
Wholesale Electricity Market Pre Market Rule Change Discussion Paper

Submitted by

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Change Proposal title:	NTDL – New and Overnight loads
Market Rule(s) affected:	4.28.9, Appendix 5 and Appendix 5A (new)

Introduction

This Pre Market Rule Change Discussion Paper can be posted, faxed or emailed to:

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The discussion paper should explain how it will enable the Market Rules to better contribute to the achievement of the wholesale electricity market objectives. The objectives of the market are:

- (a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system;
- (b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors;
- (c) to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions;
- (d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system; and
- (e) to encourage the taking of measures to manage the amount of electricity used and when it is used.

Details of the proposed Market Rule Change

1) Describe the concern with the existing Market Rules that is to be addressed by the proposed Market Rule change:

Griffin has two concerns regarding the current application of the Market Rules with respect to Non Temperature Dependent Loads (NTDLs). These are:

- The treatment of overnight loads; and
- The treatment of new loads.

Under the current definition of NTDLs, there are circumstances where loads are disqualified as being non-temperature dependant when the reason for disqualification is clearly contrary to the intent of the rule.

One example is business which structures its processes so that its load is higher overnight – taking advantage of the lower electricity prices in off-peak periods, lessening its contribution to system peak demand during the day and more effectively using distribution and transmission assets. Under the current rules, if this lower load during the daytime is more than 10% of its maximum load during the hot season (which is likely to be its overnight load), the load cannot be classified as a NTDL. That is, it cannot be classified as a NTDL even though the reason for the deviation is not related to temperature dependence and the load may have contributed a lesser amount to peak system load than if its processes were not optimised for overnight running.

The current method of using deviations from a load's peak consumption **over the hot season** appears to be an inadequate mechanism for measuring non-temperature dependence. Non-temperature dependent loads should not vary with seasons (or if they do, variation should not be due to variation in the seasonal temperature, rather some other factor). The current method of setting the load's peak consumption allows loads to be considered non-temperature dependent over a full year when it has only proved non-temperature dependence over the hot season. To capture the appropriate level of variation when assessing the status of a load with regard to temperature dependency, it is proposed to use the load's median consumption during the four peak SWIS intervals in each month as the value from which any allowable deviation is determined.

This proposed change would resolve the issue of loads that do not vary (increase) with temperature, but are perversely classed as temperature dependent because their demand increases overnight relative to their daytime load.

The proposed change would also resolve the issue of new loads entering the market that do not have historical data to determine their temperature dependence status. The status of new loads could be determined on a month by month basis until they meet some threshold that qualifies them as existing loads.

The application of the proposed new method to existing and new loads is outlined below.

Existing NTDLs

Existing NTDLs, that have been NTDLs for at least 9 months including the previous hot season, should apply for re-qualification as a NTDL each year as is intended by the current rules. This re-qualification would be in the form of a test, as follows:

- Market Customers are required to reapply in August of each year;
- The assessment will be conducted by the IMO annually in September;
- At least 9 months of data will be used for the test, i.e. the load had to become an NTDL in November the year before at the latest;
- The test will be based on the median of the 4 system peak intervals for each month of the test (i.e. the median of the 36 peak intervals will be calculated over the 9 months of the test);
- The load must have had consumption (the median consumption over the 4 system peak intervals for each month of the test) in excess of a prescribed MWh threshold; and
- The load will be considered as an NTDL from 1 October if the load meets the assessment criteria.

New NTDL loads

All new loads applying to become NTDLs (i.e. new meters) or existing loads that have implemented new measures during a Capacity Year will be treated as Temperature Dependent Loads until they apply to be NTDLs and pass the NTDL test at any point during the year. These will include loads that do not have at least 9 months of data as NTDLs in August or loads that apply to become NTDL during the Capacity Year.

The NTDL test will be conducted by the IMO as follows:

- The test will be conducted each month until there are at least 9 months of data in August including the hot season;
- Should the application be made at a date such that by the next August there is not 9 months of data accumulated, then the load will continue to go through the month by month test until August the following year;
- The test will be based on all data from the first month for which consumption data was used to conduct the first test; and
- The test will be based on the median value of the load during the 4 system peak intervals for each month of the test.

2) Explain the reason for the degree of urgency:

It is important that this change be implemented as soon as practicable. This is in order to avoid further financial costs for loads that are non temperature dependent, but currently can't be classified as NTDLs under the Market Rules, and also to ensure new NTDLs are classified as such in a timely manner.

3) Provide any proposed specific changes to particular Rules (for clarity, please use the current wording of the Rules and place a ~~strike through~~ where words are deleted and underline words added)

4.28.9. The IMO must only accept the load measured by an interval meter in the list provided in accordance with clause 4.28.8(a) as a Non-Temperature Dependent Load if that load satisfies the requirements of Appendix 5A.

~~(a) had a peak consumption during the previous Hot Season in excess of 1 MWh; and~~

~~(b) did not deviate downwards from the peak consumption in paragraph (a) by more than 10% for more than 10% of the time during the Hot Season 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.~~

APPENDIX 5: INDIVIDUAL RESERVE CAPACITY REQUIREMENTS.....

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 Trading Intervals in the preceding Hot Season but which were registered by the end of Trading Month n-3.

Identify the 4 Peak SWIS Trading Intervals of Trading Month n-3, being the 4 highest demand Trading Intervals, 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 Peak SWIS Trading Intervals of maximum Trading Interval demand for that meter during 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.

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.

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 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 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 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 peak SWIS intervals in each of the months starting from the start of month n-11 to the end of 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 month (n-11) to the end of 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 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 month (n); and
- If the load is not treated as a Non-Temperature Dependent Load in month (n-1); and
- If the load was not treated as a Non-Temperature Dependent Load for any of the months in the Capacity Year in which month (n) falls,

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

- (a) the median value of the metered consumption values for that load during the 4 Peak SWIS Trading Intervals in 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 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 month (n); and
- If the load was accepted under Step 2, or previously under this Step 3, as a Non-Temperature Dependent Load for month (n-1),

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

- (a) the median value of the metered consumption values for that load during the 4 Peak SWIS Trading Intervals in all months from the 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 month (n-3) was in excess of 1 MWh; 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 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 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.

4) Describe how the proposed Market Rule change would allow the Market Rules to better address the Wholesale Market Objectives:

The objectives of the market as set out in clause 1.2.1 of the Wholesale Electricity Market Rules are:

- (a) *to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system.*

The proposed changes support objective (a) of the Market Objectives by encouraging economically efficient behaviour of loads in the SWIS.

- (b) *to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors.*

The proposed changes support objective (b) of the Market Objectives by enabling all real NTDLs to be treated as such. NTDLs are keenly sought contestable loads.

- (c) *to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions.*

The proposed changes do not impact on, and therefore are consistent with, the operation of objective (c) of the Market Objectives.

- (d) *to minimise the long-term cost of electricity supplied to customers from the South West interconnected system*

This rule change supports objective (d) of the Market Objectives, by allowing a load to be classified as Non Temperature Dependent when its operating pattern is adjusted to take advantage of cheaper electricity in off-peak intervals. The change will also reduce the overall cost of supply by shifting demand from peak to off-peak periods, thus reducing the need for additional peaking capacity.

- (e) *to encourage the taking of measures to manage the amount of electricity used and when it is used.*

This rule change proposal supports objective (e) of the Market Objectives, by allowing a load to be classified as Non Temperature Dependent when its operating pattern is adjusted to reduce the amount of electricity used during peak intervals.

5) Provide any identifiable costs and benefits of the change:

This change will require changes to the existing Market Systems. The change may increase the ongoing administrative workload to process applications and evidence provided by Market Customers seeking to have their loads considered as being Non-Temperature Dependent.

The change will also encourage efficient behaviour and provide incentives to reduce overall peak consumption in the SWIS.
