



Independent Market Operator

**Final Market Rule Change
Report:
Reserve Capacity refund price
calculation**

Ref: RC_2009_18

Date: 18 September 2009

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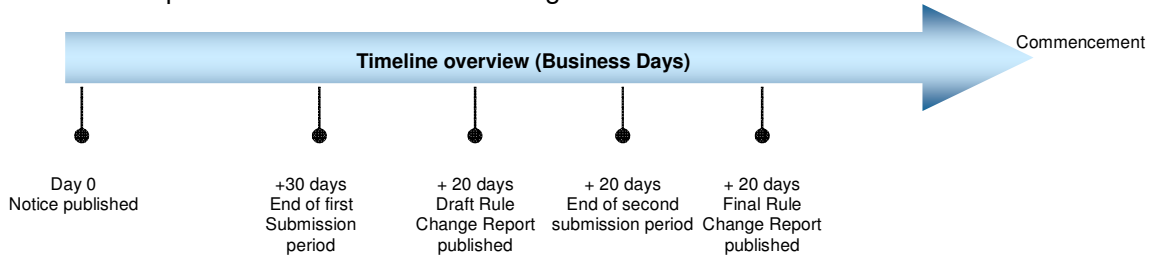
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1. INTRODUCTION

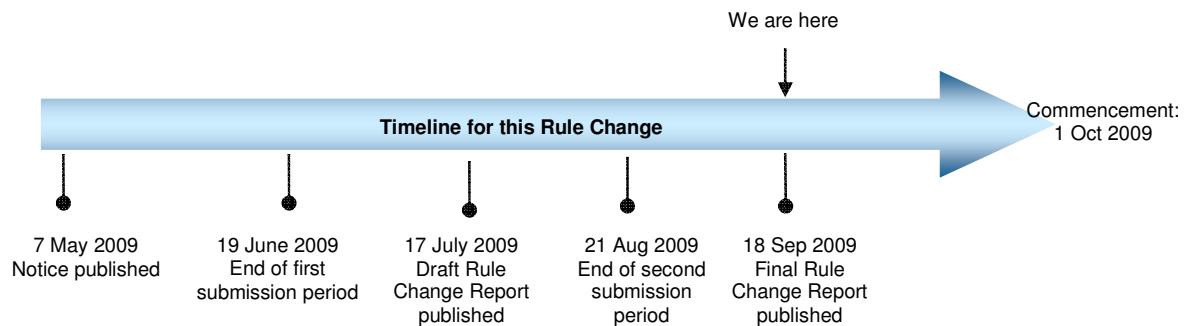
On 7 May 2009, the Independent Market Operator (IMO) submitted a Rule Change Proposal regarding the amendment of clause 4.26.1 of the Wholesale Electricity Market Rules (Market Rules).

This proposal was 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 Rule Change Proposal are:



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

In making its final decision on the Rule Change Proposal, 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/RC_2009_18

2. THE RULE CHANGE PROPOSAL

2.1 Submission Details

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Date submitted:	5 May 2009
Urgency:	Standard Rule Change Process
Change Proposal title:	Reserve Capacity Refund price calculation
Market Rule(s) affected:	4.26.1

2.2 Summary Details of the Proposal

Clause 4.29.1(b)ii of the Market Rules states that, if no Reserve Capacity Auction was held, the Monthly Reserve Capacity Price equals $(0.85 * \text{Maximum Reserve Capacity Price} * \text{Excess Capacity Adjustment})/12$. The Excess Capacity Adjustment reflects the extent of any surplus Capacity Credits assigned by the IMO above the Reserve Capacity Requirement for the relevant Capacity Year.

Clause 4.26.1 of the Market Rules includes a Refund Table used to calculate the Capacity Cost Refunds, which apply in the event that a Market Participant holding Capacity Credits does not meet its Reserve Capacity Obligations. The price variable “Y” in the Refund Table is calculated in the same way as the Monthly Reserve Capacity Price, except that there is no Excess Capacity Adjustment. It is therefore inconsistent with the Monthly Reserve Capacity Price, even though it is intended to be a refund of monies received by the Market Participant as consideration for providing Reserve Capacity.

The proposal is to amend Clause 4.26.1 so that it uses the Monthly Reserve Capacity Price calculated according to Clause 4.29.1.

The detailed information on the proposal is contained in Appendix 1 and can be found in both the Rule Change Proposal and Draft Rule Change Report contained on the IMO’s website.

2.3 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 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.

2.4 The 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.

2.5 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.

3. FIRST SUBMISSION PERIOD

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

3.1 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.

3.1.1 Submission from Alinta

Alinta supported the Rule Change Proposal. However, Alinta recommended that the Amending Rules for clause 4.26.1 be 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).

Note that this is the IMO's summary of Alinta's submission, as presented in the Draft Rule Change Report. However, it is not an accurate representation of Alinta's views. The IMO's proposal was to calculate refunds according to clause 4.29.1; in its submission, Alinta outlined that the IMO's proposal was to use (more specifically) clause 4.29.1(b)(ii), but did not suggest that this would be preferable and as such did not recommend any changes to the proposed Amending Rules.

This information is retained here as the IMO is required under clause 2.7.8(a) of the Market Rules to publish a final report containing the information in the Draft Rule Change Report.

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

3.1.3 Submission from Griffin Energy

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

3.1.2 Submission from Landfill Gas and Power

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

LGP considered that this Rule Change Proposal is consistent with all objectives, as it maintains the integrity of the Market Rules.

3.1.4 Submission from Synergy

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

Synergy contended 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 noted 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 posited 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 noted 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 noted 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 requested that these practical concerns be taken into account when assessing whether the Rule Change Proposal be accepted or not.

Synergy was unconvinced that the Rule Change Proposal would better facilitate the achievement of the market objectives.

3.3 The IMO's assessment of first submission period responses

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

Alinta recommended 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 noted 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 there will never be one, and the IMO considers that the changes should remain as in the original proposal.

Note that this is the IMO's summary of Alinta's submission, as presented in the Draft Rule Change Report. However, it is not an accurate representation of Alinta's views. The IMO's proposal was to calculate refunds according to clause 4.29.1; in its submission, Alinta outlined that the IMO's proposal was to use (more specifically) clause 4.29.1(b)(ii), but did not suggest that this would be preferable and as such did not recommend any changes to the proposed Amending Rules.

This information is retained here as the IMO is required under clause 2.7.8(a) of the Market Rules to publish a final report containing the information in the Draft Rule Change Report.

In its submission, Synergy contended 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 posited 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 contended 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 considered that this level of complexity in the Capacity Cost Regime is not warranted at this stage.

- The IMO posited 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.

3.4 Public Forums and Workshops

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

4. THE IMO'S DRAFT ASSESSMENT

The IMO's assessment, as contained in its Draft Rule Change Report, can be viewed on the IMO's website.

5. THE IMO'S DRAFT DECISION

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

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

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

6. SECOND SUBMISSION PERIOD

Following the publication of the Draft Rule Change Report on the IMO website, the second submission period was between 20 July 2009 and 21 August 2009.

6.1 Submissions received

The IMO received one submission, from Landfill Gas & Power. The full text is available on the IMO website.

6.1.2 Submission from Landfill Gas and Power

LGP supported the decision to proceed with the Rule Change Proposal.

LGP took note of Synergy's views, and would welcome consideration of these in any future review of the Reserve Capacity Mechanism.

7. THE IMO'S FINAL ASSESSMENT

In preparing its Final 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, nor have any technical studies been commissioned as parts of the IMO’s assessment.

The IMO’s assessment is outlined in the following sections.

7.1 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 customers from the South West interconnected system	Yes
(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 and provide consistency in the calculation of both payments to holders of Capacity Credits and any Capacity

Cost Refund amounts, while recognising 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 Wholesale Market Objectives.

7.2 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.

7.3 Views expressed in submissions

First Submission Period

Four submissions were received during the first submission period. Three of these (Alinta, Griffin Energy and LGP) supported the proposed Amending Rules, the fourth (Synergy) identified some concerns.

Second submission Period

One supporting submission was received during the second submission period.

Additional detail outlining the IMO's assessment of submissions received is outlined in section 3.3 of this Final Rule Change Report.

7.4 Views expressed by the 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.

8. THE IMO'S FINAL DECISION

The IMO's final decision is to accept the proposed amendments to clause 4.26.1 of the Market Rules as proposed in the Rule Change Proposal.

8.1 Reasons for the decision

The IMO has made its decision on the following basis:

- The Amending Rules:
 - will improve the consistency and integrity of the Market Rules;
 - are consistent with the Wholesale Market Objectives;
 - have no identified costs associated with implementation;

- have the support of the MAC; and
- have the support of the majority of submissions received.

Additional detail outlining the analysis behind the IMO's reasons is outlined in section 7 of this Final Rule Change Report.

9. AMENDING RULES

9.1 Commencement

The amendments to the Market Rules resulting from this Rule Change Proposal will commence at **8:00am on 1 October 2009**.

9.2 Amending Rules

The following clauses are amended (deleted text, added 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 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 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 (\$	0.75 x Y	0.75 x Y	1.5 x Y	2 x Y

per MW shortfall per Trading Interval)				
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).			
<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. 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.</p> <p>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.</p>				

APPENDIX 1: FULL 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.

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

¹ 2006 Statement of Opportunities report:

http://www.imowa.com.au/Attachments/RC_Attachments/2006_SOO_Final.pdf

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

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:

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

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

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

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.