

PUBLIC SERVICE COMPANY OF COLORADO

Second Revised Sheet No. R25

P.O. Box 840  
Denver, CO 80201-0840

First Revised Cancels Sheet No. R25

RULES AND REGULATIONS

NATURAL GAS SERVICE

STANDARDS

GAS QUALITY SPECIFICATIONS

Minimum Heating Value

The minimum monthly average heating value of natural gas delivered by the Company shall be:

- a. 945 Btu/scf in the Denver, North Metro, Boulder, Pueblo, San Luis Valley, Mountain and Sterling areas.
- b. 965 Btu/scf in the Northern (including the Northern Portion of Boulder), High Plains (except Sterling) and Rifle areas.
- c. 865 Btu/scf in the Grand Junction, Meeker, Craig, Hayden, and Steamboat areas.

THERM CONVERSION

The following is a description of the methodology utilized by the Company for the purpose of converting metered volumes to Therm equivalents. The actual calculations used to convert metered volumes to Therms or Dekatherms will be accomplished in the Company's Customer Information System and will be based on the product of metered volumes times the Therm Multiplier as follows:

$$\begin{aligned} \text{Therms (Th)} &= \text{Metered Volumes (Ccf)} \times \text{Therm Multiplier} \\ \text{Dekatherms (Dth)} &= \text{Metered Volumes (Mcf)} \times \text{Therm Multiplier} \end{aligned}$$

Fractional Therms will not be used. Standard rounding criteria will be applied. The Therm Multiplier is the product of three factors as follows:

$$\text{Therm Multiplier} = F_P \times F_T \times F_E$$

- Where  $F_P$  = Altitude Factor
- $F_T$  = Temperature Factor
- $F_E$  = Energy Factor

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VICE PRESIDENT,  
Policy Development

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GAS TRANSPORTATION TERMS AND CONDITIONS

QUALITY

Gas Receipts. Unless otherwise specified by Company, gas tendered to Company will conform with the quality specifications set forth under this tariff and associated Transportation Service Agreement executed between Shipper and Company. Company has no obligation to accept gas of a lesser quality than that set forth herein below or to accept gas of a lesser quality than that which is to be delivered.

At a pressure of 14.73 psia and a temperature of 60°F, gas received by Company shall not contain more than the following:

- (i) Hydrogen Sulfide: one quarter (1/4) grain per one hundred (100) cubic feet.
- (ii) Total Sulfur: five (5) grains per one hundred (100) cubic feet.
- (iii) Carbon Dioxide: three percent (3%) by volume.
- (iv) Water Content: three (3) pounds per one million (1,000,000) cubic feet.
- (v) Flowing Gas Temperature: not to be less than thirty-two degrees Fahrenheit (32°F) or more than one hundred and ten degrees Fahrenheit (110°F).
- (vi) Hydrocarbon Dewpoint: shall not exceed fifteen degrees Fahrenheit (15°F) at any pressure between one hundred (100) psia and one thousand (1000) psia as calculated from gas composition or otherwise determined.
- (vii) Oxygen Content: two percent (2%) by volume if inert blended, one thousandth percent (0.001%) by volume if not inert blended.
- (viii) Total non-combustible gases: fourteen and three tenths percent (14.3%) by volume if inert blended, five percent (5%) by volume if not inert blended.

Odorization. Company odorizes its natural gas only to meet requirements of the Department of Transportation, as stated in the Transportation of Natural and Other Gas by Pipeline, Minimum Safety Standards, 49 C.F.R. Section 192.625. Company assumes no responsibility for odorization of the natural gas after its delivery to Shipper or for Shipper's account, and Shipper or Shipper's Receiving Party(s) shall not rely on Company's odorization of the natural gas to meet any requirement or obligation of Shipper or Shipper's Receiving Party(s) with respect to the odorization of natural gas.

GAS TRANSPORTATION TERMS AND CONDITIONS

Liability. Company shall not be liable to Shipper or a third party for any damages incurred as a result of Company's refusal to receive gas that does not meet quality specifications. The Shipper delivering gas directly into Company's System shall indemnify, save, and hold harmless Company for any injury, damage, loss, or liability arising out of or relating to the Shipper's delivery of non-conformance gas.

Processing. Company may extract or permit the extraction of moisture, inerts, natural gasoline, butane, propane, or other hydrocarbons (except methane) from said natural gas, or may return thereto any substance extracted from it. Company, in order to conserve and utilize other available gases, may blend such gases with said natural gas. Company may subject or permit the subjection of said natural gas to compression, cooling, cleaning, or other processes to such an extent as may be required in its transportation from the Interconnecting Party(s) to the Delivery Point(s).

Objectionable Matter. The gas delivered to Company shall be commercial in quality and free of substances harmful to pipeline facilities, including but not limited to dust, dirt, gum-forming constituents, water, and other liquid or solid matter, or water and hydrocarbons in liquid form at the temperature and pressure at which it is received by Company, which might interfere with its marketability or cause injury to or interference with proper operation of the lines, regulators, meters, and other equipment of Company.

Hazardous Substances. All gas tendered to Company and component parts thereof shall not be hazardous to people, property, or the environment, cause damage to pipeline facilities, or be a limit to marketability. Hazardous substances include toxic substances, carcinogenic substances, reproductive toxins or other compounds and materials identified under hazardous materials laws.

Gas Interchangeability. For safe and efficient pipeline operations, gas received by Company must be interchangeable from a utilization basis with supplies in its System. Gas received by Company shall comply with the requirements set forth under the applicable Utilization Curve contained under an Exhibit to the Transportation Service Agreement, which is a general representation of the natural gas quality which is acceptable. Because the gas composition must be known to determine if a supply is interchangeable, Company reserves the right in all instances to evaluate gas composition to determine System compatibility and to refuse any gas which is unacceptable.



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