
Wholesale Electricity Market Rule Change Proposal Form

Change Proposal No: RC_2009_18
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Change requested by

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Urgency:	Standard Rule Change Process
Change Proposal title:	Reserve Capacity Refund price calculation
Market Rule(s) affected:	4.26.1

Introduction

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

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

Independent Market Operator

Attn: Manager Market Administration and System Capacity
PO Box 7096
Cloisters Square, Perth, WA 6850

Fax: (08) 9254 4339
Email: marketadmin@imowa.com.au

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

In order for the proposal to be progressed, all fields below must be completed and the change proposal must 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:

Background

Clause 4.26.1 of the Wholesale Electricity Market Rules (Market Rules) includes a Refund Table. This Refund Table is used to calculate the Capacity Cost Refunds that would be applied in the event that a Market Participant which holds Capacity Credits does not meet its Reserve Capacity Obligations. The price variable “Y” in the Refund Table is expressed as a dollar per megawatt (MW) per Trading Interval figure, where Y equals the greater of:

- o the Reserve Capacity Price; and
- o 85% of the Maximum Reserve Capacity Price for the relevant Reserve Capacity Auction.

Y is the price (at interval level) which is then applied to Market Participant shortfalls in calculating the refund values. These values are then scaled using the Refund Table in clause 4.26.1 to calculate the Reserve Capacity Refunds.

Clause 4.29.1(b)ii of the Market Rules sets out the formula for calculating the Monthly Reserve Capacity Price, which is a dollar per MW per Trading Month price:

Monthly Reserve Capacity Price = $((0.85 * \text{Maximum Reserve Capacity Price}) * \text{Excess Capacity Adjustment}) / 12$.

The Excess Capacity Adjustment (ECA) reflects the extent of any surplus Capacity Credits assigned by the IMO over and above the Reserve Capacity Requirement for the relevant Capacity Year) and is equal to the minimum of:

- o one; and

- o the Reserve Capacity Requirement for the Reserve Capacity Cycle divided by the total number of Capacity Credits assigned by the IMO for the Reserve Capacity Cycle.

When applying clause 4.26.1 in combination with clause 4.29.1 the IMO posits that the interpretation of 4.26.1 is ambiguous and can be applied two alternative ways.

Example and Analysis

The main concern with clause 4.26.1 is with the calculation of Y in the years where the ECA in clause 4.29.1(c) is greater than one, i.e. the number of Capacity Credits assigned by the IMO for the year is more than the Reserve Capacity Requirement.

By way of example, the ECA for the 2008/09 Reserve Capacity Cycle would be:

Reserve Capacity Requirement¹ = 4322

Capacity Credits assigned² = 4599.875

$$\begin{aligned}
 \text{ECA} &= \frac{\text{RCR}}{\text{CC}} \\
 &= \frac{4322}{4599.875} \\
 &= 0.9396
 \end{aligned}$$

The Monthly Reserve Capacity Price is based on the Maximum Reserve Capacity Price (\$122,500 for 2008/09 cycle) and is used to set the unit price of Capacity Credits paid to holders of Capacity Credits. It is also used to set the price at which refunds of those payments are paid.

Alternative one

When calculated in accordance with the method implied by clause 4.26.1:

$$\begin{aligned}
 \text{Monthly RCP} &= \frac{(\text{Max RCP} * 0.85)}{12} \\
 &= \frac{(122,500 * 0.85)}{12} \\
 &= \$8677.08
 \end{aligned}$$

¹ 2006 Statement of Opportunities report:
http://www.imowa.com.au/Attachments/RC_Attachments/2006_SO0_Final.pdf

² Summary of Capacity Credits assigned for the 2006 Reserve Capacity Cycle:
http://www.imowa.com.au/Attachments/RC_Attachments/SummaryCapacityCredits%20-%202006.pdf

Alternative two

When calculated in accordance with the method given by 4.29.1, yields the following value:

$$\begin{aligned}
 \text{Monthly RCP} &= \frac{(\text{Max RCP} * 0.85 * \text{ECA})}{12} \\
 &= \frac{(122,500 * 0.85 * 0.9396)}{12} \\
 &= \$8152.91
 \end{aligned}$$

In the absence of clarity within the Market Rules, there are three options available for settlement purposes:

1. **Option one:** Apply alternative one (clause 4.26.1) to both Capacity Credit payments and Capacity Cost Refund calculations. This would have the effect not taking into account the ECA factor and, as a result, overcharging Market Customers for Reserve Capacity.
2. **Option two:** Apply alternative two (clause 4.29.1) to both Capacity Credit payments and Capacity Cost Refund calculations. This means that the definition in the table of MR 4.26.1 is not applied, but ensures payments for Capacity Credits and Capacity Cost Refund amounts are consistently applied by taking into account oversupply via the ECA.
3. **Option three:** Apply alternative one (clause 4.26.1) to Capacity Cost Refund calculations, and alternative two (clause 4.29.1) to Capacity Credit payments which would result in holders of Capacity Credits being charged more in relation to the payments with regards to Capacity Cost Refund amounts.

The IMO settlement applications are currently configured to apply option two (which is applying the interpretation in clause 4.29.1 to both Capacity Credit payments and Capacity Cost Refund calculations).

Proposal

The IMO contends that:

- Clause 4.26.1 should have been amended to reflect the calculation methodology in 4.29.1 when changes were made to the Market Rules when the ECA concept was introduced (see Gazette No 143, 11th August 2006);
- Option one, applying the calculation methodology in clause 4.26.1, would be inconsistent with the desired intent of providing a price response to uncontracted capacity in the market as introduced via the ECA provisions; and
- The intent of clause 4.26.1 is, and should be, to calculate the value Y on a Trading Interval basis, where Y equals the Monthly Reserve Capacity Price (calculated in accordance with clause 4.29.1) divided by the number of Trading Intervals in the

relevant month. This value is then scaled in the Refund Table to take into account whether the failure to satisfy the Reserve Capacity Obligations occurred in a peak trading interval. Calculating Y in this manner would then explicitly incorporate the Excess Capacity Adjustment Value in the calculations of any Capacity Cost Refunds. Therefore the IMO recommends that the calculation methodology of 4.29.1 should be applied to both Capacity Credit payments and Capacity Cost Refund calculations.

The objective of this Rule Change Proposal is to provide clarity around the calculation of the Capacity Cost Refunds and to link the calculation of these refunds to the Monthly Reserve Capacity Price (as defined in 4.29.1), ensuring that both the original payment for Capacity Credits and any related Capacity Cost Refunds are calculated on the same basis.

2. Explain the reason for the degree of urgency:

The IMO considers that this Rule Change Proposal represents the correction of a manifest error (clause 2.5.9(b)) but would not qualify for consideration under the Fast Track Rule Change Process because the views of stakeholders may differ and there is some potential that the proposed solution could involve significant discussion and debate.

Therefore, the IMO considers this Rule Change Proposal should be progressed using the Standard Rule Change Process.

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

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

REFUND TABLE

Dates	1 April to 1 October	1 October to 1 December	1 December to 1 February	1 February to 1 April
Business Days Off-Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)	0.25 x Y	0.25 x Y	0.5 x Y	0.75 x Y
Business Days Peak Trading	1.5 x Y	1.5 x Y	4 x Y	6 x Y

Interval Rate (\$ per MW shortfall per Trading Interval)				
Non-Business Days Off- Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)	0.25 x Y	0.25 x Y	0.5 x Y	0.75 x Y
Non-Business Days Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)	0.75 x Y	0.75 x Y	1.5 x Y	2 x Y
Maximum Participant 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).			
Where:				
For an Intermittent Facility that has been commissioned: Y equals 0				
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 (calculated in accordance with clause 4.29.1) by the number of Trading Intervals in the relevant month.				
For the purposes of this clause, an Intermittent Facility will be deemed to be commissioned when the IMO determines that the facility is fully operational. In this case the IMO must apply the principle that the Facility is fully operating in accordance with the basis on which the Facility applied for, and was granted, Certified Reserve Capacity, in accordance with clause 4.10 and 4.11 respectively and was subsequently assigned Capacity Credits in accordance with clause 4.14.				

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

The IMO considers that the proposed Amending Rules remove ambiguity, provide consistency in the calculation of both payments to holders of Capacity Credits and any Capacity Cost Refund amounts while recognising the any oversupply of capacity as considered by the ECA concept. This improves the integrity of the Market Rules, and therefore is consistent with the operation of the Wholesale Market Objectives.

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

Costs: No costs have been identified as part of this Rule Change Proposal.

Benefits: The proposed Rule Change will correct the ambiguity around clause 4.26.1 when calculating the Capacity Cost Refunds, ensuring that the same basis is used for calculating Capacity Credit Payments and any associated refund payments.