

Independent Market Operator



Draft Market Rule Change Report

Title: Energy Price Limits Methodology

Ref: RC_2008_07

Standard Rule Change Process

Date: 12 May 2008

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Independent Market Operator

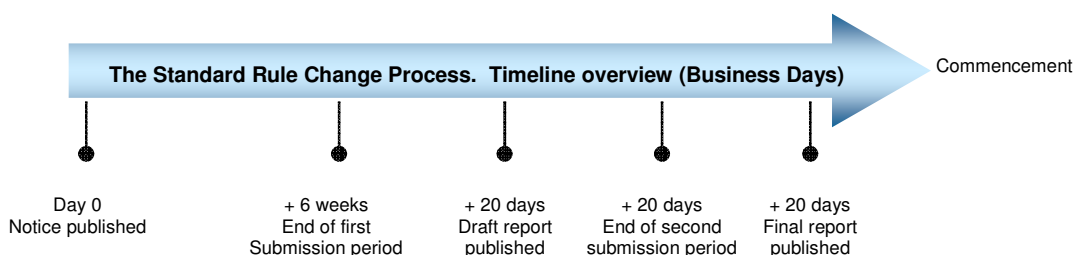
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1. INTRODUCTION

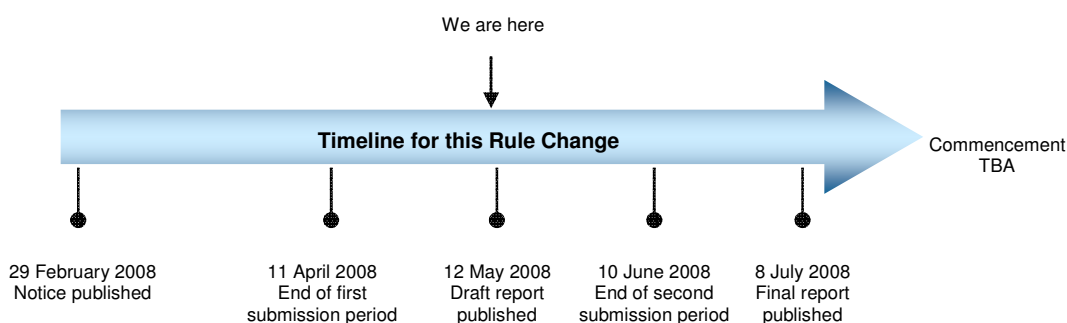
On 28 February 2008, the IMO submitted a Rule Change Proposal regarding changes to clauses 2.34.14, 6.18.1, 6.18.2, 6.18.3, 6.20.1, 6.20.5, 6.20.7, 6.20.8, 10.5.1 and Appendix 1 of the Wholesale Electricity Market Rules.

This Proposal is being processed using the Standard Rule Change Process, described in section 2.7 of the Market Rules.

The standard process adheres to the following timelines, outlined in section 2.7 of the Market Rules:



The key dates in processing this Rule Change Proposal are:



Based on the submissions received, the IMO's draft decision is to implement the Rule Change Proposal in the form outlined in section 6 of this Report.

This Draft Rule Change Report on the Rule Change Proposal has been prepared by the IMO in accordance with clause 2.7.6 of the Market Rules.

Interested parties are invited to provide further submissions in relation to this Draft Rule Change Report. In accordance with the Market Rules timelines, the deadline for submissions is 10 June 2008.

2. THE RULE CHANGE PROPOSAL

2.1. Submission Details

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Organisation:	Independent Market Operator
Address:	221 St George's Terrace, Perth WA 6000
Date submitted:	28/02/2008
Urgency:	Medium
Change Proposal title:	Energy Price Limits Methodology

2.2. Details of the Proposal

The IMO submitted that, in accordance with Market Rule 6.20.6, the IMO must annually review the appropriateness of the value of the Energy Price Limits. In 2007, the annual review also examined the cost assumptions and methodology for determining the price caps. Subsequent to the review, the Market Advisory Committee convened an Energy Price Limits Working Group to consider the various issues that were raised in the review's final report, which is available on the IMO website. The Rule Change Proposal by the IMO was a result of the Working Group's deliberations.

The IMO proposed the following changes to the methodology for determining the Energy Price Limits:

- 1) Currently, the Market Rules prescribe the use of the **average of the heat rates** at minimum capacity and maximum capacity of a 40 MW open cycle gas turbine generating station in the calculation of the Price Limits. It was proposed that the Market Rules be amended to instead prescribe the use of the heat rate at the **relevant minimum capacity**. This would ensure that the resultant Price Limit would cover the cost of the marginal generator for all load levels.
- 2) The Market Rules are silent on any specific treatment of start up cost. In the initial determination of the Maximum STEM Price and Alternative Maximum STEM Price in 2004, start up cost was included in the Variable O&M costs under clause 6.20.7(b)(ii). In the 2007 review, it was recognised that start up costs contain uncertainty in their underlying cost assumptions. The review found that it is preferred to assess the variation of run time as just another uncertain factor rather than treat it as a deterministic variable. Hence, the start up costs were included in the variable O&M costs through using a different methodology. As recommended by the Working Group, it was proposed that the inclusion of the start up cost be prescribed so as to ensure that relevant costs associated with start up are not excluded in future reviews. It was also proposed to draft this in a way that does not preclude the inclusion of other relevant, but not specifically prescribed, costs in the future.
- 3) Clause 6.20.8 prescribes a methodology for reviewing the Maximum Shutdown Price. The Working Group noted the expert advice during the 2007 review, that the opportunity cost of a shutdown instructed by System Management are able to

be fully recovered through the pay-as-bid prices under the provisions of the Market Rules. The small cost of shutting down a unit would also be covered by the proposed inclusion of start up costs. It was therefore proposed that the clauses pertaining to the Maximum Shutdown Cost be deleted from the Market Rules, as they do not appear to be either necessary or appropriate.

2.3. *The Proposal and the Market Objectives*

The IMO's submission regarding how the amendments will allow the Market Rules to better address the market objectives can be found in section 4.1.2 of this Report.

2.4. *Amending Rules proposed by the IMO*

The amendments to the Market Rules proposed by the IMO are available in section 6 of this report.

2.5. *The IMO's Initial Assessment of the Proposal*

The IMO decided to proceed with the proposal on the basis of its preliminary assessment, which indicated that the proposal was consistent with the Wholesale Market Objectives. This preliminary assessment was published in a Rule Change Notice on 29 February 2008.

3. SUBMISSIONS

The IMO received two submissions, from the Economic Regulation Authority and Landfill Gas & Power Pty Ltd, on the changes proposed by the IMO. The submissions are summarised below, and their full text is available on the IMO website.

3.1. *Market Advisory Committee*

The Market Advisory Committee (MAC) was first advised of the proposed rule change at its meeting on 13 February 2008, when the IMO also presented the Energy Price Limit's Working Group's Report, which is available on the IMO's website <http://www.imowa.com.au>. MAC supported the results from the Working Group and the IMO submitting the change as a formal Rule Change Proposal.

MAC members were also invited to discuss the proposal at the MAC meeting on 12 March 2008, after the proposal had been published on the IMO website. All members of MAC expressed their support for the Rule Change.

3.2. *Submission from the Economic Regulation Authority (ERA)*

ERA expressed its support for the Rule Change Proposal.

3.3. *Submission from Landfill Gas & Power Pty Ltd (LGP)*

LGP expressed its support for the Rule Change Proposal. In its submission LGP supported the Energy Price Limits Working Group's contention that the Rule Change would allow generators to fully recover their Short Run Marginal Costs in all circumstances.

3.4. *Public Forums and Workshops*

No public forums or workshops were held in relation to this Rule Change.

4. THE IMO'S ASSESSMENT AND DECISION

4.1. Assessment

4.1.1. Submissions

All parties responding within the prescribed submission period expressed support for the Rule Change Proposal. No party proposed any changes to the proposed amendments to the Market Rules.

4.1.2. The IMO's Assessment

According to clause 2.4.2 of the Market Rules *“the IMO must not make Amending Rules unless it is satisfied that the Market Rules, as proposed to be amended or replaced, are consistent with the Wholesale Market Objectives”*.

The IMO considers that the proposed Amending Rules will have the following impact on how the Market Rules address the Wholesale Market Objectives:

Impact	Wholesale Market Objectives
Allow the Market Rules to better address objective	a, b and d
Consistent with objective	c and e
Inconsistent with objective	-

The IMO's assessment against market objectives (a), (b) and (d) is as follows:

- (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 proposed amendments allow the Market Rules to better address market objective (a) as the explicit inclusion of start up costs, and using heat rates at minimum capacities in the calculation of the Price Limits, will promote economic efficiency by allowing generators to fully recover their Short Run Marginal Costs in all circumstances.

Offers in the Short Term Energy Market and the balancing pay-as-bid prices provide sufficient opportunity for generators to:

- (i) either sell surplus power to avoid an overnight shutdown, or
- (ii) if the balancing service price is low enough, to shutdown the unit and either avoid the losses from continuing to operate or purchase energy needed to fulfil an overnight bilateral position.

Therefore, there is no need for an explicit shut down payment in the Market Rules and its removal will promote the economic efficiency of the Market.

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

The proposed amendments allow the Market Rules to better address market objective (b) as the prescribed treatment of start up costs will enable legitimate costs to be included in the determination of the Energy Price Limits. This change, and the change pertaining to the treatment of heat rates, will provide confidence to generators that they can recover their Short Run Marginal Cost in all circumstances. This will help provide certainty to generators and promote future investment.

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

The proposed amendments allow the Market Rules to better address market objective (d) by allowing customers to benefit from the removal of the shut down prices, since this will prevent potential double counting of costs in the market and assist in minimising the overall market costs/prices.

In accordance with Clause 2.4.3(b) of the Market Rules, in deciding whether or not to make Amending Rules, the IMO must also have regard to the practicality and cost of implementing the Amending Rules.

The proposed changes will not require any changes to the Wholesale Electricity Market Systems operated by the IMO. No other costs have been identified in relation to the implementation of the proposed changes.

4.2. IMO's Draft Decision

The IMO's draft decision is to implement the proposed amendments to clauses 2.34.14, 6.18.1, 6.18.2, 6.18.3, 6.20.1, 6.20.5, 6.20.7, 6.20.8, 10.5.1 and Appendix 1 of the Wholesale Electricity Market Rules.

The IMO has made its draft decision on the basis that the resulting Amending Rules will allow the Market Rules to better address the Wholesale Market Objectives.

The wording of the relevant Amending Rules is presented in section 6 of this Report.

5. CALL FOR SUBMISSIONS

The IMO wishes to receive submissions regarding this Draft Rule Change Report. The submission period is 20 Business Days from the publication date of this Report.

Submissions must be delivered to the IMO by close of business on Tuesday 10 June 2008.

The IMO prefers to receive submissions by email to marketadmin@imowa.com.au using the submission form available on the IMO website:
http://www.imowa.com.au/10_5_1_b_rule_change_proposal.htm

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

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

6. PROPOSED AMENDING RULES

The IMO proposes to implement the following amendments to the Market Rules (added words are underlined and deletions are shown with ~~striketrough~~):

Clause 2.34.14

2.34.14 The IMO must commence using revised Standing Data from:

- (a) 8:00 AM on the Scheduling Day following the IMO's acceptance of the revised Standing Data in the case of:
 - i. Standing STEM Submissions;
 - iA. Standing Bilateral Submissions;
 - iB. Standing Resource Plan Submissions;
 - ii. ~~commitment and decommitment~~ cost data and Standing Balancing Data; and
 - iii. Standing Data changes stemming from acceptance of an application under clause 6.6.9;

with the exception that the previous Standing Data remains current for the purpose of settling the Trading Day that commences at the same time as that Scheduling Day; and

Clause 6.18.1

6.18.1. Subject to clause 6.18.3, Commitment Compensation will be payable by the IMO to a Market Participant (other than the Electricity Generation Corporation) in the event that:

- (a) the Market Participant is instructed by System Management to start up a Scheduled Generator registered by the Market Participant more times than indicated in the applicable Resource Plan for that Scheduled Generator;~~;~~ ~~or~~
- (b) ~~the Market Participant is instructed by System Management to shutdown a Scheduled Generator registered by the Market Participant more times than indicated in the applicable Resource Plan for that Scheduled Generator.~~

Clause 6.18.2

- 6.18.2. Subject to clause 6.18.3, the Commitment Compensation equals the sum of:
- (a) for each additional start up required of a Scheduled Generator during a Peak Trading Interval or Off-Peak Trading Interval the dollar amount for a commitment of the Facility specified in Standing Data, as defined in Appendix 1(c)(i); and
 - (b) [Blank]
 - (c) ~~for each additional shut down required of a Scheduled Generator during a Peak Trading Interval or Off-Peak Trading Interval the dollar amount for a de-commitment of the Facility specified in Standing Data as defined in Appendix 1(c)(i).~~
 - (d) [Blank]

Clause 6.18.3

- 6.18.3. No Commitment Compensation will be payable:
- (a) to the Electricity Generation Corporation;
 - (b) for the first start in the Trading Day of a Scheduled Generator if the relevant Market Participant has Reserve Capacity Obligations in respect of that Facility; or
 - (c) for any start-up ~~or shut-down~~ instructed by System Management in connection with any Ancillary Services Contract, Balancing Support Contract or Network Control Service Contract.

Clause 6.20.1

- 6.20.1. The Energy Price Limits are:
- (a) the Maximum STEM Price;
 - (b) the Alternative Maximum STEM Price;
 - (c) the Minimum STEM Price.; and
 - (d) ~~Maximum Shutdown Price.~~

Clause 6.20.5

~~6.20.5. Subject to clause 6.20.11, the Maximum Shutdown Price to apply for:~~

- ~~(a) the Relevant Year commencing on 1 October 2004 is equal to \$55/MW; and~~
- ~~(b) for subsequent Relevant Year is the Maximum Shutdown Price for the preceding Relevant Year multiplied by the $\frac{CPI[x]}{CPI[x-1]}$, where $CPI[x]$ represents the weighted average of the Consumer Price Index All Groups values for the eight Australian State and Territory capital cities as determined by the Australian Bureau of Statistics for the quarter ending June 30 immediately preceding the start of the Relevant Year and the $CPI[x-1]$ represents the corresponding value for the quarter ending the preceding June 30.~~

Clause 6.20.7

~~6.20.7.~~

- ~~(b) must calculate the Maximum STEM Price or Alternative Maximum STEM Price using the following methodology:~~

$$\frac{(1 + \text{Profit Margin}) \times (\text{Variable O\&M} + (\text{Heat Rate} \times \text{Fuel Cost}))}{\text{Loss Factor}}$$

~~Where~~

- ~~i. Profit Margin is the allowable profit margin expressed as a fraction;~~
- ~~ii. Variable O&M is the variable operating and maintenance costs for a 40 MW open cycle gas turbine generating station expressed in \$/MWh; and include, but is not limited to, start up related costs;~~
- ~~iii. Heat Rate is the ~~average of~~ based on a 40 MW open cycle gas turbine generating station's heat rate at minimum and maximum capacities capacity, expressed in GJ/MWh;~~

Clause 6.20.8

~~6.20.8.~~

- ~~(a) In conducting the review required by clause 6.20.6 the IMO may reassess the appropriateness of the value of the Maximum Shutdown Price.~~
- ~~(b) The value of the Maximum Shutdown Price is to be based on the IMO's estimate of the opportunity cost of lost revenue based on the likely values for MCAP.~~

- (c) ~~The factors considered in setting the Maximum Shutdown Price must be limited to:~~
- ~~i. average MCAP in Off-Peak Trading Intervals;~~
 - ~~ii. the expected duration of shut-downs;~~
 - ~~iii. minimum generation capacity of the unit most likely to be required to be shutdown;~~
 - ~~iv. average of that unit's heat rate at minimum and maximum capacities, expressed in GJ/MWh;~~
 - ~~v. variable fuel costs of that unit expressed in \$/GJ; and~~
 - ~~vi. variable operating and maintenance costs of that unit, expressed in \$/MWh.~~

Clause 10.5.1

10.5.1.

- (e) details of bid, offer and clearing price limits as approved by the Economic Regulation Authority including:
- i. the Maximum Reserve Capacity Price;
 - ii. the Maximum STEM Price;
 - iii. the Alternative Maximum STEM Price;
 - iv. the Minimum STEM Price; and
 - v. ~~the Maximum Shutdown Price;~~

Chapter 11

Energy Price Limits: The set of price limits comprising the Maximum STEM Price, the Alternative Maximum STEM Price, and the Minimum STEM Price ~~and the Maximum Shutdown Price.~~

Maximum Shutdown Price: ~~The maximum per MW price, determined under clause 6.20.5, that can be used in setting the level of compensation a Market Participant other than the Electricity Generation Corporation requires in response to being requested by System Management to shutdown a Scheduled Generator.~~

Appendix 1

(c) for a Scheduled Generator not registered to the Electricity Generation Corporation:

- i. a commitment ~~and decommitment~~ cost data comprising:
 - 1. a whole dollar amount representing the cost of committing the facility, where this amount must represent reasonable costs incurred in the typical start-up as justified by supporting evidence.
 - 2. ~~a whole dollar amount representing the cost of de-committing the facility, where this amount must not exceed the Maximum Shutdown Price multiplied by the minimum dispatchable loading level defined in b(xiv);~~

7. GENERAL INFORMATION ABOUT RULE CHANGE PROPOSALS

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

In order for the proposal to be progressed, the change proposal must explain how it will enable the Market Rules to better contribute to the achievement of the Wholesale Market Objectives. The market objectives 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
- (e) to encourage the taking of measures to manage the amount of electricity used and when it is used

A Rule Change Proposal can be processed using a Standard Rule Change Process or a Fast Track Rule Change Process. The standard process involves a combined 10 weeks public submission period. Under the shorter fast track process the IMO consults with Rule Participants who either advise the IMO that they wish to be consulted or the IMO considers have an interest in the change.