



## REQUEST FOR FEEDBACK

# PROPOSED GAS (METERING) REGULATIONS

Closing date for submissions of comments and feedback:  
8 May 2008, 5.30pm

**Note: There will be no extension of deadline beyond 8 May 2008, 5.30pm**

**18 APRIL 2008**

ENERGY MARKET AUTHORITY  
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Singapore 238164  
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**Disclaimer:**

The information in this Request for Feedback is not to be treated by any person as any kind of advice. The Energy Market Authority and the Ministry of Trade and Industry shall not be liable for any damage or loss suffered as a result of the use of or reliance on the information given in this Request for Feedback. The information contained within this document is to be considered as draft and further amendments to the proposed Gas (Metering) Regulations not covered in this document or dissimilar as indicated in this document may be introduced.

## **INTRODUCTION**

1. The restructured gas industry will be governed by the Gas Act (Cap. 116A) (the “Act”). The EMA may, with the approval of the Minister, make regulations for which it considers necessary to be prescribed for carrying out its functions and duties under, and implementing the provisions of, the Act.
2. The proposed Gas (Metering) Regulations (the “Regulations”) would set out the obligations of any person who owns a meter installation directly connected to the gas transmission network.

## **PROPOSED GAS (METERING) REGULATIONS**

3. The proposed Regulations are required to facilitate the implementation of the Gas Network Code.
4. The proposed Regulations cover amongst others, the safety consideration relating to the location of a meter installation, security and preservation of meter data, provision of meter data, necessary communication means to enable the meters to be read, the accuracy limits for various types of meters and frequency for testing and calibration of meter installations.

## **MODE OF FEEDBACK**

5. EMA invites comments and feedback on the proposed Regulations as set out in Appendix 1.
6. If you have comments and feedback on the Regulations, please submit them in the format as shown in Appendix 2.
7. Please send your submissions (preferably by email) to:

Email: [chew\\_chong\\_peng@ema.gov.sg](mailto:chew_chong_peng@ema.gov.sg) and  
[lim\\_khoon\\_huat@ema.gov.sg](mailto:lim_khoon_huat@ema.gov.sg)

Alternatively, you may send your submission by post/fax to the following address:

Deputy Director (System Development & Efficiency)  
Energy Market Authority  
111 Somerset Road, #15-05  
Singapore 238164.  
Fax: (65) 68358084

8. All comments or feedback must reach EMA by **5.30pm, 8 May 2008**. Parties submitting comments should include their personal/company particulars as well as their correspondence address, contact numbers and email addresses on the cover page of their submissions.
9. Anonymous submissions will not be considered.
10. EMA will acknowledge receipt of all submissions. Please contact Mr Lim Khoon Huat if you have not received an acknowledgement of your submission within two business days.
11. EMA reserves the right to make public all or parts of any written submission made to this Request for Feedback and to disclose the identity of the source. Any part of the submission, which is considered by respondents to be commercially sensitive, should be clearly marked and placed in a confidential annex. EMA will take this into account regarding disclosure of the information submitted. EMA will not accept any submission that requests confidential treatment of all or a substantial part of the submission.

**PROPOSED GAS (METERING) REGULATIONS**

**(THIS DRAFT IS STILL UNDER REVIEW BY THE ATTORNEY  
GENERAL'S CHAMBERS.)**

**No. S 000 -**

**GAS ACT  
(CHAPTER 116A)**

**GAS (METERING) REGULATIONS 2008**

**ARRANGEMENT OF REGULATIONS**

**PART I**

**PRELIMINARY**

Regulation

1. Citation and commencement
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**

16. Penalties
17. Transitional provisions  
The Schedules

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In exercise of the powers conferred by section 96 of the Gas Act, the Energy Market Authority of Singapore, with the approval of the Minister for Trade and Industry, hereby makes the following Regulations:

## PART I

### PRELIMINARY

#### **Citation and commencement**

1. These Regulations may be cited as the Gas (Metering) Regulations 2008 and shall come into operation on 2008.

#### **Definitions**

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

“accuracy limits” means the accuracy limits for 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;

“party” means the designated gas transporter or a participant;

“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 —

- (a) alter or tamper with any meter installation (other than the meter); or
- (b) carry out, engage in or do anything that will compromise or adversely affect the accuracy of any meter installation.

(2) In this regulation, “meter installation” includes a meter installation located at the premises of a direct access customer or a retail customer.

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

**5.** Upon the occurrence of any of the prohibited acts referred to in regulation 4(1), the meter owner of the affected meter installation shall —

- (a) notify all of the parties affected by the prohibited act; 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.

### **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 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 access to the meter data held in the meter installation; and
  - (f) provide the designated gas transporter or the 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;
  - (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 recalibrate the meter if the result of the test indicates 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, the designated gas transporter or any participant referred to in paragraph (e)(i); 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 party;
  - (b) make the results of the test conducted pursuant to sub-paragraph (a) available to the party who requested for the test to be conducted; and

(c) maintain the results of the test referred to in sub-paragraph (a) for at least 6 years, and produce such results within 7 days of being requested to do so by the Authority or the party who requested for the test to be conducted.

(2) In the event that the results of any test referred to in 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 party who requested for the test to be conducted.

(3) In the event that the results of any test conducted under paragraph (1) 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 is maintained to be accurate —

- (a) in the case of a BPCM installation or DRCM installation, to  $\pm 5$  seconds; and
- (b) in the case of a BPRM installation, to  $\pm 2$  seconds.

#### **Pulse outputs**

**13.** Every meter owner shall provide, upon the written request of the relevant direct access customer or gas shipper who takes gas out from, or ships gas to, the point in the gas transmission pipeline 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 owned by the meter owner for use by the relevant direct access customer or designated

gas transporter 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 communications means to permit —

- (a) for every BPCM installation or DRCM installation he owns, the 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, the designated gas transporter (where he is not the meter owner) to collect the necessary meter data from the BPRM installation.

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

### **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);
- (b) the relevant direct access customer or gas shipper who takes gas out from, or ships gas to, the point in the gas transmission pipeline.

## **PART V**

### **MISCELLANEOUS**

#### **Penalties**

**16.**—(1) Any meter owner who contravenes regulation 3, 5(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.

(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(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.

### **Transitional provisions**

**17.**—(1) Any person who, immediately before (*date of commencement of these Regulations*), owns a meter installation, shall be deemed to have complied with regulation 3, 6, 8, 12 or 14 for a period of 3 months from the approval date or such longer period as the Authority may determine if, and only if —

- (a) such person has written to the Authority within 14 days of (*date of publication of these Regulations*) with reasons as to why he is unable to comply with regulation 3, 6, 8, 12 or 14 (as the case may be) with effect from (*date of commencement of these Regulations*); and
- (b) the Authority has issued a written approval to such person for the application during the period referred to in sub-paragraph (a).

(2) In this regulation, “approval date” means the date on which the Authority issues a written approval for the application referred to in paragraph (1)(a).

## FIRST SCHEDULE

Regulation 2(1)

### ACCURACY LIMITS FOR METERS

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

## SECOND SCHEDULE

Regulation 8(1)

### PERIODIC TESTING AND CALIBRATION OF METER INSTALLATIONS

<i>Category</i>	<i>Peak Flow Rate of Connection Point (in scm/h)</i>	<i>Pressure and Temperature Calibration Frequency</i>	<i>Gas Chromatograph Calibration Frequency</i>	<i>Meter Test Frequency</i>
1.	> 150,000	Semi-annually	At least once in every 2 weeks	Annually
2.	> 30,000 ≤ 150,000	Semi-annually	At least once in every 2 weeks	Annually
3.	> 6,000 ≤ 30,000	Annually	At least once in every 2 weeks	Annually
4.	≤ 6,000	Annually	At least once in every 2 weeks	Annually

Made this                      day of    2008.

CHIANG CHIE FOO

*Chairman,*

*Energy Market Authority of Singapore.*

(To be presented to Parliament under section 96(4) of the Gas Act).

**FORMAT FOR SUBMISSION OF COMMENTS ON THE PROPOSED GAS (METERING) REGULATIONS**

<b>Specific Regulation(s) of Proposed Amendments</b>	<b>Revised Amendments</b>	<b>Detailed Reasons for Revised Amendments</b>