



DECISION PAPER

PROPOSED MODIFICATIONS TO MARKET SUPPORT SERVICES CODE AND METERING CODE

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Background

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

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.

Proposed modifications

3 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.

4 EMA had proposed modifications to the Market Support Services Code and Metering Code to align these Codes with the Market Rules (see Appendix).

Public feedback

5 Pursuant to Section 1.6 of the Market Support Services Code and Section 1.7 of the Metering Code, EMA had sought public feedback on the proposed modifications. No feedback was received when the consultation closed on 19 June 2009.

EMA's decision

6 EMA has decided to modify the Metering Code and the Market Support Services Code as set out in the Appendix.

Appendix

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	<p>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.</p> <p>Where: TLF^r = Transmission loss factor for consumer r at each voltage level</p> <p style="text-align: center;">TLF^p = Transmission loss factor for</p>	<p>A Market Support Services Licensee shall be responsible for calculating the factors, TLF^r, TLF^p, and $TLF^{g\#gf}$, 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.</p> <p>Where: TLF^r = Transmission loss factor for consumer r at each voltage level</p> <p style="text-align: center;">TLF^p = Transmission loss factor for</p>

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
		<p>each pool meter</p> <p>TLF^{grf} = Transmission loss factor for GRF at each voltage level</p>	<p>each pool meter</p> <p>TLF^{grfgf} = Transmission loss factor for GRF at each voltage level</p>

Modifications to the Metering Code

Modification Ref. No.	Section ²	Original Text	Modification
MC/2009/1	1.4.1	<p>“generation facility” means one or more generating units, including its associated equipment such as switchgears, transformers and all auxiliary equipment;</p> <p>"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 <i>GRF</i> or <i>GSF</i>, that provides power directly to a consumer;</p>	<p>“generation facility” or “GF” means one or more generating units, including its associated equipment such as switchgears, transformers and all auxiliary equipment;</p> <p>"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 <i>GF</i> generating unit having a name-plate rating of 1 MW or above, or registered as a <i>GRF</i> or <i>GSF</i>, that provides power directly to a consumer;</p>
MC/2009/2	2.4.8	<p>A generating unit having a name-plate rating of 1MW or above, or registered as a <i>GRF</i> or <i>GSF</i> shall:</p> <p>...</p>	<p>A <i>GF</i> generating unit having a name-plate rating of 1MW or above, or registered as a <i>GRF</i> or <i>GSF</i> shall:</p> <p>...</p>
MC/2009/3	2.4.9	<p>The main and check meters for a generating unit having a name-plate rating of 1 MW or above, or registered as a <i>GRF</i> or <i>GSF</i> shall, individually or in</p>	<p>The main and check meters for a <i>GF</i> generating unit having a name-plate rating of 1 MW or above, or registered as a <i>GRF</i> or <i>GSF</i> shall, individually or</p>

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								
		<p>combination, be capable 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.</p>	<p>in combination, be capable 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</p>								
MC/2009/4	2.4.10	<p>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 <i>GRF</i> or <i>GSF</i> 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.</p>	<p>Except in relation to an embedded generation facility, the main and check meters for a <i>GF</i> generating unit having a name-plate rating of 1 MW or above, or registered as a <i>GRF</i> or <i>GSF</i> 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.</p>								
MC/2009/5	2.9.1	<table border="0"> <tr> <td data-bbox="591 1217 981 1321">Type of Meter or Associated Facility</td> <td data-bbox="981 1217 1357 1321">Cycle</td> </tr> <tr> <td data-bbox="591 1321 981 1358">Generating Unit</td> <td data-bbox="981 1321 1357 1358">Once every two</td> </tr> </table>	Type of Meter or Associated Facility	Cycle	Generating Unit	Once every two	<table border="0"> <tr> <td data-bbox="1357 1217 1724 1321">Type of Meter or Associated Facility</td> <td data-bbox="1724 1217 2123 1321">Cycle</td> </tr> <tr> <td data-bbox="1357 1321 1724 1358">Generating Unit</td> <td data-bbox="1724 1321 2123 1358">Once every two</td> </tr> </table>	Type of Meter or Associated Facility	Cycle	Generating Unit	Once every two
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Modification Ref. No.	Section ²	Original Text	Modification
		years ...	Generation Facility years ...
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 Every business day Generation Facility ...
MC/2009/7	4.8.2	$WEQ_h^{MSSL} = \left[\sum_p E_h^p \cdot ADJ^p \cdot TLF^p \right] +$ $\left[\sum_{mp} E_h^{nmpc \geq 66 kv} \cdot TLF^r \right] - \left[\sum_{mp} E_h^{mpc < 66 kv} \cdot TLF^r \right] +$ $\left[\sum_{mp} E_h^{grf} \cdot ADJ^{grf} \cdot TLF^{grf} \right]$ <p> TLF^{grf} = Transmission loss factor for generation registered facilities <i>grf</i> 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 (<i>grf</i>) as a result of </p>	$WEQ_h^{MSSL} = \left[\sum_p E_h^p \cdot ADJ^p \cdot TLF^p \right] +$ $\left[\sum_{mp} E_h^{nmpc \geq 66 kv} \cdot TLF^r \right] - \left[\sum_{mp} E_h^{mpc < 66 kv} \cdot TLF^r \right] +$ $\left[\sum_{mp} E_h^{grfGF} \cdot ADJ^{grfGF} \cdot TLF^{grfGF} \right]$ <p> TLF^{grfGF} = Transmission loss factor for <i>GF</i> generation registered facilities <i>grf</i> at each voltage level as defined in the Market Support Services Code E_h^{grfGF} = Energy injected onto the transmission system by a <i>GF</i> generation registered facility connected to the transmission system at voltages below 66kV </p>

Modification Ref. No.	Section ²	Original Text	Modification
		connection at busbars of different voltages, if applicable, as defined in the Market Support Services Code and the Code	$ADJ^{g\#GF}$ = Site-specific adjustment factor for each GF generation registered facility (grf) as a result of connection at busbars of different voltages, if applicable, as defined in the Market Support Services Code and the Code