



Draft Rule Change Report
Title: Reserve Capacity Refund Price
Calculation

Ref: RC_2009_18
Standard Rule Change Process

Date: 17 July 2009

CONTENTS

1.	INTRODUCTION	3
2.	CALL FOR SECOND ROUND SUBMISSIONS	4
3.	THE RULE CHANGE PROPOSAL.....	4
3.1	Submission Details.....	4
3.2	Details of the Proposal	4
3.3	The Proposal and the Wholesale Market Objectives	7
3.4	Amending Rules proposed by the IMO	7
3.5	The IMO's Initial Assessment of the Proposal	7
4.	FIRST SUBMISSION PERIOD.....	7
4.1	Submissions received	7
4.1.1	Submission from Alinta.....	7
4.1.2	Submission from Griffin Energy	8
4.1.3	Submission from LGP	8
4.1.4	Submission from Synergy	8
4.2	Public Forums and Workshops	9
5.	THE IMO'S ASSESSMENT	9
5.1	Wholesale Market Objectives.....	9
5.2	Practicality and Cost of Implementation.....	10
5.3	Views expressed in submissions	10
5.4	Market Advisory Committee	11
6.	THE IMO'S DRAFT DECISION	11
6.1	Reasons for the decision.....	11
7.	PROPOSED AMENDING RULES.....	11

DOCUMENT DETAILS

IMO Notice No.: RC_2009_18

Report Title: Draft Rule Change Report: Reserve Capacity Refund Price Calculation

Release Status: Public

Confidentiality Status: Public domain

http://www.imowa.com.au/Attachments/RuleChange/RuleChange_2009_18.html

Published in accordance with Market Rule 2.7.6

Independent Market Operator

Level 3, Governor Stirling Tower

197 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

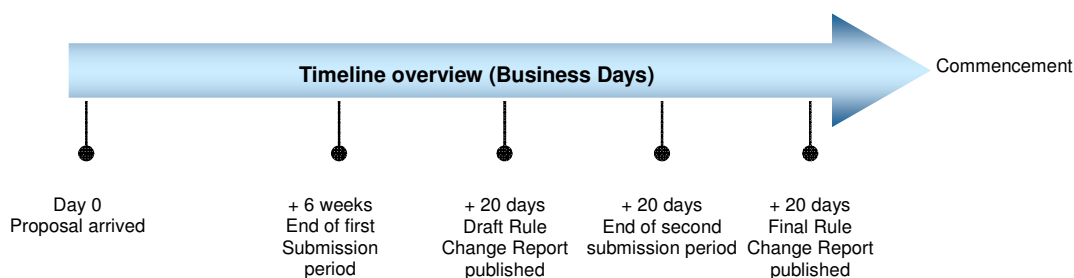
Website: www.imowa.com.au

1. INTRODUCTION

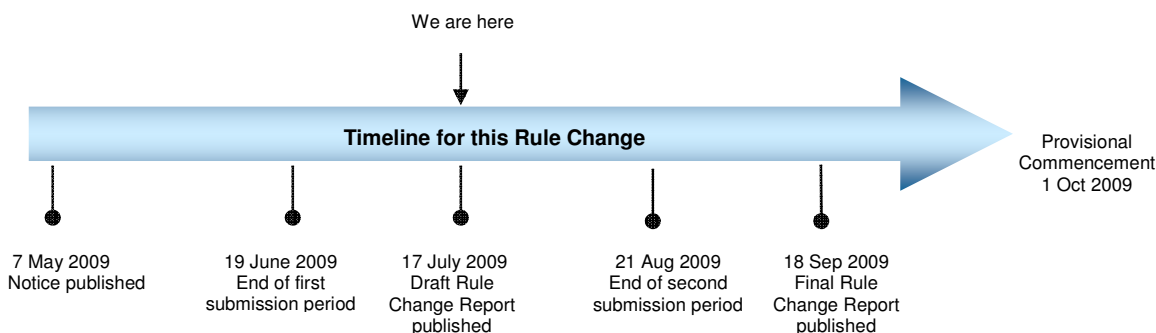
On 7 May 2009, the Independent Market Operator (IMO) submitted a Rule Change Proposal regarding the amendment of clause 4.26.1 of the Wholesale Electricity Market Rules (Market Rules).

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

The standard process adheres to the following timelines:



The key dates in processing this Draft Rule Change Report are:



Please note that the Commencement Date is provisional and may be subject to change in the Final Rule Change Report.

The IMO's draft decision is to accept the Rule Change Proposal in the form outlined in section 7 of this Report. The detailed reasons for the IMO's decision are set out in section 5 of this report.

In making its draft decision the IMO has taken into account:

- the Wholesale Market Objectives;
- the practicality and cost of implementing the proposal;
- the views of the Market Advisory Committee (MAC); and
- the submissions received.

All documents related to this Rule Change Proposal can be found on the IMO website: http://www.imowa.com.au/Attachments/RuleChange/RuleChange_2009_18.html

2. CALL FOR SECOND ROUND SUBMISSIONS

The IMO invites interested stakeholders to make submissions on this Draft Rule Change Report. The submission period is 20 Business Days from the publication date of this Report. Submissions must be delivered to the IMO by 5:00pm, **Friday 21 August 2009**.

The IMO prefers to receive submissions by email to: market.development@imowa.com.au using the submission form available on the IMO website: http://www.imowa.com.au/10_5_1_b_rule_change_proposal.htm

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

Independent Market Operator
 Attn: Manager Market Development and System Capacity
 PO Box 7096
 Cloisters Square, PERTH, WA 6850
 Fax: (08) 9254 4399

3. THE RULE CHANGE PROPOSAL

3.1 Submission Details

Name:	Neil Hay
Phone:	9254 4313
Fax:	9254 4399
Email:	Neil.Hay@imowa.com.au
Organisation:	IMO
Address:	Level 3, 197 St Georges Tce, Perth, WA 6000
Date submitted:	5 May 2009
Urgency:	Standard Rule Change Process
Change Proposal title:	Reserve Capacity Refund price calculation

3.2 Details of the Proposal

Clause 4.26.1 of the Market Rules includes a Refund Table, which is used to calculate the Capacity Cost Refunds. 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:

- the Reserve Capacity Price; and
- 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, where the 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:

- one; and
- 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; and

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_SOO_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).

Original Proposal

The IMO contended 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, 18th 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.

3.3 The Proposal and the Wholesale Market Objectives

In the Rule Change Proposal the IMO submitted that it 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.

3.4 Amending Rules proposed by the IMO

The Amending Rules originally proposed by the IMO were presented in the Rule Change Notice, available on the IMO website.

3.5 The IMO's Initial Assessment of the Proposal

The IMO decided to proceed with the proposal on the basis of its preliminary assessment, which indicated that the proposal was consistent with the Wholesale Market Objectives.

4. FIRST SUBMISSION PERIOD

The first submission period for this Rule Change Proposal was between 8 May 2009 and 19 June 2009.

4.1 Submissions received

The IMO received submissions from Alinta, Griffin Energy, Landfill Gas & Power (LGP), and Synergy. The submissions are summarised below, and the full text is available on the IMO website.

4.1.1 Submission from Alinta

Alinta supports the Rule Change Proposal. However, Alinta recommends that the Amending Rules for clause 4.26.1 are modified so that the calculation of refunds under this rule is directly linked to the Monthly Reserve Capacity Price calculated by the IMO under clause 4.29.1(b)(ii).

Alinta considers that the Market Rules, as proposed to be amended or replaced by RC_2009_18, are likely to be consistent with Wholesale Market Objectives (a), (b) and (d).

Alinta considers that RC_2009_18 is unlikely to be inconsistent with Wholesale Market Objectives (c) and (e).

4.1.2 Submission from Griffin Energy

Griffin Energy supports the Rule Change Proposal as a necessary amendment to an inconsistency brought about by the introduction of the ECA in a previous rule change.

Griffin Energy considers that the Rule Change Proposal is an amendment to the Market Rules which does not seek to better facilitate specific objectives of the market, but one which maintains the ability of the Market Rules to function in a way that allows the Wholesale Market Objectives to be met.

Griffin Energy considers that the Rule Change Proposal appears consistent with all the Wholesale Market Objectives.

4.1.3 Submission from LGP

LGP supports the Rule Change Proposal on the grounds that it corrects an unintended consequence of an earlier rule change.

LGP considers that this Rule Change Proposal is consistent with all objectives as it maintains the integrity of the rules.

4.1.4 Submission from Synergy

Synergy considers that consistency in capacity price and refund calculations should apply, but contends that there is a historically based reason for the inconsistency.

Synergy contends that there is a justifiable value difference related to the level of security between capacity costs and refunds when excess capacity is secured and that the value of Capacity Cost Refunds should be linked to the level of capacity available in the market at any particular time.

Synergy notes that the reason for scaling the cost of capacity when excess above the forecast is credited is to signal the reduced security value of each extra credit and how this is translated into a single capacity price.

Synergy posits that refunds work in a different value world to the pricing of capacity because of the outage approval behaviour of System Management. When the IMO credits more capacity than forecast System Management has a greater volume of capacity to maintain security levels therefore can allow a greater volume of plant outages than would be the case if only the forecast volume had been credited.

Synergy notes that this means that the actual value of capacity being used to meet demand including the reliability tolerance is higher than the market cost of capacity because the extra capacity the IMO has secured is not available, not providing extra security but is on an outage. Because it is not available for security or reserve purposes but is used to allow more outages the value of operating capacity and as a consequence refunds moves back up to the 85% of the Maximum Reserve Capacity Price.

Synergy notes that if, in the case of the IMO securing more capacity than forecast, System Management demanded a greater level of security then the two prices (Capacity Credit payments and Capacity Cost Refunds) would align, but because no greater security is guaranteed because System Management will allow a greater volume of outages the two are and were valued differently.

Synergy requests that these practical concerns be taken into account when assessing whether the proposed rule change be accepted or not.

Synergy is unconvinced the rule change will better facilitate the achievement of the market objectives.

4.2 Public Forums and Workshops

No public forums or workshops were held in relation to this Rule Change Proposal.

5. THE IMO'S ASSESSMENT

In preparing this Draft 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.

Market Rule 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 in respect of this Rule Change Proposal.

This IMO's assessment is outlined in the following sections.

5.1 Wholesale Market Objectives

The IMO considers that the Market Rules as a whole, if amended, will be consistent with the Wholesale Market Objectives.

Wholesale Market Objective	Consistent with objective
(a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system	Yes
(b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors	Yes
(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	Yes
(d) to minimise the long-term cost of electricity supplied to	Yes

Wholesale Market Objective	Consistent with objective
customers from the South West interconnected system	
(e) to encourage the taking of measures to manage the amount of electricity used and when it is used	Yes

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. The IMO contends that this improves the integrity of the Market Rules, and therefore is consistent with the operation of the Wholesale Market Objectives.

5.2 Practicality and Cost of Implementation

The proposed changes do not require any change to the Wholesale Electricity Market Systems operated by the IMO.

There have been no additional costs identified with the implementation of this Rule Change Proposal.

5.3 Views expressed in submissions

Four submissions were received during the first submission period. Three of the submissions (Alinta, Griffin Energy and LGP) supported the proposed Amending Rules and the fourth (Synergy) identified some concerns. Alinta also recommended a small change to the drafting.

Alinta recommends that the Amending Rules for clause 4.26.1 in RC_2009_18 be modified so that the calculation of refunds is directly linked to the Monthly Reserve Capacity Price calculated by the IMO under clause 4.29.1(b)(ii).

- The IMO notes that clause 4.26.1 of the proposed Amending Rules linked the calculation of refunds to the complete clause 4.29.1 rather than just sub-clause 4.29.1(b)(ii). The sub-clause relates only to the situation where there has been no Reserve Capacity Auction run for the Reserve Capacity Cycle. There has never been an auction run to date, but this does not mean that this will never occur, and the IMO considers that the changes should be left as proposed in the original proposal.

In its submission, Synergy contends that the value of Capacity Cost Refunds should be linked to the level of capacity available in the market at any particular time. Synergy further posits that this would be the reason the current arrangements should be interpreted so as to have a higher value for Capacity Cost Refunds in than for Capacity Credit payments.

- While there may be some argument to support such a regime, it would require sculpting of the Capacity Cost Refund value, the aggregate level of Capacity Credits procured and the level of planned and unplanned outages on an interval-by-interval basis for the value of Capacity Cost Refunds to be correctly represented.

- The IMO contends that this more complex interpretation was not the desired outcome when the original rule change was proposed (see Gazette No 143, 18th August 2006) and can find no evidence to support this position.
- The IMO considers that this level of complexity in the Capacity Cost Regime is not warranted at this stage.
- The IMO posits that, as reflected in this Rule Change Proposal, the calculation of the Capacity Cost Refunds should be linked 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.

5.4 Market Advisory Committee

The MAC was advised of the proposed rule change at its meeting on 29 April 2009. At this meeting the MAC unanimously agreed to progress this Rule Change Proposal.

6. THE IMO'S DRAFT DECISION

The IMO's draft decision is to accept the proposed amendment to clause 4.26.1 of the Wholesale Electricity Market Rules as proposed in the Rule Change Proposal.

6.1 Reasons for the decision

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

- are consistent with the Wholesale Market Objectives;
- have no identified costs associated with implementation;
- have the support of the MAC; and
- have the general support of the submissions received during the first submission period.

Additional detail outlining the analysis behind the IMO's reason is outlined in Section 5 of this report.

7. PROPOSED AMENDING RULES

The IMO proposes to implement the following amendments to the Market Rules (added text, ~~deleted text~~):

- 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	0.25 x Y	0.25 x Y	0.5 x Y	0.75 x Y

Interval Rate (\$ per MW shortfall per Trading Interval)				
Business Days Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)	1.5 x Y	1.5 x Y	4 x Y	6 x Y
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.				