

## RULE CHANGE NOTICE

### CLARIFICATION AND CALCULATION OF AVAILABILITY CURVE

(RC\_2012\_09)

This notice is given under clause 2.5.7 of the Market Rules.

**Date Submitted:** 27 July 2012

**Submitter:** System Management

#### **THE PROPOSAL**

System Management has developed this Rule Change Proposal to clarify the calculation of the Availability Curve as defined in clause 4.5.10(e) of the Market Rules. System Management considers that there is ambiguity regarding the formation of the Availability Curve which may have the potential to threaten system security. System Management contends that the Availability Curve should define the available capacity requirement for each Trading Interval of the relevant Capacity Year. This requirement should be sufficient to meet the forecast demand, the reserve margin and the frequency keeping requirement for each Trading Interval of the Capacity Year.

System Management also notes that this concept has been adopted in the Availability Curve determination for the 2012 Statement of Opportunities.

Appendix 1 contains the Rule Change Proposal and gives complete information about:

- the proposed amendments to the Market Rules;
- relevant references to clauses of the Market Rules and any proposed specific amendments to those clauses; and
- the submitter's description of how the proposed amendments would allow the Market Rules to better address the Wholesale Market Objectives.

#### **DECISION TO PROGRESS THE RULE CHANGE**

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



## TIMELINE

The projected timelines for processing this proposal are:



## CALL FOR SUBMISSIONS

The IMO is seeking submissions regarding this proposal. The submission period is 30 Business Days from the publication date of this Rule Change Notice. Submissions must be delivered to the IMO by **5:00pm on Friday, 7 September 2012**.

The IMO prefers to receive submissions by email to [market.development@imowa.com.au](mailto:market.development@imowa.com.au) using the submission form available on the IMO website: <http://www.imowa.com.au/rule-changes>.

Submissions may also be sent to the IMO by fax or post, addressed to:

Independent Market Operator  
Attn: Group Manager, Market Development  
PO Box 7096  
Cloisters Square, Perth, WA 6850  
Fax: (08) 9254 4399



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## Wholesale Electricity Market Rule Change Proposal

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### Submitted by

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<b>Address:</b>	
<b>Date submitted:</b>	27 July 2012
<b>Urgency:</b>	2 – High – by 1 January 2013
<b>Change Proposal title:</b>	Clarification and Calculation of Availability Curve
<b>Market Rule(s) affected:</b>	Clause 4.5.10(e)

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### Introduction

This Market Rule Change Proposal can be posted, faxed or emailed to:

**Independent Market Operator**

Attn: Suzanne Frame, Group Manager Market Development

PO Box 7096

Cloisters Square, Perth, WA 6850

Fax: (08) 9254 4399

Email: marketadmin@imowa.com.au

The 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.

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## Details of the proposed Market Rule Change

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### 1) Outline the issue concerning the existing Market Rules that is to be addressed by the proposed Market Rule change:

**Issue: There is a lack of clarity in the formation of the Availability Curve. This has the potential to threaten system**

The Market Rules' provisions relating to the Reserve Capacity Mechanism require an "Availability Curve" to be determined.

*"4.5.10. The IMO must use the information assembled to:*

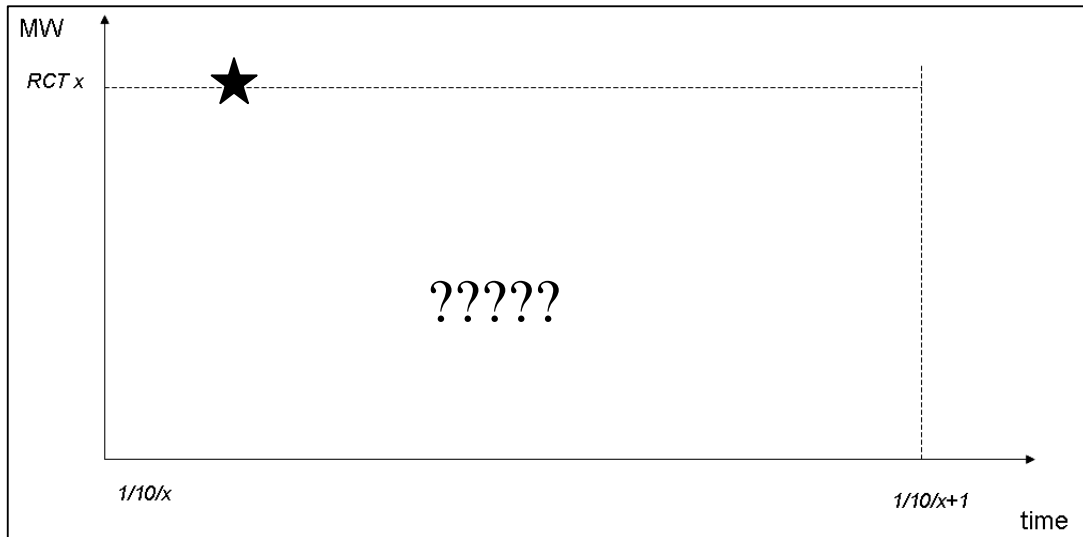
*...*

*(e) develop a two dimensional curve for each of the 2nd and 3rd Capacity Years of the Long Term PASA Study Horizon describing the information referred to in clause 4.5.12 ("**Availability Curve**")."*

System Management contends the “Availability Curve” should define the minimum availability requirements of generation and demand side programs that are to be procured under the Reserve Capacity Mechanism for the respective capacity year.

Further the Market Rules and Procedures give no guidance as to how to formulate the capacity year (12 months) and the quantum of the vertical dimension being the “Reserve Capacity Target” (RCT) (Market Rule 4.10.5(b)) essentially only defining one point on the curve.

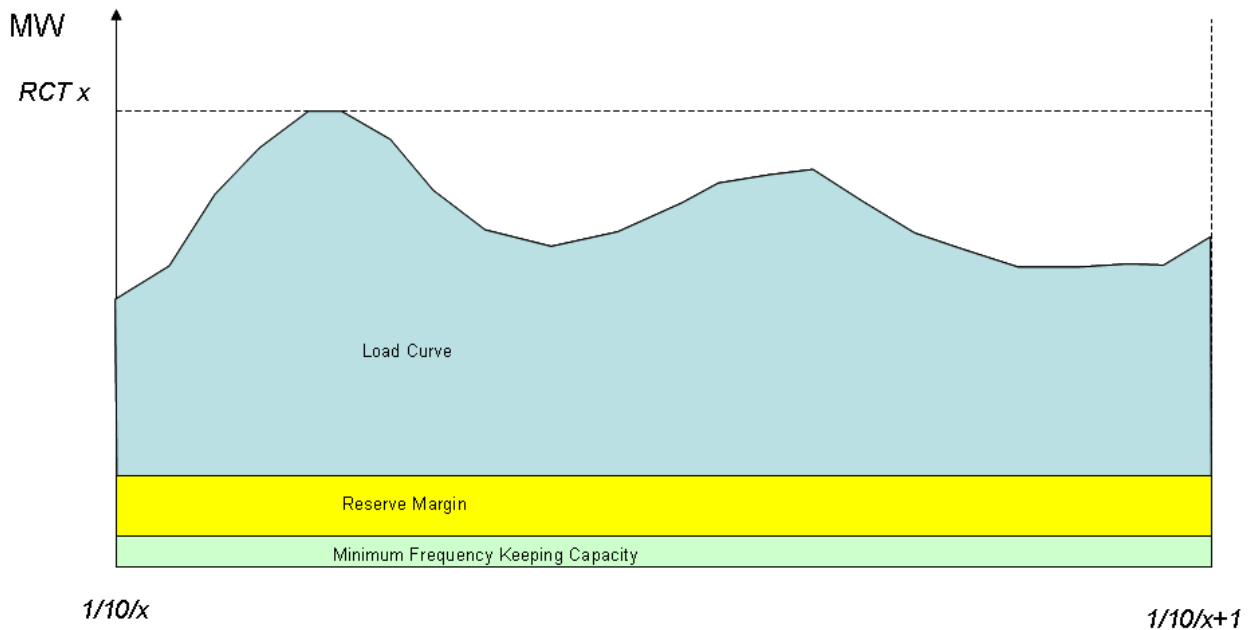
This is illustrated below



Further it believes that improper construction of the “Availability Curve” may threaten power system reliability by not having sufficient capacity for the necessary timeframes.

System Management believes the “Availability Curve” must define the availability requirement for every trading interval being the capacity to meet the forecast load, the frequency keeping requirement and the reserve margin requirement for every trading interval. This is maintains the rule philosophy given Market Rule 4.5.9 that defines how the RCT is determined for the peak trading interval for every trading interval.

This is illustrated below



System Management believes that capacity must be procured so it is available to meet the Frequency Keeping Requirement for each trading interval during the capacity year as the requirement may be needed at any time to cater for intermittent generator fluctuations. That is for the Availability Curve development the Frequency Keeping Requirement is constant throughout the year.

It should be noted that during real time dispatch if real time intermittent generator fluctuations are forecast to be low then this requirement may be reduced.

System Management also believes that capacity must be procured so it is available to meet the Reserve Margin for each trading interval during the capacity year as the requirement may be needed at any time to cater for the loss of one or more facilities. That is for the Availability Curve development the Reserve Margin Requirement is constant throughout the year.

System Management notes that this concept has been adopted in the 2012 Statement of Opportunities (SOO) which was published after the Pre-Rule change discussion paper. Further description of the development of the Availability Curve can be found in Appendix 8 of the 2012 SOO.

## 2) Explain the reason for the degree of urgency:

System Management submits that the Rule Change Proposal be progressed with an urgency of high as the change would not be in place for the 2012 Statement of Opportunities. It must be progressed shortly after as it provides transparency to the market.

The change must be completed by 1 January 2013.

## 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)

The issue can be addressed by making additional wording to Market Rule 4.5.10(e) to clarify how the Availability Curve is calculated. The proposed change is given below:

4.5.10 The IMO must use the information assembled to:

(e) develop a two dimensional duration curve of the forecast minimum capacity requirements over the Capacity Year for each of the second and third Capacity Years of the Long Term PASA Study Horizon describing the information referred to in clause 4.5.12 ("Availability Curve"). The forecast minimum capacity requirement for each Trading Interval in the Capacity Year must be determined as the sum of:

i. The forecast demand (including transmission losses and allowing for Intermittent Loads) for that Trading Interval under the scenario described in clause 4.5.10(a)(iv);

ii. The reserve margin for the Capacity Year described in clause 4.5.9(a); and

iii. The forecast Minimum Frequency Keeping Capacity for the Capacity Year.

Note the Availability Curve is a defined term in the Glossary:

"Availability Curve: A curve developed by the IMO under clause 4.5.10(e)."

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

This proposed Rule Change would better address objective (a) of the Market Objectives. The change as submitted would promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West Interconnected System.

The proposed rule change addresses this objective by clearly defining what capacity needs to be made available for each trading interval of the upcoming capacity year.

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

Benefits:

- The changes allow the procurement of capacity with the necessary availability requirements to ensure Power System Reliability.

Costs:

- No costs have been anticipated by System Management other than the administrative costs to change the rules.
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