

MARKET PROCEDURE: RESERVE CAPACITY TESTING

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CHAPTER 1. RESERVE CAPACITY TESTING PROCEDURE

Each year, the AEMO 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 AEMO may verify the operation of a Facility. In particular the:

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

AEMO must verify the operation of each generation Facility at least twice a year, and each Demand Side Programme once a year, within specified time periods, but may also conduct Facility verifications on an as required basis **[Clause MR4.25.1]**. AEMO 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 under 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 require 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 AEMO 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, Demand Side Programme or Interruptible Load, the maximum level of reduction achieved in either of the two tests **[Clause MR4.25.4]**

In the event that AEMO 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. Decisions by AEMO 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, section 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 10 December 2014. 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 Procedure is to describe the steps that:

- (a) AEMO 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 Procedure applies to:

- (a) AEMO in conducting Reserve Capacity Tests;
- (b) Market Participants in complying with Reserve Capacity Tests; and
- (c) ~~System Management in conducting Reserve Capacity Tests;~~ [Blank]
- (d) Market Participants when undertaking Verification Tests.

1.5. Associated Market Procedures

1.5.1. The following Market Procedures are associated with this 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.

1.5.2. The following ~~System Management~~ Power System Operation Procedures are associated with this Procedure:

- (a) Facility Outages.

1.6. Terminologies and Definitions

Table 1 Glossary and Defined Terms

Term	Definition
Invalid Test	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
Request to Conduct Temperature Calibration	Request to Conduct Temperature Calibration is the request made by AEMO to conduct a calibration of the Temperature Measurement Systems associated with a Facility.
Reserve Capacity Test	Reserve Capacity Test means a test conducted in accordance with clause(s) 4.25 of the Market Rules.
Temperature Measurement Consultant	Temperature Measurement Consultant means a consultant or organisation appointed by AEMO to conduct calibrations of the Temperature Measurement Systems.
Temperature Measurement Systems	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 AEMO through the SCADA system.
Temperature Dependence Curve	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: <ul style="list-style-type: none"> (a) scaled to reflect the change in Capacity Credits at 41°C; or (b) changed to reflect a new Temperature Dependence Curve supplied by the Market Participant which has been determined by an independent engineering firm.
Summer Reserve Capacity Testing Cycle	Summer Reserve Capacity Testing Cycle: refers to 1 October to 31 March.
Winter Reserve Capacity Testing Cycle	Winter Reserve Capacity Testing Cycle: refers to 1 April to 30 September.
Verification Test	Verification Test: the test that is required under clause 4.25A of the Market Rules to be undertaken each Reserve Capacity Year for each registered Demand Side Programme: <ul style="list-style-type: none"> (a) within 20 Business Days of registration of the Demand Side Programme, if applicable; or (b) between 1 October and 30 November.

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

- 1.7.1. AEMO 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 AEMO appointed Temperature Measurement Consultant.
- 1.7.2. AEMO 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.
- 1.7.3. If AEMO requires that the Temperature Measurement Consultant calibrate the Facility's Temperature Measurement System, AEMO must contact the relevant Market Participant in writing with a Request to Conduct Temperature Calibration.
- 1.7.4. 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.
- 1.7.5. Within 2 Business Days of receiving the Request to Conduct Temperature Calibration, the Market Participant must contact AEMO 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.
- 1.7.6. The Market Participant must not refuse the Request to Conduct Temperature Calibration as proposed by AEMO unless the Market Participant believes the calibration may endanger person(s) or equipment at the time proposed.
- 1.7.7. AEMO 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.
- 1.7.8. The Market Participant will be required to pay all costs associated with calibration of the Temperature Measurement Systems.

1.8. Steps for AEMO to verify facility outputs

- 1.8.1. Each year AEMO 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 a 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-Clause 4.25.1(a)]**.
 - (b) in the case of a Demand Side Programme, during the period the Reserve Capacity Obligations apply, and during the period of availability of the Demand Side Programme as specified in respect of Certification of Reserve Capacity, decrease its consumption to operate at a level equivalent to its 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 **[ClauseMR 4.25.1(c)]**.

- 1.8.2. The verification referred to in step 1.8.1(a) must be conducted at least once during each of the following periods **[ClauseMR 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).
- 1.8.3. 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 **[ClauseMR 4.25.1]**.
- 1.8.4. The verification referred to in step 1.8.1 can be achieved by AEMO:
- (a) in the case of a generation system:
 - (i) observing the Facility operating at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, for at least one interval during the six month period as part of normal operations as determined from Meter Data Submissions; or
 - (ii) ~~requiring System Management to testing (in its capacity as System Management)~~ the Facility's ability to operate at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, for not less than 60 minutes and the Facility successfully passing that test; or
 - (b) in the case of a Demand Side Programme:
 - (i) observing the Facility operate at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, at least once in response to an activation of the Facility by the relevant Market Customer as measured in metered consumption; or
 - (ii) ~~requiring System Management to testing (in its capacity as System Management)~~ the Facility's ability to reduce demand to a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, for at least one Trading Interval, and the Facility successfully passing that test; or
 - (c) in the case of Interruptible Loads and Dispatchable Loads, ~~requiring System Management, in accordance with clause 4.25.7, to testing (in its capacity as System Management)~~ the Facility's ability to reduce demand to a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, for not less than one Trading Interval and the Facility successfully passing that test **[Clause MR4.25.2]**.
- 1.8.5. The Required Level for a Scheduled Generator in Trading Interval t will be determined as:
- $$CC(t) \times TDC(\text{Temp}(t)) / TDC(41^\circ\text{C})$$

Where:

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

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

$TDC(\text{Temp})$ 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.

1.8.6. A generation Facility will be deemed by AEMO to have:

- (a) following a test by AEMO (in its capacity as System Management) under step 1.8.4(a)(ii):
 - (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 Required Level calculated in accordance with step 1.8.5;
 - (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;
 - (iii) failed a Reserve Capacity Test if the ambient temperature is below the lower bound of the Temperature Dependence Curve; 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 Required Level calculated in accordance with step 1.8.5; or
- (b) following a self-test under step 1.8.4(a)(ii):
 - (i) 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) 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.

1.8.7. A Demand Side Programme will be deemed by AEMO to have:

- (a) following a test by AEMO (in its capacity as System Management) under step 1.8.4(b)(ii):
 - (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, 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.

1.8.8. 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.

1.8.9. AEMO must not subject a Facility to a test of Reserve Capacity if that Facility **[ClauseMR 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;

- (b) has advised ~~System Management~~ AEMO (in its capacity as System Management) of a Forced Outage or Consequential Outage in accordance with clause 3.21.4 of the Market Rules; or
 - (c) is undergoing a Commissioning Test approved in accordance with clause 3.21A of the Market Rules.
- 1.8.10. 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 AEMO will consider that test to be an Invalid Test.
- 1.8.11. If a test is deemed to be an Invalid Test under step 1.8.10 then AEMO (including in its capacity as System Management) 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.
- 1.8.12. If a Test is deemed to be an Invalid Test under step 1.8.10 and another test has already been completed in accordance with step 1.10.12 or 1.10.16, then AEMO must:
- (a) use the results of the latest test in place of the Invalid Test, if a test is still required; or
 - (b) ignore the results of the latest test, if a test is no longer required.
- 1.8.13. 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, AEMO (including in its capacity with System Management) 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 re-test can be conducted.

1.9. Steps for AEMO to Verify by Observation

- 1.9.1. In accordance with step 1.8.1, AEMO may use information gathered through the Wholesale Electricity Market System (WEMS) to observe a Facility operating at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, as part of normal operations.
- 1.9.2. AEMO may verify the capability of a Facility by observation within a testing cycle until ~~System Management~~ AEMO (in its capacity as System Management) conducts a test for that Facility. Verification by observation will be performed using the meter data available to AEMO up until the time that ~~System Management~~ it commences a test.
- 1.9.3. AEMO 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 a generation Facility. Where no temperature source is specified the Market Participant must notify AEMO of a temperature source before the start of the Capacity Year.
- 1.9.4. To verify that a generation Facility has operated at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, as calculated in accordance with step 1.8.5, AEMO 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.
- 1.9.5. AEMO must assess the results obtained in steps 1.9.1 through 1.9.4 and determine if the generation Facility operated at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, as calculated in accordance with step 1.8.5, through the temperature range observed.
- 1.9.6. To verify by observation the performance of a Demand Side Programme performing a self-scheduled test, AEMO must only consider the performance in a Trading Interval for which ~~AEMO and System Management~~ has been provided with notice by the Market Participant in accordance with step 1.11.1.
- 1.9.7. Following verification by observation AEMO may request a Reserve Capacity Test if AEMO is unable to determine in accordance with this Procedure that the Facility was able to operate at a level equivalent to its Required Level, adjusted to the level of Capacity Credits currently held, during the verification by observation process.
- 1.9.8. If AEMO requests a Reserve Capacity Test in accordance with step 1.9.7 AEMO must provide the Market Participant with a summary of results obtained in step 1.9.5.
- 1.9.9. AEMO must compile and maintain a list of Facilities who have undergone the verification by observation process and must keep records of outcomes of the verification process.

1.10. Steps for ~~AEMO and System Management~~ to conduct a Reserve Capacity Test

- 1.10.1. Reserve Capacity Tests may be conducted if:
 - (a) AEMO determines the most appropriate course of action is to ~~request System Management~~ test the Facility (in its capacity as System Management) in accordance with clause 4.25.2 (a)(ii) ,4.25.2(b)(ii) or 4.25.2(c) of the Market Rules;

- (b) AEMO determines that the operation of the Facility has not passed the verification by observation process detailed at step 1.9;
 - (c) AEMO 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) AEMO 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.
- 1.10.2. ~~In the case that AEMO requires a Reserve Capacity Test to be conducted on a Facility, AEMO must contact System Management requesting that the test be conducted. [Blank]~~
- 1.10.3. ~~In requesting System Management to conduct a test, AEMO must provide System Management with the following information: [Blank]~~
- ~~(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 AEMO issues the request to System Management. [MR4.25.7].~~
- 1.10.4. ~~All information regarding the request for the test must be treated by System Management as Confidential. [Blank]~~
- 1.10.5. ~~If AEMO (in its capacity as System Management) requests System Management to conduct a Reserve Capacity Test, System Management must conduct the tests in accordance with the requirements as outlined in clause 4.25.9 of the Market Rules.~~
- 1.10.6. ~~System Management must notify AEMO within one Business Day as to whether it is possible to conduct a test requested under step 1.10.5 without endangering Power System Security and Power System Reliability. [MR4.25.8] [Blank]~~
- 1.10.7. ~~System Management must provide AEMO with: [Blank]~~
- ~~(a) justification as to why the test cannot be conducted; and~~
 - ~~(b)(f) 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]~~
- 1.10.8. ~~When AEMO (including in its capacity as System Management) receives the results of has completed the test, and has received from System Management, metering data for the Facility and, where applicable, temperature data for the Facility, AEMO must, within 10 Business Days, 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.~~
- 1.10.9. AEMO 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.
- 1.10.10. In the event that AEMO determines the Facility has passed the Reserve Capacity Test, AEMO 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 AEMO (including in its capacity as System Management) receives notification of the ~~completes the test results from System Management, and receives~~ metering data for the Facility and, where applicable, temperature data for the Facility.
- 1.10.11. In the event that AEMO determines the Facility has failed the Reserve Capacity Test, AEMO must:
- inform the Market Participant that the Facility has failed the Reserve Capacity Test;
 - provide the Market Participant with a copy of the results produced;
 - ~~require System Management~~ re-test (in its capacity as System Management) the Facility in accordance with step 1.10.12 below.
- 1.10.12. In the event that a re-test is required in accordance with step 1.10.11(c), ~~System Management~~ AEMO (in its capacity as System Management) must re-test that Facility **[MR Clause 4.25.4]**:
- not earlier than 14 days after the first test; and
 - not later than ~~28~~ 28 days after the first test.
- 1.10.13. If a Demand Side Programme fails a Reserve Capacity Test under clause 4.25.2(b)(ii) and is issued a Dispatch Instruction to decrease its consumption 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 Clause 4.25.3B]**.
- 1.10.14. 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 second Trading Day following the Scheduling Day on which AEMO determines that the second test was failed AEMO must:
- 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
 - if the test related to a Dispatchable 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 **[Clause MR4.25.4]**.
- 1.10.15. In the case that the Capacity Credits are reduced in accordance with- step 1.10.14 a Market Participant may apply to AEMO to have the Facility re-tested (the third test) subject to the following conditions:
- The Facility may only be re-tested once in accordance with step 1.10.12 during the remaining Reserve Capacity Cycle **[Clause MR 4.25.5]**.
 - AEMO (in its capacity as System Management) must ~~request System Management to~~ conduct the re-test within seven days from receiving the request from the Market Participant **[MR Clause 4.25.5]**.

- (c) ~~System Management~~ AEMO (in its capacity as System Management) must undertake the re-test in accordance with this Procedure and the Market Rules.
- (d) AEMO 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 AEMO for that Facility under clause 4.20 of the Market Rules in respect of the relevant Reserve Capacity Cycle [~~MR Clause~~ **4.25.6**].
- 1.10.16. If a Reserve Capacity re-test is conducted in accordance with step 1.10.12, AEMO 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.
- 1.10.17. 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~~ **Clause 4.25.10**].
- 1.10.18. AEMO will deem a Reserve Capacity Test to be an Invalid Test if:
- 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
 - AEMO considers that an error was made in the determination of the results of any Reserve Capacity Test
- 1.10.19. If a test is deemed to be an Invalid Test under step 1.10.18 then AEMO (in its capacity as System Management) 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.
- 1.10.20. 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 AEMO must:
- use the results of the latest test in place of the Invalid Test results; or
 - if the Invalid Test is no longer required, ignore the results of the latest test.
- 1.10.21. 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, AEMO (including in its capacity as System Management) will:
- 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;
 - 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
 - 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

- 1.11.1. If a Market Participant chooses to self-schedule a test for a Demand Side Programme, it must notify AEMO and ~~System Management~~ no later than 2 Business Days prior to the commencement of the Trading Day during which 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 AEMO if this notification is sent.
- 1.11.2. If the Market Participant is contacted by AEMO with results of a Reserve Capacity Test that indicate that AEMO determined a Facility to have failed a test, a second test be conducted between 14 and 28 days from the first test **[Clause MR4.25.4]**.
- 1.11.3. If the Market Participant is contacted by AEMO with the results of the second Reserve Capacity Test, which indicate that AEMO determined a Facility to have failed a Reserve Capacity Test, the Market Participant will also be notified that the Capacity Credits in respect of that Facility will be reduced and the date from which the reduction will occur.
- 1.11.4. In the event that the Market Participant is notified by AEMO 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 AEMO conduct a re-test **[MR-Clause 4.25.5]**.
- 1.11.5. The Market Participant may only request a re-test once during the remaining Reserve Capacity Cycle. **[MR4Clause 4.25.5]**
- 1.11.6. The re-test performed at the request of the Market Participant in accordance with steps 1.11.4 and 1.11.5 should be performed by ~~System Management~~ AEMO (in its capacity as System Management) within seven days of AEMO receiving the request, subject to the provisions of this Procedure.
- 1.11.7. Following a re-test requested by a Market Participant in accordance with steps 1.11.4 and 1.11.5, AEMO 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 AEMO 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.
- 1.11.8. If the Market Participant considers an error has been made by AEMO in the calculation of the Required Level, adjusted to the level of Capacity Credits currently held, of a Facility in either a test or by observation, it can request AEMO to review the results of the test. If AEMO determines that an error has been made then the test result will be re-determined.

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

- 1.12.1. Every three months AEMO must publish details of **[MR-Clause 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~~.

1.12.2. The details published in accordance with step 1.12.1 must be published on the Market Web Site or in the WEMS as appropriate.

1.13. Steps for AEMO 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, AEMO is required to set the level of Certified Reserve Capacity assigned to a Facility for facilities that have been tested in accordance with this Procedure. This decision is not a reviewable decision under the Market Rules.

- 1.13.1. Each year, AEMO must use the information, data and results obtained from Reserve Capacity Tests and verification by observation when considering the level of Certified Reserve Capacity assigned to a Facility.
- 1.13.2. AEMO may reduce the level of Certified Reserve Capacity in respect of an application for Certification of Reserve Capacity if AEMO 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 AEMO believes the level of Certified Reserve Capacity being applied for exceeds AEMO's reasonable expectation that the amount of capacity likely to be available in accordance with clause 4.11.1(a) of the Market Rules.
- 1.13.3. AEMO may use the information, data and results obtained from Reserve Capacity Tests and verification by observation when setting the Reserve Capacity Obligation Quantities in respect of that Facility in subsequent Reserve Capacity Cycles **[MR-Clause 4.25.12]**.

1.14. Steps for AEMO for Verification of a Demand Side Programme

- 1.14.1. In each Reserve Capacity Year, a Market Customer must undertake a Verification Test of each Demand Side Programme registered to the Market Customer:
 - (a) within 20 Business Days of registration of the Demand Side Programme, if applicable, or
 - (b) between 1 October and 30 November **[Clause MR4.25A.1]**.
- 1.14.2. To undertake a Verification Test the Market Customer will activate the Demand Side Programme and provide evidence satisfactory to AEMO of the Trading Intervals during which the Verification Test was conducted **[Clause MR4.25A.2]**.
- 1.14.3. A Market Participant must notify AEMO 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 AEMO if this notification is sent.

- 1.14.4. A Demand Side Programme will be deemed to have failed the Verification Test 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 Demand Side Programme Load associated with that Demand Side Programme **[MR4Clause 4.25A.3]**.
- 1.14.5. Where a Demand Side Programme fails a Verification Test AEMO must reduce the Capacity Credits assigned to the Demand Side Programme to zero from the second Trading Day following the Scheduling Day on which AEMO determines that the Verification Test was failed. **[Clause MR4.25A.4]**.
- 1.14.6. Where a Demand Side Programme fails a Verification Test, the relevant Market Participant may request that a second Verification Test be undertaken. If the Demand Side Programme fails 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 **[Clause MR4.25A.5]**.