# Wholesale Electricity Market
# Concept Paper

**Rule Change Proposal ID:** **CP_2013_10**
**Date received:** **TBA**
**Change requested by:**

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| **Date submitted:** | TBA |
| **Urgency:** | Medium |
| **Change Proposal title:** | Harmonisation of Supply-Side and Demand-Side Capacity Resources |
| **Market Rules affected:** | Clauses 4.5.12, 4.5.13, 4.10.1, 4.10.2, 4.11.1, 4.11.4, 4.12.2, 4.12.4, 4.12.8, 4.26.2CA, 4.26.3A, 6.12.1, 7.6.10, 7.7.10 and 7.10.4.<br>Glossary, Appendix 1, 3 and 5. |

## Introduction

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

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

**Independent Market Operator**
Attn: Group Manager, Development and Capacity
PO Box 7096
Cloisters Square, Perth, WA 6850
Fax : (08) 9254 4339
Email : market.development@imowa.com.au

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

In order for the proposal to be progressed, all fields below must be completed and the change proposal must explain how it will enable the Market Rules to better contribute to the achievement of the wholesale electricity market objectives.

The objectives of the market are:

(a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system;

(b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors;

(c) to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions;

(d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system; and

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

## Details of the Proposed Rule Change

### 1. Describe the concern with the existing Market Rules that is to be addressed by the proposed Market Rule change:

#### Background

The Reserve Capacity Mechanism (RCM) is a mechanism to support the Wholesale Electricity Market (WEM) in the South West interconnected system (SWIS) in ensuring there is sufficient Reserve Capacity to meet reliability targets. The RCM allows for capacity to be provided by addition in supply-side resources (predominantly thermal generators) or through reductions in demand, known as Demand Side Management (DSM).

The Reserve Capacity Mechanism Working Group (RCMWG) was established to assess the issues highlighted by the Lantau Group in its report "*Review of RCM: Issues and Recommendations*".[1] This report was commissioned by the IMO Board to analyse the effectiveness and efficiency of the RCM. One of the key topics discussed during the RCMWG meetings was the harmonisation of rules relating to supply-side and demand-side capacity resources. Key considerations in these discussions were:

- the current minimum availability requirements for DSM;
- real-time data requirements for DSM;
- alignment between the Individual Reserve Capacity Requirement (IRCR) and Relevant Demand (RD) for a customer providing DSM; and

[1] http://www.imowa.com.au/f5415,2873688/09._Agenda_Item_8_Lantau_Report.pdf

- fuel requirements for generators.

While not unanimously accepted, the RCMWG members generally supported the changes proposed in this concept paper.

Substantial analysis was conducted by Dr Richard Tooth of Sapere Research Group to support the RCMWG. Three reports on the *Performance requirements for demand-side and supply-side capacity resources* were presented by Dr Tooth at several RCMWG meetings. These reports are available on the Market Web Site: http://www.imowa.com.au/n5415.html. The Working Group discussions and analysis of these reports are also available via the link above.

This concept paper discusses seven key issues for which changes to the Market Rules may be required to ensure adequate harmonisation of DSM and supply-side capacity. These issues and proposed changes to the Market Rules are detailed below.

**Issue 1 – Fuel Requirements**

To receive Certified Reserve Capacity in relation to a Scheduled Generator, the Market Participant must demonstrate that the fuel storage, supply and transport arrangements for the generator are sufficient to allow 14 hours of continuous operation. The fuel requirements that are placed on Scheduled Generators stem from clause 4.11.1(a) of the Market Rules, which states:

*"the Certified Reserve Capacity for a Scheduled Generator for a Reserve Capacity Cycle must not exceed the IMO's reasonable expectation of the amount of capacity likely to be available, after netting off capacity required to serve Intermittent Loads, embedded loads and Parasitic Loads, for Peak Trading Intervals on Business Days [...] assuming an ambient temperature of 41$^{O}$ C"*

This rule has been interpreted to mean that participants must demonstrate that fuel storage, supply and transport arrangements are sufficient to allow 14 hours of continuous operation by Scheduled Generators.

The third report[2] by Dr Tooth considered the commercial incentives to ensure that adequate fuel supplies are maintained for Scheduled Generators.

The analysis concluded that there are sufficient commercial incentives for Scheduled Generators to provide reliable supply, irrespective of the certified fuel requirements. The combination of the market for energy, ancillary services and capacity refunds provide incentives for many Market Generators to ensure the availability of their Facility, including the availability of sufficient fuel for operation. The RCMWG noted that the magnitude of capacity refunds currently varies according to the time of year, time of day and day of the week. The RCMWG considered that a dynamic capacity refund mechanism would enhance the incentives to ensure the availability of adequate fuel for Scheduled Generators[3].

Consequently, the RCMWG concluded that this requirement could be relaxed if it expected that the Facility owner would have sufficient incentives to take appropriate measures to ensure fuel would be available. For example, under such a change the IMO might simply require that the Facility has the potential to source the fuel supplies when required from the spot market.

The RCMWG considered the analysis in the report discussed above and concluded that the

[2] http://www.imowa.com.au/f5415,2873627/Combined_Papers_Mtg_5.pdf

[3] The IMO is currently analysing future rule changes that will consider dynamic refunds

appropriate approach was to relax the "firm fuel" requirements for Facilities. This would involve minor amendments to the Market Rules and Market Procedures.

**Proposal**

The IMO proposes to relax the requirement for Facilities to have "firm fuel" supply contracts in place. This will be achieved through amending clauses 4.10.1(e)(v), 4.10.2, 4.11.1 and 4.12.2(d) of the Market Rules and the Market Procedure for Certification for Reserve Capacity.

**Issue 2 – Revised DSM Availability Requirements**

The cornerstone of the DSM harmonisation analysis completed during the RCMWG was the proposed changes to the DSM availability requirements. Dr Tooth presented his initial analysis on *Performance Requirements for Demand-Side and Supply-Side Capacity Resources* at the April 2012 meeting of the RCMWG. This report is available on the Market Website: http://www.imowa.com.au/f5415,2873678/Combined_RCMWG_Mtg_3_Papers.pdf

This first paper of three examined the current performance requirements of both demand and supply-side resources and the impact of harmonisation. Additionally, the report discussed such issues as:

- the design and use of Availability Classes; and
- the current limitations on the use of DSM.

The paper identified two options for the RCMWG to consider for effective harmonisation of demand and supply-side capacity. They were as follows:

- modify the minimum availability requirements; and
- refine other DSM performance requirements.

The second paper delivered by Dr Tooth was at the July RCMWG. This paper focused on the key aspects discussed at the April meeting. This paper is available on the Market Web Site: http://www.imowa.com.au/f5415,2873627/Combined_Papers_Mtg_5.pdf

This paper analysed the following key aspects of the DSM availability requirements:

- changes to the number of dispatch events for a DSP;
- the hours of availability for DSP's;
- the use of Availability Classes;
- the start and finish times for DSP availability; and
- a reduction in the notice period for dispatch.

The key availability requirements above were discussed by the RCMWG during the July and September meetings. The working group agreed to progress changes to implement the following DSM availability requirements for the 2014 Reserve Capacity Cycle:

| Requirement | Current Rule | Proposed Change |
|---|---|---|
| Days of Availability | All Business Days | All Business Days |
| Dispatch events per year | At least 6 | Unlimited |
| Hours per day | 4 hours | 6 hours |
| Total hours available per year | 24 hours | Unlimited |
| Earliest Start | 12:00 PM | 10:00 AM |
| Latest Finish | 8:00 PM | 8:00 PM |
| Minimum notice period of dispatch | 4 hours | 2 hours + day before notice (best endeavours) of probable dispatch |

The changes to the availability requirements for DSM have implications for the Availability Class definitions in the Market Rules. Further analysis has been conducted by the IMO since the final RCMWG meeting and the IMO proposes the current four Availability Classes should be reduced to two, as follows:

1. capacity that is available all the time (with the exception of Outages); and

2. all other capacity.

Additionally, the IMO has engaged PA Consulting to conduct analysis predicated on this proposed change. The analysis will focus on the impact that two Availability Classes will have on the Availability Curves and the Reserve Capacity Target. The results from this analysis will be presented to the Market Advisory Committee (MAC) as part of the Pre Rule Change Proposal planned for presentation at the August 2013 meeting.

The proposed changes to the availability requirements will also impact the refund calculations for DSP's. Suggested changes to the formula in clause 4.26.3A are still under consideration by the IMO, but a suggested formula is attached in section 3 of this concept paper.

**Proposal**

The IMO intends to amend clauses 4.5.12, 4.10.1, 4.11.4, 4.12.4, 4.26.3A and 7.7.10 of the Market Rules to account for the shift in availability requirements.

The IMO also proposes to amend the defined term; Availability Class, to factor in the change from four classes to two.

Changes will also be required to Appendices 1 and 3 of the Market Rules based on the factors discussed above. The specific amendments are currently in development and will be presented in the Pre Rule Change Proposal when it goes to the MAC for endorsement.

**Issue 3 – "Real-Time" Telemetry Service for DSP's**

Currently System Management does not have real-time information on the availability and performance of DSP's. This lack of information means that System Management is likely to be less confident in the use of DSM and less able to efficiently use DSP's. The availability of

real-time information would also enhance System Management's ability to maintain the security and reliability of the SWIS.

The IMO believes for this purpose, it is appropriate that the information provided to System Management is on the availability and performance of the DSP's and not the underlying loads.

Real-time information (telemetry) is possible and is a requirement by ISO-New England[4] for participation in 'Real Time Emergency Generation Resource' demand response. However, telemetry is not a mandatory requirement for participation in other markets.

The inevitable cost associated with a telemetry capability both to DSP's in providing it and System Management in being able to make use of the information is noted. However, in the interest of harmonisation and consistency across resources there is a benefit to a consistent provision of real-time information on availability and performance.

Without the implementation of a "real-time" telemetry service the intent and effect of the other issues identified in this concept paper are somewhat limited. With this in mind, the IMO engaged System Management during the development of this concept paper to assist in identifying and considering the possible options to receive and use the required data. This consultation is ongoing.

**Proposal**

The IMO proposes to amend the Market Rules and the relevant Procedures to require that all DSP's must provide a telemetry service that provides real-time information on availability and performance. This is intended to take effect from the 2014 Reserve Capacity Cycle onwards.

Specifically, the IMO will leverage off the existing rule (clause 2.35.4), which requires System Management, Market Participants and Network Operators to comply with the communications and control system requirements necessary to support the dispatch process. This approach will require amendment to the relevant PSOP.

The IMO also proposes to amend clause 7.10.4 which currently excludes DSP's from having to comply with Dispatch Instructions in accordance with clause 7.10.1. The amendment will remove this restriction.

**Issue 4 – The "Third Day" Rule**

Under clause 4.12.8, a DSP that has been dispatched on two consecutive days will have a Reserve Capacity Obligation Quantity (RCOQ) of zero on the third day.

Scenarios in which a DSP may be required for three continuous days include:

- a major fuel disruption, in which DSP's may be required for three continuous days to help manage a risk to fuel stocks; and
- a series of very hot days coupled with some unexpected large Outages.

In accordance with the purpose of this concept paper, to improve the harmonisation of demand-side and supply-side capacity resources, it is appropriate to remove this restriction on dispatch of a DSP.

[4] http://www.iso-ne.com/regulatory/tariff/sect_3/mr1_append-e.pdf

**Proposal**

The IMO proposes to remove clause 4.12.8 from the Market Rules for the 2014 Reserve Capacity Cycle onwards.

**Issue 5 – Non-Balancing Dispatch Merit Order (DMO)**

The Non-Balancing DMO currently orders Non-Balancing Facilities (including DSP's) firstly by price. In the event that one or more DSPs have the same price, they are ordered from largest to smallest by Load size.

The RCMWG agreed that ranking according to Facility size was inappropriate and created a disincentive to aggregation of Loads within DSP's. Instead, the RCMWG agreed to re-organise the Non-Balancing DMO to ensure the "rank-based-on Load size" rule in the Non-Balancing DMO is removed and replaced with a ranking based on time since last dispatch.

This means a No-Balancing DMO will need to be generated twice per trading interval, rather than four times each day. The practical implications of this change are currently being considered by the IMO and System Management.

**Proposal**

The IMO also proposes to implement changes to the Market Rules so that Facilities are ranked based on time since last dispatch rather than Load size. The exact drafting is still being discussed and analysed by the IMO and System Management.

**Issues 6 – Dispatch of DSPs outside nominated availability**

In the same vein as issues four and five, the RCMWG agreed that some DSP's may be able to provide availability outside their nominated availability limits. In such cases where additional availability is needed it seems prudent that System Management should have the ability to request a DSP to curtail consumption if it can.

It is proposed that changes be made to the Market Rules to enable DSPs to be dispatched in these circumstances on a best efforts basis (i.e. with no implications for capacity refunds for non-performance)

**Proposal**

The IMO proposes to incorporate into the Market Rules the ability for DSP's to be dispatched outside of nominated availability limitations on a best efforts basis. This will require amendment to clause 7.6.10(b).

The exact drafting is still being discussed and analysed by the IMO and System Management.

The IMO notes that under the Market Rules currently, DSP's are not subject to refunds when RCOQ is equal to zero.

**Issue 7 – Relationship between IRCR and RD**

The amount of Reserve Capacity that DSP's can currently provide is determined by Relevant Demand (RD). RD is currently based on a separate calculation to IRCR. As a result of separate calculations, an Associated Load may be credited with more Capacity Credits than its IRCR obligation.

The RCMWG agreed in February 2013[5] to pursue an approach that focused on the principle that a DSP Load may not sell more capacity (through DSM) than it buys (through IRCR).

**Proposal**

The IMO proposes to amend the Market Rules to implement the principle that a Load may not sell more capacity (through DSM) than it buys (through IRCR).

Specifically, the IMO proposes to amend clause 4.26.2CA to restrict a DSP from selling more capacity than it buys through IRCR. The IMO also anticipates amendments to Appendix 5: Individual Reserve Capacity Requirements.

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## 2. Explain the reason for the degree of urgency:

The IMO proposes to commence the amended rules pertaining to this concept paper in order for them to apply for the 2014 Reserve Capacity Cycle. Market Participants should note:

- Changes related to certification of Reserve Capacity are proposed to commence no later than 1 May 2014 (opening of the window for applications for Certified Reserve Capacity for the 2014 Capacity Cycle);
- Changes that impact the operation of DSP's are proposed to commence on 1 October 2016; and
- The IMO considers that the commencement of the proposed Market Rules will provide Market Participants adequate time for IT and operational system and process changes.

As such, the IMO proposes to present a harmonisation Pre Rule Change Proposal to the August MAC. Pending support from the MAC, the IMO would then progress this rule change through the Standard Rule Change Process. This would allow adequate time to commence the amendments before the 2014 Reserve Capacity Cycle.

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

**Issue 1 – Proposed Drafting**

4.10.1. Each Market Participant must ensure that information submitted to the IMO with an application for certification of Reserve Capacity pertains to the Reserve Capacity Cycle to which the certification relates, is supported by documented evidence and includes, where applicable, the following information:

(e) for a generation system other than an Intermittent Generator:

v. ~~subject to clause 4.10.2,~~ details of primary and any alternative fuels, including details and evidence of both firm and non-firm fuel supplies~~ and the factors that determine restrictions on fuel~~

[5] http://www.imowa.com.au/f5415,3854323/Minutes_Meeting_10_v5.0_FINAL.pdf

~~availability that could prevent the Facility operating at its full capacity;~~ that will enable the Facility to operate at its full capacity for a period of 14 hours;

~~4.10.2. For the purpose of clause 4.10.1(e)(v), an applicant may not claim that a Facility has an alternative fuel unless the Facility has on-site storage, or uninterruptible supply of that fuel, sufficient to maintain 12 hours of operation at the level of capacity specified in clause 4.10.1(e)(ii).~~

4.11.1. Subject to clauses 4.11.7 and 4.11.12, the IMO must apply the following principles in assigning a quantity of Certified Reserve Capacity to a Facility for the Reserve Capacity Cycle for which an application for Certified Reserve Capacity has been submitted in accordance with clause 4.10:

...

(i) the Certified Reserve Capacity assigned to a Facility is to be expressed to a precision of 0.001 MW; ~~and~~

(j) the Certified Reserve Capacity for a Demand Side Programme for a Reserve Capacity Cycle must not exceed the IMO's reasonable expectation of the amount of capacity likely to be available from that Facility during the periods specified in clause 4.10.1(f)(vi), after netting off capacity required to serve minimum loads, from the Trading Day starting on 1 October in Year 3 of the Reserve Capacity Cycle to the end of July in Year 4 of the Reserve Capacity Cycle~~.~~; and

(k) the IMO may assign Certified Reserve Capacity to a Facility on the basis of a primary fuel and an alternative fuel where the applicant provides details of both fuels under clause 4.10.1(e)(v) and the IMO reasonably expects that the capacity is likely to be available on each fuel for Peak Trading Intervals on Business Days.

4.12.2. A Market Participant holding Capacity Credits must also comply with the following obligations:

(a) the Market Participant must comply with outage planning obligations specified in clauses 3.18, 3.19, 3.20 and 3.21;

(b) the Market Participant must submit to tests of availability of capacity and inspections conducted in accordance with clause 4.25;

(c) the Market Participant must comply with Reserve Capacity performance monitoring obligations in accordance with clause 4.27~~; and~~.

~~(d) the Market Participant must, in relation to each Facility assigned Certified Reserve Capacity on the basis of having an alternative fuel available, maintain adequate fuel for 12 hours of operation except on any Trading Day for which the IMO has waived this requirement in response to a Planned Outage or in the event of an extended Forced Outage.~~

**Issue 2 – Proposed Drafting**

4.5.12. For the second and third Capacity Years of the Long Term PASA Study Horizon, the IMO must determine the following information:

(a) ~~the forecast capacity, in MW, required for more than 24 hours per year, 48 hours per year and 72 hours per year, determined from the Availability Curve for the Capacity Year developed under clause 4.5.10I;~~ [Blank]

(b) the minimum capacity required to be provided by ~~generation~~ Availability Class 1 capacity if Power System Security and Power System Reliability is to be maintained. This minimum capacity is to be set at a level such that if:

i all ~~Demand Side Management~~ Availability Class 2 capacity (excluding Interruptible Load used to provide Spinning Reserve to the extent that it is anticipated to provide Certified Reserve Capacity), were activated during the Capacity Year so as to minimise the peak demand during that year; and

ii the Planning Criterion and the criteria for evaluating Outage Plans set out in clause 3.18.11 were to be applied to the load scenario defined by clause 4.5.12(b)(i), then

it would be possible to satisfy the Planning Criterion and the criteria for evaluating Outage Plans set out in clause 3.18.11, as applied in clause 4.5.12(b)(ii), using, to the extent that the capacity is anticipated to provide Certified Reserve Capacity, the anticipated installed ~~generating~~ Availability Class 1 capacity, the anticipated Interruptible Load capacity available as Spinning Reserve and, to the extent that further ~~generation~~ Availability Class 1 capacity would be required, an appropriate mix of ~~generation~~ Availability Class 1 capacity to make up that shortfall; and

(c) the capacity associated with ~~each~~ Availability Class 2, where this is equal to the Reserve Capacity Target for the Capacity Year less the minimum capacity required to be provided by Availability Class 1 capacity under clause 4.5.12(b).~~:~~

~~i. the capacity quantity associated with Availability Class 4 is the Reserve Capacity Target for the Capacity Year less the greater of the quantity specified under clause 4.5.12(b) and the quantity specified under clause 4.5.12(a) as being required for more than 24 hours per year;~~

~~ii. the capacity quantity associated with Availability Class 3 is:~~

~~1. the Reserve Capacity Target for the Capacity Year less the greater of the quantity specified under clause 4.5.12(b) and the quantity specified under clause 4.5.12(a) as being required for more than 48 hours per year; less~~

~~2. the capacity quantity associated with Availability Class 4;~~

~~iii. the capacity quantity associated with Availability Class 2 is:~~

1. ~~the Reserve Capacity Target for the Capacity Year less the greater of the quantity specified under clause 4.5.12(b) and the quantity specified under clause 4.5.12(a) as being required for more than 72 hours per year; less~~

2. ~~the sum of the capacity quantities associated with each of Availability Class 3 and Availability Class 4;~~

iv. ~~the capacity quantity associated with Availability Class 1 is:~~

1. ~~the Reserve Capacity Target for the Capacity Year; less~~

2. ~~the sum of the capacity quantities associated with each of Availability Class 2, Availability Class 3 and Availability Class 4.~~

…

4.10.1. Each Market Participant must ensure that information submitted to the IMO with an application for certification of Reserve Capacity pertains to the Reserve Capacity Cycle to which the certification relates, is supported by documented evidence and includes, where applicable, the following information:

(f) for Interruptible Loads, Demand Side Programmes and Dispatchable Loads:

i. the Reserve Capacity the Market Participant expects to make available from each of up to 3 blocks of capacity;

ii. ~~the maximum number of hours per year the Interruptible Load, Demand Side Programme or Dispatchable Load is available to provide Reserve Capacity, where this must be at least 24 hours;~~ [Blank];

iii. the maximum number of hours per day that the Interruptible Load, Demand Side Programme or Dispatchable Load is available to provide Reserve Capacity if called, where this must be~~:~~

1. ~~not less than four~~ six hours; ~~and~~

2. ~~not more than the maximum of the periods specified in clause 4.10.1(f)(vi);~~

iv. ~~the maximum number of times the Interruptible Load, Demand Side Programme or Dispatchable Load can be called to provide Reserve Capacity during a 12 month period, where this must be at least six times;~~ [Blank];

v. the minimum notice period required for dispatch of the Interruptible Load, Demand Side Programme or Dispatchable Load, where this must not be more than ~~4~~ two hours; and

vi. the periods when the Interruptible Load, Demand Side Programme or Dispatchable Load can be dispatched, which must include the period between ~~noon~~ 10:00 AM and 8:00 PM on all Business Days;

…

4.11.4. Subject to clause 4.11.12, when assigning Certified Reserve Capacity to an Interruptible Load, Demand Side Programme or Dispatchable Load, the IMO must indicate what Availability Class is applicable to that Reserve Capacity where this Availability Class must be:

(a) ~~reflect the maximum number of hours per year that the capacity will be available and must not be~~ Availability Class 1 if the IMO reasonably expects the Facility to be available for all Trading Intervals in a year, allowing for outages and any restrictions on the availability specified by the applicant under clause 4.10.1(g); or

(b) Availability Class 2 otherwise.

…

4.12.4. Subject to clause 4.12.5, where the IMO establishes the initial Reserve Capacity Obligation Quantity to apply for a Facility for a Trading Interval:

(c) for Interruptible Loads, Demand Side Programmes and Dispatchable Loads, except where otherwise precluded by this clause 4.12.4, the Reserve Capacity Obligation Quantity:

i. ~~will equal zero once the capacity has been dispatched under clause 7.6.1C(d) for the number of hours per year that are specified under clause 4.10.1(f)(ii);~~[Blank]

ii. will equal zero for the remainder of a Trading Day in which the capacity has been dispatched under clause 7.6.1C(d) for the number of hours per day that are specified under clause 4.10.1(f)(iii);

iii. ~~will equal zero once the capacity has been dispatched under clause 7.6.1C(d) for the maximum number of times per year specified under clause 4.10.1(f)(iv);~~[Blank]

iv. must account for staffing and other restrictions on the ability of the Facility to curtail energy upon request; and

v. will equal zero for Trading Intervals which fall outside of the periods specified in clause 4.10.1(f)(vi).

…

4.26.3A. The Demand Side Programme Capacity Cost Refund for Trading Month m for 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, less all Demand Side Programme Capacity Cost Refunds applicable to the Facility in previous Trading Months falling in the same Capacity Year as Trading Month m; and

(b) the sum of:

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

~~12 * Monthly Reserve Capacity Price * S / (2 * H)~~

S/2 * (Alternative Maximum STEM Price * 24/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 day that the Facility was certified to be available in accordance with clause 4.10.1(f)(ii); and

ii. the Facility Reserve Capacity Deficit Refund for Trading Month m for the Facility, determined in accordance with clause 4.26.1A.

…

7.7.10. When System Management has issued a Dispatch Instruction or an Operating Instruction to a Demand Side Programme to decrease its consumption, System Management may issue a further instruction terminating the requirement for the Demand Side Programme to decrease its consumption providing that~~:~~

~~(a)~~ the further instruction is issued at least ~~four~~two hours before it is to come into effect~~;~~. ~~and~~

~~(b) the minimum period for which the Demand Side Programme is instructed to decrease its consumption is not less than two hours.~~

…

**Availability Class**: ~~Any o~~One of ~~4~~two classes of ~~annual~~ availability of Reserve Capacity ~~set out in clause 4.5.12(c)~~, where~~:~~ ~~each class corresponds to Reserve Capacity being available from a Facility for not more than a specified number of hours per year.~~

(a) Availability Class 1 includes all generation Facilities and any Interruptible Loads, Demand Side Programmes or Dispatchable Loads that the IMO allocates to Availability Class 1 under clause 4.11.4(a); and

(b) Availability Class 2 includes all remaining Interruptible Loads, Demand Side Programmes or Dispatchable Loads.

**Note:** Changes also required to Appendix 1 and 3.

**Issue 3 – Proposed Drafting**

7.10.4. System Management must monitor the behaviour of Market Participants with Registered Facilities to assess whether they are complying with clause 7.10.1 in accordance with its Monitoring and Reporting Protocol~~, except where it relates to a Demand Side Programme~~.

**Note:** No change required to clause 2.35.4.

**Issue 4 – Proposed Drafting**

~~4.12.8. Where a Demand Side Programme is dispatched under clause 7.6.1C(d) to a level equal to its Reserve Capacity Obligation Quantity on two consecutive days the Reserve Capacity Obligation Quantity for the third consecutive day will be zero.~~

**Issue 5 – Proposed Drafting**

**Note:** Under Development.

**Issue 6 – Proposed Drafting**

**Note:** Under Development.

**Issue 7 – Proposed Drafting**

4.26.2CA. The Relevant Demand of a Demand Side Programme for a Trading Day d in a Capacity Year is the lesser of: ~~median of the historical consumption quantities determined by the IMO for each of the 32 Trading Intervals identified under clause 4.26.2C(a) for the Capacity Year. The historical consumption quantity for each Trading Interval is the sum, over all the Associated Loads associated with the Demand Side Programme during Trading Day d, of the MW quantity determined by the IMO for each Associated Load and the Trading Interval under clause 4.26.2C(b).~~

(a) the median of the historical consumption quantities determined by the IMO for each of the 32 Trading Intervals identified under clause 4.26.2C(a) for the Capacity Year. The historical consumption quantity for each Trading Interval is the sum, over all the Associated Loads associated with the Demand Side Programme during Trading Day d, of the MW quantity determined by the IMO for each Associated Load and the Trading Interval under clause 4.26.2C(b)~~.~~; and

(b) the sum of Individual Reserve Capacity Requirement contributions of the Associated Loads as determined in accordance with Step 11 of Appendix 5.

**Note:** Changes also required to Appendix 5.

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

The IMO proposes that the key issues identified in this concept paper better achieve Wholesale Market Objectives (a), (c) and (e) and are consistent with Wholesale Market

Objectives (b) and (d).

*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.*

The key deliverable of any demand-side service is to provide an alternative to generation capacity. Through the harmonisation of supply and demand side availability the IMO contends electricity related services would be more economically efficient and provides significantly more reliability to the market.

Having more flexibility to how DSP's are used will give System Management the ability to dispatch DSM as the network requires it, without onerous restriction.

*Objective (c). To avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions.*

The current Market Rules arguably discriminate between Market Participants who provide demand-side and supply-side capacity. The key principle behind this concept paper is to provide more consistent treatment of the capacity provided by generators and DSP's. Certain obligations placed on generators can be perceived onerous in comparison to those placed on DSP's. By implementing the changes suggested in this concept paper the IMO proposes to better achieve Market Objective (c) through treating, where possible, all capacity equitably.

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

Through changing the obligations on demand-side resources within the market the IMO intends to enable greater reliability and versatility in the use of DSP's. Through the changes stipulated in this concept paper the IMO proposes to better manage the amount of electricity used and when it is used. Having a greater understanding on the amount of DSM available to the market coupled with the changes in the availability requirements of DSP's the IMO contends the Rule Changes suggested in this concept paper better achieve Wholesale Market Objective (e).

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

**Costs:**

As the proposed changes detailed in this concept paper have implications for the roles of System Management, the Network Operator, Market Participants and the IMO it is acknowledged that the associated costs may be material.

The IMO has begun consultation with System Management about the potential impact on systems and processes. This consultation will be extended to Market Participants prior to submitting the proposed rule changes into the formal process.

The IMO is conducting a preliminary analysis on the costs to internal resources and systems and intends to articulate these in a Pre Rule Change Proposal which the planned to be presented to the MAC in August 2013.

**Benefits:**

- greater achievement of Wholesale Market Objectives (a), (c) and (e);

- consistency with Wholesale Market Objectives (b) and (d); and
- improved reliability and transparency of DSM within the WEM.