

---

---

## Wholesale Electricity Market Rule Change Proposal Submission Form

### RC\_2013\_02 Clarification of the Minimum TES Calculation

---

---

#### Submitted by

<b>Name:</b>	Ky Cao
<b>Phone:</b>	08 9420 0300
<b>Fax:</b>	08 9474 9900
<b>Email:</b>	<a href="mailto:k.cao@perthenergy.com.au">k.cao@perthenergy.com.au</a>
<b>Organisation:</b>	Perth Energy
<b>Address:</b>	Level 4, 165 Adelaide Terrace, East Perth WA 6004
<b>Date submitted:</b>	8 July 2013

#### Submission

- Please provide your views on the proposal, including any objections or suggested revisions.**

#### Background

On 1 July 2012 competitive balancing and load following was introduced in the Wholesale Electricity Market (WEM). With the introduction of the new balancing market, all Scheduled Generators, not only those owned by Verve Energy, could participate in balancing by submitting price / quantity pairs to increase or decrease output. These bids and offers are sorted in order from cheapest to the most expensive to form the Balancing Merit Order (BMO). System Management normally schedules balancing energy in accordance with the BMO.

However, on occasions System Management may need to schedule balancing energy out of the merit order, by for example reducing the output of a Generator whose price in the bid stack is below the Balancing Price for the Trading Interval. Similarly, System Management may also need to increase the output of a Generator whose price in the bid stack is above the Balancing Price for the Trading Interval. These types of actions are normally referred to as “constraining off” and “constraining on” a generator.

The Market Rules provide for constrained on and constrained off payments to compensate the generators or the market for any over-payments that would otherwise occur. For example, a generator with a marginal price of \$40/MWh that is constrained off when the Balancing Price is \$60/MWh would be compensated for the difference (\$20/MWh) which would otherwise be lost profits.

In order to calculate the constrained on and off payments it is necessary to calculate an energy volume to apply the \$/MWh price differential to. To facilitate this the Market Rules make use of the concepts Minimum and Maximum Theoretical Energy Schedules (TES). The Minimum TES is the minimum theoretical output, in MWh, that the Generator could have produced given the Start of Interval (SOI) Quantity, the prevailing Balancing Price, the price / quantity pairs submitted for the Generator as well as its ramp rate (expressed as MW/minute). The Maximum TES is the maximum theoretical output, in MWh, that the Generator could have produced during the Trading Interval given all of the factors mentioned above in relation to the Minimum TES.

The Minimum and the Maximum TES will normally be exactly the same quantity. The quantities may only differ when the Generator has a price / quantity pair in its bid stack with a price identical to the Balancing Price in that Trading Interval

## Issue

Clause 6.15.2(a)(i)(2) currently defines the Minimum TES as “...if the Facility’s SOI Quantity is greater than the sum of the quantities in the Facility’s Balancing Price – Quantity Pairs which have a Loss Factor Adjusted Price less than **or equal to** the Balancing Price, the minimum amount of sent out energy, in MWh, if any, which could have been dispatched in the Trading Interval from any of the Facility’s Balancing Price-Quantity Pairs which have a Loss Factor Adjusted Price greater than or equal to the Balancing Price, taking into account the Balancing Facility’s SOI Quantity and Ramp Rate Limit...”

The test is meant to capture the energy that is produced whilst ramping down (from the start of a Trading Interval) to a level that is consistent with the minimum level that would be produced by the Facility given its price / quantity pairs, the Balancing Price and the Facility’s ramp rate limits as well as the energy that is produced for the remainder of the Trading Interval when the Facility is sustaining a level of output consistent with the minimum theoretical loading level.

However, when a Facility has submitted a price / quantity pair with a price equal to the Balancing Price and its SOI Quantity is greater than the level consistent with the minimum theoretical output of the Facility (which would be all quantities with a price below the Balancing Price), but the same or less than the level consistent with the maximum theoretical output of the Facility (which would be all quantities with a price less than or equal to the Balancing Price), then the test in clause 6.15.2(a)(i)(2) fails. This is because in this instance, the SOI quantity is **not** “...greater than the sum of the quantities in the Facility’s Balancing Price – Quantity Pairs which have a Loss Factor Adjusted Price less than **or equal to** the Balancing Price...”. The test fails because of the inclusion of “or equal to” and the result is that the energy above the minimum theoretical level associated with the ramp down towards the minimum theoretical level is excluded from the Minimum TES. The Minimum TES will therefore in this scenario reflect less energy than it should.

The same problem exists in clause 6.15.2(c)(i)(2) which applies to Verve Energy’s Facilities.

## Change Proposal

The IMO has proposed to amend clauses 6.15.2(a)(i)(2) and 6.15.2(c)(i)(2) of the Market Rules by removing “or equal to” as highlighted in bold in the paragraphs above.

The IMO has submitted this Rule Change Proposal to the Fast Track process within the Market Rules. The IMO considers the Rule Change Proposal is necessary to correct a manifest error in the Market Rules. Clause 2.5.9(b) of the Market Rules allows the Fast Track process to be used for correcting manifest errors.

## Perth Energy’s Views

Perth Energy supports the proposed changes to the Market Rules. The current wording of clauses 6.15.2(a)(i)(2) and 6.15.2(c)(i)(2) would clearly lead to an under estimation of the MWh produced in the Minimum TES when the circumstances described above occur. Having an incorrect Minimum TES amount would lead to incorrect constraint payments to Market Participants which would have a negative impact on cost reflectivity and competition in the WEM. Perth Energy considers that the proposed amendments would rectify this and ensure correct volume calculations can be made of the Minimum TES.

Perth Energy agrees with the IMO’s assessment that the identified issue represents a manifest error that should be corrected as soon as is possible. Perth Energy therefore supports the use of the Fast Track process for this Rule Change Proposal

## **2. Please provide an assessment whether the change will better facilitate the achievement of the Market Objectives.**

Perth Energy considers that the proposed amendments would improve the cost reflectivity in the WEM which would have a positive impact on efficiency and competition in the market. Perth Energy therefore considers the proposed amendments will positively impact on the achievement of Market Objectives<sup>1</sup> (a) relating to economic efficiency and (b) relating to competition.

Perth Energy has not identified any impacts on the remaining Market Objectives.

---

<sup>1</sup> 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.

- 3. Please indicate if the proposed change will have any implications for your organisation (for example changes to your IT or business systems) and any costs involved in implementing these changes.**

Perth Energy has not identified any impacts to our business.

- 4. Please indicate the time required for your organisation to implement the change, should it be accepted as proposed.**

Perth Energy will not require any lead time to implement the proposed changes.