

DEPARTMENT OF REGULATORY AGENCIES

STATE OF HAWAII

TITLE VII - PUBLIC UTILITIES COMMISSION

STANDARDS FOR GAS SERVICE
CALORIMETRY, HOLDERS & VESSELS
IN THE STATE OF HAWAII

GENERAL ORDER NO. 9

DEPARTMENT OF REGULATORY AGENCIES

STATE OF HAWAII

TITLE VII - PUBLIC UTILITIES COMMISSION

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General Order No. 9

Table of Contents

CHAPTER I - STANDARDS FOR GAS SERVICE

PART I - GENERAL

<u>RULE</u>		<u>PAGE</u>
1.1	Authorization of rules	1
1.2	Application of rules	1
1.3	Definitions	2

PART II - RECORDS AND REPORTS

2.1	Location of records	4
2.2	Retention of records	5
2.3	Data to be filed with the Commission	5
2.4	Other records	.

PART III - GENERAL REQUIREMENTS

3.1	Disposition of gas	9
3.2	Meter reading sheets, cards, or billing register	9
3.3	Meter reading interval	9
3.4	Condition of meter	10
3.5	Pre-payment meters	10
3.6	Temporary service	10
3.7	Extension plan	10

PART IV - CUSTOMER RELATIONS

<u>RULE</u>		<u>PAGE</u>
4.1	Customer information	11
4.2	Establishment and re-establishment of credit	11
4.3	Customer bill forms	13
4.4	Customer records	14
4.5	Adjustment of bills	14
4.6	Reasons for denying service	16
4.7	Insufficient reasons for denying service	16
4.8	Change in character of service	17
4.9	Customer complaints	17

PART V - ENGINEERING

5.1	Requirement for good engineering practice	17
5.2	Acceptable standards	18
5.3	Acceptable references	19
5.4	Adequacy of supply	19
5.5	Inspection of gas plant	20

PART VI - INSPECTION AND TESTS

6.1	Utility inspections and tests	20
6.2	Test procedures and accuracies	23
6.3	Facilities and equipment for meter testing	24
6.4	Records of meters and associated metering devices	25
6.5	Meter test records	26

PART VII - STANDARDS OF QUALITY OF SERVICE

7.1	Purity requirements	26
7.2	Pressure limits	27
7.3	Pressure surveys and records	28
7.4	Standards for pressure measurements	29
7.5	Heating value	30
7.6	Heating value determination and records	31
7.7	Interruptions of service	33

PART VIII - SAFETY

8.1	Acceptable standards	34
8.2	Protective measures	34
8.3	Safety program	34
8.4	Customers piping	35
8.5	Gas leaks	35
8.6	Odorization	35

CHAPTER II - STANDARDS OF CALORIMETRY

FOR GASEOUS FUELS

PART I - GENERAL

<u>RULE</u>		<u>PAGE</u>
1.1	Application of rules	35
1.2	Deviation from rules	36
1.3	Definitions	36

PART II - CALORIMETERS

2.1	Types of calorimeters	39
-----	-----------------------	----

PART III - CALORIMETRY STANDARDS

3.1	Standards for water flow calorimeters	39
3.2	Standards for recording calorimeters	40
3.3	Minimum requirements	40
3.4	Standard method for installing, operating, testing and maintaining recording calorimeters manufactured by Cutler-Hammer	40

CHAPTER III

RULES GOVERNING THE DESIGN, CONSTRUCTION, OPERATION,
MAINTENANCE & INSPECTION OF GAS HOLDERS & LIQUID
HYDROCARBON VESSELS

PART I - GENERAL

1.1	General	56
1.2	Application of rules	56
1.3	Definitions	56

PART II - DESIGN OF HOLDERS,
VESSELS, HOLDER YARDS, AND VESSEL STATIONS

2.1	General considerations	57
-----	------------------------	----

PART III - HOLDER & VESSEL OPERATION & MAINTENANCE

3.1	General	60
3.2	Water sealed holders	62
3.3	High pressure gas holders	63

<u>RULE</u>		<u>PAGE</u>
3.4	High pressure liquid hydrocarbon vessels	63
PART IV - INSPECTION PROCEDURE		
4.1	General	64
4.2	Water sealed holders	65
4.3	High pressure gas holders	67
4.4	High pressure liquid hydrocarbon vessels	68
PART V - RECORDS		
5.1	Record of history of the operation and repair of gas holders and vessels	70

DEPARTMENT OF REGULATORY AGENCIES

TITLE VII-PUBLIC UTILITIES COMMISSION

CHAPTER I - STANDARDS FOR GAS SERVICE

PART I - GENERAL

1.1 Authorization of Rules

Chapter 104-15, Revised Laws of Hawaii, provides that the Commission shall have the power to make such rules as it deems necessary in the public interest and in the exercise of its powers and jurisdiction to carry out the provisions of Chapter 104 and any other law relating to the Commission.

1.2 Application of Rules

The following rules shall apply to any person, firm or corporation now or hereafter engaged as a public utility in the business of furnishing manufactured gas, hydrocarbon gas, or any mixture of gases for domestic, commercial, industrial or other purposes within the State of Hawaii where gas service is subject to the jurisdiction of the Public Utilities Commission of the State of Hawaii.

- a. These rules are intended to promote safe and adequate service to the public, to provide standards for uniform and reasonable practices by utilities, and to establish a basis for determining the reasonableness of such demands as may be made by the public upon the utilities.
- b. If unreasonable hardship to a utility or to a customer results from the application of any rule herein prescribed, application may be made to the Commission for the modification of the rule or for temporary or permanent exemption from its requirements.
- c. The adoption of these rules shall in no way preclude the Commission from altering or amending them, or from making such modifications with respect to their application as may be found necessary to meet exceptional conditions.
- d. These regulations shall in no way relieve any utility from any of its duties under the laws of this State.
- e. No gas utility shall deviate from these rules without specific written authorization from the Commission, except as herein provided. The rules herein established shall take precedence

1.2 Applications of Rules - continued

over all rules filed or to be filed by gas utilities insofar as inconsistent therewith. Rules now on file and inconsistent with the rules herein established shall be properly revised and refiled within thirty (30) days from the effective date of this order.

- f. Any gas utility may of its own accord establish uniform non-discriminatory rules more favorable to its customers than the rules herein established.
- g. The rules herein established shall take precedence over all orders, general or special heretofore made by the Commission, insofar as said orders may be inconsistent with these rules.
- h. In any case where any gas utility was supplying gas to customers prior to the adoption of these rules, under conditions more favorable or advantageous to such customers than the minimum levels of service provided in these rules, either as to contracted quality or character of service, no reduction shall be made in the level of such service conditions without the prior approval of the Commission.

1.3 Definitions

The following words and terms, when used in these rules, shall have the meaning indicated below:

- a. The word "utility" and the term "gas utility" shall be construed to mean any person, firm or corporation engaged as a public utility in producing, transmitting, distributing or furnishing manufactured gas, hydrocarbon gas, or any mixture of gases for domestic, commercial, industrial or other purposes.
- b. The word "commission" shall be construed to mean the Public Utilities Commission of the State of Hawaii.
- c. The word "customer" shall be construed to mean any person, group of persons, firm, corporation, association, institution, agency of the federal, state or local government or civic body in whose name gas service is rendered by a gas utility. The utility shall include in its tariff, definitions in detail of the qualification requirements of customers for the several classes of utility service available.
- d. The word "tariff" shall be construed to mean the entire body of rates, charges, definitions, rules & regulations, including those services contained in special contracts and supplemental tariffs adopted and filed by the utility and authorized by the Commission.
- e. The word "gas" shall, unless otherwise specifically designated, be construed to mean manufactured gas, hydrocarbon gas, or any mixture of gases produced, transmitted, distributed or furnished by any gas utility.

1.3 Definitions - continued

- f. The term "manufactured gas" shall be construed to mean any gas produced by any generating or processing equipment, exclusive of "hydrocarbon gas."
- g. The term "hydrocarbon gas" shall be construed to mean any gas consisting essentially of methane, ethane, propane, butane, and pentane or any mixture thereof.
- h. The term "mixed gas" shall be construed to mean any mixture of two or more gases, of materially different physical character or chemical composition mixed inside or outside of any generating or processing equipment, separating or extracting plant.
- i. The term "Gas main or distribution main" is a pipe installed in a community to convey gas to individual services or other mains.
- j. The term "Gas service" is the pipe that runs between a main or a pipeline and a customer's meter.
- k. The term "Low-pressure distribution system" is a gas distribution piping system in which the gas pressure in the mains and services is substantially the same as that delivered to the customer's appliances. In such a system a service regulator is not required on the individual services.
- l. The term "High-pressure distribution system" is a gas distribution piping system which operates at a pressure higher than the standard service pressure delivered to the customer. In such a system a service regulator is required on each service to control the pressure delivered to the customer.
- m. The term "cubic foot" of gas as used in these rules shall have the following meaning:
 - 1. In cases where gas is supplied to customers at the standard delivery pressure, a cubic foot of gas shall be construed to be that volume of gas which, at the temperature and pressure existing in the meter, occupies one cubic foot.
 - 2. In cases where gas is supplied to customers through orifice meters at other than standard delivery pressure, a cubic foot of gas shall be construed to be that volume of gas which, at the temperature in the meter and the metered pressure corrected to standard delivery pressure occupies one cubic foot.
 - 3. In cases where gas supplied to customers through positive displacement meters at other than standard delivery pressure, a cubic foot of gas shall be construed to be that volume of

1.3 Definitions - continued

gas which, at the temperature existing in the meter, and the metered pressure corrected to standard delivery pressure, occupies one cubic foot.

4. The standard cubic foot of gas for all other purposes of these rules shall be at that volume of gas which, when saturated with water vapor and at the temperature of 60 degrees F. and under a pressure of 30 inches of mercury (density 13.5951 grams per c.c. and acceleration of gravity 980.665 c.m./sec²) occupies one cubic foot.
- n. "Premises" means a piece of land or real estate, including buildings and other appurtenances thereon.
- o. "Gas plant" means all facilities owned by a gas utility for the production, storage, transmission, and distribution of gas.
- p. "Meter," without other qualification, shall mean any device or instrument which is used by a utility in measuring a quantity of gas.
- q. "Check flow" means a flow between 20% and 50% of the rated capacity of a meter.
- r. "Full rated flow" means a flow of 100% of the rated capacity of a meter.
- s. "Interruption of service" means any disturbance of the gas supply whereby the pilot flame on the appliances of at least 50 customers shall have been extinguished.
- t. The abbreviations used, and their meaning, shall be as follows:

BTU	-----	British Thermal Unit
LF-Gas	-----	Liquefied Petroleum Gas
psig	-----	Pounds Per Square Inch, Gauge
W.C.	-----	Water Column

FART II - RECORDS AND REPORTS

2.1 Location of Records

All records required by these rules or necessary for the administration thereof, shall be kept within this State, unless otherwise authorized by the Commission. These records shall be available for examination by the Commission or its authorized representatives at all reasonable hours.

- a. Complete tariff schedules, contract forms, rules and regulations, etc., as approved by the Commission, shall be on file in each business office of the utility and shall be open for inspection of the public.

2.2 Retention of Records

Unless otherwise specified by the Commission, all records required by these rules shall be preserved for the period of time specified in the current edition of the National Association of Railroad and Utilities Commissioners' publication "Regulations to Govern the Preservation of Records of Electric, Gas and Water Utilities."

2.3 Data To Be Filed With The Commission

The utility shall file with the Commission the following documents and information, and shall maintain such documents and information in a current status.

a. A copy of the utility's tariff, which shall include:

1. A copy of each schedule of rates for service, together with the applicable riders.
2. A copy of the utility's rules, or terms and conditions, describing the utility's policies and practices in rendering service. These rules shall include:
 - (a) The standard total heating value of the gas in BTU's per cubic foot. If necessary, this may be listed by district, division, or community.
 - (b) The list of the items which the utility furnishes, owns, and maintains on the customer's premises, such as service pipe, meters, regulators, vents, and shut-off valves.
 - (c) General statement indicating the extent to which the utility will provide free service in the adjustment of customers' appliances.
 - (d) A statement indicating the minimum number of days allowed for payment of the gross amount of the customers' bill before service will be discontinued for non-payment.
 - (e) A statement indicating the volumetric measurement base to which all sales of gas at other than standard delivery pressure are corrected (see Rule 1.3m2).
 - (f) The utility's extension plan as required in Rule 3.7.

b. A copy of each type of customer bill form.

- c. A map or maps showing the utility's operating area. Maps shall be revised annually unless revision is unnecessary, in which event the utility shall notify the Commission that the map on file is current. The map or maps shall show major mains and transmission lines, production plants, principal storage holders and system metering points.

2.3 Data To Be Filed With The Commission - continued

- d. The name, title, address, and telephone number of the person who should be contacted in connection with:
1. General management duties.
 2. Customer relations (complaints).
 3. Engineering operations.
 4. Meter tests and repairs.
 5. Emergencies during non-office hours.
- e. A report of each accident in connection with the operation of the utility's gas plant. Prompt notice of fatal accidents shall be given to the Commission by telephone or telegraph.
- f. Capital Improvements
1. The utility shall, by January 1 of each year, file with the Commission, a report (in a form approved by the Commission) of its projected capital improvements program expenditures budget for the ensuing five years which shall include, in considerable detail, the capital improvements program expenditures budget approved by management for the first year of the five-year period.
 2. Proposed capital expenditures for any single project related to plant replacement, expansion or modernization, in excess of \$500,000 or 10 per cent of the total plant in service, whichever is less, shall be submitted to the Commission for review at least 60 days prior to the commencement of construction or commitment for expenditure, whichever is earlier. If the Commission determines, after hearing on the matter, that any portion of the proposed project provides facilities which are unnecessary or are unreasonably in excess of probable future requirements for utility purposes, then the utility shall not include such portion of the project in its rate base. If the utility subsequently convinces the Commission that the property in question has become necessary or useful for public utility purposes, it may then be included in the rate base. Failure of the Commission to act upon the matter and render a decision and order within 90 days of filing by the utility shall allow the utility to include the project in its rate base without the determination by the Commission required by this rule. The data submitted under this rule shall be in such form and detail as prescribed by the Commission.

g. Reports of gas service.

1. Each utility shall file the following regular reports:

- (a) The daily and weekly heating value report showing minimum, maximum, and average values in accordance with Rule 7.6.
- (b) Monthly and Annual Financial Report and Statistical Information on utility operations.

2. These reports shall be due in the Commission's offices within the time limits set below; unless otherwise required:

- (a) Weekly reports - five days after close of period.
- (b) Monthly reports - thirty days after close of period.
- (c) Annual reports - ninety days after close of period.

2.4 OTHER RECORDS

- a. A suitable map or maps shall be kept on file in the principal office of each division or district, which maps shall at all times show the size, character and location of each street main, district regulator, street valve and drip, and when practicable, each service connection in the corresponding territory served. In lieu of showing service locations on maps, a card record or other suitable means may be used.
- b. In each division or district office there shall be available such information relative to the distribution system as will enable the local utility representatives at all times, to furnish necessary information regarding the rendering of service to existing and prospective customers.
- c. Each gas manufacturing or mixing plant and each compressor and holder station shall be provided with an accurate ground plan drawn to a suitable scale, showing the entire layout of the plant or station, the location, size and character of plant equipment, major pipe lines, connections, valves and other facilities used for the production and delivery of gas, all properly identified.
- d. Station Records.
 - 1. Each gas utility shall keep and preserve, for a period of at least two (2) years, an accurate record of the pressures maintained on each main leading from each manufacturing or mixing plant and from each compressing, receiving and/or dispatching station on its system. Such record may be kept in the form of pressure gauge charts.

d. Station Records -- continued

2. Each gas utility shall keep and preserve, for a period of at least three (3) years, an accurate record of the operation of each isolated compressor station, as follows:
 - (a) The amount of fuel used each day under steam boilers and in compressors.
 - (b) The amount of electricity or other energy used each month for compression purposes.

3. Each gas utility serving manufactured or mixed gas shall keep and preserve, for a period of at least three (3) years, an accurate record of the operation of each manufacturing or mixing plant, as follows:
 - (a) The volume of gas manufactured or mixed each day, recorded in standard cubic feet.
 - (b) The volume of gas sent out each day, recorded in standard cubic feet.
 - (c) The amount of make oil, liquid hydrocarbons, and/or other raw material used each day in manufacturing and/or mixing gas.
 - (d) The amount of heat oil and/or other fuel used each day in gas generators or producers.
 - (e) The amount of fuel used each day under steam boilers or elsewhere, together with the amount of lampblack and tar utilized for steam purposes (estimated if necessary).
 - (f) The amount of electricity or other energy used each month.
 - (g) The character of, and an estimate of, the quantity of by-products or residuals produced, utilized, sold or remaining on hand each month.

4. Each gas utility serving hydrocarbon gas shall keep and preserve, for a period of at least three (3) years, an accurate record of the operation of each vaporizing plant or system, as follows:
 - (a) The quantity of gas vaporized each month, recorded in cubic feet.
 - (b) The quantity of gas sent out each month, recorded in cubic feet.

- (c) The amount of liquid hydrocarbons used each month recorded in gallons.
- (d) The amount of fuel used each month for plant operations, in cubic feet.
- (e) The amount of electricity used each month.
- (f) The average monthly calorific value per gallon of liquid hydrocarbons received in each operating district.

PART III GENERAL REQUIREMENTS

3.1 Disposition of Gas

- a. All gas sold by a utility shall be on the basis of meter measurement unless otherwise authorized by the Commission.
- b. Wherever practicable, consumption of gas within the utility itself, or by administrative units associated with it, shall be metered.

3.2 Meter Reading Sheets, Cards, or Billing Register

- a. The meter reading sheets, cards or billing register shall show:
 - 1. Customer's name, address, and rate schedule.
 - 2. Identifying number and/or description of the meter(s).
 - 3. Meter readings.
 - 4. If the reading has been estimated.
- b. Each meter shall indicate clearly the cubic feet or other unit of gas registered by such meter. In cases where the dial readings of a meter must be multiplied by a constant to obtain the cubic feet or other unit consumed, the proper constant to be applied shall be clearly marked on the consumer's bill. Where gas is metered under high pressure or where the quantity is determined by calculations from recording devices, the utility shall, upon application from the customer, supply the customer with such information as will cover the conditions under which the quantity is determined.

3.3 Meter Reading Interval

Meters shall be read montly, except that authority may be obtained from the Commission for reading the meters at other than monthly intervals. As nearly as practicable, utilities shall avoid sending a customer two successive estimated bills.

3.4 Condition of Meters and Regulators

- a. In the service of gas to domestic, commercial and industrial customers, each gas utility shall provide and install at its own expense and shall continue to own, maintain and operate all equipment for the regulation and measurement of gas to the outlet of the meter.
- b. Customers' meters and regulators shall be located and installed to conform to Section 846 of American Standard Code for Gas Transmission and Distribution Piping Systems ASA B31.8 as specified in Rule 5.2.
- c. Each utility shall install service lines and meters of adequate capacity to provide satisfactory service and to assure accurate meter registration under the load conditions imposed.
- d. Every gas service meter, when installed for the use of any customer shall be in good order and shall have been adjusted to register within one (1) per cent over or two (2) per cent under the prover registration under conditions of normal operations.
- e. All tests to determine the accuracy of registration of any gas service meter shall be made with a suitable meter prover.

3.5 Pre-Payment Meters

Pre-payment meters shall not be geared or set so as to result in the charge of a rate or amount higher than would be paid if a standard type meter were used, except under such special rate schedule as may be filed under Rule 2.3a1.

3.6 Temporary Service

The utility shall, in its tariff authorized by the Commission, make provision for the rendering of temporary service to a customer. It shall make specific definition of temporary service and shall specify the terms and conditions under which temporary service may be reclassified as permanent service. The customer may be required to advance all the cost of installing and removing the service in excess of any salvage realized. In the event such service becomes permanent service, provision must be made for adjustment of any advance for temporary service.

3.7 Line Extension Plan

- a. The utility will construct, own, operate and maintain gas distribution main extensions only along public streets, roads and highways which the utility has the legal right to occupy, and on public lands and private property across which rights of way satisfactory to the utility may be obtained by the utility.
- b. Each gas utility shall file with the Commission as part of the company's rules, its policy on gas main extensions which shall be subject to Commission's approval. Any revisions as the utility may find necessary to incorporate in its policy shall be first submitted to the Commission for review and approval.

PART IV CUSTOMER RELATIONS

4.1 Customer Information

Each utility shall:

- a. Maintain up-to-date maps, plans, or records of its entire transmission and distribution systems, with such other information as may be necessary to enable the utility to advise prospective customers, and others entitled to the information, as to the facilities available for serving any locality.
- b. Assist the customer or prospective customer in selecting the most economical rate schedule.
- c. Notify customers affected by a change in rates or schedule classification.
- d. Post a notice in a conspicuous place in each office of the utility where applications for service are received, informing the public that copies of the rate schedules and rules relating to the service of the utility, as filed with the Commission, are available for inspection.
- e. Upon request, give its customers such information and assistance as is reasonable in order that customers may secure safe and efficient service at the most economical rate and upon request shall render every reasonable assistance in securing appliances that are properly adapted and adjusted to the gas service furnished.
- f. Inform its customers of any change made, or proposed to be made, in the character of the service supplied as would affect the efficiency or safety of operation of the appliances or equipment which may be in use by said customer.
- g. Adopt some means of informing its customers as to the methods of reading meters, either by printing on its bills a description of the method, or by customer request at any office where applications for service are received.
- h. Furnish such additional information as the customer may reasonably request.

4.2 Establishment and Re-establishment of Credit.

Each applicant for service will be required to establish or re-establish his credit in one of the following manners before service will be rendered.

- a. Establishment of Credit: Credit shall be established when:
 1. Applicant furnishes credit information or references satisfactory to the utility;

a. Establishment of Credit - continued

2. Applicant establishes a record of prompt payment for services for twelve consecutive months;
3. Applicant is the owner with substantial equity in the premises to be served, or in other real estate located within the limits of the utility service, of sufficient value in relation to charges for utility service to be rendered;
4. Applicant makes a cash deposit to secure payment of bills for service to be furnished by the utility as provided in Rule 4.2c; or
5. Applicant furnishes a guarantor, satisfactory to the utility to secure payment of bills for the service requested.

b. Re-establishment of Credit:

1. An applicant who previously has been a customer of the utility and whose service has been discontinued for non-payment of bills, may be required before service is rendered to pay all amounts owing to the utility and to re-establish credit as provided in Rule 4.2a.
2. A customer who fails to pay his bills before they become past due and who further fails to pay such bill within five days after the date of presentation of a discontinuance of service notice for non-payment of bills, may be required to pay such bills and re-establish his credit by depositing the amount prescribed in Rule 4.2c.

c. Customer Deposits:

Each utility may require from any customer or prospective customer a deposit intended to guarantee payment of bills for service.

1. Such deposit shall not be less than \$5.00 nor more in amount than the maximum estimated charge for service for 2 consecutive billing periods, or as may reasonably be required by the utility in cases involving service for short periods or special occasions.
2. Interest on Deposits
 - (a) Simple interest on deposits at the rate of at least 6% per annum shall be paid by the utility to each customer required to make such deposit for the time it is held by the utility after credit is established.
 - (b) Payment of the interest to the customer shall be made annually if requested by the customer, or at the time the deposit is returned.

2. Interest on Deposits - continued

(c) The interest shall be accrued annually.

(d) The deposit shall cease to draw interest on the date it is returned, on the date service is terminated, or on the date notice is sent to the customer's last known address that the deposit is no longer required.

3. Each utility shall keep records to show:

(a) The name and address of each depositor.

(b) The amount and date of the deposit.

(c) Each transaction concerning the deposit.

4. Each utility shall issue a receipt of deposit to each customer from whom a deposit is received, and shall provide means whereby a depositor may establish his claim if his receipt is lost.

5. The utility may retain the deposit as long as it feels it is necessary to insure payment of bills for service provided it complies with Rule 4.2c2.

6. A record of each unclaimed deposit must be maintained for at least 3 years, during which time the utility shall make a reasonable effort to return the deposit.

7. Unclaimed deposits, together with accrued interest, shall be credited to an appropriate account.

4.3 Customer Bill Forms

The utility shall bill each customer as promptly as possible following the reading of his meter. The bill shall show:

a. The reading of the meter at the beginning and at the end of the period for which the bill is rendered.

b. The dates of the billing period.

c. The quantity and kind of units metered.

d. The applicable rate schedule, or identification of the applicable rate schedule. If the actual rates are not shown, the bill shall carry a statement to the effect that the applicable rate schedule is available for inspection at the utility's business office.

e. The amount of the bill.

f. A distinct marking to identify an estimated bill.

4.3 Customer Bill Forms - continued

- g. Any conversions from meter reading units to billing units, or any other factors, such as fuel adjustments used in determining the bill. In lieu of such information on the bill, a statement must be on the bill advising that such information can be obtained by contacting the utility's principal office, except that any multiplier used to determine billing units will be shown whenever used.
- h. Copies of all forms of bills, bill stubs and notices appertaining to the payment of bills shall be filed with the Commission as a part of the tariff then in force.

4.4 Customer Records

The utility shall retain customer billing records as may be necessary to effectuate compliance with Rule 4.5 but not less than 3 years.

- a. Records for customers shall show where applicable.
 - 1. Cubic feet meter reading.
 - 2. Cubic feet consumption.
 - 3. Therms or BTU's per cubic feet.
 - 4. Total therms consumed.
 - 5. Total amount of bill.

4.5 Adjustment of Bills

Bills which are incorrect due to meter or billing errors are to be adjusted as follows:

a. Fast Meters

Whenever a meter in service is tested and found to have over-registered more than 2%, the utility shall recalculate the bills for service, for the period as determined below:

- 1. The bills for service shall be recalculated from the time at which the error first developed or occurred if that time can be definitely determined.
- 2. If the time at which the error first developed or occurred cannot be definitely determined, it shall be assumed that the over-registration existed for a period of six (6) months or equal to one-half of the time since the meter was last tested, whichever is the lesser, and the bills for service shall be recalculated for that period.

a. Fast Meters - continued

3. If the recalculated bills indicate that more than \$1 is due an existing customer or \$2 is due a person no longer a customer of the utility, the full amount of the calculated difference between the amount paid and the recalculated amount shall be refunded to the customer. The refund to an existing customer may be in cash or as credit on a bill. If a refund is due a person no longer a customer of the utility, a notice shall be mailed to the last known address, and the utility shall upon request made within 3 months thereafter refund the amount due.

b. Non-registering Meters

Whenever a meter in service is found not to register or to register less than 75% of actual consumption, the utility may render an estimated bill for the period in question, for a period not to exceed three months, based upon past average use.

c. Slow Meters

Whenever a meter is found to be more than 2% slow, the utility may bill the customer for the amount the test indicates he has been undercharged for the period of inaccuracy, which period shall not exceed the last 3 months the meter was in service unless otherwise ordered by the Commission. No back billing will be sanctioned if the customer has called to the company's attention his doubts as to the meter's accuracy and the company has failed within a reasonable time to check it.

- d. Billing adjustments due to fast or slow meters shall be calculated on the basis that the meter should be 100% accurate. For the purpose of billing adjustment the meter error shall be one-half of the algebraic sum of the error at full-rated flow plus the error at check flow.
- e. When a customer has been overcharged as a result of incorrect reading of the meter, incorrect application of the rate schedule, incorrect connection of the meter, or other similar reasons, the amount of the overcharge shall be adjusted, refunded, or credited to the customer.
- f. When a customer has been undercharged as a result of incorrect reading of the meter, incorrect application of the rate schedule, incorrect connection of the meter, or other similar reasons, the amount of the undercharge may be billed to the customer.

4.6 Reasons for Denying Service

Service may be refused or discontinued for any of the reasons listed below. Unless otherwise stated, the customer shall be allowed a reasonable time in which to comply with the rule before service is discontinued.

- a. Without notice in the event of a condition determined by the utility to be hazardous.
- b. Without notice in the event of customer use of equipment in such a manner as to adversely affect the utility's equipment or the utility's service to others.
- c. Without notice in the event of tampering with the equipment furnished and owned by the utility.
- d. Without notice in the event of unauthorized use.
- e. For violation of and/or non-compliance with the utility's rules on file with and approved by the Commission.
- f. For failure of the customer to fulfill his contractual obligations for service and/or facilities subject to regulation by the Commission.
- g. For failure of the customer to permit the utility reasonable access to its equipment.
- h. For non-payment of bill provided that the utility has made a reasonable attempt to effect collection and has given the customer written notice that he has at least 5 days, excluding Sundays and holidays, in which to make settlement on his account or have his service denied.
- i. For failure of the customer to provide the utility with a deposit as authorized by Rule 4.2.
- j. For failure of the customer to furnish such service equipment, permits, certificates, and/or rights-of-way, as shall have been specified by the utility as a condition to obtaining service, or in the event such equipment or permissions are withdrawn or terminated.
- k. For fraud against the utility.

4.7 Insufficient for Denying Service

The following shall not constitute sufficient cause for refusal of service to a present or prospective customer:

- a. Delinquency in payment for service by a previous occupant of the premises to be served.

4.7 Insufficient for Denying Service - continued

- b. Failure to pay for merchandise purchased from the utility.
- c. Failure to pay for a different type or class of public utility service.
- d. Failure to pay the bill of another customer as guarantor thereof.
- e. Failure to pay a back bill rendered in accordance with Rule 4.5.
- f. Failure to pay adjusted bills based on the undercharges set forth in Rule 4.5.

4.8 Change in Character of Service

The following procedure shall be followed whenever there is a material change in the character of the gas service:

a. Changes Under the Control of the Utility

The utility shall make such changes only with the approval of the Commission, and after adequate notice to the customers.

b. Changes Not Under the Control of the Utility

The utility shall maintain the proper combustibility of the gas supplied at the heating value and specific gravity existing at the customers' meters (see Rule 7.5b)

- c. The utility shall make any necessary adjustments to the customers' appliances without charge and shall conduct the adjustment program with a minimum of inconvenience to the customers.

4.9 Customer Complaints

- a. Each gas utility shall make a full and prompt investigation of all complaints made to it by its customers, either directly or through the Commission concerning its charges, practices, facilities or service.
- b. Each gas utility shall keep a chronological record of all complaints received which shall show in each case the name and address of the complainant, the date of receiving a complaint, the date and method of disposal, and name of service man responsible. The record shall be kept for a period of at least two (2) calendar years after the complaint has been adjusted.

PART V ENGINEERING

5.1 Requirement for Good Engineering Practice

The gas plant of the utility shall be constructed, installed, maintained and operated in accordance with accepted good engineering practice in the gas industry to assure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.

5.1 Requirement for Good Engineering Practice. - continued

- a. A record shall be kept by each gas utility of conditions found upon inspection, or otherwise reported or ascertained, involving life or property hazard or of interference with service, which record shall describe the location and circumstances of each apparently hazardous condition or possible service interference condition found or reported, and a statement showing the date and general character of its correction.

5.2 Acceptable Standards

Unless otherwise specified by the Commission, the utility shall use the applicable provisions in the publications listed below as standards of accepted good practice.

- a. The current edition of the American Standard Code for "Gas Transmission and Distribution Piping Systems," ASA B31.8.
- b. The latest edition of the American Standard Installation of Gas Appliances and Gas Piping, ASA Z21.30.
- c. The current edition of the National Fire Protection Association Standard, No. 59, "The Storage and Handling of Liquefied Petroleum Gases at Utility Gas Plants."
- d. "Standard Methods of Gas Testing," Circular No. 48, National Bureau of Standards, 1916. (The applicable portions of this circular have been substantially reproduced in the American Meter Co. Handbook E-4, covering the testing of positive displacement gas meters.)
- e. "Testing Large Capacity Rotary Gas Meters," Research Paper No. 1741, National Bureau of Standards Journal of Research, September 1946.
- f. "Standard Method of Test of Calorific Value of Gaseous Fuels by the Water-flow Calorimeter," American Society for Testing Materials, Standard D 900-55.
- g. Design, construction, operation, maintenance and inspection of gas holders and liquid hydrocarbon vessels by gas utilities in the State of Hawaii shall conform to the "Rules Governing the Design, Construction, Operation, Maintenance and Inspection of Gas Holders and Liquid Hydrocarbon vessels" adopted by this Commission contained herein as Chapter III.
- h. Rules and Regulations adopted by the Fire Marshal's Office, State of Hawaii.

5.3 Acceptable References

The following publications have not been designated as standards but they may be used as guides to acceptable practice.

- a. "Accuracy of the Recording Gas Calorimeter When Used with Gases of High Btu Content," by John H. Eiseman, National Bureau of Standards, and Elwin A. Potter, Gas Inspection Bureau of the District of Columbia, AGA Publication No. CEP-55-13.
- b. "Orifice Metering of Natural Gas," Report No. 3 of the AGA Gas Measurement Committee.
- c. Reports prepared by the Practical Methods Committee of the Appalachian Gas Measurement Short Course, West Virginia University, as follows:
 1. Report No. 1, "Methods of Testing Large Capacity Displacement Meters."
 2. Report No. 2, "Testing Orifice Meters."
 3. Report No. 3, "Designing and Installing Measuring and Regulating Stations."
 4. Report No. 4, "Useful Tables for Gas Men."
 5. Report No. 5, "Prover Room Practices."

5.4 Adequacy of Supply

- a. The production and/or storage capacity of the utility's plant supplemented by gas regularly available from other sources, must be sufficiently large to meet all reasonably expectable demands for service and provide a reasonable reserve for emergencies. A statement shall be filed annually with the Commission within 30 days after the close of the year indicating the adequacy of such capacity and the method used to determine the required reserve capacity which forms the basis for future requirements in production, storage, transmission, and distribution plant expansion programs required under Rule 2.3f.

- b. Where a gas utility has no production capacity or limited production capacity and purchases and stores a portion of its gas for resale to its utility customers, the utility must be assured that sufficient firm production or storage capacity is dedicated by the supplying company, as well as utility storage capacity to assure the requirements of Rule 5.4. A statement as to the adequacy of such commitment and the method used by the utility to determine its reliability, shall be filed with the Commission as required in Rule 5.4.

5.5 Inspection of Gas Plant

Each utility shall adopt and file with the Commission a program of inspection of its gas plant in order to determine the necessity for replacement and repair. The frequency of the various inspections shall be based on the utility's experience and accepted good practice. Each utility shall keep sufficient records to give evidence of compliance with its inspection program.

PART VI INSPECTIONS AND TESTS

6.1 Utility Inspections and Tests

Each utility shall make inspections and tests of meters and associated metering devices as follows:

- a. Pre-installation Inspections and Tests

Every meter and/or associated metering device shall be inspected, tested and sealed in the meter shop of the utility before being placed in service, and the accuracy of each meter shall be within the tolerances permitted by Rule 6.2.