



NORTHWEST PIPELINE LLC
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February 19, 2020

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: Northwest Pipeline LLC
Docket No. RP20-_____

Dear Ms. Bose:

Pursuant to Part 154 of the regulations of the Federal Energy Regulatory Commission (“Commission” or “FERC”), Northwest Pipeline LLC (“Northwest”) tenders for filing and acceptance of the tariff sheets listed as part of its FERC Gas Tariff, Fifth Revised Volume No. 1 (“Tariff”).

Sixth Revised Sheet No. 201
Fifth Revised Sheet No. 202-E
Fifth Revised Sheet No. 202-F
Second Revised Sheet No. 204
Second Revised Sheet No. 204-A
Second Revised Sheet No. 204-B

Second Revised Sheet No. 204-C
Second Revised Sheet No. 204-D
Second Revised Sheet No. 205
Third Revised Sheet No. 205-A
Fifth Revised Sheet No. 205-B

Statement of Nature, Reasons and Basis for the Filing

The purpose of this filing is to expand Northwest’s Tariff language regarding renewable natural gas (“RNG”). Northwest proposes Tariff changes to define RNG and to allow up to a four percent inerts substance level and a minimum 970 BTU level for RNG to encourage additional development and flow of this lower lifecycle CO₂e emission gas on its system while, at the same time, prohibiting RNG from hazardous waste landfills.

Background

Northwest initially updated its Tariff to handle renewable gas in 2008¹ after parties began contacting Northwest about the possibility of receiving biogas and landfill gas. At that time,

¹ See Northwest Pipeline GP’s filing in Docket No. RP08-411 dated June 16, 2008. Approved by Letter Order dated July 8, 2008

Northwest added Tariff language to address potential differences between RNG and historical sources of gas supply. Since that time, Northwest has connected three RNG facilities (two landfills and one dairy), to its system and regularly receives between five to ten RNG connection inquiries each year.

States in the Pacific Northwest, like in other parts of the U.S., are seeking to reduce their carbon footprint. As part of this strategy, states like Oregon and Washington are actively promoting the increased development and use of RNG. They recently published reports showing that they each have the potential to produce approximately 10-15 Bcf/year of RNG via anaerobic digestion². While not all of this potential RNG supply will be connected to an interstate pipeline due to either the lack of proximity of the RNG source and/or the inability to produce enough RNG to justify the connection costs, Northwest welcomes and anticipates a portion of this RNG supply will be positioned to flow on to its system for distribution within the western U.S.

Northwest proposes Tariff language that will permit RNG sources to have up to a four percent inerts substance level³ and a minimum 970 BTU level when Northwest, in its reasonable judgement, determines it can blend RNG with other gas supplies and still meet its Tariff's gas quality delivery requirements. According to industry experts, increasing the inerts substance level and lowering the minimum BTU level for RNG will permit RNG operators to economically produce and/or potentially increase their production of RNG by as much as thirty percent. Since potential RNG deliveries into Northwest's system are limited, as mentioned above, Northwest believes that this waiver of the inerts substance level and minimum BTU level in its Tariff for RNG will help the region reduce its carbon footprint without impacting Northwest's ability to deliver gas to interconnecting pipelines and without impacting the integrity of the pipeline.⁴

Northwest's gas quality standards in General Terms and Conditions ("GT&C") Section 3 of its Tariff currently states that gas received by Northwest shall not contain any toxic or hazardous substance, or any other substance which interferes with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of its facilities. Northwest proposes to further clarify that it will prohibit RNG from a landfill containing hazardous waste from being injected into its pipeline system and RNG delivered to Northwest shall be subject to periodic testing and monitoring based on the RNG source.

² <https://www.oregon.gov/energy/Data-and-Reports/Documents/2018-RNG-Inventory-Report.pdf>; <http://www.commerce.wa.gov/wp-content/uploads/2019/01/Energy-Promoting-RNG-in-Washington-State.pdf>

³ Other interstate pipelines like Kern River Gas Transmission, Natural Gas Pipeline Company of America, and Columbia Gas Transmission have gas quality standards of four percent inerts in their tariffs.

⁴ The Commission will allow a tariff waiver of certain gas quality standards when doing so will allow the pipeline to accept more gas from a unique supply source, provided such gas can be blended with other supplies to meet downstream pipeline gas quality requirements. *TransColorado Gas Transmission Co.*, 121 F.E.R.C. ¶ 61,217 at P 4 & P 8 (2007).

Filings Pending Before the Commission

In compliance with 18 CFR § 154.204(f), Northwest states that it has no other tariff filings pending before the Commission that may significantly impact this filing.

Effective Date and Waiver Request

Northwest hereby moves that the proposed Tariff sheets be made effective March 20, 2020, or at the end of any suspension period which may be imposed by the Commission. Northwest requests that the Commission grant any waivers it may deem necessary for the acceptance of this filing.

Procedural Matters

Pursuant to the applicable provisions in Section 154 of the Commission's regulations, Northwest submits an eTariff .xml filing package, containing the following items:

- Proposed tariff sheets,
- Marked tariff sheets,
- Transmittal letter

Service and Communications

In compliance with 18 CFR § 154.7(b), Northwest certifies that copies of this filing have been served electronically upon Northwest's customers and upon interested state regulatory commissions.

All communications regarding this filing should be served by e-mail to:

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The undersigned certifies that the contents of this filing are true and correct to the best of his knowledge and belief; that the paper and electronic versions of the submitted tariff sheets contain the same information; and that he possesses full power and authority to sign this filing.

Respectfully submitted,

NORTHWEST PIPELINE LLC

David J. Madsen

Director, Rates & Regulatory Affairs

Enclosures

GENERAL TERMS AND CONDITIONS

1. DEFINITIONS

Except where the context expressly establishes another meaning, the following terms when used in this Tariff and in a Service Agreement or other agreement with Transporter incorporating said Tariff will have the following meanings:

Agent: Any party retained by Service Requester for purposes of administering Service Requester's Service Agreement with Transporter. An Agent has only those rights designated in writing to Transporter by such Service Requester.

Associated Receipt Point: A Receipt Point identified by Transporter from which gas may be nominated to a specific pool without incurring transportation and fuel charges. Associated Receipt Point(s) will be posted on Transporter's Designated Site.

Balancing-Approved Day: A Day in which Transporter has indicated on its website that it is accepting Balancing Nominations.

Balancing Nomination: A separately identified Nomination to resolve or reduce imbalance(s) with Transporter.

Begin Date: The Gas Day specified by Service Requester when a transaction is to begin.

Biogas: Raw gas substantially composed of methane that is produced by the breakdown of organic matter in the absence of oxygen.

Boil-off: Gas vapors generated during the storage and use of liquefied natural gas.

British Thermal Unit ("Btu"): As defined in the American Gas Association Report No. 3, as revised from time to time. "Standardize the reporting basis for Btu as 14.73 psia and 60 degrees F (101.325 kPa and 15 degrees C, and dry). Standardize the reporting basis for gigacalorie as 1.035646 Kg/cm² and 15.6 degrees C and dry. Standardize the reporting basis for gas volumes as cubic foot at standard conditions of 14.73 psia, 60 degrees, F and dry. For gas volumes reported in cubic meters, the standard conditions are 101.325 kPa, 15 degrees C, and dry." NAESB WGQ Standard 2.3.9.

Business Associate Information: The company identifier information, designated representative information, notification preferences and related data provided by a party to Transporter as specified in the Business Associate Information form contained in the informational posting section on Transporter's Designated Site.

Business Day: "Monday through Friday, excluding Federal Banking Holidays for transactions in the U.S., and similar holidays for transactions occurring in Canada and Mexico." NAESB WGQ Standard 3.2.1

Commission: The Federal Energy Regulatory Commission or any successor entity thereto.

GENERAL TERMS AND CONDITIONS
(Continued)

1. DEFINITIONS (Continued)

c) For both a) and b) above, Related Income Taxes include a gross-up calculation to cover the income tax that Transporter must pay on the Related Income Taxes that are collected from the Shipper.

Renewable Natural Gas ("RNG"): Renewable Natural Gas, also known as biomethane, refers to the portion of biogas that has been purified. Sources may include landfill gas, dairies or feedlots, publicly owned treatment works, sewage treatment plants, and wastewater plants. RNG must conform to the gas quality specifications and testing/monitoring requirements in Section 3 of the GT&C and be free from bacteria, pathogens, and any other substances injurious to pipeline facilities or that would cause the gas to be unmarketable.

Scheduled Quantity: The quantity of gas Transporter has scheduled to transport from specific receipt point(s) to specific delivery point(s), Transportation Service Agreements or zones for a defined period pursuant to an executed Service Agreement; the quantity of gas Transporter has scheduled for aggregation/dis-aggregation from a Pool.

Secondary Firm Service Rights: For purposes of Section 12.1, the quantity of Secondary Firm Service Rights pursuant to a Firm Transportation Service Agreement at any Receipt and/or Delivery Point, on the mainline or on a lateral is equal to the Contract Demand on a Firm Service Agreement (as adjusted for any released capacity pursuant to Section 22) less the quantity at such point that is designated as Primary Firm Service Rights, as defined in Section 1.42.

a) Secondary Firm Service Rights include rights designated as subordinate in any Firm Service Agreement with non-conforming provisions that have been approved by the Commission.

b) Secondary Firm Service Rights include rights delineated in Rate Schedule TF-2, Section 11.

Service Requester: A Shipper or any other party that executes with Transporter a Northwest Passage Access Agreement and/or a Trading Partner Agreement.

Shipper: A party that executes a Service Agreement with Transporter under one of the Rate Schedules contained in this tariff.

Shipper Imbalance: A Shipper Imbalance will result when there is a difference between a Shipper's scheduled net receipts and deliveries due to an upstream and/or downstream confirmation.

~~Thermally Equivalent: An equal number of Dths.~~

~~Trading Partner Agreement: An agreement entered into by Transporter and requesting party which governs the EDI between Transporter and Service Requester.~~

GENERAL TERMS AND CONDITIONS
(Continued)

1. DEFINITIONS (Continued)

Thermally Equivalent: An equal number of Dths.

Trading Partner Agreement: An agreement entered into by Transporter and requesting party which governs the EDI between Transporter and Service Requester.

Transportation: The receipt of Shipper's gas at input points on Transporter's mainline transportation system (referred to as "Receipt Points") and the delivery of thermally equivalent quantities by Transporter to Shipper or for Shipper's account (after making allowance for any requisite fuel reimbursement furnished in-kind) at other points on Transporter's mainline transportation system (referred to as "Delivery Points") regardless of the direction of flow of gas in Transporter's pipelines between the Receipt and Delivery Points, or of changes in such directions of flow. Transportation also means the receipt of Shipper's gas for injection or liquefaction into Transporter's storage facilities and the storage and subsequent withdrawal or vaporization of thermally equivalent quantities, less fuel use, for Shipper's account. All storage references in this tariff, shall be considered to be a part of the term Transportation.

Transporter: Northwest Pipeline LLC, Northwest or Transportation Service Provider.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY

3.1 Gas Quality at Receipt Points. All Gas delivered by Shipper to Transporter shall conform to the applicable specifications in either Section 3.1(a) or Section 3.1(b). As used in this section, the La Plata Facilities are defined as those facilities commencing at a measurement facility downstream of the discharge side of Northwest's La Plata B compressor station southward to the Blanco Hub, including the La Plata A compressor station and certain plant interconnects, all located in southern Colorado and northern New Mexico.

(a) All Gas delivered by Shipper to Transporter at Receipt Points not connected to the La Plata Facilities shall conform to the following specifications:

(1) Hydrocarbon Liquids and Liquefiabiles: The hydrocarbon dew point of the gas delivered shall not exceed fifteen degrees Fahrenheit at any pressure between 100 psia and 1,000 psia as calculated from the gas composition and shall be free from hydrocarbons in the liquid state. At all times, any and all liquid or liquefiable hydrocarbons, or any other constituent or by-product, recovered from the gas by Transporter, after delivery of gas to Transporter shall be and remain the exclusive property of Transporter, except as specified in Section 20 of the General Terms and Conditions.

(2) Hydrogen Sulfide and Total Sulfur: The gas shall contain not more than one quarter grain of hydrogen sulfide per one hundred cubic feet and not more than five grains total sulfur per one hundred cubic feet.

(3) Carbon Dioxide ~~and Total Nonhydrocarbons~~: The gas shall contain not more than two percent by volume of carbon dioxide ~~and shall contain not more than three percent by volume of combined nonhydrocarbon gases including, but not limited to, carbon dioxide, nitrogen and oxygen~~, except as otherwise provided in Section 3.5.

(4) Inerts: The gas shall contain not more than a combined total of three percent by volume of inerts including, but not limited to, carbon dioxide, nitrogen and oxygen, except as otherwise provided in Section 3.1(c) and Section 3.5.

GENERAL TERMS AND CONDITIONS
Continued)

3. QUALITY (Continued)

(45) Dust, Gums, etc.: The gas shall be commercially free from objectionable odors (excluding odorant added to natural gas for safety reasons or to comply with federal and/or state regulations), solid matter, dust, gums, and gum forming constituents, or any other substance which interferes with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow.

(56) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu, except as otherwise provided in Section 3.1(c).

(67) Oxygen: The gas shall not contain in excess of two-tenths of one percent by volume of oxygen, and the parties agree to exercise every reasonable effort to keep the gas completely free of oxygen.

(78) Temperature: The temperature of the gas at the point of delivery shall not exceed one hundred twenty degrees Fahrenheit.

(89) Water: The gas delivered shall be free from liquid water and shall not contain more than seven pounds of water in vapor phase per million cubic feet.

(910) Mercury: The gas shall be free from any detectable mercury.

(1011) Toxic or Hazardous Substance: The gas shall not contain any toxic or hazardous substance in concentrations which, in the normal use of the gas, may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or be contrary to applicable government standards.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

(~~1112~~) Bacteria: The gas, including any associated liquids, shall not contain any microbiological organism, active bacteria or bacterial agent capable of causing or contributing to: (i) injury to Transporter's pipelines, meters, regulators, or other facilities and appliances through which such gas flows or (ii) interference with the proper operation of the Transporter's facilities. Microbiological organisms, include, but are not limited to, sulfate reducing bacteria (SRB) and acid producing bacteria (ACB). When bacteria or microbiological organisms are considered a possibility, Shipper(s) desiring to Nominate such gas, upon Transporter's request, shall cause such gas to be tested for bacteria or bacterial agents utilizing the American Petroleum Institute test method API-RP38 or other acceptable test method as determined by both parties.

(b) All Gas delivered by Shipper to Transporter at Receipt Points connected to the La Plata Facilities shall conform to the following specifications:

(1) Hydrocarbon Liquids and Liquefiabiles: The hydrocarbon dew point of the gas delivered shall not exceed fifteen degrees Fahrenheit at any pressure between 100 psia and 1,000 psia as calculated from the gas composition and shall be free from hydrocarbons in the liquid state. At all times, any and all liquid or liquefiable hydrocarbons, or any other constituent or by-product, recovered from the gas by Transporter, after delivery of gas to Transporter shall be and remain the exclusive property of Transporter, except as specified in Section 20 of the General Terms and Conditions.

(2) Hydrogen Sulfide and Total Sulfur: The gas shall contain not more than one quarter grain of hydrogen sulfide per one hundred cubic feet of gas. The gas shall contain not more than 0.3 grains of mercaptan sulfur per one hundred cubic feet of gas. The gas shall contain not more than 0.75 grains of total sulfur per one hundred cubic feet of gas.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

(3) Carbon Dioxide ~~and Total Nonhydrocarbons~~: The gas shall contain not more than two percent by volume of carbon dioxide ~~and shall contain not more than three percent by volume of combined nonhydrocarbon gases including, but not limited to, carbon dioxide, nitrogen and oxygen~~, except as otherwise provided in Section 3.5.

(4) Inerts: The gas shall contain not more than a combined total of three percent by volume of inerts including, but not limited to, carbon dioxide, nitrogen and oxygen, except as otherwise provided in Section 3.5.

(45) Dust, Gums, etc.: The gas shall be commercially free from objectionable odors (excluding odorant added to natural gas for safety reasons or to comply with federal and/or state regulations), solid matter, dust, gums, and gum forming constituents, or any other substance which interferes with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow.

(56) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu.

(67) Oxygen: The gas shall not contain in excess of one-tenth of one percent by volume of oxygen, and the parties agree to exercise every reasonable effort to keep the gas completely free of oxygen.

(78) Temperature: The temperature of the gas at the point of delivery shall not be less than forty (40) degrees Fahrenheit, and not exceed one hundred twenty degrees (120) Fahrenheit.

(89) Water: The gas delivered shall be free from liquid water and shall not contain more than seven pounds of water in vapor phase per million cubic feet.

(910) Mercury: The gas shall be free from any detectable mercury.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

~~(1011)~~ Toxic or Hazardous Substance: The gas shall not contain any toxic or hazardous substance in concentrations which, in the normal use of the gas, may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or be contrary to applicable government standards.

~~(1112)~~ Bacteria: The gas, including any associated liquids, shall not contain any microbiological organism, active bacteria or bacterial agent capable of causing or contributing to: (i) injury to Transporter's pipelines, meters, regulators, or other facilities and appliances through which such gas flows or (ii) interference with the proper operation of the Transporter's facilities. Microbiological organisms, include, but are not limited to, sulfate reducing bacteria (SRB) and acid producing bacteria (ACB). When bacteria or microbiological organisms are considered a possibility, Shipper(s) desiring to Nominate such gas, upon Transporter's request, shall cause such gas to be tested for bacteria or bacterial agents utilizing the American Petroleum Institute test method API-RP38 or other acceptable test method as determined by both parties.

(c) RNG delivered by Shipper to Transporter at Receipt Points mentioned in Section 3.1(a) shall conform to the following specifications and testing/monitoring requirements:

(1) RNG gas delivered into Transporter's system shall conform to the gas quality specifications set forth in Section 3.1(a) above except when Transporter, in its reasonable judgement, determines it can accept RNG: (a) containing not more than a combined total of four percent by volume of inerts including, but not limited to, carbon dioxide, nitrogen and oxygen and/or (b) with a total gross heating value of not less than 970 Btu.

~~(1)~~ (2) Transporter prohibits RNG from a landfill containing hazardous waste, as defined in Title 40 of the Code of Federal Regulation (CFR) Section 261.3, from being injected into its pipeline system. The operator of a receipt point shall not knowingly supply or cause to supply RNG from a landfill containing hazardous waste. It is the responsibility of the operator of a landfill receipt point to disclose whether the landfill is a site of hazardous waste, has ever been a site of hazardous waste, contains hazardous waste, or ever accepted hazardous waste. Hazardous waste landfills include all

~~3.2 Gas Quality at Delivery Point(s). The gas delivered by Transporter to Shipper at the Delivery Point shall be natural gas containing a gross heating value of at least 985 Btus. Such gas shall be commercially free of dust, gums, dirt, impurities and other solid matter and shall not contain more than one-quarter grain hydrogen sulfide per one hundred cubic feet as determined by using commercially available on-line analyses and/or such analytical methods that are generally accepted in industry practice; provided that Transporter may install and utilize a recording hydrogen sulfide analyzer to monitor the gas at points at which it deems such continuous monitoring to be desirable. The gas to be delivered shall not contain more than five grains of total sulfur per one hundred cubic feet, unless Transporter determines that there is a regulatory requirement for gas to be odorized upstream of the Delivery Point, in which case, the gas to be delivered shall not contain more than six grains of total sulfur per one hundred cubic feet.~~

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

continuous land and structures, and other appurtenances and improvements, on the land used for the treatment, transfer, storage, resource recovery, and disposal or recycling of hazardous waste. The operator of the landfill receipt point shall demonstrate verification from an approved laboratory that the RNG does not originate from hazardous waste before gas flows into Transporter's pipeline system.

(3) RNG to be delivered to and transported on Transporter's pipeline system shall be subject to periodic testing and monitoring based on the biogas source. Transporter's RNG operating policy and testing requirements for the acceptance of RNG into Transporter's system will be posted on Transporter's Designated Site.

3.2 Gas Quality at Delivery Point(s). The gas delivered by Transporter to Shipper at the Delivery Point shall be natural gas containing a gross heating value of at least 985 Btus. Such gas shall be commercially free of dust, gums, dirt, impurities and other solid matter and shall not contain more than one-quarter grain hydrogen sulfide per one hundred cubic feet as determined by using commercially available on-line analyses and/or such analytical methods that are generally accepted in industry practice; provided that Transporter may install and utilize a recording hydrogen sulfide analyzer to monitor the gas at points at which it deems such continuous monitoring to be desirable. The gas to be delivered shall not contain more than five grains of total sulfur per one hundred cubic feet, unless Transporter determines that there is a regulatory requirement for gas to be odorized upstream of the Delivery Point, in which case, the gas to be delivered shall not contain more than six grains of total sulfur per one hundred cubic feet.

The gas shall be free of water and hydrocarbons in liquid form at the temperature and pressure at which the gas is delivered and in no event shall have a water content in excess of seven pounds in vapor phase per million cubic feet.

~~3.3 Determination of Gross Heating Value and Component Analysis. The party operating the measurement equipment shall determine the gross heating value of the gas delivered and its component analysis at reasonable intervals. Such determination shall be made using either an on-line chromatograph or by chromatographic analysis of a representative sample of gas taken with a continuous sampler. Transporter may at its option allow the use of spot samples. If at any time and for any reason Shipper or Transporter should question the results of any spot sampling, a redetermination shall be made and the redetermination mutually acceptable to the parties shall be used; provided, however, if neither~~

~~party questions such results within a period of sixty (60) days following the determination thereof, then such results shall be deemed conclusive and binding upon the parties. Btu measuring equipment shall be installed at a location or locations where the gross heating value of the gas received or delivered hereunder may be reasonably determined.~~

~~3.4 Failure to Meet Specifications. Transporter or Shipper shall have the right, exercisable by the giving of written or oral notice to the other party, to require the remedy of any failure to deliver or redeliver gas in accordance with the quality specifications set forth in Sections 3.1 and 3.2. In the event gas delivered by either party fails to conform to such specifications, as evidenced by the latest chromatograph analysis derived from an on-line chromatograph or from a sample taken manually and analyzed by a chromatograph, or from any other verifiable evidence, the receiving party may refuse to accept all or any portion of such gas.~~

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

3.3 Determination of Gross Heating Value and Component Analysis. The party operating the measurement equipment shall determine the gross heating value of the gas delivered and its component analysis at reasonable intervals. Such determination shall be made using either an on-line chromatograph or by chromatographic analysis of a representative sample of gas taken with a continuous sampler. Transporter may at its option allow the use of spot samples. If at any time and for any reason Shipper or Transporter should question the results of any spot sampling, a redetermination shall be made and the redetermination mutually acceptable to the parties shall be used; provided, however, if neither party questions such results within a period of sixty (60) days following the determination thereof, then such results shall be deemed conclusive and binding upon the parties. Btu measuring equipment shall be installed at a location or locations where the gross heating value of the gas received or delivered hereunder may be reasonably determined.

3.4 Failure to Meet Specifications. Transporter or Shipper shall have the right, exercisable by the giving of written or oral notice to the other party, to require the remedy of any failure to deliver or redeliver gas in accordance with the quality specifications set forth in Sections 3.1 and 3.2. In the event gas delivered by either party fails to conform to such specifications, as evidenced by the latest chromatograph analysis derived from an on-line chromatograph or from a sample taken manually and analyzed by a chromatograph, or from any other verifiable evidence, the receiving party may refuse to accept all or any portion of such gas.

3.5 Accepting Gas Which Fails to Meet Specifications. Transporter will accept gas that does not meet quality specifications on a non-discriminatory basis to all similarly situated Shippers, provided: 1) such acceptance does not jeopardize Transporter's ability to meet its obligations to deliver gas to downstream interconnecting pipelines or markets; and, 2) such acceptance occurs on a short-term basis as a result of an unplanned upstream event such as a plant start-up, plant upset or line freeze-off.

3.6 Gas Analysis Equipment. If Transporter, in its reasonable judgment, determines that any additional or modified Gas analysis or control equipment is needed to accurately monitor the quality of Gas received at an existing Receipt Point and control the receipt of Gas failing to conform to the applicable quality specifications, then the Shipper(s) desiring to nominate at such Receipt Point will cause the interconnecting party at such Receipt Point to install such necessary additional or modified equipment.

~~Unless otherwise mutually agreed, if Transporter installs such additional or modified Gas analysis or control equipment, the interconnecting party will provide a contribution in aid of~~

~~construction to Transporter for all actual costs incurred by
Transporter, and reimburse Transporter for any Related Income Taxes.~~

~~3.7 NAESB Standards Related to Gas Quality. NAESB WCQ Quadrant
Electronic Delivery Mechanism Related Standards referenced below, will
apply and are incorporated by reference:~~

~~NAESB WCQ Standards:~~

~~4.3.89 through 4.3.93~~

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued) ~~RESERVED FOR FUTURE USE~~

Unless otherwise mutually agreed, if Transporter installs such additional or modified Gas analysis or control equipment, the interconnecting party will provide a contribution in aid of construction to Transporter for all actual costs incurred by Transporter, and reimburse Transporter for any Related Income Taxes.

3.7 NAESB Standards Related to Gas Quality. NAESB WGQ Quadrant Electronic Delivery Mechanism Related Standards referenced below, will apply and are incorporated by reference:

NAESB WGQ Standards:

4.3.89 through 4.3.93

GENERAL TERMS AND CONDITIONS

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Associated Receipt Point: A Receipt Point identified by Transporter from which gas may be nominated to a specific pool without incurring transportation and fuel charges. Associated Receipt Point(s) will be posted on Transporter's Designated Site.

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Balancing Nomination: A separately identified Nomination to resolve or reduce imbalance(s) with Transporter.

Begin Date: The Gas Day specified by Service Requester when a transaction is to begin.

Biogas: Raw gas substantially composed of methane that is produced by the breakdown of organic matter in the absence of oxygen.

Boil-off: Gas vapors generated during the storage and use of liquefied natural gas.

British Thermal Unit ("Btu"): As defined in the American Gas Association Report No. 3, as revised from time to time. "Standardize the reporting basis for Btu as 14.73 psia and 60 degrees F (101.325 kPa and 15 degrees C, and dry). Standardize the reporting basis for gigacalorie as 1.035646 Kg/cm² and 15.6 degrees C and dry. Standardize the reporting basis for gas volumes as cubic foot at standard conditions of 14.73 psia, 60 degrees, F and dry. For gas volumes reported in cubic meters, the standard conditions are 101.325 kPa, 15 degrees C, and dry." NAESB WGQ Standard 2.3.9.

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GENERAL TERMS AND CONDITIONS
(Continued)

1. DEFINITIONS (Continued)

- c) For both a) and b) above, Related Income Taxes include a gross-up calculation to cover the income tax that Transporter must pay on the Related Income Taxes that are collected from the Shipper.

Renewable Natural Gas ("RNG"): Renewable Natural Gas, also known as biomethane, refers to the portion of biogas that has been purified. Sources may include landfill gas, dairies or feedlots, publicly owned treatment works, sewage treatment plants, and wastewater plants. RNG must conform to the gas quality specifications and testing/monitoring requirements in Section 3 of the GT&C and be free from bacteria, pathogens, and any other substances injurious to pipeline facilities or that would cause the gas to be unmarketable.

Scheduled Quantity: The quantity of gas Transporter has scheduled to transport from specific receipt point(s) to specific delivery point(s), Transportation Service Agreements or zones for a defined period pursuant to an executed Service Agreement; the quantity of gas Transporter has scheduled for aggregation/dis-aggregation from a Pool.

Secondary Firm Service Rights: For purposes of Section 12.1, the quantity of Secondary Firm Service Rights pursuant to a Firm Transportation Service Agreement at any Receipt and/or Delivery Point, on the mainline or on a lateral is equal to the Contract Demand on a Firm Service Agreement (as adjusted for any released capacity pursuant to Section 22) less the quantity at such point that is designated as Primary Firm Service Rights, as defined in Section 1.42.

- a) Secondary Firm Service Rights include rights designated as subordinate in any Firm Service Agreement with non-conforming provisions that have been approved by the Commission.
- b) Secondary Firm Service Rights include rights delineated in Rate Schedule TF-2, Section 11.

Service Requester: A Shipper or any other party that executes with Transporter a Northwest Passage Access Agreement and/or a Trading Partner Agreement.

Shipper: A party that executes a Service Agreement with Transporter under one of the Rate Schedules contained in this tariff.

Shipper Imbalance: A Shipper Imbalance will result when there is a difference between a Shipper's scheduled net receipts and deliveries due to an upstream and/or downstream confirmation.

GENERAL TERMS AND CONDITIONS
(Continued)

1. DEFINITIONS (Continued)

Thermally Equivalent: An equal number of Dths.

Trading Partner Agreement: An agreement entered into by Transporter and requesting party which governs the EDI between Transporter and Service Requester.

Transportation: The receipt of Shipper's gas at input points on Transporter's mainline transportation system (referred to as "Receipt Points") and the delivery of thermally equivalent quantities by Transporter to Shipper or for Shipper's account (after making allowance for any requisite fuel reimbursement furnished in-kind) at other points on Transporter's mainline transportation system (referred to as "Delivery Points") regardless of the direction of flow of gas in Transporter's pipelines between the Receipt and Delivery Points, or of changes in such directions of flow. Transportation also means the receipt of Shipper's gas for injection or liquefaction into Transporter's storage facilities and the storage and subsequent withdrawal or vaporization of thermally equivalent quantities, less fuel use, for Shipper's account. All storage references in this tariff, shall be considered to be a part of the term Transportation.

Transporter: Northwest Pipeline LLC, Northwest or Transportation Service Provider.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY

3.1 Gas Quality at Receipt Points. All Gas delivered by Shipper to Transporter shall conform to the applicable specifications in either Section 3.1(a) or Section 3.1(b). As used in this section, the La Plata Facilities are defined as those facilities commencing at a measurement facility downstream of the discharge side of Northwest's La Plata B compressor station southward to the Blanco Hub, including the La Plata A compressor station and certain plant interconnects, all located in southern Colorado and northern New Mexico.

(a) All Gas delivered by Shipper to Transporter at Receipt Points not connected to the La Plata Facilities shall conform to the following specifications:

(1) Hydrocarbon Liquids and Liquefiabiles: The hydrocarbon dew point of the gas delivered shall not exceed fifteen degrees Fahrenheit at any pressure between 100 psia and 1,000 psia as calculated from the gas composition and shall be free from hydrocarbons in the liquid state. At all times, any and all liquid or liquefiable hydrocarbons, or any other constituent or by-product, recovered from the gas by Transporter, after delivery of gas to Transporter shall be and remain the exclusive property of Transporter, except as specified in Section 20 of the General Terms and Conditions.

(2) Hydrogen Sulfide and Total Sulfur: The gas shall contain not more than one quarter grain of hydrogen sulfide per one hundred cubic feet and not more than five grains total sulfur per one hundred cubic feet.

(3) Carbon Dioxide: The gas shall contain not more than two percent by volume of carbon dioxide, except as otherwise provided in Section 3.5.

(4) Inerts: The gas shall contain not more than a combined total of three percent by volume of inerts including, but not limited to, carbon dioxide, nitrogen and oxygen, except as otherwise provided in Section 3.1(c) and Section 3.5.

GENERAL TERMS AND CONDITIONS
Continued)

3. QUALITY (Continued)

(5) Dust, Gums, etc.: The gas shall be commercially free from objectionable odors (excluding odorant added to natural gas for safety reasons or to comply with federal and/or state regulations), solid matter, dust, gums, and gum forming constituents, or any other substance which interferes with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow.

(6) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu, except as otherwise provided in Section 3.1(c).

(7) Oxygen: The gas shall not contain in excess of two-tenths of one percent by volume of oxygen, and the parties agree to exercise every reasonable effort to keep the gas completely free of oxygen.

(8) Temperature: The temperature of the gas at the point of delivery shall not exceed one hundred twenty degrees Fahrenheit.

(9) Water: The gas delivered shall be free from liquid water and shall not contain more than seven pounds of water in vapor phase per million cubic feet.

(10) Mercury: The gas shall be free from any detectable mercury.

(11) Toxic or Hazardous Substance: The gas shall not contain any toxic or hazardous substance in concentrations which, in the normal use of the gas, may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or be contrary to applicable government standards.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

(12) Bacteria: The gas, including any associated liquids, shall not contain any microbiological organism, active bacteria or bacterial agent capable of causing or contributing to: (i) injury to Transporter's pipelines, meters, regulators, or other facilities and appliances through which such gas flows or (ii) interference with the proper operation of the Transporter's facilities. Microbiological organisms, include, but are not limited to, sulfate reducing bacteria (SRB) and acid producing bacteria (ACB). When bacteria or microbiological organisms are considered a possibility, Shipper(s) desiring to Nominate such gas, upon Transporter's request, shall cause such gas to be tested for bacteria or bacterial agents utilizing the American Petroleum Institute test method API-RP38 or other acceptable test method as determined by both parties.

(b) All Gas delivered by Shipper to Transporter at Receipt Points connected to the La Plata Facilities shall conform to the following specifications:

(1) Hydrocarbon Liquids and Liquefiabiles: The hydrocarbon dew point of the gas delivered shall not exceed fifteen degrees Fahrenheit at any pressure between 100 psia and 1,000 psia as calculated from the gas composition and shall be free from hydrocarbons in the liquid state. At all times, any and all liquid or liquefiable hydrocarbons, or any other constituent or by-product, recovered from the gas by Transporter, after delivery of gas to Transporter shall be and remain the exclusive property of Transporter, except as specified in Section 20 of the General Terms and Conditions.

(2) Hydrogen Sulfide and Total Sulfur: The gas shall contain not more than one quarter grain of hydrogen sulfide per one hundred cubic feet of gas. The gas shall contain not more than 0.3 grains of mercaptan sulfur per one hundred cubic feet of gas. The gas shall contain not more than 0.75 grains of total sulfur per one hundred cubic feet of gas.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

(3) Carbon Dioxide: The gas shall contain not more than two percent by volume of carbon dioxide, except as otherwise provided in Section 3.5.

(4) Inerts: The gas shall contain not more than a combined total of three percent by volume of inerts including, but not limited to, carbon dioxide, nitrogen and oxygen, except as otherwise provided in Section 3.5.

(5) Dust, Gums, etc.: The gas shall be commercially free from objectionable odors (excluding odorant added to natural gas for safety reasons or to comply with federal and/or state regulations), solid matter, dust, gums, and gum forming constituents, or any other substance which interferes with the intended purpose of merchantability of the gas, or causes interference with the proper and safe operation of the lines, meters, regulators, or other appliances through which it may flow.

(6) Heating Value: The total gross heating value of the gas deliverable hereunder shall not be less than 985 Btu.

(7) Oxygen: The gas shall not contain in excess of one-tenth of one percent by volume of oxygen, and the parties agree to exercise every reasonable effort to keep the gas completely free of oxygen.

(8) Temperature: The temperature of the gas at the point of delivery shall not be less than forty (40) degrees Fahrenheit, and not exceed one hundred twenty degrees (120) Fahrenheit.

(9) Water: The gas delivered shall be free from liquid water and shall not contain more than seven pounds of water in vapor phase per million cubic feet.

(10) Mercury: The gas shall be free from any detectable mercury.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

(11) Toxic or Hazardous Substance: The gas shall not contain any toxic or hazardous substance in concentrations which, in the normal use of the gas, may be hazardous to health, injurious to pipeline facilities, or be a limit to merchantability or be contrary to applicable government standards.

(12) Bacteria: The gas, including any associated liquids, shall not contain any microbiological organism, active bacteria or bacterial agent capable of causing or contributing to: (i) injury to Transporter's pipelines, meters, regulators, or other facilities and appliances through which such gas flows or (ii) interference with the proper operation of the Transporter's facilities. Microbiological organisms, include, but are not limited to, sulfate reducing bacteria (SRB) and acid producing bacteria (ACB). When bacteria or microbiological organisms are considered a possibility, Shipper(s) desiring to Nominate such gas, upon Transporter's request, shall cause such gas to be tested for bacteria or bacterial agents utilizing the American Petroleum Institute test method API-RP38 or other acceptable test method as determined by both parties.

(c) RNG delivered by Shipper to Transporter at Receipt Points mentioned in Section 3.1(a) shall conform to the following specifications and testing/monitoring requirements:

(1) RNG gas delivered into Transporter's system shall conform to the gas quality specifications set forth in Section 3.1(a) above except when Transporter, in its reasonable judgement, determines it can accept RNG: (a) containing not more than a combined total of four percent by volume of inerts including, but not limited to, carbon dioxide, nitrogen and oxygen and/or (b) with a total gross heating value of not less than 970 Btu.

(2) Transporter prohibits RNG from a landfill containing hazardous waste, as defined in Title 40 of the Code of Federal Regulation (CFR) Section 261.3, from being injected into its pipeline system. The operator of a receipt point shall not knowingly supply or cause to supply RNG from a landfill containing hazardous waste. It is the responsibility of the operator of a landfill receipt point to disclose whether the landfill is a site of hazardous waste, has ever been a site of hazardous waste, contains hazardous waste, or ever accepted hazardous waste. Hazardous waste landfills include all

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

continuous land and structures, and other appurtenances and improvements, on the land used for the treatment, transfer, storage, resource recovery, and disposal or recycling of hazardous waste. The operator of the landfill receipt point shall demonstrate verification from an approved laboratory that the RNG does not originate from hazardous waste before gas flows into Transporter's pipeline system.

(3) RNG to be delivered to and transported on Transporter's pipeline system shall be subject to periodic testing and monitoring based on the biogas source. Transporter's RNG operating policy and testing requirements for the acceptance of RNG into Transporter's system will be posted on Transporter's Designated Site.

3.2 Gas Quality at Delivery Point(s). The gas delivered by Transporter to Shipper at the Delivery Point shall be natural gas containing a gross heating value of at least 985 Btus. Such gas shall be commercially free of dust, gums, dirt, impurities and other solid matter and shall not contain more than one-quarter grain hydrogen sulfide per one hundred cubic feet as determined by using commercially available on-line analyses and/or such analytical methods that are generally accepted in industry practice; provided that Transporter may install and utilize a recording hydrogen sulfide analyzer to monitor the gas at points at which it deems such continuous monitoring to be desirable. The gas to be delivered shall not contain more than five grains of total sulfur per one hundred cubic feet, unless Transporter determines that there is a regulatory requirement for gas to be odorized upstream of the Delivery Point, in which case, the gas to be delivered shall not contain more than six grains of total sulfur per one hundred cubic feet.

The gas shall be free of water and hydrocarbons in liquid form at the temperature and pressure at which the gas is delivered and in no event shall have a water content in excess of seven pounds in vapor phase per million cubic feet.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

3.3 Determination of Gross Heating Value and Component Analysis. The party operating the measurement equipment shall determine the gross heating value of the gas delivered and its component analysis at reasonable intervals. Such determination shall be made using either an on-line chromatograph or by chromatographic analysis of a representative sample of gas taken with a continuous sampler. Transporter may at its option allow the use of spot samples. If at any time and for any reason Shipper or Transporter should question the results of any spot sampling, a redetermination shall be made and the redetermination mutually acceptable to the parties shall be used; provided, however, if neither party questions such results within a period of sixty (60) days following the determination thereof, then such results shall be deemed conclusive and binding upon the parties. Btu measuring equipment shall be installed at a location or locations where the gross heating value of the gas received or delivered hereunder may be reasonably determined.

3.4 Failure to Meet Specifications. Transporter or Shipper shall have the right, exercisable by the giving of written or oral notice to the other party, to require the remedy of any failure to deliver or redeliver gas in accordance with the quality specifications set forth in Sections 3.1 and 3.2. In the event gas delivered by either party fails to conform to such specifications, as evidenced by the latest chromatograph analysis derived from an on-line chromatograph or from a sample taken manually and analyzed by a chromatograph, or from any other verifiable evidence, the receiving party may refuse to accept all or any portion of such gas.

3.5 Accepting Gas Which Fails to Meet Specifications. Transporter will accept gas that does not meet quality specifications on a non-discriminatory basis to all similarly situated Shippers, provided: 1) such acceptance does not jeopardize Transporter's ability to meet its obligations to deliver gas to downstream interconnecting pipelines or markets; and, 2) such acceptance occurs on a short-term basis as a result of an unplanned upstream event such as a plant start-up, plant upset or line freeze-off.

3.6 Gas Analysis Equipment. If Transporter, in its reasonable judgment, determines that any additional or modified Gas analysis or control equipment is needed to accurately monitor the quality of Gas received at an existing Receipt Point and control the receipt of Gas failing to conform to the applicable quality specifications, then the Shipper(s) desiring to nominate at such Receipt Point will cause the interconnecting party at such Receipt Point to install such necessary additional or modified equipment.

GENERAL TERMS AND CONDITIONS
(Continued)

3. QUALITY (Continued)

Unless otherwise mutually agreed, if Transporter installs such additional or modified Gas analysis or control equipment, the interconnecting party will provide a contribution in aid of construction to Transporter for all actual costs incurred by Transporter, and reimburse Transporter for any Related Income Taxes.

3.7 NAESB Standards Related to Gas Quality. NAESB WGQ Quadrant Electronic Delivery Mechanism Related Standards referenced below, will apply and are incorporated by reference:

NAESB WGQ Standards:
4.3.89 through 4.3.93