

# Decision on Energy Price Limits

Submitted by the Independent Market Operator

24 October 2007

Economic Regulation Authority  
 WESTERN AUSTRALIA

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## DECISION

- 1 The Authority approves the revised value for the Maximum STEM Price of \$206/MWh pursuant to clause 2.26 of the Wholesale Electricity Market Rules (Market Rules). In accordance with clause 6.20.11 of the Market Rules, the approved revised value for the Maximum STEM Price will apply with effect from the time specified in a notice to be published on the IMO's web site.
- 2 The Authority approves the revised value for the Alternative Maximum STEM Price of \$498/MWh pursuant to clause 2.26 of the Market Rules. In accordance with clause 6.20.11 of the Market Rules, the approved revised value for the Alternative Maximum STEM Price will apply with effect from the time specified in a notice to be published on the IMO's web site.

## INTRODUCTION AND OVERVIEW

### Background

- 3 The Market Rules require the IMO to annually review the appropriateness of the value of the Energy Price Limits. In conducting the review, the IMO may propose revised values for the Maximum STEM Price and the Alternative Maximum STEM Price, and may re-assess the appropriateness of the value of the Maximum Shutdown Price.
- 4 In conducting its review, the IMO is required to prepare a draft report describing how it arrived at a proposed revised value of an Energy Price Limit. The IMO is required to publish the Draft Report and to request submissions. After considering the submissions on the Draft Report, the IMO must propose a final revised value for any proposed change to an Energy Price Limit and must submit those values and its Final Report, including submissions received on the Draft Report, to the Authority for approval.
- 5 The Market Rules require the Authority to review the Final Report provided by the IMO, including all submissions received on the Draft Report, and to make a decision as to whether or not to approve any proposed change to an Energy Price Limit.
- 6 In making its decision as to whether or not to approve any proposed change to an Energy Price Limit, the Authority must consider:
  - whether the proposed revised value reasonably reflects the application of the method and guiding principles for calculating the Energy Price Limits, as set out in the Market Rules; and
  - whether the IMO has carried out an adequate public consultation process.

### The IMO's process

- 7 The IMO engaged McLennan Magasanik Associates (MMA) to assist with reviewing the requirements and the prescribed methodology of the Market Rules, and revising the Energy Price Limits by conducting an analysis of the relevant costs. MMA

provided the IMO with a Final Report on 28 August 2007, which was published on the IMO's web site.

- 8 The IMO published on its web site a Draft Report on its review of the energy price limits on 29 August 2007, inviting submissions by 10 October 2007. Submissions were received from four parties: Alinta Sales, Synergy, Landfill Gas and Power, and Griffin Energy. Prior to the due date for submissions, on 21 September 2007, the IMO held a workshop for interested parties, dealing with the review of the energy price limits.
- 9 MMA provided the IMO with a Second Final Report, responding to submissions from interested parties, on 16 October 2007.
- 10 The IMO provided the Authority with its Final Report on its review of the Energy Price Limits on 17 October 2007.

## REASONS

- 11 Clause 2.26.1 of the Market Rules states:

Where the IMO has proposed a revised value for the Maximum Reserve Capacity Price in accordance with clause 4.16 or a change in the value of one or more Energy Price Limits in accordance with clause 6.20, the Economic Regulation Authority must:

- (a) review the report provided by the IMO, including all submissions received by the IMO in preparation of the report;
  - (b) make a decision as to whether or not to approve the revised value for the Maximum Reserve Capacity Price or any value comprising the Energy Price Limits;
  - (c) in making its decision, consider:
    - i. whether the proposed revised value for the Maximum Reserve Capacity Price or Energy Price Limit proposed by the IMO reasonably reflects the application of the method and guiding principles described in clauses 4.16 or 6.20 (as applicable);
    - ii. whether the IMO has carried out an adequate public consultation process; and
  - (d) notify the IMO as to whether or not it has approved the revised value.
- 12 The Authority has reviewed IMO's Draft Report, all submissions from interested parties, MMA's Second Final Report to the IMO, and the IMO's Final Report. The Authority has also been provided with and has reviewed a spreadsheet setting out MMA's methodology for calculating the Energy Price Limits.
  - 13 On the basis of this information, the Authority is satisfied that:
    - 1) the proposed revised Energy Price Limits set out in the IMO's Final Report reasonably reflect the application of the method and guiding principles for calculating the Energy Price Limits; and
    - 2) that the IMO has carried out an adequate public consultation process.

## Methodology for calculating Energy Price Limits

- 14 Clause 6.20.7(b) of the Market Rules requires the IMO to calculate the Maximum STEM Price or the Alternative Maximum STEM Price using the following methodology:

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

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;
- iii. Heat Rate is the average of a 40 MW open cycle gas turbine generating station's heat rate at minimum and maximum capacities, expressed in GJ/MWh;
- iv. Fuel Cost is the unit fixed and variable fuel cost for a 40 MW open cycle gas turbine generating station expressed in \$/GJ; and
- v. Loss Factor is the marginal loss factor for the generator relative to the Reference Node.

Where the IMO must determine appropriate values for the factors described in paragraphs (i) to (v) as applicable to the Maximum STEM Price and Alternative Maximum STEM Price.

- 15 The Authority considers that the proposed revised Energy Price Limits reasonably reflect the application of this methodology. In particular, the Authority notes:

- The IMO, on the basis of advice from MMA, has determined values for each of Profit Margin, Variable O&M, Heat Rate, Fuel Cost and Loss Factor. The values for Variable O&M, Heat Rate and Fuel Cost are set out in Section 4.4 of the IMO's Final Report, and discussed in more detail in Section 3 of MMA's Second Final Report. The value for Profit Margin is set out in Section 4.3 of the IMO's Final Report, and discussed in more detail in Section 3 of MMA's Second Final Report. The IMO has also informed the Authority of the values of the Loss Factor, but has not included these in its Final Report for reasons of confidentiality. The Authority notes that the values for Variable O&M and Fuel Cost were determined as a range, but considers that this approach is consistent with the method and guiding principles described in Clause 6.20.7(b) of the Market Rules.
- The proposed revised Energy Price Limits set out in the IMO's Final Report are based on a probabilistic approach undertaken by MMA. The Authority has reviewed the calculations upon which this probabilistic approach is based and is satisfied that the approach is consistent with the method and guiding principles described in the Market Rules. Specifically, the Authority notes that the calculations make use of an equation consistent with the equation set out in clause 6.20.7(b).
- The proposed revised Energy Price Limits include an explicit allowance for start-up costs. The Authority is satisfied that start-up costs are a component of Variable O&M costs, and that their inclusion in the Energy Price Limits is consistent with the method and guiding principles described in clause 6.20.7(b).

## Public Consultation Process

- 16 The Authority is satisfied that the IMO has carried out an adequate public consultation process.
- 17 The IMO prepared a Draft Report describing how it arrived at the proposed revised values of the Maximum STEM Price and the Alternative Maximum STEM Price, and published both its Draft Report, and the Final Report prepared by MMA, on its web site. The IMO invited submissions from interested parties within six weeks of the date of publication of the Draft Report.
- 18 The Authority is satisfied that the IMO has considered the submissions from interested parties. The submissions from interested parties are addressed in Section 4 of MMA's Second Final Report to the IMO, and Section 6 of the IMO's Final Report.
- 19 The Authority has reviewed the submissions from interested parties, and notes that, in general, interested parties were supportive of the proposal to increase the Energy Price Limits, and were in broad agreement with the methodology and assumptions used by MMA.
- 20 Concerns were raised in some submissions that the proposed revised Energy Price Limits may not provide full cost recovery to some plant in some circumstances. MMA addressed these concerns in its Second Final Report to the IMO, and concludes that while high cost plant may face costs in excess of the proposed revised price caps in some circumstances, any such losses would be outweighed by more profitable operation in more favourable circumstances. The Authority also notes that the significant proposed increase in the profit margin is intended to ensure that the proposed revised Energy Price Limits are greater than actual costs with a probability of 80 per cent.
- 21 Therefore, the Authority considers that the IMO has appropriately considered and responded to submissions from interested parties. Accordingly, for the reasons above, the Authority considers that the IMO has carried out an adequate public consultation process.