
Wholesale Electricity Market Rule Change Proposal Form

Change Proposal No: RC_2009_21
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Change requested by

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Urgency:	Standard Rule Change Process
Change Proposal title:	Treatment of Negative MCAP on the settlement of Ancillary Services
Market Rule(s) affected:	Clause 9.9.2

Introduction

Market Rule 2.5.1 of the Wholesale Electricity Market Rules provides that any person (including the Independent Market Operator (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: Manager Market Administration and System Capacity
PO Box 7096
Cloisters Square, Perth, WA 6850

Fax: (08) 9254 4339

Email: marketadmin@imowa.com.au

The IMO 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 Market Rule Change

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

Background

Ancillary Services are used to guarantee the safe, secure and reliable production of electricity on the South West interconnected system (SWIS) by ensuring the system can adequately respond to real time changes in load and generation under a range of scenarios. Ancillary Services are used to control key technical characteristics of the power system such as frequency and voltage. In particular Ancillary Services:

- help maintain Power System Security (ability of SWIS to deliver energy within reliability standards);
- help maintain Power System Reliability (ability of the SWIS to withstand sudden disturbances including restoration in the case of blackout);
- facilitate orderly trading in electricity; and
- ensure that electricity supplies are of acceptable quality.

Ancillary Services are required to support the Wholesale Electricity market (WEM) but are not traded as part of the WEM. System Management is required to procure adequate quantities of these services, either from Electricity Generation Corporation (Verve Energy) resources (the default option) or on a contestable basis from independent providers (if they provide a least cost option to Verve's facilities).

System Management will budget the cost of procuring Ancillary Services, where budgeted costs must be in accordance with those approved by the Economic Regulation Authority. However, System Management will not fund Ancillary Services. Rather, the IMO recovers the costs of the Ancillary Services from Market Participants through the WEM settlement systems, and will use the revenue received to fund Ancillary Services provided by Verve Energy and any contracted Ancillary Service providers.

The Wholesale Electricity Market Rules (Market Rules) provide for the settlement of Ancillary Services based on an availability payment, whereas energy is settled separately. Clause 9.9 of the Market Rules outlines the Ancillary Service settlement calculations for a Trading Month. In particular, clause 9.9.2 outlines the availability payment arrangements for the provision of Ancillary Services by Verve Energy.

The calculations use the value of the Marginal Cost Administrative Price (MCAP) as the price input and the quantity of Ancillary Services provided to calculate the total availability cost for the supply of Ancillary Services. Payments to other Market Generators for the supply of Ancillary Services are determined through arrangements directly between System Management and the provider.

Issue

The provision of ancillary services such as load following and spinning reserve imposes additional costs on the service provider including increased plant maintenance, out-of-merit plant dispatch and lost energy sales opportunities. The costs incurred will vary and it is foreseeable that they could tend towards zero on occasions. However it is highly improbable that cost savings would result from providing the services.

Verve Energy's main concern is that the equations specified under clause 9.9.2 can result in a negative availability cost payment when MCAP prices are less than zero. This would result in Verve Energy paying to supply ancillary services to the market whilst having no realistic expectation of having offsetting cost savings. Thus Verve Energy would be subsidising the cost of service to the market. This is clearly an inequitable and economically inefficient outcome. In addition, the potential requirement to supply below cost acts as a disincentive to supply and may discourage independent providers from offering competitive ancillary services.

Proposal

To address the issue, it is proposed that clause 9.9.2 of the Market Rules be amended to incorporate a price floor on the value of MCAP used in the Ancillary Service availability cost calculations. It is suggested that this price floor be set at \$0/MWh.

Adopting a price floor of zero for Ancillary Services would:

- Ensure Verve Energy is not required to pay to supply Ancillary Services when MCAP 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.;

Verve does however consider the amendments to represent a temporary fix in the absence of a better mechanism and we expect the advent of that better mechanism in the future.

2. Explain the reason for the degree of urgency:

Verve Energy considers this Rule Change Proposal should be progressed using the Standard Rule Change Process.

3. Provide any proposed specific changes to particular Rules: (for clarity, please use the current wording of the Rules and place a ~~strike through~~ where words are deleted and underline words added)

9.9.2. The following terms related to Ancillary Service availability costs:

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

$$\begin{aligned} \text{Availability_Cost}(m) = & \\ & 0.5 \times (\text{Margin_Peak}(m) \times \text{Sum}(d \in D, t \in \text{Peak}, \text{MCAP}(d, t) \\ & \times (\text{Capacity_R_Peak}(m) - \text{Sum}(i \in I, \text{ASP_SRQ}(i, t)))) \\ & + 0.5 \times (\text{Margin_Off-Peak}(m) \times \text{Sum}(d \in D, t \in \text{Off-Peak}, \text{MCAP}(d, t) \\ & \times (\text{Capacity_R_Off-Peak}(m) - \text{Sum}(i \in I, \text{ASP_SRQ}(i, t)))) \\ & + \text{Sum}(i \in I, \text{ASP_SRPayment}(i, m)) \\ & + \text{Sum}(i \in I, \text{ASP_LFPayment}(i, m)) \end{aligned}$$

- (b) the Spinning Reserve Cost Share for Market Participant p, which is a Market Generator, for Trading Month m:

$$\begin{aligned} \text{Reserve_Cost_Share}(p, m) = & \\ & 0.5 \times (\text{Margin_Peak}(m) \times \text{Sum}(d \in D, t \in \text{Peak}, \text{MCAP}(d, t) \\ & \times \text{Reserve_Share}(p, t) \\ & \times (\text{Capacity_R_Peak}(m) - \text{Sum}(i \in I, \text{ASP_SRQ}(i, t)) - 0.5 \text{LFR}(m))) \\ & + 0.5 \times (\text{Margin_Off-Peak}(m) \times \text{Sum}(d \in D, t \in \text{Off-Peak}, \text{MCAP}(d, t) \\ & \times \text{Reserve_Share}(p, t) \\ & \times (\text{Capacity_R_Off-Peak}(m) - \text{Sum}(i \in I, \text{ASP_SRQ}(i, t)) \\ & - 0.5 \times \text{LFR}(m))) \\ & + \text{Sum}(t \in \text{Peak and Off_Peak}, \text{Reserve_Share}(p, t) \\ & \times \text{Sum}(i \in I, \text{ASP_SRPayment}(i, m) / \text{TITM})) \end{aligned}$$

- (c) the total Spinning Reserve Availability Cost for Trading Month m:

$$\begin{aligned} \text{Availability_Cost_R}(m) = & \\ & \text{Sum}(p \in P, \text{Reserve_Cost_Share}(p, m)) \end{aligned}$$

- (d) the total Load Following Availability Cost for Trading Month m:

$$\text{Availability_Cost_LF}(m) = \text{Availability_Cost}(m) - \text{Availability_Cost_R}(m)$$

Where

ASP_SRQ(i,t) is the quantity of Spinning Reserve provided by Ancillary Service Provider i in Trading Interval t (this being one of the quantities referred to in clause 9.9.3);

ASP_SRPayment(i,m) is defined in clause 9.9.3;

ASP_LFPayment(i,m) is defined in clause 9.9.3;

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

Reserve_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;

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);

Capacity_R_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);

Capacity_R_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);

LFR(m) is the capacity necessary to cover the Ancillary Services Requirement for Load Following for Trading Month m as specified by the IMO under clause 3.22.1(fA);

MCAP(d,t) has the meaning given in clause 9.8.1 and = 0 if MCAP(d,t) < 0;

Peak denotes the set of Trading Intervals occurring during Peak Trading Intervals, where “t” refers to a Trading Interval during a Trading Day;

Off-Peak denotes the set of Trading Intervals occurring during Off-Peak Trading Intervals, where “t” refers to a Trading Interval during a Trading Day; and

D denotes the set of Trading Days within Trading Month m, where “d” is used to refer to a member of that set.

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

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

Verve Energy submits that the proposed Amending Rules will better achieve 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 will ensure the safe and reliable production of electricity can be maintained by incentivising supply of Ancillary Services. This will be achieved by better reflecting the true value of Ancillary Services to the market when MCAP is negative in the payment calculations.

Verve Energy considers that the proposed Amending Rules are consistent with the remaining Market Objectives.

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

Costs:

The proposed changes will require changes to the Wholesale Electricity Market Systems. The cost of the change is yet to be confirmed with the IMO.

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