Transportation Tariff

TransCanada PipeLines Limited

V QUALITY

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- The gas to be delivered hereunder shall be natural gas; provided however, that helium, natural gasoline, butane, propane and any other hydrocarbons except methane may be removed prior to delivery. TransCanada may subject, or permit the subjection of the natural gas to compression, cooling, cleaning and other processes.
- 2. **Heating Value:** The minimum gross heating value of the gas to be received and delivered by TransCanada shall be 36.00 MJ/m³. The maximum Gross Heating Value of the gas to be received and delivered by TransCanada shall be 41.34 MJ/m³. TransCanada shall have the right to refuse to accept Shipper's gas if the Gross Heating Value of such gas remains below 36.00 MJ/m³ or above 41.34 MJ/m³.

In the event that the Gross Heating Value of the gas to be delivered by TransCanada is below 36.00 MJ/m^3 or above 41.34 MJ/m^3 the Shipper shall have the option to refuse to accept such gas so long as the Gross Heating Value remains below 36.00 MJ/m^3 or above 41.34 MJ/m^3 .

3. **Freedom from Objectionable Matter:** The gas to be received by TransCanada from Shipper and to be delivered by TransCanada hereunder:

GENERAL TERMS and CONDITIONS

- (a) Shall be commercially free (at prevailing pressure and temperature in TransCanada's pipeline) from sand, dust, gums, oils, hydrocarbons liquefiable at temperatures in excess of minus ten degrees (-10°) Celsius at five thousand five hundred (5500) kPa absolute, impurities, other objectionable substances which may become separated from the gas, and other solids or liquids which will render it unmerchantable or cause injury to or interference with proper operations of the lines, regulators, meters or other appliances through which it flows; and shall not contain any substance not contained in the gas at the time the same was produced other than traces of those materials and chemicals necessary for the transportation and delivery of the gas and which do not cause it to fail to meet any of the quality specifications herein set forth.
- (b) Shall contain no more than twenty-three (23) milligrams of hydrogen sulphide per cubic metre nor more than one hundred and fifteen (115) milligrams of total sulphur per cubic metre of gas as determined by standard methods of testing.
- (c) Shall not contain more than two per cent (2%) by volume of carbon dioxide.
- (d) Shall have been dehydrated, if necessary, for removal of water present therein in a vapour state, and in no event contain more than sixty-five (65) milligrams of water vapour per cubic metre of gas.
- (e) Shall not exceed a temperature of fifty degrees (50°) Celsius.
- (f) Shall be as free of oxygen as practicable and shall not in any event contain more than four tenths of one percent (0.4%) by volume of oxygen.
- (g) Shall not have a total inert gas content in excess of 4% when used as a diluent to meet Natural Gas Interchangeability Indices.
- (h) Shall be free of any microbiological organisms, active bacteria or bacterial agents, including but not limited to sulphate reducing bacteria, iron oxidizing bacteria, and/or acid producing bacteria.
- 4. Failure to Conform to Specifications Re Objectionable Matter: If the gas being received by TransCanada from Shipper or transported by TransCanada to Shipper fails at any time to conform to any of the specifications set forth in subsection 3 of this Section, then the party receiving such gas (the "First Party") shall notify the party delivering such gas (the "Second Party") of such deficiency and thereupon the First Party may at the First Party's option refuse to accept delivery pending correction by the Second Party. Upon the Second Party's failure promptly to remedy any deficiency in guality as specified in subsection 3 of this Section, the First Party may accept

GENERAL TERMS and CONDITIONS

delivery of such gas and may make changes necessary to bring such gas into conformity with such specifications, and the Second Party shall reimburse the First Party for any reasonable expense incurred by the First Party in effecting such changes.

- 5. **Natural Gas Interchangeability Indices:** The natural gas received by TransCanada shall conform to the following specifications (the "Natural Gas Interchangeability Indices");
 - i) Weaver Incomplete Combustion Index less than or equal to 0.05;
 - ii) AGA Yellow Tipping Index greater than or equal to 0.86;
 - iii) The minimum Wobbe Index of the gas shall be 47.23 MJ/m ;
 - iv) The maximum Wobbe Index of the gas shall be 51.16 MJ/m³; and
 - v) Shall not contain greater than 1.5 mole percent (%) Butanes Plus.

The Natural Gas Interchangeability Indices are based on the following historical supply gas composition:

<u>Compound</u>	Mole %
Methane	95.6734
Ethane	1.6241
Propane	0.1410
I-Butane	0.0180
N-Butane	0.0173
I-Pentane	0.0034
N-Pentane	0.0034
N-Hexane	0.0014
N-Heptane	0.0007
N-Octane	0.0002
Nitrogen	1.8419
Carbon Dioxide	0.6411
Helium	0.0339

GENERAL TERMS and CONDITIONS

- Refined Biogas received at the following Receipt Point(s) shall also comply with the BNQ Standard gas quality requirements.
 - i. Lachenaie Receipt Point
 - Refined Biogas shall mean gas obtained from the purification of Biogas that meets the technical specifications required by TransCanada.
 - Biogas shall mean gas produced through the fermentation of organic material in the absence of oxygen.
 - BNQ Standard shall mean Bureau of normalisation du Quebec BNQ 3672 100 Biomethane – Quality Specifications for Injection into Natural Gas Distribution and Transmissions Systems, as may be amended from time to time.