

Independent Market Operator



Rule Change Notice

Title: Calculation of Reserve Capacity Refund

Ref: RC_2007_08

Date: 19 June 2007

CONTENTS

INTRODUCTION	2
THE RULE CHANGE PROPOSAL	2
The Submission	2
Details of the Proposal	3
The Proposal and the Market Objectives	4
WHETHER THE PROPOSAL WILL BE PROGRESSED FURTHER	6
PROPOSED AMENDING RULE	7
CALL FOR SUBMISSIONS	10

DOCUMENT DETAILS

IMO Notice No.: Magnus Stensson
Report Title: Rule Change Notice: Calculation of Reserve Capacity Refund
Release Status: Public
Confidentiality Status: Public domain
Published in accordance with Market Rule 2.5.7

Independent Market Operator

Level 22, The Forrest Centre
221 St George's Terrace, Perth WA 6000
PO Box 7096, Cloisters Square, Perth WA 6850
Tel. (08) 9254 4300
Fax. (08) 9254 4399
Email: imo@imowa.com.au
Website: www.imowa.com.au

INTRODUCTION

Market Rule 2.5.1 of the Wholesale Electricity Market Rules provides that any person (including the Independent Market Operator) may make a Rule Change Proposal by completing a Rule Change Proposal Form and submit this to the Independent Market Operator (IMO).

The IMO will assess the proposal and, within 5 Business Days of receiving the Rule Change Proposal Form, will notify the proponent whether the Rule Change Proposal will be progressed further.

In order for the proposal to be progressed the change proposal must explain how it will enable the Market Rules to better contribute to the achievement of the Wholesale 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.

A Rule Change Proposal can be processed using a Standard Process or a Fast Track Process. The Standard Process involves a combined 10 weeks public submission period, while the Fast Track Process involves the IMO consulting with Rule Participants who either advise the IMO that they wish to be consulted or the IMO considers have an interest in the change.

THE RULE CHANGE PROPOSAL

The Submission

The IMO submitted, on 11 June 2007, a Rule Change Proposal regarding a change to clauses 4.26.1 and 4.26.3 of the Wholesale Electricity Market Rules.

This Rule Change Notice is published according to Market Rule 2.5.7, which requires the IMO to publish a notice within 7 Business Days of receiving a Rule Change Proposal.

Submission details

Name: Anne Nolan
Phone: (08) 9254 4300
Email: imo@imowa.com.au
Organisation: IMO
Date submitted: 11/06/2007
Urgency: High
Change Proposal title: Calculation of Reserve Capacity Refund

Details of the Proposal

The IMO proposes a rule change to clarify the wording in the Market Rules that describes the Reserve Capacity Refund Mechanism. The Reserve Capacity Refund Mechanism Working Group, established by the Market Advisory Committee (MAC), developed the proposed changes in response to identified shortcomings with the present wording of the Rules. In summary, the main issues for the Group to address were:

- The wording describing the refund mechanism in the Market Rules required more clarity.
- The out-workings of the Market Rules wording did not reflect the intention of the refund mechanism.

All facilities that have been assigned Capacity Credits are, unless they are undergoing an approved outage, required to make refunds to the market in the event that they are unable to offer their full capacity through bilateral contracts or into the STEM. The development of the original refund mechanism was based on a number of objectives considered necessary for the success of the market as follows:

- The level of refunds for each outage should be set at the appropriate level to provide the incentive for generators to meet their Reserve Capacity Obligations.
- There must be a strong incentive to encourage capacity providers to be fully available at peak times but there must also be incentives for good performance at other times of the year when scheduled outages reduce the available system capacity.
- There must be a very strong incentive on peaking plants to deliver capacity when required (because there may be no other spare generation capacity available on the system) but these plants may only be called on to run for a few hours each year.
- While refund levels should be high enough to encourage good operational performance, they should not be so high as to deter investment or force capacity providers to include an excessive risk component into their pricing.

It was intended that a facility that experienced a short outage would face a high initial refund. For longer outages, the total refund would be capped by the daily, seasonal and annual caps. More details on the intent of the existing Market Rules can be found in the IMO Rule Change Proposal.

However, the way in which the Market Rules were drafted results in the seasonal cap overriding the daily and trading interval refund rates under all circumstances. This results in significant reductions in refund levels and uncertainty about the interpretation of the Rules.

After examining a number of options, the Working Group considered that the option progressed should result in a minimum change to the rules. This was considered important to maintain stable market arrangements in the initial period of the market to encourage investors.

The Working Group considered that a simpler mechanism is possible if a single rate is applied to each season or part of season. The main elements of the alternative approach are:

- A single refund rate applies in all peak trading intervals of the season (or part of the season).
- A second refund rate applies to all off-peak trading intervals in the season.
- There are no specific seasonal caps.
- An annual cap is retained and this is equal to the amount of reserve capacity payments made to a facility.

In the current Market Rules, different refund rates apply to peak and off-peak trading intervals (i.e. daily). This provides the opportunity to balance the refund levels over the different trading intervals. To reduce the total level of refunds, while maintaining appropriate performance incentives, this differentiation concept has been taken further in this proposal through two other changes.

The first change is that a differentiation is made between business days and non-business days, (weekends and public holidays). The maximum demand on non-business days is generally well below that on adjacent business days so the impact of any outage is likely to be less severe. For this reason, it is proposed that a different refund rate apply to peak trading intervals (8 am to 10 pm) on non-business days.

The second change is that a distinction is made between the first and second halves of the Hot Season. Because of school and public holidays, there is a significant difference in peak demands which occur in December and January and those occurring in February and March. It is proposed that this be reflected by having different refund rates apply to the first and second halves of the Hot Season.

This notice should be read in conjunction with the IMO Rule Change Proposal and the Working Group's Report (published with this notice and the proposal on the IMO website, <http://www.imowa.com.au>), which contain further detail about the proposed changes.

The Proposal and the Market Objectives

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

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

The IMO considers that it is essential that there be a strong incentive on Market Generators to deliver capacity when required and to encourage capacity providers to be fully available at peak times. At the same time there must be incentive for good performance at other times of the year when scheduled outages reduce available system capacity.

Refund levels should be set appropriately to provide proper incentives for generators to meet their Reserve Capacity Obligations, and the proposed changes better reflects the way the refund mechanism was intended to operate.

The IMO considers, therefore, that the proposed rule changes would promote the reliable production and supply of electricity 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 would remove the current uncertainty amongst investors about the interpretation of the Rules. The IMO considers that the proposed changes, therefore, are consistent with the operation of objective (b) of the Market Objectives.

- (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 IMO considers that 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*

The IMO considers that the proposed rule changes will result in refund levels that are sufficient to encourage good operational performance but not so high as to deter investment or force capacity providers to include an excessive risk component into their pricing.

This is consistent with the operation of objective (d) of the Market Objectives.

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

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

Cost of the Change

The IMO has received a preliminary indication that the cost of changes to the IMO Market Systems, should this change be implemented as proposed, would be around \$19,500.

WHETHER THE PROPOSAL WILL BE PROGRESSED FURTHER

The IMO has decided to proceed with this proposal on the basis that the IMO's preliminary assessment indicated that the proposal is consistent with the Market Objectives.

The proposal will be progressed according to the Standard Rule Change Process described in section 2.7 of the Market Rules.

The projected timelines for processing this proposal are:

- This Rule Change Notice published 19/06/2007
- Submission period 20/06/2007 - 31/07/2007
- Draft Report published 28/08/2007
- Second submission period 29/08/2007 - 25/09/2007
- Final Report published 23/10/2007

PROPOSED AMENDING RULES

Amendments to clauses 4.26.1 and 4.26.3 are proposed as follows:

- 4.26.1. If a Market Participant holding Capacity Credits fails to comply with its Reserve Capacity Obligations then the Market Participant must pay a refund to the IMO calculated in accordance with the following provisions.

REFUND TABLE

Season	Cold	Intermediate	Hot
Dates	1 April to 1 October	1 October to 1 December	1 December to 1 April
Off-Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)	—2 × Y	—2 × Y	—2 × Y
Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)	—8 × Y	—8 × Y	—8 × Y
Maximum Daily Rate (\$ per average MW shortfall per Trading Interval over a Trading Day)	—5 × Y	—5 × Y	—5 × Y
Maximum Seasonal Rate (\$ per average MW shortfall per Trading Interval over a Season)	—0.6 × Y	—0.6 × Y	—1.8 × Y
Maximum Refund	— The total value of the Capacity Credit payments paid or to be paid under these Market Rules to the relevant Market Participant for the 12 Trading Months commencing at the start of the Trading Day of the previous 1 October assuming the IMO acquires all of the Capacity Credits held by the Market Participant and the cost of each Capacity Credit so acquired is determined in accordance with clause 4.28.2(b), (c) and (d) (as applicable).		
<p>Where:</p> <p>For an Intermittent Facility that has been commissioned: Y equals 0</p> <p>— For all other facilities, including Intermittent Facilities that have not been commissioned: Y equals the greater of the Reserve Capacity Price and 85% of the Maximum Reserve Capacity Price for the relevant Reserve Capacity Auction expressed as a \$ per MW per Trading Interval figure.</p>			

Public Domain

<u>Dates</u>	<u>1 April to 1 October</u>	<u>1 October to 1 December</u>	<u>1 December to 1 February</u>	<u>1 February to 1 April</u>
<u>Business Days Off-Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)</u>	- <u>0.25 x Y</u>	- <u>0.25 x Y</u>	- <u>0.5 x Y</u>	- <u>0.75 x Y</u>
<u>Business Days Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)</u>	- <u>1.5 x Y</u>	- <u>1.5 x Y</u>	- <u>4 x Y</u>	- <u>6 x Y</u>
<u>Non-Business Days Off-Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)</u>	- <u>0.25 x Y</u>	- <u>0.25 x Y</u>	- <u>0.5 x Y</u>	- <u>0.75 x Y</u>
<u>Non-Business Days Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)</u>	- <u>0.75 x Y</u>	- <u>0.75 x Y</u>	- <u>1.5 x Y</u>	- <u>2 x Y</u>
<u>Maximum Refund</u>	<u>The total value of the Capacity Credit payments paid or to be paid under these Market Rules to the relevant Market Participant for the 12 Trading Months commencing at the start of the Trading Day of the previous 1 October assuming the IMO acquires all of the Capacity Credits held by the Market Participant and the cost of each Capacity Credit so acquired is determined in accordance with clause 4.28.2(b), (c) and (d) (as applicable).</u>			
<u>Where:</u>				
<u>For an Intermittent Facility that has been commissioned: Y equals 0</u>				
<u>For all other facilities, including Intermittent Facilities that have not been commissioned: Y equals the greater of the Reserve Capacity Price and 85% of the Maximum Reserve Capacity Price for the relevant Reserve Capacity Auction, expressed as a \$ per MW per Trading Interval figure. This is determined by dividing the Monthly Reserve Capacity Price by the number of Trading Intervals in the relevant month.</u>				

Market Rule 4.26.3

4.26.3 For each Market Participant holding Capacity Credits, the IMO must determine the amount of the refund (“**Capacity Cost Refund**”) to be applied for Trading Month *m* in respect of a Capacity Shortfall as defined in clauses 4.26.2 during that Trading Month. The Capacity Cost Refund is the lesser of:

- (a) the Maximum Refund determined in accordance with the Refund Table, less all Capacity Cost Refunds applicable to the Market Participant in previous Trading Months falling in the same Capacity Year as Trading Month *m*; and
- (b) ~~the Maximum Seasonal Rate determined in accordance with the Refund Table, multiplied by the average Trading Interval Capacity Shortfall calculated over the Season within which Trading Month *m* falls, less the sum of the Capacity Cost Refunds applicable to the Market Participant in previous Trading Months which fall in the same Season; and~~
- (c) ~~the sum of the relevant amounts for Trading Month *m*, where a relevant amount is calculated for each Trading Day *d* in Trading Month *m* and is equal to the lesser of:~~
 - ~~i. the Maximum Daily Rate determined in accordance with the Refund Table for Trading Day *d* multiplied by the sum over all Trading Intervals *t* in Trading Day *d* of the Capacity Shortfall in Trading Interval *t*; and~~
 - ~~ii. the sum over all Trading Intervals *t* in Trading Month *m* Day *d* of the product of:~~
 - 4i. the Off-Peak Trading Interval Rate or Peak Trading Interval Rate determined in accordance with the Refund Table applicable to Trading Interval *t*; and
 - 2ii. the Capacity Shortfall in Trading Interval *t*.

Chapter 11 Glossary

Non-Business Day: A day that is a Saturday, Sunday, or a public holiday throughout Western Australia.

CALL FOR SUBMISSIONS

The IMO wishes to receive submissions regarding this proposal. The submission period is 6 weeks from the publication date of this notice. Submissions must be delivered to the IMO by close of business on **Tuesday 31 July 2007**.

The IMO prefers to receive submissions by email to **marketadmin@imowa.com.au**, using the submission form available on the IMO website, http://www.imowa.com.au/10_5_1_a_v_open_rule_change_proposals.htm

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

Independent Market Operator
Attn: Dora Guzeleva, Manager Market Administration
PO Box 7096
Cloisters Square, Perth, WA 6850

Fax: (08) 9254 4399