



# Call for Further Submissions: Changes to the Reserve Capacity Price and the Dynamic Reserve Capacity Refund Regime (RC\_2013\_20)

23 March 2015

## 1. Background

The IMO commenced the formal rule change process for Rule Change Proposal: Changes to the Reserve Capacity Price and the Dynamic Reserve Capacity Refund Regime (RC\_2013\_20) on 10 January 2014. The Rule Change Proposal was one of a number of proposals developed by the Reserve Capacity Mechanism Working Group<sup>1</sup> in 2013. An overview of the proposed changes is provided below.

Consultation on the Rule Change Proposal took place in early 2014 with the first submission period on this Rule Change Proposal held between 13 January to 24 February 2014 and the second submission period held between 1 April and 1 May 2014.

Following the close of the second submission period, the IMO extended the timeframe for publishing the Final Rule Change Report until 30 April 2015 to allow the IMO to consider the outcomes of the State Government's Electricity Market Review and any potential impacts on this Rule Change Proposal.

On 18 March 2015, the IMO received a letter from the Minister requesting that the IMO resume the 2014 Reserve Capacity Cycle, which had been deferred by 12 months under a Ministerial Direction received on 29 April 2014, and expedite the progression of this Rule Change Proposal to provide certainty to applicants for the 2014 Reserve Capacity Cycle.

## 2. Call for further submissions

The IMO has issued this call for further submissions on the basis that a significant period of time has passed since the IMO last consulted on this Rule Change Proposal. The IMO notes that stakeholders have already provided submissions in the first and second submission periods. These submissions and the IMO's response to the issues raised will be included in the Final Rule Change Report. The IMO therefore requests that stakeholders **ONLY submit on new, substantive issues.**

The IMO invites interested stakeholders to make submissions on this Rule Change Proposal. The further submission period is approximately two weeks from the publication of this notice. Submissions must be delivered to the IMO by **5:00 PM on Thursday 2 April 2015.**

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<sup>1</sup> Information relating to the Reserve Capacity Mechanism Working Group is available at: <http://www.imowa.com.au/rcmwg>.

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 at: <http://www.imowa.com.au/wem-rule-changes>.

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

**Independent Market Operator**

Attn: Group Manager, Development and Capacity  
PO Box 7096  
Cloisters Square, PERTH, WA 6850

### 3. Overview of proposed changes

#### Changes to the Reserve Capacity Price formula

To improve incentives for investment in capacity when needed the Reserve Capacity Price (RCP) formula was proposed to be amended to include:

- (a) the ability for the RCP to move above the Maximum Reserve Capacity Price (MRCP) where a capacity shortfall exists, up to a maximum level where the RCP is 110 percent of the MRCP when 97 percent of the Reserve Capacity Requirement has been fulfilled; and
- (b) a steeper slope function of -3.75 replacing the current -1 slope embedded into the 'excess capacity adjustment' component of the RCP formula such that the rate of downward adjustment to the RCP is accelerated as excess capacity increases.

The proposed amendments are expected to increase the responsiveness of the RCP adjustment to changing market conditions resulting in better signals for investment in new capacity. Accordingly, it is expected that the proposed amendments will, over time, result in a reduction of excess capacity.

In accordance with the proposed amendments to the RCP formula, the applicable ceiling price for a Reserve Capacity Price-Quantity Pair to be submitted in a Reserve Capacity Auction is also proposed to be amended to 110 percent of the MRCP.

The IMO also proposed to rename the 'Maximum' RCP to the 'Benchmark' RCP on the basis that, following the five-yearly MRCP review completed in 2011, the MRCP has become more representative of a benchmark price that signals the expected, rather than the maximum price for providing Reserve Capacity.

#### Dynamic Reserve Capacity refund regime

To address the issue of the weak alignment of the current Reserve Capacity refund factors to the prevalent system conditions, the Refund Table is proposed to be replaced by a formula for determining the applicable refund factor. It is proposed that the refund factor will be determined as a function of the spare capacity in a given Trading Interval where spare capacity is calculated as the sum of the capacity available from different types of Facilities less the capacity being utilised in that Trading Interval. The formula is proposed to work such that:

- (a) a maximum refund factor of six applies when the spare capacity in a Trading Interval is 750 MW or below;

- (b) a minimum refund factor of 0.25 applies when the spare capacity in a Trading Interval exceeds 1500 MW; and
- (c) the minimum refund factor scales up from 0.25 towards one depending on the level of unavailability of a Facility over the previous 90-day period up to and including that Trading Interval.

Additionally, to address the issue of the inefficient value transfer from Market Generators to Market Customers which exists in the current regime in the form of the distribution of Capacity Cost Refund revenue to Market Customers, it is proposed that a recycling regime be adopted where the collected Capacity Cost Refund revenue is re-distributed to capacity providers in the form of rebates. Eligibility for rebates is proposed to be based on an assessment of actual dispatch of a Facility in the previous 30-day rolling period. Rebates for a Trading Interval are proposed to be allocated to Facilities based on their share of available Capacity Credits in that Trading Interval.

The proposed amendments are expected to strengthen the incentives for maximising the availability of capacity in the energy market through efficient scheduling of maintenance, increasing competition and reducing the risk of price spikes in the event of unforeseen supply interruptions. Additionally, the proposed amendments related to the recycling regime are expected to promote economic efficiency by reducing inefficient value transfer from Market Generators to Market Customers.

Full details of the Rule Change Proposal are available at: [http://www.imowa.com.au/RC\\_2013\\_20](http://www.imowa.com.au/RC_2013_20).

#### 4. Proposed Amending Rules

This section includes the proposed Amending Rules for this Rule Change Proposal, as amended following the first and second submission periods. The changes are shown with reference to the current Market Rules (as at 1 November 2014).

However, the proposed Amending Rules contained in the Draft Rule Change Report published on 31 March 2014, were prepared with reference to changes to the Market Rules that were proposed to be included in other Rule Change Proposals but which have subsequently not progressed. The differences between the Amending Rules presented in this section and the Draft Rule Change Report are shown in section 5 below.

The proposed Amending Rules as presented in the Rule Change Proposal and amended following the first and second submission periods are as follows (~~deleted text~~, added text):

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...

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...

1.4.1. In these Market Rules, unless the contrary intention appears:

...

- (r) **(Headings and comments):** headings and comments appearing in boxes in these Market Rules (~~other than the Refund Table in clause 4.26~~) are for convenience only and do not affect the interpretation of these Market Rules.

...

## **Maximum and Minimum Administered Prices and Loss Factors**

### **2.26. Economic Regulation Authority Approval of ~~Maximum and Minimum Administered Prices~~**

2.26.1. Where the IMO has proposed a revised value for the ~~Maximum Benchmark~~ Reserve Capacity Price in accordance with ~~clause section~~ 4.16 or a change in the value of one or more Energy Price Limits in accordance with ~~clause section~~ 6.20, the Economic Regulation Authority must:

...

- (b) make a decision as to whether or not to approve the revised value for the ~~Maximum Benchmark~~ Reserve Capacity Price or any value comprising the Energy Price Limits;
- (c) in making its decision, only consider:
  - i. whether the proposed revised value for the ~~Maximum Benchmark~~ Reserve Capacity Price or Energy Price Limit proposed by the IMO reasonably reflects the application of the method and guiding principles described in ~~clauses section~~ 4.16 or 6.20 (as applicable);

...

2.26.2. Where the Economic Regulation Authority rejects a revised ~~Maximum Benchmark~~ Reserve Capacity Price or the Energy Price Limits submitted by the IMO it must give reasons and may direct the IMO to carry out all or part of the review process under ~~clause section~~ 4.16 or 6.20 (as applicable) again in accordance with any directions or recommendations of the Economic Regulation Authority.

2.26.3. The Economic Regulation Authority must review the methodology for setting the ~~Maximum Benchmark~~ Reserve Capacity Price and the Energy Price Limits not later than the fifth anniversary of the first Reserve Capacity Cycle and, subsequently, not later than the fifth anniversary of the completion of the preceding review under this clause 2.26.3. A review must examine:

...

(d) historical Reserve Capacity Offers and the proportion of Reserve Capacity Offers with prices equal to the MaximumBenchmark Reserve Capacity Price, in the case of Reserve Capacity Cycles up to and including 2013;

(dA) historical Reserve Capacity Offers and the proportion of Reserve Capacity Offers with prices equal to 110 percent of the Benchmark Reserve Capacity Price, in the case of Reserve Capacity Cycles from 2014 onwards;

...

(f) the appropriateness of the parameters and methodology in ~~clauses section~~ 4.16 and the Market Procedure referred to in clause 4.16.3 for recalculating the MaximumBenchmark Reserve Capacity Price;

...

...

4.1.19. The IMO must commence a review of the MaximumBenchmark Reserve Capacity Price as required by clause 4.16.3 with the objective of completing the review, including consideration of public submissions in relation to that review, so as to allow a reasonable time for the Economic Regulation Authority to approve any proposed change in value and for that value to be implemented prior to the date and time specified in clause 4.1.4 that relates to the following Reserve Capacity Cycle.

...

4.3.1. A Request for Expression of Interest for a Reserve Capacity Cycle must include the following information:

...

(c) for each of the three previous Reserve Capacity Cycles (if applicable):

...

v. the MaximumBenchmark Reserve Capacity Price;

...

(f) the then current MaximumBenchmark Reserve Capacity Price;

...

4.13.2. For the purposes of ~~this section clause~~ 4.13 the amount of Reserve Capacity Security is:

(a) at the time and date referred to in clause 4.1.13, ~~twenty-five~~ 25 percent of the MaximumBenchmark Reserve Capacity Price included in the most recently issued Request for Expressions of Interest at the time the Certified Reserve Capacity is assigned, expressed in \$/MW per year, multiplied by an amount equal to:

...

- (b) at the time and date referred to in clause 4.1.21, ~~twenty-five~~ 25 percent of the MaximumBenchmark Reserve Capacity Price included in the most recently issued Request for Expressions of Interest at the time the Certified Reserve Capacity is assigned, expressed in \$/MW per year, multiplied by an amount equal to the total number of Capacity Credits assigned to the Facility under clause 4.20.5A.

...

#### **4.16. The MaximumBenchmark Reserve Capacity Price**

4.16.1. For all Reserve Capacity Cycles, the IMO must publish a MaximumBenchmark Reserve Capacity Price as determined in accordance with this clause 4.16 prior to the time specified in clause 4.1.4.

4.16.2. The MaximumBenchmark Reserve Capacity Price to apply for the first Reserve Capacity Cycle is \$150,000 per MW per year.

4.16.3. The IMO must develop a Market Procedure documenting the methodology it uses and the process it follows in determining the MaximumBenchmark Reserve Capacity Price, and:

...

- (b) the IMO must follow the documented Market Procedure to annually review the value of the MaximumBenchmark Reserve Capacity Price in accordance with this clause 4.16 and in accordance with the timing requirements specified in clause 4.1.19.

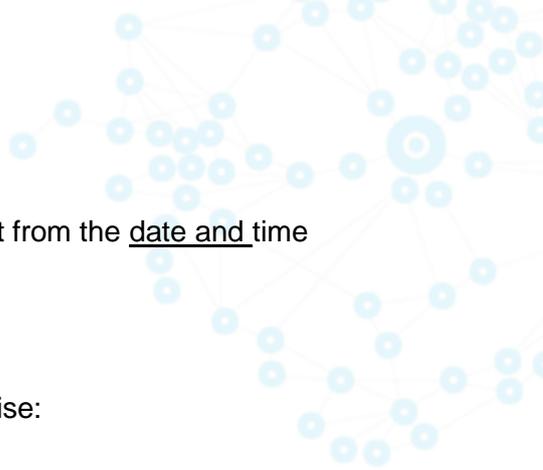
...

4.16.5. The IMO must propose a revised value for the MaximumBenchmark Reserve Capacity Price using the methodology described in the Market Procedure referred to in clause 4.16.3.

4.16.6. The IMO must prepare a draft report describing how it has arrived at a proposed revised value for the MaximumBenchmark Reserve Capacity Price under clause 4.16.5. The IMO must publish the report on the Market Web-Site and advertise the report in newspapers widely distributed in Western Australia and request submissions from all sectors of the Western Australia energy industry, including end-users.

4.16.7. After considering ~~of~~ the submissions on the draft report described in clause 4.16.6, the IMO must propose a final revised value for the MaximumBenchmark Reserve Capacity Price and publish that value and its final report, including submissions received on the draft report, on the Market Web-Site.

4.16.8. A proposed revised value for the MaximumBenchmark Reserve Capacity Price becomes the MaximumBenchmark Reserve Capacity Price after the IMO has posted a notice on the Market Web Site of the new value of the



~~MaximumBenchmark~~ Reserve Capacity Price with effect from the date and time specified in the IMO's notice.

...

4.18.2. Each Reserve Capacity Price-Quantity Pair must comprise:

...

- (b) an offer price in units of dollars per MW per year expressed to a precision of \$0.01/MW between zero and 110 percent of the ~~MaximumBenchmark~~ Reserve Capacity Price;

...

...

4.22.2. If a Market Participant nominates to have Capacity Credits covered by a Long Term Special Price Arrangement, it must at the same time nominate:

- (a) a level of coverage, in MW and to a precision of 0.005 MW, subject to the limits that:

...

- ii. if the Capacity Credits are provided by a Facility which has previously provided Capacity Credits, the number of Capacity Credits covered by the arrangement is not to exceed the lesser of:

...

the increase in the number of Capacity Credits provided by the Facility, whether acquired by the IMO or traded bilaterally, since the previous Reserve Capacity Cycle<sub>n</sub>.

~~Where~~ the Long Term Special Price Arrangement is conditional on evidence being provided to the IMO prior to that Long Term Special Price Arrangement taking effect that capital costs in excess of 10% percent of the ~~MaximumBenchmark~~ Reserve Capacity Price have been incurred on average with respect to the provision of each Capacity Credit covered by the arrangement; and

...

**Note:** The IMO has proposed to amend the alignment of the drafting of the last section in this clause to ensure that it applies for each sub-clause in 4.22.2(a), rather than only sub-clause 4.22.2(a)(ii).

...

4.26.1. If a Market Participant holding Capacity Credits associated with a generation system Facility 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.

(a) The refund factor RF(f,t) for a Facility f in a Trading Interval t is the lesser of:

- i. six; and
- ii. the greater of RF\_dynamic(t) and RF\_floor(f,t).

(b) The dynamic refund factor RF\_dynamic(t) in a Trading Interval t is equal to:

$$\frac{11.75 - \left(\frac{5.75}{750}\right) \times \text{Spare}(t)}$$

where Spare(t) in a Trading Interval t is equal to the sum of the quantities calculated as follows:

- i. for each Scheduled Generator for which a Market Participant holds Capacity Credits:
  1. the MW quantity of Capacity Credits; less
  2. the MW quantity of Outage provided under clause 7.13.1A(b); less
  3. the Sent Out Metered Schedule multiplied by two so as to be a MW quantity;

**Note:** The IMO intends to propose amendments to clause 7.13.1A(b) to receive Outage data as measured at 15 degrees and 41 degrees Celsius in the Rule Change Proposal: Administrative Improvements to the Outage Process (RC\_2014\_03). Clause 4.26.1(b)(i)(2) will be proposed to be further amended in RC\_2014\_03 to refer to the Outage data measured at 41 degrees Celsius.

- ii. for each Non-Scheduled Generator that received a Dispatch Instruction to decrease its output under clause 7.6.1C and for which a Market Participant holds Capacity Credits:
  1. the estimate of the maximum quantity of sent out energy which would have been generated had a Dispatch Instruction not been issued, as provided by System Management in accordance with clause 7.13.1(eF), multiplied by two so as to be a MW quantity; less
  2. the Sent Out Metered Schedule multiplied by two so as to be a MW quantity; and
- iii. for each Demand Side Programme within the periods specified in clause 4.10.1(f)(vi) and for which a Market Participant holds Capacity Credits:
  1. the Demand Side Programme Load multiplied by two so as to be a MW quantity; less

2. the sum of the minimum consumption of each Load in MW provided under clause 2.29.5B(c) for the Facility's Associated Loads.

(c) Subject to clause 4.26.1(d), the minimum refund factor  $RF_{\text{floor}(f,t)}$  in a Trading Interval  $t$  is equal to:

$$1 - 0.75 \times \text{Dispatchable}(f,t)$$

where  $\text{Dispatchable}(f,t)$  for a Facility  $f$  in a Trading Interval  $t$ , over the 4,320 Trading Intervals prior to and including that Trading Interval, is determined as:

$$1 - \left( \frac{\sum FO(f,t)}{\sum Cap(f,t)} \right)$$

where:

i.  $FO(f,t)$  is the quantity of Forced Outage determined in accordance with clause 3.21.6(b); and

ii.  $Cap(f,t)$  is the capacity for the Facility, given by

1. the number of Capacity Credits held by the Facility in Trading Interval  $t$  if the Facility holds Capacity Credits and had its Certified Reserve Capacity assigned using the methodology described in clause 4.11.1(a); or

2. the Sent Out Capacity of the Facility as recorded in Standing Data (Appendix 1(b)(iii) if the Facility is a Scheduled Generator and Appendix 1(e)(iiiA) if the Facility is a Non-Scheduled Generator) during Trading Interval  $t$  otherwise.

(d) For a Facility to which clause 4.26.1A(a)(3), 4.26.1A(a)(4) or 4.26.1A(a)(5) applies or for which a non-zero value is determined under clause 4.26.1A(a)(6),  $RF_{\text{floor}(f,t)}$  in a Trading Interval  $t$  is equal to one.

(e) The Trading Interval Refund Rate for a Facility  $f$  in a Trading Interval  $t$  is equal to:

$$RF(f,t) \times Y$$

where:

i. for a Non-Scheduled Generator,  $Y$  equals zero if the IMO has determined that the Non-Scheduled Generator is in Commercial Operation under clause 4.13.10B and one of the following applies:

1. the Non-Scheduled Generator has operated at a level equivalent to its Required Level, adjusted to 100 percent of the level of Capacity Credits currently held, in at least two Trading Intervals; or

2. the Market Participant has provided the IMO with a report under clause 4.13.10C specifying that the Facility can operate at a level equivalent to its Required Level, adjusted

to 100 percent of the level of Capacity Credits currently held;  
and

- ii. for a Non-Scheduled Generator to which clause 4.26.1(e)(i) does not apply and for all other Facilities, Y 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 Trading Month.

### **REFUND TABLE**

<b>Dates</b>	<b>1 April to 1 October</b>	<b>1 October to 1 December</b>	<b>1 December to 1 February</b>	<b>1 February to 1 April</b>
<del>Business Days Off-Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)</del>	<del>0.25 x Y</del>	<del>0.25 x Y</del>	<del>0.5 x Y</del>	<del>0.75 x Y</del>
<del>Business Days Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)</del>	<del>1.5 x Y</del>	<del>1.5 x Y</del>	<del>4 x Y</del>	<del>6 x Y</del>
<del>Non-Business Days Off-Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)</del>	<del>0.25 x Y</del>	<del>0.25 x Y</del>	<del>0.5 x Y</del>	<del>0.75 x Y</del>
<del>Non-Business Days Peak Trading Interval Rate (\$ per MW shortfall per Trading Interval)</del>	<del>0.75 x Y</del>	<del>0.75 x Y</del>	<del>1.5 x Y</del>	<del>2 x Y</del>
<del>Maximum Participant Generation Refund</del>	<del>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 (excluding any payments relating to a Demand Side Programme) assuming the IMO acquires all of the Capacity Credits held by the Market Participant (excluding any Capacity Credits held for Demand Side Programmes) and the cost of each Capacity Credit so acquired is determined in accordance with clause 4.28.2(b), (c) and (d) (as applicable).</del>			

Where:

~~For an Intermittent Generator that has:~~

~~(a) either:~~

~~i. operated at a level equivalent to its Required Level, adjusted to 100 percent of the level of Capacity Credits currently held, in at least two Trading Intervals; or~~

~~ii. provided the IMO with a report under clause 4.13.10C, where this report specifies that the Facility can operate at a level equivalent to its Required Level, adjusted to 100 percent of the level of Capacity Credits currently held; and~~

~~(b) is, following a request to the IMO by a Market Participant, considered by the IMO to be in Commercial Operation:~~

~~Y equals 0~~

~~For all other facilities: Y 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 Trading Month.~~

4.26.1A. The IMO must calculate the Reserve Capacity Deficit refund for each Facility (“**Facility Reserve Capacity Deficit Refund**”) for each Trading Month  $m$  as the lesser of:

(a) the sum over all Trading Intervals  $t$  in Trading Month  $m$  of the product of:

i. ~~the Off-Peak Trading Interval Rate or Peak Trading Interval Refund Rate determined in accordance with the Refund Table applicable to the Facility in Trading Interval  $t$ ; and~~

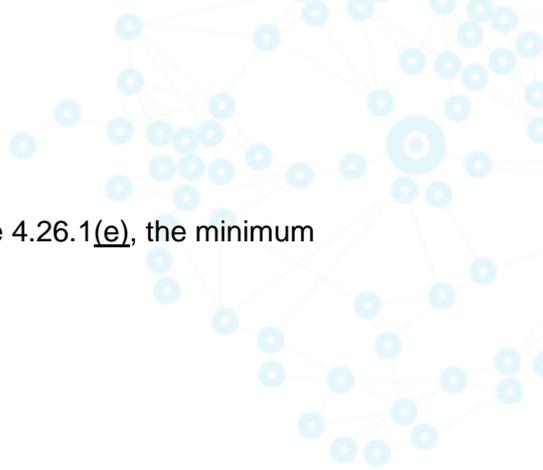
ii. ~~the Reserve Capacity Deficit in Trading Interval  $t$ ,~~

where the Reserve Capacity Deficit for a Facility is equal to whichever of the following applies:

~~iii.1.~~ 1. if the Facility is required to have submitted a Forced Outage under clause 3.21.4, the Forced Outage in that Trading Interval measured in MW; ~~or~~

~~iv.2.~~ 2. if the Facility is an Intermittent Generator which is not considered by the IMO to have been in Commercial Operation for the purposes of clause 4.26.1(e), the number of Capacity Credits associated with the relevant Intermittent Generator; ~~or~~

~~ivA.3.~~ 3. if the Facility is an Intermittent Generator which is considered by the IMO to have been in Commercial Operation for the purposes of clause 4.26.1(e), but for which  $Y$  does not equal



zero in the ~~Refund Table~~ in clause 4.26.1(e), the minimum of:

~~4.i.~~ 4.i.  $RL - (2 \times Max_2)$ ; or

~~2.ii.~~ 2.ii.  $RL - A$

where;

...

where this value will be applied for the purposes of this clause for the relevant Trading Month; ~~or~~

~~v.4.~~ v.4. if, from the Trading Day commencing on 30 November of Year 3 for Reserve Capacity Cycles up to and including 2009 or 1 October of Year 3 for Reserve Capacity Cycles from 2010 onwards, the Facility is undergoing an approved Commissioning Test and, for the purposes of permission sought under clause 3.21A.2, is a new generating system referred to in clause 3.21A.2(b), the number of Capacity Credits associated with the relevant Facility; ~~or~~

~~vi.5.~~ vi.5. if, from the Trading Day commencing on 30 November of Year 3 for Reserve Capacity Cycles up to and including 2009 or 1 October of Year 3 for Reserve Capacity Cycles from 2010 onwards, the Facility is not yet undergoing an approved Commissioning Test and, for the purposes of permission sought under clause 3.21A.2, is a new generating system referred to in clause 3.21A.2(b), the number of Capacity Credits associated with the relevant Facility; or

~~vii.6.~~ vii.6. if the Facility is a Demand Side Programme:

$\max(0, RCOQ - \max(0, (RD - \text{MinLoad})))$

where:

RCOQ is the Reserve Capacity Obligation Quantity determined for the Facility under clause 4.12.4

RD is the Relevant Demand for the Facility determined in accordance with clause 4.26.2CA; and

MinLoad is the sum of the minimum load MW quantities provided under clause 2.29.5B(c) for the Facility's Associated Loads; and

...

...

4.26.3. The Generation Capacity Cost Refund for Trading Month m in Capacity Year y for a Market Participant p holding Capacity Credits associated with a generation system is the lesser of:

- (a) the Maximum Participant Generation Refund determined for Market Participant p and Capacity Year y Trading Month m in accordance with the ~~Refund Table~~, less all Generation Capacity Cost Refunds applicable to Market Participant p in previous Trading Months falling in ~~the same~~ Capacity Year y as Trading Month m; and
- (b) the Generation Reserve Capacity Deficit Refund for Market Participant p and Trading Month m, plus the sum over all Trading Intervals t in Trading Month m of the Net STEM Refund,

where the Net STEM Refund is the product of:

- i. the ~~Off-Peak Trading Interval Rate or Peak Trading Interval Refund Rate determined in accordance with the Refund Table~~ applicable to Facility f in Trading Interval t; and
- ii. the Net STEM Shortfall for Market Participant p in Trading Interval t.

4.26.3A. The Demand Side Programme Capacity Cost Refund for Trading Month m in Capacity Year y for a Market Participant p holding Capacity Credits associated with a Demand Side Programme is equal to the lesser of:

- (a) ~~twelve times the Monthly Reserve Capacity Price for Trading Month m multiplied by the number of Capacity Credits associated with the Facility, the Maximum Participant Demand Side Programme Refund determined for Market Participant p and Capacity Year y less all Demand Side Programme Capacity Cost Refunds applicable to that Facility Market Participant p in previous Trading Months falling in the same Capacity Year y as Trading Month m~~; and
- (b) the sum of:
  - i. the sum over all Trading Intervals t in Trading Month m of:  

$$12 \times \text{Monthly Reserve Capacity Price} \times S / (2 \times H)$$

Where:

S is the Capacity Shortfall in MW determined in accordance with clause 4.26.2D in any Trading Interval; and

H is the maximum number of hours per Trading Day that the Facility ~~was certified to be~~ is available to provide Reserve Capacity in accordance with clause 4.10.1(f)(ii); and

...

4.26.4. ~~The IMO must apply any revenue generated from the application of clause 4.26.2E to Market Customers in accordance with clause 4.28.4.~~ For each Market Participant holding Capacity Credits associated with a Scheduled Generator or a Demand Side Programme, the IMO must determine the amount of the rebate (“Participant Capacity Rebate”) to be applied for Trading Month m as the sum of all Facility Capacity Rebates determined in accordance with clause 4.26.6.

...

4.26.6. The Facility Capacity Rebate for Facility f, being a Scheduled Generator or a Demand Side Programme for which a Market Participant holds Capacity Credits, is the sum over all Trading Intervals t in Trading Month m of:

$$\frac{CC(f, t) \times E(f, t)}{\sum_{f=1}^F CC(f, t) \times E(f, t)} \times \sum CCR(t)$$

where:

$\sum CCR(t)$  is the sum over all Market Participants of the Capacity Cost Refund for Trading Interval t; and

$\sum_{f=1}^F CC(f, t) \times E(f, t)$  is the sum, over all Facilities F, being Scheduled Generators or Demand Side Programmes for which Market Participants hold Capacity Credits, in Trading Interval t, of the product of:

(a) CC(f, t) which equals:

- i. for a Scheduled Generator, the MW value of Capacity Credits less the MW quantity of Outage as provided under clause 7.13.1A(b); and
- ii. for a Demand Side Programme, the Demand Side Programme Load multiplied by two so as to be a MW quantity less the sum of the minimum consumption of each Load in MW provided under clause 2.29.5B(c) for the Facility's Associated Loads; and

(b) E(f, t) which is the eligibility of the Facility f in Trading Interval t, where eligibility is equal to:

- i. one if, subject to clause 4.26.7, Facility f was dispatched and generated (for a Scheduled Generator) or dispatched and reduced (for a Demand Side Programme) a non-zero MW quantity in any one Trading Interval of the 1,440 Trading Intervals prior to and including Trading Interval t; or
- ii. zero otherwise.

**Note:** The IMO intends to propose amendments to clause 7.13.1A(b) to receive Outage data as measured at 15 degrees and 41 degrees Celsius in the Rule Change Proposal: Administrative Improvements to the Outage Process (RC\_2014\_03). Clause 4.26.6(a)(i) will be proposed to be further amended in RC\_2014\_03 to refer to the Outage data measured at 41 degrees Celsius.

4.26.7. For the purposes of clause 4.26.6(b)(i), a Facility is deemed to have generated a non-zero MW quantity if it meets the requirements for a Reserve Capacity Test specified in clause 4.25.1(a) in any one Trading Interval of the 1,440 Trading Intervals prior to and including Trading Interval t.

...

4.28.4. For each Trading Month, the IMO must calculate a Shared Reserve Capacity Cost being the sum of:

- (a) the cost defined under clause 4.28.1(b); and
- (aAb) the net payments to be made by the IMO under Supplementary Capacity Contracts less any amount drawn under a Reserve Capacity Security by the IMO and distributed in accordance with clause 4.13.11A(a); less
- ~~(b) the Capacity Cost Refunds for that Trading Month; less~~
- (bAc) the Intermittent Load Refunds for that Trading Month; less
- (ed) any amount drawn under a Reserve Capacity Security by the IMO and distributed in accordance with clause 4.13.11A(b)

and the IMO must allocate this total cost to Market Customers in proportion to each Market Customer's Individual Reserve Capacity Requirement.

...

4.28A.1. The IMO must determine for each Intermittent Load registered to Market Participant p the amount of the refund ("~~Intermittent Load Refund~~**Intermittent Load Refund**") to be applied for each Trading Month m in respect of that Intermittent Load as the sum over all Trading Intervals t of Trading Day d in the Trading Month m of the product of:

- (a) the applicable value of Y for Scheduled Generators as specified ~~in the Refund Table described~~ in clause 4.26.1(e)(ii) is that which applies for Scheduled Generators; and

...

...

4.28C.9. The amount for the purposes of clauses 4.28C.8 and 4.28C.12 is ~~twenty-five~~ 25 percent of the ~~Maximum~~**Benchmark** Reserve Capacity Price included in the most recent Request for Expressions of Interest at the time and date associated with ~~either~~ clause 4.28C.8 or 4.28C.12, as applicable, multiplied by an amount equal to the Early Certified Reserve Capacity assigned to the Facility.

...

4.29.1. The Monthly Reserve Capacity Price for a Reserve Capacity Cycle to apply during the period specified in clause 4.1.29 is to equal:

- (a) if a Reserve Capacity Auction ~~was~~ is run for the Reserve Capacity Cycle, the Reserve Capacity Price for the Reserve Capacity Cycle divided by 12; or
- (b) if no Reserve Capacity Auction ~~was~~ is run ~~for the Reserve Capacity Cycle~~:
  - i. for a Reserve Capacity Cycle prior to 1 October 2008, 85% of the ~~Maximum~~**Benchmark** Reserve Capacity Price for the Reserve Capacity Cycle divided by 12;

- ii. for a Reserve Capacity Cycle from 1 October 2008 up to and including the 2013 Reserve Capacity Cycle, 85% of the Maximum Benchmark Reserve Capacity Price for the Reserve Capacity Cycle multiplied by the Excess Capacity Adjustment and divided by 12 where the excess capacity adjustment is equal to the minimum of;
  - 1. one; and
  - 2. the Reserve Capacity Requirement for the Reserve Capacity Cycle divided by the total number of Capacity Credits assigned by the IMO in accordance with clause 4.20.5A for the Reserve Capacity Cycle; and

~~(c) the Excess Capacity Adjustment is equal to the minimum of:~~

- ~~i. one, and~~
- ~~ii. the Reserve Capacity Requirement for the Reserve Capacity Cycle divided by the total number of Capacity Credits assigned by the IMO in accordance with clause 4.20.5A for the Reserve Capacity Cycle.~~
- ~~iii. for a Reserve Capacity Cycle from the 2014 Reserve Capacity Cycle onwards, the value calculated as below and divided by 12:~~

$$\text{--- MIN}\left\{\left(\frac{\text{BRCP} \times 1.1}{1 - ((\text{surplus} + 0.03) \times -3.75)}\right), \text{BRCP} \times 1.1\right\}$$

where:

- 1. BRCP is the Benchmark Reserve Capacity Price determined in accordance with clause 4.16; and
- 2. surplus is the amount of excess capacity calculated as:
  - i. the total number of Capacity Credits assigned by the IMO in accordance with clause 4.20.5A for the Reserve Capacity Cycle; less
  - ii. the Reserve Capacity Requirement for the Reserve Capacity Cycle,  
divided by the Reserve Capacity Requirement for the Reserve Capacity Cycle.

4.29.3. The IMO must prepare and provide the following information to the Settlement Systems in time for settlement of Trading Month m:

...

(d) subject to clause 4.29.4, for each Market Participant p and for Trading Month m:

...

v. the Individual Reserve Capacity Requirement for each Market Customer for that Trading Month; ~~and~~

- vi. the total Capacity Cost Refund to be paid by the Market Participant to the IMO; and
- vii. the total Participant Capacity Rebate to be paid to the Market Participant by the IMO;

...

...

9.7.1. The Reserve Capacity settlement amount for Market Participant p for Trading Month m is:

$$\begin{aligned}
 \text{RCSA}(p,m) = & \text{Monthly Reserve Capacity Price}(m) \times (\text{CC\_NSPA}(p,m) \\
 & \quad - \text{Sum}(q \in P, \text{CC\_ANSPA}(p,q,m))) \\
 & + \text{Sum}(a \in A, \text{Monthly Special Price}(p,m,a) \times (\text{CC\_SPA}(p,m,a) \\
 & \quad - \text{Sum}(q \in P, \text{CC\_ASPA}(p,q,m,a)))) \\
 & - \text{Capacity Cost Refund}(p,m) \\
 & - \text{Intermittent Load Refund}(p,m) \\
 & + \text{Participant Capacity Rebate}(p,m) \\
 & + \text{Supplementary Capacity Payment}(p,m) \\
 & - \text{Targeted Reserve Capacity Cost}(m) \times \text{Shortfall Share}(p,m) \\
 & - \text{Shared Reserve Capacity Cost}(m) \times \text{Capacity Share}(p,m) \\
 & + \text{LF\_Capacity\_Cost}(m) \times \text{Capacity Share}(p,m)
 \end{aligned}$$

Where:

...

LF\_Capacity\_Cost(m) is the total Load Following Service capacity payment cost for Trading Month m as specified in clause 9.9.2(q); and

Participant Capacity Rebate(p,m) is the Participant Capacity Rebate payable to the Market Participant p for Trading Month m, as calculated in accordance with clause 4.26.4.

...

10.5.1. The IMO must set the class of confidentiality status for the following information under clause 10.2.1<sub>7</sub> as Public<sub>1</sub> and the IMO must make each item of information available from the Market Web Site after that item of information becomes available to the IMO:

...

(e) details of bid, offer and clearing price limits as approved by the Economic Regulation Authority including:

- i. the ~~Maximum~~ Benchmark Reserve Capacity Price;

...

...

# 11 Glossary

...

**Balancing Forecast:** Means a forecast, determined by the IMO in accordance with the Balancing Forecast Market Procedure, for a Trading Interval, of the following:

- (a) the Relevant Dispatch Quantity for the Trading Interval;
- (b) the aggregate output of all Non-Scheduled Generators which are Balancing Facilities for the Trading Interval; ~~and~~
- (c) the Balancing Price for the Trading Interval; and ~~---~~
- (d) the spare capacity for the Trading Interval.

...

**Benchmark Reserve Capacity Price:** In respect of a Reserve Capacity Cycle, the price in clause 4.16.2 as revised in accordance with clause 4.16.

...

**Facility Capacity Rebate:** For a Scheduled Generator or a Demand Side Programme, the rebate determined for a Trading Month m, as calculated in accordance with clause 4.26.6.

...

**Maximum Participant Demand Side Programme Refund:** The total amount of the Capacity Credit payments paid or to be paid under these Market Rules to a Market Participant in relation to its Demand Side Programmes and in relation to a Capacity Year assuming that:

- (a) the IMO acquires all of the Capacity Credits held by the Market Participant in relation to its Demand Side Programmes; and
- (b) the cost of each Capacity Credit so acquired is determined in accordance with clause 4.28.2(b), 4.28.2(c) and 4.28.2(d) (as applicable).

...

**Maximum Participant Generation Refund:** Has the meaning given in clause 4.26.1. The total amount of the Capacity Credit payments paid or to be paid under these Market Rules to a Market Participant in relation to its generating Facilities and in relation to a Capacity Year assuming that:

- (a) the IMO acquires all of the Capacity Credits held by the Market Participant in relation to its generating Facilities; and
- (b) the cost of each Capacity Credit so acquired is determined in accordance with clause 4.28.2(b), 4.28.2(c) and 4.28.2(d) (as applicable).

...

**Maximum Reserve Capacity Price:** In respect of a given Reserve Capacity Cycle, the price in clause 4.16.2 as revised in accordance with clause 4.16.

...

**Off-Peak Trading Interval Rate:** A Trading Interval occurring between 10 PM and 8 AM.

...

**Participant Capacity Rebate:** For a Market Participant holding Capacity Credits associated with a Scheduled Generator or a Demand Side Programme, the rebate determined for a Trading Month *m*, as calculated in accordance with clause 4.26.4.

...

**Peak Trading Interval Rate:** A Trading Interval occurring between 8 AM and 10 PM.

...

**Refund Table:** The table titled “Refund Table” and set out in Chapter 4.

...

**Reserve Capacity Price:** In respect of a Reserve Capacity Cycle, the price for Reserve Capacity determined in accordance with clause 4.29.1 and multiplied by 12, where this price is expressed in units of dollars per megawatt per year and has a value between zero and 110 percent of the Maximum Benchmark Reserve Capacity Price.

...

**Trading Interval Refund Rate:** The refund rate applicable in a Trading Interval, and in respect of a Facility, as calculated in accordance with clause 4.26.1(e).

...

## 5. Further Amendments to the proposed Amending Rules

Subsequent to the second submission period, the Minister rejected the Rule Change Proposals:

- Incentives to Improve Availability of Scheduled Generators (RC\_2013\_09); and
- Harmonisation of Supply-Side and Demand-Side Capacity Resources (RC\_2013\_10),

on the basis that the cost to implement the amendments may not be recovered in light of the possible reforms arising from the State Government’s Electricity Market Review.

The IMO has therefore made further amendments to the proposed Amending Rules contained in the Draft Rule Change Report to remove the drafting reflecting the changes in the two rejected Rule Change Proposals.

The IMO has also taken the opportunity to make minor grammatical changes to improve the integrity of the Market Rules.

The IMO proposes to make amendments to the proposed Amending Rules following the second submission period. These changes are as follows (~~deleted text~~, added text):

## TABLE OF CONTENTS

...

### ~~Maximum and Minimum Administered Prices and Loss Factors~~

- 2.26. Economic Regulation Authority Approval of ~~Maximum and Minimum Administered Prices~~

...

...

- 1.4.1. In these Market Rules, unless the contrary intention appears:

...

- (r) **(Headings and comments):** headings and comments appearing in boxes in these Market Rules (~~other than the Outage Rate Limit Table in clause 4.11.1D~~) are for convenience only and do not affect the interpretation of these Market Rules.

...

## ~~Maximum and Minimum Administered Prices and Loss Factors~~

### **2.26. Economic Regulation Authority Approval of ~~Maximum and Minimum Administered Prices~~**

- 2.26.1. Where the IMO has proposed a revised value for the Benchmark Reserve Capacity Price in accordance with ~~clause section 4.16~~ or a change in the value of one or more Energy Price Limits in accordance with ~~clause section 6.20~~, the Economic Regulation Authority must:

...

- (c) in making its decision, only consider:
- i. whether the proposed revised value for the Benchmark Reserve Capacity Price or Energy Price Limit proposed by the IMO reasonably reflects the application of the method and guiding principles described in ~~clauses section 4.16~~ or 6.20 (as applicable);

...

- 2.26.2. Where the Economic Regulation Authority rejects a revised Benchmark Reserve Capacity Price or the Energy Price Limits submitted by the IMO it must give reasons and may direct the IMO to carry out all or part of the review process under

~~clause-section~~ 4.16 or 6.20 (as applicable) again in accordance with any directions or recommendations of the Economic Regulation Authority.

2.26.3. The Economic Regulation Authority must review the methodology for setting the Benchmark Reserve Capacity Price and the Energy Price Limits not later than the fifth anniversary of the first Reserve Capacity Cycle and, subsequently, not later than the fifth anniversary of the completion of the preceding review under this clause 2.26.3. A review must examine:

...

- (f) the appropriateness of the parameters and methodology in ~~clauses-section~~ 4.16 and the Market Procedure referred to in clause 4.16.3 for recalculating the Benchmark Reserve Capacity Price;

...

...

4.13.2. For the purposes of this ~~clause-section~~ 4.13, the amount of Reserve Capacity Security is:

- (a) at the time and date referred to in clause 4.1.13, ~~twenty-five~~ 25 percent of the Benchmark Reserve Capacity Price included in the most recently issued Request for Expressions of Interest at the time the Certified Reserve Capacity is assigned, expressed in \$/MW per year, multiplied by an amount equal to:

...

- (b) at the time and date referred to in clause 4.1.21, ~~twenty-five~~ 25 percent of the Benchmark Reserve Capacity Price included in the most recently issued Request for Expressions of Interest at the time the Certified Reserve Capacity is assigned, expressed in \$/MW per year, multiplied by an amount equal to the total number of Capacity Credits assigned to the Facility under clause 4.20.5A.

...

4.16.3 The IMO must develop a Market Procedure documenting the methodology it uses and the process it follows in determining the Benchmark Reserve Capacity Price, and:

...

- (b) the IMO must follow the documented Market Procedure to annually review the value of the Benchmark Reserve Capacity Price in accordance with this ~~clause-section~~ 4.16 and in accordance with the timing requirements specified in clause 4.1.19.

...

4.16.7. After considering of the submissions on the draft report described in clause 4.16.6, the IMO must propose a final revised value for the Benchmark Reserve Capacity Price and publish that value and its final report, including submissions received on the draft report, on the Market Web Site.

4.16.8. A proposed revised value for the Benchmark Reserve Capacity Price becomes the Benchmark Reserve Capacity Price after the IMO has posted a notice on the Market Web Site of the new value of the Benchmark Reserve Capacity Price with effect from the date and time specified in the IMO's notice.

...

4.22.2. If a Market Participant nominates to have Capacity Credits covered by a Long Term Special Price Arrangement, it must at the same time nominate:

(a) a level of coverage, in MW and to a precision of 0.005 MW, subject to the limits that:

...

ii. if the Capacity Credits are provided by a Facility which has previously provided Capacity Credits, the number of Capacity Credits covered by the arrangement is not to exceed the lesser of:

...

the increase in the number of Capacity Credits provided by the Facility, whether acquired by the IMO or traded bilaterally, since the previous Reserve Capacity Cycle,

Where the Long Term Special Price Arrangement is conditional on evidence being provided to the IMO prior to that Long Term Special Price Arrangement taking effect that capital costs in excess of 10 percent of the Benchmark Reserve Capacity Price have been incurred on average with respect to the provision of each Capacity Credit covered by the arrangement; and

...

4.26.1. If a Market Participant holding Capacity Credits associated with a ~~generation system~~ Facility 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.

...

(b) The dynamic refund factor  $RF\_dynamic(t)$  in a Trading Interval  $t$  is equal to:

$$11.75 - \left(\frac{5.75}{750}\right) \times Spare(t)$$

where  $Spare(t)$  in a Trading Interval  $t$  is equal to the sum of the quantities calculated as follows:

...

- iii. for each Demand Side Programme within the periods specified in clause 4.10.1(f)(vi) and for which a Market Participant holds Capacity Credits:
  1. the Demand Side Programme Load multiplied by two so as to be a MW quantity; less
  2. the sum of the minimum consumption of each load in MW quantities provided under clause 2.29.5B(c) for the Facility's Associated Loads.

- (c) Subject to clause 4.26.1(d), the minimum refund factor  $RF_{\text{floor}}(f, t)$  in a Trading Interval  $t$  is equal to:

$$1 - 0.75 \times \text{Dispatchable}(f, t)$$

where  $\text{Dispatchable}(f, t)$  for a Facility  $f$  in a Trading Interval  $t$ , over the 4,320 Trading Intervals prior to and including that Trading Interval, is determined as:

$$1 - \left( \frac{\sum FO(f, t)}{\sum Cap(f, t)} \right)$$

where:

- i.  $FO(f, t)$  is the quantity of Forced Outage determined in accordance with clause 3.21.6(b); and
- ii.  $Cap(f, t)$  is the capacity for the Facility, given by
  - ...
  - 2. if clause 4.26.1(c)(ii)(1) does not apply, the Sent Out Capacity of the Facility as recorded in Standing Data (Appendix 1(b)(iii) if the Facility is a Scheduled Generator and Appendix 1(e)(iiiA) if the Facility is a Non-Scheduled Generator) during Trading Interval  $t$  otherwise.

- (d) For a Facility to which clause 4.26.1A(a)(iv~~3~~), 4.26.1A(a)(v~~4~~) or 4.26.1A(a)(vi~~5~~) applies or for which a non-zero value is determined under clause 4.26.1A(a)(vii~~6~~),  $RF_{\text{floor}}(f, t)$  in a Trading Interval  $t$  is equal to one.

- (e) The Trading Interval Refund Rate for a Facility  $f$  in a Trading Interval  $t$  is equal to:

$$RF(f, t) \times Y$$

where:

- i. for a Non-Scheduled Generator ~~that has either,~~ Y equals zero if the IMO has determined that the Non-Scheduled Generator is in Commercial Operation under clause 4.13.10B and one of the following applies:
  1. the Non-Scheduled Generator has operated at a level equivalent to its Required Level, adjusted to 100 percent of

the level of Capacity Credits currently held, in at least two Trading Intervals; or

2. the Market Participant has provided the IMO with a report under clause 4.13.10C, where this report specifies specifying that the Facility can operate at a level equivalent to its Required Level, adjusted to 100 percent of the level of Capacity Credits currently held; and

~~and that the IMO has determined under clause 4.13.10B, is in Commercial Operation, Y equals zero; and~~

- ii. for a Non-Scheduled Generator to which clause 4.26.1(e)(i) does not apply and for all other Facilities, Y 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 Trading Month.

4.26.1A. The IMO must calculate the Reserve Capacity Deficit refund for each Facility ("**Facility Reserve Capacity Deficit Refund**") for each Trading Month m as the lesser of:

- (a) the sum over all Trading Intervals t in Trading Month m of the product of:
  - i. the Trading Interval Refund Rate applicable to the Facility in Trading Interval t; and
  - ii. the Reserve Capacity Deficit in Trading Interval t,

where the Reserve Capacity Deficit for a Facility is equal to whichever of the following applies:

- ~~iii.1.~~ if the Facility is required to have submitted a Forced Outage under clause 3.21.4, the Forced Outage in that Trading Interval measured in MW; ~~or~~
- ~~iv.2.~~ if the Facility is an Intermittent Generator which is not considered by the IMO to have been in Commercial Operation for the purposes of clause 4.26.1(e), the number of Capacity Credits associated with the relevant Intermittent Generator; ~~or~~
- ~~ivA.3.~~ if the Facility is an Intermittent Generator which is considered by the IMO to have been in Commercial Operation for the purposes of clause 4.26.1(e), but for which Y does not equal clause 4.26.1(e), the minimum of:

~~4.i.~~  $RL - (2 \times Max_2)$ ; or

~~2.ii.~~  $RL - A$

where;

...

where this value will be applied for the purposes of

this clause for the relevant Trading Month; ~~or~~

~~v.4.~~ if, from the Trading Day commencing on 30 November of Year 3 for Reserve Capacity Cycles up to and including 2009 or 1 October of Year 3 for Reserve Capacity Cycles from 2010 onwards, the Facility is undergoing an approved Commissioning Test and, for the purposes of permission sought under clause 3.21A.2, is a new generating system referred to in clause 3.21A.2(b), the number of Capacity Credits associated with the relevant Facility; ~~or~~

~~vi.5.~~ if, from the Trading Day commencing on 30 November of Year 3 for Reserve Capacity Cycles up to and including 2009 or 1 October of Year 3 for Reserve Capacity Cycles from 2010 onwards, the Facility is not yet undergoing an approved Commissioning Test and, for the purposes of permission sought under clause 3.21A.2, is a new generating system referred to in clause 3.21A.2(b), the number of Capacity Credits associated with the relevant Facility; or

...

~~vii.6.~~ if the Facility is a Demand Side Programme:

$\max(0, \text{CCRCOQ} - \max(0, (RD - \text{MinLoad})))$

where:

~~CC is the MW value of Capacity Credits for the Facility determined in accordance with clause 4.20, 4.28B or 4.28C as applicable;~~

RCOQ is the Reserve Capacity Obligation Quantity determined for the Facility under clause 4.12.4;

RD is the Relevant Demand for the Facility determined in accordance with clause 4.26.2CA; and

MinLoad is the sum of the minimum load MW quantities provided under clause 2.29.5B(c) for the Facility's Associated Loads; and

...

...

4.26.3. The Generation Capacity Cost Refund for Trading Month m in Capacity Year y for a Market Participant p holding Capacity Credits associated with a generation system is the lesser of:

- (a) the Maximum Participant Generation Refund determined for Market Participant p and Capacity Year y ~~Trading Month m~~ less all Generation Capacity Cost Refunds applicable to Market Participant p in previous

Trading Months falling in ~~the same~~ Capacity Year y as Trading Month m;  
and

...

4.26.3A. The Demand Side Programme Capacity Cost Refund for Trading Month m in Capacity Year y for a Market Participant p holding Capacity Credits associated with a Demand Side Programme is equal to the lesser of:

(a) the ~~Market Maximum~~ Participant Demand Side Programme Refund determined for Market Participant p and ~~Capacity Year y~~ Trading Month m less all Demand Side Programme Capacity Cost Refunds applicable to Market Participant p in previous Trading Months falling in ~~the same~~ Capacity Year y as ~~Trading Month m~~;

(b) the sum of:

i. the sum over all Trading Intervals t in Trading Month m of:

$$\left(\frac{24}{H}\right) \times TIRR \times S$$

$$\underline{12 \times \text{Monthly Reserve Capacity Price} \times S / (2 \times H)}$$

Where:

S is the Capacity Shortfall in MW determined in accordance with clause 4.26.2D in any Trading Interval;

H is the maximum number of hours per Trading Day that the Facility is available to provide Reserve Capacity in accordance with clause 4.10.1(f)(iii); and

~~TIRR is the Off-Peak Trading Interval Rate or Peak Trading Interval Refund Rate applicable to the Facility in Trading Interval t; and~~

ii. the Facility Reserve Capacity Deficit Refund for Trading Month m for the Facility.

...

4.26.6. The Facility Capacity Rebate for Facility f, being a Scheduled Generator or a Demand Side Programme for which a Market Participant holds Capacity Credits, is the sum over all Trading Intervals t in Trading Month m of:

$$\frac{CC(f, t) \times E(f, t)}{\sum_{f=1}^F CC(f, t) \times E(f, t)} \times \sum CCR(t)$$

where:

...

$\sum_{f=1}^F CC(f, t) \times E(f, t)$  is the sum, over all Facilities F in Trading Interval t, being Scheduled Generators or Demand Side Programmes for which Market Participants hold Capacity Credits, in Trading Interval t, of the product of:

(a)  $CC(f, t)$  which equals:

...

ii. for a Demand Side Programme, the Demand Side Programme Load multiplied by two so as to be a MW quantity less the sum of the minimum consumption of each Load in MW quantities provided under clause 2.29.5B(c) for the Facility's Associated Loads; and

...

4.26.7. For the purposes of clause 4.26.6(b)(i), a Facility is deemed to have generated a non-zero MW quantity if it meets the requirements for a Reserve Capacity Test specified in clause 4.25.1(a) in any one Trading Interval of the 1,440 Trading Intervals prior to and including Trading Interval t.

...

4.28.4. For each Trading Month, the IMO must calculate a Shared Reserve Capacity Cost being the sum of:

...

(d) any amount drawn under a Reserve Capacity Security by the IMO and distributed in accordance with clause 4.13.11A(b),

and the IMO must allocate this total cost to Market Customers in proportion to each Market Customer's Individual Reserve Capacity Requirement.

...

4.28A.1. The IMO must determine for each Intermittent Load registered to Market Participant p the amount of the refund ("~~Intermittent Load Refund~~**Intermittent Intermittent Load Refund**") to be applied for each Trading Month m in respect of that Intermittent Load as the sum over all Trading Intervals t of Trading Day d in the Trading Month m of the product of:

(a) the applicable value of Y for Scheduled Generators as specified ~~described~~ in clause 4.26.1(e)(ii) is that which applies for Scheduled Generators; and

...

...

4.28C.9. The amount for the purposes of clauses 4.28C.8 and 4.28C.12 is ~~twenty-five~~25 percent of the Benchmark Reserve Capacity Price included in the most recent Request for Expressions of Interest at the time and date associated with ~~either~~ clause 4.28C.8 or 4.28C.12, as applicable, multiplied by an amount equal to the Early Certified Reserve Capacity assigned to the Facility.

...

4.29.1. The Monthly Reserve Capacity Price for a Reserve Capacity Cycle to apply during the period specified in clause 4.1.29 is to equal:

- (a) if a Reserve Capacity Auction ~~was~~ is run for the Reserve Capacity Cycle, the Reserve Capacity Price for the Reserve Capacity Cycle divided by 12; or
- (b) if no Reserve Capacity Auction ~~was~~ is run for the Reserve Capacity Cycle:
  - i. for a Reserve Capacity Cycle prior to 1 October 2008, 85% of the Benchmark Reserve Capacity Price for the Reserve Capacity Cycle divided by 12;
  - ii. for a Reserve Capacity Cycle up to and including the 2013 Reserve Capacity Cycle, 85% of the Benchmark Reserve Capacity Price for the Reserve Capacity Cycle multiplied by the excess capacity adjustment and divided by 12 where the excess capacity adjustment is equal to the minimum of:
    - 1. one; and
    - 2. the Reserve Capacity Requirement for the Reserve Capacity Cycle divided by the total number of Capacity Credits assigned by the IMO in accordance with clause 4.20.5A for the Reserve Capacity Cycle; and
  - iii. for a Reserve Capacity Cycle from the 2014 Reserve Capacity Cycle onwards, the value calculated as below and divided by 12:

$$\frac{\text{MIN}\left\{\left(\frac{\text{BRCP} \times 1.1}{1 - ((\text{surplus} + 0.03) \times -3.75)}\right), \text{BRCP} \times 1.1\right\}}{12}$$

where:

- 1. BRCP is the Benchmark Reserve Capacity Price determined in accordance with clause 4.16; and
  - 2. surplus is the amount of excess capacity calculated as:
    - i. the total number of Capacity Credits assigned by the IMO in accordance with clause 4.20.5A for the Reserve Capacity Cycle; less
    - ii. the Reserve Capacity Requirement for the Reserve Capacity Cycle,  
divided by the Reserve Capacity Requirement for the Reserve Capacity Cycle.
- (c) ~~the Excess Capacity Adjustment is equal to the minimum of:~~
- i. ~~one, and~~
  - ii. ~~the Reserve Capacity Requirement for the Reserve Capacity Cycle divided by the total number of Capacity Credits assigned by the IMO in accordance with clause 4.20.5A for the Reserve Capacity Cycle.~~

~~(d) if no Reserve Capacity Auction was run for the Reserve Capacity Cycle from 2014 onwards, the value calculated as below and divided by 12:~~

$$\text{MIN}\left\{\left(\frac{\text{BRCP} \times 1.1}{1 - ((\text{surplus} + 0.03) \times -3.75)}\right), \text{BRCP} \times 1.1\right\}$$

~~where:~~

- ~~i. BRCP is the Benchmark Reserve Capacity Price determined in accordance with clause 4.16; and~~
- ~~ii. surplus is the amount of excess capacity calculated as:
  - ~~1. the total number of Capacity Credits assigned by the IMO in accordance with clause 4.20.5A for the Reserve Capacity Cycle; less~~
  - ~~2. the Reserve Capacity Requirement for the Reserve Capacity Cycle,~~divided by the Reserve Capacity Requirement for the Reserve Capacity Cycle.~~

...

4.29.3. The IMO must prepare and provide the following information to the Settlement Systems in time for settlement of Trading Month m:

...

(d) subject to clause 4.29.4, for each Market Participant p and for Trading Month m:

...

- vii. the total Participant Capacity Rebate to be paid to the Market Participant by the IMO;

...

...

~~7.6.10A. System Management must provide the IMO the consumption data received under clause 7.6.10 from each Market Participant with a Demand Side Programme, as soon as reasonably possible after receipt of that data.~~

...

**Note:** In this Rule Change Proposal the IMO proposed to delete clause 7.13.1(eH) which was proposed to be introduced in the Rule Change Proposal: Harmonisation of Supply-Side and Demand-Side Capacity Resources (RC\_2013\_10). As this clause was not made, this change has not been reflected in these proposed further amendments.

...

9.7.1. The Reserve Capacity settlement amount for Market Participant p for Trading Month m is:

...

Where:

Participant Capacity Rebate(p,m) is the Participant Capacity Rebate payable to the Market Participant p for Trading Month m, as calculated in accordance with clause 4.26.4.

...

10.5.1. The IMO must set the class of confidentiality status for the following information under clause 10.2.1<sub>7</sub> as Public<sub>1</sub> and the IMO must make each item of information available from the Market Web Site after that item of information becomes available to the IMO:

...

...

## 11 Glossary

...

**Benchmark Reserve Capacity Price:** In respect of a ~~given~~ Reserve Capacity Cycle, the price in clause 4.16.2 as revised in accordance with clause 4.16.

...

**Facility Capacity Rebate:** ~~Has the meaning given in~~ For a Scheduled Generator or a Demand Side Programme, the rebate determined for a Trading Month m, as calculated in accordance with clause 4.26.6.

...

**Maximum Participant Demand Side Programme Refund:** The total ~~value~~ amount of the Capacity Credit payments paid or to be paid under these Market Rules to ~~the relevant a~~ Market Participant in relation to its Demand Side Programmes and in relation to a<sub>1</sub>, for the ~~relevant~~ Capacity Year assuming that:

(a) the IMO acquires all of the Capacity Credits held by the Market Participant in relation to its Demand Side Programmes<sub>1</sub> and

(b) the cost of each Capacity Credit so acquired is determined in accordance with clause 4.28.2(b), 4.28.2(c) and 4.28.2(d) (as applicable).

...

**Maximum Participant Generation Refund:** The total ~~value~~ amount of the Capacity Credit payments paid or to be paid under these Market Rules to ~~the relevant a~~ Market Participant in

relation to all of its generating Facilities and in relation to a, ~~for the relevant~~ Capacity Year assuming that:

- (a)      the IMO acquires all of the Capacity Credits held by the Market Participant in relation to its generating Facilities; and
- (b)      the cost of each Capacity Credit so acquired is determined in accordance with clause 4.28.2(b), 4.28.2(c) and 4.28.2(d) (as applicable).

...

**Note:** In this Rule Change Proposal the IMO proposed to delete the definitions for Off-Peak Trading Interval Refund Rate, Peak Trading Interval Refund Rate and Refund Table which were proposed to be amended in the Rule Change Proposal: Harmonisation of Supply-Side and Demand-Side Capacity Resources (RC\_2013\_10). As these changes were not made, they have not been reflected in these proposed further amendments.

**Participant Capacity Rebate:** ~~Has the meaning given in~~ For a Market Participant holding Capacity Credits associated with a Scheduled Generator or a Demand Side Programme, the rebate determined for a Trading Month m, as calculated in accordance with clause 4.26.4.

...