

ELECTRICITY INDUSTRY ACT 2004

ELECTRICITY INDUSTRY (WHOLESALE ELECTRICITY
MARKET) REGULATIONS 2004

WHOLESALE ELECTRICITY MARKET RULES

Reserve Capacity Procedure: Reserve Capacity Testing

Version ~~3~~4

Commencement: This Market Procedure is to have effect from 8:00am (WST) on the same date as the Wholesale Electricity Market Rule, in accordance with which this procedure is made, commences.

Version history

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1. Reserve Capacity Testing Procedure

Each year, the Independent Market Operator (IMO) is required to verify and test the operation of Facilities holding Capacity Credits to ensure that the Reserve Capacity Obligations of Market Participants are met. There are two methods by which the IMO may verify the operation of a Facility. In particular the:

- (a) first method is by observing the ~~Facility~~ generation system or Demand Side Programme ~~can~~ operate at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, the required level at least once as part of normal market operations ~~using Metered Schedules~~ as determined from Meter Data Submissions; and
- (b) second method is by System Management conducting a test on:
 - i. in the case of a generation system, the ~~Facilit~~ Facility's ability to operate at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, the required level for not less than 60 minutes; or
 - in the case of a Demand Side Programme, Interruptible Load or Dispatchable Load, the Facility's ability to ~~operate~~ reduce demand to a level equivalent to its -at the R-required Llevel, adjusted to the level of Capacity Credits currently held, for not less than one Trading Interval; or
 - ~~in the case of a Interruptible Load, Curtailable Load or and Dispatchable Load, the Facility's ability to reduce demand to the required level a level equivalent to its Required level, adjusted to the level of Capacity Credits currently held, for not less than one Trading Interval.~~ **[MR4.25.2]**
 - ii. ~~in the case of a Interruptible Load, Curtailable Load or and Dispatchable Load, the Facility's ability to reduce demand to the required level a level equivalent to its Required level, adjusted to the level of Capacity Credits currently held, for not less than one Trading Interval.~~ **[MR4.25.2]**

The IMO must verify the operation of each generation Facility at least twice a year, and each ~~Curtailable Load~~ Demand Side Programme once a year, within specified time periods, but may also conduct Facility verifications on an as required basis **[MR4.25.1]**.

The IMO notes that Intermittent Generators do not need to undertake Reserve Capacity Tests.

The assessment of the performance of each Facility is based on its Required Level determined in ~~MR~~ under ~~4.11.3B~~ clause 4.11.3B. The Required Level is defined from the Capacity Credits originally assigned to a Facility.

- For a Scheduled Generator, the Required Level is determined from the original Capacity Credits and the Temperature Dependence Curve for the Facility.
- For a Demand Side Programme, the Required Level is the Relevant Demand minus the original Capacity Credits.

The Capacity Credits may be reduced from the originally assigned level (for example, due to previous Reserve Capacity Tests or a voluntary Capacity Credit reduction). Consequently, for the purpose of Reserve Capacity Testing, the Required Level must be adjusted to the level of Capacity Credits currently held to reflect the Reserve Capacity obligations applicable to each Facility at the time of the test.

Market Participants may undertake as many self scheduled tests as they required to demonstrate the capability of their Facilities.

If a Facility's capability has not been demonstrated through a self-scheduled test, up to two tests are conducted. If a Facility fails the first test, a second test will be called. If the Facility fails the second test the IMO must reduce the number of Capacity Credits assigned to a Facility to:

- (a) in the case of a generation system, reflect the maximum capabilities achieved in either test performed (after an adjustment to the 41°C temperature equivalent values and allowing for the capability provided by operation on different types of fuels); or
- (b) in the case of a Dispatchable Load, ~~Curtable Load~~ Demand Side Programme or Interruptible Load, the maximum level of reduction achieved in either of the two tests **[MR4.25.4]**

~~Market Participants may undertake as many self scheduled tests as they required.~~

In the event that the IMO reduces the number of Capacity Credits associated with a Facility, the Market Participant may, subject to certain provisions, ask to have the Facility re-tested and have the Capacity Credits reassigned in the case that the Facility performs to a level equivalent to its Required Level.~~the relevant level~~. Decisions by the IMO in regard to verification by observation, and to tests, are not reviewable decisions under clause 2.17.1 of the Market Rules.

1.1. Relationship with the Market Rules

- (a) This Market Procedure for Reserve Capacity Testing (Procedure) has been developed in accordance with, and should be read in conjunction with, sections 4.25 and 4.25A of the Wholesale Electricity Market (WEM) Rules (Market Rules).
- (b) References to particular Market Rules within the procedure in bold and square brackets **[MR XX]** are current as at ~~21 April 2010~~ 1 July October 2011. These references are included for convenience only and are not part of this procedure.
- (c) This procedure is made in accordance with clause 4.25.14 and 4.25A.1 of the Market Rules.

1.2. Interpretation

In this procedure, unless the contrary intention is expressed:

- (a) terms used in this Procedure have the same meaning as those given in the Market Rules (made pursuant to the Electricity Industry (Wholesale Electricity Market) Regulations 2004);
- (b) to the extent that this Procedure is contrary or inconsistent with the Market Rules, the Market Rules shall prevail to the extent of the inconsistency;
- (c) a reference to the Market Rules or Market Procedures includes any associated forms required or contemplated by the Market Rules or Market Procedures; and

- (d) words expressed in the singular include the plural or vice versa.

1.3. Purpose

The purpose of this ~~P~~procedure is to describe the steps that:

- (a) the IMO must follow in performing the Reserve Capacity Testing and Verification Testing functions specified under the Market Rules; and
- (b) Market Participants and System Management must follow in fulfilling the Reserve Capacity Testing and Verification Testing functions under the Market Rules.

1.4. Application

This ~~P~~procedure applies to:

- (a) The IMO in conducting Reserve Capacity ~~verifications and~~ Tests;
- (b) Market Participants in complying with Reserve Capacity Tests; ~~and~~
- ~~(c)~~ System Management in conducting Reserve Capacity Tests;
- ~~(e)(d)~~ Market Participants when undertaking Verification Tests.

1.5. Associated Market Procedures

1 The following IMO Market Procedures are associated with this ~~P~~procedure:

- (a) Declaration of Bilateral Trades and the Reserve Capacity Auction;
- (b) Capacity Credit Allocation;
- (c) Reserve Capacity Security;
- (d) Reserve Capacity Performance Monitoring; and
- (e) Notices and Communications.

2. The following System Management Power System Operation Procedures are associated with this ~~P~~procedure:

- (a) Facility Outages.

1.6. Glossary and Defined Terms used in ~~this~~ this Market Procedure

1 **Invalid Test** is a test the results of which will be disregarded but which for the purposes of settlement will be considered to be a Reserve Capacity Test.

~~2~~ **Relevant Reserve Capacity Test Level** means:

- ~~(-)~~ ~~in the case of a generation system, the required Reserve Capacity level, in MW, net of any parasitic or embedded loads and determined by the IMO for~~

~~the purposes of conducting Reserve Capacity Tests under this procedure and section 4.25 of the Market Rules; or~~

~~in the case of a Curtailable Load, the reduction required to meet its maximum Reserve Capacity Obligation Quantity.~~

~~3~~2 **Request to Conduct Temperature Calibration** is the request made by the IMO to conduct a calibration of the Temperature Measurement Systems associated with a Facility.

~~3~~4 **Reserve Capacity Test** means a test conducted in accordance with clause(s) 4.25 of the Market Rules.

~~5~~4 **Temperature Measurement Consultant** means a consultant or organisation appointed by the IMO to conduct calibrations of the Temperature Measurement Systems.

~~6~~5 **Temperature Measurement Systems** means the sensors, systems and data used to measure ambient temperature at a Facility where the information is provided to System Management through the SCADA system.

~~7~~6 **Temperature Dependence Curve:** refers to the information provided by a Market Participant under clause 4.10.1(e)(i) of the Market Rules. If a change in Capacity Credits occurs over a Reserve Capacity Year, the Temperature Dependence Curve will be:

- (a) scaled to reflect the change in Capacity Credits at 41°C; or
- (b) changed to reflect a new ~~t~~Temperature ~~d~~Dependence ~~e~~Curve supplied by the Market Participant which has been determined by an independent engineering firm.

~~8~~7 **Summer Reserve Capacity Testing Cycle:** refers to 1 October to 31 March.

~~9~~8 **Winter Reserve Capacity Testing Cycle:** refers to 1 April to 30 September.

10 **Verification Test:** ~~t~~The ~~t~~Test that is required under clause 4.25A of the Market Rules to be undertaken ~~for~~ each Reserve Capacity Year for each registered Curtailable Load~~Demand Side Programme:~~

- (a) within 20 Business Days of registration of the ~~Curtailable Load~~Demand Side Programme, if applicable; or
- (b) between 1 October and 30 November ~~of each Reserve Capacity Year~~

1.7. Steps for the IMO and Market Participants to calibrate Temperature Measurement Systems used in association with SCADA

- 1 The IMO may require the Temperature Measurement Systems associated with any Facility subject to the testing requirements under Chapter 4 of the Market Rules be calibrated by an IMO appointed Temperature Measurement Consultant.
- 2 The IMO may appoint a Temperature Measurement Consultant each year to calibrate the temperature measurement systems associated with each generation Facility that nominates to use the SCADA Temperature Method.
- 3 If the IMO requires that the Temperature Measurement Consultant calibrate the Facility's Temperature Measurement System, the IMO must contact the relevant Market Participant in writing with a Request to Conduct Temperature Calibration.
- 4 The Request to Conduct Temperature Calibration must include the following information:
 - a) Information detailing the time and location of the proposed calibration; and
 - b) Details of the Temperature Measurement Consultant that will be conducting the calibration.
- 5 Within 2 Business Days of receiving the Request to Conduct Temperature Calibration, the Market Participant must contact the IMO to either:
 - a) accept the proposed time; or
 - b) subject to step 1.7.6, propose another time, which must be within 10 Business Days of the original request date.
- 6 The Market Participant must not refuse the Request to Conduct Temperature Calibration as proposed by the IMO unless the Market Participant believes the calibration may endanger person(s) or equipment at the time proposed.
- 7 The IMO must present the results of the temperature calibration to the Market Participant within 5 working days of receiving the results from the Temperature Measurement Consultant.
- 8 The Market Participant will be required to pay all costs associated with calibration of the Temperature Measurement Systems.

1.8. Steps for the IMO to verify facility outputs

- 1 Each year the IMO must take steps to verify that each Facility providing Capacity Credits can,
 - (a) in the case of a generation system, during the period the Reserve Capacity Obligations apply, operate at ~~its maximum Reserve Capacity Obligation~~ Quantity level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, at least once during each of the 6 month periods listed in Procedure step 1.8.2 below **[MR 4.25.1(a)]**.

- (b) in the case of a ~~Curtailed Load~~ Demand Side Programme, during the period the Reserve Capacity Obligations apply, ~~operate and during the period of availability of the Demand Side Programme as specified in respect of Certification of Reserve Capacity between noon and 8.00PM on all Business days [MR 4.10.1(f)(vi)]~~, decrease its consumption to operate at a level equivalent to its ~~maximum Reserve Capacity Obligation Quantity~~ Required Level, adjusted to the level of Capacity Credits currently held, at least once during the period between 1 October to 31 March each Capacity Year **[MR 4.25.1(c)]**.
- 2 The verification referred to in step 1.8.1(a) must be conducted at least once during each of the following periods **[MR 4.25.1(a)]**:
- (a) 1 October to 31 March (**The Summer Reserve Capacity Testing Cycle**); and
- (b) 1 April to 30 September (**The Winter Reserve Capacity Testing Cycle**).
- 3 The verifications conducted in accordance with step 1.8.1(a) must be conducted on each type of fuel available to that Facility as notified in the information provided in respect of Certification of Reserve Capacity required under clause 4.10.1(e)(v) of the Market Rules **[MR 4.25.1]**.
- 4 The verification referred to in steps 1.8.1 ~~through 1.8.2~~ can be achieved by the IMO:
- (a) in the case of a generation system:
- i. ~~by the IMO~~ observing the Facility operating at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, the required level for at least one interval during the six month period as part of normal operations ~~in Metered Schedules specific to the Facility as determined from Meter Data Submissions~~; or
- (a)ii. requiring System Management to test the Facility's ability to operate at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, the required level for not less than 60 minutes and the Facility successfully passing that test; or
- (b) ~~by the IMO~~ in the case of a Demand Side Programme:
- i. ~~in the case of a generation system, requiring System Management in accordance with clause 4.25.7 to test the Facility's ability to operate at the required level for not less than 60 minutes and the Facility successfully passing that test; (or requiring System Management to test the Facility's ability to operate at the required level for 60 minutes, and the Facility successfully passing the test); and~~
- i. in the case of a Demand Side Programme, observing the Facility operate at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, the required level at least once in a response to an activation of the Facility by the relevant Market Customer as measured in metered consumption; ~~or~~
- ii. requiring System Management to test the Facility's ability to reduce demand to a level equivalent to its Required Level, adjusted to the level

of Capacity Credits currently held, the required level for at least one Trading Interval, and the Facility successfully passing that test); and/or

~~ii.(c)~~ in the case of Interruptible Loads, ~~Curtaillable Loads~~ and Dispatchable Loads, requiring System Management, in accordance with clause 4.25.7, to test the Facility's ability to reduce demand to a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, the required level for not less than one Trading Interval and the Facility successfully passing that test **[MR4.25.2]**.

~~5~~ Relevant Reserve Capacity Test Level will be set:

~~(a)~~ in the case of a generation system, to the output required to meet the Reserve Capacity Obligation Quantity at 41°C using the Temperature Dependence Curve and the temperature measurement method specified in Standing Data;

~~(a)~~ in the case of a Curtaillable Load Demand Side Programme assigned Capacity Credits in accordance with clause 4.10.1(f)(i)(1), to the Relevant Demand minus the Reserve Capacity Obligations held by that Facility; and

~~—~~ in the case of a Curtaillable Load Demand Side Programme assigned Capacity Credits in accordance with clause 4.10.1(f)(i)(2), to the Stipulated Default Load plus the Reserve Capacity Obligations held by that Facility **[MR4.25.2]**

~~65~~ For the purposes of Reserve Capacity Testing, the term Relevant Reserve Capacity Test The Required Level will be used to describe the required level referred to in step 1.8.5 above. The Relevant Reserve Capacity Test Level for a Scheduled Generator in Trading Interval t will be determined by the IMO and may be different for different Trading Intervals. For example, the Relevant Reserve Capacity Test Level may vary with ambient temperature at the Facility as:

$$\frac{CC(t) \times TDC(Temp(t))}{TDC(41^\circ C)}$$

where

CC(t) is the number of Capacity Credits held for Trading Interval t;

Temp(t) is the temperature during Trading Interval t, measured according to the method specified in Standing Data;

TDC(Temp) is the Facility output indicated in the Temperature Dependence Curve at temperature Temp; and

TDC(41°C) is the Facility output indicated in the Temperature Dependence Curve at a temperature of 41°C.

~~-6~~ AA generation ~~The Facility will~~ will be deemed by the IMO to have:

~~(a)~~ following a test by System Management under step 1.8.4(a)(i):

~~(a)~~ (i) passed a Reserve Capacity Test if, on average for any two consecutive Trading Intervals during the period of the test, the output is at or above the output specified in the Temperature Dependence

~~Curve for the ambient temperature measures at the site~~ Required Level calculated in accordance with step 1.8.5;

(b) (ii) passed a Reserve Capacity Test if the output of the Facility is at or above the output required at the highest point of the Temperature Dependence Curve where the ambient temperature measured at the site exceeds the largest value supplied in the Temperature Dependence Curve;

(c) (iii) failed a Reserve Capacity Test if the ambient temperature is below the lower bound of the Temperature Dependence Curves submitted as part of the Certification of Reserve Capacity for the Facility; and

(iv) failed a Reserve Capacity Test if, on average for all sets of two consecutive Trading Intervals during the period of the test, the output is below the output specified in the Temperature Dependence Curve for the ambient temperature measures at the site Required Level calculated in accordance with step 1.8.5; or

(b) following a self-test under step 1.8.4(a)(ii):

(i) passed a Reserve Capacity Test verified by observation if the output is at or above the Required Level calculated in accordance with step 1.8.5 for one Trading Interval; and

(ii) passed a Reserve Capacity Test verified by observation if the output of the Facility is at or above the output required at the highest point of the Temperature Dependence Curve where the ambient temperature measured at the site exceeds the largest value supplied in the Temperature Dependence Curve.

(c) —

7.7 AA Demand Side Programme will be deemed by the IMO to have:

(a) following a test by System Management under step 1.8.4(b)(i):

(i) passed a Reserve Capacity Test if its Demand Side Programme Load is at or below the Required Level, adjusted to the level of Capacity Credits currently held, for one Trading Interval during the period of the test; and

(ii) failed a Reserve Capacity Test if its Demand Side Programme Load is above the Required Level, adjusted to the level of Capacity Credits currently held, for all Trading Intervals during the period of the test; or

(b) following a self-test under step 1.8.4(b)(ii) in a Trading Interval for which notification has been provided under step 1.11.1, passed a Reserve Capacity Test verified by observation if its Demand Side Programme Load is at or below the Required Level, adjusted to the level of Capacity Credits currently held.

- ~~78~~ A Market Participant may update the Temperature Dependence Curve associated with a Facility at any time before they have been tested by observation in respect of a [Summer Reserve Capacity Testing Cycle](#) or [Winter Reserve Capacity Testing Cycle](#) by submitting a new Temperature Dependence Curve determined by an independent engineering firm.
- ~~89~~ The IMO must not subject a Facility to a test of Reserve Capacity if that Facility ~~is~~ **[MR 4.25.3A]**:
- (a) ~~is~~ undergoing a Scheduled Outage or Opportunistic Maintenance which has been approved in accordance with clause 3.19 of the Market Rules; ~~or~~
 - (b) ~~if the Facility~~ has advised System Management of a Forced Outage or Consequential Outage in accordance with clause 3.21.4 of the Market Rules; or
 - (c) ~~if the Facility~~ is undergoing a [Commissioning Test](#) approved in accordance with clause 3.21A of the Market Rules.
- ~~910~~ If a Facility fails a Reserve Capacity Test when the temperature measured by the temperature method specified in the relevant ~~Facility's~~ [Standing Data](#) is outside of the range 0 - 45 °C, then the IMO will consider that test to be [an Invalid Test](#).
- ~~1011~~ If a test is deemed [to be an Invalid Test](#) under step 1.8.~~910~~ then the IMO must request System Management re-conduct the test as soon as is practicable, with consideration to the timelines in clause 4.25.1, 4.25.4, 4.25.5 and 4.25.6 of the Market Rules.
- ~~1112~~ If a Test is deemed to be [an Invalid Test](#) under step 1.8.~~910~~ and another test has already been completed in accordance with [step 1.10.12](#) or [1.10.16](#), then the IMO must:
- (a) use the results of the latest test in place of the ~~Invalid Test~~, if ~~the Invalid Test~~ [a test](#) is still required; or
 - (b) ignore the results of the latest test, if ~~the Invalid Test~~ [a test](#) is no longer required.
- ~~1213~~ If a Facility cannot be tested due to restrictions imposed by the timelines in clauses 4.25.1, 4.25.4, 4.25.5 and 4.25.6 of the Market Rules, the IMO will:
- (a) in the case of the first Reserve Capacity Test not being able to be completed within the relevant Reserve Capacity Testing cycle, conduct the tests as soon as practicable in the next Reserve Capacity Testing cycle;
 - (b) in the case of the second Reserve Capacity Test not being able to be completed within 14-28 days after the first test, request System Management to re-conduct the first test, in accordance with steps 1.9 and 1.10; or
 - (c) in the case of the third Reserve Capacity Test ("[re-test](#)") not being able to be completed within 7 days, liaise with the Market Participant to determine a period during which the ~~third Reserve Capacity Test~~ [re-test](#) can be conducted.

1.9. Steps for the IMO to Verify by Observation

- 1 In accordance with step 1.8.1, the IMO may use information gathered through the Wholesale Electricity Market System (WEMS) to observe a ~~generation~~ Facility operating at ~~the a level equivalent to its required level~~ Required Level, adjusted to the level of Capacity Credits currently held. -as part of normal operations.
 - 2 The IMO may verify the capability of a Facility by observation within a testing cycle until System Management conducts a test for that Facility. Verification by observation will be performed using the meter data available to the IMO up until the time that System Management commences a test.
- ~~To verify by observation, the IMO must use temperature dependence information submitted by the Market Participant under clause 4.10.1(e) (i) of the Market Rules.~~
- 3 The IMO must refer to the temperature measurement source specified by the Market Participant under clause 4.10.1 (e)(iv) when determining the ambient temperature at the site of ~~the a~~ generation Facility. Where no temperature source is specified the Market Participant must notify the IMO of a ~~T~~ temperature source before the start of the ~~Reserve~~ Capacity Year.
 - 4 To verify that a generation Facility has operated at a level equivalent to its Relevant Reserve Capacity Test Level ~~Required Level, adjusted to the level of Capacity Credits currently held, as,~~ calculated in accordance with step 1.8.5, the IMO must use the information contained in the WEMS, together with the temperature information, to determine the operating output and ambient temperature relationship of the Facility.
 - 5 The IMO must assess the results obtained ~~through in~~ steps 1.9.1 through 1.9.3-4 and determine if the generation Facility operated at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held ~~achieved its Relevant Reserve Capacity Test Level~~ Required Level, as calculated in accordance with step 1.8.5, through the temperature range observed.
 - 6 To verify by observation the performance of a Demand Side Programme performing a self-scheduled test, the IMO must only consider the performance in a Trading Interval for which the IMO and System Management have been provided with notice by the Market Participant in accordance with step 1.11.1 ~~no later than 2 Business Days prior to the commencement of the Trading Day during which the test will take place.~~
 - 67 Following verification by observation the IMO may request a Reserve Capacity Test if the IMO is unable to determine in accordance with this Procedure that the Facility was able to operate at a level equivalent to its Relevant Reserve Capacity Test Level ~~Required Level, adjusted to the level of Capacity Credits currently held,~~ ~~for part or all of the by observation~~ during the verification by observation process.
 - 7 ~~The IMO must between 1 October and 31 March request a Reserve Capacity Test of each Curtailable Load~~ Demand Side Programme [MR4.25.1].
 - 8 If the IMO requests a Reserve Capacity Test in accordance with step 1.9.67 the IMO must provide the Market Participant with a summary of results obtained in step 1.9.45.

- 9 The IMO must compile and maintain a list of Facilities whose ~~operation~~ have undergone the verification by observation process and must keep records of outcomes of the verification process.

1.10. Steps for the IMO and System Management to Conduct a Reserve Capacity Test

- 1 Reserve Capacity Tests may be conducted if:
- (a) The IMO determines the most appropriate course of action is to request System Management to test the Facility in accordance with clause 4.25.2 (a)(ii) 4.25.2(b)(ii) or 4.25.2(c) ~~(b)~~ of the Market Rules;
 - (b) The IMO determines that the operation of the Facility has not passed the ~~V~~erification by ~~O~~bservation process detailed at step 1.9;
 - (c) The IMO requires that a Reserve Capacity Test be conducted by System Management in respect of any Network Control Service Contract, Ancillary Service Contract as required under the Market Rules;
 - (d) The IMO requires System Management to conduct a re-test in accordance with clause 4.25.4 of the Market Rules; or
 - (e) A Market Participant requests a re-test in accordance with clause 4.25.5 of the Market Rules.
- 2 In the case that the IMO requires a Reserve Capacity Test to be conducted on a Facility, the IMO must contact System Management requesting that the test be conducted.
- 3 In requesting System Management to conduct a test, the IMO must provide System Management with the following information:
- (a) The details of the Facility to be tested;
 - (b) the fuel to be used by the Facility during the test, where applicable; and
 - (c) the time interval during which the test is proposed to be conducted, where this interval must begin not less than two Business Days after the time the IMO issues the request to System Management **[MR4.25.7]**.
- 4 All information regarding the request for the test must be treated by System Management as Confidential.
- 5 If the IMO requests System Management to conduct a Reserve Capacity Test, System Management must conduct the test in accordance with the requirements as outlined in clause 4.25.9 of the Market Rules.
- 6 System Management must notify the IMO within one Business Day as to whether it is possible to conduct a test requested under step 1.10.5 with out endangering Power System Security and Power System Reliability. **[MR4.25.8]**
- 7 System Management must provide the IMO with:
- (a) justification as to why the test cannot be conducted; and

- (b) an alternative time interval during which the test will be conducted, where this must be the earliest time that the test can be performed without endangering Power System Security and Power System Reliability. **[MR4.25.8]**

8 When the IMO receives the results of the test from System Management, metering data for the Facility and, where applicable, temperature data for the Facility, the IMO must, within 10 Business Days, ~~determine whether the Facility has operated at the Relevant Reserve Capacity Test Level(s) and~~ make a determination that the Facility has either passed or failed the Reserve Capacity Test in accordance with clause 4.25.3A and steps 1.8.6 and 1.8.7.

9 The IMO must record the results of the test including:

- (a) Information regarding the conduct of the Reserve Capacity Test;
- (b) Information regarding the results of the Reserve Capacity Test;
- (c) The determination of the outcome of the Reserve Capacity Test (passed or failed); and
- (d) Information regarding any action taken in accordance with steps 1.10.11, 1.10.14 and 1.10.16, as applicable.

10 In the event that the IMO determines the Facility has passed the Reserve Capacity Test, the IMO must inform the Market Participant that the Facility has passed, and provide the Market Participant with a copy of the results produced. This must be completed within 10 Business Days of the date the IMO receives notification of the test results from System Management, metering data for the Facility and, where applicable, temperature data for the Facility.

11 In the event that the IMO determines the Facility has failed the Reserve Capacity Test, the IMO must:

- (a) ~~inform~~ the Market Participant that the Facility has failed the Reserve Capacity Test;
- (b) provide the Market Participant with a copy of the results produced;
- (c) require System Management re-test the Facility in accordance with step 1.10.12 below.

12 In the event that a re-test is required in accordance with step 1.10.11(c), System Management must re-test that Facility **[MR 4.25.4]**:

- (a) not earlier than 14 days after the first test; and
- (b) not later than 28 days after the first test.

13 If a ~~Curtailable Load~~ Demand Side Programme fails a Reserve Capacity Test under clause 4.25.2(b)(ii) and is ~~activated~~ issued a Dispatch Instruction to decrease its consumption by a quantity equivalent to its maximum Reserve Capacity Obligation Quantity to a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, for not less than one Trading Interval prior to a second Reserve Capacity Test being undertaken then the activation shall be deemed to be the second Reserve Capacity Test. **[MR4.25.3B]**.

- 14 If a Facility fails the second Reserve Capacity Test (the re-test) outlined in steps 1.10.11 and 1.10.12 then, from the ~~next Trading Day~~ second Trading Day following the Scheduling Day on which the IMO determines that the second test was failed the IMO must:
- (a) if the test related to a generation system, reduce the number of Capacity Credits held by the relevant Market Participant for that Facility to reflect the maximum capability achieved in either of the tests performed (after adjusting these results to the equivalent values at a temperature of 41°C and allowing for the capability provided by operation on different types of fuels if the test related to a generation system; or
 - (b) if the test related to a Dispatchable Load, ~~Curtailable Load~~ Demand Side Programme or Interruptible Load, reduce the number of Capacity Credits held by the relevant Market Participant for that Facility to the maximum level of reduction achieved in either of the two tests **[MR4.25.4]**.
- 15 In the case that the Capacity Credits are reduced in accordance with step 1.10.14 a Market Participant may apply to the IMO to have the Facility re-tested (the third test) subject to the following conditions:
- (a) The Facility may only be re-tested once in accordance with step 1.10.12 during the remaining Reserve Capacity Cycle **[MR 4.25.5]**.
 - (b) The IMO must request System Management to conduct the re-test within seven days from receiving the request from the Market Participant **[MR 4.25.5]**.
 - (c) System Management must undertake the re-test in accordance with this Procedure and the Market Rules.
 - (d) The IMO must set the number of Capacity Credits held by the relevant Market Participant for that Facility to reflect the maximum capabilities achieved in the re-test (after adjusting these results to the equivalent values at a temperature of 41°C and allowing for the capability provided by operation on different types of fuel), but not to exceed the number of Capacity Credits originally confirmed by the IMO for that Facility under clause 4.20 of the Market Rules in respect of the relevant Reserve Capacity Cycle **[MR 4.25.6]**.
- 16 If a Reserve Capacity re-test is conducted in accordance with step 1.10.12, the IMO must determine the outcome (step 1.10.8), record the results (step 1.10.9) and notify the Market Participant in accordance with steps 1.10.11(a) and 1.10.11(b), as appropriate.
- 17 Where a Facility is tested, excluding a Demand Side Programme, the Dispatch Schedule for that Facility during the period of the test is to reflect the energy scheduled in the test **[MR 4.25.10]**.
- 18 The IMO will deem a Reserve Capacity Test to be an Invalid Test if:
- (a) a Facility fails a Reserve Capacity Test when the temperature measured by the temperature method specified in the standing data for the Facility is outside of the range 0 -45°C; or

- (b) the IMO considers that an error was made in the determination of the results of any Reserve Capacity Test
- 19 If a test is deemed to be an Invalid Test under step 1.10.18 then the IMO must request System Management to conduct the test again as soon as is practicable, taking into account the timelines in clauses 4.25.1, 4.25.4, 4.25.5 and 4.25.6 of the Market Rules.
- 20 If a test is deemed to be an Invalid Test under step 1.10.18 and another test has already been completed in accordance with steps 1.10.12 or 1.10.16 then the IMO must:
- (a) use the results of the latest test in place of the Invalid Test results; or
- (b) if the Invalid Test is no longer required, ignore the results of the latest test.
- 21 If a Facility cannot be tested due to restrictions imposed by the timelines in clauses 4.25.1, 4.25.4, 4.25.5 and 4.25.6 of the Market Rules, the IMO will:
- (a) in the case of the first Reserve Capacity Test not being able to be completed within the relevant Reserve Capacity Testing cycle, conduct the tests as soon as practicable in the next Reserve Capacity Testing cycle;
- (b) in the case of the second Reserve Capacity Test not being able to be completed within 14-28 days after the first test, request System Management to re-conduct the first test, in accordance with steps 1.9 and 1.10; or
- (c) in the case of the third Reserve Capacity Test not being able to be completed within 7 days, liaise with the Market Participant to determine a period during which the third Reserve Capacity Test can be repeated.

1.11. Steps for the Market Participant

1 If a Market ~~Customer~~ Participant chooses to self-schedule a test for a Demand Side Programme, it must notify the IMO and System Management ~~at least 24 hours~~ no later than 2 Business Days prior to the commencement of the Trading Day during which ~~that~~ the test will take place, advising:

(a) the identify of the Demand Side Programme that will be tested;

(b) the Trading Interval(s) in which the test will be conducted; and

(c) the expected reduction in Demand Side Programme Load from the Relevant Demand.

The results of the test will only be considered by the IMO if this notification is sent.

+2 If the Market Participant is contacted by the IMO with results of a Reserve Capacity Test that indicate that the IMO determined a Facility to have failed a test, ~~the Market Participant can expect~~ a second test be conducted between 14 and 28 days from the first test [MR4.25.4].

23 If the Market Participant is contacted by the IMO with the results of the second Reserve Capacity Test, which indicate that the IMO determined a Facility to have failed a Reserve Capacity Test, the Market Participant ~~may also expect~~ will also be

~~notification-notified~~ that the Capacity Credits in respect of that Facility ~~have been~~will be ~~reduced~~ and the date from which the reduction will occur.

~~34~~ In the event that the Market Participant is notified by the IMO that the Capacity Credits in respect of a Facility has been reduced as a result of the Reserve Capacity Testing process, then the Market Participant may request that the IMO conduct a re-test [MR 4.25.5].

~~45~~ The Market Participant may only request a re-test once during the remaining Reserve Capacity Cycle. [MR4.25.5]

~~56~~ The re-test ~~is~~ performed at the request of the Market Participant in accordance with steps 1.11.~~3-4~~ and 1.11.~~4-5~~ should be performed by System Management within seven days of the IMO receiving the request, subject to the provisions of this Procedure.

~~7~~ Following a re-test requested by a Market Participant in accordance with steps 1.11.4 and 1.11.5, the IMO must set the number of Capacity Credits for that Facility to reflect the maximum output over two consecutive Trading Intervals during the period of the test (after adjusting these results to the equivalent values at a temperature of 41°C and allowing for the capability provided by operation on different types of fuel), but not to exceed the number of Capacity Credits originally confirmed by the IMO for that Facility in respect of the relevant Reserve Capacity Cycle. The setting of Capacity Credits must occur within 2 Business Days of the re-test result being determined.

~~68~~ If the Market Participant considers an error has been made by the IMO in the calculation of the Required Level, adjusted to the level of Capacity Credits currently held, ~~Relevant Reserve Capacity test level~~ of a Facility in either a test or by observation, it can request the IMO to review the results of the test. If the IMO determines that an error has been made then the test result will be ~~deemed to be an Invalid Test~~re-determined.

1.12. Steps for the IMO to publish the results of Reserve Capacity Tests

- 1 Every three months the IMO must publish details of [MR 4.25.11]:
 - (a) Facilities tested during the preceding three months; and
 - (b) whether any of those tests were delayed by System Management and the reasons for the delay as given by System Management.
- 2 The details published in accordance with step 1.12.1 must be published on the IMO Website (www.imowa.com.au) or in the WEMS as appropriate.

1.13. Steps for the IMO when setting the level of Certified Reserve Capacity and Reserve Capacity Obligation Quantities

Each year, Market Participants are required to re-certify the capacity of their Facilities (apply for Certification of Reserve Capacity). Under clause 4.11 of the Market Rules and the Market Procedure: Certification of Reserve Capacity, the IMO is required to set the level of Certified Reserve Capacity assigned to a Facility for facilities that have been tested in accordance

with this ~~Market~~ Procedure. This decision is not a reviewable decision under the Market Rules.

- 1 Each year, the IMO must use the information, data and results obtained from Reserve Capacity Tests and ~~V~~verification by ~~O~~observation when considering the level of Certified Reserve Capacity assigned to a Facility.
- 2 The IMO may reduce~~;~~ the level of Certified Reserve Capacity in respect of an application for Certification of Reserve Capacity if the IMO believes the results obtained through the Reserve Capacity Tests in conjunction with the level of Certified Reserve Capacity being applied for
 - (a) constitutes a *potentially limiting factor* in accordance with the Reserve Capacity Procedure: Certification of Reserve Capacity; and/or
 - (b) if the IMO believes the level of Certified Reserve Capacity being applied for exceeds the IMO's reasonable expectation that the amount of capacity likely to be available in accordance with clause 4.11.1(a) of the Market Rules.
- 3 The IMO may use the information, data and results obtained from Reserve Capacity Tests and ~~V~~verification by ~~O~~observation when setting the Reserve Capacity Obligation Quantities in respect of that Facility in subsequent Reserve Capacity Cycles **[MR 4.25.12]**.

1.14. Steps for the IMO for Verification of a **Curtailable Load** Demand Side Programme

- 1 In each Reserve Capacity Year, a ~~A-Rule Participant~~ Market Customer must undertake a Verification Test of each Curtailable Load Demand Side Programme registered ~~by the Rule Participant~~ to the Market Customer:
 - ~~—~~ a) within 20 Business Days of registration of the **Curtailable Load** Demand Side Programme, if applicable, or
 - ~~—~~ (b) between 1 October and 30 November ~~of each Reserve Capacity Year~~~~—~~ **[MR4.25A.1]**.
- 2 To undertake a Verification Test the ~~Rule Participant~~ Market Customer will activate the Curtailable Load Demand Side Programme and ~~advise~~ provide evidence acceptable to satisfactory to the IMO of the Trading Intervals during which the Verification Test was conducted **[MR4.25A.2]**.
- 3 A Market Participant must notify the IMO and System Management no later than 2 Business Days prior to the commencement of the Trading Day during which a Verification Test will take place, advising:

- (a) the identify of the Demand Side Programme that will be tested;
- (b) the Trading Interval(s) in which the Verification Test will be conducted; and
- (c) the expected reduction in Demand Side Programme Load from the Relevant Demand.

The results of the Verification Test will only be considered by the IMO if this notification is sent.

- 34 ~~The~~ A Demand Side Programme will be deemed to have failed the Verification Test ~~is failed if~~ unless a reduction in demand equal to at least 10% of the Capacity Credits, when measured against the Demand Side Programme's Relevant Demand is not identified from the ~~Curtable~~ Demand Side Programme Load ~~meter data~~ associated with that Demand Side Programme [MR4.25A.3].
- 45 Where a Demand Side Programme fails a Verification Test ~~is failed~~ the IMO must reduce the Capacity Credits assigned to the ~~Curtable Load~~ Demand Side Programme to zero from the second Trading Day following the Scheduling Day on which the IMO determines that the Verification Test was failed. [MR4.25A.4].
- 56 Where ~~the~~ a Demand Side Programme fails a Verification Test ~~is failed~~, the ~~Rule Participant~~ relevant Market Customer ~~Participant~~ may request that a second Verification Test be undertaken. If the Demand Curtable Load ~~Demand Side Programme~~ fails ~~this~~ the second Verification Test then the Capacity Credits assigned to the Demand Side Programme are to remain at zero until the end of the relevant Reserve Capacity Year [MR4.25A.5].