

GAS ACT  
(CHAPTER 116A, SECTION 96)  
GAS (METERING) REGULATIONS

ARRANGEMENT OF REGULATIONS

PART I  
PRELIMINARY

Regulation

1. Citation
2. Definitions

PART II  
METER INSTALLATION AND SECURITY

3. Location of meter installation
4. Tampering with meter installation, etc.
5. Notification of tampering with meter installation, etc.
6. Security of meter data
7. Preservation of meter data

PART III  
TESTING AND CALIBRATION OF METER INSTALLATIONS

8. Testing and calibration
9. Right to check accuracy of meter installation

PART IV  
METER DATA COLLECTION AND ACCESS

10. Availability of BPRM installations
11. Availability of BPCM installations and DRCM installations
12. Time and date
13. Pulse outputs
14. Data collection and transfer
15. Right of access to meter data

PART V

MISCELLANEOUS

Regulation

16. Penalties
  17. Transitional provisions  
The Schedules
- 

[15th September 2008]

PART I

PRELIMINARY

**Citation**

1. These Regulations may be cited as the Gas (Metering) Regulations.

**Definitions**

2.—(1) In these Regulations, unless the context otherwise requires —

“accuracy limits” means the accuracy limits for a specified range of volume of gas as set out in the First Schedule;

“balancing period” means a period of one hour commencing on an hour bar and ending on the next following hour bar;

“BPCM installation” means a balancing period capable meter installation for which —

- (a) meter reading is not conducted for each balancing period;
- (b) meter data is recorded in the meter installation for each balancing period; and
- (c) meter data is available to the designated gas transporter at intervals longer than every hour;

“BPRM installation” means a balancing period read meter installation for which —

- (a) meter reading is conducted for each balancing period;
- (b) meter data is recorded in the meter installation for each balancing period; and
- (c) meter data is available to the designated gas transporter at hourly intervals;

“designated gas transporter” has the same meaning as in section 61A of the Act;

“DRCM installation” means a daily read capable meter installation for which —

- (a) meter data is recorded in the meter installation for each day; and
- (b) meter data is available to the designated gas transporter at intervals longer than every day;

“meter data” means all data collected and transferred from a meter installation, including the meter readings, the meter installation ID, the relevant balancing period, energy consumption and natural gas throughput volume and quality, where applicable;

“meter installation” means any meter and its associated equipment and installation, including any associated pipework, filter, valve, pressure regulating equipment, seal, housing, mounting, telemetry equipment, gas chromatograph and flow computer;

“meter installation ID” means the identification number given to each meter installation by the designated gas transporter;

“meter owner” means a person who owns any meter installation;

“participant” means a meter owner, direct access customer or gas shipper;

“relevant direct access customer”, in relation to a meter owner, means a direct access customer who withdraws gas conveyed

to his premises through a meter installation owned by the meter owner;

“relevant gas shipper”, in relation to a meter owner, means a gas shipper who ships gas into or out from, the point in a gas transmission pipeline where a meter installation owned by the meter owner is installed;

“retail customer” means a consumer, other than a direct access customer, who is supplied with gas by a gas retailer and whose premises are connected to a gas mains network.

(2) Except as otherwise expressly provided, any reference in these Regulations to a meter installation shall not include a reference to a meter installation located at the premises of a retail customer.

## PART II

### METER INSTALLATION AND SECURITY

#### **Location of meter installation**

3. Every meter owner shall ensure that his BPCM installation or DRCM installation is installed in such location and in such a manner as will enable any person, authorised by a relevant gas shipper to read the meter, to have reasonable access to the meter with minimal risk of bodily injury to himself.

#### **Tampering with meter installation, etc.**

4.—(1) No person shall alter or tamper with, or carry out, engage in or do anything in relation to, any meter installation such as to compromise or adversely affect the accuracy of the meter installation.

(2) In this regulation, “meter installation” —

(a) includes a meter installation located at the premises of a direct access customer or a retail customer; and

(b) does not include any meter.

**Notification of tampering with meter installation, etc.**

5.—(1) Where any meter installation has been altered or tampered with, or has had its accuracy compromised or adversely affected, the meter owner of the meter installation shall —

- (a) notify all of the parties affected by such an occurrence; and
- (b) arrange for tests to be conducted on the meter installation and, if necessary, repair the meter installation, to ensure that the meter installation is operating within the accuracy limits.

*[S 578/2019 wef 01/09/2019]*

(2) A gas transporter or a gas retailer must collect and use an individual's unique identity information to verify, in relation to a report by the individual to the gas transporter or gas retailer (as the case may be) about any tampering or suspected tampering of any meter, the individual's identity.

*[S 578/2019 wef 01/09/2019]*

(3) An individual's unique identity information for the purpose of paragraph (2) is any of the following:

- (a) the individual's NRIC number;
- (b) the individual's foreign identification number or FIN;
- (c) the individual's work permit number.

*[S 578/2019 wef 01/09/2019]*

**Security of meter data**

6. Every meter owner shall, in respect of every meter installation he owns —

- (a) ensure that the meter installation is secured against unauthorised access, interference and tampering, and, where necessary, install a remote alarm which alerts the meter owner to any unauthorised access to the meter installation;
- (b) ensure that the meter installation is located as close to the point of measurement on the gas transmission pipeline as technically practicable;

- (c) ensure that the meter data held in the meter installation is protected from unauthorised local or remote electronic access by implementing appropriate security measures, including, where necessary, password protection and data firewalls;
- (d) ensure that the security measures he has implemented to prevent any unauthorised local or remote electronic access to the meter data held in the meter installation are reviewed periodically;
- (e) keep secure record of the electronic access password used to prevent any unauthorised local or remote electronic access to the meter data held in the meter installation; and
- (f) provide the designated gas transporter or a relevant gas shipper, as the case may be, with a “read only” password to access the meter data held in the meter installation.

### **Preservation of meter data**

7. Every meter owner shall ensure that any meter data in the meter installations owned by him is not altered, corrupted or lost.

## PART III

### TESTING AND CALIBRATION OF METER INSTALLATIONS

#### **Testing and calibration**

8. Every meter owner shall, for every meter installation he owns —
- (a) cause the meter installation to be tested and calibrated in accordance with the Second Schedule before the meter is installed;
  - (b) cause the meter to be certified that it complies with the accuracy limits by —
    - (i) a laboratory approved by the Singapore Accreditation Council under the Singapore Laboratory Accredited Scheme (SAC-SINGLAS);
    - or

- (ii) such other test facility as the Authority may determine from time to time;
- (c) where the meter installation includes a gas chromatograph, cause the gas chromatograph to be tested and calibrated by a competent person;
- (d) cause the meter installation to be tested no less frequently than as prescribed in the Second Schedule, and cause the meter to be calibrated if the result of the test indicates that the meter is operating outside the accuracy limits;
- (e) provide the following persons with at least 14 days' written notice of the proposed time and date on which the meter installation is to be tested and calibrated and the nature of the testing and calibration to be undertaken, or such shorter notice as may be agreed by the parties:
  - (i) the participants who may be affected by the testing and calibration of the meter installation; and
  - (ii) the designated gas transporter (where the meter installation is not owned by the designated gas transporter);
- (f) permit the participants referred to in paragraph (e)(i) to be present in person or by a representative, at their own cost and risk, to observe the calibration of the meter installation and any consequential adjustment or recalibration;
- (g) maintain the results of the test referred to in paragraph (a) and the certificates issued by the test facility referred to in paragraph (b) for at least 6 years, and produce such results or certificates within 7 days of being requested to do so by the Authority, any participant referred to in paragraph (e)(i) or the designated gas transporter; and
- (h) where the meter installation is not owned by the designated gas transporter, arrange at his own cost for the designated gas transporter to be present to witness and affirm in a written statement that the testing and calibration and any consequential adjustment or recalibration has been carried out.

**Right to check accuracy of meter installation**

9.—(1) Every meter owner shall, for every meter installation he owns —

- (a) arrange for the meter to be tested to confirm the accuracy of the meter readings, on the request of any participant referred to in regulation 8(e)(i);
- (b) make the results of the test conducted pursuant to subparagraph (a) available to the participant who requested for the test to be conducted; and
- (c) keep the results of the test conducted pursuant to subparagraph (a) for at least 6 years, and produce such results within 7 days of being requested to do so by the Authority or the participant who requested for the test to be conducted.

(2) In the event that the results of any test conducted pursuant to paragraph (1)(a) show that the meter is operating within the accuracy limits, the cost of the test and other expenses incurred in conducting the test shall be borne by the participant who requested for the test to be conducted.

(3) In the event that the results of any test conducted pursuant to paragraph (1)(a) show that the meter is operating outside the accuracy limits, the cost of the test and other expenses incurred in conducting the test shall be borne by the meter owner.

**PART IV****METER DATA COLLECTION AND ACCESS****Availability of BPRM installations**

10. When any BPRM installation malfunctions, the meter owner shall repair or replace, or cause to be repaired or replaced, the BPRM installation in such manner as may be necessary to rectify the malfunction within one day of his discovery of the malfunction.



**Availability of BPCM installations and DRCM installations**

11. When any BPCM installation or DRCM installation malfunctions, the meter owner shall repair or replace, or cause to be repaired or replaced, the BPCM installation or DRCM installation in such manner as may be necessary to rectify the malfunction within 7 days of his discovery of the malfunction.

**Time and date**

12. Every meter owner shall ensure that each BPCM installation, BPRM installation or DRCM installation he owns is referenced to Singapore time and date, and that such time is maintained within a margin of error not exceeding —

- (a) in the case of a BPCM installation or DRCM installation, plus or minus 5 seconds of the actual Singapore time and date; and
- (b) in the case of a BPRM installation, plus or minus 2 seconds of the actual Singapore time and date.

**Pulse outputs**

13. Every meter owner of a BPCM installation or BPRM installation shall provide, upon the written request of a relevant direct access customer, relevant gas shipper or the designated gas transporter, the pulse or electronic outputs representing the quantities or characteristics of natural gas measured from the BPCM installation or BPRM installation for use by the relevant direct access customer or designated gas transporter (as the case may be) in managing the flow of natural gas that is introduced into or withdrawn from the gas transmission pipeline.

**Data collection and transfer**

14.—(1) No meter owner of a BPRM installation shall adopt or use any data coding and communications protocol for the BPRM installation for data collection and transfer unless the protocol has been approved by the designated gas transporter.

(2) Every meter owner shall provide the necessary means of communications —

- (a) for every BPCM installation or DRCM installation he owns, to permit a relevant gas shipper to collect and provide the designated gas transporter with the necessary meter data from the relevant installation; or
- (b) for every BPRM installation he owns, to permit the designated gas transporter (where he is not the meter owner) to collect the necessary meter data from the BPRM installation.

(3) In paragraph (2), “necessary means of communications” includes hand-held electronic data entry or data capture units with associated downloadable communications paths if these are required to meet the time limit for data capture and transfer.

### **Right of access to meter data**

**15.** Every meter owner shall give the following persons access to the meter data held in his meter installation which is in operation and used to measure the volume or energy of natural gas withdrawn from a gas transmission pipeline owned by, or under the management or control of, the designated gas transporter:

- (a) the designated gas transporter (where he is not the meter owner); and
- (b) a relevant direct access customer or relevant gas shipper.

## PART V

### MISCELLANEOUS

#### **Penalties**

**16.—**(1) Any meter owner who contravenes regulation 3, 5(1)(b), 6, 8(a), (b), (c) or (d), 10, 11 or 13 shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000 or to imprisonment for a term not exceeding 12 months or to both and, in the case of a continuing offence, to a further fine not exceeding \$250 for every day or part thereof during which the offence continues after conviction.

*[S 578/2019 wef 01/09/2019]*

(2) Any person who contravenes regulation 4(1) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000 or to imprisonment for a term not exceeding 12 months or to both and, in the case of a continuing offence, to a further fine not exceeding \$250 for every day or part thereof during which the offence continues after conviction.

(3) Any meter owner who contravenes regulation 5(1)(a), 7, 8(e), (f), (g) or (h), 9(1)(a), (b) or (c), 12, 14(1) or (2) or 15(a) or (b) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$5,000.

[S 578/2019 wef 01/09/2019]

### **Transitional provisions**

17.—(1) Regulations 3, 6, 8, 12 and 14 shall not apply for a period of 3 months from 15th September 2008 to any person who, immediately before that date, is the owner of a meter installation in relation to the meter installation (referred to in this regulation as the existing meter installation).

(2) Any meter owner referred to in paragraph (1) who is unable to comply with regulation 3, 6, 8, 12 or 14 in relation to the existing meter installation after the expiry of the period of 3 months referred to in that paragraph shall, within that period in writing —

- (a) notify the Authority that he is unable to comply with regulation 3, 6, 8, 12 or 14, as the case may be, in relation to the existing meter installation with reasons as to why he is unable to so comply; and
- (b) apply for written approval of the Authority for a grace period to so comply with regulation 3, 6, 8, 12 or 14, as the case may be, in respect of the existing meter installation.

(3) Where a meter owner makes an application under paragraph (2)(b), regulation 3, 6, 8, 12 or 14, as the case may be, shall not apply to him in relation to the existing meter installation —

- (a) until the date the application is refused by the Authority; or
- (b) where the application is approved by the Authority, until the expiry of such grace period as the Authority considers

appropriate having regard to the reasons given by that person and the circumstances of the case.

## FIRST SCHEDULE

Regulation 2(1)

### ACCURACY LIMITS FOR METERS

<i>Maximum Volumetric Flowrates</i>	<i>Category</i>	<i>Accuracy Limits</i>
<i>(in scm/hr)</i>		<i>(Volume)</i>
>150,000	Category 1, BPRM	$\pm 0.7\%$
>30,000 $\leq 150,000$	Category 2, BPRM	$\pm 1.0\%$
>6,000 $\leq 30,000$	Category 3, BPCM	$\pm 1.5\%$
<6,000	Category 4, DRCM	$\pm 2.0\%$

## SECOND SCHEDULE

Regulation 8

### PERIODIC TESTING AND CALIBRATION OF METER INSTALLATIONS

<i>Category</i>	<i>Peak Flow Rate of Connection Point</i>	<i>Pressure and Temperature Calibration Frequency</i>	<i>Gas Chromatograph Calibration Frequency</i>	<i>Meter Test Frequency</i>
	<i>(in scm/hr)</i>			
1	>150,000	Semi-annually	Once in every 2 weeks	Annually
2	>30,000 $\leq 150,000$	Semi-annually	Once in every 2 weeks	Annually
3	>6,000 $\leq 30,000$	Annually	Once in every 2 weeks	Annually
4	$\leq 6,000$	Annually	Once in every 2 weeks	Annually

[G.N. No. S 459/2008]

LEGISLATIVE HISTORY  
GAS (METERING) REGULATIONS  
(CHAPTER 116A, RG 3)

This Legislative History is provided for the convenience of users of the Gas (Metering) Regulations. It is not part of these Regulations.

**1. G. N. No. S 459/2008 — Gas (Metering) Regulations 2008**

Date of commencement : 15 September 2008

**2. 2009 Revised Edition — Gas (Metering) Regulations**

Date of operation : 1 June 2009

**3. G.N. No. S 578/2019 — Gas (Metering) (Amendment) Regulations 2019**

Date of commencement : 1 September 2019