

TITLE 83: PUBLIC UTILITIES  
CHAPTER I: ILLINOIS COMMERCE COMMISSION  
SUBCHAPTER d: GAS UTILITIES

PART 500  
STANDARDS OF SERVICE FOR GAS UTILITIES AND  
ALTERNATIVE GAS SUPPLIERS

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**AUTHORITY:** Implementing and authorized by Sections 8-301, 8-302, 8-501, 9-201, 10-101, 10-107, 19-110(e)(3), and 19-115(b)(1), (b)(4), and (b)(5) of the Public Utilities Act [220 ILCS 5/8-301, 8-302, 8-501, 9-201, 10-101, 10-107, 19-110(e)(3), and 19-115(b)(1), (b)(4), and (b)(5)].

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#### SUBPART A: GENERAL

##### **Section 500.10 Definitions**

"Act" means the Public Utilities Act [220 ILCS 5].

"AGA" means the American Gas Association.

"ANSI" means the American National Standards Institute.

"Alternative Gas Supplier" has the same meaning as in Section 19-105 of the Act [220 ILCS 5/19-105].

"Answer Time" means a measurement from the point the customer dialed the last digit of the natural gas public utility's or alternative gas supplier's telephone

number and a natural gas public utility or alternative gas supplier representative or automated system is ready to render assistance or accept information to process calls.

"Auxiliary Equipment" means an integral device attached directly or remotely to a gas meter. The function of auxiliary equipment is to adjust gas meter usage measurements to account for changes in gas temperature or pressure.

"Bell Prover" means a cylindrical metal tank open at the top and nearly filled with liquid, in which a smaller calibrated cylindrical tank called the bell, open at the bottom and having a dome-shaped top, can be raised or lowered. As the operator raises (negative pressure) or lowers (positive pressure) the bell, the bell will displace a known volume of air.

"British Thermal Unit" means the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit from 58.5° F to 59.5° F under a standard pressure of 30 inches of mercury at 32°F, or 1054.804 Joules.

"Complaint" means an objection made to a natural gas public utility or alternative gas supplier, by a customer or another entity, as to its charges, facilities, or service. Complaints include a customer or other entity identifying and asking a natural gas public utility or alternative gas supplier to address or resolve a problem or concern, and shall not include contacts that are limited to inquiry or seeking information.

"Compressibility" means a gas volume correction factor calculated by using the parameters of natural gas composition, flowing gas temperature, and flowing gas pressure. The compressibility correction factor compensates for the deviation of gases from the ideal gas laws with increased pressure, and variations in temperature and gas composition. Compressibility is not to be confused with "Supercompressibility," which is also defined in this Section.

"Coriolis Meter" means a gas meter that infers mass flow rate by measuring tube displacement resulting from the Coriolis effect.

"Corrector" means a device that corrects uncorrected gas meter volume according to the gas laws (Boyle's Law, Charles's Law, and Real Gas Law).

"Commission" means the Illinois Commerce Commission.

"Commission Referee Test" means the accuracy test of any gas meter made in the presence of one or more members of Commission Staff.

"Cubic Foot" means the unit of volume for purposes of measurement at a base temperature of 60°F at a base pressure of 14.73 pounds per square inch absolute.

"Custody Transfer Meter" means the meter, auxiliary equipment, and tertiary equipment a utility uses to measure a customer's gas usage.

"Diaphragm Meter" means a positive displacement, bellows-type gas meter that alternately fills and empties compartments of known volume and totals the number of times the cycle occurs to determine the volume of gas passing through the meter.

"Defective Meter" means a meter whose condition is impairing service to a customer or a meter that has failed the requirements of Sections 500.170, 500.180, 500.190, 500.200, 500.210, 500.220, or 500.230.

"Flow Computer" means a device that electronically converts signals from a gas measurement system to a useful form such as flow rate.

"Fixed Factor" means the use of a gas pressure regulator to control gas pressure within an allowable pressure band over the required flow rate range considering the variation of inlet pressures and results in the application of a pressure correction factor applied via an arithmetic application or special index to a customer's measured usage.

"Master Bell" means a primary bell prover used as a reference standard for target proof correlations and bell prover interface recertification.

"Measurement Error" means an error in the calculation of a customer's gas usage due to the inaccuracy or improper setup of a utility's meter or other equipment whose function directly or indirectly affects the utility's measurement of a customer's gas usage.

"Meter Accuracy" means the overall performance of a particular meter in relationship to a known reference or portable standard.

"Meter Soaking Room" means a room maintained at the same atmospheric conditions as the meter proving room. The purpose of a meter soaking room is to store and acclimatize meters prior to testing to ensure meter testing accuracy that is not affected by temperature variations.

"Multi-path Ultrasonic Meter" means a device that derives gas flow rate by measuring the transit times of high-frequency sound pulses. Sound pulses transit between pairs of transducers located on or in the gas pipe.

"Natural Gas Supplier" means an alternative gas supplier or any other natural gas supplier providing the natural gas commodity to a customer under a gas utility tariff or rider.

"Orifice Meter" means an inferential meter that consists of an orifice plate perpendicular to the gas flow in a pipe. When gas flows across the orifice, it creates a pressure differential. Transmitters and transducers measure the pressure differential, static pressure, and other variables to determine the flow rate. The flow rate is proportional to the square root of the differential pressure across the orifice plate.

"Portable Standards" means instruments that utilities use in the field or the meter shop to test the accuracy of auxiliary and tertiary equipment, transmitters, and other equipment associated with correcting a meter's output.

"Proving Room" means a temperature-controlled room where the utility uses equipment to determine the accuracy of meters.

"Rated Capacity," also known as "badged capacity," means the hourly gas throughput of a meter as defined by the meter manufacturer.

"Reference Standards" means instruments that utilities use only for verifying the accuracy of portable standards, and whose accuracy is traceable back to the national standard maintained by the National Institute of Standards and Technology or its successor.

"Rotary Meter" means a positive displacement meter that alternately fills and empties rotating compartments of known size and totals the number of times the cycle occurs to determine the volume of gas passing through the meter.

"Service Applicant" means a person who applies for residential or non-residential utility service for a location where the utility has not yet installed the meter.

"Small Commercial Customer" has the same meaning as in Section 19-105 of the Act [220 ILCS 5/19-105].

"Sonic Nozzle Automatic Prover" means a device containing a parallel bank of sonic flow nozzles that it uses to determine actual gas volume passed through a gas meter in order to determine the gas meter's accuracy.

"Sub-metering" means a meter located downstream of a custody transfer meter.

"Supercompressibility" means a value used in some flow equations for differential pressures (for example, orifice metering). In general, the supercompressibility factor is equal to the square root of the quotient of gas compressibility at base conditions divided by the gas compressibility at flowing conditions. Supercompressibility is not to be confused with "Compressibility."

"Tertiary Equipment" means a device that electronically converts signals from a gas measurement system (meter or auxiliary equipment or both) to a useful form such as flow rate (for example, flow computers).

"Therm" means a unit of measurement representing a quantity of heat equivalent to 100,000 British thermal units and expresses the energy content of natural gas.

"Transducer" means a sensing element capable of transforming values of physical properties such as pressure or temperature into equivalent electrical signals.

"Transmitter" means a device designed to enhance the transmission of information from a transducer to a flow computer by the addition of an electrical

circuit that converts the transducer output to a standard signal in analog, digital, or frequency form.

"Turbine Meter" means an inferential meter that measures gas flow by counting the revolutions of a rotor with blades, which turn in proportion to the gas flow velocity.

### **Section 500.20 Application**

This Part sets forth minimum requirements and shall apply to any natural gas public utility as defined in Section 3-105 of the Act [220 ILCS 5/3-105] and any alternative gas supplier as defined in Section 500.10. This Part shall not apply to any natural gas cooperative or to a municipal system when operating within its service territory. A public utility shall retain a record required by this Part for the period specified in 83 Ill. Adm. Code 510 unless this Part requires a longer retention period.

### **Section 500.30 Exemption or Modification**

A utility or alternative gas supplier may file an application requesting modification of or exemption from any Section of this Part. The Commission may grant the modification or exemption if the utility or alternative gas supplier demonstrates that the requested modification or exemption is economically and technically sound and will not compromise safety, reliability, or the service obligations of the utility or alternative gas supplier. A utility or alternative gas supplier shall file its requested exemption or modification pursuant to 83 Ill. Adm. Code 200 and shall set forth specific reasons and facts in its petition in support of the requested action.

### **Section 500.40 Complaints**

- a) A utility or alternative gas supplier shall investigate each complaint received. The utility or alternative gas supplier shall acknowledge the receipt of all written complaints orally or in writing.
- b) A utility or alternative gas supplier shall document each complaint and make any records required by this Part available to Commission personnel upon request. Each record shall contain, at a minimum, the name and address of the complainant, the time of day and the date received, the nature of the complaint, the result of the investigation or analysis, when and by whom the investigation or analysis was conducted, the final disposition of the complaint, and the date of disposition.
- c) A utility shall keep records of complaints related to pressure regulation or accuracy of metering equipment or data, other than requests for meter rereads, in the following manner. A utility will keep an index or file containing all complaints for three years, separated by year. If a utility chooses to maintain an index of these complaints, the index shall contain enough information to allow access to individual records of each complaint.

- d) The provisions of this Section shall apply only to:
  - 1) Natural gas public utilities; and
  - 2) Alternative gas suppliers serving residential or small commercial customers and only to the extent such alternative gas suppliers provide services to residential or small commercial customers.

### **Section 500.50 Customer Call Centers**

- a) A utility or alternative gas supplier shall maintain a customer call center where customers can reach a representative of the utility or alternative gas supplier and receive current information regarding their accounts. At least once every six months, a utility or alternative gas supplier shall provide written information to customers explaining how to contact the call center, which can be accomplished through a bill message either by the alternative gas supplier or a utility in utility-consolidated billing situations. The annual average answer time for calls placed to the call center shall not exceed 60 seconds where a representative or automated system is ready to render assistance and/or accept information to process calls. The annual abandon rate for calls placed to the call center shall not exceed 10%. A utility or alternative gas supplier shall maintain records of the call center's telephone answer time performance and abandon call rate. A utility or alternative gas supplier shall keep these records for a minimum of two years and make these records available to Commission personnel upon request. If annual answer times and/or abandon rates exceed the limits established above, a utility or alternative gas supplier may provide the Commission or its personnel with explanatory details. At a minimum, these records shall contain the following information in monthly increments:
  - 1) Total number of calls received;
  - 2) Number of calls answered;
  - 3) Average answer time;
  - 4) Number of abandoned calls; and
  - 5) Abandon call rate.
- b) A utility or alternative gas supplier that uses the same call center for both gas and electric service is not required to provide separate data for gas service and electric service.
- c) A utility or alternative gas supplier that uses the same call center for gas or electric service in multiple jurisdictions is not required to provide separate data

about Illinois customers unless calls of Illinois customers are routed to a separate area for handling or are identified or tracked separately.

- d) A utility or alternative gas supplier that does not have electronic answering capability that meets the requirements of subsection (a) shall notify the Manager of the Commission's Consumer Services Division or its successor by January 1, 2015, and collaborate with Staff to develop individualized reporting requirements for the call volume and responsiveness of the call center.
- e) On or before March 1 of every year, a utility or alternative gas supplier shall file a report with the Chief Clerk of the Commission for the preceding calendar year on its answer time and abandon call rate for its call center as described in subsection (a). The report shall include an explanation of what service territories are included and a description of how calls are received and routed. For combined utilities, the report shall indicate which types of utility service are included in the report. When a utility or alternative gas supplier files its report with the Commission, it shall also provide a copy of its report to the Manager of the Consumer Services Division.
- f) The provisions of this Section shall apply only to:
  - 1) Natural gas public utilities; and
  - 2) Alternative gas suppliers serving residential or small commercial customers and only to the extent those alternative gas suppliers provide services to residential or small commercial customers.

#### SUBPART B: NATURAL GAS MEASUREMENT REQUIREMENTS

##### **Section 500.100 Application of Subpart B**

The purpose of this subpart is to ensure that gas metering that could affect a customer's bill is accurate. This subpart applies to all custody transfer meters and all meters that measure the gas usage associated with utility-owned equipment including usage by pipeline heaters, compressors, fuel gas, and storage fields injections and withdrawals whose readings directly or indirectly affect a customer's gas utility bills. This subpart does not apply to sub-metering that will not affect a customer's gas utility bills.

##### **Section 500.110 Location and Installation of Meters**

- a) A utility shall install a meter on a service applicant's premises as near as practical to the point of entrance of gas service into the service applicant's building or utilization area as mutually agreed upon by the utility and service applicant. The utility shall install a meter in a readily accessible location and protect the meter from corrosion and other damage.

- b) A utility shall not install a meter indoors unless outdoor installation is not possible or would make the meter installation financially infeasible. A utility shall not install a meter in sleeping rooms, in small, unventilated areas, or in locations where the installation, reading or removal of the meter may prove difficult or hazardous. A utility shall not install meters less than three feet from any ignition source, air intake, or source of heat that might damage the meter. A utility shall not install a meter in a location where expected temperatures are likely to exist outside the range recommended by the meter manufacturer.
- c) A utility shall not install a meter in front of a residential dwelling except with the consent of the service applicant or if no other practical external location is available.
- d) A utility shall install all meters in a secured upright and level position. A utility may vary from this requirement if it installs a meter whose accuracy does not depend upon an upright and level installation. A utility shall install each meter to minimize anticipated stresses upon the connecting piping and the meter.
- e) If it is not practical for a utility to locate a meter installation in a place free of vehicular traffic hazards, the utility shall install meter protection such as guard posts or rails to protect the meter installation from damage. If the utility determines meter protection is necessary, then the utility shall inform the service applicant and include an estimate of the cost for the additional meter protection. The service applicant may install the guard posts or rails prior to the installation of the meter if the utility approves the proposed protection, or the service applicant may reimburse the utility for the cost and installation of the guard posts or rails.
- f) A utility may refuse to install a meter or to serve a service applicant if, in the utility's judgment, the metering installation is hazardous or the service applicant's installation of piping or gas burning equipment is hazardous or of such character that the utility cannot provide service in a manner consistent with the requirements of Section 8-101 of the Act [220 ILCS 5/8-101]. In case of refusal, the utility shall inform the service applicant in writing of the reason for refusal to render service and make the service applicant aware of the refusal to provide service within five business days after the decision to refuse service.
- g) A utility shall not install a meter without a temperature compensation device unless the utility uses a corrector or other acceptable auxiliary equipment to correct the meter's reading for temperature variation. A utility may install non-temperature compensated meters in indoor locations if the utility uses only that type and size of meter in indoor locations.
- h) Each diaphragm, rotary, and turbine meter shall have a register or display on the meter or correcting device that displays consumption in a definite and known proportion to the actual energy consumption of the customer, that is plainly

visible, and that a customer can read. A customer may waive this requirement in writing. This requirement shall not affect the utility's right to secure meters for safety reasons or in situations in which the meter is subject to excessive risk of damage or tampering. At the customer's request, a utility shall explain to the customer how to read the meter used for billing that customer.

- i) A utility shall avoid installing a meter or auxiliary or tertiary equipment in locations where the meter or auxiliary or tertiary equipment is in direct contact with soil or concrete unless the manufacturer designed the meter or equipment for those conditions.
- j) A utility shall have security seals installed on all meters and auxiliary and tertiary equipment or take measures to secure its equipment in order to deter unauthorized personnel from tampering with it.
- k) A utility shall secure all meter bypass valves when not in use in order to deter unauthorized personnel from tampering with them while also providing a readily apparent visual indication of tampering or other diversion activities.
- l) A utility shall secure a regulator that it uses in conjunction with fixed factor billing if it discovers tampering with the pressure setting.

#### **Section 500.120 Meter and Equipment Handling Requirements**

- a) A utility shall store all meters not in service in a secure, weather-protected environment and stack the meters in an upright position or in a manner recommended by the manufacturer. The weather-protected environment requirement does not apply to utility vehicles used to transport meters.
- b) A utility shall provide a secure means of transporting a meter prior to its installation and after its removal from service.
- c) A utility shall cap the inlet and outlet connections of a meter when the meter is not in service. Meter caps are not necessary when a meter is located within a utility's proving room or meter soaking room or after the meter has been tested and is waiting for repair.
- d) A utility shall protect all auxiliary and tertiary equipment prior to installation and after removal from service.
- e) If a utility drops or in any way damages a meter or auxiliary or tertiary equipment prior to installation, the utility shall not place that equipment into service until the utility establishes the proper operation and accuracy of the equipment.

#### **Section 500.130 Trained Personnel**

A utility shall ensure that only trained personnel install, inspect, test, and adjust meters and auxiliary and tertiary equipment. A utility shall ensure that its employees and agents have received adequate training regarding their specific responsibilities.

#### **Section 500.140 Compressibility and Supercompressibility**

- a) A utility shall account for compressibility when metering gas at pressures greater than 15 pounds per square inch gauge ("psig").
- b) A utility shall account for supercompressibility in the flow equation used in orifice metering.

#### **Section 500.150 Fixed Factor Delivery**

- a) A utility's regulator for fixed factor delivery shall control the delivery pressure at the outlet of the meter to +/- 1% of the absolute billing pressure (delivery pressure (psi) + atmospheric pressure) over the range of expected regulator inlet pressures and customer load requirements. For example, for a 10 psig service and assuming an atmospheric pressure of 14.4 psi, the regulator shall control the delivery pressure at the outlet of the meter between 10.244 psig and 9.756 psig.
- b) A utility may use fixed-factor delivery at delivery pressures of less than or equal to 15 psig. At pressures above 15 psig, a utility shall not use fixed factor delivery except for company-use metering that was in place on January 1, 2015.
- c) A utility shall determine fixed factors for billing by measuring the pressure at the meter outlet with a calibrated pressure instrument while the regulator is delivering a steady flow to the meter, but at a flow rate that is less than 90% of the meter's capacity at the designated fixed-factor operating pressure.
- d) Whenever a utility performs regulator or meter set maintenance that can affect the established fixed factor, the utility shall reestablish and reset the fixed factor if the reading falls outside of the allowable delivery pressure variations in subsection (a) above.
- e) A utility shall verify that the regulator's delivery pressure meets the requirements of subsection (a) at least once every 36 months—third calendar year and at intervals not to exceed 39 months. If a utility documents conditions at the meter that prevent verification, then the utility may delay verification until those conditions cease to exist or for four months, whichever is shorter. If a utility delays verification, it shall maintain for three years documentation of the conditions that prevented verification within the required 36 months—third calendar year and provide the documentation to an authorized representative of the Commission when requested.
- f) A utility is not required to conduct the verification of the regulator's delivery pressure in subsection (e) for residential rate classes if those locations serve a

customer at a pressure of 5.0 psi or less and the utility uses a meter with a rated capacity under 700 cubic feet per hour (at ½ inch differential) to measure the residential customer's usage.

- g) A utility is not required to conduct the verification of the regulator's delivery pressure in subsection (e) for non-residential rate classes if those locations serve a customer at a pressure of 2.0 psi or less and the utility uses a meter with a rated capacity under 700 cubic feet per hour (at ½ inch differential) to measure the non-residential customer's usage.

### **Section 500.160 Testing Facilities and Equipment**

- a) A utility shall provide laboratories, testing shops and other equipment, facilities, and personnel as may be necessary to conduct the tests required by this Subpart or other orders of the Commission. A utility's laboratories, meter testing shops, and other equipment and facilities so provided shall be at all times available for inspection by authorized representatives of the Commission.
- b) If a utility selects an agent to perform meter sample testing, meter accuracy tests when a meter is removed from service, and other requirements of this Subpart, or if a utility changes its agent, or if the agent changes the location where it will conduct meter tests, the utility shall notify the Director of the Safety and Reliability Division of the Commission in writing within 60 days after the selection or change. If an agent is selected or changed, the utility shall provide the following information about the new agent:
- 1) Name of agent;
  - 2) Name of contact for agent;
  - 3) Address and phone number of agent contact;
  - 4) Address of location where agent will conduct meter tests;
  - 5) Summary of meter types and sizes that agent will test;
  - 6) Summary of services the agent will perform for the utility; and
  - 7) Identification of what changes, if any, caused the need for the notification.
- c) A utility shall provide meter testing equipment, including a bell prover of not less than two-cubic-foot capacity. A utility shall maintain each of its active provers of all types in proper adjustment in order to determine the average accuracy of meters to within one-half of one percent. A utility shall provide suitable thermometers, pressure gauges, and temperature recorders and shall adequately control the temperature of the meter testing room, meter soaking room, and air

supply used in testing meters to achieve the meter testing accuracy stated herein. The temperature of the meter testing and soaking room, when in use, shall not vary by more than 4°F during regular operating hours and shall not vary by more than 6°F throughout the year.

- d) In the event a meter shop experiences temperature variances that exceed those provided in subsection (c), a utility will immediately stop testing meters in the meter shop until the utility corrects the problem and the temperature returns to the normal levels for at least four continuous hours or the utility can demonstrate that the temperature variance between the meters and testing equipment is less than or equal to 1° F.
- e) A utility that uses a transfer prover to test the accuracy of meters in the field shall verify the transfer prover's accuracy by testing a reference meter on the transfer prover at least every three months. If this testing shows a deviation of more than 0.5% in the reference meter accuracy, the utility must take all necessary repairs or actions to bring the transfer prover's testing of the reference meter to within 0.5% of the prior readings.
- f) An authorized representative of the Commission may check or establish the accuracy of all testing equipment used or intended for use in determining the accuracy of custody transfer meters, as well as the methods of operating ~~that such~~ equipment. If a utility uses an agent to test the accuracy of its meters, the utility shall include provisions within its agreement with its agent for the authorized representatives of the Commission to conduct on-site audits of the agent's facility. An authorized representative of the Commission shall perform an audit of the utility's testing equipment and methods at least every three years. The utility shall reimburse the Commission for all expenses related to audits of meter shops used or maintained by the utility or its agents located outside of this State.
- g) A utility shall certify the accuracy of its testing equipment against National Institute of Standards and Technology traceable standards. Unless specified below, the maximum certification interval is ~~36 months~~ once every third calendar year and at intervals not to exceed 39 months.
  - 1) A utility shall certify sonic nozzle automatic provers at least once every 12 months. A utility shall also conduct the following maintenance at least ~~every 12 months~~ once annually each calendar year and at intervals not to exceed 15 months on sonic nozzle automatic provers:
    - A) Inspect and clean nozzles and solenoids;
    - B) Strap and recertify a master bell during the bell interface recertification process;
    - C) Recalibrate prover sensors and instrumentation in accordance with manufacturer's specifications;

- D) Test the function of the optical sensor; and
  - E) Perform a complete bell interface certification followed by a reference meter target proof analysis.
- 2) Utility verification checks on portable or reference equipment shall meet the below requirements:
- A) A utility shall verify the accuracy of a portable standard against a reference standard at least ~~every 12 months~~ once annually and at intervals not to exceed 15 months. If the portable standard exhibits an error greater than 0.5%, the utility shall adjust the portable standard to read within 0.5% or replace the portable standard, or shall apply the proper correction factor.
  - B) If a utility does not operate a reference standard, the utility shall certify or replace its portable standards at least ~~every 12 months~~ once annually each calendar year at intervals not to exceed 15 months.
  - C) A utility shall certify a reference standard at least ~~every 36 months~~ once every third calendar year and at intervals not to exceed 39 months.
  - D) A calibration certificate, verification certificate, or card signed or initialed by the person responsible for the calibration shall accompany a portable standard and a reference standard at all times. A utility, in lieu of maintaining the certificate or card with the device, may maintain the certificate or card in a central location or database that is available to Commission Staff upon request. A certificate or card shall provide the date and results of the last calibration or verification of the instrument. A utility after each successive issuance of certificates or cards shall keep any superseded certificates or cards on file for at least three years.
- h) A utility that tests meters with a rated capacity of 800 cubic feet per hour or less shall use one or more reference meters to conduct equipment checks every week. A utility shall designate and label reference meters for meter shop use only, and shall not adjust reference meters in any manner once in service unless they are in need of repair. A utility shall fully document all alterations to a repaired reference meter including before and after accuracies. A reference meter shall carry a rating of 800 cubic feet per hour or less and shall have a similar size to the meters the utility tests. Every week during periods when a utility expects to test meters, a utility shall test a reference meter on each prover that the utility uses to test meters of the reference meter's size. A utility shall record reference meter test results including temperature when testing on a sonic nozzle automatic prover, and shall record the test results, temperature test flow times and bell pressure when testing on a bell prover. If the reference meter tests indicate an accuracy problem with any equipment, the utility shall cease using that equipment until the utility repairs the equipment.

- i) A utility shall allow meters tested within a meter testing facility to acclimate in the room containing the testing equipment or meter soaking room for at least 12 hours prior to testing. This acclimation time is not required if the utility can show that it has taken sufficient actions to bring the meter temperature and the testing equipment to within 1.0° F of each other.

### **Section 500.170 Meter Accuracy Requirements**

- a) Prior to installing a new, adjusted, refurbished, remanufactured or repaired gas meter, a utility shall ensure that the meter's average accuracy is not more than 1.0% slow and not more than 1.0% fast. If a utility finds that a meter is more than 1.0% fast or slow, the utility shall repair or retire the meter.
- b) When a utility installs a meter, it shall verify the proper operation and settings of all auxiliary and tertiary equipment prior to activating a customer's service.
- c) If a utility determines that a meter is in service and is mechanically defective, the utility shall repair or replace the meter.
  - 1) The utility shall repair or replace the meter within 48 hours if the defective meter impedes the utility's ability to provide service to the customer, unless the utility and the customer agree upon a longer time interval not to exceed 30 days.
  - 2) If the meter does not impede the customer's service, the utility must repair or replace the meter within 60 days unless the utility and the customer agree upon a longer time interval not to exceed 120 days.
  - 3) If the meter is of sufficient size that portions of a customer's structure require modification to remove the meter, then the utility has 90 days to replace the meter unless the utility and the customer agree upon a longer time interval not to exceed 180 days.
- d) A utility shall test the accuracy of a meter and verify the proper operation and settings of auxiliary equipment and tertiary equipment, after the utility removes the meter from service.
- e) For those metering installations where a utility transfers the auxiliary equipment and tertiary equipment from an existing meter to a replacement meter, the utility shall inspect the auxiliary equipment and tertiary equipment to verify proper operation within ~~60 days~~ three months of the meter exchange.

### **Section 500.180 Diaphragm Meters**

- a) A utility shall install a new diaphragm meter set and revisions to an existing diaphragm meter set in accordance with the recommendations of ANSI B109.1, XQ0008, June 2000 for diaphragm meters with a rated capacity less than 500

cubic feet per hour and in accordance with ANSI B109.2, XQ0009, June 2000 for diaphragm meters with a rated capacity of 500 cubic feet per hour or greater.

- b) A utility furnishing natural gas service with diaphragm meters shall ensure the use of suitable meter proving or testing equipment to determine the accuracy of the meter. The average accuracy of a diaphragm meter is determined by averaging the accuracy of the check and open flow rates.
  - 1) The open rate is 95% to 105% of the rated capacity.
  - 2) The check rate is 20% to 33% of the rated capacity.
  - 3) The maximum allowable accuracy spread between the open and check rates' accuracy is 1.0%.
- c) A utility shall conduct periodic accuracy tests on all installed diaphragm meters at least once every 120 months tenth year and at intervals not to exceed 123 months unless the utility has provided notification to the Commission regarding its plans to conduct sample testing in accordance with Section 500.250.

#### **Section 500.190 Rotary Meters**

- a) A utility shall install all rotary meters or revisions to existing rotary meter sets in accordance with the recommendations of ANSI B109.3, XQ0010, June 2000.
- b) A utility furnishing gas service through a rotary meter shall verify that the meter's accuracy meets the requirements of Section 500.170(a) before placing the meter in service.
  - 1) A utility may rely on the manufacturer's factory accuracy test to demonstrate that a new rotary meter meets the Section 500.170(a) requirements only if the utility also conducts quality assurance reviews on its new rotary meters.
  - 2) A utility that conducts quality assurance reviews must group the new meters into meter lots consisting of the same size and manufactured under the same conditions. The utility must then sample test these lots in accordance with a single sample plan for normal inspection, Inspection Level II, of ANSI/ASQ Z1.4-2008 using an acceptable quality level not to exceed 1.0%.
  - 3) In the event that a meter lot fails, the utility must either return the meters to the manufacturer or test all of the meters in the lot to verify compliance with Section 500.170(a).

- 4) A utility shall retain a record of a meter's accuracy test for the life of the meter.
- c) A utility shall differential test an in-service rotary type positive displacement meter at least once every 60 months fifth calendar year and at intervals not to exceed 63 months. If the meter's pressure differential for a given flow rate is more than 50% higher than the utility's initial differential test or the factory published differential curve, a utility shall return the differential to a value below the 50% limit. If the utility cannot return the meter's differential to below the 50% limit, the utility shall clean and retest the rotary meter within 7 days and, if the meter's pressure differential is still more than 50% higher than the utility's initial differential test or the factory published differential curve, the utility will replace the meter within 60 days. If the meter is of sufficient size that portions of a customer's structure require modification to remove the meter, then the utility will replace the meter within 90 days unless the utility and customer agree to a longer period, not to exceed 180 days.
- d) If a utility documents conditions at the meter that prevent the utility from obtaining a differential reading from the meter, then the utility may delay verification until those conditions cease to exist or for four months, whichever is shorter. If a utility delays verification, it shall maintain for three years documentation of the conditions that prevented verification within the required 60 months and provide the documentation to an authorized representative of the Commission when requested.
- e) In lieu of the differential test requirement in subsection (c), a utility may conduct an accuracy test of a rotary meter. The average accuracy of a rotary meter is determined by averaging the accuracy of the check and open flow rates.
  - 1) The check rate is 10% to 33% of the meter's rated capacity.
  - 2) The open rate is 60% to 105% of the meter's rated capacity. The utility may substitute the proving equipment's maximum capacity for the open flow rate if the meter's required testing volume exceeds the utility's testing equipment's capacity.
- f) A utility shall maintain the most recent ten years of inspection records as well as the dates of all inspections of rotary meters.

### **Section 500.200 Turbine Meters**

- a) A utility furnishing natural gas service with turbine meters shall install new turbine meters or revisions to existing meter sets in accordance with the recommendations contained in AGA Report No. 7, Measurement of Natural Gas by Turbine Meters, XQ0601, February 2006.
- b) A utility shall accuracy test a turbine meter at least once every 60 months fifth calendar year and at intervals not to exceed 63 months.

- 1) A utility shall atmospherically test the accuracy of a turbine meter at a minimum of four different flow rates of not less than 10% of meter capacity and not more than 105% of the meter capacity.
  - 2) A utility shall accuracy test turbine meters at the expected operating pressure of the meter installation using at least five flow rates of not less than 10% of meter capacity and no more than 105% of the meter capacity. A utility may install a turbine meter at a location where the operating pressure falls within the range of 50% less than or two times greater than the pressure of the meter's accuracy test. For example, a turbine meter that was accuracy tested at 100 psi is acceptable for delivery pressures from 50 psi (50% of 100) through 200 psi (2 x 100).
  - 3) A utility may accuracy test its turbine meters in natural gas or air. A utility that conducts accuracy tests with air shall account for the Reynolds number equivalence as set forth in AGA Report No. 7, Measurement of Natural Gas by Turbine Meters, Appendix E, XQ0601, February 2006.
  - 4) When tested at the expected delivery pressure of the in-service location, a turbine meter shall demonstrate a tested accuracy within +/- 1.0% of the accuracy shown over the manufacturer's entire published flow range.
- c) A utility furnishing natural gas service with a dual rotor turbine meter that has an external means of verifying meter accuracy may extend the accuracy test requirement to at least once every 120 months tenth calendar year and at intervals not to exceed 123 months if the utility can demonstrate that it verifies the accuracy of the meter at least every six months and that the meter's performance meets the manufacturer's guidelines.
  - d) A utility shall spin test and, if necessary, lubricate its turbine meters at least ~~every 12 months~~ once annually each calendar year and at intervals not to exceed 15 months. If a turbine meter is not equipped with external lubrication provisions or external means of verifying the operation of the meter, a utility shall spin test the meter every six months. If the turbine meter's spin time is not equal to or greater than the minimum spin time specified by the manufacturer, the utility shall make corrections to the meter to allow the spin time to equal or exceed the manufacturer's specifications.
  - e) A utility is not required to conduct a spin test of its dual rotor turbine meter if the utility furnishes natural gas service with a dual rotor turbine that has an external means of verifying rotor health, the utility can demonstrate that it verifies the health of the rotor at least every six months, and the utility can demonstrate the performance of the rotor meets the manufacturer's guidelines.
  - f) A utility shall maintain the most recent five years of inspection records as well as the dates of all inspections for the most recent ten years, except accuracy tests. A utility shall maintain documents for each turbine meter's most recent accuracy

test, the prior accuracy test, and the dates of any other accuracy test that occurred during the prior ten years.

### Section 500.210 Orifice Meters

- a) A utility shall install all new orifice meters in accordance with the recommendation of AGA Report No. 3, Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids, Part 2, Specification and Installation Requirements, XQ0002, April 2000 and June 2003.
- b) A utility furnishing metered gas service through orifice meters shall provide and have available instruments capable of accurately determining the accuracy of the orifice plate diameters and instruments used to measure meter pressure and temperature to within 0.5%.
- c) ~~At least every six months~~ twice each calendar year and at intervals not to exceed 7 ½ months, a utility shall inspect an orifice meter's orifice plate and meter body and inspect and verify the proper operation of all transmitters used to measure pressures and temperatures.
- d) If a utility discovers that the orifice plate is deformed, damaged, or bowed, the utility shall replace the plate within seven days. If the utility finds that the orifice plate is deformed, damaged or bowed on two consecutive inspections, then the utility shall document the problem and conduct inspections at least every three months on the orifice plate until three consecutive inspections show no damage. If the utility cannot obtain three consecutive inspections showing no damage after 24 months, the utility shall take corrective action, such as installing a strainer upstream of the meter, to avoid continued damage to the orifice plate.
- e) A utility shall maintain five years of inspection records.

### Section 500.220 Multi-Path Ultrasonic Meters

- a) A utility shall install a multi-path ultrasonic meter in accordance with the recommendations of AGA Report #9, Measurement of Gas by Multipath Ultrasonic Meters, XQ0701, April 2007. Ultrasonic meters installed prior to April 2007 shall meet the installation recommendations of AGA Report #9, Measurement of Gas by Multipath Ultrasonic Meters, XQ9801, June 1998, unless said meter is physically removed from service after the enactment of this rule, then the meter must meet the installation recommendations of AGA Report #9, Measurement of Gas by Multipath Ultrasonic Meters, XQ0701, April 2007.
- b) ~~At least every three months~~ four times each calendar year and at intervals not to exceed 4 ½ months, a utility that installs a multi-path ultrasonic meter shall verify the proper operation of the meter so that the meter meets the manufacturer's tolerances using at a minimum of the following inspection requirements:

- 1) Path velocities;
  - 2) Gain levels;
  - 3) Gain limits;
  - 4) Performance percentage;
  - 5) Meter output frequency range;
  - 6) Speed of sound verification; and
  - 7) Verification that the flow computer and ultrasonic meter have the correct settings for the installation, including:
    - A) Meter pulse uncorrected actual per cubic foot factor;
    - B) Internal diameter of pipe; and
    - C) Validate flow computer operation by independent calculation of corrected volume, thermal output, and meter adjustment factor(s).
- c) A utility that installs a multi-path ultrasonic meter shall flow calibrate the meter at least once every ~~120 months~~ tenth calendar year and at intervals not to exceed 123 months. A utility shall test a multi-path ultrasonic meter as a metering package so that the utility tests the flow conditioner, thermowells, and affixed meter tubes as one unit with the meter. If the utility can demonstrate that the meter meets the manufacturing tolerances set forth in subsection (b) and the utility conducts an internal inspection of the meter body at least once every ~~120 months~~ tenth calendar year and at intervals not to exceed 123 months to ensure the meter body has not accumulated internal deposits or incurred other damage that would affect the meter's accuracy, the utility may forego the 120-month flow calibration requirement.
- d) The initial accuracy test of an ultrasonic meter shall include the metering package that consists of the ultrasonic meter, adequate upstream and downstream piping (per AGA Report #9, Measurement of Gas by Multipath Ultrasonic Meters, Section 7.2.2, XQ0701, April 2007), along with thermowell(s), sample probe, and any flow conditioning to ensure that there is no material difference between the velocity profile experienced by the meter in the laboratory and the velocity profile experienced in the final installation.
- e) A utility shall maintain the most recent five years of inspection records. A utility shall also maintain documents for a multi-path ultrasonic meter's most recent accuracy test, the prior accuracy test, and the dates of any other accuracy test that occurred during the prior ten years.

### Section 500.230 Coriolis Meters

- a) A utility shall install a Coriolis meter in accordance with the recommendations of AGA Report #11, Measurement of Natural Gas by Coriolis Meter, XQ1301, February 2013.
- b) A utility shall verify the proper operation of an installed Coriolis meter at least ~~every 12 months~~ once annually each calendar year and at intervals not to exceed 15 months by verifying that the meter meets the manufacturer's tolerances using at a minimum of the following inspection requirements:
  - 1) Meter zero flow check;
  - 2) Meter sensor check; and
  - 3) Meter transmitter check.
- c) A utility shall calibrate a Coriolis meter at least once every 120 months tenth calendar year and at intervals not to exceed 123 months. However, if the utility can demonstrate that the meter meets the manufacturing tolerances set forth in Section 500.220(b) and the utility conducts an annual inspection of the meter body to ensure that the meter body has not incurred damage that would affect the meter's accuracy, the utility may forego the 120-month calibration requirement.
- d) When a utility removes a Coriolis meter from service, the utility shall verify the meter's existing accuracy prior to altering the operation of the meter. This verification replaces the requirements of Section 500.170(d) for Coriolis meters.
- e) A utility shall maintain the most recent five years of inspection records. A utility shall also maintain documents for each Coriolis meter's most recent accuracy test, the prior accuracy test, and the dates of any other accuracy test that occurred during the prior ten years.

#### **Section 500.240 Other Meter Types**

A utility shall use only meter types specifically identified within this Part for natural gas custody transfer.

#### **Section 500.250 Sample Testing of Diaphragm Meters**

- a) A utility may, at its option and upon giving notice to the Commission, adopt scientific sample procedures for new and in-service diaphragm meters.
- b) A utility shall develop sample testing lots for new meters that consist of meters of a single type and size, manufactured under the same conditions, and at essentially the same time. All sample testing procedures shall be in accordance with Inspection Level II of ANSI/ASQ Z1.4-2008.

- c) A utility shall establish meter sample testing lots for in-service meters that consist of meters of a similar type, size and year of installation or year of purchase. In the ninth and every subsequent year thereafter that the meters are in service, a utility shall test their accuracy in accordance with Inspection Level II of ANSI/ASQ Z1.4-2008.
- d) In order to comply with the accuracy limits of Section 500.170, a utility's sample testing plan for new meters shall provide an acceptable quality limit not to exceed 1.0% in order to assure a process average of at least 99%.
- e) A manufacturer shall test a new meter, and the resulting test record shall accompany the meter to retirement. A utility shall use the manufacturer's test as the initial test of the meter. However, if a utility tested the new meter prior to placing it into service, then the utility shall use its test as the meter's initial test.
- f) A utility's sample testing plan for meters in service shall provide an acceptable quality limit of 6.5% in order to assure a process average of at least 93.5%. A meter is deviant if the average of its check-rate and capacity-rate accuracy test results in accuracy more than 3.0% fast or 3.0% slow. A utility must complete all sample tests by the end of the calendar year in which the tests are due for completion.
- g) If a utility determines that a meter lot has failed sample testing, the utility shall remove all remaining meters in the failed lot from service ~~within 24 months~~ by December 31 of the second calendar year of the completion of the current year's sampling.

#### **Section 500.260 Meter Tests Requested by the Customer**

- a) Upon the request of a customer, if the utility or manufacturer has not tested the meter within 12 months prior to the request, a utility furnishing metered gas service shall, without charge, test the accuracy of a meter used to measure the customer's gas consumption if either the meter's rated capacity is less than 16,000 cubic feet per hour or the meter's rated capacity is equal to or greater than 16,000 cubic feet per hour and the test can be done without removing the meter. If a customer so desires, a utility shall allow the customer or its representatives to witness the meter test, whether conducted on the customer's premises or at the utility's metering shop. The utility shall provide a written summary of the results of the meter test to the customer within five business days.
- b) A utility shall test a meter within 45 days after receiving a customer's request, unless the customer agrees to a later time. The utility shall conduct the meter test between 7 a.m. and 4 p.m. Monday through Friday, excluding holidays, unless the utility and the customer agree to a different day or time.
- c) If a customer requests a test of a meter used to measure the customer's gas consumption and the customer wishes to witness the test, but the utility's testing

facility is located out of state, then the utility shall provide the option of having the meter tested at an in-state testing facility, if that location is more convenient for the customer, provided that the alternative location is in good standing with the Commission. A meter shop is in good standing if a Commission representative has conducted a review of the facility for compliance with the requirements of this Part within the last 40 months and the meter shop has no outstanding non-compliance issues associated with its ability to accurately measure meter accuracy. A Commission representative shall advise if a meter shop is in good standing upon request by a utility.

- d) If a customer requests an accuracy test of a meter used to measure the customer's gas consumption, but the meter has a rated capacity equal to or greater than 16,000 cubic feet per hour and the requested test requires the physical removal of the meter, then the customer shall pay to the utility the costs associated with the test. A utility may not charge a customer more than \$10,000 for the test unless the utility must send the meter to a non-affiliated third party for testing, and in that case the utility may not charge a customer more than \$25,000 for the test. In the testing costs charged to the customer, a utility may include meter removal and installation labor, costs associated with transportation of the meter to and from a meter shop, shop testing labor, transportation charges to send the meter to and from an outside testing facility, and outside testing lab fees. If a meter over-registers by more than 2%, a utility shall reimburse a customer its payment of fees associated with the meter test. A utility shall provide to its customer an itemized written statement of the cost of a requested meter test, obtain the customer's agreement to pay the stated cost, and receive payment from the customer for the requested meter test before taking any action to remove the meter or begin the requested meter test.
- e) No later than April 1 of each year, a utility shall provide a report to the Director of the Safety and Reliability Division regarding the number of customer-requested meter tests that the utility conducted in the prior calendar year. The report shall list the meter size, meter type, test results, and testing location for each meter tested.
- f) A utility shall waive the 12-month waiting period identified in subsection (a) for customer-requested meter tests if a customer makes the following demonstrations.
  - 1) A deviation in the customer's measured gas usage in excess of 10% occurred following the utility's installation of a different meter on the customer's service and the difference is not attributable to weather or the customer's process changes; or
  - 2) Relevant facts that point to potential accuracy problems with the meter.

#### **Section 500.270 Commission Referee Tests**

- a) Subject to the provisions of subsection (b), a customer may not request a referee test of a meter used to measure the customer's gas consumption if the utility that provides service to the customer does not have the necessary testing equipment.
- b) If a customer requests a referee test of the meter used to measure the customer's gas consumption, but the utility's testing facility is located out of state, then the utility shall provide the option of having the meter tested at an in-state testing facility, provided the alternative location is in good standing with the Commission and the location is capable of testing the meter. A meter shop is in good standing if a Commission representative has conducted a review of the facility for compliance with the requirements of this Part within the last 40 months and the meter shop has no outstanding non-compliance issues associated with its ability to accurately measure meter accuracy. A Commission representative shall advise if a meter shop is in good standing upon request of a utility.
- c) A utility shall conduct a referee test of a meter within 45 days after receiving notice from a Commission representative of a customer's request if the meter testing facility that the utility uses to conduct the test is located in-state. The utility shall conduct the meter test between 7 a.m. and 4 p.m. Monday through Friday, excluding holidays, at a date and time agreed upon by the utility, the customer and the Commission representative, unless the utility, the customer, and the Commission representative agree to a different day or time.
- d) A utility shall conduct a referee test of a meter within 90 days after receiving notice from a Commission representative of a customer's request if the meter testing facility that the utility uses to conduct the test is located out of state and the customer requesting the referee test selects the out-of-state location, unless the customer agrees to a later time. The utility shall conduct the meter test between 7 a.m. and 4 p.m. Monday through Friday, excluding holidays, at a date and time agreed upon by the utility, the customer and the Commission representative, unless the utility, the customer, and the Commission representative agree to a different day or time.
- e) Upon written application to the Commission by a customer and upon notice to a utility by a Commission representative, a utility under the oversight of a Commission representative shall conduct an accuracy test of a meter that was the subject of the written request, provided the customer has not requested a meter accuracy test under this Section or under Section 500.260 in the 12 months prior to the request. A customer shall make a written request for a meter test and pay a fee, as provided below, to the Commission. A utility shall inform the customer or a Commission representative of the size and type of meter used to serve the customer upon request. If the accuracy test indicates that the meter over-registers by more than 2.0%, the utility shall refund the fee to the customer.

## SCHEDULE OF FEES

<u>Rated capacities in cubic feet per hour</u>	<u>Fee</u>
Diaphragm meters up to 650	\$40
Diaphragm meters from 651 to 1,500	\$80
Diaphragm meters in excess of 1,500	\$120
Rotary meters up to 1,500	\$40
Rotary meters from 1,501 to 12,000	\$80
Rotary meters from in excess of 12,000	\$120
Turbine meter tested in utility shop at atmospheric	\$120
Metering types not listed but tested in utility shop	\$120

- f) If a customer is required to pay the costs of a meter test under Section 500.260 because of the type or size of the meter, the customer must pay the utility the same costs under this Section, in addition to the fee to the Commission under subsection (e).
- g) Upon notice of a referee test from a Commission representative, a utility shall not disturb the meter that was the subject of the written referee test request in any manner, unless a Commission representative or the customer provides authorization. The utility shall document the authorization by recording the name of the person giving the authorization and the date and time of the authorization. The utility shall provide this authorization documentation to the Commission representative at the time of the referee test.
- h) When a utility removes a meter for purposes of a referee test, the utility or Commission representative shall deliver the meter to the utility's meter testing facility, and the utility shall secure the meter to prevent potential tampering or disturbance from in-service conditions until the referee test begins.
- i) A utility shall waive the 12-month waiting period identified in subsection (e) for Commission referee tests if a customer makes the following demonstrations.
- 1) A deviation in the customer's measured gas usage in excess of 10% occurred following the utility's installation of a different meter on the customer's service and the difference is not attributable to weather or the customer's process changes; or
  - 2) Relevant facts that point to potential accuracy problems with the meter.
- j) If a utility removes a meter for testing but before the testing occurs is notified by the customer that the customer plans to request a referee test of the meter, the utility shall not test the meter and shall secure the meter to prevent potential tampering or disturbance from in-service conditions until the referee test begins. If after 60 days from when the utility removed the meter for testing, the customer has not filed a request with the Commission for a referee test, the utility shall send a notice in writing to the customer informing it of the following:

- 1) The notice shall state that the customer has 30 days in which to complete the request for the Commission referee test.
  - 2) If the customer fails to make its request within the 30 days, the utility, at its option, may conduct the required testing of the meter.
- k) The utility is responsible for contacting the Commission to verify the status of the customer's request for a referee test prior to testing the meter.

### **Section 500.280 Meter Tests Requested by Natural Gas Suppliers**

- a) Upon a natural gas supplier's request, provided that the utility or manufacturer has not tested the meter in question within 12 months prior to such request, a utility providing metering service shall test the meter in question within 45 days after receiving the request, unless the natural gas supplier agrees to a later time. The utility shall perform the meter test between 7 a.m. and 4 p.m. on Monday through Friday, excluding holidays, unless the utility and the natural gas supplier agree to a different day or time. The utility shall inform the customer of the natural gas supplier's request and the date and time of the test at least five business days prior to the agreed-upon test date. The utility shall perform the test in the presence of a representative of the natural gas supplier, unless the natural gas supplier waives the right to have a representative present. The utility shall allow the customer or its representative to observe the meter test. The utility shall provide a written summary of the results of the meter test to the natural gas supplier and the customer within five business days.
- b) If a utility or manufacturer has tested a meter within the last 12 months, the utility is not obligated to retest the meter in response to the latest request. Instead, the utility may offer the results of the last test in response to the latest request.
- c) If a requested meter test will not interrupt a customer's gas service, then a utility may perform a meter test requested by a natural gas supplier at any time agreeable to the utility and the natural gas supplier. If a requested meter test will interrupt the customer's gas service, then a utility shall obtain permission from a customer to interrupt the customer's service to perform a requested test.
- d) A utility may require a natural gas supplier to pay up to \$10,000 (\$25,000 if performed at a non-affiliated third-party location) for the actual costs of the meter test. A utility performing a meter test at the request of a natural gas supplier shall refund the natural gas supplier's payment if the meter test shows that the meter is under-registering by more than 2.0%. A utility shall provide to a natural gas supplier an itemized written statement of the cost of a requested meter test, obtain the natural gas supplier's agreement to pay the stated cost, and receive payment from the natural gas supplier for the requested meter test before taking any action to remove the meter or begin the requested meter test.

- e) A natural gas supplier may request a meter test only for a current customer or for a prior customer if, at the time of the request, the supplier had provided gas supply to that customer within the prior three months.
- f) A natural gas supplier may request a Commission referee test of a meter under the provisions of subsection (c) and Section 500.270, and shall be responsible for the fee prescribed by Section 500.270(e) and the actual cost, not to exceed \$10,000, of the test. The utility shall inform the customer of the natural gas supplier's request and the date and time of the referee test at least five business days prior to the agreed upon test date. The utility shall perform the referee test in the presence of a representative of the natural gas supplier, unless the natural gas supplier waives the right to have a representative present. The utility shall allow the customer or its representative to observe the meter test. If the meter over-registers by more than 2.0%, the utility shall refund all fees it charged to the natural gas supplier and make any necessary meter data adjustment.
- g) A utility shall conduct a referee test of a meter within 45 days after receiving notice from a Commission representative of a natural gas supplier's request if the meter testing facility that the utility uses to conduct the test is located in-state, unless the supplier agrees to a later time. The utility shall conduct the meter test between 7 a.m. and 4 p.m. Monday through Friday, excluding holidays, unless the utility, the third party supplier, and Commission representative agree to a different day or time.
- h) A utility shall conduct a referee test of a meter within 90 days after receiving notice from a Commission representative of a natural gas supplier's request if the meter testing facility that the utility uses to conduct the test is located out of state, unless the supplier agrees to a later time. The utility shall conduct the meter test between 7 a.m. and 4 p.m. Monday through Friday, excluding holidays, unless the utility, the third party supplier, and Commission representative agree to a different day or time.

### **Section 500.290 Meter Installation Inspection**

- a) During installation of a meter, a utility shall inspect and verify the proper mechanical condition of the meter and the suitability of the meter location. The utility shall verify that service pipes and meter connections are free of leaks.
- b) When a utility affixes or connects an auxiliary or tertiary device to a meter, the utility shall verify the proper operation of the meter and the affixed or connected device.

### **Section 500.300 Correctors**

- a) A utility shall install all correctors in accordance with the recommendations of AGA Gas Measurement Manual, Electronic Corrector, Part No. 15, May 1999, XQ9901.
- b) A utility that installs an electronic or mechanical corrector shall verify the proper operation of the corrector at least once every 60 months fifth calendar year and at intervals not to exceed 63 months.
  - 1) Verification temperatures are 32°F and 75°F/or flowing gas temperature with a tolerance of +/- 2.5°F.
  - 2) Verification pressures are zero and flowing pressure with a tolerance of +/- 1%.
- c) A utility shall maintain the most recent ten years of inspection records.

#### **Section 500.310 Transmitters**

- a) A utility shall install all transmitters in accordance with the recommendations of AGA Gas Measurement Manual (Revised), Electronic Flow Computers and Transducers, Part No. 8, 1988, XQ8805.
- b) A utility that installs digital and analog transmitters for use in conjunction with flow computers in custody transfer metering shall verify the proper operation of the transmitters at least ~~every six months~~ twice each calendar year and at intervals not to exceed 7 ½ months.
- c) A utility must verify that its transmitters maintain a tolerance of +/- 2.5°F at flowing gas temperature of the calibrated temperature span. A utility must verify that its transmitters maintain inspection pressures of zero and full-calibrated span with a tolerance of 1% of span.
- d) A utility shall maintain the most recent five years of inspection records.

#### **Section 500.320 Gas Chromatograph**

- a) A utility shall install all gas chromatographs according to the recommendations of the device's manufacturer.
- b) A utility shall set all in-service gas chromatographs to perform an automatic calibration at least once every 24 hours. If the utility is using the chromatograph to assist the measurement calculation at a utility-owned natural gas storage facility and the facility is not injecting or withdrawing natural gas, the utility may suspend the calibration of the chromatograph until the facility resumes injecting or withdrawing natural gas.

- c) A utility shall perform field verification of all in-service gas chromatographs at least ~~every 3 months~~ four times each calendar year and at intervals not to exceed 4 ½ months and verify that the un-normalized mole percent variance is within +/- 1.5% of the gas contained within the calibrated gas cylinder.
- d) A utility shall certify or replace the calibrated gas cylinders at least every ~~36 months~~ third calendar year and at intervals not to exceed 39 months.

### SUBPART C: CUSTOMER INFORMATION

#### **Section 500.400 Corrections and Adjustments for Measurement Error**

- a) A utility shall observe the following provisions for adjusting customer bills whenever any test made by a utility or by the Commission shows a customer's measured gas usage to have an average error of more than 2.0%.
  - 1) If the utility determines that a customer's measured gas usage contains an average error of more than 2.0% fast, the utility shall determine the billing adjustment for services provided by the utility based on the actual average error percentage found, not the difference between the allowable error (i.e., 2.0%) and the error found as a result of a test. The utility shall presume that the average error existed for a period of two years prior to the date the utility removed the measurement equipment that caused the error from service; if the measurement equipment was tested while in service, then the utility shall presume that the average error existed for a period of two years prior to the date of the equipment's test.
  - 2) If the utility determines a customer's measured gas usage contains an average error of more than 2.0% slow, the utility may determine a billing adjustment for services provided by the utility, in which event the billing adjustment shall be based on the actual average error percentage found, not the difference between the allowable error (i.e., 2.0%) and the error found as a result of a test. The utility shall presume that the average error existed for a period of one year prior to the date the utility removed the measurement equipment that caused the error from service for small commercial and residential customers and two years prior to the date the utility removed the measurement equipment that caused the error from service for all other customers. If the utility tested the measurement equipment while in service, then the utility shall presume that the average error existed for a period of one year prior to the date of the measurement equipment's test for small commercial and residential customers and two years prior to the date of the measurement equipment's test for all other customers.
  - 3) If the utility determines that the measurement error is due to a non-registering meter, the utility may determine a billing adjustment for services provided by the utility, in which event the billing adjustment shall

be based on the presumption that the non-registration existed for a period of not more than 60 days when the utility reads the meter on a monthly schedule or 90 days when the utility reads the meter on a longer schedule. A utility may consider meters equipped with automatic meter reading devices as read on a monthly schedule. However, a utility may presume that the non-registration existed for a period of up to 180 days if the utility is unable to gain access to the meter within 20 business days of its initial request for access due to the customer's refusal to grant access, provided the utility offered to exchange the meter during or after the utility's normal working hours.

- 4) If a utility intends to make a billing adjustment pursuant to subsections (1), (2) or (3), the utility shall notify the customer of the test results and applicable billing adjustment for the services provided by the utility, including an explanation of the billing adjustment within 30 business days after the utility receives the test results. At the same time the utility provides notice to the customer, the utility shall provide the same notice to each alternative gas supplier serving the customer during the period over which the utility deems the average error to have occurred. The utility shall provide a billing adjustment to the customer for the services provided by the utility within 45 business days after the date of the notice to the customer.
- 5) A utility shall not determine a billing adjustment for services provided by the utility for a measurement error before the in-service date of the measurement equipment that caused the error, nor shall it provide for any correction before the date upon which the current customer first occupied the premises at which the inaccurate measurement equipment was located.
- 6) If a utility, a customer, an alternative gas supplier, or a natural gas supplier can show that the measurement equipment error has existed for a longer or shorter period than the presumed time for a billing adjustment set forth in this subsection the utility shall determine the billing adjustment for the error using the longer or shorter time period, as applicable. This Section will not apply to occasions when the utility found the measurement equipment to under-register, but the utility did not meet all of the prescribed testing and maintenance requirements for the measurement equipment as set forth in Subpart B.
- 7) When a utility finds that an error results from a gas meter registering gas leaking from the meter, the utility shall estimate the amount of leaked gas that the meter has registered in accordance with this subsection to determine the billing adjustment.

- 8) The provisions of this subsection do not apply to situations in which a utility detects tampering of the gas measurement equipment by the customer and the customer enjoyed the benefit of the tampering.
- b) If a current or previous alternative gas supplier receives a notice of meter test results and applicable billing adjustment and explanation for services provided by the utility pursuant to subsection (a), the alternative gas supplier shall determine the applicable billing adjustment for its gas supply services pursuant to the terms and conditions of its contract with the customer using the same usage adjustment applied by the utility for the applicable time period. Within 45 days after receipt of the notice from the utility, the alternative gas supplier shall submit, if applicable, its resulting billing adjustment to the utility if consolidated billing is or was provided by the utility, or to the customer if single or dual billing is or was provided by the alternative gas supplier. An alternative gas supplier may include terms and conditions in its contracts that provide for billing that is not dependent on the volume of gas consumed by the customer, but its customer contract shall not otherwise eliminate a customer's right to a billing adjustment.
- c) If an alternative gas supplier has signed a contract with a customer with billing that is not dependent on the volume of gas consumed by the customer and would require the alternative gas supplier to pay on behalf of the customer any under-collected distribution charges that result from the billing adjustment for services provided by the utility, the alternative gas supplier shall pay the charges on behalf of the customer within 45 business days after the date of the notice of test, billing adjustment, and explanation received from the utility.
- d) The applicable usage adjustments calculated pursuant to subsection (a) shall be used in determining the pool or supply requirements of the alternative gas supplier to the utility, or any adjustments thereto.
- e) The provisions of this Section shall apply only to:
  - 1) Natural gas public utilities; and
  - 2) Alternative gas suppliers serving residential or small commercial customers and only to the extent that the alternative gas suppliers provide services to residential or small commercial customers.

#### **Section 500.410 Information to Customers**

- a) Bills rendered to retail customers for service shall clearly show at least the following:
  - 1) The date of the meter reading, the number of days in the billing period, the energy used, the meter constant if applicable, the type of service rendered, a complete description of the service or rate classification under which the

customer receives service, and the type of reading that was used in the bill calculation (such as actual, estimated or customer reading), and, for meters for which beginning and ending meter readings are used as billing determinants, the reading of the meter at the beginning and the reading of the meter at the end of the period for which the bill is rendered.

- 2) In the event that a bill rendered to retail customers is not based on usage derived from meter readings, the bill must indicate the period of time for which the bill is rendered, the type of service rendered, and a complete description of the service or rate classification under which the customer receives service.
- 3) Minimum content requirements listed vertically for easy readability:
  - A) The total amount of the bill.
  - B) The monthly customer charge or portion thereof.
  - C) The demand charges.
  - D) If applicable, the cost of gas detailed by the number of therms used and the price per therm for each change in the unit price.
  - E) If applicable, the cost of gas adjustment.
  - F) Any other applicable adjustments (other charges not under categories of charges but relating to services, energy, or other programs provided to customer by the utility).
  - G) State tax.
  - H) Municipal tax.
  - I) Optional services listed separately.
- 4) The due date of the bill.
- 5) Definitions or explanations of any abbreviations and technical words used on the bill.
- 6) The name and the toll-free telephone number of each service provider whose services to the customer appear on the bill.
- 7) The average use per day for the period over which the bill is rendered and for the comparable period one year earlier, and an indication of the

difference in temperatures between the two periods. If this information is not available for a customer, the bill shall so state.

- b) A utility or alternative gas supplier, upon request by a customer, shall transmit at a minimum a statement of the actual consumption of therms by the customer at the customer's present billing address for each billing period during the immediately preceding 12-month period for which that customer was receiving service.
- c) All gas utilities shall have on file with the Commission a proposed tariff under Section 9-201 of the Act [220 ILCS 5/9-201] that contains a bill form complying with the requirements of subsection (a). By June 15, 2015, all billings shall comply with the requirements of subsection (a).
- d) As mandated by Section 8-302 of the Act [220 ILCS 5/8-302], whenever a customer for whom a gas utility provides metering service provides the utility with a written request asking the meter reader to leave a card showing the meter readings and dates, the gas utility shall have its meter reader leave a card showing these meter readings and dates.
- e) At least annually, each gas utility shall disclose to each of its customers information about the customer's service in a clear and concise manner. The disclosure shall contain the following minimum requirements:
  - 1) A description of the rates or charges for the rate classification under which the customer receives service.
  - 2) An identification and explanation of optional or experimental rates or classifications available to customers.
  - 3) An identification and explanation of all charges that are not related to costs incurred in service and the supply of energy to that customer.
- f) In addition, for customers served under the residential and commercial classifications, a utility disclosure statement shall contain the following:
  - 1) An explanation of the terms appearing on the customer's bill form.
  - 2) An example of how to calculate a bill using the customer's existing rate.
- g) Disclosure statements shall be provided by the utility:
  - 1) To each new utility customer, not later than 60 days after the date of commencement of service, through a billing insert, separate mailing or direct customer contact by a representative of the utility.

- 2) To all affected customers in the event of a change in overall utility rate levels. The disclosure statement shall be transmitted, at a minimum, within the second complete billing cycle after the utility rates become effective following the issuance of a final order in any rate proceeding by the utility. If the disclosure is sent during a period in which proration occurs, a statement such as the following shall be incorporated in the text:

"This summary is being sent during a period in which proration occurs. Proration occurs when part of your bill is charged on old utility rates and part of your bill is charged on new utility rates. If an attempt is made to calculate your bill using this rate summary, your calculation will not yield the proper billing amount for this billing period, but will do so in subsequent months. We recommend that you retain this summary for future reference in computing proper billing amounts."

- h) Each alternative gas supplier shall provide to all residential customers the following information:
- 1) At least annually, a statement of the average monthly prices.
  - 2) At least annually, a notification that describes the means by which a customer can obtain the terms and conditions of the products and services sold to the customer, including a reference to the alternative gas supplier's website.
- i) "Retail Customer" as used in this Section means a single entity using natural gas at a single premises and that is receiving tariffed services from a gas utility, or a residential or small commercial customer receiving gas commodity service from an alternative gas supplier.
- j) The provisions of this Section shall apply only to:
- 1) Natural gas public utilities; and
  - 2) Alternative gas suppliers serving residential or small commercial customers and only to the extent that the alternative gas suppliers provide services to residential or small commercial customers.

### **Section 500.420 Meter Reading**

A utility shall obtain an actual meter reading within 30 days after ~~of~~ a customer switches from the utility to an alternative gas supplier or when the customer switches from one alternative gas supplier to another, unless circumstances beyond the utility's control prevent it from obtaining the meter reading.

## SUBPART D: GAS SERVICE STANDARDS

**Section 500.500 Pressure Regulation**

A utility shall not provide service to any customer at a pressure, as measured at the outlet of the meter used to measure the customer's gas consumption, of less than 4 inches of water column or no more than 12 inches of water column except where the customer requested a higher delivery pressure. A utility is not in violation of this Section if the pressure variations occurred because of the operations of a customer in violation of its contract or the rules of the utility or other events beyond the utility's control.

**Section 500.510 Pressure Survey**

- a) Each utility shall make pressure surveys, conduct hydraulic modeling, or both at such intervals and of such comprehensiveness as may be necessary to keep itself fully informed that its system provides sufficient pressure to ensure reliable service to its customers.
- b) All readings taken by charts in pressure surveys shall be preserved and filed in a systematic manner, accompanied by information showing the date and place of the survey, the instrument used, and the name of the person making the survey. A utility may make use of a supervisory control and data acquisition system, electronic recording instruments using electronic filing and dating, or both, to meet the requirements of this subsection.
- c) Each utility shall install and maintain recording pressure devices as may be necessary on its system to verify the adequacy of its system design. A utility may make use of a supervisory control and data acquisition system, electronic recording instruments using electronic filing and dating, or both, to meet the requirements of this subsection.

**Section 500.520 Interruptions of Service**

- a) Each utility shall make all reasonable efforts to prevent interruptions of service. When interruptions occur, the utility shall reestablish service with the shortest possible delay, consistent with general safety and public welfare. Whenever a utility must interrupt its customers' service for the purpose of working on the system, the utility shall conduct this work at a time that will cause the least inconvenience to customers, and the utility shall notify, in advance and in writing, the customers who will be affected by the interruption. Advanced notification is not required whenever a utility interrupts service for emergency work on a matter that represents an existing or probable hazard to persons or property, and requires immediate repair or continuous action until the conditions are no longer hazardous. A utility shall notify the Director of the Safety and Reliability Division and the Director of the Consumer Services Division by phone during working

hours or via fax or email during non-working hours if it has interrupted service to more than ~~50~~ 25 customers for a period of ~~42~~ 8 hours or more.

- b) Each utility shall file a report with the Director of the Safety and Reliability Division by April 1 that details the prior calendar year's service interruptions that affected more than 25 customers for longer than eight hours. The utility shall include the following information in the report.
- 1) Indicate the number of service interruptions that exceed 8 hours in length:
    - A) ~~Lasted 8 or more hours, but less than 12 hours.~~
    - B) ~~Lasted 12 or more hours.~~
  - 2) Date(s) of service interruption that exceeded 8 hours in length.
  - 3) City Location of service interruptions that exceeded 8 hours in length.
  - 4) Reason for service interruptions that exceeded 8 hours in length.
- c) The provisions of this Section shall not apply to customers receiving gas service on an interruptible basis.
- d) A utility shall measure a service interruption beginning at the time the utility becomes aware of the interruption and ending when the utility reestablishes service or makes a first attempt at visiting a customer's premises for the purpose of reestablishing service.

### **Section 500.530 Heating Value**

Each utility shall exercise in good faith all reasonable best efforts to maintain a consistent heating value for the natural gas it provides to its customers. The utility will not independently introduce (separate from its pipeline supplier) gas into its system that exceeds the heating value limits for the pipeline tariffs supplying gas into the system except ~~A utility shall take what actions it deems necessary to avoid daily heating value fluctuations in excess of 5% for the gas it provides to individual customers. A utility may allow the daily heating value of gas delivered to its customer to fluctuate in excess of 5% when a failure to take such gas would result in a supply shortage, or when for the purpose of meeting the requirements of a peak load or an emergency, a utility makes use of a reserve or emergency supply, such as liquefied petroleum gas.~~

### **Section 500.540 Good Engineering Practice**

A utility shall use accepted good engineering practice to plan, design, construct, operate, and maintain its natural gas delivery facilities to ensure adequate, efficient, reliable, safe, and least-cost service to customers.

## SUBPART E: EXTENSION OF MAINS

**Section 500.600 Extension of Distribution Mains in Urban Areas**

- a) Urban Customer
  - 1) For the purposes of this Section, a customer shall be deemed to be an urban customer if his premises are located within the incorporated limits of a city, village or town, or in a territory where the conditions of service approximate the conditions of service normally found in recognized urban territory; provided, however, that a public utility may file, with the Commission for its consideration, maps showing the areas deemed to be urban and, when so filed and approved by order or otherwise by this Commission, those maps shall govern. A utility shall consider a customer whose premises are not located in urban territory to be a rural customer.
  - 2) The provisions of this Section shall not apply to applicants for service under tariffs allowing interruptions of service. A utility with service tariffs that allow the utility to interrupt service to a customer shall file with the Commission an extension provision or an agreement with the applicant that shall govern main extensions for service under those tariffs.
- b) Free Extensions
  - 1) If a utility determines that a main extension is necessary to provide firm gas service for an applicant or group of applicants whose premises are located in urban areas within which the utility operates, the utility, upon written request for service by the applicants, shall without charge make the necessary main extension along a street, highway or other right-of-way to the nearest point adjacent to the premises of the applicants, provided the extension does not exceed 100 feet of low pressure system main or 200 feet of high pressure system main per applicant, and provided further that no free extension shall be made from existing mains on which refunds are still due from previous deposits. When refunds are still due any further extension shall be made only upon the applicant making a deposit equal to the full estimated cost of the further extension required.
  - 2) For the purpose of this Section, high pressure system mains transport gas to the applicant's premises at a nominal pressure of two pounds or more per square inch, and low pressure system mains transport gas at a nominal pressure of less than two pounds per square inch.
- c) Extension in excess of free limits
  - 1) If a utility determines that a main extension is necessary to provide firm gas service for an applicant or group of applicants in excess of the free limit as specified in subsection (b), and the requested service is in an area where the utility operates, the utility shall make the extension upon

agreement by the applicant or group of applicants to comply with the following provisions:

- A) A utility may file in conjunction with its rate schedule a main extension provision that would provide the utility customer with the choice of obtaining the extension under the provision or under subsection (c)(1)(C). If a utility files a main extension provision and the Commission permits it to become effective, then the applicant may, at his election, proceed either under the provision or under subsection (c)(1)(C).
  - B) A utility may file a main extension provision that operates in place of, and not as an alternative to, subsection (c)(1)(C), but in that case the main extension provision shall not become effective except after a showing that it is generally more favorable to applicants than are the provisions of subsection (c)(1)(C), and after specific action by the Commission by order or otherwise, permitting the provision to become effective. If the provision becomes effective, it shall govern the making of extensions in excess of the free limits.
  - C) The utility may require the applicant or group of applicants to deposit with the utility the estimated cost of the extension in excess of the free limit specified in subsection (b), determined in the manner designated in subsection (d). The utility then shall refund an amount equal to the average estimated cost, at the time of making the deposit, of constructing in the area 100 feet of low pressure main or 200 feet of high pressure main, for each additional customer whose service shall be taken from the original extension or from any extension thereof within a period of ten years from the making of the original extension, provided that the total amount refunded shall not exceed the original deposit.
- 2) A utility, when reaching agreement with a group of applicants, shall consider the group to be governed by the majority as applied to any specific extension to the extent this option is available.
- d) A utility shall provide the applicant with a free estimate of the cost of the requested main extension along the expected route for the main extension designated by the utility. A utility shall also provide a free estimate of the cost of an alternative route if the applicant requests an alternative route and the utility expects the cost for the alternative route to not exceed the cost from the expected route by more than 50%.
  - e) A utility shall use as the basis for determining the amount of a deposit the distance the applicant is from the nearest available distribution main and a route that the

utility would normally follow in making the extension and over which right-of-way is available.

- f) A utility may petition the Commission for an investigation and determination of the reasonableness of any main extension if circumstances indicate that the additional revenues generated as a result of the main extension would be so meager as to make it unlikely to pay a fair compensation to the utility for its investment, operation, maintenance and replacement of the extension, or that for other substantial reasons the extension is unwarranted. If, after a hearing, the Commission orders a utility to construct an extension that has been challenged on any of these grounds, the applicant or group of applicants shall reimburse the utility for the construction costs to the extent necessary to ensure that the utility earns the Commission-authorized return from the required investment.

### **Section 500.610 Extension of Distribution Mains in Rural Areas**

- a) Rural Customer
- 1) A utility shall consider a customer whose premises are not located in urban territory as described in Section 500.600 as a rural customer.
  - 2) The provisions of this Section shall not apply to applicants for service under tariffs allowing interruptions of service. A utility with service tariffs that allow the utility to interrupt service to a customer shall file with the Commission an extension provision or an agreement with the applicant that shall govern main extensions for service under those tariffs.
- b) Extension Provisions
- 1) If a utility determines that a main extension is necessary to provide firm gas service for an applicant or group of applicants whose premises are located in rural areas within which the utility operates, the utility, upon written request for service by such applicants, shall make the necessary main extension along a street, highway or other right-of-way to the nearest point or points adjacent to the point of connection with the service piping of such applicants, upon agreement by the applicant or group of applicants to comply with the provisions of the this Section.
    - A) A utility may file in conjunction with its rate schedule a main extension provision that would provide the utility customer with the choice of obtaining the extension under the provision or under subsection (b)(1)(C). If a utility files a main extension provision and the Commission permits it to become effective, then the applicant may, at his election, proceed either under the provision or under subsection (b)(1)(C).

- B) A utility may file a main extension provision that operates in place of, and not as an alternative to, subsection (b)(1)(C), but in that case the main extension provision shall not become effective except after a showing that it is generally more favorable to applicants than are the provisions of subsection (b)(1)(C), and, after specific action by the Commission by order or otherwise, permitting the provision to become effective. If the provision becomes effective, it shall govern the making of extensions.
- C) Deposits for extensions
- i) The utility may require the applicant or group of applicants to deposit with the utility the estimated cost of the extension determined in the manner designated in subsection (c). Each subsequent customer to be connected within a period of ten years, from the date of making the original extension, shall be required to deposit with the utility an amount equal to the sum of the estimated cost of the existing extension plus the estimated cost of any further extension necessary to serve the customer, divided by the number of depositors for the entire extension. The excess of this deposit over the estimated cost of any further extension necessary to serve the customer shall be divided equally by the utility among the previous depositors for the extension and shall be refunded to them in that amount. In no case shall the amount of the refund to a customer exceed the customer's deposit, nor shall the total of deposits for any extension exceed the estimated cost of making the extension.
  - ii) The foregoing provisions depend upon agreement by applicants that deposits of applicants will be equal. If an applicant or group of applicants requests a new extension to an existing main that would increase present customers' deposits, the utility shall consider the new extension as an original extension and shall not require deposits from existing customers for the requested new original extension.
  - iii) If the point of connection with the service piping of an applicant is so located that the applicant could be served by extending a separate parallel main at less cost than the amount of deposit that would be required from the applicant for connection to the existing extension, a utility will not require the applicant to deposit in excess of the estimated cost of the separate main, and the applicant shall

not share in any refunds so long as the applicant's deposit remains less than that of the other depositors on the existing extension.

- 2) A utility, when reaching agreement with a group of applicants, shall consider the group to be governed by the majority as applied to any specific extension.
- c) A utility shall provide the applicant with a free estimate of the cost of the requested main extension along the expected route for the main extension designated by the utility. A utility shall also provide a free estimate of the cost of an alternative route if the applicant requests an alternative route and the utility expects the cost for the alternative route to not exceed the cost from the expected route by more than 50%.
- d) A utility shall use, as the basis for determining the amount of a deposit, the distance the applicant is from the nearest available distribution main and a route that the utility would normally follow in making the extension and over which right-of-way is available.
- e) A utility may petition the Commission for an investigation and determination of the reasonableness of any main extension if circumstances indicate that the additional revenues generated as a result of the main extension would be so meager as to make it unlikely to pay a fair compensation to the utility for its investment, operation, maintenance and replacement of the extension, or that for other substantial reasons the extension is unwarranted. If, after a hearing the Commission orders a utility to construct an extension that has been challenged on any of these grounds, the applicant or group of applicants shall reimburse the utility for the construction costs to the extent necessary to ensure that the utility earns the Commission-authorized return from the required investment.