



INDEPENDENT
MARKET
OPERATOR

Final Rule Change Report

Title: Selection of the 12 peak Trading Intervals
used for calculation of IRCR

RC_2013_11

Standard Rule Change Process

Date: 18 September 2013

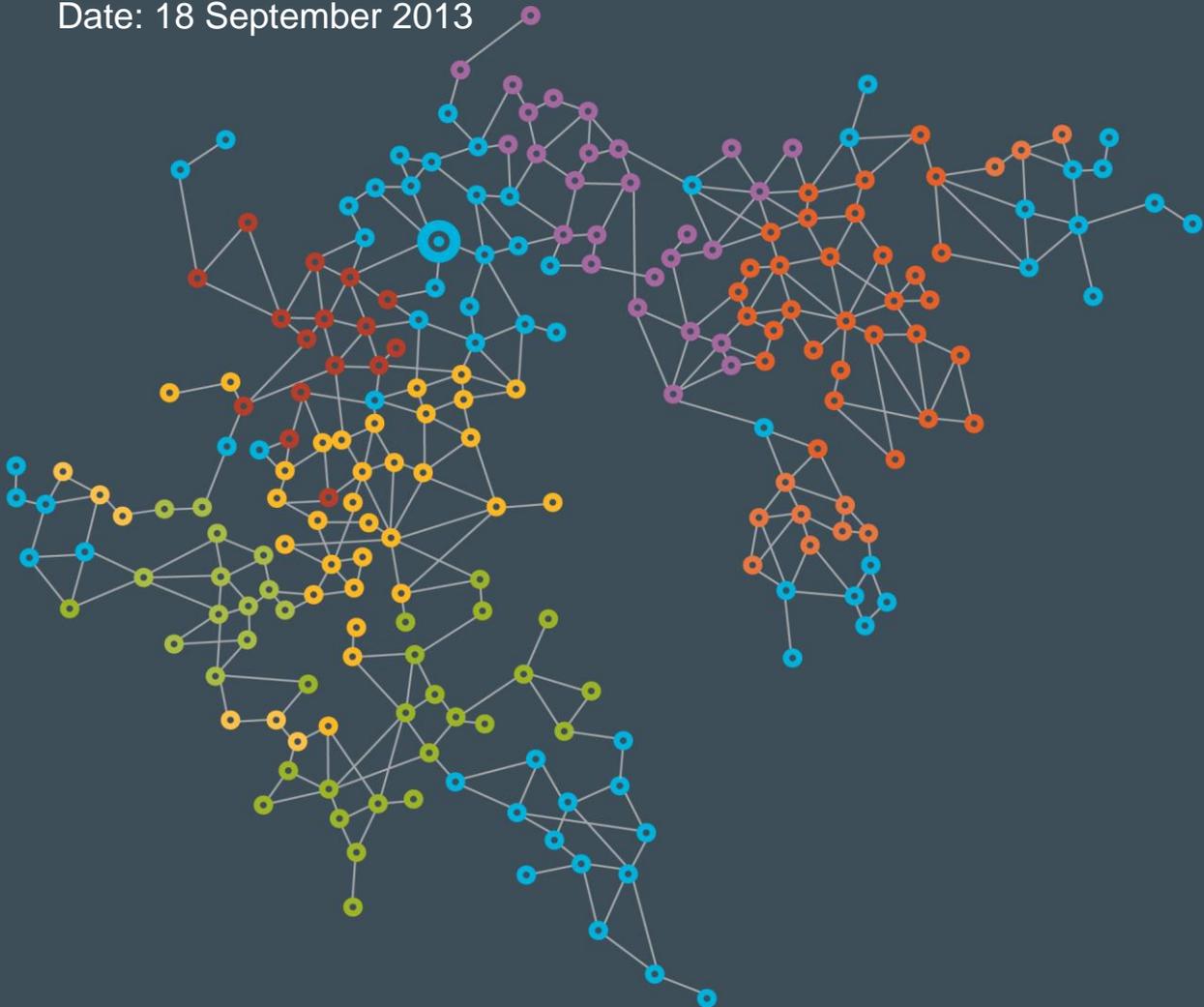


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Executive Summary

Proposed amendments

The Individual Reserve Capacity Requirement (IRCR) for a Market Customer is a quantity of capacity (expressed in MW) which represents that customer's share of the Reserve Capacity Requirement (RCR) for the relevant Capacity Year.

IRCRs are determined by dividing the RCR among Market Customers based on their relative contribution to system demand during the "12 peak Trading Intervals" in the previous Hot Season (December to April inclusive). The IMO proposes to amend Appendix 5 of the Market Rules to select the 12 peak Trading Intervals from the 4 Trading Days in the previous Hot Season with the highest maximum demand, rather than the 4 Trading Days in the previous Hot Season with the highest daily consumption.

The IMO also proposes a number of minor amendments to Appendix 5 and Appendix 5A, to clarify how the system demand in a Trading Interval is measured for the purposes of these appendices.

Consultation

The proposed change to the selection methodology was discussed and supported by the Reserve Capacity Mechanism Working Group (RCMWG) at its September 2012 meeting.

A Pre Rule Change Proposal was discussed by the Market Advisory Committee (MAC) at its 10 April 2013 meeting. At this meeting the IMO was asked to provide members with an analysis comparing the Trading Days selected using the current and proposed methodologies.

On 26 April 2013 the IMO provided the requested analysis to MAC members and noted that, based on its assessment of the results, it intended to submit the proposal into the formal rule change process. The IMO requested any MAC members who disagreed with the IMO's assessment to advise the IMO by 3 May 2013. Only one MAC member raised a concern in regard to the IMO's assessment.

The Rule Change Proposal was submitted on 14 May 2013 and the first submission period was held between 15 May 2013 and 26 June 2013. Submissions were received from Community Electricity and Perth Energy, both supporting the Rule Change Proposal. An out of session submission was received from Alinta Energy, which did not comment specifically on the proposed amendments but proposed that the IMO defer the rule change.

The Draft Rule Change Report was published on 24 July 2013. No submissions were received during the second submission period, which ended on 21 August 2013.

Assessment against Wholesale Market Objectives

The IMO considers that the proposed amendments will better achieve Wholesale Market Objectives (d) and (e), and are consistent with the other Wholesale Market Objectives.

Practicality and Cost of Implementation

The proposed amendments will require changes to the IMO's IT systems, at an estimated cost of approximately \$15,000.

No other significant costs or practicality issues have been identified. The IMO proposes to time the commencement of the Amending Rules so that the new methodology takes effect from the start of the 2013/14 Capacity Year.

The IMO's Decision

The IMO's decision is to accept the Rule Change Proposal as modified following the first and second submission periods.

Next Steps

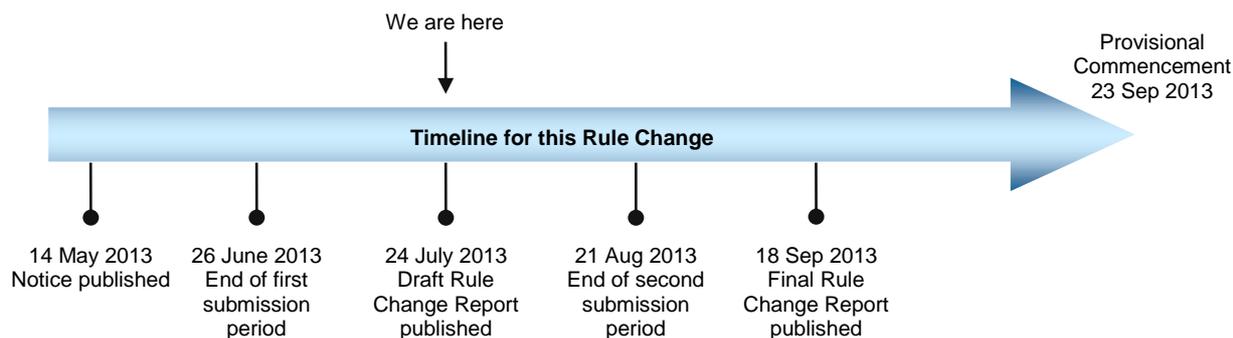
The Amending Rules will provisionally commence at **8.00 am on 23 September 2013**.

1. Rule Change Process and Timetable

On 14 May 2013 the IMO submitted a Rule Change Proposal regarding amendments to Appendix 5 of the Wholesale Electricity Market (WEM) Rules (Market Rules).

This proposal is being processed using the Standard Rule Change Process, described in section 2.7 of the Market Rules.

The key dates in processing this Rule Change Proposal are:



2. Proposed Amendments

2.1. The Rule Change Proposal

To fund capacity that is procured through the Reserve Capacity Mechanism (RCM), each Market Customer is assigned an Individual Reserve Capacity Requirement (IRCR) obligation. The IRCR for a Market Customer is a quantity of capacity (expressed in MW) which represents that customer's share of the Reserve Capacity Requirement (RCR) for the relevant Capacity Year.

IRCRs are determined by dividing the RCR among Market Customers based on their relative contribution to system demand during the "12 peak Trading Intervals" in the previous Hot Season (December to April inclusive). The IMO proposed to amend Appendix 5 of the Market Rules to select the 12 peak Trading Intervals from the 4 Trading Days in the previous Hot Season with the highest maximum demand, rather than the 4 Trading Days in the previous Hot Season with the highest daily consumption.

The IMO also proposed a minor amendment to Appendix 5, to clarify that for the purposes of IRCR calculation the demand in a Trading Interval is measured as the sum of the Sent Out Metered Schedules of all Scheduled Generators and Non-Scheduled Generators in that Trading Interval.

For full details of the Rule Change Proposal please refer to the Market Web Site: http://www.imowa.com.au/RC_2013_11.

2.2. The IMO's Initial Assessment of the Proposal

The IMO decided to progress the Rule Change Proposal on the basis that Rule Participants should be given an opportunity to provide submissions on the proposed amendments as part of the rule change process.

3. Consultation

3.1. The Reserve Capacity Mechanism Working Group

The proposed change to the selection methodology was one of several recommendations contained in a report prepared by Dr Richard Tooth of Sapere Research Group for the Reserve Capacity Mechanism Working Group (RCMWG) Work Stream 4: Individual Reserve Capacity Requirements. The report was discussed by the RCMWG at its 13 September 2012 meeting.

While two members, Ms Wendy Ng and Mr Stephen MacLean, suggested that a wider analysis should be undertaken to explore alternative methodologies for IRCR calculation, RCMWG members generally agreed with the change to the selection methodology proposed by Dr Tooth.

Following the support for the proposal at the September 2012 meeting, the proposed amendment was included in the list of key proposals recommended to the IMO Board for progression into the rule change process.

Further details are available in the RCMWG meeting minutes available on the Market Web Site: <http://www.imowa.com.au/RCMWG>.

3.2. The Market Advisory Committee

10 April 2013 meeting

The Pre Rule Change Proposal was presented by Mr George Sproule to the Market Advisory Committee (MAC) at its 10 April 2013 meeting.

During the MAC discussion Mr MacLean suggested an alternative amendment, which was to maintain the current methodology of selecting the 12 peak Trading Intervals from the 4 Trading Days with the highest daily consumption but to restrict the selection of the Trading Days to Business Days only. Mr MacLean suggested that this would provide continuity with the current IRCR methodology.

The Chair however noted that this would not address the concern raised in the proposal, which was that the highest demand Trading Intervals did not always occur on the Trading Days with the highest daily consumption. In response Mr MacLean requested that the IMO provide evidence to the MAC to support the Chair's assertion. The Chair agreed to provide the requested information to MAC members.

Further details are available in the MAC meeting minutes available on the Market Web Site: <http://www.imowa.com.au/MAC>.

Further consultation with the MAC

The IMO undertook an analysis of whether the days selected in the current IRCR calculation (based on highest aggregated daily demand) corresponded to the Trading Days with the highest Trading Interval demand.

In each of the six years assessed in the analysis, the current IRCR methodology selected a Trading Day which had a lower maximum demand than the 4 Trading Days which recorded the highest maximum demand Trading Intervals.

On 26 April 2013 the IMO distributed the results of its analysis to MAC members. The IMO noted it did not consider it material whether or not the IRCR methodology selected Business Days, provided that it selected the Trading Intervals most representative of each Market Customer's likely contribution to system peak load. As this had been demonstrated to be more likely under the proposed amendments, the IMO proposed to submit the proposal into the formal rule change process. Any MAC members who disagreed with the IMO's assessment were requested to advise the IMO by 3 May 2013.

The IMO received only one response (from Synergy). Synergy disagreed with the proposed amendments, expressing concern that the consequences of the change were unknown and questioning the need to use peak Trading Intervals. Synergy considered that the Rule Change Proposal was premature and not based on the Wholesale Market Objectives.

The IMO disagrees with Synergy's assessment of the proposal. There was general agreement from both RCMWG and MAC members that Trading Intervals selected from Trading Days with the highest maximum demand would provide a better indication of each Market Customer's likely contribution during a peak system load event. Further, the proposed amendments represent only a small enhancement to the IRCR methodology and Market Customers should have little difficulty in assessing the likely impact of the change on their IRCRs.

3.3. Submissions received during the first submission period

The first submission period for this Rule Change Proposal was held between 15 May 2013 and 26 June 2013. Submissions were received from Community Electricity and Perth Energy. An out of session submission was received from Alinta Energy.

Community Electricity and Perth Energy supported the Rule Change Proposal and did not raise any issues. Alinta Energy did not comment specifically on the proposed amendments, but noted that due to the restricted scope of the RCMWG's review of the RCM alternative methodologies for allocating capacity costs, which were more resilient to gaming opportunities and better able to provide a timely and accurate calculation, were not explored.

Alinta Energy suggested that the IMO defer the rule change until such time as there was greater clarity with regard to the scope of the Minister for Energy's recently proposed broader review of the WEM and RCM.

The assessment by submitting parties as to whether the proposal would better achieve the Wholesale Market Objectives is summarised below.

Submitter	Wholesale Market Objective Assessment
Alinta Energy	Did not comment.
Community Electricity	Better achieves Wholesale Market Objectives (d) and (e) and is otherwise consistent with the Wholesale Market Objectives.
Perth Energy	Positively impacts on the achievement of Wholesale Market Objectives (a), (b) and (d). Did not identify any impacts on the remaining Wholesale Market Objectives.

A copy of all submissions in full received during the first submission period is available on the Market Web Site: http://www.imowa.com.au/RC_2013_11.

3.4. The IMO's response to submissions received during the first submission period

The IMO's response to the issues raised in Alinta's submission is detailed in section 4.4 of the Draft Rule Change Report, available on the Market Web Site:
http://www.imowa.com.au/RC_2013_11.

3.5. Submissions received during the second submission period

Following publication of the Draft Rule Change Report on the Market Web Site the second submission period was held between 25 July 2013 and 21 August 2013.

No submissions were received during the second submission period.

3.6. Public Forums and Workshops

No public forums or workshops were held with regard to this Rule Change Proposal.

4. The IMO's Draft Assessment

The IMO's draft assessment against clauses 2.4.2 and 2.4.3 of the Market Rules, and analysis of the Rule Change Proposal can be viewed in the Draft Rule Change Report available of the Market Web Site: http://www.imowa.com.au/RC_2013_11.

5. The IMO's Proposed Decision

The IMO's proposed decision was to accept the Rule Change Proposal as modified following the first submission period. The wording of the relevant Amending Rules was presented in section 7 of the Draft Rule Change Report.

The IMO made its proposed decision on the basis that the Amending Rules:

- better achieve Wholesale Market Objectives (d) and (e);
- are consistent with the remaining Wholesale Market Objectives;
- have the general support of the RCMWG and the MAC; and
- have the support of two of the three submissions received during the first submission period.

6. The IMO's Final Assessment

In preparing its Final Rule Change Report, the IMO must assess the Rule Change Proposal in light of clauses 2.4.2 and 2.4.3 of the Market Rules.

Clause 2.4.2 outlines that the IMO *"must not make Amending Rules unless it is satisfied that the Market Rules, as proposed to be amended or replaced, are consistent with the Wholesale Market Objectives"*. Additionally, clause 2.4.3 states, when deciding whether to make Amending Rules, the IMO must have regard to the following:

- any applicable policy direction from the Minister regarding the development of the market;

- the practicality and cost of implementing the proposal;
- the views expressed in submissions and by the MAC; and
- any technical studies that the IMO considers necessary to assist in assessing the Rule Change Proposal.

The IMO notes that there has not been any applicable policy direction from the Minister or any technical studies commissioned in respect of this Rule Change Proposal. A summary of the views expressed in submissions and by the MAC is available in section 3 of this report.

The IMO's assessment is outlined in the following sub-sections.

6.1. Additional amendments to the Amending Rules

Following the first submission period the IMO made some additional changes to the proposed Amending Rules to:

- incorporate a number of minor and typographical amendments to improve the overall integrity of the Amending Rules;
- clarify that the calculation of total system demand should exclude any negative values from the Sent Out Metered Schedules of Scheduled Generators or Non-Scheduled Generators; and
- clarify the definition of 4 peak SWIS Trading Intervals in Appendix 5A.

The changes the IMO made to the Amending Rules presented in the Rule Change Proposal are outlined in detail in Appendix 1 of the Draft Rule Change Report.

Following the second submission period the IMO made one minor correction to the proposed Amending Rules, removing a redundant word from Appendix 5. This change is shown below (~~deleted text~~):

STEP 5: When determining the Individual Reserve Capacity Requirements for Trading Month n identify meters that were not registered with the IMO during one or more of the 12 peak SWIS Trading Intervals in the preceding Hot Season but which were registered by the end of Trading Month n-3.

....

For a new meter v that measures Temperature Dependent Load set $NMTDCR(v)$ equal to be 1.3 times the MW figure formed by doubling the median value of the metered consumption for that meter during the 4 peak SWIS Trading Intervals of Trading Month n-3.

...

6.2. Wholesale Market Objectives

The IMO considers that the Market Rules as a whole, if amended as presented in section 8, will not only be consistent with the Wholesale Market Objectives but also allow the Market Rules to better achieve Wholesale Market Objectives (d) and (e).

The IMO's assessment is presented below:

The proposed methodology more accurately (and more equitably) allocates the costs of the RCM among Market Customers, through better aligning each Market Customer's IRCR with its contribution to peak demand. This provides price signals that encourage Market Customers to reduce their peak demand, which contributes to the following Wholesale Market Objectives:

- minimising the long-term cost of electricity supplied to customers (Wholesale Market Objective (d)) by providing incentives to reduce peak load, which has the effect of reducing the RCR and the need for investment in network infrastructure; and
- encouraging the taking of measures to manage the amount of electricity used and when it is used (Wholesale Market Objective (e)).

6.3. Practicality and Cost of Implementation

Cost:

The proposed amendments will require changes to the IMO's IT systems, at an estimated cost of approximately \$15,000.

The IMO will also need to amend its internal procedures around the calculation of IRCR. However, the costs of these changes fall within the IMO's normal operating budget.

No implementation costs for other Rule Participants were identified.

Practicality:

The IMO does not consider that there are any issues with the practicality of implementation of the proposed changes

7. The IMO's Decision

The IMO's decision is to accept the Rule Change Proposal as modified following the first and second submission periods.

7.1. Reasons for the decision

The IMO has made its decision on the basis that the Amending Rules:

- better achieve Wholesale Market Objectives (d) and (e);
- are consistent with the remaining Wholesale Market Objectives;
- have the general support of the RCMWG and the MAC; and

- have the support of two of the three submissions received during the first submission period.

Additional detail outlining the analysis behind the IMO's decision is outlined in section 6 of this report.

8. Amending Rules

8.1. Commencement

The amendments to the Market Rules resulting from this Rule Change Proposal will provisionally commence at **8.00 am on 23 September 2013**.

The amended methodology will apply from the start of the 2013/14 Capacity Year. The IMO has extended the publication date of the initial IRCR for the 2013/14 Capacity Year (under clause 4.1.32 of the Market Rules) until 23 September 2013, so as to ensure that a consistent IRCR methodology is applied throughout the Capacity Year.

8.2. Amending Rules

The IMO has decided to implement the following Amending Rules (~~deleted text~~, added text):

Appendix 5: Individual Reserve Capacity Requirements

This Appendix presents the method for annually setting and monthly adjusting Individual Reserve Capacity Requirements.

For the purpose of this Appendix:

- Steps 1 to 10 are repeated every month.
- All references, apart from those in Step 5A, to meters are interval meters.
- The Notional Wholesale Meter is to be treated as a registered interval meter measuring Temperature Dependent Load. This meter is denoted by Temperature Dependent Load meter $v=v^*$.
- The New Notional Wholesale Meter, determined in accordance with Step 5A, is to be treated as a registered interval meter measuring Temperature Dependent Load.
- The meter registration data to be used in the calculations is to be the most current complete set of meter registration data as at the time of commencing the calculations.
- The values of RR (the Reserve Capacity Requirement) and FL (forecast peak demand associated with that Reserve Capacity Requirement as specified in clause 4.6.2) may be modified from their standard values in accordance with clause 4.28.11A.

- In the case of the first Reserve Capacity Cycle, the IMO may use meter data relating to periods prior to Energy Market Commencement as if the energy market had commenced prior to the time periods covered by that meter data.
- In Steps 1 and 5 the demand in a Trading Interval is measured as the Total Sent Out Generation in that Trading Interval.
- In Step 1 the maximum demand for a Trading Day is the highest demand measured for any Trading Interval in that Trading Day.

STEP 1: Define the 12 peak SWIS Trading Intervals during the Hot Season preceding the initial calculation of Individual Reserve Capacity Requirements for a Reserve Capacity Cycle (the “preceding Hot Season”), ~~as corresponding to the 3 highest demand Trading Intervals on each of the 4 Trading Days with the highest-daily maximum demand, where demand refers to total demand, net of embedded generation, in the SWIS.~~

...

STEP 5: When determining the Individual Reserve Capacity Requirements for Trading Month n identify meters that were not registered with the IMO during one or more of the 12 peak SWIS Trading Intervals in the preceding Hot Season but which were registered by the end of Trading Month n-3.

Identify the 4 ~~P~~peak SWIS Trading Intervals of Trading Month n-3, being the 4 highest demand Trading Intervals in that Trading Month, ~~where demand refers to total demand, net of embedded generation, in the SWIS.~~

For a new meter u that measures Non-Temperature Dependent Load set NMNTCR(u) to be 1.1 times the MW figure formed by doubling the median value of the metered consumption for that meter during the 4 ~~P~~peak SWIS Trading Intervals of Trading Month n-3.

For a new meter v that measures Temperature Dependent Load set NMTDCR(v) ~~equal~~ to be 1.3 times the MW figure formed by doubling the median value of the metered consumption for that meter during the 4 ~~P~~peak SWIS Trading Intervals of Trading Month n-3.

For a new meter w that measures Intermittent Load set IILRCR(w) in accordance with Appendix 4A to the value applicable to Trading Month n.

STEP 5A: When determining the Individual Reserve Capacity Requirements for Trading Month n.

Find the MW figure formed by doubling the median value of the metered consumption for the Notional Wholesale Meter v*, during the 4 ~~P~~peak SWIS Trading Intervals of Trading Month n-3 (“Median Notional Wholesale Meter”).

...

STEP 7: Identify the set NM of all those new meters v that measured consumption that was measured by meter v=v* during the preceding Hot Season and set TDLn(v) for meter v=v* to equal:

$$TDLn(v^*) = TDL(v^*) - \text{Sum}(v \in \text{NW}, \text{NMTDCR}(v) \times d(v,q))$$

Where

q denotes a Market Customer to which the new meter is associated.

d(v,q) is the number of days the new meter is registered to Market Participant q divide by number of days in the $\text{Trading Month } n-3$.

...

Appendix 5A: Non-Temperature Dependent Load Requirements

This Appendix presents the method and requirements for accepting, in accordance with clause 4.28.9, a load measured by an interval meter in the list provided in accordance with clause 4.28.8(a) as a Non-Temperature Dependent Load.

For the purpose of this Appendix:

- the meter data to be used in any calculations is to be the most current set of meter data as at the time of commencing the calculations; and
- the 4 peak SWIS Trading Intervals in a Trading Month are the 4 highest demand Trading Intervals in that Trading Month, where the demand in a Trading Interval is measured as the Total Sent Out Generation in that Trading Interval.

The IMO must perform the following steps in deciding whether to accept, in accordance with clause 4.28.9, a load measured by an interval meter in the list provided in accordance with clause 4.28.8(a) as a Non-Temperature Dependent Load:

Step 1:

- If, in accordance with clause 4.28.8(a), the IMO is provided by a Market Customer in Trading Month (n-2) with a list that includes an interval meter associated with that Market Customer that it wants the IMO to treat as a Non-Temperature Dependent Load from Trading Month (n); and
- If the list including the interval meter is provided by the date and time specified in clause 4.1.23; and
- If the load was treated as a Non-Temperature Dependent Load in Trading Month (n-8),

then the IMO must accept the load as a Non-Temperature Dependent Load if:

- (a) the median value of the metered consumption for that load was in excess of 1.0MWh, calculated over the set of Trading Intervals defined as the ~~four~~⁴ peak SWIS Trading Intervals intervals in each of the Trading Months starting from the start of Trading Month n-11 to the end of Trading Month n-3; and
- (b) the load did not deviate downwards from the median consumption in paragraph (a) by more than 10% for more than 10% of the time during the period from the start of Trading Month (n-11) to the end of Trading Month (n-3) except during Trading Intervals where:
 - i. the consumption was 0 MWh; or
 - ii. consumption was reduced at the request of System Management; or
 - iii. evidence is provided by the Market Customer that the source of the consumption was operating at below capacity due to maintenance or a Saturday, Sunday or a public holiday throughout Western Australia.

Step 2:

- If, in accordance with clause 4.28.8(a), the IMO is provided by a Market Customer in Trading Month (n-2) with a list that includes an interval meter associated with that Market Customer that it wants the IMO to treat as a Non-Temperature Dependent Load from Trading Month (n); and
- If the load is not treated as a Non-Temperature Dependent Load in Trading Month (n-1); and
- If the load was not treated as a Non-Temperature Dependent Load for any of the Trading Months in the Capacity Year in which Trading Month (n) falls,

then the IMO must accept the load as a Non-Temperature Dependent Load for Trading Month (n) if:

- (a) the median value of the metered consumption values for that load during the 4 P_{peak} SWIS Trading Intervals in Trading Month (n-3) was in excess of 1.0MWh; and
- (b) the load did not deviate downwards from the median consumption in paragraph (a) by more than 10% for more than 10% of the time during Trading Month (n-3) except during Trading Intervals where:
 - i. the consumption was 0 MWh; or
 - ii. consumption was reduced at the request of System Management; or
 - iii. evidence is provided by the Market Customer that the source of the consumption was operating at below capacity due to maintenance or a Saturday, Sunday or a public holiday throughout Western Australia.

Step 3:

- If a load was not accepted under Step 1 as a Non-Temperature Dependent Load for Trading Month (n); and
- If the load was accepted under Step 2, or previously under this Step 3, as a Non-Temperature Dependent Load for Trading Month (n-1),

then the IMO must accept the load as a Non-Temperature Dependent Load for Trading Month (n) if:

- (a) the median value of the metered consumption for that load was in excess of 1.0MWh, calculated over the set of Trading Intervals defined as the ~~four~~⁴ peak SWIS Trading Intervals in each of the Trading Months commencing at the start of the Trading Month for which metered consumption values were used by the IMO to accept the load as a Non-Temperature Dependent Load under Step 2 to the end of Trading Month (n-3); and
- (b) the load did not deviate downwards from the median consumption in paragraph (a) by more than 10% for more than 10% of the time during the period from the start of the Trading Month for which metered consumption values were used by the IMO to accept the load as a Non-Temperature Dependent Load under Step 2 to the end of Trading Month (n-3) except during Trading Intervals where:
 - i. the consumption was 0 MWh; or
 - ii. consumption was reduced at the request of System Management; or
 - iii. evidence is provided by the Market Customer that the source of the consumption was operating at below capacity due to maintenance or a Saturday, Sunday or a public holiday throughout Western Australia.

Step 4:

Otherwise, the IMO must treat a load as a Temperature Dependent Load.

11 Glossary

Total Sent Out Generation: Means, for a Trading Interval, the sum over all Scheduled Generators and Non-Scheduled Generators of each Facility's Sent Out Metered Schedule for the Trading Interval or zero (whichever is higher for that Facility).