seven years is needed and appropriate. **Therefore, the Commission Panel grants the CPCN for the CNG Virtual Pipeline subject to the following conditions and a sixth condition described in section 5.4, all of which PNG(N.E.) must meet on or before December 31, 2016:**

1) **PNG(N.E.) must provide evidence that there is sufficient firm commitment from a customer (or combination of customers) for take-or-pay service for a minimum of 60 percent of the total forecast CNG demand for the Tumbler Ridge Service Area of 140,000 GJ. This take-or-pay contract (or combination of contracts) must be set for a minimum of seven years effective from the in-service date of the CNG Virtual Pipeline.** The Panel bases the forecast demand on the 2016 forecast CNG supply of 140,000 GJ, as shown in Table 1 above. The Panel considers that a 60 percent commitment is appropriate because it provides some certainty that the demand will materialize, while also recognizing that there is potential for existing Tumbler Ridge customers to benefit from the new facilities. The Panel also considers that a medium to long-term commitment is appropriate as it provides sufficient support to mitigate the risks to the existing Tumbler Ridge ratepayers of stranded assets.

2) **PNG(N.E.) must calculate the rate charged under the minimum 60 percent take-or-pay contract(s) in Condition 1 based on the rolled-in cost of the existing Tumbler Ridge natural gas system with the incremental cost of the CNG Virtual Pipeline.** As guidance in determining the rate, the Panel refers PNG(N.E.) to section 3.1.5 of the 1995 PNG and PNG(N.E.) Rate Design Decision[3], which discussed the Cost of Service Implications of the 1993/94 Looping Agreement. In that Decision, the Commission required that PNG use a rolled-in methodology whereby the facilities which are constructed for the reliable service of all customers should be allocated to the embedded costs that are allocated to all customers. (Order G-106-95, Appendix A, pp. 17-18) Therefore, in determining the appropriate rate to charge, PNG must consider the revenue requirements for the existing

[3]An Application by Pacific Northern Gas Ltd./Pacific Northern Gas (N.E.) Ltd. in the form of a Cost of Service Allocation / Rate Design Study Decision Dated December 15, 1995, Oder G-106-95.

Tumbler Ridge operations as well as the revenue requirements resulting from the incremental capital and operating costs for the CNG Virtual Pipeline.

3) **PNG(N.E.) Dawson Creek Division must obtain a minimum volume commitment from the PNG(N.E.) Tumbler Ridge Division of 60 percent of the forecast deliveries of CNG to Tumbler Ridge of 140,000 GJ for a minimum of seven years, effective from the in-service date of the Project.** The Panel finds that there is a risk of lower than anticipated load in the Dawson Creek Service Area, which could place Dawson Creek ratepayers at risk for increased rates to cover the capital and operating costs of the compression and dispensing facility. The Panel bases the forecast CNG demand on the 2016 forecast CNG deliveries to the Tumbler Ridge Service Area of 140,000 GJ, as shown in Table 2 above. The Panel considers this commitment between the Dawson Creek and Tumbler Ridge Divisions to be appropriate and consistent with the conditions set for the Tumbler Ridge Division.

4) **PNG(N.E.) must file the minimum take-or-pay contracts which collectively satisfy Conditions 1 through 3.**

5) **PNG(N.E.) is further directed to file a rate proposal and accompanying rate schedule for Quintette Mine and other potential customers of the CNG Virtual Pipeline which contemplates the cost recovery mechanisms in Conditions 1 and 2 above.**

PNG(N.E.) is to confirm acceptance of these five conditions, as well as the sixth condition described in section 5.4, through a compliance filing by April 30, 2014. If PNG(N.E.) does not confirm acceptance of the six conditions by the deadline, nor meet the six conditions by December 31, 2016, the CPCN approval shall be deemed cancelled.

3.5 Consultation

3.5.1 Community Engagement and Support

PNG(N.E.) submits that it has been in close collaboration with the City of Dawson Creek on the CNG Virtual Pipeline proposal, and that the City of Dawson Creek has expressed support for the project. A letter from the City of Dawson Creek, submitted by PNG(N.E.), states:

> "The City of Dawson Creek would like to offer its support to Pacific Northern Gas (PNG) for its efforts to build a permanent compressed natural gas (CNG) station within the city limits…The City would like to continue their support of CNG and wishes to encourage the development of a permanent station in Dawson Creek." (Exhibit B-1, Appendix D, p. 1)

PNG(N.E.) submits that other community stakeholders, such as School District 59, have expressed interest in and support for NGV fuelling in the Dawson Creek Service Area (Exhibit B-1, p. 17).

PNG(N.E.) also submits that it performed informal outreach with community leadership in Tumbler Ridge and "met with various members of local government and administration on three separate occasions to discuss the justification for PNG(N.E.)'s proposed CNG Virtual Pipeline" (Exhibit B-1, p. 18).

PNG(N.E.) submits that Tumbler Ridge stakeholders expressed some concerns about the Project with respect to the original proposed location of the back-up receiving and injection terminal at Town Gate Station. PNG(N.E.) submits that the community expressed safety concerns due to the close proximity of the proposed back-up terminal to the community. PNG(N.E.) submits that the location of the back-up injection site at Town Gate station is not critical, and that "PNG(N.E.) would work with the District Administration to find an alternative location suitable to all parties." (Exhibit B-1, p. 18) In its Final Submission, PNG(N.E.) states:

> "the exact location of the backup injection site in the community was not critical to the Project and [PNG(N.E.)]has subsequently identified a site it presently owns within the Tumbler Ridge Industrial Park as a feasible location and submits that it is a preferable site for this facility" (PNG(N.E.) Final Submission, p. 19).

The District of Tumbler Ridge does not identify the location of the backup injection station as a remaining concern in its Final Submission.

Tumbler Ridge Service Area stakeholders expressed concerns about potential adverse rate impacts on residential and small commercial customers. However, PNG(N.E.) submits that the community of Tumbler Ridge understands the importance of retaining existing large industrial users as customers of the utility. PNG(N.E.) states:

> "the District Administration recognizes that the CNG Virtual Pipeline proposal represents the most cost-effective and flexible solution to stabilize natural gas supply to the community and customer rates and to enable industrial growth in the medium-term, until such time that an evaluation might be made supporting construction of a new pipeline interconnection to a sweet gas supply as an economically viable alternative" (Exhibit B-1, p. 18).

However, in its Final Submission, the District of Tumbler Ridge continues to be opposed to its ratepayers paying for the project. DTR states:

> "the District's primary concerns in this matter are founded on the stated intent of PNG(N.E.) to attribute the capital costs and the operating costs of these new assets to the Tumbler Ridge rate base. We continue to consider any apportionment of direct industrial costs to the remaining non-benefiting local sectors to be both inequitable and unacceptable" (DTR Final Submission, p. 1).

Furthermore, DTR expresses concerns about the adequacy of PNG(N.E.)'s evaluation of the CNRL supply shortfall, and questions PNG(N.E.)'s efforts to develop the needed resources to ensure a dependable and sustainable supply of natural gas for Tumbler Ridge. DTR submits:

> "In numerous responses, PNG (N.E,) has confirmed that 'the 2009 Tumbler Ridge Gas Reserves Study confirmed that there is ample supply of gas having H2S and CO2 that meets the requirements of the Tumbler Ridge gas plant.' In this regard, we would appreciate knowing what efforts have been made to date to develop these resources in order to ensure a dependable and sustainable supply of natural gas for Tumbler Ridge's current and projected needs. Concurrently, we would also appreciate knowing what, if any, projected timeline may exist within the industry for the development of these needed resources…
>
> …As our direct provider of natural gas, we consider it to be PNG(N.E.)'s obligation to undertake any and all reasonable steps as a way of ensuring a dependable and sustainable supply of natural gas to their existing customers…

> …In light of the absence of pertinent information, the District of Tumbler Ridge continues to express its formal objection to the reference application." (DTR Final Submission, pp. 1–2)

PNG(N.E.) replies that it relies on the efforts of producers in the area to supply raw gas, its knowledge of gas resources is limited to the information that producers will provide, and that it has no influence over the selection and timing of gas reserve development. PNG(N.E.) submits that it has taken all reasonable steps to ensure a dependable and sustainable supply of gas for all existing customers (PNG(N.E.) Reply Submission, pp. 2–3).

3.5.2 First Nations Consultation

In its Application, PNG(N.E.) states:

> "All of the proposed facilities for the CNG Virtual Pipeline will be located within the boundaries of established municipalities. Therefore PNG(N.E.) has not identified, nor does it anticipate, any issues or concerns related to First Nations." (Exhibit B-1, p. 18)

PNG(N.E.) undertook an internet search to identify and assess potential First Nations interests related to the Project. PNG(N.E.) confirmed that the Project is situated within the boundary of Historic Treaty Number 8. (Exhibit B-4, BCUC 1.54.2)

In response to an Information Request, that it "explain, with reference to relevant cases, whether there is a duty to consult First Nations with respect to activity contemplated along existing Utility Right-of-Ways," PNG(N.E.) provided the following answer, in part, on the impact of treaty rights:

> "Treaty rights flow from the treaty under which they are granted. However, as explained by the Supreme Court in *Mikisew Cree*, Treaty 8 has a provision that allows lands to be 'taken up' by the Crown and, after lands are taken up, treaty rights can no longer be exercised on those lands. *Badger* provides that, in some circumstances, treaty rights may continue to be exercised on private lands until those lands are the subject of a visible, incompatible use." (Exhibit B-8, BCUC 2.53.1.1)

PNG(N.E.) submits that the lands used for the Project have already been sufficiently "taken up", such that Treaty rights cannot be exercised on the lands in question, irrespective of the Project.

PNG(N.E.) gives the following reasons as to why the lands required for the Project are already "taken up":

- While currently vacant, Lot A was previously part of a larger parcel of land that was used for railway purposes (Exhibit B-4, BCUC 1.55.1);
- The area surrounding Lot A is zoned as "light industrial" and is being actively used "in a manner that is incompatible with hunting, including a BC Hydro substation, various industrial facilities and residences" (Exhibit B-4, BCUC 1.55.1; Exhibit B-8, BCUC 2.54.1);
- The location of the injection terminals at Tumbler Ridge are within PNG(N.E.)'s existing utility Right-of-Ways (ROWs) (Exhibit B-8, BCUC 2.53.1.1); and
- The remainder of the project will be on a combination of privately-owned fee-simple land, utility ROWs or public access ROWs (municipal roads and provincial highways) (Exhibit B-4, BCUC 1.54.1.2).

PNG(N.E.) provided maps and satellite images to demonstrate that the area surrounding Lot A is "taken up" for industrial uses, incompatible with hunting, fishing or trapping (Exhibit B-8, BCUC 2.54.1).

Furthermore, PNG(N.E.) submits that "The CNG Virtual Pipeline will have no deleterious impacts on the environment" (Exhibit B-1, p. 17). PNG(N.E.) maintains that Treaty 8 First Nations' rights are not impacted by the Project, and therefore there is no obligation to consult First Nations with respect to the proposed CNG Virtual Pipeline.

PNG(N.E.) also submits that the requirement, if any, to engage in consultation with First Nations with respect to the Project lies with the BCR Properties or the Crown (Exhibit B-8, BCUC 2.55.1.3). PNG(N.E.) has not been delegated any consultation responsibilities from BC Rail. PNG(N.E.) submits:

> "PNG(N.E.) has sought the opinion of BCR Properties as the vendor of the lands and a Crown agent on whether it believes that the duty to consult is triggered. …BCR Properties does not believe that the duty to consult is triggered." (Exhibit B-8, BCUC 2.55.1.1)

Commission Determination

The Commission Panel finds that overall, public consultation efforts have been adequate. PNG(N.E.) has met with representatives for the City of Dawson Creek and the District of Tumbler Ridge and provided information about the Project.

PNG(N.E.) has taken measures to address the District of Tumbler Ridge's concern regarding the safety of the back-up injection station at Town Gate by identifying an alternative location for the station within PNG(N.E.)'s industrial park.

The District of Tumbler Ridge's outstanding concern regarding PNG(N.E.)'s limited knowledge of the long-term supply available to service Tumbler Ridge will be addressed by the long-term supply study for the Tumble Ridge area, which PNG(N.E.) has been directed to undertake in section 6.3 of the Decision.

On the basis of the evidence in this proceeding, the Commission Panel concludes that there was no obligation upon PNG(N.E.) to consult with First Nations for the purposes of this Application. The duty to consult rests with the Crown. On PNG(N.E.)'s evidence, that duty had not been delegated to it. Further, the Panel is satisfied on the evidence before it that the lands to be used for the Project have been "taken up."

The Panel bases its findings on the reasons provided by PNG(N.E.) referred to in this section and its review of the maps and satellite images of the area surrounding Lot A submitted by PNG(N.E.), which show the site in question has already been "taken up" and put to "visibly incompatible use," such that First Nations cannot exercise their Treaty rights on the land in question. Therefore, the purchase of Lot A by PNG(N.E.), or the building of a compression and dispensing facility on the site will not have an impact on Treaty rights.

4.0 PROJECT COSTS

4.1 Capital Cost Components

In the Evidentiary Update, PNG(N.E.) estimates the capital cost of the CNG Virtual Pipeline as follows:

Dawson Creek land, compression, dispensing station	$1,683,920
CNG Trailers (to Tumbler Ridge rate base)	$1,583,740
Tumbler Ridge receiving stations	$260,356
Contingency at 10%	$353,002
TOTAL	$3,881,017

The estimate is generally based on budgetary quotes received from suppliers, manufacturers and service providers (Exhibit B-1-1, p. 7).

4.1.1 Cost of Compressor Site Land

One risk in the cost estimate is the potentially higher cost for compressor site land at Dawson Creek if the proposed Lot A site becomes unavailable or proves unsatisfactory. The current estimate of $345,100 could increase by as much as $245,000 (Exhibit B-8, BCUC 2.29.2). At the close of the evidentiary phase of the proceeding, the Offer to Purchase the compressor site land had been extended to January 31, 2014 (Exhibit B-11, p. 2).

BCPSO expresses concern about utilities becoming land speculators, with ratepayers providing financing. In its final submission, BCPSO makes reference to the *ATCO Gas and Pipelines Ltd. v. Alberta*[4] decision, and states: "... there should therefore be a high regulatory bar in terms of clear, certain, and material ratepayer benefit for approval to be granted" (BCPSO Final Submission, pp. 6–7). PNG(N.E.) replies that a land site is an essential part of the Project, and the Dawson Creek industrial land market is very tight such that suitable sites are scarce. PNG(N.E.) submits:

[4] *ATCO Gas and Pipelines Ltd. v. Alberta (Energy and Utilities Board*), 2006 SCC 4

> "On this basis, PNG(N.E.) does not believe it to be unreasonable to secure the required property in anticipation of approval to proceed with the Project such that a suitable site is available at that time" (PNG(N.E.) Reply Submission, p. 9).

4.1.2 Cost of CNG Trailers

PNG(N.E.) considered three trailer-types when estimating the cost for the two CNG Trailers it seeks to purchase. Based on its review, PNG(N.E.) determined that Type III trailers were most appropriate in order to maximize natural gas volume per load, while balancing capital and transport costs (Exhibit B-1, p. 10). PNG(N.E.) submits that the higher capital cost of the Type III trailers is justified by the lower variable transportation costs associated with Type III trailers (PNG(N.E.) Final Submission, p. 9).

	Type II	Type III	Type IV	Reference
Design	Small steel tubes	Aluminum tubes	Composite bottles	Exhibit B-4, BCUC 1.5.1
Cost, 2013$	428,000	741,000	485,000	Exhibit B-8, BCUC 2.22.5
Capacity, GJ	386	493	370	Exhibit B-8, BCUC 2.22.5
Max Delivery, GJ/d	1231	1411	1200	Exhibit B-8, BCUC 2.22.5

As shown in the Table above, the evidence indicates that the cost estimate for the CNG Virtual Pipeline Project could be reduced by about $688,000 (including 10 percent contingency) by using two Type II trailers rather than two Type III trailers (Exhibit B-8, BCUC 2.22.5). On the other hand, the higher capacity of Type III trailers will reduce the number of trips required and permit somewhat more growth in peak day load before a third trailer needs to be purchased (Exhibit B-4, BCUC 1.6.2).

PNG(N.E.) calculates net present value savings over 20 years for Type III trailers relative to Type II, of $134,000 using a discount rate of 7.31 percent and of zero using a discount rate of 11.13 percent (Exhibit B-5, BCPSO 1.2.1).

Under a peak day operating scenario, PNG(N.E.) estimates that using CNG as a peak day gas supply resource would reduce the amount of CNG required by Tumbler Ridge in 2016 to 20,216 GJ (Exhibit

B-8, BCUC 2.24.1). Under this scenario, the 2016 Tumbler Ridge CNG Service Revenue Requirement is $369,000 for Type III trailers and $292,000 for Type II trailers. PNG(N.E.) submits that the $77,000 annual savings using Type II trailers represents $0.07/GJ (Exhibit B-11, BCUC 3.2.1).

Commission Determination

It is evident from the information provided in the Application and the further evidence gathered through the IR process that the capital costs provided by PNG(N.E.) are well founded. The Land costs are based on a purchase contract with the vendor while the equipment costs are based on quotes received from suppliers, manufacturer and service providers. The Commission Panel accepts the capital costs as being reasonable estimates based on the evidence collected in the course of this proceeding. **The Panel therefore approves the capital budget of $3.842 million.**

4.2 Operating (Revenue Requirement) Components

4.2.1 Cost of Energy

PNG(N.E.) estimates the cost of energy as a component of its forecast annual operating costs for Dawson Creek, but has not included a cost of energy component as part of its forecast annual operating costs for Tumbler Ridge.

PNG(N.E.) includes the cost of electricity used to operate the Compression and Dispensing Station in Dawson Creek in the cost of energy. It estimates the cost of energy to be $63,000 in 2016, calculated based on BC Hydro's Rate Schedule 1611 Large General Service and the peak load of the CNG compression facility of 309 kW (Exhibit B-1-1, Table 3-3, p. 14). PNG(N.E.) provides a detailed calculation of this energy cost in its response to BCUC IR 1.45.2. As part of its Evidentiary Update, PNG(N.E.) provided a revised response to BCUC IR 1.45.2 in which PNG(N.E.) indicated that it has assumed that the BC Hydro RS 1611 charges will increase by five percent each year over the period 2014 to 2016 and then by one percent per year for the remainder of the forecast period. (Exhibit B-1-1, Revised BCUC 1.45.2) PNG(N.E.) considers its BC Hydro rate increase assumptions to be "middle-of-the-road" given the findings in the confidential report for BC Hydro's Rates Working

Group which was leaked to the major news outlets by the Canadian Office and Professional Employees Union, and the statements made by Energy Minister Bill Bennett in a September 11, 2013 Globe and Mail article. PNG(N.E.) states that is has conducted an analysis of the sensitivity of the compression facility cost of service to the power costs and that based on PNG(N.E.)'s analysis for every 10 percent increase in power costs, the compression facility cost of service on a per GJ basis increases by approximately 1.7 cents, or one percent. (Exhibit B-8, BCUC 2.33.7)

4.2.2 Operations and Maintenance

PNG(N.E.) estimated ongoing operating and maintenance (O&M) expenses for Dawson Creek and Tumbler Ridge separately.

For Dawson Creek PNG(N.E.) estimates the ongoing O&M expenses to be $110,000 plus $11,000 related to the allocation of Administrative and General (A&G) and corporate overhead expenses starting in 2016, which is the first year that Quintette Mine is expected to be in full operation (Exhibit B-1-1, Table 3-3, p. 14; Exhibit B-8, BCUC 2.33.1). The $110,000 of O&M relates to the operation of the Compression and Dispensing Station in Dawson Creek. This amount includes $30,000 for annual parts and service maintenance while the remaining portion of the cost is for labour, as PNG(N.E.) has estimated that the Compression and Dispensing Station will require a PNG trained staff to be onsite two hours per day to perform checks and maintenance (Exhibit B-1-1, Table 3-3, p. 14; Exhibit B-8, BCUC 2.33.4). PNG(N.E.) states that the Compression and Dispensing Station will operate un-manned, but that it has trained several of its service technicians to perform routine daily checks and maintenance on the compressor. These checks, which have been occurring as part of PNG(N.E.)'s temporary pilot project, occur twice or more per day as part of the service technicians' regular routine work schedule (Exhibit B-4, BCUC 1.43.6). PNG(N.E.) states that the Allocation of A&G is a provision for any potential general and administrative costs which is calculated as 10 percent of the Facility O&M (Exhibit B-4, BCUC 1.48.3).

PNG(N.E.) estimates the ongoing O&M expense for Tumbler Ridge to be $300,000, which includes $257,000 for transportation of the CNG, $10,000 for annual CNG trailer maintenance, $29,000 for maintenance, snow removal and gravelling at the Tumbler Ridge receiving and injection terminals, and $4,000 for the allocation of A&G and corporate overhead. The O&M costs are based on the assumption that PNG(N.E.) will utilize two transport trailers and that the average cost per trip is approximately $800 based on approximately one trailer per day travelling 250 kilometres round trip over six hours using a CNG powered tractor. (Exhibit B-1-1, Table 3-3, p. 14)

4.2.3 Property Taxes

PNG(N.E.) has included an annual provision for property taxes in Dawson Creek of approximately $24,000 annually (Exhibit B-1-1, Table 3-3, p. 14). This amount is based on PNG(N.E.)'s most recent property assessment of $368,000 for the BC Rail site, in addition to the Dawson Creek Utility combined mill rate per $1,000 of $66.0834 (Exhibit B-4, BCUC 1.45.4).

PNG(N.E.) has not included a property tax expense component as part of its forecast of annual operating costs for Tumbler Ridge.

4.2.4 Depreciation and Amortization

PNG(N.E.) has included depreciation and amortization expenses for the year 2016 of $45,000 for Dawson Creek and $168,000 for Tumbler Ridge. PNG(N.E.) indicates that the depreciation expense for Dawson Creek is calculated based on an annual rate for Compressor Equipment of 3.33 percent. The depreciation expense for Tumbler Ridge is calculated based on the annual rate of 6.67 percent for Heavy Work Equipment which is applied to the CNG Trailers and the annual rate of 4.00 percent for Regulating Equipment which is applied to the Unloading Facility. (Exhibit B-1-1, Table 3-3, p. 14; Exhibit B-4, BCUC 1.45.4)

Commission Panel Determination

The Panel accepts the basis and assumptions for the calculation of the cost of service inputs to be reasonable based on the evidence in this proceeding. **The Panel therefore accepts PNG(N.E.)'s forecast for the cost of service inputs for both Dawson Creek and Tumbler Ridge.**

5.0 RATE DESIGN AND RATES

5.1 Deferral Accounts

5.1.1 2012/2013 Quintette Security of Supply Agreement Deferral Account

By Order G-183-12, the Commission gave PNG(N.E.) approval to establish the Quintette Security of Supply Agreement 2012/2013 Deferral Account (Quintette SSA Deferral Account) to record the costs associated with providing CNG to Teck Coal's Quintette Mine operations under the Quintette SSA for the three month period during winter 2012/2013. As part of the Application, PNG(N.E.) requests approval to: (i) transfer $43,180 of the deferred costs to the capital cost of the CNG Virtual Pipeline, and (ii) recover the remaining $261,706 of deferred costs in Tumbler Ridge rates on a straight-line basis over five years. (Exhibit B-1-1, p. 55)

Transfer of Deferred Costs to Project Capital Costs:

PNG(N.E.) requests approval to allocate $43,180 from the Quintette SSA Deferral Account to the Project's capital costs as follows:

- Towards Dawson Creek capital costs, $27,140 in electrical equipment and fencing costs; and
- Towards Tumbler Ridge capital costs, $16,040 in costs related to site improvements made to the proposed receiving and injection terminals in Tumbler Ridge. (Exhibit B-4, BCUC 1.1.1)

PNG(N.E.) submits that these deferred costs all relate to facilities and improvements that can be utilized on an ongoing basis for the permanent CNG service and thus it is appropriate for these deferred costs to be capitalized (Exhibit B-1-1, p. 55).

Recovery of Deferred Costs from Tumbler Ridge Ratepayers

PNG(N.E.) provides a breakdown of the Quintette SSA Deferral Account balance of $261,706 in its response to BCUC IR 1.52.3.

When asked why PNG(N.E.) believes it is appropriate to recover the deferred costs from Tumbler Ridge ratepayers instead of seeking reimbursement from Teck Coal, PNG(N.E.) stated that the temporary provision of CNG to Quintette Mine under the SSA is an element of a larger strategy to provide supplemental CNG supply to the Tumbler Ridge service area which benefits all Tumbler Ridge customers. PNG(N.E.) submits that Tumbler Ridge is a direct beneficiary of the temporary CNG service provided to Teck Coal under the Quintette SSA because providing the temporary CNG service to Teck Coal retains Quintette Mine as a customer on the system, which provides opportunities for system load growth. (Exhibit B-8, BCUC 2.44.2, 2.44.3)

PNG(N.E.) also submits that a five year amortization period for the Quintette SSA Deferral Account is appropriate because it provides the benefits of rate smoothing and it aligns with the ongoing value that PNG(N.E.) considers the Quintette SSA to provide to all Tumbler Ridge ratepayers by way of retention of the Quintette Mine sales volumes into the future and the experience gained by PNG(N.E.) through the operation of the temporary CNG services to Quintette Mine (Exhibit B-4, BCUC 1.52.1). PNG(N.E.) provides the burner tip rate impacts for Tumbler Ridge customers which compares the rate impacts of amortizing the Quintette SSA Deferral Account over the following time periods: the proposed five years, three years, two years and one year. The result of decreasing the amortization period is that customers would experience larger overall rate increases. (Exhibit B-8, BCUC 2.42.1)

The BCPSO states that it is "strongly opposed" to an amortization period that is less than PNG(N.E.)'s proposed five years and that it would support amortizing the Quintette SSA Deferral Account over a period greater than the proposed five years to lessen the impact on residential customers (BCPSO Final Submission, p. 5).

In its response to BCUC IR 1.52.2, PNG(N.E.) submits that it accepts that the Quintette SSA Deferral Account should earn a return based on Tumbler Ridge's weighted average cost of debt (WACD) as this is consistent with a number of past Commission decisions, including the PNG West and PNG(N.E.) 2013 RRA Decisions (Exhibit B-4, BCUC 1.52.2).

Commission Determination

Transfer of Deferred Costs to Project Capital Costs

Subject to PNG(N.E.) meeting each of the Conditions in section 3.4 and section 5.3, the Commission Panel is prepared to approve for PNG(N.E.) to:

- **transfer $27,140 from the Quintette SSA Deferral Account to the Dawson Creek portion of the Project capital costs and**
- **transfer $16,040 to the Tumbler Ridge portion of the Project capital costs,**

for a total transfer of $43,180 from the Quinette SSA Deferral Account to Project capital costs. The Panel considers that PNG(N.E.) has provided adequate support to show that these costs relate to facilities or improvements that can be used on an ongoing basis as part of the project.

If the conditions of the CPCN approval are not met, the Panel determines that the $43,180 which PNG(N.E.) requests to transfer to Project Capital Costs shall remain in the Quintette SSA Deferral Account, the recovery of which is discussed below.

Recovery of Deferred Costs from Tumbler Ridge Ratepayers

While maintaining Quintette Mine as a customer provides some benefit to all Tumbler Ridge ratepayers, the primary beneficiary of the temporary security of supply arrangement is Quintette Mine itself. The deferral account was set up to absorb some of the costs attributed to the temporary services provided to Quintette Mine in the 2012/13 and 2013/14 demand years. As such, the Commission Panel is not persuaded that the costs of the SSA Deferral Account should be recovered from the other customers in the Tumbler Ridge Service Area. **Therefore, the Commission Panel does not approve PNG(N.E.)'s request to recover any part of the Quintette SSA Deferral Account from Tumbler Ridge ratepayers.**

5.1.2 Studies Deferral Account

PNG(N.E.) is requesting approval to transfer the $3,203 in costs accumulated in the Studies Deferral Account and the costs associated with the Sweet Gas Supply Options Study of $18,613 to the Tumbler Ridge portion of the capital cost of the CNG Virtual Pipeline. If approved, these costs would be included in the Tumbler Ridge site preparation, mobilization and commissioning capital costs. (Exhibit B-1-1, p. 2)

PNG(N.E.) states that the costs contained in the Studies Deferral Account were incurred prior to 2001 and that they relate to the historic study of supply options for Tumbler Ridge (Exhibit B-4, BCUC 1.53.2). In response to BCUC IR 2.46.2, PNG(N.E.) submits that given the immateriality of the costs included in the Studies Deferral Account and the fact that the costs were incurred over a decade ago, it would also be acceptable to expense the deferred costs into rates in the upcoming test period, as this approach is consistent with the principles established in the 2012-2013 FortisBC Inc. RRA Decision (Exhibit B-8, BCUC 2.46.2).

PNG(N.E.) states that the Sweet Gas Supply Options Study costs of $18,613 were incurred in 2013 as payments made to Solaris to perform the Sweet Gas Supply Options Study. This study was included as Appendix J to the Application. (Exhibit B-8, BCUC 2.32.1)

Commission Panel Determination

Subject to PNG(N.E.) meeting each of the conditions set out in section 3.4 and section 5.3, the Commission Panel approves the inclusion of the $18,613 incurred for the Sweet Gas Supply Options Study in the Tumbler Ridge portion of the capital costs of the CNG Virtual Pipeline.

If PNG(N.E.) cannot meet the conditions of the CPCN, the Panel directs PNG(N.E.) to place the $18,613 into a new "Sweet Gas Studies" deferral account. The Panel further directs PNG(N.E.) to apply for recovery of this deferral account as part of its next Revenue Requirements Application.

With respect to the $3,203 in the Studies Deferral Account, the Commission Panel denies PNG(N.E.)'s request to include the $3,203 Studies Deferral Account as part of the capital costs of the Project. The Studies Deferral Account costs were incurred prior to 2001 and therefore it is not reasonable to associate these previously incurred study costs with the current CNG Virtual Pipeline project. **Therefore, the Panel finds that these costs do not have a direct correlation to the CNG Virtual Pipeline and should not be capitalized as part of the Project. The Panel directs PNG(N.E.) to write off the balance of $3,203 in the Studies Deferral Account.**

5.2 Rate Schedule 30

PNG(N.E.) is requesting approval for a proposed new Bulk CNG Service (RS 30) tariff for the Dawson Creek Service Area. The proposed RS 30 includes a seasonal CNG compression and dispensing (C&D) charge and a commodity cost recovery charge. PNG(N.E.) submits that the seasonal C&D charge allows for the recovery of incremental capital and system operating costs for the proposed CNG compression and dispensing station located in Dawson Creek. PNG(N.E.) states that it has set a minimum threshold of eligibility for RS 30 at an annual demand of 10,000 GJ per year. The proposed RS 30 would apply to supply for the Tumbler Ridge CNG Virtual Pipeline and would also be available to any other third party customer that meets the load criteria of the tariff. (Exhibit B-1-1, pp. 44–45)

In the Application, PNG(N.E.) initially proposed a flat RS 30 C&D charge of $1.50 per GJ, which PNG(N.E.) determined based on a 20-year levelized cost forecast for operating the proposed compression and dispensing station in Dawson Creek (Exhibit B-1, pp. 41–42). However, in the Evidentiary Update, PNG(N.E.) amended the proposed C&D charge from a flat rate to a seasonal rate. PNG(N.E.) submits that the seasonal C&D charge will range from $1.65 per GJ during the period of October 1 to May 31, which is the time period when CNG will be delivered to Tumbler Ridge, to $2.15 per GJ for the remainder of the year, which is the time period when only CNG bulk sales are anticipated to occur. PNG(N.E.) submits that this seasonal C&D charge is more in line with PNG(N.E.)'s objective of cost causation because under the proposed seasonal charge the CNG bulk sales customers will be assigned the additional operating costs associated with operating the CNG compression and dispensing facility on a year-round basis. (Exhibit B-1-1, pp. 41-42)

PNG(N.E.) views the CNG provided under RS 30 as serving two different and distinct customers: Tumbler Ridge Service Area customers who will benefit from the provision of a supplemental supply of gas to serve their growing industrial base; and non-captive customers taking Bulk CNG. Thus, PNG(N.E.) considers the seasonal C&D charge to be fair because it recognizes that there are two distinct customers being served under RS 30. Further, PNG(N.E.) considers that to the extent the charges for Bulk CNG recover fully the cost of providing the service to non-captive customers there is no subsidization by PNG(N.E.)'s existing Dawson Creek ratepayers of providing the Bulk CNG service. (Exhibit B-8, BCUC 2.36.1)

PNG(N.E.) indicates that its proposed RS 30 is consistent with standard rate design principles such as:

- **Fairness** – The seasonality of the C&D charge recognizes that there are two distinct customers being served and thus allocates costs fairly between these two distinct customers.

- **Stability** – The C&D charge will change only as a result of any rate rebalancing occurring after approval by the Commission of a revenue requirements application; thus, it is comparable to the stability of all other rates charged to Dawson Creek customers.

- **Recovery of the Revenue Requirement and Avoidance of Undue Discrimination** – PNG(N.E.) has demonstrated that RS 30 can recover its share of the overall revenue requirement for Dawson Creek which includes the cost related to the provision of CNG. Additionally, RS 30 will be rebalanced along with all other Dawson Creek rates at every revenue requirements application.

- **Economic Efficiency and Conservation** – PNG(N.E.) submits that the overarching consideration of the Project and the design of RS 30 is to achieve the lowest cost gas supply portfolio for Tumbler Ridge while recovering from Tumbler Ridge Service Area customers all of the associated costs of compressing and dispensing CNG so as to avoid rate impacts to Dawson Creek Service Area customers. PNG(N.E.) considers that by providing CNG as an alternative base load supply for Tumbler Ridge, rather than as a source of peaking supply, the cost of the CNG is reduced to the point where it is comparable to the cost of gas provided by CNRL.

- **Customer Understanding and Acceptance** – The proposed RS 30 consists of just a single variable C&D charge and a commodity charge, thus the rate is expected to be simple for customers to understand and simple for PNG(N.E.) to administer.

(Exhibit B-4, BCUC 1.44.2)

PNG(N.E.) is not proposing any rate design changes for the Tumbler Ridge Service Area. PNG(N.E.) submits that the cost of supplemental gas supplied under the proposed Dawson Creek RS 30 would become part of the Tumbler Ridge Service Area's cost of gas to be recovered from gas sales customers. Further, PNG(N.E.) states that the transportation and receiving/injection infrastructure and annual operating costs allocated to the Tumbler Ridge Service Area will become part of the Tumbler Ridge revenue requirement and are proposed to be recovered in rates from all Tumbler Ridge Service Area customers. (Exhibit B-1-1, p. 45)

PNG(N.E.) submits that it is appropriate to recover the capital and operating costs associated with the transportation and receiving/injection of CNG from all Tumbler Ridge Service Area customers because they will all share the benefits of increased security and reliability of gas supply. PNG(N.E.) submits that providing supply certainty is essential for maintaining existing load and for capturing new industrial loads on the Tumbler Ridge system, which is beneficial for all Tumbler Ridge Service Area customers. (Exhibit B-4, BCUC 1.46.3)

DTR states that it considers any apportionment of direct industrial costs to "non-benefiting local sectors to be both inequitable and unacceptable" (DTR Final Submission, p. 1).

The BCPSO raises concerns over the design of the proposed RS 30 because it was not subject to a formal cost of service study. The BCPSO submits that without relying on a formal cost of service study, the proposed RS 30 tariff may not be "reflective of the actual costs." As an example, BCPSO references the fact that PNG(N.E.) has not confirmed that the proposed RS 30 excludes any allocation of depreciation costs associated with the utility's plant, notwithstanding the capital associated with directly providing service to the RS 30 class. However, BCPSO states that it is prepared to accept PNG(N.E.)'s proposed RS 30 rate design. (BCPSO Final Submission, p. 6)

In its Reply Submission, PNG(N.E.) acknowledges that it has not undertaken a cost of service study for the Tumbler Ridge division since it was acquired by Pacific Northern Gas Ltd. in 1993. Further to this, PNG(N.E.) states that it has made a provision in its 2014 revenue requirements applications to undertake fully-allocated cost of service and rate design studies to ensure that rates reflect a fair and equitable allocation of costs. (PNG(N.E.) Reply Submission, p. 9)

5.3 Rate Impacts

PNG(N.E.) states that the impact of the CNG Virtual Pipeline on Dawson Creek Service Area customer rates is minimal, as the proposed Dawson Creek RS 30 C&D charge is designed to recover the capital and operating costs associated with the CNG compression facility (Exhibit B-1-1, p. 48). PNG(N.E.) summarizes the burner tip impacts to Dawson Creek Service Area customers in its Final Submission. This table is provided below.

Table 6-5 Dawson Creek Burner Tip Impacts

Dawson Creek	Residential		Small Commercial		Large Commercial (RS3)		Delivery (CNG Facilities)
Burner Tip Impacts (2014)	CNG Addition	Status Quo	CNG Addition	Status Quo	CNG Addition	Status Quo	CNG Addition
Cost of gas (ni Carbon Tax)	$ 3.53	$ 3.53	$ 3.54	$ 3.54	$ 3.44	$ 3.44	$ 3.44
Delivery Charge	$ 4.24	$ 4.23	$ 2.60	$ 2.59	$ 1.65	$ 1.64	$ -
Total Commodity + Delivery	**$ 7.77**	**$ 7.76**	**$ 6.14**	**$ 6.13**	**$ 5.09**	**$ 5.08**	**$ 3.44**
Impact wrt Status Quo + Facilities Charge (2013)	0.2%		0.2%		0.1%		

Dawson Creek	Residential		Small Commercial		Large Commercial (RS3)		Delivery (CNG Facilities)
Burner Tip Impacts (2015)	CNG Addition	Status Quo	CNG Addition	Status Quo	CNG Addition	Status Quo	CNG Addition
Cost of gas (ni Carbon Tax)	$ 3.53	$ 3.53	$ 3.54	$ 3.54	$ 3.44	$ 3.44	$ 3.44
Delivery Charge	$ 4.26	$ 4.23	$ 2.61	$ 2.59	$ 1.65	$ 1.64	$ -
Total Commodity + Delivery	**$ 7.79**	**$ 7.76**	**$ 6.15**	**$ 6.13**	**$ 5.09**	**$ 5.08**	**$ 3.44**
Impact wrt Status Quo + Facilities Charge (2013)	0.4%		0.3%		0.2%		

Dawson Creek	Residential		Small Commercial		Large Commercial (RS3)		Delivery (CNG Facilities)
Burner Tip Impacts (2016)	CNG Addition	Status Quo	CNG Addition	Status Quo	CNG Addition	Status Quo	CNG Addition
Cost of gas (ni Carbon Tax)	$ 3.53	$ 3.53	$ 3.54	$ 3.54	$ 3.44	$ 3.44	$ 3.44
Delivery Charge	$ 4.23	$ 4.23	$ 2.59	$ 2.59	$ 1.64	$ 1.64	$ -
Total Commodity + Delivery	**$ 7.76**	**$ 7.76**	**$ 6.13**	**$ 6.13**	**$ 5.08**	**$ 5.08**	**$ 3.44**
Impact wrt Status Quo + Facilities Charge (2013)	0.0%		0.0%		0.0%		

(PNG(N.E.) Final Submission, p. 17)

PNG(N.E.) states that the proposed rate structure meets its objective of minimizing rate impacts to Tumbler Ridge Service Area customers (PNG(N.E.) Final Submission, p. 15). PNG(N.E.) submits that there will be an increase in the delivery charge to Tumbler Ridge Service Area customers due to the additional cost of owning and operating the CNG Virtual Pipeline. PNG(N.E.) further submits that the residential delivery charge will increase from $7.30 per GJ to $7.98 per GJ in 2014; however, as the Quintette Mine load increases in subsequent years, increased CNG deliveries will reduce the delivery charges and in 2016 the delivery charge for residential customers will decrease to $7.38 per GJ (Exhibit B-1-1, p. 49). PNG(N.E.) summarizes the burner tip impacts to Tumbler Ridge Service Area customers in its Final Submission. This table is provided below.

Table 6-6 Tumbler Ridge Burner Tip Impacts

Tumbler Ridge	Residential		Small Commercial		Large Commercial		CNRL	
Burner Tip Impacts (2014)	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge
Weighted average cost of gas (ni Carbon Tax)	$ 4.87	$ 4.84	$ 4.87	$ 4.84	$ 4.87	$ 4.84		
Delivery Charge TR	$ 7.98	$ 7.30	$ 6.00	$ 5.48	$ 4.58	$ 4.19	$ 0.51	$ 0.47
Total Commodity + Delivery	**$ 12.85**	**$ 12.13**	**$ 10.86**	**$ 10.32**	**$ 9.45**	**$ 9.02**	**$ 0.51**	**$ 0.47**
Impact wrt Status Quo + Facilities Charge (2013)	**6%**		**5%**		**5%**		**9%**	

Tumbler Ridge	Residential		Small Commercial		Large Commercial		CNRL	
Burner Tip Impacts (2015)	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge
Weighted average cost of gas (ni Carbon Tax)	$ 4.97	$ 4.84	$ 4.97	$ 4.84	$ 4.97	$ 4.84		
Delivery Charge TR	$ 7.97	$ 7.30	$ 5.99	$ 5.48	$ 4.57	$ 4.19	$ 0.51	$ 0.47
Total Commodity + Delivery	**$ 12.94**	**$ 12.13**	**$ 10.96**	**$ 10.32**	**$ 9.54**	**$ 9.02**	**$ 0.51**	**$ 0.47**
Impact wrt Status Quo + Facilities Charge (2013)	**7%**		**6%**		**6%**		**9%**	

Tumbler Ridge	Residential		Small Commercial		Large Commercial		CNRL	
Burner Tip Impacts (2016)	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge	CNG/CNRL Portfolio	Status Quo (TR RS3) + CNRL Facilities Charge
Weighted average cost of gas (ni Carbon Tax)	$ 5.04	$ 4.84	$ 5.04	$ 4.84	$ 5.04	$ 4.84		
Delivery Charge TR	$ 7.40	$ 7.30	$ 5.56	$ 5.48	$ 4.25	$ 4.19	$ 0.48	$ 0.47
Total Commodity + Delivery	**$ 12.44**	**$ 12.13**	**$ 10.60**	**$ 10.32**	**$ 9.28**	**$ 9.02**	**$ 0.48**	**$ 0.47**
Impact wrt Status Quo + Facilities Charge (2013)	**3%**		**3%**		**3%**		**1%**	

(PNG(N.E.) Final Submission, p. 18)

The BCPSO submits that while PNG(N.E.) has provided the burner tip impacts, these are different than actual rate increases, and that the rate increase may in fact be a higher percentage. BCPSO further states that the impact of the Project over the relatively short term on residential ratepayers is "clearly significant." (BCPSO Final Submission, p. 4)

PNG(N.E.) argues in its Reply Submission that the BCPSO has misunderstood the burner tip percentage impacts provided in the Application. PNG(N.E.) submits that Table 6-6 in the Application shows residential burner tip rates increasing by six percent in 2014, a further one percent in 2015, and then decreasing in 2016 by four percent, which results in an overall cumulative increase of three percent as compared to 2013 rates. PNG(N.E.) argues that while the result of the Project is an increase to Tumbler Ridge residential rates, there is "no alternative that will result in smaller increases." (PNG(N.E.) Reply Submission, p. 6)

Commission Determination

PNG(N.E.) describes the C&D charge applied through the proposed RS 30 as being based on a 20-year levelized-cost forecast (Exhibit B-1-1, p. 42). PNG(N.E.) further submits that RS 30 is not a levelized rate, but rather that a levelized rate calculation was used to determine a rate that would recover all of the costs of operating and maintaining the compression and dispensing facility, including a return on rate base, a recovery of depreciation, administrative and general expenses, and all taxes (Exhibit B-4, BCUC 1.44.3, p. 96). However, PNG(N.E.) also acknowledges that due to the fact that the CNG compression and dispensing facility in Dawson Creek is not a stand-alone or "greenfield" project, to the extent that the rate charged under RS 30 under-recovers the cost of operating the C&D facility, the short fall may end up being recovered from other Dawson Creek Service Area customers (Exhibit B-4, BCUC 1.44.4, p. 97). This risk, however, is somewhat mitigated by the fact that the RS 30 rate, along with all other Dawson Creek customer rates, will be rebalanced at every revenue requirements application (Exhibit B-4, BCUC 1.44.4, p. 97).

PNG(N.E.) further acknowledges that setting the initial RS 30 rate using a levelized rate calculation under-recovers the costs associated with the compression and dispensing facility in the first two years due to the fact that the Quintette Mine will not resume full operation and will not take service at its full load until 2016. These under-recovered costs in the first two years will be collected from Dawson Creek ratepayers. PNG(N.E.) argues that this under-recovery is a reasonable trade-off because the impact to Dawson Creek Service Area customers is small and the rate volatility and impact to the Tumbler Ridge Service Area is reduced (Exhibit B-8, BCUC 2.38.2, p. 106).

The Commission Panel has considered PNG(N.E.)'s proposed RS 30 design in the context of Bonbright's Principles of Rate Design and in the context of PNG(N.E.)'s objectives of minimizing the rate impacts to Tumbler Ridge customers and maintaining competitive industrial rates while creating negligible or no rate impacts to Dawson Creek customers. The Panel has some concerns over the potential risk of under-recovery of the costs to own and operate the C&D facility in

Dawson Creek and that these costs will ultimately be borne by all Dawson Creek ratepayers. However, the Panel also recognizes that Dawson Creek customers have the potential to share in any benefits realized from higher than forecast revenues from RS 30.

For the foregoing reasons, the Commission Panel finds that using a levelized rate calculation to determine the compression and dispensing charge under RS 30 is reasonable for setting rates. The Panel approves the proposed new seasonal Bulk Compressed Natural Gas (CNG) Service (RS 30) tariff for Dawson Creek as applied for in the Application, subject to PNG(N.E.) meeting Conditions 1-5 in section 3.4 and, in addition, also meeting the following Condition 6:

6) **PNG(N.E.) is directed to file with the Commission the RS 30 Tariff at the same time as it files the take-or-pay contracts and rate schedules in Conditions 4 and 5 of section 3.4.**

PNG(N.E.) is to confirm acceptance of the conditions through a compliance filing by April 30, 2014.

The Panel shares the BCPSO's concern that the proposed RS 30 was not subject to a formal cost of service study and therefore accepts PNG(N.E.)'s proposal to include a provision in its 2014 revenue requirement applications to undertake a fully-allocated cost of service and rate design study.

6.0 OTHER ISSUES AND CONSIDERATIONS

The Commission Panel found that the 20,000 GJ curtailment provision in the existing Service Agreement warrants the need for the Project. Nevertheless, as discussed in section 3, PNG(N.E.) submitted additional arguments as to the need for the CNG Virtual Pipeline. As these additional reasons are not fundamental to the Panel's conditional approval of the CPCN, and as they raise additional issues and concerns with respect to long-term resource planning, the Panel discusses them in this section.

6.1 CNRL Service Agreement Constraints

As discussed in section 3.2.2.1 (CNRL Contract Constraints), the Service Agreement imposes constraints on PNG(N.E.) which prevent it from providing firm supply to customers requiring more

than 20,000 GJ of firm supply. PNG(N.E.) further submits that another provision of the Service Agreement, subsection 7.1(e), also presents problems for PNG(N.E.).

Subsection 7.1(e) of the Service Agreement states that the raw gas delivered to PNG(N.E.) by CNRL will contain no more than 22,000 ppm (2.2 percent) Hydrogen Sulphide (H_2S).

This provision of the contract presents a problem for PNG(N.E) in that it permits CNRL to deliver raw gas that, at anything more than the lowest throughputs, contains more sulphur than the Tumbler Ridge processing plant's maximum permitted emissions. PNG(N.E.) states:

> "Furthermore, under the contractual terms of the service agreement between CNRL and PNG(N.E.), CNRL is entitled to supply the Tumbler Ridge processing plant with gas containing up to 22,000 ppm of H_2S. Under these gas conditions, the Tumbler Ridge processing plant will not be able to meet the demand of all customers, including the forecast full load of Quintette Mine, during all times of the year. PNG(N.E.) submits that this constraint exists today and is the impediment to retaining and attracting large volume customers." (PNG(N.E.) Final Submission, p. 11)

As is discussed in section 6.2 (Tumbler Ridge Processing Plant Capacity), a raw gas volume of 1188 mscfd with 2.2 percent H_2S would produce 2 tonnes of sulphur dioxide (SO_2). CNRL's average daily demand is 2,241 GJ/d or approximately 2,110 thousand standard cubic feet per day (mscfd). Therefore, if CNRL were to deliver gas with the maximum H_2S content permitted by the contract, the Tumbler Ridge processing plant would appear to be unable to meet the CNRL demand alone.

Currently the raw gas stream to the Tumbler Ridge processing plant contains about 85 ppm (0.01 percent) of H_2S, which is significantly less than the permitted maximum (Exhibit B-8, BCUC 2.12.2). Nevertheless, PNG(N.E.) submits that this clause of the contract presents a serious problem (Exhibit B-6, BCUC 2.12.4).

Commission Determination

The Commission Panel acknowledges that renegotiating the Service Agreement with CNRL is "the most practical alternative" to allow PNG(N.E.) to provide firm service to large customers in Tumbler

Ridge. According to PNG(N.E.), CNRL is unwilling to give PNG(N.E.) relief from the limitations within the existing Service Agreement. However, given that Quintette Mine has delayed re-commissioning and has entered into another agreement to provide temporary CNG supply to Quintette Mine for the 2013/14 winter, the Commission Panel considers that PNG(N.E.) has some time in which it could renew its efforts to re-negotiate the Service Agreement with CNRL. The Commission Panel recognizes that while PNG(N.E.) relies on CNRL for raw gas, CNRL also relies on PNG(N.E.) for its fuel gas. Moreover, CNRL is in the business of producing and selling natural gas, and the evidence indicates that there are sufficient supplies of suitable sweet gas in the area. Therefore, irrespective of incremental supply, it appears that PNG(N.E.) and CNRL need to work together to at least maintain the current level of supply for Tumbler Ridge and to provide fuel gas for CNRL's operations. These discussions and a better appreciation of each party's needs and concerns may provide the basis to negotiate satisfactory modifications to the Service Agreement.

Potential changes to the Service Agreement that may be discussed between the signatory parties could have a positive impact with regard to providing gas supply to the Tumbler Ridge Service Area. While re-negotiating the service agreement would not diversify PNG(N.E.)'s supply portfolio, it is the lowest-cost option and, if successful, would adequately address PNG(N.E.)'s supply constraints, at least in the short-term and negate the need for the CNG Virtual Pipeline.

Even if CNRL is not willing to revise the curtailment provision, it may be open to revising the H_2S content specification in the contract, as it is inconsistent with the maximum allowable sulphur emissions of the Tumbler Ridge processing plant.

Therefore, the Commission Panel encourages PNG(N.E.) to attempt to renegotiate the problematic provisions of the Service Agreement, including the 20,000 GJ per year limitation on firm sales to a single customer, as well as the mix of sweet and sour gas supply availability and sulphur content for the PNG plant.

6.2 Tumbler Ridge Processing Plant Capacity

In addition to the limitations imposed by the contract with CNRL, PNG(N.E.) cites the capacity of its Tumbler Ridge processing plant as a need for the CNG Virtual Pipeline.

When asked about the ability of the plant to operate at its design throughput and raw gas composition, PNG(N.E.) states:

> "The only restrictions on the plant's operations relate to allowable emissions and these emissions are directly affected by the composition of the inlet gas" (Exhibit B-8, BCUC 2.17.2).

Throughout the proceeding, PNG(N.E.) provided various reports of the physical capacity of the plant equipment in terms of raw gas volume into the plant and the acid gas components of the raw gas stream, hydrogen sulphide (H_2S) and carbon dioxide (CO_2):

Raw Gas, mmscfd	% H_2S	% CO_2	Reference
6	3.0	3.73	B-1-1, pp. 22, 32
8	0.025	4.0	B-1, Appendix H
8	2.2		B-4, BCUC 1.12.3
9.1	0.05	3.73	B-8, BCUC 2.17.1
9.1	0.004	6.43	B-8, BCUC 2.17.1

PNG(N.E.) states that the maximum allowable sulphur emissions from the plant is 2 tonnes per day of SO_2 (Exhibit B-11, BCUC 3.1.1, 3.1.2, 3.1.3). The restriction is expressed as:

> "Maximum 15 day sulphur emissions other than maintenance and emergency: 2 tonnes x 15 days= 30 tonnes SO_2." (Exhibit B-11, BCUC 3.1.1)

PNG(N.E.) does not provide evidence that indicates the probability that peak day loads will persist for 15 days or longer. PNG(N.E.) calculates that 26.14 mscfd of H_2S is required to generate the maximum 2 tonnes of sulphur allowed (Exhibit B-11, revised BCUC 2.16.5). This is the amount of H2S in 1188 mscfd of raw gas containing 2.2 percent H_2S.

Commission Determination

The Commission Panel does not necessarily agree that the existing capacity of the Tumbler Ridge processing plant constrains the supply of gas to customers in the Tumbler Ridge Service Area. Given the evidence submitted, the Tumbler Ridge processing plant appears capable of handling at least 8 mmscfd of raw gas that contains not more than 26.14 mscfd of H_2S and amounts of CO_2 that are typical for the Tumbler Ridge area. The wording of the sulphur emission restriction and the probability that peak day loads will not persist for 15 days indicates that PNG(N.E.) has additional operational flexibility to deal with supply problems upstream of the plant.

6.3 Tumbler Ridge Availability and Security of Supply

In addition to the limitations imposed by the Service Agreement with CNRL, PNG(N.E.) cites availability and security of gas supply for Tumbler Ridge as a need for the CNG Virtual Pipeline.

6.3.1 Availability of Supply

In the Application, PNG(N.E.) indicates concern over the availability of gas with sufficiently low sulphur content to meet its above described Tumbler Ridge processing plant emission standards.

The raw gas that CNRL provides to PNG(N.E.) under the supply contract is primarily sweet gas. Sweet raw gas contains insufficient sulphur for the sulphur to be measurable on a percentage basis, but generally contains trace amounts of sulphur. It must be treated in a processing plant to meet marketable or residue gas specifications of maximum 6 milligrams of H_2S per cubic metre and 115 milligrams of total sulphur per cubic metre (Exhibit B-1, Appendix F, Section 7.4).

PNG(N.E.) forecasts a peak day raw gas demand for Tumbler Ridge of 5,379 GJ/d in 2016, with a small increase to 5,409 GJ/d by 2018. This forecast includes the projected requirements of Quintette Mine. The sweet raw gas that CNRL provides must be treated at the Tumbler Ridge processing plant to meet marketable sales gas specifications. The total 2016 raw gas demand is

equivalent to 5,379 GJ/d or 5,064 mscfd of marketable gas (Exhibit B-8, BCUC 2.20.1). The total 2018 raw gas demand equivalent in marketable gas is not provided by PNG(N.E.).

Although the detailed supply information for Tumbler Ridge has been filed on a confidential basis, PNG(N.E.) and CNRL have agreed that certain summary information may be publically disclosed (Exhibit B-12, BCUC 3.2.2).

PNG(N.E.) submits that 178.6 thousand cubic metres per day of sweet raw gas (or 6,305 mscfd of raw gas) is currently available from CNRL. This is equivalent to 154.2 thousand cubic metres per day of marketable sales gas (or 5,675 GJ/d of marketable sales gas) (Exhibit B-12, BCUC 3.2.1).

Furthermore, CNRL also expects to be able to supply PNG(N.E.) with additional sweet gas that is currently flowing into Alberta from wells in the North Grizzly, Thunder and Ojay fields (Exhibit B-9, BCUC 2.4.4; DTR Final Submission, p. 2; PNG(N.E.) Reply Submission, p. 3). These sweet gas wells are forecast to be capable of ensuring supply is maintained at 5,400 mscfd or 5,600 GJ/d through January 2018. This estimate does not include additional volumes of gas that CNRL has available from sour gas supplies and which can be blended into the gas stream without exceeding the 2 tonnes of sulphur per day restriction.

However, PNG(N.E.) admits that is has little to no visibility into CNRL's current supply sources from either a deliverability or gas quality perspective (Exhibit B-1, p. 35; Exhibit B-4, BCUC 1.33.6; PNG(N.E.) Final Submission, p. 12). DTR expressed concern about PNG(N.E.)'s lack of visibility into these supply sources (DTR Final Submission, p. 1).

In evaluating the Sweet Gas Pipeline Alternative, PNG(N.E.) notes that the Sweet Gas Pipeline Alternative is the one it would turn to next in the event the current CNRL supply arrangement started to fall short. The top five wells evaluated for their potential interconnection via the Sweet Gas Pipeline Alternative are all currently owned by CNRL (Exhibit B-1, Appendix J, Section 8). PNG(N.E.) does not provide evidence as to whether CNRL would have an interest in contracting supply from the top five wells to PNG(N.E.).

In November 2011, CNRL acquired all or a portion of the Spectra Grizzly Pipeline sour gas gathering line upstream of the PNG(N.E.) Tumbler Ridge processing plant (Exhibit B-4, BCUC 1.31.0; Exhibit B-8, BCUC 2.5.3.1). CNRL also passed on the incremental cost of adding other facilities required to tie in new supply to maintain deliverability of gas to PNG(N.E.) under the existing supply contract based on an industry accepted JP05 calculation, or by-pass rate (i.e. the new $1.20/GJ fee) (Exhibit B-1, p. 22 ; Exhibit B-4, BCUC 1.122.2). This indicates a willingness on CNRL's part to add facilities to continue supplying PNG(N.E.) but PNG(N.E.) does not know if CNRL will continue to add additional supply sources, nor has it provided any evidence as to whether CNRL would prefer PNG(N.E.) build the facilities to connect additional supply that CNRL may have (Exhibit B-8, BCUC 2.5.3).

6.3.2 Security of Supply

In its Application, (as examined in section 3.2.2.3 of this Decision), PNG(N.E.) submits that a benefit of the CNG Virtual Pipeline is that the Project will provide PNG(N.E.) with an alternative source of gas supply, which in turn would assist in providing greater security of supply for the Tumbler Ridge Service Area. DTR and BCPSO expressed concern over the use of the security of supply argument as a means of justifying the requested CPCN (DTR Final Submission, p. 1; BCPSO Final Submission, p. 2).

Commission Determination

The evidence provided concerning the long term availability and security of supply to the Tumbler Ridge Service Area raises concerns about how to deal with these issues. Although not part of the specific orders sought, there is sufficient concern for the Commission Panel to address these issues.

Availability of Supply

The Commission Panel finds that the evidence does not indicate that there is insufficient supply to meet the increasing demand of the Tumbler Ridge Service Area, at least in the short-term.

As indicated in section 6.3.1 above, PNG(N.E.) forecasts a peak day raw gas demand for Tumbler Ridge of 5,379 GJ/d in 2016, with a small increase to 5,409 GJ/d by 2018. The total 2016 raw gas demand is equivalent to 5,277 GJ/d of marketable gas. The 5,277 GJ/d of marketable gas demand forecasted for 2016 is less than the 5,675 GJ/d of marketable gas supply currently available from CNRL. This, combined with the fact that CNRL also expects to be able to supply PNG(N.E.) with additional sweet gas that is currently flowing into Alberta from wells in the North Grizzly, Thunder and Ojay fields indicates that the currently connected physical supply of raw gas available for processing through the Tumbler Ridge processing plant appears to be sufficient to meet the existing demand for some years.

However, given CNRL's dominant role in the region, it is the Panel's view that PNG(N.E.) needs to obtain a better understanding of its resource options with CNRL in order to continue to serve all Tumbler Ridge Service Area customers over the long term (not just Quintette Mine and the other potential incremental firm customers). The Sweet Gas Pipeline Alternative provides increased capacity as well as additional interconnection options, but at a very high cost to ratepayers without a clear understanding of the quantity and quality of the supply from CNRL wells into which the Sweet Gas Pipeline would connect. In fact, it may be unnecessary for PNG(N.E.) to build a sweet gas interconnection in the future if CNRL invests in additional facilities to connect these wells itself.

Security of Supply

While the Commission Panel agrees that security and reliability are legitimate concerns, this has been an issue since gas service was first provided to customers in the area.

There is no evidence to suggest that relying on CNRL as the sole supplier is an issue with respect to physical supply reliability. The curtailment of service provisions in the Service Agreement combined with CNRL's own need for fuel gas provides an important assurance of reliability for current firm sales customers.

However, the Commission Panel acknowledges that CNRL's position as the preeminent producer in the Tumbler Ridge area is a reliability concern with respect to PNG(N.E.)'s competitive options. This issue is also acknowledged by BCPSO. PNG(N.E.) appears to have little choice other than to work with CNRL, unless it develops a new supply from outside the general area. Although the lack of diversity causes concerns about supply reliability and PNG(N.E.)'s competitive position relative to CNRL, the Commission Panel considers that these concerns provide only limited support for the CNG Virtual Pipeline, especially because it is proposed only as a supplemental source of supply.

The Commission Panel agrees that the CNG Virtual Pipeline offers some reliability in that it provides a secondary supplemental source of supply to Tumbler Ridge. For instance, the CNG Virtual Pipeline would provide a degree of useful support in the event of an outage of the single transmission line to Tumbler Ridge, the Tumbler Ridge plant, or of the wells and facilities providing raw gas to the plant.

This Application raises concerns about the long term security of supply for Tumbler Ridge. The Commission Panel has concerns about PNG(N.E.)'s lack of visibility into and understanding of the sweet gas supply options in the area.

Given CNRL's dominate role in the region, it is the Panel's view that PNG(N.E.) needs to obtain a better understanding of its resource options with CNRL in order to continue to serve all Tumbler Ridge customers over the long term (not just Quintette Mine and the other potential incremental firm customers PNG(N.E.) is concerned about in this Application).

The Commission Panel directs that PNG(N.E.) undertake a comprehensive and detailed technical study of the sweet raw gas supply sources in the Tumbler Ridge region. The Panel recommends PNG(N.E.) actively seek input and cooperation from CNRL to supply availability in sufficient detail to understand the potential for supplying the load requirements of Tumbler Ridge Service Area customers into the future. **The Commission Panel directs PNG(N.E.) to file this long-term supply study for the Tumble Ridge Service Area with its next PNG(N.E.) Resource Plan, which is due on or before April 18, 2015 as per Order G-60-13.**

7.0 SUMMARY OF DIRECTIVES

This Summary is provided for the convenience of readers. In the event of any difference between the Directions in this Summary and those in the body of the Decision, the wording in the Decision shall prevail.

Directive	Reference
The Commission Panel approves PNG(N.E.)'s request to construct, own and operate the CNG Virtual Pipeline, subject to PNG(N.E.) meeting the six conditions on or before December 31, 2016.	30
PNG(N.E.) is to confirm acceptance of these six conditions through a compliance filing by April 30, 2014.	Page 31
Condition 1: • **PNG(N.E.) must provide evidence that there is sufficient firm commitment from a customer (or combination of customers) for take-or-pay service for a minimum of 60 percent of the total forecast CNG demand for the Tumbler Ridge Service Area of 140,000 GJ. This take-or-pay contract (or combination of contracts) must be set for a minimum of seven years effective from the in-service date of the CNG Virtual Pipeline.**	Page 30
Condition 2: • **PNG(N.E.) must calculate the rate charged under the minimum 60 percent take-or-pay contract(s) in Condition 1 based on the rolled-in cost of the existing Tumbler Ridge natural gas system with the incremental cost of the CNG Virtual Pipeline.**	Page 30
Condition 3: • **PNG(N.E.) Dawson Creek Division must obtain a minimum volume commitment from the PNG(N.E.) Tumbler Ridge Division of 60 percent of the forecast deliveries of CNG to Tumbler Ridge of 140,000 GJ for a minimum of seven years, effective from the in-service date of the Project.**	Page 31
Condition 4: • **PNG(N.E.) must file the minimum take-or-pay contracts which collectively satisfy Conditions 1 through 3.**	Page 31

Condition 5: • **PNG(N.E.) is further directed to file a rate proposal and accompanying rate schedule for Quintette Mine and other potential customers of the CNG Virtual Pipeline which contemplates the cost recovery mechanisms in Conditions 1 and 2.**	Page 31
Condition 6: • **PNG(N.E.) is directed to file with the Commission the RS 30 Tariff at the same time as it files the take-or-pay contracts and rate schedules in Conditions 4 and 5.**	Page 53
The Panel finds that public and First Nation consultation efforts have been adequate.	Page 36
The Panel approves the capital budget of $3.842 million.	Page 39
The Panel accepts PNG(N.E.)'s forecast for the cost of service inputs for both Dawson Creek and Tumbler Ridge.	Page 42
Subject to PNG(N.E.) meeting each of the six Conditions, the Panel approves PNG(N.E.) to: • **transfer $27,140 from the Quintette SSA Deferral Account to the Dawson Creek portion of the Project capital costs and** • **transfer $16,040 to the Tumbler Ridge portion of the Project capital costs,** **for a total transfer of $43,180 from the Quinette SSA Deferral Account to Project capital costs.**	Page 44
If the conditions of the CPCN approval are not met, the Panel determines that the $43,180 which PNG(N.E.) requests to transfer to Project Capital Costs shall remain in the Quintette SSA Deferral Account.	Page 44
The Panel does not approve PNG(N.E.)'s request to recover any part of the Quintette SSA Deferral Account from Tumbler Ridge ratepayers.	Page 45
Subject to PNG(N.E.) meeting each of the six conditions, the Panel approves the inclusion of the $18,613 incurred for the Sweet Gas Supply Options Study in the Tumbler Ridge portion of the capital costs of the CNG Virtual Pipeline.	Page 46

If PNG(N.E.) cannot meet the conditions of the CPCN, the Panel directs PNG(N.E.) to place the $18,613 into a new "Sweet Gas Studies" deferral account. The Panel further directs PNG(N.E.) to apply for recovery of this deferral account as part of its next Revenue Requirements Application.	Page 46
The Commission Panel denies PNG(N.E.)'s request to include the $3,203 Studies Deferral Account as part of the capital costs of the Project. The Panel directs PNG(N.E.) to write off the balance of $3,203 in the Studies Deferral Account.	Page 46
The Panel approves the proposed new seasonal Bulk Compressed Natural Gas (CNG) Service (RS 30) tariff for Dawson Creek as applied for in the Application, subject to PNG(N.E.) meeting the six conditions.	Page 53
The Panel directs that PNG(N.E.) undertake a comprehensive and detailed technical study of the sweet raw gas supply sources in the Tumbler Ridge region. The Panel directs PNG(N.E.) to file this long-term supply study for the Tumble Ridge Service Area with its next PNG(N.E.) Resource Plan, which is due on or before April 18, 2015 as per Order G-60-13.	Page 61

DATED at the City of Vancouver, in the Province of British Columbia, this 5th day of March 2014.

Original signed by

B.A. MAGNAN
PANEL CHAIR

Original signed by

L.A. O'HARA
COMMISSIONER

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BRITISH COLUMBIA UTILITIES COMMISSION

ORDER NUMBER C-4-14

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IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

an Application by Pacific Northern Gas (N.E.) Ltd.
for a Certificate of Public Convenience and Necessity to Acquire,
Construct, Own and Operate a Compressed Natural Gas Virtual Pipeline
between the Communities of Dawson Creek and Tumbler Ridge

BEFORE: B.A. Magnan, Panel Chair/Commissioner
L.A O'Hara, Commissioner March 5, 2014

O R D E R

WHEREAS:

A. On July 17, 2013, Pacific Northern Gas (N.E.) Ltd. [PNG(N.E.)] submitted an application to the British Columbia Utilities Commission (Commission) for a permanent Compressed Natural Gas (CNG) trucking service solution that would act as a virtual pipeline from the community of Dawson Creek to Tumbler Ridge (CNG Virtual Pipeline). On September 20, 2013, PNG(N.E.) filed an Evidentiary Update, which included revisions to the approvals sought (Application);

B. PNG(N.E.) seeks:

1) Approval for a Certificate of Public Convenience and Necessity (CPCN) pursuant to sections 45 and 46 of the *Utilities Commission Act* (UCA) to acquire, construct, own and operate the CNG Virtual Pipeline for an approximate capital cost of $3.842 million;

2) Approval for a proposed new Bulk CNG Service (RS 30) tariff, pursuant to sections 59 to 61 of the UCA, for Dawson Creek in order to provide CNG service to customers, including CNG supply for the Tumbler Ridge service area;

3) Pending approval of 1) and 2) above, approval for the disposition of costs deferred under the Quintette Security of Supply Agreement (SSA), including the transfer of $43,180 in costs to the capital cost of the CNG Virtual Pipeline and the recovery of remaining costs of $261,706 in Tumbler Ridge customer rates over a period of five years (the Application); and

4) Pending approval of 1) and 2) above, approval for the inclusion of costs accumulated in the "Studies" deferral account ($3,203), and of the cost associated with the "Sweet Gas Supply

…/2

Options" Study ($18,613), for a total of $21,816 in the Tumbler Ridge site preparation, mobilization and commissioning capital cost (the Application);

C. On August 8, 2013, the Commission issued Order G-119-13 establishing a Written Hearing Process and a Regulatory Timetable for the review of the Initial Application, which included two rounds of Information Requests (IRs);

D. On September 3, 2013, the Commission issued Order G-137-13 amending the Regulatory Timetable to allow PNG(N.E.) to file an Evidentiary Update to the Initial Application for consideration by the Commission and Registered Interveners prior to the second round of IRs and establish a third round of IRs;

E. The District of Tumbler Ridge (DTR) registered as an Intervener on August 15, 2013 and the British Columbia Pensioners' and Seniors' Organization *et al.* (BCPSO) and FortisBC Energy Utilities (FEU) registered as Interveners on August 16, 2013;

F. The CNG Virtual Pipeline will consist of natural gas compression and dispensing facilities in Dawson Creek, receiving and injection terminals in the Tumbler Ridge Service Area, and specialized trailers to transport the CNG between the facilities in Dawson Creek and terminals in Tumbler Ridge;

G. PNG(N.E.) filed its Final Submission on November 20, 2013. DTR and BCPSO filed their Final Submissions on November 27, 2013. PNG(N.E.) filed its Reply Submission on December 4, 2013; and

H. The Commission has reviewed the Application, considered the evidence and the submissions and finds that a CNG Virtual Pipeline as described in the Application is in the public interest and that a CPCN should be granted, subject to the conditions as set out in this Order.

NOW THEREFORE the Commission orders as follows:

1. A Certificate of Public Convenience and Necessity (CPCN) is granted to Pacific Northern Gas (N.E.) Ltd. [PNG(N.E.)] to construct, own and operate a Compressed Natural Gas (CNG) Virtual Pipeline, subject to the conditions as set out in Directives 2 to 6 and 12 of this Order. PNG(N.E.) is to confirm acceptance of the conditions through a compliance filing by April 30, 2014.

2. PNG(N.E.) must provide evidence that there is sufficient firm commitment from a customer (or combination of customers) for take-or-pay service for a minimum of 60 percent of the total forecast new CNG demand for the Tumbler Ridge Service Area of 140,000 GJ. This take-or-pay contract (or combination of contracts) must be set for a minimum seven year period effective from the in-service date of the CNG Virtual Pipeline.

3. PNG(N.E.) must calculate the rate charged under the minimum 60 percent take-or-pay contract(s) described in Directive 2 based on the rolled-in cost of the existing Tumbler Ridge natural gas system with the incremental cost of the CNG Virtual Pipeline.

4. PNG(N.E.) Dawson Creek Division must obtain a minimum volume commitment from the PNG(N.E.) Tumbler Ridge Division of 60 percent of the forecast deliveries of CNG to Tumbler Ridge of 140,000 GJ for a the equivalent period as that of the Tumbler Ridge take-or-pay customers effective from the in-service date of the Project.

5. PNG(N.E.) must file with the Commission the minimum take-or-pay contracts which collectively satisfy the conditions in Directives 2 to 4 on or before December 31, 2016.

6. PNG(N.E.) must also file a rate proposal and accompanying rate schedule for Quintette Mine and other potential customers of the CNG Virtual Pipeline which contemplates the cost recovery mechanisms in Directives 2 and 3 on or before December 31, 2016.

7. Subject to PNG(N.E.) meeting the conditions described in Directives 2 to 6 and 12, the Commission approves PNG(N.E.)'s request to transfer $27,140 from the Quintette Security of Supply Agreement (SSA) Deferral Account to the Dawson Creek project capital costs and $16,040 to the Tumbler Ridge project capital costs, for a total transfer of $43,180 from the Quintette SSA Deferral Account to project capital costs. If PNG(N.E.) does not meet the conditions for CPCN approval, the Commission directs that the $43,180 remain in the Quintette SSA Deferral Account.

8. PNG(N.E.)'s request to recover the Quintette SSA Deferral Account from Tumbler Ridge customer rates is not approved.

9. Subject to PNG(N.E.) meeting the conditions described in Directives 2 to 6 and 12, PNG(N.E.)'s request to include the $18,613 incurred for the Sweet Gas Supply Options Study in the Tumbler Ridge portion of the capital costs of the CNG Virtual Pipeline is approved. If PNG(N.E.) does not meet the conditions for CPCN approval, the Commission directs that, PNG(N.E.) place the $18, 613 into a new "Sweet Gas Studies" deferral account.

10. PNG(N.E.)'s request to include the $3,203 in the Studies Deferral Account as part of the capital costs of the CNG Virtual Pipeline is not approved.

11. Subject to PNG(N.E.) meeting the conditions described in Directives 2 to 6 and 12, the Commission approves the new seasonal Bulk Compressed Natural Gas Service (RS 30) tariff for PNG(N.E.)-Dawson Creek.

12. PNG(N.E.) is directed to file with the Commission the RS 30 Tariff at the same time as it files the take-or-pay contracts and rate schedules in directives 5 and 6.

13. PNG(N.E.) must undertake a comprehensive and detailed technical study of the sweet raw gas supply sources in the Tumbler Ridge region, and file the long-term supply study for the Tumble Ridge Service Area with its next PNG(N.E.) Resource Plan, which is due on or before April 18, 2015 as per Order G-60-13.

14. If PNG(N.E.) does not:

    (a) confirm acceptance of the conditions set out in Directives 2 to 6 and 12 through a compliance filing by April 30, 2014; and

    (b) meet all the conditions set out in Directives 2 through 6 and 12 by December 31, 2016,

    the CPCN approval shall be deemed cancelled.

DATED at the City of Vancouver, in the Province of British Columbia, this 5th day of March, 2014.

BY ORDER

Original signed by

B.A. Magnan
Panel Chair/Commissioner

RELEVANT LEGISLATION

***Utilities Commission Act* (UCA)**

The following are excerpts from relevant sections of the *Utilities Commission Act*.

Long-term resource and conservation planning

44.1 (2) Subject to subsection (4), a public utility must file with the commission, in the form and at the times the commission requires, a long-term resource plan including all of the following:

(a) an estimate of the demand for energy the public utility would expect to serve if the public utility does not take new demand-side measures during the period addressed by the plan;

(b) a plan of how the public utility intends to reduce the demand referred to in paragraph (a) by taking cost-effective demand-side measures;

(c) an estimate of the demand for energy that the public utility expects to serve after it has taken cost-effective demand-side measures;

(d) a description of the facilities that the public utility intends to construct or extend in order to serve the estimated demand referred to in paragraph (c);

(e) information regarding the energy purchases from other persons that the public utility intends to make in order to serve the estimated demand referred to in paragraph (c);

(f) an explanation of why the demand for energy to be served by the facilities referred to in paragraph (d) and the purchases referred to in paragraph (e) are not planned to be replaced by demand-side measures;

(g) any other information required by the commission.

Certificate of public convenience and necessity

45 (1) Except as otherwise provided, after September 11, 1980, a person must not begin the construction or operation of a public utility plant or system, or an extension of either, without first obtaining from the commission a certificate that public convenience and necessity require or will require the construction or operation.

(2) For the purposes of subsection (1), a public utility that is operating a public utility plant or system on September 11, 1980 is deemed to have received a certificate of public convenience and necessity, authorizing it

(a) to operate the plant or system, and

(b) subject to subsection (5), to construct and operate extensions to the plant or system.

(3) Nothing in subsection (2) authorizes the construction or operation of an extension that is a reviewable project under the *Environmental Assessment Act*.

(4) The commission may, by regulation, exclude utility plant or categories of utility plant from the operation of subsection (1).

(5) If it appears to the commission that a public utility should, before constructing or operating an extension to a utility plant or system, apply for a separate certificate of public convenience and necessity, the commission may, not later than 30 days after construction of the extension is begun, order that subsection (2) does not apply in respect of the construction or operation of the extension.

(6) A public utility must file with the commission at least once each year a statement in a form prescribed by the commission of the extensions to its facilities that it plans to construct.

(6.1) and (6.2) [Repealed 2008-13-8.]

(7) Except as otherwise provided, a privilege, concession or franchise granted to a public utility by a municipality or other public authority after September 11, 1980 is not valid unless approved by the commission.

(8) The commission must not give its approval unless it determines that the privilege, concession or franchise proposed is necessary for the public convenience and properly conserves the public interest.

(9) In giving its approval, the commission

(a) must grant a certificate of public convenience and necessity, and

(b) may impose conditions about

(i) the duration and termination of the privilege, concession or franchise, or

(ii) construction, equipment, maintenance, rates or service,

as the public convenience and interest reasonably require.

Procedure on application

46 (1) An applicant for a certificate of public convenience and necessity must file with the commission information, material, evidence and documents that the commission prescribes.

(2) The commission has a discretion whether or not to hold any hearing on the application.

(3) Subject to subsections (3.1) to (3.3), the commission may, by order, issue or refuse to issue the certificate, or may issue a certificate of public convenience and necessity for the construction or operation of a part only of the proposed facility, line, plant, system or extension, or for the partial exercise only of a right or privilege, and may attach to the exercise of the right or privilege granted by the certificate, terms, including conditions about the duration of the right or privilege under this Act as, in its judgment, the public convenience or necessity may require.

(3.1) In deciding whether to issue a certificate under subsection (3) applied for by a public utility other than the authority, the commission must consider

(a) the applicable of British Columbia's energy objectives,

(b) the most recent long-term resource plan filed by the public utility under section 44.1, if any, and

(c) the extent to which the application for the certificate is consistent with the applicable requirements under sections 6 and 19 of the *Clean Energy Act*,

(3.2) Section (3.1) does not apply if the commission considers that the matters addressed in the application for the certificate were determined to be in the public interest in the course of considering a

long-term resource plan under section 44.1.

(3.3) In deciding whether to issue a certificate under subsection (3) to the authority, the commission, in addition to considering the interests of persons in British Columbia who receive or may receive service from the authority, must consider and be guided by

(a) British Columbia's energy objectives,

(b) an applicable integrated resource plan approved under section 4 of the *Clean Energy Act*, and

(c) the extent to which the application for the certificate is consistent with the requirements under section 19 of the *Clean Energy Act*.

(4) If a public utility desires to exercise a right or privilege under a consent, franchise, licence, permit, vote or other authority that it proposes to obtain but that has not, at the date of the application, been granted to it, the public utility may apply to the commission for an order preliminary to the issue of the certificate.

(5) On application under subsection (4), the commission may make an order declaring that it will, on application, under rules it specifies, issue the desired certificate, on the terms it designates in the order, after the public utility has obtained the proposed consent, franchise, licence, permit, vote or other authority.

(6) On evidence satisfactory to the commission that the consent, franchise, licence, permit, vote or other authority has been secured, the commission must issue a certificate under section 45.

(7) The commission may, by order, amend a certificate previously issued, or issue a new certificate, for the purpose of renewing, extending or consolidating a certificate previously issued.

(8) A public utility to which a certificate is, or has been, issued, or to which an exemption is, or has been, granted under section 45 (4), is authorized, subject to this Act, to construct, maintain and operate the plant, system or extension authorized in the certificate or exemption.

Discrimination in rates

59 (1) A public utility must not make, demand or receive

(a) an unjust, unreasonable, unduly discriminatory or unduly preferential rate for a service provided by it in British Columbia, or

(b) a rate that otherwise contravenes this Act, the regulations, orders of the commission or any other law.

(2) A public utility must not

(a) as to rate or service, subject any person or locality, or a particular description of traffic, to an undue prejudice or disadvantage, or

(b) extend to any person a form of agreement, a rule or a facility or privilege, unless the agreement, rule, facility or privilege is regularly and uniformly extended to all persons under substantially similar circumstances and conditions for service of the same description.

(3) The commission may, by regulation, declare the circumstances and conditions that are substantially similar for the purpose of subsection (2) (b).

(4) It is a question of fact, of which the commission is the sole judge,

(a) whether a rate is unjust or unreasonable,

(b) whether, in any case, there is undue discrimination, preference, prejudice or disadvantage in respect of a rate or service, or

(c) whether a service is offered or provided under substantially similar circumstances and conditions.

(5) In this section, a rate is "unjust" or "unreasonable" if the rate is

(a) more than a fair and reasonable charge for service of the nature and quality provided by the utility,

(b) insufficient to yield a fair and reasonable compensation for the service provided by the utility, or a fair and reasonable return on the appraised value of its property, or

(c) unjust and unreasonable for any other reason.

Setting of rates

60 (1) In setting a rate under this Act

(a) the commission must consider all matters that it considers proper and relevant affecting the rate,

(b) the commission must have due regard to the setting of a rate that

(i) is not unjust or unreasonable within the meaning of section 59,

(ii) provides to the public utility for which the rate is set a fair and reasonable return on any expenditure made by it to reduce energy demands, and

(iii) encourages public utilities to increase efficiency, reduce costs and enhance performance,

(b.1) the commission may use any mechanism, formula or other method of setting the rate that it considers advisable, and may order that the rate derived from such a mechanism, formula or other method is to remain in effect for a specified period, and

(c) if the public utility provides more than one class of service, the commission must

(i) segregate the various kinds of service into distinct classes of service,

(ii) in setting a rate to be charged for the particular service provided, consider each distinct class of service as a self contained unit, and

(iii) set a rate for each unit that it considers to be just and reasonable for that unit, without regard to the rates set for any other unit.

(2) In setting a rate under this Act, the commission may take into account a distinct or special area served by a public utility with a view to ensuring, so far as the commission considers it advisable, that the rate applicable in each area is adequate to yield a fair and reasonable return on the appraised value of the plant or system of the public utility used, or prudently and reasonably acquired, for the purpose of providing the service in that special area.

(3) If the commission takes a special area into account under subsection (2), it must have regard to the special considerations applicable to an area that is sparsely settled or has other distinctive

characteristics.

(4) For this section, the commission must exclude from the appraised value of the property of the public utility any franchise, licence, permit or concession obtained or held by the utility from a municipal or other public authority beyond the money, if any, paid to the municipality or public authority as consideration for that franchise, licence, permit or concession, together with necessary and reasonable expenses in procuring the franchise, licence, permit or concession.

Rate schedules to be filed with commission

61 (1) A public utility must file with the commission, under rules the commission specifies and within the time and in the form required by the commission, schedules showing all rates established by it and collected, charged or enforced or to be collected or enforced.

(2) A schedule filed under subsection (1) must not be rescinded or amended without the commission's consent.

(3) The rates in schedules as filed and as amended in accordance with this Act and the regulations are the only lawful, enforceable and collectable rates of the public utility filing them, and no other rate may be collected, charged or enforced.

(4) A public utility may file with the commission a new schedule of rates that the utility considers to be made necessary by a rise in the price, over which the utility has no effective control, required to be paid by the public utility for its gas supplies, other energy supplied to it, or expenses and taxes, and the new schedule may be put into effect by the public utility on receiving the approval of the commission.

(5) Within 60 days after the date it approves a new schedule under subsection (4), the commission may,

(a) on complaint of a person whose interests are affected, or

(b) on its own motion,

direct an inquiry into the new schedule of rates having regard to the setting of a rate that is not unjust or unreasonable.

(6) After an inquiry under subsection (5), the commission may

(a) rescind or vary the increase and order a refund or customer credit by the utility of all or part of the money received by way of increase, or

(b) confirm the increase or part of it.

Clean Energy Act

The following are excerpts from relevant sections of the *Clean Energy Act.*

Electricity self-sufficiency

6 (1) In this section:

"electricity supply obligations" means

(a) electricity supply obligations for which rates are filed with the commission under section 61 of the *Utilities Commission Act*, and

(b) any other electricity supply obligations that exist at the time this section comes into force,

determined by using the authority's prescribed forecasts of its energy requirements and peak load, taking into account demand-side measures, that are in an integrated resource plan approved under section 4;

"heritage energy capability" means the maximum amount of annual energy that the heritage assets that are hydroelectric facilities can produce under prescribed water conditions.

(2) The authority must achieve electricity self-sufficiency by holding,

(a) by the year 2016 and each year after that, the rights to an amount of electricity that meets the electricity supply obligations, and

(b) by the year 2020 and each year after that, the rights to 3 000 gigawatt hours of energy, in addition to the amount of electricity referred to in paragraph (a), and the capacity required to integrate that energy

solely from electricity generating facilities within the Province,

(c) assuming no more in each year than the heritage energy capability, and

(d) relying on Burrard Thermal for no energy and no capacity, except as authorized by regulation.

(3) The authority must remain capable of meeting its electricity supply obligations from the electricity referred to in subsection (2) (a) and (b), except to the extent the authority may be permitted, by regulation, to enter into contracts in the prescribed circumstances and on the prescribed terms and conditions.

(4) A public utility, in planning in accordance with section 44.1 of the *Utilities Commission Act* for

(a) the construction or extension of generation facilities, and

(b) energy purchases,

must consider British Columbia's energy objective to achieve electricity self-sufficiency.

Clean or renewable resources

19 (1) To facilitate the achievement of British Columbia's energy objective set out in section 2 (c), a person to whom this subsection applies

(a) must pursue actions to meet the prescribed targets in relation to clean or renewable resources, and

(b) must use the prescribed guidelines in planning for

(i) the construction or extension of generation facilities, and

(ii) energy purchases.

(2) Subsection (1) applies to

(a) the authority, and

(b) a prescribed public utility, if any, and a public utility in a class of prescribed public utilities, if any.

***Clean Energy Act — Greenhouse Gas Reduction (Clean Energy) Regulation* (GGRR)**

The following are excerpts from relevant sections of the *Greenhouse Gas Reduction (Clean Energy) Regulation.*

Prescribed undertakings

2 (1) A public utility's undertaking that is in the class defined as follows is a prescribed undertaking for the purposes of section 18 of the Act:

(a) the public utility provides, through an open and competitive application process,

(i) grants or zero-interest loans to persons in British Columbia for the purchase of an eligible vehicle to be operated in British Columbia, or

(ii) grants to persons in British Columbia

(A) to implement safety practices, or

(B) to improve maintenance facilities

to meet safety guidelines for operating and maintaining an eligible vehicle;

(b) an expenditure on a grant or zero-interest loan for an eligible vehicle does not, in a year of the undertaking, exceed the percentage difference as indicated in the following table:

	Year of Undertaking					
	1	2	3	4	5	6
Percentage of the difference between the cost of the eligible vehicle and the cost of a comparable vehicle that uses gasoline or diesel	100	80	70	60	50	40

(c) total expenditures on the undertaking during the undertaking period, including expenditures on administration, marketing, training and education, do not exceed $62 million, and

(i) expenditures on the undertaking during the undertaking period on marine vehicles do not exceed $11 million, and

(ii) expenditures on the undertaking during the undertaking period

(A) on administration, marketing, training and education do not exceed $3.1 million, and

(B) on grants referred to in paragraph (a) (ii) do not exceed $6 million.

(1.1) Despite the reference in subsection (1) (a) to an open and competitive application process, a public utility may, in carrying out the undertaking described in subsection (1), give priority to a person in British Columbia who fuels an eligible vehicle using natural gas delivered through the public utility's pipeline system.

(2) A public utility's undertaking that is in the class defined as follows is a prescribed undertaking for the purposes of section 18 of the Act:

(a) the public utility, before April 1, 2017, enters into a binding commitment to

(i) construct and operate, or

(ii) purchase and operate

one or more compressed natural gas fuelling stations, including storage, compression and dispensing equipment and facilities, within the service territory of the public utility for the purposes of providing compressed natural gas fuel and fuelling services to owners of vehicles that operate on compressed natural gas;

(b) total expenditures on the undertaking during the undertaking period, including expenditures on administration and marketing, do not exceed $12 million, and

(i) the average expenditure on stations, in any year of the undertaking, does not exceed $2 million per station, and

(ii) expenditures, during the undertaking period, on administration and marketing do not exceed $240 000;

(c) at least 80% of the energy provided at each station is provided to one or more persons under a take-or-pay agreement with a minimum term of 5 years.

IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

Pacific Northern Gas (N.E.) Ltd.
Application For a Certificate of Public Convenience and Necessity to Acquire, Construct, Own and Operate a Compressed Natural Gas ("CNG") Virtual Pipeline between the Communities of Dawson Creek and Tumbler Ridge

EXHIBIT LIST

Exhibit No.	Description
COMMISSION DOCUMENTS	
A-1	Letter dated July 31, 2013 - Appointing the Commission Panel for the review of the Pacific Northern Gas (N.E.) Ltd. Application For a Certificate of Public Convenience and Necessity to Acquire, Construct, Own and Operate a Compressed Natural Gas ("CNG") Virtual Pipeline between the Communities of Dawson Creek and Tumbler Ridge
A-2	Letter dated August 8, 2013 – Establishing a Regulatory Timetable
A-3	Letter dated August 19, 2013 – Commission Information Request No. 1 to Pacific Northern Gas (N.E.) Ltd.
A-4	Letter Dated August 23, 2013 – Establishing a Participant Assistance/Cost Awards Timetable
A-5	Letter Dated September 3, 2013 – Order G-137-13 Establishing an Amended Regulatory Timetable
A-6	Letter Dated September 27, 2013 – Order G-157-13 Amended Regulatory Timetable
A-7	Letter Dated October 11, 2013 – Commission Information Request No. 2 to Pacific Northern Gas (N.E.) Ltd.
A-8	**CONFIDENTIAL** Letter Dated October 11, 2013 – Confidential Commission Information Request No. 2 to Pacific Northern Gas (N.E.) Ltd.
A-9	Letter Dated November 6, 2013 – Commission Information Request No. 3 to Pacific Northern Gas (N.E.) Ltd.

Exhibit No.	Description
A-10	**CONFIDENTIAL** Letter Dated November 6, 2013 – Confidential Commission Information Request No. 3 to Pacific Northern Gas (N.E.) Ltd.
A2-1	Letter Dated August 19, 2013 - Commission Staff Filing Excerpt from Pacific Northern Gas (N.E.) Ltd. 2012 Resource Plan for Pipeline Systems proceeding – Commission Information Request No. 1 to Pacific Northern Gas (N.E.) Ltd.

APPLICANT DOCUMENTS

B-1	**PACIFIC NORTHERN GAS (N.E.) LTD. (PNGNE)** Letter dated July 17, 2013 - Application For a Certificate of Public Convenience and Necessity to Acquire, Construct, Own and Operate a Compressed Natural Gas ("CNG") Virtual Pipeline between the Communities of Dawson Creek and Tumbler Ridge
B-1-1	Letter Dated September 20, 2013 – PNGNE Submitting Evidentiary Update
B-1-2	**CONFIDENTIAL** Letter Dated September 20, 2013 – PNGNE Submitting Confidential Attachment to Evidentiary Update
B-2	**CONFIDENTIAL** Letter dated August 14, 2013 – PNGNE Confidential Supplemental Filing DC CNG Bulk Sales Memorandum of Agreement
B-3	Letter dated August 27, 2013 – PNGNE Submitting Request for Variance to the Regulatory Timetable
B-4	Letter Dated September 11, 2013 – PNGNE Submitting Response to BCUC IR No. 1
B-4-1	**CONFIDENTIAL** Letter Dated September 11, 2013 – PNGNE Submitting Confidential Response to BCUC IR No. 1
B-5	Letter Dated September 11, 2013 – PNGNE Submitting Response to BCPSO IR No. 1
B-6	Letter Dated September 18, 2013 – PNGNE Submitting Notice of Filing Delay
B-7	Letter Dated October 28, 2013 – PNGNE Submitting Response to BCPSO IR No. 2
B-8	Letter Dated October 28, 2013 – PNGNE Submitting Response to BCUC IR No. 2 and corrected typographical error in the Evidentiary Update
B-9	**CONFIDENTIAL** Letter Dated October 28, 2013 – PNGNE Submitting Response to Confidential BCUC IR No. 2

Exhibit No.	Description
B-10	Letter Dated November 14, 2013 – PNG Response to BCPSO IR No. 3
B-11	Letter Dated November 14, 2013 – PNG Response to BCUC IR No. 3
B-12	**CONFIDENTIAL** Letter Dated November 14, 2013 – PNG Response to BCUC Confidential IR No. 3

INTERVENOR DOCUMENTS

C1-1	**DISTRICT OF TUMBLER RIDGE (DTR)** Letter dated August 15, 2013 and Online Registration – Request for Intervener Status by Darwin Wren and Aleen Torraville
C1-2	Letter Dated August 30, 2013 – DTR Submitting Response to PNGNE Timetable Variance Request
C2-1	**BC PENSIONERS' AND SENIORS' ORGANIZATION, ACTIVE SUPPORT AGAINST POVERTY, BC COALITION OF PEOPLE WITH DISABILITIES, COUNSEL OF SENIOR CITIZENS' ORGANIZATIONS OF BC, AND THE TENANT RESOURCE AND ADVISORY CENTRE (BCPSO ET AL)** Letter Dated August 16, 2013 – Request for Intervener Status by Eugene Kung and James Wightman
C2-2	Letter Dated August 23, 2013 – BCPSO et al Submitting Information Request No. 1 to PNGNE
C2-3	Letter Dated August 28, 2013 – BCPSO et al Submitting Response to PNGNE Timetable Variance Request
C2-4	Letter Dated October 11, 2013 – BCPSO et al Submitting notice of Counsel addition
C2-5	Letter Dated October 11, 2013 – BCPSO et al Submitting Information Request No. 2
C2-6	Letter Dated November 6, 2013 – BCPSO et al Submitting IR No. 3
C3-1	**FORTISBC ENERGY UTILITIES (FEU)** Letter Dated August 16, 2013 – Request for Intervener Status by Diane Roy

GLOSSARY

A&G	Administrative and General
Application; Project	Application for Certificate of Public Convenience and Necessity (CPCN) to acquire, construct and operate a permanent compressed natural gas (CNG) trucking service from Dawson Creek to the Tumbler Ridge Service Area that would serve as a "Virtual Pipeline" between the two communities
BC Rail	British Columbia Railway Company
BCSPO	British Columbia Pensioners' and Seniors' Organization *et al.*
C&D charge	Compression and Dispensing Charge
CEA	*Clean Energy Act*, SBC 2010, c. 22
CNG	Compressed natural gas
CNRL	Canadian Natural Resources Ltd.
Commission, BCUC	British Columbia Utilities Commission
CPCN	Certificate of Public Convenience and Necessity
CPCN Guidelines	Guidelines to assist public utilities and other parties wishing to construct or operate utility facilities in preparing CPCN applications, found in G-50-10
DTR	District of Tumbler Ridge
FEU	FortisBC Energy Utilities
GGRR	Greenhouse Gas Reduction (Clean Energy) Regulation
HD Mines	HD Mining International Ltd
Lot A	The four acre industrial-zoned site currently owned by BC Rail
NGV	Natural gas vehicle
NPV	Net present value
O&M	Operating and Maintenance
PNG	Pacific Northern Gas Ltd.
PNG(N.E.)	Pacific Northern Gas (N.E.) Ltd.
Quintette SSA Deferral Account	Quintette Security of Supply Agreement 2012/2013 Deferral Account
RS 30	Rate Schedule 30 — Bulk CNG Service tariff
SSA	Quintette Security Supply Agreement
Teck Coal	Teck Coal Limited
UCA	*Utilities Commission Act*