Singapore Electricity Market Rules

Chapter 2
Participation

Energy Market Authority

1 April 2022
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1 INTRODUCTION

1.1 INTRODUCTION

1.1.1 This Chapter sets forth:

1.1.1.1 the procedures pursuant to which a person may apply to the EMC for registration as a market participant and a market support services licensee may apply for authorisation to participate in the wholesale electricity markets;

1.1.1.2 the terms and conditions upon which a market participant may cease to be a market participant and upon which a market support services licensee may cease to be authorised to participate in the wholesale electricity markets;

1.1.1.3 the procedures pursuant to which persons may apply to the EMC for the registration of facilities;

1.1.1.4 the terms and conditions upon which the registration of a registered facility, a generation settlement facility or a non-exporting embedded intermittent generation facility may be cancelled or transferred at the request of a market participant;

1.1.1.5 the prudential and technical requirements which must be met by prospective market participants, market participants and market support services licensees;

1.1.1.6 the manner in which the EMC may recover from market participants and market support services licensee shortfalls resulting from payment defaults; and

1.1.1.7 the fees payable by prospective market participants, market participants and market support services licensees.

1.2 MARKET PARTICIPANT REGISTRATION AND MARKET SUPPORT SERVICES LICENSEE AUTHORISATION

1.2.1 No person, other than a market support services licensee, shall participate in the wholesale electricity markets or cause or permit any physical service to be conveyed into, through or out of the transmission system unless:

1.2.1.1 that person has been registered by the EMC as a market participant pursuant to this section 1.2 and section 3; and
1.2.1.2 subject to sections 5.1.2 to 5.1.9A and 5.1.11, the facility to or from which the physical service is to be so conveyed has been registered by the EMC as a registered facility, as a commissioning generation facility, as a generation settlement facility, or as a non-exporting embedded intermittent generation facility pursuant to section 5.2, 5.3, 5.4, 5.4B or 5.4C, as the case may be.

1.2.2 No person shall be registered by the EMC as a market participant unless the EMC is satisfied:

1.2.2.1 on the basis of the certification, tests, and inspections referred to in section 8.2, that the person satisfies the technical requirements referred to in that section applicable to all market participants, to the class of market participant of which the person forms part and the wholesale electricity market in which the person wishes to participate;

1.2.2.2 on reasonable grounds, if the person applies to participate in the real-time markets, that the person will satisfy the prudential requirements set forth in section 7;

1.2.2.3 that the person has executed the PSO/MP agreement; and

1.2.2.4 that the person:

a. if it engages in an activity for which an electricity licence is required under section 6 of the Electricity Act, holds an electricity licence permitting it to engage in such activity or is exempt by an order made pursuant to section 8 of the Electricity Act from the obligation to hold such an electricity licence; and

b. holds an electricity licence permitting it to trade in the wholesale electricity markets or is exempt by an order made pursuant to section 8 of the Electricity Act from the obligation to hold such an electricity licence.

1.2.3 A person that has been registered by the EMC as a market participant may, subject to the registration of its facilities under section 5 where required, participate in the wholesale electricity market to which the registration relates.

1.2.4 No market support services licensee shall participate in the wholesale electricity markets to:

1.2.4.1 supply and sell electricity to non-contestable consumers;
1.2.4.2 facilitate access to any *wholesale electricity market* for obtaining *supply of electricity* for contestable *consumers* and *retail electricity licensees*; or

1.2.4.3 provide other services related to access to any *wholesale electricity market*,

unless it has been authorised to do so by the *EMC* pursuant to this section 1.2 and section 3.

1.2.5 No *market support services licensee* shall be authorised to participate in the *wholesale electricity markets* for the purpose referred to in section 1.2.4 unless the *EMC* is satisfied:

1.2.5.1 on the basis of the certification, tests and inspections referred to in section 8.2.3, that the *market support services licensee* satisfies the technical requirements referred to in that section;

1.2.5.2 on reasonable grounds, that the *market support services licensee* will satisfy the prudential requirements set forth in section 7;

1.2.5.3 that the *market support services licensee* has executed such agreement with the *PSO* as may be required by the applicable *market manual*; and

1.2.5.4 that the *market support services licensee* holds an *electricity licence* permitting it to engage in and provide the relevant *market support services* referred to in section 1.2.4 pertaining to the *wholesale electricity markets*, for which the *market support services licensee* seeks to be authorised.
2 CLASSES OF MARKET PARTICIPANTS

2.1 For the purposes of these market rules, market participants shall be comprised in the following classes:

2.1.1 generation licensee class of market participants, comprising of all market participants who are generation licensees;

2.1.2 retail electricity licensee class of market participants, comprising of all market participants who are retail electricity licensees;

2.1.2A importer licensee class of market participants, comprising of all market participants who are importer licensees;

2.1.3 wholesale trader class of market participants, comprising of all market participants (other than generation licensees, retail electricity licensees, importer licensees and transmission licensees), that either have been granted an electricity licence permitting them to trade in the wholesale electricity markets or are exempt by an order made pursuant to section 8 of the Electricity Act from the obligation to hold such an electricity licence; and

2.1.4 transmission licensee class of market participants, comprising of all market participants who are transmission licensees.
3 APPLICATION FOR REGISTRATION OR AUTHORISATION

3.1.1 If a person wishes to be registered by the EMC as a market participant, he shall file a completed participant registration application with the EMC. Such participant registration application shall be in the form set out in the applicable market manual.

3.1.2 If the EMC determines that a participant registration application which it receives is incomplete or contains information with respect to which the EMC requires clarification, the EMC shall request that the relevant participation applicant provide further information or clarification required to support that application. Such request shall be made by the EMC within ten business days of its receipt of that application (or such longer period as the EMC may agree with the participation applicant).

3.1.3 The participation applicant shall be deemed to have withdrawn its participant registration application if it does not provide the information or clarification requested under section 3.1.2 to the EMC’s satisfaction within fifteen business days of the request (or such longer time as the EMC may agree with it).

3.1.4 Within twenty business days of receiving (i) a participation applicant’s participant registration application; or (ii) further information or clarification requested under section 3.1.2, whichever is later (or within such longer period as it may agree with the participation applicant), if the EMC:

3.1.4.1 is satisfied that the participation applicant meets all the requirements in section 1.2.2 and all the requirements as prescribed in the applicable market manual, it shall register the participation applicant as a market participant on such terms and conditions (that comply with section 3.1.7) as it determines appropriate; or

3.1.4.2 is not satisfied that the participation applicant meets all the requirements in section 1.2.2 and all the requirements as prescribed in the applicable market manual, it shall deny the participation applicant registration as a market participant, except that, if the EMC is satisfied that a participation applicant meets the requirements in sections 1.2.2.2 and 1.2.2.3, it may conditionally register the participation applicant as a market participant,
and notify the participation applicant of the same. If the EMC denies the participation applicant registration, the notice shall identify the reason for the denial. If the EMC conditionally registers the participation applicant as a market participant, the notice shall state a date by which the participation applicant shall satisfy all the remaining unsatisfied requirements in section 1.2.2 and in the applicable market manual.

3.1.5 For the purposes of section 3.1.4, conditional registration means the registration of a participation applicant by the EMC as a market participant whose registration is conditional upon the participation applicant satisfying all the remaining unsatisfied requirements in section 1.2.2 and in the applicable market manual by the date stated in the notice to a participation applicant that it has been conditionally registered ("conditional registration deadline"). Such conditional registration shall:

3.1.5.1 permit the participation applicant to commence the process of registration of its facilities pursuant to section 5 (provided that the EMC shall not register such facilities if the participation applicant has not been issued with the notice referred to in section 3.1.5.3);

3.1.5.2 not otherwise have effect, or impose any other obligations on or grant any other rights to the participation applicant as a market participant, until the participation applicant has been issued with the notice referred to in section 3.1.5.3; and

3.1.5.3 lapse on the fifth business day from the conditional registration deadline unless the participation applicant has by that fifth business day received a notice from the EMC that the participation applicant has satisfied all the requirements in section 1.2.2 and in the applicable market manual.

3.1.6 When a participation applicant (who has been granted conditional registration) receives a notice from the EMC that it has satisfied all the requirements in section 1.2.2 and in the applicable market manual, it shall be deemed registered as a market participant on the terms and conditions (that comply with section 3.1.7) set forth in the notice.

3.1.7 Registration terms imposed in respect of a market participant shall not unjustly discriminate against or in favour of the market participant. However, if the market participant intends to register a facility outside Singapore under section 5, the registration terms imposed on it may be different from (including more onerous than) the registration terms imposed on other market participants. For the avoidance of doubt, registration terms may, impose new or more onerous requirements on a market participant than the requirements that would otherwise apply to it under these market rules.
3.1.8 A person shall comply with the dispute resolution procedures in section 3 of Chapter 3 if he wishes to dispute a decision made by the EMC under section 3.1.4.2 to deny a participation applicant registration as a market participant, or to dispute any registration terms.

3.1.9 A participation applicant or a market participant shall immediately inform the EMC of any circumstances which result (or will likely result) in a change to the information provided in its participant registration application or in any updates to its participant registration application.

3.1.10 If a market support services licensee intends to participate in the wholesale electricity markets to:

3.1.10.1 supply and sell electricity to non-contestable consumers;

3.1.10.2 facilitate access to any wholesale electricity market for obtaining supply of electricity for contestable consumers and retail electricity licensees; or

3.1.10.3 provide other services related to access to any wholesale electricity market,

it shall file a completed application for authorisation with the EMC in the form set out in the applicable market manual.

3.1.11 If a market support services licensee seeks authorisation to participate in the wholesale electricity markets for the purposes referred to in section 3.1.10, sections 3.1.1 to 3.1.9 shall apply to it and all references in those sections to:

3.1.11.1 a person who wishes to be registered as a market participant shall be read as references to a market support services licensee who wishes to be authorised to participate in the wholesale electricity markets;

3.1.11.2 a participant registration application shall be read as references to its application for authorisation;

3.1.11.3 a participation applicant shall be read as references to the market support services licensee;

3.1.11.4 registration as market participant shall be read as references to authorisation of a market support services licensee to participate in the wholesale electricity markets; and

3.1.11.5 registration terms shall (notwithstanding the definition thereof in Chapter 8) be read as references to the terms and conditions which the EMC may impose in respect of the authorisation of a
market support services licensee to participate in the wholesale electricity market, under section 3.1.4.1 or 3.1.6 (as the case may be and each as modified and applied pursuant to this section 3.1.11); and

3.1.11.6 *section* 1.2.2, 1.2.2.1, 1.2.2.2, 1.2.2.3 or 1.2.2.4 shall be read as references to section 1.2.5, 1.2.5.1, 1.2.5.2, 1.2.5.3 or 1.2.5.4 respectively.

3.1.12 The *EMC* shall establish, maintain, update and *publish* a list of:

3.1.12.1 all *market participants*;

3.1.12.2 all *participation applicants* whose applications are currently under consideration by the *EMC*; and

3.1.12.3 all *market support services licensees* that have been granted authorisation under section 3.

3.1.13 The *EMC* shall notify each *market support services licensee* in accordance with the applicable *code of practice* of the receipt and the status of a *participant registration application* filed by a contestable *consumer*. 
4  WITHDRAWAL BY A MARKET PARTICIPANT OR MARKET SUPPORT SERVICES LICENSEE

4.1.1 Provided that the market participant has requested that the EMC cancel or transfer the registration of any applicable registered facility, generation settlement facility or non-exporting embedded intermittent generation facility pursuant to section 6, a market participant that wishes to cease being a market participant shall provide a written notice to the EMC to that effect. The notice shall specify the date of the trading day upon which the market participant intends to cease to participate in the wholesale electricity markets or to cause or permit any physical service to be conveyed into, through or out of the transmission system. The trading day specified shall not be earlier than the trading day on which:

4.1.1.1 the registration of the last of the market participant's applicable registered facilities, generation settlement facilities or non-exporting embedded intermittent generation facility is to be cancelled by the EMC, determined in accordance with section 6.1; or

4.1.1.2 the registration of the last of the market participant's applicable registered facilities, generation settlement facilities or non-exporting embedded intermittent generation facilities is to be transferred by the EMC, determined in accordance with section 6.2.

4.1.2 Upon receipt of the notice referred to in section 4.1.1, the EMC shall publish a notice stating that:

4.1.2.1 the EMC has received a notice under section 4.1.1; and

4.1.2.2 the market participant that gave the notice has stated that, from the end of the trading day specified in the notice, it intends to cease participating in the wholesale electricity markets or causing or permitting any physical service to be conveyed into, through or out of the transmission system.

4.1.3 A market participant that has given notice pursuant to section 4.1.1 shall cease to participate in the wholesale electricity markets and to cause or permit any physical service to be conveyed into, through or out of the transmission system no later than the end of the trading day specified in such notice.

4.1.4 The registration of a market participant that has given notice under section 4.1.1 shall expire on the date of the trading day:

4.1.4.1 specified in the notice referred to in section 4.1.1;
4.1.4.2 referred to in section 4.1.1.1;

4.1.4.3 referred to in section 4.1.1.2; or

4.1.4.4 on which all payments due to be paid by it or to it under the market rules have been made,

whichever is the later.

4.1.5 A person whose registration as a market participant expires pursuant to section 4.1.4 shall remain subject to and liable for all of its obligations and liabilities as a market participant, including a liability under section 9 of this Chapter or a liability in respect of adjustments arising from metering errors under Chapter 7, which were incurred or arose under the market rules, a market manual or the system operation manual prior to or on the trading day on which such registration so expires regardless of the date on which any claim relating thereto may be made, subject only to any applicable provisions of the Limitation Act (Cap. 163).

4.1.6 Once the EMC is satisfied that a person whose registration as a market participant has expired pursuant to section 4.1.4 has no remaining financial obligations or liabilities under the market rules, including a liability under section 9 of this Chapter or an actual, contingent or prospective liability in respect of adjustments arising from metering errors under Chapter 7, the EMC shall return to the person all credit support held by the EMC in respect of such person.

4.1.7 The EMC shall establish, maintain, update as required and publish a list of all market participants that will cease to be market participants and the date, determined in accordance with section 4.1.4, on which the registration of each listed market participant expired.

4.1.8 The EMC shall notify each market support services licensee of the date on which the registration of any market participant that is a contestable consumer expires.

4.1.9 Sections 4.1.1 to 4.1.6 shall apply to each market support services licensee that has been granted authorisation to participate by the EMC pursuant to section 3 and that intends to cease participating in the wholesale electricity markets and, for such purposes, references in those sections to:

4.1.9.1 a market participant shall be deemed to include references to a market support services licensee; and

4.1.9.2 registration shall be deemed to include references to authorisation.
5 FACILITIES REGISTRATION

5.1 REQUIREMENT FOR REGISTRATION

5.1.1 No person, other than a market support services licensee, shall participate in the real-time markets or cause or permit any physical service to be conveyed into, through or out of the transmission system unless:

5.1.1.1 that person is registered as a market participant pursuant to section 1.2 and section 3; and

5.1.1.2 subject to sections 5.1.2 to 5.1.9 and 5.1.11, the facility to or from which the physical service is to be so conveyed has been registered by the EMC as a registered facility, as a commissioning generation facility, as a generation settlement facility or as a non-exporting embedded intermittent generation facility pursuant to section 5.2, 5.3, 5.4, 5.4B or 5.4C, as the case may be.

5.1.2 A person that intends to participate in the real-time markets or cause or permit a physical service to be conveyed into, through or out of the transmission system from a load facility shall not be required to register the load facility as a registered facility unless:

5.1.2.1 the person wishes to provide a physical service from such load facility to the real-time markets, or withdraw a physical service through such load facility from the real-time markets; and

5.1.2.2 the EMC has published a notice indicating that load facilities may be registered as registered facilities for the purpose of providing or withdrawing that physical service.

Where the EMC has published a notice pursuant to section 5.1.2.2 in respect of a physical service, a person wishing to provide that physical service from, or withdraw that physical service through, a load facility shall be required to register that load facility as a registered facility. No load facility shall be registered as a registered facility or subject to dispatch by the PSO other than a load facility that is registered to provide or withdraw a physical service in respect of which a notice has been published pursuant to section 5.1.2.2.

Explanatory Note: Pursuant to section 5.1.2.2, the EMC has published a notice on 15 December 2003 stating that, from 1 January 2004, all interested parties can register their load facilities to provide reserve to the Singapore Wholesale Electricity Market. Pursuant to section 5.1.2.2, the EMC has also published a notice on 21 April 2016 stating...
that, from 28 April 2016, all interested parties can register their load facilities to be scheduled for energy withdrawal for the purposes of load curtailment in the Singapore Wholesale Electricity Market, as contemplated in the Authority’s final determination paper titled “Implementing Demand Response in the National Electricity Market of Singapore” dated 28 October 2013.

5.1.3 Unless otherwise provided in section 5.1.4, 5.1.5 or 5.1.6, a person that intends to participate in the real-time markets or cause or permit a physical service to be conveyed into, through or out of the transmission system from a generation facility having a name-plate rating of less than 1 MW shall not be required to register that generation facility as a registered facility or a generation settlement facility. No such generation facility shall be subject to dispatch by the PSO, unless that generation facility is registered as a generation registered facility.

Explanatory Note: The name-plate rating of each given facility (including that of an intermittent generation facility) shall be its alternating current output capacity.

5.1.4 A person that intends to participate in the real-time markets or cause or permit a physical service to be conveyed into, through or out of the transmission system from any generation facility that is not an intermittent generation facility, which together with all other generation facilities that are not intermittent generation facilities at the same generating station (if any) have an aggregate name-plate rating of 10 MW or more, shall register all the generation facilities of such generating station as one or more generation registered facilities in accordance with Appendix 2B.

5.1.5 Unless otherwise provided in section 5.1.6 or 5.1.10, a person that intends to participate in the real-time markets or cause or permit a physical service to be conveyed into, through or out of the transmission system from any generation facility that is not an intermittent generation facility, which together with all other generation facilities that are not intermittent generation facilities at the same generating station (if any) have an aggregate name-plate rating of 1 MW or more but less than 10 MW, shall register all the generation facilities of such generating station as one or more generation settlement facilities in accordance with Appendix 2B.

5.1.6 Notwithstanding section 5.1.5, if a person intends that any one or more of the generation facilities at a generating station described in section 5.1.5 be subject to dispatch by the PSO, that person shall register such generation facilities as one or more generation registered facilities in accordance with Appendix 2B.

5.1.7 A person that intends to participate in the real-time markets or cause or permit a physical service to be conveyed into, through or out of the
transmission system from one or more intermittent generation facilities shall register such intermittent generation facilities as one or more generation settlement facilities, unless such registration requirements are waived by the Authority, not required pursuant to section 5.1.3, or if section 5.1.9, 5.1.9A or 5.1.10 applies.

**Explanatory Note:** The Authority has waived the above registration requirements for certain generation facilities of non-contestable consumers pursuant to the Authority’s Assessment and Decision on Review of Policy on Generation with less than 1MW in Installed Capacity published on 28 February 2011.

5.1.8 Notwithstanding sections 5.1.3 to 5.1.7, a person, other than a market support services licensee, that intends to participate in the real-time markets or cause or permit a physical service to be conveyed into, through or out of the transmission system from a generation facility may first register such generation facility as a commissioning generation facility under section 5.3 in pursuance of the subsequent registration of the generation facility as a generation registered facility or a generation settlement facility.

5.1.9 A person that intends to participate in the real-time markets or cause or permit a physical service to be conveyed into, through or out of the transmission system from an embedded intermittent generation facility having a name-plate rating of less than 10 MW, may register such generation facility as a non-exporting embedded intermittent generation facility.

**Explanatory Note:** For the purposes of this section 5.1.9, intermittent generation facilities are embedded intermittent generation facilities only if they meet the eligibility conditions for embedded intermittent generation sources as specified in the Authority’s Clarification Paper on Enhancements to the Regulatory Framework for Intermittent Generation Sources in the National Electricity Market of Singapore dated 24 February 2015.

5.1.9A A person that intends to participate in the real-time markets or cause or permit a physical service to be conveyed into, through or out of the transmission system from one or more intermittent generation facilities that are not embedded intermittent generation facilities having individual name-plate rating of less than 10 MW may register such generation facilities as a generation settlement facility pursuant to section 5.4C.

5.1.10 Notwithstanding section 5.1.5, but subject always to section 5.1.6, a generation facility (that is not an intermittent generation facility) referred to in section 5.1.5 or an intermittent generation facility referred to in section 5.1.7 may be comprised in a generation settlement facility that is registered by the market support services licensee in accordance with section 5.4A in
5.1.11 A person that intends to participate in the real-time markets and cause or permit energy to be conveyed into, through or out of the transmission system from any facility, installation and/or apparatus used for, or for purposes connected with, the production of electricity for import into the transmission system, or the import of electricity, shall register such facility, installation and/or apparatus as an import registered facility.

5.1A **REGISTRATION PROCESS**

5.1A.1 Each applicable market participant shall apply for:

- 5.1A.1.1 the registration of its facility as a registered facility and the registration of a market participant as the dispatch coordinator for such facility in accordance with section 5.2;

- 5.1A.1.2 the registration of its facility as a generation settlement facility in accordance with section 5.4;

- 5.1A.1.2A the registration of its facility as a generation settlement facility in accordance with section 5.4C;

- 5.1A.1.3 the registration of its facility as a commissioning generation facility and, if the facility is required or intended to be registered as a generation registered facility, the registration of a market participant as the dispatch coordinator for such facility, in accordance with section 5.3; or

- 5.1A.1.4 the registration of its facility as a non-exporting embedded intermittent generation facility in accordance with section 5.4B,

as the case may be, and in accordance with the process described in the applicable market manual.

5.1A.2 A market support services licensee shall apply for the registration of

- 5.1A.2.1 one or more intermittent generation facilities; or

- 5.1A.2.2 one or more generation facilities (that are not intermittent generation facilities),

as a generation settlement facility in accordance with section 5.4A and the process described in the applicable market manual.
5.2 **REGISTRATION OF GENERATION REGISTERED FACILITIES, IMPORT REGISTERED FACILITIES AND LOAD REGISTERED FACILITIES**

5.2.1 [Deleted and Intentionally Left Blank]

5.2.2 The process referred to in section 5.1A.1.1 shall include the obligation to provide the certifications referred to in sections 5.2.4.5 and 5.2.4.6 and the testing and inspection obligations referred to in section 5.2.4.7.

5.2.3 A market participant may apply to register a facility as a registered facility for the delivery or withdrawal of specific physical services pursuant to the provisions of this section 5.2.

5.2.4 The EMC shall register a facility as a registered facility if:

5.2.4.1 the applying market participant submits:

a. the registration information required by section 5.2;

b. a copy of the connection agreement entered into with the transmission licensee for the facility, unless the facility is an aggregation of multiple installations as described under section 1.1.3 of Chapter 4 (where applicable);

c. identification of the physical services intended to be provided from or withdrawn through the facility; and

d. a standing offer or standing bid for each physical service intended to be provided from or withdrawn through the facility as required under sections 5.1.1 to 5.1.3 or section 5.1A.1 of Chapter 6, respectively;

5.2.4.2 the PSO, upon referral of the application for registration by the EMC, advises the EMC that the facility for which registration is sought poses no threat to the reliability or security of the PSO controlled system;

5.2.4.3 the EMC is satisfied on reasonable grounds that the applying market participant has operational control and authority over the registered facility;

5.2.4.4 the EMC, after consulting with the PSO, is satisfied on reasonable grounds that the facility is capable of operating as described in the registration information or as otherwise provided by the market rules, any applicable market manual or the system operation manual or any additional requirements.
imposed pursuant to section 5.2.4.8 in respect of the relevant physical service;

5.2.4.5 the applying market participant certifies to the EMC that all of the facilities and equipment to which its application for registration relates comply with all applicable technical requirements, other than those referred to in section 8.2:

a. set forth in these market rules, any applicable market manual or the system operation manual applicable to all market participants, the class of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate; and

b. imposed pursuant to section 5.2.4.8;

5.2.4.6 the applying market participant certifies to the EMC that it has adequate qualified employees or other personnel and organisational and other arrangements that are sufficient to enable the applying market participant to perform all of the functions and obligations applicable to market participants under:

a. these market rules, any applicable market manual or the system operation manual, the class of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate; and

b. imposed pursuant to section 5.2.4.8,

in respect of all of the facilities and equipment to which its application for registration relates;

5.2.4.7 the applying market participant successfully completes such testing and permits such inspection as the EMC may reasonably require for the purposes of testing or inspecting whether all of the facilities and equipment to which its application for registration relates meet all applicable technical requirements, other than those referred to in section 8.2:

a. set forth in these market rules, any applicable market manual or the system operation manual applicable to all market participants, the class of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate; and
b. imposed pursuant to section 5.2.4.8; and

5.2.4.8 where the facility to which the application for registration relates is located outside of Singapore, the EMC is satisfied on reasonable grounds that the facility meets such additional requirements as may be imposed by the EMC.

5.2.5 The market participant designated in the registration information as the market participant authorised to submit dispatch data with respect to a registered facility shall be the dispatch coordinator for that registered facility. The dispatch coordinator designated for a registered facility may not be changed without the prior approval of the EMC.

5.2.6 The information required for registration as a registered facility shall, subject to any lesser information requirements that may be specified in the applicable market manual in respect of the registration of a given class or size of facility, include:

5.2.6.1 the identity of the owner and the operator of the facility;

5.2.6.2 the identity of the proposed dispatch coordinator for the facility;

5.2.6.3 information demonstrating that the proposed dispatch coordinator for the facility has the operational control necessary to assure delivery or withdrawal of the relevant physical services as described in the registration information;

5.2.6.4 information demonstrating that the facility meets the connection-related requirements and the metering-related requirements set forth or referred to in Chapter 4;

5.2.6.5 the location of the facility and, where applicable, the identity of the RQM that will measure the flow of energy between the facility and the transmission system; and

5.2.6.6 such data as may be required by the PSO so as to satisfy the PSO that the operation of the facility will not have an unacceptable impact on the reliability or security of the PSO controlled system and that the PSO can dispatch the facility for the services that facility is registering to provide during both normal and emergency situations including, but not limited to, standing capability data for the facility.

5.2.7 The EMC shall, in addition to referring each application for registration of a facility as a registered facility to the PSO, provide the PSO with such additional technical information associated with any such application for registration as the EMC may determine appropriate or as the PSO may request for the purpose of the fulfilment by the PSO of its obligations under
these market rules. The EMC shall provide the applicable market support services licensee with such metering-related information contained in or associated with any such application for registration as the EMC may determine appropriate or as the market support services licensee may request for the purpose of the fulfilment by the market support services licensee of its obligations under these market rules or the metering code.

5.3 REGISTRATION OF COMMISSIONING GENERATION FACILITIES

5.3.1 A market participant shall apply to register a commissioning generation facility:

5.3.1.1 if the facility is required or intended to be registered as a generation registered facility under section 5.1; or

5.3.1.2 if the facility is required or intended to be registered as a generation settlement facility under section 5.1, and is required to cause or permit any physical service to be conveyed into, through or out of the transmission system,

on a transitional basis in accordance with the applicable market manual for the purpose of being permitted to convey a physical service into, through or out of the transmission system or of participating in the real-time markets during the period in which the commissioning generation facility is undergoing the commissioning tests referred to in section 5.3.4.

5.3.2 The EMC shall register a facility as a commissioning generation facility on a transitional basis if the EMC is satisfied that the requirements of the market rules and the applicable market manual have been met and shall issue to the market participant a notification of transitional registration. Each such registration shall expire on the earlier of:

5.3.2.1 the expected date of completion by the commissioning generation facility of the final commissioning test, being the later of:

   a. the date specified by the market participant in its commissioning test plans that have been submitted to and approved by the PSO pursuant to section 5.3.4; or

   b. such later date as may be requested by the market participant in accordance with the applicable market manual and approved by the PSO for completing the final commissioning test,

in each case as communicated by the PSO to the EMC; or
5.3.2.2 upon the registration of the facility as a generation registered facility or generation settlement facility.

5.3.3 Upon expiry of the registration referred to in section 5.3.2, a market participant shall not participate in the real-time markets nor cause or permit any physical service to be conveyed into, through or out of the transmission system in respect of a former commissioning generation facility unless such former commissioning generation facility has been registered in accordance with section 5.2 or 5.4.

5.3.4 Where a commissioning generation facility has been registered by the EMC pursuant to section 5.3.2, the market participant for that commissioning generation facility shall, while such registration is in effect:

5.3.4.1 ensure that the commissioning generation facility:

a. except as may otherwise be provided in the notification of transitional registration applicable to the commissioning generation facility, complies with all of the provisions of the market rules applicable to registered facilities; and

b. complies with any applicable connection-related requirements.

5.3.4.2 submit to the PSO, for approval and in accordance with section 5.3.5, information detailing the commissioning test plans for the commissioning generation facility.

5.3.5 The detailed commissioning test plans referred to in section 5.3.4.2 shall be submitted to the PSO for approval and shall, if determined by the PSO to be required, include:

5.3.5.1 the time required for the commissioning generation facility to synchronise to and desynchronise from the PSO controlled grid;

5.3.5.2 energy and reactive power output levels;

5.3.5.3 the timing of and ramp rates associated with changes in energy and reactive power output levels; and

5.3.5.4 run-back or trip tests for the commissioning generation facility.

5.3.6 Except as otherwise provided in this section 5.3 or in the notification of transitional registration applicable to the commissioning generation facility, where a commissioning generation facility has been registered by the EMC pursuant to section 5.3.2, the EMC shall, while such registration
is in effect, other than for the purposes of section 3.7.3 of Chapter 5 and Appendix 5D, treat the commissioning generation facility as a:

5.3.6.1 generation registered facility for all purposes under these market rules, including with respect to the submission of dispatch data and settlement, where the application for the registration of such commissioning generation facility is made under section 5.3.1.1; or

5.3.6.2 generation settlement facility for all purposes under these market rules, where the application for the registration of such commissioning generation facility is made under section 5.3.1.2.

5.4 REGISTRATION OF GENERATION SETTLEMENT FACILITIES BY MARKET PARTICIPANTS

5.4.1 The process referred to in section 5.1A.1.2 shall include the obligation to provide the certifications referred to in sections 5.4.3.5 and 5.4.3.6 and the testing and inspection obligations referred to in section 5.4.3.7.

5.4.2 A market participant may apply to register a facility as a generation settlement facility for the delivery of energy only.

5.4.3 The EMC shall register a facility as a generation settlement facility if:

5.4.3.1 the applying market participant submits:

a. the registration information required by this section 5.4; and

b. a copy of the connection agreement entered into with the transmission licensee with respect to the facility;

5.4.3.2 the PSO, upon referral of the application for registration by the EMC, advises the EMC that the facility for which registration is sought poses no threat to the reliability or security of the PSO controlled system;

5.4.3.3 the EMC is satisfied on reasonable grounds that the applying market participant has operational control and authority over the generation settlement facility;

5.4.3.4 the EMC, after consulting with the PSO, is satisfied on reasonable grounds that the facility is capable of operating as described in the registration information or as otherwise provided by the market rules, any applicable market manual or the system operation manual;
5.4.3.5 the applying market participant certifies to the EMC that all of the facilities and equipment to which its application for registration relates comply with all applicable technical requirements, other than those referred to in section 8.2, set forth in these market rules, any applicable market manual or the system operation manual applicable to all market participants, the class of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate;

5.4.3.6 the applying market participant certifies to the EMC that it has adequate qualified employees or other personnel and organisational and other arrangements that are sufficient to enable the applying market participant to perform all of the functions and obligations applicable to market participants under these market rules, any applicable market manual or the system operation manual, the class of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate in respect of all of the facilities and equipment to which its application for registration relates; and

5.4.3.7 the applying market participant successfully completes such testing and permits such inspection as the EMC may reasonably require for the purposes of testing or inspecting whether all of the facilities and equipment to which its application for registration relates meet all applicable technical requirements, other than those referred to in section 8.2, set forth in these market rules, any applicable market manual or the system operation manual applicable to all market participants, the class of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate.

5.4.4 The information required for registration as a generation settlement facility shall, subject to any lesser information requirements that may be specified in the applicable market manual in respect of the registration of a given class or size of facility, include:

5.4.4.1 the identity of the owner and the operator of the facility;

5.4.4.2 information demonstrating that the facility meets the connection-related requirements and the metering-related requirements set forth or referred to in Chapter 4;
5.4.4.3 the location of the facility and the identity of the RQM that will measure the flow of energy between the facility and the transmission system; and

5.4.4.4 such data as may be required by the PSO so as to satisfy the PSO that the operation of the facility will not have an unacceptable impact on the reliability or security of the PSO controlled system.

5.4.5 The EMC shall, in addition to referring each application for registration of a facility as a generation settlement facility to the PSO, provide the PSO with such additional technical information associated with any such application for registration as the EMC may determine appropriate or as the PSO may request for the purpose of the fulfilment by the PSO of its obligations under these market rules. The EMC shall provide the applicable market support services licensee with such metering-related information contained in or associated with any such application for registration as the EMC may determine appropriate or as the market support services licensee may request for the purpose of the fulfilment by the market support services licensee of its obligations under these market rules or the metering code.

5.4A REGISTRATION OF GENERATION SETTLEMENT FACILITIES BY A MARKET SUPPORT SERVICES LICENSEE

5.4A.1 The process referred to in section 5.1A.2 shall include the obligation to provide the relevant representations, warranties and undertakings referred to in section 5.4A.3 or 5.4A.3A, as applicable.

5.4A.2 A market support services licensee may apply to register a generation facility as a generation settlement facility for the delivery of energy only.

5.4A.3 The EMC shall register one or more intermittent generation facilities as a generation settlement facility if the applying market support services licensee represents, warrants and undertakes (as continuing representations, warranties and undertakings) to the EMC in writing that, at all times:

5.4A.3.1 such generation settlement facility shall be comprised only of embedded intermittent generation facilities;

Explanatory Note: For the purposes of this section 5.4A.3.1, intermittent generation facilities are embedded intermittent generation facilities only if they meet the eligibility conditions for embedded intermittent generation sources as specified in the Authority’s Clarification Paper on Enhancements to the Regulatory Framework for
5.4A.3.2 every intermittent generation facility as may from time to time be comprised in such generation settlement facility is for the purpose of supplying electricity to a contestable consumer;

5.4A.3.3 such generation settlement facility shall not be comprised of any intermittent generation facility directly or indirectly connected to a given substation of the transmission licensee (if any) for the purposes of supplying electricity to a given contestable consumer, if such intermittent generation facility together with all other intermittent generation facilities directly or indirectly connected to that given substation for the purposes of supplying electricity to that given contestable consumer, have an aggregate name-plate rating of 10 MW or more; and

5.4A.3.4 a connection agreement has been entered into (and remains in full force and effect) in respect of each intermittent generation facility as may from time to time be comprised in such generation settlement facility.

5.4A.3A The EMC shall register one or more generation facilities as a generation settlement facility if the applying market support services licensee represents, warrants and undertakes (as continuing representations, warranties and undertakings) to the EMC in writing that, at all times:

5.4A.3A.1 such generation settlement facility shall be comprised only of generation facilities that are not intermittent generation facilities;

5.4A.3A.2 such generation settlement facility shall be comprised only of generation facilities which are embedded generation facilities;

Explanatory Note: For the purposes of this section 5.4A.3A.2, generation facilities are embedded generation facilities only if they meet the eligibility conditions for embedded generation facilities as specified in the Authority’s Information Guide for Embedded Generation dated February 2014.

5.4A.3A.3 every generation facility as may from time to time be comprised in such generation settlement facility is for the purpose of supplying electricity to a contestable consumer;
5.4A.3A.4 such *generation settlement facility* shall not be comprised of any *generation facility*, which together with all other *generation facilities* that are not *intermittent generation facilities* at the same *generating station* (if any), have an aggregate name-plate rating of 10 MW or more; and

5.4A.3A.5 a *connection agreement* has been entered into (and remains in full force and effect) in respect of each *generation facility* as may from time to time be comprised in such *generation settlement facility*.

5.4A.4 A *generation settlement facility* that is registered pursuant to section 5.4A.3 or 5.4A.3A shall be classified by the EMC as a *pseudo generation settlement facility*.

Explanatory Note: A generation facility is classified as a pseudo generation settlement facility by the EMC on the successful application by a market support services licensee for registration of a) one or more embedded intermittent generation facilities referred to in section 5.4A.3.1, or b) one or more embedded generation facilities referred to in section 5.4A.3A.2 (that are not intermittent generation facilities), as a generation settlement facility in accordance with section 5.4A.3 or 5.4A.3A respectively, where such generation settlement facility registration is sought for the purpose of the market support services licensee facilitating contestable consumers (who do not wish to participate directly in the wholesale electricity market as market participants) to supply energy produced from their generation facilities through the market support services licensee in the wholesale electricity market. The market energy price to be paid to the pseudo generation settlement facility will be the volume-weighted average market energy price of all generation registered facilities and import registered facilities, calculated in accordance with section D.24.1.3 of Appendix 6D.

5.4A.5 A *market support services licensee* may, at any time and from time to time, add or remove one or more *generation facilities* to or from a *generation settlement facility* that is registered pursuant to section 5.4A.3 or 5.4A.3A. The *market support services licensee* shall ensure that all of its representations and warranties as set out in section 5.4A.3 or 5.4A.3A (as the case may be) remain true, accurate and complete, and that it continues to be in full compliance with all its undertakings as set out in section 5.4A.3 or 5.4A.3A (as the case may be), in respect to such generation settlement facility and all *generation facilities* for the time being comprised therein consequent to such addition or removal. For the purposes of sections 5.1.7, 5.1.7, 5.4A.3 and 5.4A.3A, a *generation facility* shall:
5.4A.5.1 upon its addition by the market support services licensee to such generation settlement facility, be deemed to be comprised in and duly registered as a part of such generation settlement facility; and

5.4A.5.2 upon its removal by the market support services licensee from such generation settlement facility, be deemed to cease being comprised in and duly registered as a part of such generation settlement facility.

5.4B REGISTRATION OF NON-EXPORTING EMBEDDED INTERMITTENT GENERATION FACILITIES

Explanatory note: A market participant may apply for its embedded intermittent generation facility with name-plate rating of less than 10MW to be registered as a non-exporting embedded intermittent generation facility, instead of a generation settlement facility which entails daily settlement. The market participant of a non-exporting embedded intermittent generation facility is allowed to pay the relevant market-related charges (“fixed market-related charge”) in advance. This charge is intended to reflect the charges that would have been payable if such facility were to be a non-exporting generation settlement facility that is classified as an embedded generation facility.

The methodology to determine the fixed market-related charge, together with the payment schedule, shall be approved by the Authority and published by the EMC.

5.4B.1 A market participant may apply to register a generation facility as a non-exporting embedded intermittent generation facility, if such facility is an embedded intermittent generation facility with name-plate rating of less than 10 MW. It shall be understood by the applying market participant that there will be no payment to market participants in respect of any non-exporting embedded intermittent generation facility, whether or not any electricity is injected into the transmission system.

5.4B.2 The EMC shall register a generation facility as a non-exporting embedded intermittent generation facility if:

5.4B.2.1 the applying market participant submits:

a. the registration information required by this section 5.4B; and

b. a copy of the connection agreement entered into with the transmission licensee with respect to the facility;
5.4B.2.2 the applying *market participant* confirms that the facility is an embedded *intermittent generation facility* with name-plate rating of less than 10 MW;

5.4B.2.3 the *PSO*, upon referral of the application for registration by the *EMC*, advises the *EMC* that the facility for which registration is sought poses no threat to the *reliability* or *security* of the *PSO controlled system*;

5.4B.2.4 the *EMC* is satisfied on reasonable grounds that the applying *market participant* has operational control and authority over the *generation facility*;

5.4B.2.5 the *EMC*, after consulting with the *PSO*, is satisfied on reasonable grounds that the facility is capable of operating as described in the registration information or as otherwise provided by the *market rules*, any applicable *market manual* or the *system operation manual*;

5.4B.2.6 the applying *market participant* certifies to the *EMC* that all of the facilities and equipment to which its application for registration relates comply with all applicable technical requirements (other than those referred to in section 8.2) set forth in these *market rules*, any applicable *market manual* or the *system operation manual* applicable to all *market participants*, the class of *market participant* of which the applying *market participant* forms part and the *wholesale electricity market* in which the applying *market participant* wishes to participate;

5.4B.2.7 the applying *market participant* certifies to the *EMC* that it has adequate qualified employees or other personnel and organisational and other arrangements that are sufficient to enable the applying *market participant* to perform all of the functions and obligations applicable to *market participants* under these *market rules*, any applicable *market manual* or the *system operation manual*, the class of *market participant* of which the applying *market participant* forms part and the *wholesale electricity market* in which the applying *market participant* wishes to participate in respect of all of the facilities and equipment to which its application for registration relates;

5.4B.2.8 the applying *market participant* successfully completes such testing and permits such inspection as the *EMC* may reasonably require for the purposes of testing or inspecting whether all of the facilities and equipment to which its application for registration relates meet all applicable technical requirements (other than those referred to in section 8.2) set forth in these *market rules*, any applicable *market manual* or the *system operation manual* applicable to all *market participants*, the class
of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate; and

5.4B.2.9 the applying market participant has paid the fixed market-related charge applicable to such generation facility to the EMC in accordance with the payment schedule approved by the Authority and published by the EMC.

5.4B.3 The information required for registration as a non-exporting embedded intermittent generation facility shall, subject to any lesser information requirements that may be specified in the applicable market manual in respect of the registration of a given class or size of facility, include:

5.4B.3.1 the identity of the owner and the operator of the facility;

5.4B.3.2 information demonstrating that the facility meets the connection-related requirements;

5.4B.3.3 the location of the facility; and

5.4B.3.4 such data as may be required by the PSO so as to satisfy the PSO that the operation of the facility will not have an unacceptable impact on the reliability or security of the PSO controlled system.

5.4B.4 A market participant shall pay the fixed market-related charge applicable to each of its non-exporting embedded intermittent generation facility to the EMC in accordance with the payment schedule approved by the Authority and published by the EMC.

5.4C REGISTRATION OF PSEUDO GENERATION SETTLEMENT FACILITIES BY MARKET PARTICIPANTS

5.4C.1 The process referred to in section 5.1A.1.2A shall include the obligation to provide the relevant representations, warranties and undertakings referred to in section 5.4C.3.2, the certifications referred to in sections 5.4C.3.6 and 5.4C.3.7 and the testing and inspection obligations referred to in section 5.4C.3.8.

5.4C.2 A market participant may apply to register one or more facilities as a generation settlement facility in accordance with this section 5.4C for the delivery of energy only.

5.4C.3 The EMC shall register one or more intermittent generation facilities as a generation settlement facility in accordance with this section 5.4C if:
5.4C.3.1 the applying market participant submits the registration information required by this section 5.4C;

5.4C.3.2 the applying market participant represents, warrants and undertakes (as continuing representations, warranties and undertakings) to the EMC in writing that, at all times:

a. such generation settlement facility shall be comprised only of intermittent generation facilities that are not embedded intermittent generation facilities;

b. every intermittent generation facility as may from time to time be comprised in such generation settlement facility is directly connected to a generating station;

c. such generation settlement facility shall not be comprised of any intermittent generation facility having a name-plate rating of 10 MW or more; and

d. every intermittent generation facility as may from time to time be comprised in such generation settlement facility meets the connection-related requirements and the metering-related requirements set forth or referred to in Chapter 4;

5.4C.3.3 the PSO, upon referral of the application for registration by the EMC, advises the EMC that the facility for which registration is sought poses no threat to the reliability or security of the PSO controlled system;

5.4C.3.4 the EMC is satisfied on reasonable grounds that the applying market participant has operational control and authority over the generation settlement facility;
5.4C.3.5 the EMC is satisfied on reasonable grounds that the facility is capable of operating as described in the registration information or as otherwise provided by the market rules, any applicable market manual or the system operation manual;

5.4C.3.6 the applying market participant certifies (as continuing certifications) to the EMC in writing that, at all times, all of the facilities and equipment to which its application for registration relates comply with all applicable technical requirements, other than those referred to in section 8.2, set forth in these market rules, any applicable market manual or the system operation manual applicable to all market participants, the class of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate;

5.4C.3.7 the applying market participant certifies (as continuing certifications) to the EMC in writing that, at all times, it has adequate qualified employees or other personnel and organisational and other arrangements that are sufficient to enable the applying market participant to perform all of the functions and obligations applicable to market participants under these market rules, any applicable market manual or the system operation manual, the class of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate in respect of all of the facilities and equipment to which its application for registration relates; and
5.4C.3.8 the applying market participant successfully completes such testing and permits such inspection as the EMC may reasonably require for the purposes of testing or inspecting whether all of the facilities and equipment to which its application for registration relates meet all applicable technical requirements, other than those referred to in section 8.2, set forth in these market rules, any applicable market manual or the system operation manual applicable to all market participants, the class of market participant of which the applying market participant forms part and the wholesale electricity market in which the applying market participant wishes to participate.

5.4C.4 The information required for registration as a generation settlement facility in accordance with this section 5.4C shall, subject to any lesser information requirements that may be specified in the applicable market manual in respect of the registration of a given class or size of facility, include:

5.4C.4.1 the identity of the owner and the operator of the facility; and

5.4C.4.2 such data as may be required by the PSO so as to satisfy the PSO that the operation of the facility will not have an unacceptable impact on the reliability or security of the PSO controlled system.

5.4C.5 The applying market participant shall provide the PSO with such additional technical information associated with any such application for registration as the PSO may request for the purpose of the fulfilment by the PSO of its obligations under these market rules. The applying market participant shall provide the applicable market support services licensee with such metering-related information contained in or associated with any such application for registration as the market support services licensee may request for the purpose of the fulfilment by the market support services licensee of its obligations under these market rules or the metering code.

5.4C.6 A generation settlement facility that is registered pursuant to this section 5.4C shall be classified by the EMC as a pseudo generation settlement facility.
5.4C.7 A market participant may, at any time and from time to time, apply to the market support services licensee to add or remove one or more intermittent generation facilities to or from a generation settlement facility that is registered in accordance with this section 5.4C. The market support services licensee shall add or remove such intermittent generation facilities to or from the generation settlement facility provided that:

5.4C.7.1 for additions or removals of an intermittent generation facility with name-plate rating of more than 1MW, the market participant submits the approved standing capability data of that intermittent generation facility by the PSO to the market support services licensee; and

5.4C.7.2 the market support services licensee is satisfied that such addition or removal will not have an unacceptable impact on the fulfilment by the market support services licensee of its obligations under the market rules or the metering code.

The market participant shall ensure that all of its representations and warranties as set out in section 5.4C.3.2 remain true, accurate and complete, and that it continues to be in full compliance with all its undertakings as set out in section 5.4C.3.2, in respect to such generation settlement facility and all intermittent generation facilities for the time being comprised therein consequent to such addition or removal. For the purposes of sections 5.1.9A and 5.4C, an intermittent generation facility shall:

5.4C.7.3 upon its addition by the market support services licensee to such generation settlement facility, be deemed to be comprised in and duly registered as a part of such generation settlement facility; and

5.4C.7.4 upon its removal by the market support services licensee from such generation settlement facility, be deemed to cease being comprised in and duly registered as a part of such generation settlement facility.

5.4C.8 The market participant shall notify the EMC and the PSO in writing in respect of such additions and removals made pursuant to section 5.4C.7, and provide the EMC and the PSO with the latest maximum generation capacity of such generation settlement facility in a timely manner.
5.5 **CLASSIFICATION OF GENERATION FACILITIES REGISTERED BY MARKET PARTICIPANTS AS EMBEDDED GENERATION FACILITIES**

**Explanatory Note:**

(1) An electricity licensee holding a relevant electricity licence, or a person exempt from the obligation to hold a relevant electricity licence, under the Electricity Act who intends to install a generation facility principally to generate and supply electricity to its load facilities, or such other load facilities, as the Authority may permit may apply to the Authority for approval for that generation facility to be classified by the EMC as an embedded generation facility and to be assigned to an EGF group. Guidance on when the Authority will grant such approval may be found in the Authority’s Information Guide for Embedded Generation dated February 2014. If the EMC is notified by the Authority that such approval is granted by the Authority, the EMC shall classify that generation facility as an embedded generation facility and effect such assignment in accordance with the market rules. When so classified and assigned, that generation facility will be eligible to receive net treatment on certain non-reserve charges (i.e. MEUC, the PSO’s fees and the EMC’s fees) under Chapter 7 of the market rules.

(2) An electricity licensee holding a relevant electricity licence, or a person exempt from the obligation to hold a relevant electricity licence, under the Electricity Act may also apply to the Authority for approval for a group of one or more generation facilities to be granted price neutralisation. If the EMC is notified by the Authority that such approval is granted by the Authority, the EMC shall grant price neutralisation to that group in accordance with the market rules.

(3) All of the foregoing applications to the Authority for its approvals will be subject to such procedures, requirements, terms and conditions as the Authority may from time to time impose or prescribe.

(4) The EMC will cease the classification of a generation facility as an embedded generation facility and its assignment to an EGF group, and/or the grant of price neutralisation to that EGF group, if conditions set out in section 5.5.10.1 and/or section 5.5.11.1 (as the case may be) cease to be satisfied or if the Authority notifies the EMC of the Authority’s approval(s) for such cessation(s).

5.5.1 If the EMC receives notification from the Authority of the Authority’s approval for a generation facility to be classified as an embedded generation facility and assigned to an EGF group, the EMC shall, subject to sections 5.5.2, 5.5.3 and 5.5.4, effect such classification and assignment of that generation facility as stated in such notification from the Authority:
5.5.1.1 upon the registration of that generation facility as a commissioning generation facility, a generation registered facility or a generation settlement facility, if at the date of the EMC’s receipt of such notification from the Authority:

a. an application had been submitted for that generation facility to be so registered; and

b. such application was then still pending; or

5.5.1.2 within ten business days from the date of the EMC’s receipt of such notification from the Authority, if at the date of the EMC’s receipt of such notification from the Authority, the generation facility is already registered as a commissioning generation facility, a generation registered facility or a generation settlement facility.

5.5.1A Notwithstanding section 5.5.1, the EMC may, subject to sections 5.5.2 and 5.5.3, classify an intermittent generation facility as an embedded generation facility and assign it to an EGF group upon the registration of that intermittent generation facility as a generation settlement facility, if that intermittent generation facility comprises only of embedded intermittent generation facilities, and such generation settlement facility is not one which is registered as such under section 5.4A.3.

Explanatory Note: For the purposes of this section 5.5.1A, intermittent generation facilities are embedded intermittent generation facilities only if they meet the eligibility conditions for embedded intermittent generation sources as specified in the Authority’s Clarification Paper on Enhancements to the Regulatory Framework for Intermittent Generation Sources in the National Electricity Market of Singapore dated 24 February 2015.

5.5.2 Notwithstanding section 5.5.1 or 5.5.1A, the classification and assignment in respect of a generation facility of any person under sections 5.5.1 or 5.5.1A shall be subject to:

5.5.2.1 that person at all times being a market participant; and

5.5.2.2 that generation facility at all times being either a commissioning generation facility, a generation registered facility or a generation settlement facility of such market participant.

5.5.3 Notwithstanding any other provision in this section 5.5, the EMC shall not put into effect any classification, assignment or grant under sections 5.5.1, 5.5.1A, 5.5.6 or 5.5.7 earlier than the date notified by the market support services licensee to the EMC as being the date by which the market support services licensee will be ready to provide the EMC with all relevant
settlement data as may be required, if and when such classification, assignment or grant (as the case may be) is effective, under the market rules.

5.5.4 Notwithstanding section 5.5.1, the EMC shall only effect the classification and assignment in respect of a generation facility under section 5.5.1 if, in the Authority’s notification to the EMC referred to in section 5.5.1 in respect of that generation facility:

5.5.4.1 that generation facility is to be assigned to a group which contains only embedded generation facilities; and

5.5.4.2 all generation facilities assigned or to be assigned to that group are all generation facilities of the same market participant.

5.5.5 Upon the classification of a market participant’s generation facility as an embedded generation facility and its assignment to an EGF group under section 5.5.1 or 5.5.1A:

5.5.5.1 consumption of electricity by that market participant’s load facilities, or such other load facilities, as the Authority may permit shall be assigned as the associated load of that EGF group; and

5.5.5.2 the associated load of that EGF group shall be associated with the settlement account of that market participant for that EGF group, another market participant’s settlement account, or a combination of two or more such settlement accounts.

5.5.6 If the EMC receives notification from the Authority of the Authority’s approval for a group of one or more generation facilities to be granted price neutralisation, and if an EGF group has not yet been created for all such generation facilities at the date of the EMC’s receipt of such notification from the Authority, the EMC shall, subject to section 5.5.3, grant price neutralisation to that group with effect on and from the date of creation of that EGF group.

5.5.6A Notwithstanding section 5.5.6, the EMC may grant price neutralisation to an EGF group created under section 5.5.1A with effect on and from the date of creation of that EGF group.

5.5.7 If the EMC receives notification from the Authority of the Authority’s approval for an existing EGF group to be granted price neutralisation, the EMC shall, subject to section 5.5.3, grant price neutralisation to that EGF group with effect on and from a date falling within ten business days from the date of the EMC’s receipt of such notification from the Authority.
5.5.8 In this section 5.5, the reference to the creation of an *EGF group* is a reference to the assignment of the first *embedded generation facility* to such *EGF group*.

5.5.9 A *market participant* shall, as long as its *generation facility* is classified by the *EMC* as an *embedded generation facility* and assigned to an *EGF group*, ensure that the associated *load* of that *EGF group* in each successive 12-month period (the first of such 12-month periods shall commence from the day that the first *embedded generation facility* in that *EGF group* is classified by the *EMC* as an *embedded generation facility* and assigned to that *EGF group*) is at least half of the *generation* of that *EGF group* in the same 12-month period.

5.5.9A This section 5.5.9 does not apply to *generation facilities* that are classified by the *EMC* as *embedded generation facilities* under section 5.5.1A.

5.5.10 The *EMC* shall cease the classification of a *generation facility* as an *embedded generation facility* and its assignment to an *EGF group*:

5.5.10.1 if any of the conditions in section 5.5.2 ceases to be met; or

5.5.10.2 no later than ten *business days* after the *EMC* receives a notification from the *Authority* of the *Authority’s* approval for such cessation.

Explanatory Note: If the registration of an *embedded generation facility* is transferred from a *market participant* to another *market participant*, the *EMC* will cease to classify that facility as an *embedded generation facility* and its assignment to its then assigned *EGF group*. This does not prevent the *transferee market participant* from seeking fresh approval from the *Authority* for that facility to be classified as an *embedded generation facility* of the *transferee* or assignment to an *EGF group*.

5.5.11 The *EMC* shall cease the grant of *price neutralisation* to an *EGF group*:

5.5.11.1 if there ceases to be any *embedded generation facility* assigned to that *EGF group*; or

5.5.11.2 no later than ten *business days* after the *EMC* receives a notification from the *Authority* of the *Authority’s* approval for such cessation.

Explanatory Note: If the registration of an *embedded generation facility* is transferred from a *market participant* to another *market participant*, the *EMC* will cease to classify that facility as an *embedded generation facility* and its assignment to its then assigned *EGF group*. 
If that EGF group has been granted price neutralisation, the cessation of assignment of that generation facility to that EGF group will also mean that any price neutralisation which may be granted to the EGF group will no longer include such generation facility. The foregoing does not prevent the transferee market participant from seeking fresh approvals from the Authority for that facility to be classified as an embedded generation facility of the transferee, and assigned to an EGF group, and for the grant of price neutralisation to that EGF group.

5.5.12 To the extent that a generation facility had been classified as a non-injecting generation facility (as defined in the market rules effective immediately before 28 June 2011) effective immediately before 28 June 2011, such generation facility shall be deemed to be classified as an embedded generation facility and assigned to an EGF group under section 5.5.1 with effect on and from 28 June 2011 until cessation of classification and assignment is required under section 5.5.10.

5.5.13 To the extent that a generation facility had been classified as an embedded generation facility and authorised and assigned to a group for the purposes of price neutralisation under the market rules effective immediately before 28 June 2011, then with effect on and from 28 June 2011:

5.5.13.1 that generation facility shall be deemed to be an embedded generation facility to which the EMC has assigned to the aforementioned group as an EGF group until cessation of classification and assignment is required under section 5.5.10; and

5.5.13.2 that EGF group shall be granted price neutralisation until cessation of grant of price neutralisation is required under section 5.5.11.

5.5A CLASSIFICATION OF PSEUDO GENERATION SETTLEMENT FACILITIES AS EMBEDDED GENERATION FACILITIES

5.5A.1 Notwithstanding the provisions in section 5.5, the EMC shall classify a pseudo generation settlement facility as an embedded generation facility and assign it to an EGF group upon the classification of that generation facility as a pseudo generation settlement facility.

5.5A.2 Upon the classification of a pseudo generation settlement facility as an embedded generation facility and its assignment to an EGF group under section 5.5A.1:

5.5A.2.1 consumption of electricity by the load facilities of the contestable consumers who are owners or lessees of the generation facilities comprising the pseudo generation
settlement facility shall be assigned as the associated load of that EGF group; and

5.5A.2.2 the associated load of that EGF group shall be associated with either the settlement account of that market support services licensee for that EGF group, a settlement account of a market participant, or a combination of two or more such settlement accounts.

5.5A.3 Upon the classification of a pseudo generation settlement facility as an embedded generation facility and its assignment to an EGF group under section 5.5A.1, the EMC shall grant price neutralisation to that EGF group.

5.5A.4 Upon the classification of a pseudo generation settlement facility as an embedded generation facility and its assignment to an EGF group under section 5.5A.1, the EMC shall grant net AFP treatment to that EGF group if the market support services licensee for that EGF group represents, warrants and undertakes (as continuing representations, warranties and undertakings) to the EMC in writing that, at all times:

5.5A.4.1 every intermittent generation facility as may from time to time be comprised in such pseudo generation settlement facility is for the purpose of supplying electricity to residential premises; and

5.5A.4.2 such pseudo generation settlement facility shall not be comprised of any intermittent generation facility directly or indirectly connected to a given substation of the transmission licensee (if any) for the purposes of supplying electricity to a given contestable consumer, if such intermittent generation facility together with all other intermittent generation facilities directly or indirectly connected to that given substation for the purposes of supplying electricity to that given contestable consumer, have an aggregate name-plate rating of 1 MW or more.

5.6 Publication of Facility Data

5.6.1 The EMC shall establish, maintain, update and publish a list containing the information specified in sections 5.6.2, 5.6.2A and 5.6.3.

5.6.2 The list referred to in section 5.6.1 shall contain the following information most currently available to the EMC in respect of each generation facility registered with the EMC under sections 5.2, 5.3, 5.4, 5.4A and 5.4C:

5.6.2.1 the identity of the market participant or market support services licensee in respect of which such generation facility is registered;
5.6.2.2 the identity of such *generation facility*;

5.6.2.3 the type of registration of such *generation facility*, that is whether such *generation facility* is registered as a:

a. *generation registered facility*;

b. *commissioning generation facility*; or

c. *generation settlement facility*;

5.6.2.4 whether such *generation facility* is classified as an *embedded generation facility*;

5.6.2.5 the type of *generation facility*;

5.6.2.6 the maximum *generation capacity* of such *generation facility*;

5.6.2.7 the maximum *reserve* capacity for each *reserve class* that such *generation facility* is registered to provide;

5.6.2.8 the maximum *regulation* capacity that such *generation facility* is registered to provide;

5.6.2.9 whether such *generation facility* is frequency responsive, that is, whether it has a positive maximum *reserve capacity* for primary *reserve*; and

5.6.2.10 the minimum stable load level registered for such *generation facility*, if any.

5.6.2A The list referred to in section 5.6.1 shall contain the following information most currently available to the *EMC* in respect of each *import registered facility* registered with the *EMC* under section 5.2:

5.6.2A.1 the identity of the *market participant* in respect of which such *import registered facility* is registered;

5.6.2A.2 the identity of such *import registered facility*; and

5.6.2A.3 the maximum *import capacity* of such *import registered facility*.

**Explanatory note:** For the purpose of the publication of facility data in this section, information in respect of an import registered facility will be indicated as a subtype of generation registered facility.

5.6.3 The list referred to in section 5.6.1 shall contain the following information (where applicable) most currently available to the *EMC* in respect of each *load registered facility*:
5.6.3.1 the identity of the market participant under which such load registered facility is registered;

5.6.3.2 the identity of such load registered facility;

5.6.3.3 the maximum reserve capacity for each reserve class that such load registered facility is registered to provide; and

5.6.3.4 the maximum load curtailment capacity in respect of such load registered facility if it is an LRF with REB.

Explanatory Note: Load curtailment, in respect of an LRF with REB, refers to the reduction in the withdrawal of energy (from the transmission system and/or from an embedded generation facility otherwise than through the transmission system) in a dispatch period by such load registered facility based on the load registered facility’s restricted energy bid submission to the EMC for that same dispatch period. It is generally calculated as the difference between the quantity in the load registered facility’s restricted energy bid submitted and the quantity of energy scheduled to be withdrawn as aforesaid by such load registered facility in a dispatch period.

5.6.4 The EMC shall establish, maintain, update and publish a list containing the following information in respect of each non-exporting embedded intermittent generation facility:

5.6.4.1 the identity of the market participant under which such non-exporting embedded intermittent generation facility is registered;

5.6.4.2 the identity of such non-exporting embedded intermittent generation facility; and

5.6.4.3 the name-plate rating of such non-exporting embedded intermittent generation facility.
6 CANCELLATION AND TRANSFER OF REGISTRATION OF FACILITIES

6.1 CANCELLATION OF REGISTRATION

6.1.1 If a *market participant* wishes to cancel the registration of a *registered facility*, it shall:

6.1.1.1 file with the *EMC* a request to cancel the registration of the facility in the form specified in the applicable *market manual*; and

6.1.1.2 at the same time provide a copy of the request to each of the *transmission licensee* and the *PSO*.

6.1.2 The *PSO* shall determine if a technical assessment of the impact of the cancellation of the registration of a *registered facility* on the *reliability* or *security* of the *PSO controlled system* is required. Such determination shall be made within ten *business days* of the *PSO*’s receipt of a request to cancel the registration of the *registered facility*. The *PSO* shall notify the relevant *market participant* of its determination.

6.1.3 If the *PSO* determines that a *technical assessment* of a *market participant’s registered facility* is required and notifies the *market participant* of its determination, it shall also indicate the expected completion date of the *technical assessment*. This date shall be no later than 45 days from the date that the *PSO* notifies that *market participant* of the determination, or such later date that the *PSO* and the *market participant* may agree.

6.1.4 If the *PSO* conducts a *technical assessment* of a *market participant’s registered facility* and concludes that the cancellation of the registration of that *registered facility*:

6.1.4.1 will not, or is unlikely to, have an unacceptable impact on the *reliability* or *security* of the *PSO controlled system*, it shall notify the *market participant* of this conclusion; or

6.1.4.2 will, or is likely to, have an unacceptable impact on the *reliability* or *security* of the *PSO controlled system*, the *PSO* and the *market participant* shall begin the process described in section 8.5 of Chapter 5 with a view to concluding a *reliability must-run service contract* for that *registered facility*. The registration of that *registered facility* shall not be cancelled during this process.
6.1.5 A market participant shall file with the EMC a notice stating the date that it wishes the EMC to cancel the registration of its registered facility if:

6.1.5.1 the PSO notifies that market participant that a technical assessment of that registered facility is not required under section 6.1.2; or

6.1.5.2 the PSO conducts a technical assessment and notifies that market participant under section 6.1.4.1 that the cancellation of the registration of that relevant registered facility will not, or is not likely to, have an unacceptable impact on the reliability or security of the PSO controlled system.

The date stated shall be at least five business days after the date of the market participant’s receipt of the notice described in section 6.1.5.1 or 6.1.5.2.

6.1.6 The EMC shall cancel the registration of a market participant’s registered facility if that market participant files a notice in respect of that registered facility with the EMC in accordance with section 6.1.5. The date of such cancellation shall be the date stated in such notice.

6.1.7 The EMC shall notify a market participant, the market support services licensee, the transmission licensee and the PSO of the cancellation of registration of the market participant’s registered facility.

6.2 Transfer of Registration

6.2.1 A market participant that wishes to transfer the registration of a registered facility (“transferor”) to another person shall file with the EMC a request to transfer the registration of that registered facility, and shall at the same time provide a copy of that request to the transmission licensee and the PSO. That request shall:

6.2.1.1 be filed with the EMC at least ten business days before the transfer is proposed to take effect;

6.2.1.2 be in the form required by the applicable market manual;

6.2.1.3 state the identity of the proposed transferee which shall, as at the date of that request, be either:

(a) a market participant, and not a suspended market participant; or
(b) a *participation applicant* which, to the *EMC*’s satisfaction, is likely to be able to meet, on or before the date that the transfer is proposed to take effect, all the requirements in section 1.2.2 and the applicable market manual, for registration by the *EMC* as a *market participant*;

6.2.1.4 state the date that the transfer is proposed to take effect; and

6.2.1.5 be accompanied by a written declaration and undertaking by the proposed transferee, in such form as may be prescribed by the *EMC*, stating (among other things) that, with effect on and from the date of the transfer of the registration under section 6.2.2 of the registered facility to which that request relates:

(a) it is willing and able to assume, and will assume, control of the registered facility; and

(b) it will comply with all provisions of these market rules, and any *contracted ancillary services* contract, as applicable to the registered facility, as if the proposed transferee is the transferor.

6.2.2 If the conditions in section 6.2.3 are satisfied, the *EMC* shall, on the effective date of transfer, transfer the registration of a registered facility for which a request has been filed under section 6.2.1.

For the purposes of sections 6.2.2 and 6.2.3, “effective date of transfer”, in relation to the transfer of the registration of a registered facility for which a request has been filed under section 6.2.1, means the later of:

6.2.2.1 the date referred to in section 6.2.1.4; or

6.2.2.2 the 10th *business day* from when the *EMC* is satisfied that the request satisfies all the requirements of section 6.2.1 and of the applicable market manual (other than the conditions referred to in section 6.2.3),

unless the *EMC* has agreed with the transferor and the proposed transferee to effect such transfer on a different date, in which case “effective date of transfer” shall mean such agreed date.

6.2.3 Notwithstanding section 6.2.2, the *EMC* shall only transfer the registration of a registered facility if, on the effective date of transfer, the *EMC* is satisfied that the proposed transferee:

(a) is a *market participant* and is not a *suspended market participant*; and
(b) has satisfied all other conditions prescribed in the applicable market manual, being conditions which are required to be satisfied by the proposed transferee on the effective date of transfer.

6.2.4 The EMC’s communication regarding its satisfaction of the matters referred to in section 6.2.1.3 (b) shall be regarded merely as a statement of its own belief, and the EMC shall have no liability whatsoever to any person for any reliance upon such communication. No communication by the EMC regarding its satisfaction of the matters referred to in section 6.2.1.3(b) shall be regarded as (i) the EMC’s endorsement of the proposed transferee; (ii) a representation, warranty or assurance that the proposed transferee will fulfill the requirements referred to in section 6.2.1.3(b); or (iii) a representation, warranty or assurance that the proposed transferee will be registered as a market participant.

6.3 APPLICABILITY TO GENERATION SETTLEMENT FACILITY AND NON-EXPORTING EMBEDDED INTERMITTENT GENERATION FACILITY

6.3.1 All references in section 6 to a registered facility shall also include references to a generation settlement facility and a non-exporting embedded intermittent generation facility.
7 PRUDENTIAL REQUIREMENTS

7.1 PURPOSE AND GENERAL MARKET PARTICIPANT OBLIGATION

7.1.1 This section 7 sets forth the nature and amount of credit support that must be provided by market participants as a condition of participation in the real-time markets or of causing or permitting a physical service to be conveyed into, through or out of the transmission system and the manner in which market participants must provide and maintain such credit support on an on-going basis in order to protect the EMC and other market participants from payment defaults.

7.1.2 Each market participant shall initially and continually satisfy the obligations set forth in this section 7 with regard to the provision of credit support as a condition of transacting in the real-time markets or of causing or permitting a physical service to be conveyed into, through or out of the transmission system.

7.1.3 This section 7 does not apply to the transmission licensee.

7.1.4 This section 7 applies to a market support services licensee that has been granted authorisation to participate by the EMC pursuant to section 3 and, for such purposes, all references in this section 7 to a market participant shall be deemed to include references to a market support services licensee, provided that specific provisions in respect of a market support services licensee shall prevail if there is any conflict with such deemed references.

7.2 CURRENT EXPOSURE AND ESTIMATED NET EXPOSURE

7.2.1 A market participant’s current exposure shall be determined by the EMC each business day and shall be a dollar amount determined in accordance with the procedure specified in the market manual.

7.2.2 A market participant’s estimated net exposure shall be determined by the EMC each business day and shall be a dollar amount determined in accordance with the procedure specified in the market manual.

7.3 ESTIMATED AVERAGE DAILY EXPOSURE AND CREDIT SUPPORT VALUE

7.3.1 Each participation applicant shall provide to the EMC, in or with its participant registration application or as may otherwise be required by the EMC, the estimated average daily exposure (as defined in the applicable
market manual) and any other information as the EMC may reasonably require, for the purpose of determining the participation applicant’s credit support value that will apply immediately when it begins participating in the wholesale electricity market.

7.3.2 A market participant who intends to participate in the wholesale electricity market shall determine and provide credit support to the EMC in accordance with the form as specified in section 7.6.2 that is thirty-eight (or in the case of a market support services licensee, thirty-three) times the estimated average daily exposure (as defined in the applicable market manual) of the market participant. For the avoidance of doubt, the credit support value of a market participant shall be calculated in accordance with the following formula:

\[
\text{Credit Support Value} = \text{Estimated Average Daily Exposure} \times 38 \text{ days (or 33 days, in the case of a market support services licensee)}
\]

Explanatory Note: The increased duration in the calculation of a market participant’s credit support value, as compared to a market support services licensee, is to account for customer transfer lead time if a market participant loses its ability to participate in the wholesale electricity market without making prior arrangements for continuity of supply. Such lead time does not apply to a market support services licensee.

7.3.3 As and when necessary in the sole and absolute discretion of the EMC, the EMC will review and revise the credit support value required of each market participant in accordance with section 7.3.2. The EMC shall promptly notify the market participant of any such revision in its credit support value. Any revision to a market participant’s credit support value shall apply with effect from such time, not being earlier than the time of notification to the market participant of the revised credit support value, as the EMC may specify in the notice.

7.3.4 Unless otherwise provided in section 7.3.5, a market participant who has received notification from the EMC that its credit support value has been revised as a result of an increase in the market participant’s credit support value pursuant to section 7.3.3, shall, within 5 business days of the time when the revised credit support value becomes effective in accordance with section 7.3.3, provide to the EMC revised credit support in accordance with the form as specified in section 7.6.2.

7.3.5 A market participant:
7.3.5.1 who has received notification from the EMC that its credit support value has been revised as a result of an increase in the market participant’s credit support value pursuant to section 7.3.3; and

7.3.5.2 whose estimated net exposure reaches a value equal to or greater than fifty-five (or sixty, in the case of a market support services licensee) percent of the value of the credit support currently provided by that market participant,

shall, by the close of banking business of the bank at which the EMC’s bank accounts are held on the second business day following the date of the notification issued under section 7.3.3, provide to the EMC revised credit support in accordance with the form as specified in section 7.6.2, without prejudice to its obligations under sections 7.4 and 7.5.

7.4 **MARGIN CALLS**

7.4.1 The EMC shall notify a market participant when the estimated net exposure of the market participant reaches forty-five (or fifty, in the case of a market support services licensee) percent of the value of the credit support currently provided by that market participant.

7.4.2 The EMC shall issue a margin call to a market participant when the estimated net exposure of the market participant reaches a value equal to or greater than fifty-five (or sixty, in the case of a market support services licensee) percent of the value of the credit support currently provided by that market participant.

7.4.3 Upon a market participant’s receipt of a margin call under section 7.4.2, if such market participant has a reasonable basis for believing that there is a manifest error in the determination of its estimated net exposure by the EMC for the purposes of section 7.4.2 and that such error if absent,

7.4.3.1 would not have required the issuance of such margin call by the EMC under section 7.4.2; and/or

7.4.3.2 would have resulted in its estimated net exposure (if correctly determined) to be either greater than 110%, or lesser than 90%, of its estimated net exposure originally determined for the purposes of section 7.4.2,
that market participant may request the EMC to reassess its estimated net exposure. Such request for reassessment shall be made in such form as may be specified in the applicable market manual and shall clearly state, with supporting material, the nature of such error and the proposed correction to the relevant estimated net exposure. All requests for reassessments shall be made to the EMC no later than 12pm on the first business day following the date of such margin call issued by the EMC under section 7.4.2.

Explanatory Note: Manifest errors in the determination of a market participant’s estimated net exposure can be caused by metering, human input or system calculation errors.

7.4.4 The EMC shall consider the merits of each request for reassessment of estimated net exposure made to the EMC in accordance with section 7.4.3, and notify the market participant to which such request relates, by no later than the end of the first business day following the date of the relevant margin call issued by the EMC under section 7.4.2 to which such request for reassessment relates, that:

7.4.4.1 such margin call is revoked, if the market participant’s reassessed estimated net exposure is less than fifty-five (or sixty, in the case of a market support services licensee) percent of the value of the credit support currently provided by the market participant. In this case, if the market participant has received notification from the EMC that its credit support value has been revised as a result of an increase in the market participant’s credit support value pursuant to section 7.3.3, section 7.3.4 shall apply in relation to its obligation to provide to the EMC revised credit support in accordance with the form as specified in section 7.6.2;

7.4.4.2 (except where section 7.4.4.1 applies) such margin call is to be revised (together with the particulars of such revision) if the market participant’s reassessed estimated net exposure is either greater than 110%, or lesser than 90%, of its estimated net exposure originally determined for the purposes of section 7.4.2; or

7.4.4.3 the EMC will take no further action and such margin call shall continue to apply if neither section 7.4.4.1 nor section 7.4.4.2 applies. In this case, the EMC shall not be obliged to carry out any further reassessment of such estimated net exposure.

7.4.5 Where the market participant’s estimated net exposure is reassessed, and consequently, its margin call is also revised by the EMC, under section 7.4.4.2, then all references in section 7.5.1 to “estimated net exposure” and “estimated net exposure, determined at the time the margin call was issued”
in respect of that market participant shall be deemed to be references to the estimated net exposure as so reassessed under section 7.4.4.

7.5 **MARGIN CALL REQUIREMENTS**

7.5.1 Subject to section 7.4.5, a market participant must satisfy a margin call (if not revoked by the EMC) within the time prescribed in section 7.5.2 by:

7.5.1.1 providing to the EMC credit support or additional credit support in the form as specified in section 7.6.2 such that the market participant’s estimated net exposure determined at the time the margin call was issued is no greater than thirty-five (or forty, in the case of a market support services licensee) percent of the total value of the credit support provided to the EMC by the market participant; or

7.5.1.2 prepaying such amount to the EMC as would be sufficient to reduce the market participant's estimated net exposure to a value no greater than thirty-five (or forty, in the case of a market support services licensee) percent of the value of the credit support provided to the EMC by that market participant.

7.5.2 The time within which a margin call (unless revoked by the EMC) must be satisfied under section 7.5.1 shall be the close of banking business of the bank at which the EMC’s bank accounts are held on the second business day following the date of the margin call issued under section 7.4.2 (whether or not such margin call is subsequently revised under section 7.4.4.2).

7.6 **OBLIGATION TO PROVIDE CREDIT SUPPORT**

7.6.1 Each market participant shall provide to the EMC and shall at all times maintain adequate credit support in a form permitted by section 7.6.2 by ensuring that the value of credit support shall not be less than the market participant's credit support value, which obligation shall be determined in accordance with the relevant provision of the market manual. For this purpose, the total value of the credit support available at any one moment in time shall be the sum equivalent of the value of the undrawn or unclaimed amounts of credit support provided by the market participant.

7.6.2 A market participant's credit support value must be met through the provision to the EMC and the maintenance of credit support in one or more of the following forms:

7.6.2.1 a guarantee or irrevocable standby letter of credit that must be in the form defined in section 7.6.3.1 (d) and section 7.6.3.1 (c)
respectively and provided by a financial institution which satisfies such criteria as prescribed by the EMC in the applicable market manual;

7.6.2.2 [Deleted and Intentionally Left Blank]

7.6.2.3 cash deposits made with or assigned to the EMC by or on behalf of the market participant; or

7.6.2.4 Singapore Government Treasury bills assigned to EMC by or on behalf of the market participant. Such Treasury bills shall be valued as cash at their current market value less than 2 percent to take into account the potential eroding effects of interest rate increases.

7.6.3 The following terms and conditions shall apply in respect of the credit support provided by a market participant pursuant to section 7.6.2:

7.6.3.1 credit support provided in accordance with section 7.6.2.1 shall:

a. be an obligation in writing;

b. be governed by the laws of Singapore;

c. where the credit support is in the form of an irrevocable standby letter of credit:

i. be valid for a term of at least one year or provide for automatic renewal, subject only to the right of the issuing financial institution to advise the EMC at least thirty-eight (or thirty-three, in the case of a market support services licensee) days prior to the date of renewal that the letter of credit will not be renewed;

ii. name the EMC as beneficiary and constitute valid and binding obligations to pay to the EMC amounts in accordance with its terms which relate to the obligations of the relevant market participant under the market rules;
iii. not include any conditions on the ability of the EMC to draw or make claims thereon other than the condition that the EMC deliver a certificate of an officer of the EMC indicating that a specified amount is owing by the market participant to the EMC and that, in accordance with these market rules, the EMC is entitled to payment of that specified amount as of the date of delivery of such certificate;

iv. not prohibit partial draws and permit drawings or claims by the EMC on demand up to the amount stated in the credit support; and

v. be executed in the manner as set out in the applicable market manual; and

d. where the credit support is in the form of a guarantee, be executed as a deed and in the manner as set out in the applicable market manual, permit drawings or claims by the EMC and provide for payment by the guarantor on demand up to the amount stated in the credit support.

7.6.3.2 [Deleted and Intentionally Left Blank]

7.6.3.3 credit support provided in accordance with section 7.6.2.3 and section 7.6.2.4 shall:

a. constitute valid and binding unsubordinated obligations to pay to the EMC amounts in accordance with its terms which relate to the obligations of the relevant market participant under the market rules;

b. be accompanied by an assignment by the market participant to the EMC of all of the market participant’s present and future right, title and interest in and to such credit support as general and continuing security and as a pledge to secure all indebtedness, obligations and liabilities of any kind, direct or indirect, absolute or contingent, joint or several, of the market participant to the EMC in respect of the market participant’s transactions in the real-time markets;

c. if cash, be reflected in a written instrument; and

d. if Treasury Bills, permit drawings or claims by the EMC on demand up to the amount of the Treasury Bills.
7.6.4 [Deleted and Intentionally Left Blank]

7.6.5 [Deleted and Intentionally Left Blank]

7.6.6 If credit support for the time being held by the EMC in respect of a market participant pursuant to this section 7 (the existing support) is due to expire or terminate and, upon expiry or termination of the existing support the total credit support held by the EMC in respect of that market participant will be less than the market participant’s credit support value then, at least thirty-five (or thirty, in the case of a market support services licensee) prior to the time at which the existing support is due to expire or terminate, the market participant must provide to the EMC a replacement credit support as defined in accordance with section 7.6.2, which will become effective no later than the expiry or termination of the existing support, such that the total credit support provided is at least equal to the market participant's credit support value.

7.6.7 Where:

7.6.7.1 any part of the existing support held by the EMC in respect of a market participant otherwise ceases to be or shall cease to be current or valid for any reason,

7.6.7.2 it becomes unlawful for a market participant’s credit support provider to comply with any of its obligations under the credit support supplied by it or any other obligation owed to the EMC, or it is claimed to have become so by the credit support provider;

7.6.7.3 a licence, permit or other authorisation necessary to enable a market participant’s credit support provider to carry on its principal business or activities is suspended, revoked or otherwise ceases to be in full force and effect;

7.6.7.4 the market participant’s credit support provider ceases or threatens to cease to carry on its business or a substantial part of its business;

7.6.7.5 the market participant’s credit support provider enters into or takes any action to enter into an arrangement, composition or compromise with, or an assignment for the benefit of, all or any class of its creditors or members or a moratorium involving any of them;

7.6.7.6 the market participant’s credit support provider states that it is unable to pay from its own money its debts when they fall due for payment;
7.6.7.7 a receiver, receiver and manager, judicial manager or person having a similar or analogous function under the laws of any relevant jurisdiction is appointed in respect of any property of a market participant’s credit support provider which is used in or relevant to the performance by the market participant or the market participant's credit support provider of their respective obligations under the market rules, a market manual, the system operation manual, an electricity licence issued to the market participant or credit support provided by the market participant or the market participant's credit support provider, as the case may be;

7.6.7.8 an administrator, liquidator, trustee in bankruptcy or person having a similar or analogous function under the laws of any relevant jurisdiction is appointed in respect of a market participant’s credit support provider, or any action is taken to appoint such person;

7.6.7.9 an application is made for the winding up or dissolution or a resolution is passed or any steps are taken to pass a resolution for the winding up or dissolution of a market participant’s credit support provider;

7.6.7.10 the market participant’s credit support provider is wound up or dissolved, unless the notice of winding up or dissolution is discharged; or

7.6.7.11 the market participant’s credit support provider is taken to be insolvent or unable to pay its debts under any applicable legislation,

the market participant must immediately so notify the EMC. The market participant shall provide to the EMC, (i) within two business days of the date on which the EMC is notified, or (ii) at least thirty-five (or thirty, in the case of a market support services licensee) days prior to the date on which the existing support or any part thereof ceases or shall cease to be current or valid, whichever is later, a replacement credit support as defined in accordance with section 7.6.2, such that the total credit support provided is at least equal to the market participant's credit support value.

7.7 EXERCISE OF RIGHTS TO CREDIT SUPPORT

7.7.1 Subject to section 9.2.2 of this chapter and to section 7.3.3, 7.3.3A and 7.3.3B of Chapter 3, upon the occurrence of an event of default by or in relation to a market participant, the EMC shall, without prejudice to any other rights and remedies that the EMC may have under these market rules or applicable law or in equity, be entitled to:
7.7.1.1 make demand under any guarantee provided pursuant to section 7.6.2.1 and pursue all rights and remedies under applicable law or in equity against any such guarantor; and

7.7.1.2 draw on any letter of credit issued to the EMC pursuant to section 7.6.2.1; and

7.7.1.3 set off and apply any and all credit support held in the form of cash or Treasury Bills against the indebtedness, obligations and liabilities referred to in section 7.6.3.3(b).

7.7.2 Each of the rights and remedies referred to in section 7.7.1 is intended to be a separate right and remedy and in no way is a limitation on or substitute for any one or more of the other rights and remedies otherwise available to the EMC. The rights and remedies referred to in section 7.7.1 shall be cumulative and not exclusive, and such rights and remedies may be exercised concurrently or individually without the necessity of any election.

7.7.3 A market participant shall pay to the EMC forthwith on demand all costs, charges, expenses and fees, including legal fees on a solicitor and client basis, of or incurred by or on behalf of the EMC in:

7.7.3.1 the enforcement or recovery of payment of any amounts owing to the EMC by the market participant in respect of its transactions in the real-time markets; and

7.7.3.2 the realisation of the credit support provided by the market participant.

7.7.4 The costs, charges, expenses and fees referred to in section 7.7.3 shall be secured by the credit support provided by the market participant.

7.7.5 Except as may otherwise be provided in section 9.8, all monies received by the EMC in respect of the realisation of the credit support provided by a market participant may, notwithstanding any appropriation by the market participant or any other person, be appropriated by the EMC to such parts of the component parts of the market participant’s estimated net exposure, any interest thereon owing pursuant to these market rules or any costs, charges, expenses and fees referred to in section 7.7.3 and in such order as the EMC determines appropriate.

7.7.6 If, as a result of the EMC exercising its rights under credit support provided by a market participant in accordance with this section 7.7 and section 7.3.3 of Chapter 3, the remaining credit support held by the EMC in respect of that market participant is less than the market participant's credit support value, the market participant must, unless otherwise provided in
section 7.7.6A, within five business days of receiving notice of the exercise by the EMC of such rights, provide the EMC with additional credit support such that the total credit support provided is at least equal to the market participant's credit support value.

7.7.6A If, as a result of the EMC exercising its rights under credit support provided by a market participant in accordance with this section 7.7 and section 7.3.3 of Chapter 3, the remaining credit support held by the EMC in respect of that market participant is less than the market participant's credit support value and the estimated net exposure of that market participant reaches a value equal to or greater than fifty-five (or sixty, in the case of a market support services licensee) percent of the value of the credit support currently provided by that market participant, the market participant must, by the close of banking business of the bank at which the EMC’s bank accounts are held on the second business day following the date on which the market participant receives notice of the exercise by the EMC of such rights, provide the EMC with additional credit support such that the total credit support provided is at least equal to the market participant's credit support value.

7.7.7 For the avoidance of doubt, the EMC shall be entitled to all rights, in respect of any and all credit support previously provided by a person, whose registration as a market participant has expired pursuant to section 4.1.4 or who is a terminated market participant, and retained by the EMC in accordance with the market rules after the expiration or termination of such person’s registration as a market participant. In this regard, a non-payment by such person of any sums due and payable by it under section 9 of this Chapter or under section 5.8.6 of Chapter 7 shall for the purposes of the market rules be deemed to be an event of default by or of that person as a market participant notwithstanding the expiration or termination of its registration as a market participant.

7.8 RETURN OF CREDIT SUPPORT

7.8.1 Where a market participant’s credit support value has been reduced pursuant to section 7.3.3 and the EMC is holding credit support that is in excess of that market participant’s credit support value, the EMC shall, provided that the market participant is not then in default of its obligations or liabilities under these market rules:

7.8.1.1 where the credit support is in a form described in sections 7.6.2.3 and 7.6.2.4, return to the market participant, within two business days a portion of the cash deposit or Treasury Bills equal to the reduction in the market participant’s credit support value; and
7.8.1.2 in all other cases, return to the market participant the credit support as soon as possible following receipt by the EMC of the replacement credit support that complies with section 7.6.2.

7.8.2 Subject to section 4.1.6 of this Chapter and section 7.4.14 of Chapter 3 as applicable, the EMC shall be entitled to retain the whole or part of the credit support previously provided by a person, whose registration as a market participant has expired pursuant to section 4.1.4 or who is a terminated market participant, to such extent as the EMC reasonably determines to be necessary to secure all financial obligations and liabilities of such person under the market rules, including a liability under section 9 of this Chapter or an actual, contingent or prospective liability under section 5.8.6 of Chapter 7. In determining an appropriate amount of credit support to be retained by the EMC in respect of any actual, contingent or prospective liability of that person under section 5.8.6 of Chapter 7, the EMC shall take into account, among other things, the previous transactions of that person as a market participant on the wholesale electricity markets and previous instances of metering errors known to the EMC.
8 TECHNICAL REQUIREMENTS

8.1 TECHNICAL REQUIREMENTS

8.1.1 Each market participant shall, in addition to ensuring that its facilities and equipment meet all other applicable technical requirements set forth in these market rules, any market manual or the system operation manual, ensure that its facilities:

8.1.1.1 meet the applicable technical requirements of Appendix 2A; and

8.1.1.2 are capable of meeting the technical requirements necessary for connection contained or referred to in any applicable connection agreement and the transmission code.

8.2 CERTIFICATION, TESTING AND INSPECTION FOR AUTHORISATION

8.2.1 Each participation applicant shall, as a condition of obtaining registration as a market participant pursuant to section 3, certify to the EMC that its:

8.2.1.1 voice communication facilities and equipment;

8.2.1.2 monitoring and control facilities and equipment; and

8.2.1.3 electronic communication facilities and equipment,

comply with the applicable technical requirements of Appendix 2A.

8.2.2 Each participation applicant shall, as a condition of obtaining registration as a market participant pursuant to section 3, successfully complete such testing and permit such inspection as the EMC may reasonably require for the purposes of testing or inspecting whether the participation applicant’s facilities and equipment referred to in sections 8.2.1.1 to 8.2.1.3 meet all applicable technical requirements set forth in Appendix 2A.

8.2.3 Each market support services licensee that applies for authorisation to participate shall, as a condition of obtaining authorisation pursuant to section 3:

8.2.3.1 certify to the EMC that its facilities and equipment meet all applicable technical requirements set forth in the applicable market manual; and

8.2.3.2 successfully complete such testing and permit such inspection as the EMC may reasonably require for the purposes of testing or
inspecting whether the market support services licensee’s facilities and equipment meet all applicable technical requirements set forth in the applicable market manual.

8.3 **CERTIFICATION, TESTING AND INSPECTION FOR REGISTRATION OF FACILITIES**

8.3.1 Each market participant shall, as a condition of obtaining the registration of a facility as a registered facility pursuant to section 5.2:

8.3.1.1 provide the certifications referred to in sections 5.2.4.5 and 5.2.4.6; and

8.3.1.2 successfully complete the testing and permit the inspection referred to in section 5.2.4.7.

8.3.2 Each market participant shall, as a condition of obtaining the registration of a facility as a generation settlement facility pursuant to section 5.4:

8.3.2.1 provide the certifications referred to in sections 5.4.3.5 and 5.4.3.6; and

8.3.2.2 successfully complete the testing and permit the inspection referred to in section 5.4.3.7.

8.3.3 Each market participant shall, as a condition of obtaining the registration of a facility as a non-exporting embedded intermittent generation facility pursuant to section 5.4B:

8.3.3.1 provide the certifications referred to in sections 5.4B.2.6 and 5.4B.2.7; and

8.3.3.2 successfully complete the testing and permit the inspection referred to in section 5.4B.2.8.

8.3.4 Each market participant shall, as a condition of obtaining the registration of a facility as a generation settlement facility pursuant to section 5.4C:

8.3.4.1 provide the certifications referred to in sections 5.4C.3.6 and 5.4C.3.7; and

8.3.4.2 successfully complete the testing and permit the inspection referred to in section 5.4C.3.8.
9 DEFAULT LEVY

9.1 POWER TO IMPOSE DEFAULT LEVY

9.1.1 The EMC shall be entitled to recover, by means of the imposition of a default levy on non-defaulting market participants in accordance with this section 9, the aggregate of any amounts owing to the EMC under the market rules which have not been paid in full by a defaulting market participant and the costs and expenses reasonably incurred by the EMC in investigating the default in payment, in realising on any applicable credit support and in implementing the default levy.

9.1.2 The imposition of a default levy or a multiple default levy pursuant to this section 9 shall in no way waive, excuse or relieve a defaulting market participant of its obligations under the market rules and shall be without prejudice to:

- 9.1.2.1 such rights or remedies which the EMC may otherwise have to recover all amounts owing by the defaulting market participant; and
- 9.1.2.2 the right of the EMC to take such other action, including but not limited to the issuance of a suspension order, as may be provided for in these market rules in respect of the defaulting market participant's default in payment.

For the avoidance of doubt, a defaulting market participant shall not be excused or relieved of its obligations with respect to a default in payment by any other market participant (including, without limitation, the obligation to make payment of a default levy or a multiple default levy).

Explanatory Note: A market participant, which is a defaulting market participant for its default in payment with respect to a particular trading day, would be considered a non-defaulting market participant for purposes of a default in payment by another defaulting market participant in respect of the same trading day.]

9.1.3 The provisions of this section 9 apply only to a default in payment by a defaulting market participant in respect of its settlement amount.

9.1.4 For the purposes of this section 9, the transmission licensee shall not be a non-defaulting market participant.

9.1.5 This section 9 applies to a market support services licensee that has been granted authorisation to participate by the EMC pursuant to section 3 and, for such purposes, all references in this section 9 to:
9.1.5.1 a defaulting market participant shall be deemed to include references to a defaulting market support services licensee;

9.1.5.2 a non-defaulting market participant shall be deemed to include references to a non-defaulting market support services licensee; and

9.1.5.3 a market participant payment date shall be interpreted in accordance with section 5.2.6 of Chapter 7.

9.1.6 [Deleted and Intentionally Left Blank]

9.2 NOTICE OF FIRST DEFAULT LEVY

9.2.1 Where a market participant has failed to remit to the EMC settlement clearing account the full amount due by that market participant by the close of banking business of the bank at which the EMC settlement clearing account is held on a market participant payment date:

9.2.1.1 the EMC shall, within one business days of the market participant payment date, issue a default notice to the defaulting market participant in accordance with section 7.3.3 of Chapter 3;

9.2.1.2 the EMC shall take such steps as may be required to enable the EMC to realise, under section 9.2.2.2, any credit support held in respect of the defaulting market participant; and

9.2.1.3 the EMC may take such steps as may be permitted by section 5.12.4 of Chapter 7.

9.2.2 Where a defaulting market participant has failed to remit to the EMC settlement clearing account the full amount due by that market participant within the time specified in the default notice, the EMC shall:

9.2.2.1 issue a first notice of default levy in accordance with section 9.2.3; and

9.2.2.2 take such steps as may be required to realise any credit support held in respect of the defaulting market participant,

within the same business day.

9.2.3 A first notice of default levy shall be issued to each non-defaulting market participant that transacted in the real-time markets during the trading day to which such default relates and shall identify:

9.2.3.1 the name of the defaulting market participant;
9.2.3.2 the trading day in respect of which the default in payment by the defaulting market participant has occurred;

9.2.3.3 the defaulting market participant's default amount, calculated in accordance with section 9.3.1;

9.2.3.4 the amount of the first default levy calculated in accordance with section 9.3.2;

9.2.3.5 the value of all credit support held in respect of the defaulting market participant;

9.2.3.6 the estimated amount of any second default levy that may have to be imposed pursuant to section 9.4 in the event of the inability by the EMC to realise all of the credit support referred to in section 9.2.3.5 prior to the time noted in section 9.4.1;

9.2.3.7 the non-defaulting market participant's share of the first default levy, calculated in accordance with section 9.6.1; and

9.2.3.8 the non-defaulting market participant's share of the estimated amount of any second default levy referred to in section 9.2.3.6.

9.2.4 The first notice of default levy shall be issued at least ten days prior to the date on which the invoice imposing the first default levy on non-defaulting market participants is issued by the EMC in accordance with section 9.6.2.

9.3 CALCULATION OF DEFAULT AMOUNT AND FIRST DEFAULT LEVY

9.3.1 The defaulting market participant's default amount shall be the aggregate of:

9.3.1.1 the net invoice amount payable by the defaulting market participant (for the trading day to which the default in payment relates) in respect of which payment has not been received within the time specified in section 9.2.2, exclusive of any amounts payable on account of financial penalties or damages; and

9.3.1.2 any default interest payable in respect of the amount referred to in section 9.3.1.1 that has accrued since the market participant payment date referred to in section 9.2.1 in accordance with section 5.12 of Chapter 7.

9.3.2 The amount of the first default levy shall be:

9.3.2.1 the aggregate of:
a. the *defaulting market participant's default amount*, calculated in accordance with section 9.3.1; and

b. any costs and expenses reasonably incurred to the date of issuance of the first *notice of default levy* by the *EMC* in investigating the default in payment to which the *default levy* relates, in realising on any applicable *credit support* held in respect of the *defaulting market participant* and in implementing the *default levy*;

9.3.2.2 less the aggregate of:

a. claimed or drawn dollar amount of all *credit support* held in respect of the default in payment of the *defaulting market participant*; and

b. unclaimed or undrawn dollar amount of all *credit support* held in respect of the *defaulting market participant*.

9.3.2A If the amount of the first *default levy* calculated in accordance with section 9.3.2 is negative, the amount of the first *default levy* shall be considered as zero.

9.3.3 The first *default levy* shall be apportioned amongst and invoiced to *non-defaulting market participants* in accordance with sections 9.6.1 and 9.6.2.

9.4 **NOTICE OF SECOND DEFAULT LEVY**

9.4.1 The *EMC* shall, on the seventh *business day* following the issuance of invoices imposing the first *default levy*, issue a second *notice of default levy* in accordance with section 9.4.2 if:

9.4.1.1 the *EMC* has failed to realise the unclaimed or undrawn dollar amount of the *credit support* referred to in section 9.3.2.2(b) within seven *business days* following the issuance of invoices imposing the first *default levy*; and/or

9.4.1.2 any costs and expenses have been reasonably incurred by the *EMC* after the issuance of the first *notice of default levy* in investigating the default in payment to which the *default levy* relates, in realising any applicable *credit support* held in respect of the *defaulting market participant* and in implementing the *default levy*. 
9.4.2 The second notice of default levy shall be issued to each non-defaulting market participant on whom a first default levy has been imposed and shall identify:

9.4.2.1 the name of the defaulting market participant;

9.4.2.2 the trading day in respect of which the default in payment by the defaulting market participant has occurred;

9.4.2.3 the defaulting market participant's residual default amount, calculated in accordance with section 9.5.1;

9.4.2.4 the amount of the first default levy;

9.4.2.5 the amount of any credit support held in respect of the defaulting market participant that has been realised;

9.4.2.6 the amount of any credit support held in respect of the defaulting market participant that remains to be realised;

9.4.2.7 the amount of the second default levy, calculated in accordance with section 9.5.2; and

9.4.2.8 the non-defaulting market participant's share of the second default levy, calculated in accordance with section 9.6.1.

9.4.3 The second notice of default levy shall be issued at least ten days prior to the date on which the invoice imposing the second default levy on non-defaulting participants is issued by the EMC in accordance with section 9.6.2.

9.5 Calculation of Residual Default Amount and Second Default Levy

9.5.1 The defaulting market participant's residual default amount shall be:

9.5.1.1 the aggregate of:

a. the net invoice amount payable by the defaulting market participant (for the trading day to which the default in payment relates) in respect of which payment has not been received as of the date of issuance of the second notice of default levy, exclusive of any amounts payable on account of financial penalties or damages; and
b. any default interest payable in respect of the amount referred to in section 9.5.1.1(a) that has accrued since the market participant payment date referred to in section 9.2.1 in accordance with section 5.12 of Chapter 7;

9.5.1.2 less the aggregate of:

a. the amount of the first default levy; and

b. any claimed or drawn dollar amount of all credit support held in respect of the default in payment of the defaulting market participant since the market participant payment date referred to in section 9.2.1.

9.5.2 The amount of the second default levy shall be the aggregate of:

9.5.2.1 the defaulting market participant’s residual default amount, calculated in accordance with section 9.5.1; and

9.5.2.2 any costs and expenses reasonably incurred by the EMC in investigating the default in payment to which the default levy relates, in realising any applicable credit support and in implementing the default levy since the market participant payment date referred to in section 9.2.1.

9.5.2A If the amount of the second default levy calculated in accordance with section 9.5.2 is negative, the amount of the second default levy shall be considered as zero.

9.5.3 The second default levy shall be apportioned and invoiced to non-defaulting market participants in accordance with sections 9.6.1 and 9.6.2.

9.6 APPORTIONMENT AND INVOICING OF DEFAULT LEVY

9.6.1 The amount of a default levy shall be apportioned amongst all non-defaulting market participants to whom a notice of default levy has been issued in accordance with section 9.2.3 or 9.4.2 by allocating to each non-defaulting market participant a share of the default levy calculated as follows:
[the amount of the first default levy or the amount of the second default levy (as the case may be) x (absolute value of the non-defaulting market participant's net invoice amount, exclusive of any amounts payable on account of financial penalties or damages, for the trading day to which the default in payment by the defaulting market participant relates)] divided by the net transaction dollar amount

where the net transaction dollar amount is:

$$\sum \text{the absolute value, in dollars, of each market participant's and each market support services licensee's net invoice amount, exclusive of any amounts payable on account of financial penalties or damages, for the trading day to which the default in payment by the defaulting market participant relates}$$ minus the absolute value, in dollars, of the defaulting market participant's net invoice amount, exclusive of any amounts payable on account of financial penalties or damages, for such trading day

9.6.2 Subject to sections 9.2.4 and 9.4.3, within ten business days from the date on which a notice of default levy is issued to a non-defaulting market participant, the EMC shall issue an invoice to each non-defaulting market participant comprising the amount of that non-defaulting market participant's share of the default levy. Each non-defaulting market participant shall pay to the EMC the invoice amount by the fourth business day following issuance of the invoice. If a non-defaulting market participant's share of the default levy is zero, the EMC shall not be required to issue any invoice imposing the default levy to that non-defaulting market participant.

9.6.3 [Deleted and Intentionally Left Blank]
9.7 **ALLOCATION OF Default Levy**

9.7.1 The EMC shall allocate amounts received from *non-defaulting market participants* in respect of a *default levy* within two *business days* of receipt of the amounts from *non-defaulting market participants*:

9.7.1.1 first, to pay the reasonable costs and expenses referred to in section 9.3.2.1(b) and 9.5.2.2;

9.7.1.2 second, to pay the EMC the amount of short-term funds borrowed by the EMC pursuant to section 5.12.4 of Chapter 7 on account of the *defaulting market participant’s* default in payment, including interest thereon at the *default interest rate*;

9.7.1.3 third, to replenish any funds transferred from the *EMC settlement reserve account* pursuant to section 5.12.6 of Chapter 7 on account of the *defaulting market participant’s* default in payment, including interest thereon at the *default interest rate*;

9.7.1.4 fourth, to the payment of amounts owed by the *defaulting market participant* to the EMC on account of the EMC’s and the PSO’s administrative costs referred to in section 4.2 of Chapter 7, including interest thereon at the *default interest rate*; and

9.7.1.5 fifth, to the payment of all other *settlement amounts* owed by the *defaulting market participant* to the EMC, including interest thereon at the *default interest rate*.

9.8 **Other Recovery of Default Amounts**

9.8.1 Notwithstanding the imposition of a *default levy*, the EMC shall subject to section 9.9 take all reasonable steps to recover from the *defaulting market participant*, including by means of the realisation of any *credit support* held in respect of a *defaulting market participant* that has not been realised as at the date of calculation of a second *default levy*, all amounts owing to the EMC under the *market rules* in respect of the *defaulting market participant’s* default in payment and any costs and expenses incurred by the EMC in connection with or in relation to the recovery of such amounts owing by the *defaulting market participant* (including but not limited to costs and expenses incurred by the EMC in investigating the default in payment, in realising any applicable *credit support*, in implementing the *default levy* or multiple *default levy*, and in taking any steps under this section 9.8.1). The EMC may, but shall not be obliged to, follow the dispute resolution process set forth in section 3 of Chapter 3 for the purpose of obtaining such recovery.
9.8.2 Subject to section 9.8.3 and section 9.11.4, any full or partial recovery of the default amount, default interest and costs or expenses made by the EMC pursuant to section 9.8.1 shall be distributed to each non-defaulting market participant that remitted payment to the EMC on account of a default levy or a multiple default levy (as the case may be) on a prorated basis according to the amount so remitted by the non-defaulting market participant. Where the non-defaulting market participant is, at the relevant time, still a market participant, any such amount shall be paid by the EMC to that non-defaulting market participant in such manner as the EMC determines appropriate.

9.8.3 In the event that the EMC cannot, after taking all reasonable steps to do so, locate a non-defaulting market participant that has remitted payment to the EMC on account of a default levy or a multiple default levy (as the case may be), any amount that would otherwise be distributed to such non-defaulting market participant under section 9.8.2 shall:

9.8.3.1 be allocated and distributed to other non-defaulting market participants in the manner described in section 9.8.2; or

9.8.3.2 where other non-defaulting market participants have already been fully reimbursed in respect of a default levy or a multiple default levy (as the case may be) and are therefore not entitled to payment of any amounts under section 9.8.2, be used to offset the EMC’s administrative costs referred to in section 4.2 of Chapter 7.

9.8.4 Any costs and expenses reasonably incurred by the EMC in recovering amounts from a defaulting market participant under section 9.8.1 that have not been included in a default levy under section 9.3.2.1(b) or 9.5.2.2 shall subject to section 9.9.5 be recovered by the EMC from the non-defaulting market participants through one or more multiple default levies as the EMC deems fit.

9.9 APPROVAL OF COSTS FOR RECOVERY OF DEFAULT AMOUNTS

9.9.1 The provisions of this section 9.9 apply only for the purposes of the implementation of multiple default levies for the recovery (to the extent permitted under section 9.9.5) of costs and expenses incurred by the EMC in connection with or in respect of default recovery measures. The provisions of this section 9.9 shall not:
9.9.1.1 restrict the power, authority or discretion of the EMC to effect any default recovery measures under section 9.8.1 in its absolute discretion;

9.9.1.2 affect the validity of any default recovery measures taken by the EMC under section 9.8.1; or

9.9.1.3 require any default recovery measures to be taken only with the approval of the rule change panel.

9.9.2 The EMC shall submit in writing for the approval of the rule change panel an estimate of the costs and expenses which it anticipates incurring in connection with or in relation to the EMC effecting any default recovery measures. Such estimate of costs and expenses shall be accompanied by a brief description or summary in writing of the default recovery measures which the EMC proposes to effect in respect of which such costs and expenses may be incurred.

9.9.3 The rule change panel shall consider each estimate of costs and expenses submitted for its approval by the EMC under section 9.9.2 and shall either:

9.9.3.1 approve such estimate of costs and expenses submitted by the EMC under section 9.9.2; or

9.9.3.2 decline to approve such estimate of costs and expenses submitted by the EMC under section 9.9.2; or

9.9.3.3 approve a lesser amount of costs and expenses than that stated in such estimate of costs and expenses submitted by the EMC under section 9.9.2;

and shall inform the EMC in writing of its decision.

9.9.4 If the rule change panel declines to approve any estimate, the EMC shall be released and discharged from its obligations to effect default recovery measures under section 9.8.1. If the rule change panel approves a lesser amount of costs and expenses pursuant to section 9.9.3.3, the EMC shall be obliged to effect default recovery measures under section 9.8.1 only to the extent of such lesser amount of costs and expenses so approved and shall released and discharged from its obligation to take any further action to effect, pursue or complete any default recovery measures to the extent that the same would result in the EMC incurring any costs or expenses in excess of the amount of costs and expenses so approved.

9.9.5 The EMC may recover from the non-defaulting market participants the costs and expenses for the time being incurred by the EMC in effecting any default recovery measures by way of one or more multiple default levies under section 9.10 as the EMC deems fit provided that, and only to the extent
that, such costs and expenses have been approved by the rule change panel under section 9.9.3.

9.9.6 If the estimate of costs and expenses (and its accompanying description or summary of the proposed default recovery measures) submitted by the EMC under section 9.9.2 relates to a defaulting market participant whose representative is a member of the rule change panel, the EMC and the other members of the rule change panel shall not disclose to that member of the rule change panel who is a representative of the relevant defaulting market participant any information relating to the default recovery measures proposed to be taken by the EMC. Such member of the rule change panel who is a representative of the relevant defaulting market participant shall not be entitled to attend, speak or vote at any meeting of the rule change panel convened for the purposes of this section 9.9.

9.10 MULTIPLE DEFAULT LEVY

9.10.1 Subject to section 9.8.4 and section 9.9, the EMC shall be entitled to recover, by means of the imposition of a multiple default levy on non-defaulting market participants in accordance with this section 9.10, the aggregate of any costs and expenses for the time being incurred by the EMC in connection with or in relation to the effecting of default recovery measures by the EMC.

9.10.2 Where costs and expenses have been incurred by the EMC in connection with or in relation to any default recovery measures and such costs and expenses have not been recovered from the defaulting market participant, the EMC may issue a notice of multiple default levy to the non-defaulting market participants, and in such notice shall identify:

9.10.2.1 the name of the defaulting market participant;

9.10.2.2 all the trading day(s) in respect of which the default(s) in payment by the defaulting market participant has occurred;

9.10.2.3 the amount of the multiple default levy, being (subject to section 9.9.5) the aggregate sum of the costs and expenses for the time being incurred by the EMC in connection with or in relation to such default recovery measures; and

9.10.2.4 the non-defaulting market participant's share of the multiple default levy, calculated in accordance with section 9.10.4.

9.10.3 The notice of multiple default levy shall be issued at least ten days prior to the date on which the invoice imposing the multiple default levy on non-defaulting market participants is issued by the EMC in accordance with section 9.10.5.
9.10.4 The amount of a *multiple default levy* shall be apportioned amongst all *non-defaulting market participants* to whom a notice of *multiple default levy* has been issued in accordance with section 9.10.2 by allocating to each *non-defaulting market participant* a share of the *multiple default levy* calculated as follows:

<table>
<thead>
<tr>
<th>[the amount of the <em>multiple default levy</em> x (the sum of the absolute value(s) of all of the <em>non-defaulting market participant’s net invoice amount(s)</em>, exclusive of any amounts payable on account of financial penalties or damages, for the <em>trading day(s)</em> to which the default(s) in payment by the <em>defaulting market participant</em> relates)]</th>
<th>divided by</th>
<th>the net transaction dollar amount</th>
</tr>
</thead>
</table>

where the net transaction dollar amount is:

| \[\sum \text{the absolute value, in dollars, of each *market participant’s* and each *market support services licensee’s net invoice amount(s)*, exclusive of any amounts payable on account of financial penalties or damages, for the *trading day(s)* to which the default(s) in payment by the *defaulting market participant* relates} \] | minus | \[\text{the absolute value, in dollars, of the *defaulting market participant’s net invoice amount(s)*, exclusive of any amounts payable on account of financial penalties or damages, for all such *trading day(s)* on which the default(s) occurred}\] |

9.10.5 Subject to section 9.10.3, within ten *business days* from the date on which a notice of *multiple default levy* is issued to a *non-defaulting market participant*, the *EMC* shall issue an invoice to each *non-defaulting market participant* comprising the amount of that *non-defaulting market participant’s share* of the *multiple default levy*. Each *non-defaulting market participant* shall pay to the *EMC* the invoice amount by the fourth *business day* following issuance of the invoice. If a *non-defaulting market participant’s share* of the *multiple default levy* is zero, the *EMC* shall not be required to issue any invoice imposing the *multiple default levy* to that *non-defaulting market participant*.

9.10.6 [Deleted and Intentionally Left Blank]
9.11 **VOLUNTARY FINANCIAL ASSISTANCE FOR DEFAULT RECOVERY MEASURES**

9.11.1 If the *rule change panel* declines to approve any estimate of costs and expenses submitted for its approval pursuant to section 9.9.3.2, any one or more *non-defaulting market participants*, who is or are liable to pay any amount under any *default levy* or *multiple default levy*, may request the *EMC* to effect, pursue and/or complete the *default recovery measures* proposed to be effected by the *EMC* as referred to in section 9.9.2.

9.11.2 If a *non-defaulting market participant* requests the *EMC*, and the *EMC* agrees, to effect, pursue and/or complete any *default recovery measures* under section 9.11.1, all costs and expenses which may be incurred by the *EMC* in effecting, pursuing and/or completing any such *default recovery measures* (other than any costs or expenses which may be recovered by way of *multiple default levies*) shall be borne by that *non-defaulting market participant* and the *non-defaulting market participant* shall pay to the *EMC* such amounts as the *EMC* may from time to time require to enable the *EMC* to meet all such costs and expenses which the *EMC* may incur or anticipates incurring. For the avoidance of doubt, the *EMC* may require all payments to be made by the *non-defaulting market participant* under this section, and such *non-defaulting market participant* shall make such payments, prior to the *EMC* effecting, or incurring any such costs or expenses in relation to effecting, any *default recovery measures* under section 9.11.1.

9.11.3 If two or more *non-defaulting market participants* request, and the *EMC* agrees, to effect, pursue and/or complete any *default recovery measures* under section 9.11.1, all costs and expenses which may be incurred by the *EMC* in effecting, pursuing and/or completing any such *default recovery measures* (other than any costs or expenses which may be recovered by way of *multiple default levies*) shall be borne by those *non-defaulting market participants* in such proportions as such *non-defaulting market participants* and the *EMC* may agree and such *non-defaulting market participants* shall pay to the *EMC* in their respective agreed proportions such amounts as the *EMC* may from time to time require to enable the *EMC* to meet all such costs and expenses which the *EMC* may incur or anticipates incurring. For the avoidance of doubt, the *EMC* may require all payments to be made by the *non-defaulting market participants* under this section, and such *non-defaulting market participants* shall make such payments, prior to the *EMC* effecting, or incurring any such costs or expenses in relation to effecting, any *default recovery measures* under section 9.11.1.

9.11.4 If the *EMC* effects any *default recovery measures* pursuant to the request of any *non-defaulting market participant* under this section 9.11, then notwithstanding section 9.8.2, any full or partial recovery of the *default amount*, *default interest*, and costs and expenses incurred by the *EMC* in respect of such *default recovery measures* shall:
9.11.4.1 first be applied towards the reimbursement of the non-defaulting 
market participant referred to in section 9.11.2 who effected 
payment to the EMC pursuant to section 9.11.2 to the extent of 
such payment or each of the non-defaulting market participants 
referred to in section 9.11.3 who effected payment to the EMC 
pursuant to section 9.11.3 to the extent of, and in proportion to, 
their respective payments; and 

9.11.4.2 any remaining amounts shall thereafter be distributed amongst 
the non-defaulting market participants in accordance with 
section 9.8.2.

10 EMC BUDGET

10.1.1 Subject to sections 10.1.2 and 10.1.8, the EMC shall, no less than 100 days 
prior to the beginning of each EMC fiscal year that commences after the 
market commencement date:

10.1.1.1 submit in such form and detail as may required by section 11 its 
proposed expenditure and revenue requirements for, and a 
schedule of the fees that it proposed to charge during, the 
following EMC fiscal year to the rules change panel for review; and 

10.1.1.2 publish notice of its proposed expenditure and revenue 
requirements for, and a schedule of the fees that it proposed to 
charge during, the following EMC fiscal year, inviting interested 
persons to make submissions with respect thereto to the rules 
change panel within the time prescribed in the notice.

10.1.2 Sections 10.1.1 and 11.1.1 shall not apply in respect of the first fiscal year 
of the EMC that commences after the market commencement date if:

10.1.2.1 the EMC has, prior to the market commencement date, 
obtained the approval of the Authority for its proposed 
expenditure and revenue requirements and of the schedule of 
fees that it proposes to charge; and 

10.1.2.2 the Authority has approved the proposed expenditure and 
revenue requirements and the schedule of fees referred to in 
section 10.1.2.1 and has consented to their being in effect for 
such first fiscal year.

10.1.3 The rules change panel shall review the EMC’s proposed statement of 
expenditure and revenue requirements for, and a schedule of the fees that 
it proposed to charge during, the applicable fiscal year:
10.1.3.1 using such procedures;
10.1.3.2 in consultation with such persons; and
10.1.3.3 by means of such meetings,
as it considers appropriate.

10.1.4 Following the conclusion of the review referred to in section 10.1.3, the rules change panel shall, within the time referred to in section 10.1.5, submit a written report to the EMC Board indicating:

10.1.4.1 the views of the rules change panel with respect to the subject-matter of the review; and
10.1.4.2 a summary of any material submissions filed pursuant to section 10.1.1.2.

10.1.5 The report referred to in section 10.1.4 shall be submitted to the EMC Board no later than the date that is 75 days before the beginning of the applicable EMC fiscal year.

10.1.6 The EMC shall publish and consider, but shall not be bound by, the contents of the report referred to in section 10.1.4 in finalising its proposed expenditure and revenue requirements for, and a schedule of the fees that it proposed to charge during, the fiscal year to which the report relates.

10.1.7 Where the EMC is required by its electricity licence to seek the approval of the Authority in respect of its proposed expenditure and revenue requirements for, or a schedule of the fees that it proposed to charge during, a given fiscal year, or both, the EMC shall provide the Authority with a copy of the report referred to in section 10.1.4 that relates to such fiscal year at the same time as it files with the Authority its proposed expenditure and revenue requirements for, or a schedule of the fees that it proposed to charge during, that fiscal year, or both.

10.1.8 Nothing in this section 10 or in section 11 shall be construed as requiring the EMC to submit to the rules change panel for review or to the Authority for approval any fees levied by the EMC that are:

10.1.8.1 calculated on the basis of a formula set forth in these market rules, including the price of any physical service and monthly energy uplift charges, but excluding the EMC’s administrative costs;
10.1.8.2 levied to recover the PSO’s administrative costs in accordance with section 4.2 of Chapter 7;
10.1.8.3 levied to recover amounts paid under contracted ancillary services contracts; or

10.1.8.4 levied in respect of vesting contracts.

11 APPROVAL AND PUBLICATION OF EMC BUDGET

11.1 Subject to sections 10.1.2 and 10.1.8, the EMC shall, no less than sixty days prior to the beginning of each EMC fiscal year that commences after the market commencement date, submit, in accordance with the requirements of this section 11:

11.1.1 its proposed expenditure and revenue requirements for; and

11.1.2 either:

a. a schedule of the fees that it proposes to charge during; or

b. a statement of the methodology that it proposes to use to determine the fees that it proposes to charge during,

the following EMC fiscal year to the Authority for approval.

11.2 Subject to the provisions of the EMC’s electricity licence and to any direction issued to the EMC by the Authority, the EMC’s proposed expenditure and revenue requirements referred to in section 11.1.1(a) shall include the following:

11.2.1 a statement of the revenues anticipated to be earned by the EMC in the applicable EMC fiscal year;

11.2.2 a statement of the costs anticipated to be incurred by the EMC in the applicable EMC fiscal year, in the aggregate;

11.2.3 a statement of the costs anticipated to be incurred by the EMC in the applicable EMC fiscal year for each of the EMC’s activities or services, classified into such categories as may be required or permitted by the Authority; and

11.2.4 an identification of the sources that are driving each of the costs referred to in section 11.2.3.
11.1.3 The proposed schedule of fees or statement of methodology referred to in section 11.1.1.2 shall be accompanied by the EMC’s assessment of the impact of the schedule of fees or methodology on:

11.1.3.1 each class of market participant;

11.1.3.2 market support services licensees as a class; and

11.1.3.3 any other classes of persons on whom the EMC proposes to levy fees.

11.1.4 The Authority shall notify the EMC of its approval or non-approval of the EMC’s proposed schedule of fees or statement of methodology, and shall provide reasons for any non-approval. Where the Authority does not grant its approval, the EMC shall submit revised proposed schedule of fees or statement of methodology until such time as the approval of the Authority is granted.

11.1.5 Where the Authority approves the EMC’s proposed schedule of fees or statement of methodology:

11.1.5.1 such schedule of fees or methodology shall apply and supersede any previous schedule of fees or methodology as of the date specified by the Authority when granting its approval; and

11.1.5.2 the EMC shall:

a. where the Authority has approved a statement of methodology rather than a schedule of fees, prepare where feasible a statement of fees determined on the basis and in accordance with the statement of methodology;

b. publish the proposed schedule of fees or statement of methodology, as the case may be, approved by the Authority and the statement of fees referred to in section 11.1.5.2(a);

c. make a copy of the documents referred to in section 11.1.5.2(b) available to any person on request; and

d. not, on or after the date referred to in section 11.1.5.1, charge to any person any fees other than fees that have been approved as part of a proposed schedule of fees approved by the Authority or that have been determined on the basis of and in accordance with a proposed statement of methodology approved by the Authority, as the case may be, without the further approval of the Authority.
11.1.6 Where section 10.1.2 applies, the EMC shall publish the schedule of fees referred to in that section, as approved by the Authority, as soon as reasonably practicable following the receipt of the Authority’s approval.

## 12 PSO BUDGET

12.1.1 The PSO shall, at least once every 3 fiscal years of the Authority (each fiscal year of the Authority referred to as “Authority fiscal year”, in this section 12 and in section 4.2.3 of Chapter 7), review the fees that the PSO proposes to charge for the recovery of the PSO’s administrative costs in respect of a period of no more than the next 3 consecutive Authority fiscal years (each such period referred to as “relevant fiscal period”). The PSO shall, no less than 60 days before the beginning of each relevant fiscal period, publish on the Authority’s web site:

12.1.1.1 the PSO’s proposed expenditure and revenue requirements, and a schedule of the fees that the PSO proposes to charge for the recovery of the PSO’s administrative costs, in respect of that relevant fiscal period, and

12.1.1.2 an invitation to all interested persons to make written submissions to the PSO in respect of such proposed expenditure and revenue requirements and schedule of fees, within a reasonable period specified in the invitation.

12.1.2 The PSO and the Authority shall consider, but shall not be bound by, the written submissions made pursuant to in section 12.1.1 in finalising the PSO’s expenditure and revenue requirements and schedule of fees for any relevant fiscal period to which the written submissions relates.

12.1.3 Once the Authority has finalised the PSO’s expenditure and revenue requirements and schedule of fees for a given relevant fiscal period, the PSO shall, prior to the start of that relevant fiscal period, publish on the Authority’s web site such finalised expenditure and revenue requirements and schedule of fees and provide a copy of such published schedule of fees to the EMC.

12.1.4 As soon as reasonably practicable after the end of each Authority fiscal year, the PSO shall determine whether, due to events, circumstances or factors not anticipated by the Authority or the PSO at the time that the PSO’s expenditure and revenue requirements and schedule of fees applicable to such Authority fiscal year were published pursuant to section 12.1.3, the PSO’s actual expenditure for such Authority fiscal year is:
12.1.4.1 more than the PSO’s published expenditure requirements applicable to such Authority fiscal year (referred to in this section 12 as “under-recovery”); or

12.1.4.2 less than the PSO’s published expenditure requirements applicable to such Authority fiscal year (referred to in this section 12 as “over-recovery”).

12.1.5 If there is any under-recovery or over-recovery as described in section 12.1.4, the PSO shall seek recovery of the under-recovery through increased PSO’s fees, or seek to apply the over-recovery towards reduction of PSO’s fees, over the remainder of the current relevant fiscal period, or such other longer period of time as the Authority may approve. If the prevailing schedule of fees for the remainder of the current relevant fiscal period is required to be revised for this purpose, the PSO shall, as soon as reasonably practicable, with the Authority’s approval, revise and publish on the Authority’s web site, the PSO’s revised expenditure and revenue requirements and schedule of fees. The PSO shall provide a copy of such published revised schedule of fees to the EMC. Each such revised schedule of fees shall, when published by the PSO, take effect with respect to the reminder of the current relevant fiscal period and shall, for the remainder of the current relevant fiscal period, supersede any prior schedule of fees published by the PSO in respect of the remainder of the current relevant fiscal period.