

**General Terms and Conditions for Gas Service**

**9. Measurement Standards**

- 9.01 **Measurement:** Company shall define its deliveries of natural gas in thousands of cubic feet (Mcf).
  - 9.01.01 **Definition:** One cubic foot of natural gas is defined as that quantity of gas which fills one cubic foot of space at an absolute pressure of 14.65 pounds per square inch at a temperature of 60 degrees Fahrenheit.
  - 9.01.02 **Assumptions:** Company may assume that gas delivered obeys Boyle's Law, that atmospheric pressure is 14.4 pounds per square inch absolute and that the flowing temperature of the gas in the meter is 60 degrees Fahrenheit.
  - 9.01.03 **Delivery Pressure:** Company reserves the right to specify the pressure at points of delivery.
    - (1) **Delivery Pressure at Meter:** Under normal operating conditions, utility service shall be delivered at a nominal pressure of four ounces above atmospheric pressure. At Company's option, gas may be delivered at a higher pressure to satisfy a customer's requirements.
    - (2) **Delivery Pressure of Transportation Service Gas:** The pressure at which Company delivers a customer's gas to the customer shall be mutually agreed upon from time to time. The agreed-upon pressure shall reflect the customer's requirements, Company's delivery system and other pertinent factors.
  - 9.01.04 **Pressure and Temperature Correction:** At Company's option, the volume of gas registered by the meter may be adjusted to a volume based on 60 degrees Fahrenheit and a pressure of four ounces above the atmospheric pressure of 14.4 pounds per square inch absolute, computed in accordance with Boyle's Law governing pressure and volume of gases with correction for deviation.
- 9.02 **Metering:** The registration of Company's meters shall be accepted and received at all times and placed as prima facie evidence of the amount of energy used by a customer.
  - 9.02.01 **Required Meter Accuracy Prior to Installation:** Metering devices shall be accurate to within one percent fast or two percent slow before being installed, in accordance with the rules and regulations established in Docket 34,856-U.
  - 9.02.02 **Testing Equipment:** Company shall provide and be responsible for the proper calibration of such testing equipment and apparatus as may be necessary to comply with the Rules and Regulations of the Commission.

Issued:	November 29, 2016	16-KGSG-491-RTS Approved Kansas Corporation Commission December 28, 2016 /S/ Amy L. Green
Effective:	January 1, 2017	
By:	/S/ David N. Dittmore, Director – Regulatory Affairs	

**General Terms and Conditions for Gas Service**

- 9.02.03 **Routine Meter Testing:** Company shall routinely test gas meters in accordance with its schedule. When a meter is found to be more than two percent fast or two percent slow, Company shall refund to, or may collect from, a customer the overcharge or undercharge in accordance with Section 9.02.05 Adjustment of Bills for Meter Error.
- 9.02.04 **Meter Tests at Customer's Request:** Upon written request by a customer, Company shall test the accuracy of the customer's meter.
  - (1) If the results of the test show the meter accurate within the limits of two percent fast or two percent slow, the customer shall be assessed a charge as stated in Section 12.10 Meter Test Fee.
  - (2) If the meter is found to be more than two percent fast or two percent slow, Company shall bear the cost of the test and related expenses and shall refund to, or may collect from, the customer the overcharge or undercharge in accordance with Section 9.02.05 Adjustment of Bills for Meter Error.
- 9.02.05 **Adjustment of Bills for Meter Error:** Billing adjustments shall be prepared for metering errors.
  - (1) **Fast or Slow Registering Meters:** When a billing adjustment is prepared for metering error, it shall be based on the calculated corrected meter readings for a period not exceeding six months or for the time the meter has been in service at that location if less than six months. If it can be shown that the error was due to some cause, the date of which can be fixed, the over charge or under charge shall be computed back to, but not beyond, such date.
  - (2) **Non-registering Meters:** If the meter is found not to register for any period, Company shall estimate the utility service used during this period in accordance with Section 4.05.02 Correction of Erroneous Bills.
  - (3) **Non-reporting Automatic Meter Reading (AMR) Devices:** If AMR device is found not to have reported known usage for any period; Company shall allocate the utility service used during this period in accordance with Sections 4.04.05 Estimating Procedure and 4.05.02 Correction of Erroneous Bills.

<p>Issued: <u>November 29, 2016</u></p> <p>Effective: <u>January 1, 2017</u></p> <p>By: <u>/S/</u> David N. Dittmore, Director – Regulatory Affairs</p>	<p>16-KGSG-491-RTS Approved Kansas Corporation Commission December 28, 2016 /S/ Amy L. Green</p>
---	--

**General Terms and Conditions for Gas Service**

(4) **Payment:** Company may permit payments to be made in installments over a reasonable period of time. No refund or bill less than the amount stated in Section 12.09 Adjusted Bill Amount need be issued or made.

9.02.06 **Sub-Metering:** When an additional meter is installed at the sole discretion of Company for use as sub-meter for the customer's convenience, a monthly charge may be made for the use of such meter, depending on its size. Sub-metering by the customer is not permitted.

9.03 **Gas Quality**

9.03.01 **Quality of Gas Received:** After June 1, 2007, unless specifically stated otherwise in a written agreement, gas received into Company's transmission or distribution systems shall conform to the following specifications:

- (1) It shall contain no more than 4 parts per million (ppm) of hydrogen sulfide per 100 cubic feet, nor more than 8 ppm of total sulphur per 100 cubic feet.
- (2) Its temperature shall be no less than 25 degrees Fahrenheit and no more than 120 degrees Fahrenheit.
- (3) It shall contain no more than seven pounds of water vapor per 1,000 Mcf.
- (4) It shall contain no more than 2% carbon dioxide by volume.
- (5) It shall contain no more than 100 parts per million oxygen by volume.
- (6) Its delivery pressure shall be sufficient to permit receipt of the gas by Company's delivery system.
- (7) Its dry heat content shall be no less than 950 British Thermal Units (Btu) per cubic foot and no more than 1,100 Btu per cubic foot at a pressure base of 14.65 pounds per square inch gauge (psig), and
- (8) Its hydrocarbon dew point shall not exceed 25 degrees Fahrenheit at the Company's current line pressure.
- (9) It shall be commercially free from dust, gums, gum-forming constituents, dirt, impurities, or other solid or liquid matter which might interfere with its merchantability or cause injury to or interference with proper operation of the pipelines, regulators, meters, or other equipment of Company.

Issued:	February 5, 2019	18-KGSG-560-RTS Approved Kansas Corporation Commission February 5, 2019 /S/ Lynn Retz
Effective:	February 6, 2019	
By:	/S/ Janet L. Buchanan, Director- Regulatory Affairs	

**General Terms and Conditions for Gas Service**

- 9.03.02 **Quality of Gas Delivered:** Company shall strive to deliver natural gas to customers which meet the requirements of Section 9.03.01 Quality of Gas Received.
- 9.04 **Heat Content:** The heat content of gas delivered to customers shall be the heat content available on Company's system at the particular delivery point at the time of delivery.
  - 9.04.01 **Minimum Heat Content:** The heat content may vary from delivery point to delivery point and from time to time and nothing contained herein shall be construed as obligating Company to alter the usual operation of Company's delivery system to achieve deliveries for a prescribed heat content at any point or points. In accordance with Commission Docket No. 34,856-U, Company shall not deliver gas to a customer having a heat content lower than 800 British Thermal Units per cubic foot, except by permission of the Commission.
  - 9.04.02 **Measurement of Heat Content of Gas Received**
    - (1) **'K' System:** The heat content of gas received on Company's 'k' system shall be determined by multiplying the heat value of gas received from supplying pipeline(s), stated in Btu per cubic foot, by the gas volumes received for the customer during the billing period.
    - (2) **'T' System:** The heat content of gas received on Company's 't' system shall be calculated by the same method except that the per-cubic-foot heat content of the individual gas source shall be used.
  - 9.04.03 **Measurement of Heat Content of Gas Delivered**
    - (1) **'K' System:** The heat content of a customer's gas delivered by Company's 'k' system shall be determined by multiplying the per-cubic-foot heat content of the customer's supplying pipeline connected to Company's 'k' system by the volume of gas delivered to the customer. If the customer's gas is from multiple supplying pipelines connected to Company's 'k' system, the per-cubic-foot heat content used in the above calculation shall be the prorated share of each pipeline's per-cubic-foot heat content based on the amount of the customer's gas supplied from each pipeline.
    - (2) **'T' System:** The per-cubic-foot heat content of the gas delivered by Company's 't' system shall be determined by Company measurement or by the current method used by Company to determine average heat content. The customer's heat content is calculated as above.

Issued:	November 29, 2016	16-KGSG-491-RTS Approved Kansas Corporation Commission December 28, 2016 /S/ Amy L. Green
Effective:	January 1, 2017	
By:	/S/ David N. Dittmore, Director – Regulatory Affairs	

**General Terms and Conditions for Gas Service**

9.04.04 **Additional Equipment for Measuring Heat Content:** A customer shall be required to compensate Company for all costs incurred in determining the heat content of the customer's gas if no heat content measurement is available, or if the available measurement is unacceptable to Company or the customer.

- (1) When a customer requires additional heat content measurement, Company shall determine the type and location of measurement equipment, and install the equipment at the customer's sole expense.
- (2) A customer requesting the installation of heat content measurement equipment shall be required to utilize the equipment for a minimum period of 12 consecutive months following its installation.
- (3) The customer shall pay Company a monthly charge, reasonably calculated, to reimburse Company for operating expenses associated with heat content measurement.

Issued: <u>November 29, 2016</u>	16-KGSG-491-RTS Approved Kansas Corporation Commission December 28, 2016 /S/ Amy L. Green
Effective: <u>January 1, 2017</u>	
By: <u>/S/</u> David N. Dittmore, Director – Regulatory Affairs	