

## RULE CHANGE NOTICE

### TREATMENT OF NEGATIVE BALANCING PRICE ON THE SETTLEMENT OF ANCILLARY SERVICES

(RC\_2012\_05)

This notice is given under clause 2.5.7 of the Market Rules.

**Date Submitted:** 18 April 2012

**Submitter:** Jacinda Papps, Verve Energy

#### **THE PROPOSAL**

Verve Energy has developed the Rule Change Proposal: Treatment of negative Balancing Price on the settlement of Ancillary Services (RC\_2012\_05) to address a manifest error identified with clause 9.9.2 of the Amending Rules resulting from the Rule Change Proposal: Competitive Balancing and Load Following Market (RC\_2011\_10), which would otherwise result in Verve Energy paying to supply Ancillary Services to the market when the Balancing Price is less than zero.

This issue was previously addressed during 2009 by the Rule Change Proposal: Treatment of Negative MCAP on the settlement of Ancillary Services (RC\_2009\_21), relating to the treatment of a negative Marginal Cost Administered Price (MCAP) on the settlement of Ancillary Services. It appears that during the drafting of the Amending Rules for RC\_2011\_10 the amendments to clause 9.9.2 (as a result of RC\_2009\_21) were not incorporated. Verve Energy considers that this was an oversight during the drafting process

To address the issue Verve Energy proposes that clause 9.9.2 of the Amending Rules approved under RC\_2011\_10 be amended to incorporate a price floor on the value of the Balancing Price used in the Spinning Reserve Service availability cost calculations. Verve Energy considers that this will better Market Objective (a) by making certain that the system can adequately respond to real time changes in load and generation in a range of scenarios.

Appendix 1 contains the Rule Change Proposal and gives complete information about:

- the proposed amendments to the Market Rules;
- relevant references to clauses of the Market Rules and any proposed specific amendments to those clauses; and



- the submitter's description of how the proposed amendments would allow the Market Rules to better address the Wholesale Market Objectives.

### **DECISION TO PROGRESS THE RULE CHANGE**

The IMO has decided to progress the Rule Change Proposal on the basis that Rule Participants should be given an opportunity to provide submissions as part of the rule change process.

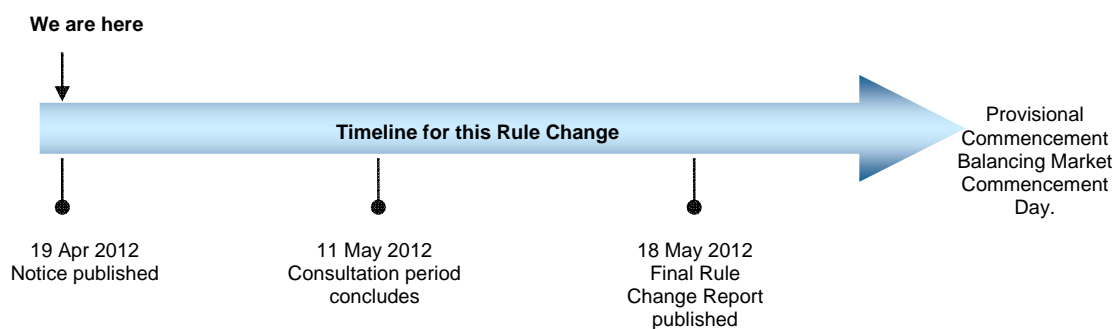
### **RULE CHANGE PROCESS**

The IMO has decided to subject the Rule Change Proposal to the Fast Track Rule Change Process described in section 2.6 of the Market Rules, on the grounds that it satisfies the criteria in clause 2.5.9(a) of the Market Rules.

The IMO considers that the proposed amendments will correct a manifest error in the Amending Rules from RC\_2011\_10 which would otherwise result in Verve Energy paying to supply Spinning Reserve Service when the Balancing Price is negative. This issue was originally corrected via the inclusion of a price floor in the Amending Rules resulting from RC\_2009\_21. During the process of drafting the Amending Rules for the new Balancing and Load Following Markets there was an unintentional oversight that resulted in the same price floor not being included into the Amending Rules for RC\_2011\_10. The IMO notes that it did not intend to remove this price floor.

### **TIMELINE**

The projected timelines for processing this proposal are:





### **CALL FOR SUBMISSIONS**

Any Rule Participant wishing to be consulted regarding this Rule Change Proposal is invited to notify the IMO within 5 Business Days of this notice being published (**27 April 2012**). The consultation period is 15 Business Days from the publication date of this Rule Change Notice. Submissions must be delivered to the IMO by 5.00pm on **Friday 11 May 2012**.

Submissions should be made by email to [market.development@imowa.com.au](mailto:market.development@imowa.com.au) using the submission form available on the IMO website: <http://www.imowa.com.au/rule-changes>. Submissions may also be sent to the IMO by fax or post, addressed to:

Independent Market Operator  
Attn: Group Manager, Market Development  
PO Box 7096  
Cloisters Square, Perth, WA 6850  
Fax: (08) 9254 4399



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## Appendix 1

### Wholesale Electricity Market Rule Change Proposal Form

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**Change Proposal No:** RC\_2012\_05

**Received date:** 18 April 2012

**Change requested by:**

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<b>Organisation:</b>	Verve Energy
<b>Address:</b>	GPO Box F366, Perth WA 6841
<b>Date submitted:</b>	18 April 2012
<b>Urgency:</b>	3-high, Fast Track Rule Change Process
<b>Change Proposal title:</b>	Treatment of negative Balancing Price on the settlement of Ancillary Services
<b>Market Rule(s) affected:</b>	Clause 9.9.2

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### 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, Market Development

PO Box 7096

Cloisters Square, Perth, WA 6850

Fax: (08) 9254 4339

Email: [market.development@imowa.com.au](mailto: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.

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## **Details of the proposed Market Rule Change**

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

#### **Background**

During 2009 the IMO progressed a Rule Change Proposal (RC\_2009\_21<sup>1</sup>) relating to the treatment of negative Marginal Cost Administered Prices (MCAP) on the settlement of Ancillary Services in the Wholesale Electricity Market (WEM) Rules (Market Rules).

This Rule Change Proposal corrected an issue whereby the settlement equations for Ancillary Services, specified under clause 9.9.2 of the Market Rules, could result in a negative availability cost payment when MCAP is less than zero. This resulted in the Electricity Generation Corporation (Verve Energy) paying to supply Ancillary Services to the market while having no realistic expectation of having offsetting cost savings. Thus, prior to the Rule Change Proposal taking effect, Verve Energy would have subsidised the cost of the service to the market. This was an inequitable and economically inefficient outcome which also acted as a disincentive to supply.

To remedy this issue, the Rule Change Proposal incorporated a price floor, set at \$0/MWh, on the value of MCAP used in the Ancillary Service availability cost calculations.

The Amending Rules for RC\_2009\_21, which:

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<sup>1</sup> Available on the IMO website: [www.imowa.com.au/RC\\_2009\\_21](http://www.imowa.com.au/RC_2009_21)

- were unanimously endorsed by the MAC at its 10 June 2009 meeting<sup>2</sup>, and
- received the support of all submissions received in both the first and second submission periods,

commenced on 1 February 2010.

## Issue

During 2011/12 the IMO progressed a Rule Change Proposal (RC\_2011\_10<sup>3</sup>) which sought to establish competitive Balancing and Load Following Ancillary Services Markets in the WEM. Among other things, the proposal:

- sought to enable all Market Generators to participate in Balancing, within the current hybrid market design;
- removed the administered pricing regime<sup>4</sup> for Load Following Services (please note this administered pricing regime has been retained for Spinning Reserve Services); and
- retained the concept of marginal pricing, but with IPPs able to compete on price for dispatch and the market setting a clean price reflecting actual dispatch outcomes to the extent practical. As such “MCAP” was replaced with “Balancing Price” in the Amending Rules for RC\_2011\_10).

It appears that during the drafting of the Amending Rules for RC\_2011\_10 the amendments to clause 9.9.2 (as a result of RC\_2009\_21) were not incorporated. Verve Energy considers that this was an oversight during the drafting process

## Proposal

To address the issue, it is proposed that clause 9.9.2, of the Amending Rules approved under RC\_2011\_10, be amended to incorporate a price floor on the value of the Balancing Price used in the Spinning Reserve Service availability cost calculations. It is suggested that this price floor be set at \$0/MWh. It should be noted that adopting a price floor of zero will:

- Ensure Verve Energy is not required to pay to supply Ancillary Services when the Balancing Price is negative;
- Better reflect the cost of provision of Ancillary Services by Verve Energy to the market;
- Reduce disincentives to supply; and;
- Represent a balance between demonstrating the value of the services to the market and the potential for over recovery of costs if a higher priced floor, say \$10/MWh, was adopted.

<sup>2</sup> Available on the IMO website: [www.imowa.com.au/MAC\\_20](http://www.imowa.com.au/MAC_20)

<sup>3</sup> Available of the IMO website: [www.imowa.com.au/RC\\_2011\\_10](http://www.imowa.com.au/RC_2011_10)

<sup>4</sup> Margin peak and off peak pricing based on estimated opportunity costs.

Verve Energy considers that the proposed amendments represent a temporary fix in the absence of a better mechanism. Verve Energy will work with the IMO to facilitate the advent of that better mechanism.

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

This Rule Change Proposal will correct a manifest error which could result in Verve Energy paying to supply Ancillary Services, an issue previously resolved under RC\_2009\_21. As such Verve Energy considers that the proposal fulfils sub-clause 2.5.9(b) and therefore maybe be fast-tracked.

Clause 2.5.9 states:

*The IMO may subject a Rule Change Proposal to the Fast Track Rule Change Process if, in its opinion, the Rule Change Proposal:*

- (a) is of a minor or procedural nature; or*
  - (b) is required to correct a manifest error; or*
  - (c) is urgently required and is essential for the safe, effective and reliable operation of the market or the SWIS.*
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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 underline words added)

The following clause is contained in the Amending Rules resulting from RC\_2011\_10:

9.9.2. The following terms relate to Load Following Service and Spinning Reserve Service costs in Trading Month m:

- (a) the payment to Market Participant p for providing upwards LFAS in Trading Interval t:

$$\begin{aligned} \text{LF\_Up\_Market\_Payment}(p,t) = & \\ & \text{LF\_Up}(p,t) \times \text{LF\_Up\_Price}(t) \\ & + \text{LF\_Up\_Backup}(p,t) \times \text{LF\_Up\_Backup\_Price}(p,t) \end{aligned}$$

- (b) the payment to Market Participant p for providing downwards LFAS in Trading Interval t:

$$\begin{aligned} \text{LF\_Down\_Market\_Payment}(p,t) = & \\ & \text{LF\_Down}(p,t) \times \text{LF\_Down\_Price}(t) \\ & + \text{LF\_Down\_Backup}(p,t) \times \text{LF\_Down\_Backup\_Price}(p,t) \end{aligned}$$

- (c) the total payment to Market Participant p for Load Following Service in Trading Interval t:

$$\text{LF\_Market\_Payment}(p,t) = \text{LF\_Up\_Market\_Payment}(p,t) + \text{LF\_Down\_Market\_Payment}(p,t)$$

- (d) the total payment to Market Participant p for Load Following Service in Trading Month m:

$$\text{LF\_Market\_Payment}(p,m) = \text{Sum}(t \in T, \text{LF\_Market\_Payment}(p,t))$$

- (e) the total payment to all Market Participants for Load Following Service in Trading Interval t:

$$\text{LF\_Market\_Payment}(t) = \text{Sum}(p \in P, \text{LF\_Market\_Payment}(p,t))$$

- (f) the total payment to all Market Participants for Spinning Reserve Service in Trading Interval t:

$$\begin{aligned} \text{SR\_Availability\_Payment}(t) = & 0.5 \times \text{Margin}(t) \times \text{Balancing\_Price}(t) \\ & \times \max(0, \text{SR\_Capacity}(t) - \text{LF\_Up\_Capacity}(t)) \\ & - \text{Sum}(c \in \text{CAS\_SR}, \text{ASP\_SRQ}(c,t)) \\ & + \text{Sum}(c \in \text{CAS\_SR}, \text{ASP\_SRPayment}(c,m) / \text{TITM}) \end{aligned}$$

- (g) the total payment to Market Participants for Spinning Reserve Service in Trading Month m:

$$\text{SR\_Availability\_Payment}(m) = \text{Sum}(t \in T, \text{SR\_Availability\_Payment}(t))$$

- (h) the assumed total cost of Spinning Reserve Service if no Spinning Reserve was provided by Load Following plant and without the Ancillary Service cost saving, in Trading Interval t:

$$\begin{aligned} \text{SR\_NoLF\_Cost}(t) = & 0.5 \times \text{Margin}(t) \times \text{Balancing\_Price}(t) \\ & \times \max(0, \text{SR\_Capacity}(t) - \text{Sum}(c \in \text{CAS\_SR}, \text{ASP\_SRQ}(c,t))) \\ & + \text{Sum}(c \in \text{CAS\_SR}, \text{ASP\_SRPayment}(c,m) / \text{TITM}) \end{aligned}$$

- (i) the Ancillary Service cost saving, derived through the dual use of plant to simultaneously provide Spinning Reserve Service and Load Following Service in Trading Interval t in Trading Month m:

$$\begin{aligned} \text{AS\_Cost\_Saving}(t) = & 0.5 \times \text{Margin}(t) \times \text{Balancing\_Price}(t) \\ & \times \min(\text{LF\_Up\_Capacity}(t), \\ & \text{SR\_Capacity}(t) - \text{Sum}(c \in \text{CAS\_SR}, \text{ASP\_SRQ}(c,t))) \end{aligned}$$



- (j) the allocation factor for the Ancillary Service cost saving in Trading Interval t:

$$AS\_Saving\_Factor(t) = \frac{LF\_Market\_Payment(t)}{(LF\_Market\_Payment(t) + SR\_NoLF\_cost(t))}$$

- (k) LF\_Up\_Capacity(t) is the capacity necessary to cover the requirement for providing upwards LFAS for Trading Interval t:

$$LF\_Up\_Capacity(t) = \text{Sum}(p \in P, LF\_Up(p,t) + LF\_Up\_Backup(p,t))$$

- (l) the Spinning Reserve availability cost share for Market Participant p, which is a Market Generator, for Trading Month m:

$$SR\_Availability\_Cost\_Share(p,m) = \text{Sum}(t \in T, SR\_Share(p,t) \times ((0.5 \times \text{Margin}(t) \times \text{Balancing\_Price}(t) \times \max(0, SR\_Capacity(t) - LF\_Up\_Capacity(t) - \text{Sum}(c \in CAS\_SR, ASP\_SRQ(c,t)))) + \text{Sum}(c \in CAS\_SR, ASP\_SRPayment(c,m) / TITM) + (AS\_Saving\_Factor(t) \times AS\_Cost\_Saving(t))))$$

- (m) the total Spinning Reserve availability cost for Trading Month m:

$$SR\_Availability\_Cost(m) = \text{Sum}(p \in P, SR\_Availability\_Cost\_Share(p,m))$$

- (n) the Load Following market cost share for Market Participant p for Trading Month m:

$$LF\_Market\_Cost\_Share(p,m) = \text{Sum}(t \in T, LF\_Share(p,m) \times (LF\_Market\_Payment(t) - AS\_Saving\_Factor(t) \times AS\_Cost\_Saving(t)))$$

- (o) the total Load Following market cost for Trading Month m:

$$LF\_Market\_Cost(m) = \text{Sum}(p \in P, LF\_Market\_Cost\_Share(p,m))$$

- (p) the Load Following capacity cost share for Market Participant p for Trading Month m:

$$LF\_Capacity\_Cost\_Share(p,m) = (\text{Monthly\_Reserve\_Capacity\_Price}(m) / TITM) \times \text{Sum}(t \in T, LF\_Share(p,m) \times LF\_Up\_Capacity(t))$$

- (q) the total Load Following capacity cost for Trading Month m:

$$LF\_Capacity\_Cost(m) = \text{Sum}(p \in P, LF\_Capacity\_Cost\_Share(p,m))$$

Where

$t$  denotes a Trading Interval in Trading Month  $m$ ;

$T$  is the set of Trading Intervals in Trading Month  $m$ ;

$LF\_Up(p,t)$  is the sum of any Ex-post Upwards LFAS Enablement quantities provided under clause 7.13.1(e) for LFAS Facilities registered to Market Participant  $p$  in Trading Interval  $t$ ;

$LF\_Up\_Price(t)$  is the Upwards LFAS Price for Trading Interval  $t$ ;

$LF\_Up\_Backup(p,t)$  is the sum of any Upwards LFAS Backup Enablement quantities for Trading Interval  $t$  if Market Participant  $p$  is Verve Energy and 0 otherwise;

$LF\_Up\_Backup\_Price(p,t)$  is the Backup Upwards LFAS Price for Trading Interval  $t$  if Market Participant  $p$  is Verve Energy and 0 otherwise;

$LF\_Down(p,t)$  is the sum of any Ex-post Downwards LFAS Enablement quantities provided under clause 7.13.1(eC) for LFAS Facilities registered to Market Participant  $p$  in Trading Interval  $t$ ;

$LF\_Down\_Price(t)$  is the Downwards LFAS Price for Trading Interval  $t$ ;

$LF\_Down\_Backup(p,t)$  is the sum of any Downwards LFAS Backup Enablement quantities for Trading Interval  $t$  if Market Participant  $p$  is Verve Energy and 0 otherwise;

$LF\_Down\_Backup\_Price(p,t)$  is the Backup Downwards LFAS Price for Trading Interval  $t$  if Market Participant  $p$  is Verve Energy and 0 otherwise;

$Balancing\_Price(t)$  is the greater of zero and the Balancing Price for Trading Interval  $t$ ;

$c$  denotes a Contracted Ancillary Service;

$CAS\_SR$  is the set of Contracted Spinning Reserve Services;

$P$  is the set of all Market Participants;

$ASP\_SRQ(c,t)$  is the quantity provided by System Management in accordance with clause 3.22.3(b)(ii) for Contracted Spinning Reserve Service  $c$  in Trading Interval  $t$  multiplied by 2 to convert to units of MW;

$ASP\_SRPayment(c,m)$  is defined in clause 9.9.4;

$TITM$  is the number of Trading Intervals in Trading Month  $m$  (excluding any Trading Intervals prior to Energy Market Commencement);

$SR\_Share(p,t)$  is the share of the Spinning Reserve Service payment costs allocated to Market Participant  $p$  in Trading Interval  $t$ , where this is to be determined by the IMO using the methodology described in clause 3.14.2;

LF\_Share(p,m) is the share of the Load Following Service costs allocated to Market Participant p in Trading Month m, where this is to be determined by the IMO using the methodology described in clause 3.14.1;

Margin(t) is Margin\_Peak(m), if Trading Interval t is a Peak Trading Interval and Margin\_Off-Peak(m), if Trading Interval t is a Off-Peak Trading Interval;

Margin\_Peak(m) is the reserve availability payment margin applying for Peak Trading Intervals for Trading Month m as specified by the IMO under clause 3.22.1(c);

Margin\_Off-Peak(m) is the reserve availability payment margin applying for Off-Peak Trading Intervals for Trading Month m as specified by the IMO under clause 3.22.1(d);

SR\_Capacity(t) is SR\_Capacity\_Peak(m), if Trading Interval t is a Peak Trading Interval; and SR\_Capacity\_Off-Peak(m) if Trading Interval t is an Off-Peak Trading Interval;

SR\_Capacity\_Peak(m), is the capacity necessary to cover the Ancillary Services Requirement for Spinning Reserve for Peak Trading Intervals for Trading Month m as specified by the IMO under clause 3.22.1(e);

SR\_Capacity\_Off-Peak(m), is the capacity necessary to cover the Ancillary Services Requirement for Spinning Reserve for Off-Peak Trading Intervals for Trading Month m as specified by the IMO under clause 3.22.1(f);

Ex-post\_Upwards\_LFAS\_Enablement(t) is the sum of the quantities provided under clause 7.13.1(e) for Trading Interval t; and

Upwards\_LFAS\_Backup\_Enablement(t) is any quantity provided under clause 7.13.1(eA) for Trading Interval t.

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

Verve Energy considers that the proposed changes, which correct a manifest error in the Amending Rules for RC\_2011\_10: Competitive Balancing and Load Following Market, are consistent with the Wholesale Market Objectives.

Further, Verve Energy notes that the original Amending Rules introduced by RC\_2009\_21 (which this proposal seeks to reinstate) better addressed Wholesale Market Objective (a) by making certain the system can adequately respond to real time changes in load and generation under a range of scenarios. In particular, the proposed changes sought to ensure that the safe and reliable production of electricity could be maintained by incentivising supply of Ancillary Services. This was achieved by better reflecting the true value of Ancillary Services to the market when MCAP [or the Balancing Price under the Amending Rules for RC\_2011\_10] is negative in the payment calculations.

Verve Energy considers that, once the Amending Rules for RC\_2011\_10 commence (currently scheduled for 1 July 2012), the proposed amendments outlined in this Rule Change Proposal would have the same impact in better addressing Wholesale Market Objective (a).

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

### **Costs:**

The proposed changes may require changes to the Wholesale Electricity Market Systems currently being developed for the implementation of RC\_2011\_10. However, the incremental cost of the change is yet to be confirmed with the IMO. Verve Energy considers that this cost should be minimal if not zero.

### **Benefits:**

- Better reflection of the true value of supplying Ancillary Services to the market in the relevant payment calculations.
  - Improved incentives for Verve Energy and independent producers to supply Ancillary Services.
-