CONSULTATION PAPER

PROPOSED MODIFICATIONS TO MARKET SUPPORT SERVICES CODE AND METERING CODE

Closing date for submissions of comments and feedback:
19 Jun 2009

18 MAY 2009

ENERGY MARKET AUTHORITY
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Disclaimer:

The information in this Consultation Paper is not to be treated by any person as any kind of advice. The Energy Market Authority 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 Consultation Paper.

1 Introduction

1.1 The Market Support Services (MSS) Code sets out the requirements relating meter reading, billing, etc that Electricity Licensees, in particular the Market Support Services Licensee, must comply with to support settlement under the Market Rules.

1.2 The Metering Code sets out the requirements relating to meter specifications, meter data management, etc that the Market Support Services Licensee and other Electricity Licensees who own meters must comply with to support settlement under the Market Rules.

2 Proposed Modifications

2.1 Pursuant to Section 1.6 of the MSS Code and Section 1.7 of the Metering Code, EMA is seeking consultation on the proposed modifications as set out in Appendix 1.

2.2 The Market Rules allow each generation facility to have a set of meters (regardless of the number of generating units) for market settlement purposes. On the other hand, the Metering Code requires each generating unit to have a set of meters. The modifications proposed are to align the MSS Code and Metering Code with the Market Rules.

3 Request for comments and feedback

3.1 EMA invites comments and feedback on the proposed modifications to the MSS Code and Metering Code as set out in Appendix 1.

3.2 Please send your submission by e-mail to:

seah_kwang_hwee@ema.gov.sg and **yeo_eng_houw@ema.gov.sg**

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

Standards Branch
Regulation Division
Energy Market Authority
991G Alexandra Road, #01-29
Singapore 119975.
Fax: (65) 6 835 8020

Please use the form given in Appendix 2 for your submission.

3.3 Anonymous submission will not be considered.

3.4 Clarifications, if any, with regard to the proposed modifications should reach EMA by 5pm on 25 May 2009.

3.5 All comments and feedback must reach EMA by 5 pm on 19 Jun 2009.

3.6 EMA will acknowledge receipt of all submissions electronically. Please contact Mr Yeo Eng Houw or Mr Seah Kwang Hwee if you have not received an acknowledgement of your submission within two business days.

3.7 EMA reserves the right to make public all or parts of any written submissions made in response to this Consultation Paper and to disclose the identity of the source. Any part of the submission, which is considered by respondents to be confidential, should be clearly marked and placed as an annex. EMA will take this into account regarding disclosure of the information submitted.

~ End ~

APPENDIX 1

PROPOSED MODIFICATIONS TO THE MARKET SUPPORT SERVICES CODE AND THE METERING CODE

Proposed Modifications to the Market Support Services Code

Modification Ref. No.	Section[1]	Original Text	Modification
MSSC/2009/1	1.3.1	None as this is an inserted section.	"generation facility" or "GF" means one or more generating units, including its associated equipment such as switchgears, transformers and all auxiliary equipment;
MSSC/2009/2	6.1.4	A Market Support Services Licensee shall be responsible for calculating the factors, TLF^{r}, TLF^{p}, and TLF^{grf}, that adjusts for transmission loss and unaccounted for energy for use in equations in the Metering and Market Support Services Codes. The factors shall be calculated in accordance with such methodology and on such schedule as may be specified by the Authority. *TLF* may vary amongst consumers and metering points based on the voltage at which the consumer or metering point is connected to the transmission system and on such other factors as may be determined by the Authority. Where: TLF^{r} = Transmission loss factor for consumer *r* at each voltage level TLF^{p} = Transmission loss factor for	A Market Support Services Licensee shall be responsible for calculating the factors, TLF^{r}, TLF^{p}, and $TLF^{~~grfgf~~}$, that adjusts for transmission loss and unaccounted for energy for use in equations in the Metering and Market Support Services Codes. The factors shall be calculated in accordance with such methodology and on such schedule as may be specified by the Authority. *TLF* may vary amongst consumers and metering points based on the voltage at which the consumer or metering point is connected to the transmission system and on such other factors as may be determined by the Authority. Where: TLF^{r} = Transmission loss factor for consumer *r* at each voltage level TLF^{p} = Transmission loss factor for

[1] Reference to the section of the MSS Code where change has been made in the version dated on April 2008 as published on the web.

Modification Ref. No.	Section[1]	Original Text	Modification
		each pool meter TLF^{grf} = Transmission loss factor for GRF at each voltage level	each pool meter TLF^{grfgf} = Transmission loss factor for GF~~GRF~~ at each voltage level

Proposed Modifications to the Metering Code

Modification Ref. No.	Section[2]	Original Text	Modification
MC/2009/1	1.4.1	"generation facility" means one or more generating units, including its associated equipment such as switchgears, transformers and all auxiliary equipment; "site-specific adjustment factors" means a loss factor applied to a Pool meter to account for the notional metering point being on the high voltage side of the transformer whereas the physical metering point is on the low voltage side of the transformer or a loss factor, as a result of connection at busbars of different voltages, applied to a generating unit having a name-plate rating of 1 MW or above, or registered as a *GRF* or *GSF,* that provides power directly to a consumer;	"generation facility" or "GF" means one or more generating units, including its associated equipment such as switchgears, transformers and all auxiliary equipment; "site-specific adjustment factors" means a loss factor applied to a Pool meter to account for the notional metering point being on the high voltage side of the transformer whereas the physical metering point is on the low voltage side of the transformer or a loss factor, as a result of connection at busbars of different voltages, applied to a *GF* ~~generating unit having a name-plate rating of 1 MW or above, or registered as a *GRF* or *GSF*~~, that provides power directly to a consumer;
MC/2009/2	2.4.8	A generating unit having a name-plate rating of 1MW or above, or registered as a *GRF* or *GSF* shall: …	A *GF* ~~generating unit having a name-plate rating of 1MW or above, or registered as a *GRF* or *GSF*~~ shall: …
MC/2009/3	2.4.9	The main and check meters for a generating unit having a name-plate rating of 1 MW or above, or registered as a *GRF* or *GSF* shall, individually or in combination, be capable of	The main and check meters for a *GF* ~~generating unit having a name-plate rating of 1 MW or above, or registered as a *GRF* or *GSF*~~ shall, individually or in combination, be capable

[2] Reference to the section of the Metering Code where change has been made in the version dated on January 2009 as published on the web.

Modification Ref. No.	Section[2]	Original Text	Modification
		measuring the net injections of active energy, measured in units of kWh, and reactive energy, measured in kVarh, with such injections being measured and recorded for each half-hour interval in time. For the purposes of this section, net injection shall be generating unit or generation facility output less auxiliary load (including energy withdrawn by station and excitation transformers, where applicable) and transformation losses.	of measuring the net injections of active energy, measured in units of kWh, and reactive energy, measured in kVarh, with such injections being measured and recorded for each half-hour interval in time. For the purposes of this section, net injection shall be generating unit or generation facility output less auxiliary load (including energy withdrawn by station and excitation transformers, where applicable) and transformation losses
MC/2009/4	2.4.10	Except in relation to an embedded generation facility, the main and check meters for a generating unit having a name-plate rating of 1 MW or above, or registered as a *GRF* or *GSF* shall be a 3-phase, 4-wire type or 3-phase, 3-wire type of accuracy class 0.2s. Metering current transformers of accuracy class 0.2 with 1 or 5 amperes secondary current and 30VA burden shall be provided for each circuit. Metering voltage transformers shall be of accuracy class 0.5 with 110 volts secondary voltage and a burden of not less than 100VA per phase per circuit.	Except in relation to an embedded generation facility, the main and check meters for a *GF* ~~generating unit having a name-plate rating of 1 MW or above, or registered as a *GRF* or *GSF*~~ shall be a 3-phase, 4-wire type or 3-phase, 3-wire type of accuracy class 0.2s. Metering current transformers of accuracy class 0.2 with 1 or 5 amperes secondary current and 30VA burden shall be provided for each circuit. Metering voltage transformers shall be of accuracy class 0.5 with 110 volts secondary voltage and a burden of not less than 100VA per phase per circuit.
MC/2009/5	2.9.1	**Type of Meter or Associated Facility** — **Cycle** Generating Unit — Once every two years	**Type of Meter or Associated Facility** — **Cycle** ~~Generating Unit~~ Generation Facility — Once every two years

Modification Ref. No.	Section[2]	Original Text	Modification
		…	…
MC/2009/6	4.2.1	**Type of Metered Entity or Meter Installation** / **Meter Reading Frequency** Generating Unit / Every business day …	**Type of Metered Entity or Meter Installation** / **Meter Reading Frequency** ~~Generating Unit~~ Generation Facility / Every business day …
MC/2009/7	4.8.2	$WEQ_h^{MSSL} = \left[\sum_p E_h^p \bullet ADJ^P \bullet TLF^P\right] + \left[\sum_{mp} E_h^{nmpc \geq 66kv} \bullet TLF^r\right] - \left[\sum_{mp} E_h^{mpc<66kv} \bullet TLF^r\right] + \left[\sum_{mp} E_h^{grf} \bullet ADJ^{grf} \bullet TLF^{grf}\right]$ TLF^{grf} = Transmission loss factor for generation registered facilities *grf* at each voltage level as defined in the Market Support Services Code E_h^{grf} = Energy injected onto the transmission system by a generation registered facility connected to the transmission system at voltages below 66kV ADJ^{grf} = Site-specific adjustment factor for each generation registered facility (grf) as a result of connection at busbars of different voltages, if applicable, as defined in the Market Support	$WEQ_h^{MSSL} = \left[\sum_p E_h^p \bullet ADJ^P \bullet TLF^P\right] + \left[\sum_{mp} E_h^{nmpc \geq 66kv} \bullet TLF^r\right] - \left[\sum_{mp} E_h^{mpc<66kv} \bullet TLF^r\right] + \left[\sum_{mp} E_h^{GF} \bullet ADJ^{GF} \bullet TLF^{GF}\right]$ $TLF^{~~grf~~GF}$ = Transmission loss factor for *GF* ~~generation registered facilities *grf*~~ at each voltage level as defined in the Market Support Services Code $E_h^{~~grf~~GF}$ = Energy injected onto the transmission system by a *GF* ~~generation registered facility~~ connected to the transmission system at voltages below 66kV $ADJ^{~~grf~~GF}$ = Site-specific adjustment factor for each *GF* ~~generation registered facility (grf)~~ as a result of connection at busbars of different

Modification Ref. No.	Section[2]	Original Text	Modification
		Services Code and the Code	voltages, if applicable, as defined in the Market Support Services Code and the Code

Appendix 2

Industry Comments on the Proposed Modification to the ___Market Support Services / Metering___ Code

Name: _____ Designation: _____

Company: _____ Email: _____

Role (Generation Licensee/ Retailer/ Consumer):

_____

Submission Date: _____ (dd/mm/yy)

Modification Ref. No.	Section*	Industry Comments

* Reference to the section of the MSS Code where change has been made in the version dated on April 2008 or to the section of the Metering Code where change has been made in the version dated on January 2009 as published on the web.