



**Draft Rule Change Report**  
**Title: Capacity Credits for Solar**  
**Facilities**

Ref: RC\_2008\_31  
Standard Rule Change Process

Date: 20 February 2009

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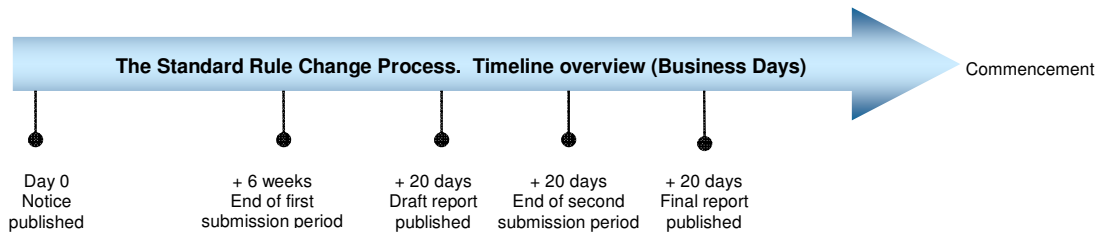
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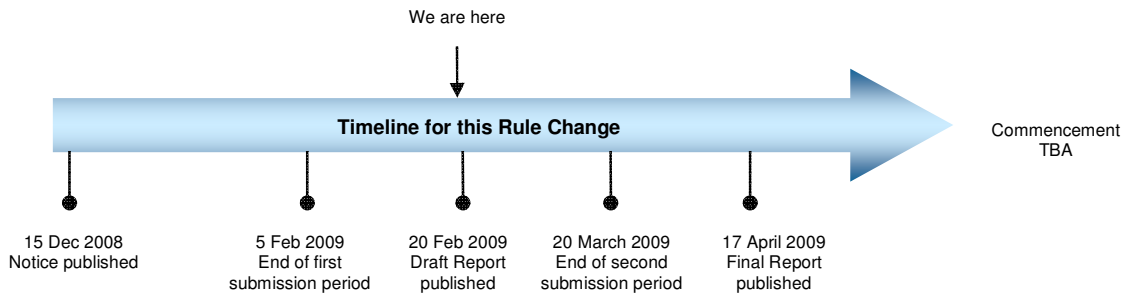
## 1. INTRODUCTION

On 15 December 2008 Synergy submitted a Rule Change Proposal regarding changes to clauses 4.11.2, 4.11.3A, and 4.11.3B of the Wholesale Electricity Market Rules (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:



The key dates in processing this Rule Change Proposal are:



Based on the IMO's assessment of the Rule Change Proposal against the Market Objectives, the practicality and cost of implementing the proposal, the views of the Market Advisory Committee (MAC) and the submissions received during the first submission period, the IMO's draft decision is to accept the Rule Change Proposal in the form outlined in section 7 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.

## 2. CALL FOR SECOND ROUND SUBMISSIONS

The IMO invites Market Participants to make submissions on 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 Monday 20 March 2009.

The IMO prefers to receive submissions by email to [marketadmin@imowa.com.au](mailto: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](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 and System Capacity  
PO Box 7096  
Cloisters Square, PERTH, WA 6850  
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### 3. THE RULE CHANGE PROPOSAL

#### 3.1 *Submission Details*

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<b>Date submitted:</b>	15 December 2008
<b>Urgency:</b>	Medium
<b>Change Proposal title:</b>	Capacity Credits for Solar Facilities

#### 3.2 *Details of the Proposal*

Synergy submitted that Market Participants may currently nominate to have the Certified Reserve Capacity of an Intermittent Generator assessed under the methodology outlined under clause 4.11.2(b) of the Rules. This requires the IMO to utilise the calculation process outlined in clause 4.11.3A of the Rules to determine the “Relevant Level” for this capacity certification.

According to Synergy’s submission, clause 4.11.3A uses the average output of the Facility to determine the Certified Reserve Capacity of an Intermittent Generator. This clause replaced an earlier provision of the Market Rules (clause 4.11.3) that determined the Relevant Level by considering the capacity available with 90% confidence. The Rules were amended in 2005 to remove clause 4.11.3 following the insertion of clause 4.11.3A.

Synergy argued that the averaging approach under the current certification process for Intermittent Generators acts to reduce the amount of Certified Reserve Capacity that would be afforded to solar power station facilities below that available during peak demand. It may therefore act as a potential disincentive to the establishment of such Facilities within the South West interconnected system.

Synergy considered that the arrangements under the previous clause 4.11.3 would be more appropriate for the application of the certification process to solar power station facilities that are eligible for certification under the Rules. This alternate certification mechanism would more closely approximate the capacity of the facility that will be available during periods of peak system demand, given that the electricity load within the SWIS is largely temperature dependent.

Synergy proposed that the current methodology be changed to ensure that the current capacity certification process does not discriminate against solar powered facilities.

#### 3.3 *The Proposal and the Wholesale Market Objectives*

Synergy submitted that advancing the Rule Change Proposal would support the Wholesale Market Objectives, most notably objectives (b) - facilitating efficient entry of new competitors, and (c) - avoiding discrimination 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.

### **3.4 Amending Rules proposed by Synergy**

The amendments to the Market Rules proposed by Synergy are outlined below (added text, ~~deleted text~~):

4.11.2. Where an applicant nominates under clause 4.10.1(i) to have the IMO use the methodology described in clause 4.11.2(b) to apply to a Scheduled Generator or a Non-Scheduled Generator, the IMO:

- (a) may reject the nomination if the IMO reasonably believes that the capacity of the Facility has permanently declined, or is anticipated to permanently decline prior to or during the Reserve Capacity Cycle to which the Certified Reserve Capacity relates. If the IMO rejects such a nomination it must process the application as it would if no nomination to use the method described in clause 4.11.2(b) had been made;
- (b) if it has not rejected the nomination under paragraph (a), must assign a quantity of Certified Reserve Capacity to the relevant Facility for the Reserve Capacity Cycle equal to the Relevant Level determined by the IMO in accordance with either clause 4.11.3A or clause 4.11.3B (as elected by the applicant) but subject to clauses 4.11.1(b), 4.11.1(c), 4.11.1(f), 4.11.1(g), 4.11.1(h) and 4.11.1(i).

4.11.3. [Blank]

4.11.3A. Where an applicant elects under clause 4.11.2(b) to have the IMO determine the Relevant Level in respect of a Facility at a point in time under this clause ~~is determined by the IMO~~ will following these steps:

- (a) take all the Trading Intervals that fell within the last three years, up to, and including, the last Hot Season;
- (b) determine the amount of electricity (in MWh) sent out by the Facility in accordance with metered data submissions received by the IMO in accordance with clause 8.4 during these Trading Intervals;
- (c) If the Generator has not entered service, or if it entered service during the period referred to in step (a), estimate the amount of electricity (in MWh) that would have been sent out by the Facility,

had it been in service, for all Trading Intervals occurring during the period referred to in (a) which are prior to it entering service;

- (d) set the Relevant Level as double the sum of the quantities determined in (b) and (c) divided by 52,560.

4.11.3B. Where an applicant elects under clause 4.11.2(b) to have the IMO determine the Relevant Level in respect of a Facility at a point in time under this clause the IMO will follow these steps:

- (a) take all the Trading Intervals that fell within the last full Hot Season;
- (b) identify the 250 Trading Intervals from those referred to in step (a) during which the demand for electricity on the SWIS is highest, where demand refers to total demand, net of embedded generation;
- (c) remove any Trading Intervals from those identified in step (b) during which System Management instructed the Facility to reduce its electricity sent out;
- (d) determine the level of electricity sent out by the Facility during each of those remaining Trading Intervals (ignoring Losses), in accordance with metered data submissions received by the IMO for that Facility in accordance with clause 8.4;
- (e) rank the levels determined under step (d) from highest to lowest; and
- (f) set the Relevant Level as the lowest 10% percentile level of the ranking in step (e).

### **3.5 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 the Rule Change Notice on 18 December 2008.

## 4. FIRST SUBMISSION PERIOD

The first submission period for this Rule Change Proposal was between 18 December 2008 and 5 February 2009.

### 4.1 *Submissions received*

The IMO received two submissions on the Rule Change Proposal, from Alinta Sales (Alinta) and Landfill Gas and Power (LGP).

The details of the submissions received during the first submission period and the outcomes from any discussions of the proposal at public forums and workshops are summarised below. The full text of the public submissions are available on the IMO website.

#### 4.1.1 *Submission from Alinta*

Alinta submits that while the Rule Change Proposal has intuitive appeal, it notes that the proposed new rule would be available to all intermittent facilities, not just solar facilities.

Further, Alinta notes that it has not been examined whether or not the proposal would, as stated, result in capacity certification for solar facilities being set at levels that more closely approximate the capacity that would be available from those facilities during periods of peak system demand.

Consequently, Alinta considers that the proposal should not be approved as currently proposed. Instead Alinta proposes that:

- The rules should be amended to apply only to intermittent solar facilities; and
- The IMO should undertake a technical study to assist it and Market Participants in assessing whether the amendments proposed for the calculation of Certified Reserve Capacity for solar facilities is consistent with the Market Objectives and should therefore be approved.

Alinta concludes that no evidence has been provided to allow an assessment to be made as to whether the proposal would amend the Market Rules in a manner that would better facilitate the Wholesale Market Objectives.

#### 4.1.2 *Submission from Landfill Gas and Power (LGP)*

LGP supports the proposed Rule Change Proposal on the grounds that it removes an existing inequity impeding solar generation in a manner that properly and rationally recognises its contribution to system capacity. This is without diminishing other facilities and technologies.

LGP also supports Synergy's contention that the proposal supports market objectives (b) and (c). In particular, LGP submits that the proposal removes an inequity whereby solar generation would otherwise be assigned Certified Reserve Capacity and potentially allocated capacity credits significantly below its true contribution, without diminishing other facilities or technologies. LGP perceives the Rule Change Proposal to be an essential upgrade of the Market Rules to facilitate utilization of Western Australia's



abundant solar resource and thereby enhanced participation in the revised federal Mandatory Renewable Energy Target.

#### **4.2 Public Forums and Workshops**

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

#### **4.3 Additional amendments**

While assessing the submissions received on the Rule Change Proposal the IMO identified additional amendments to the proposed Amending Rules. These are:

- An amendment to sub-clause 4.10.1(i) to place an obligation on the applicant to elect the process outlined in clause 4.11.3A or the new clause 4.11.3B;
- clarifying the text in clause 4.11.2, without changing the meaning of the clause;
- the addition of the reference to new clause 4.11.3B in clause 4.11.1(d); and
- replacing the new word “will” with “must” in both 4.11.3A and 4.11.3B with regards to the IMO’s obligations.

The wording of the relevant Amending Rules is presented in section 7 of this Report.

## 5. THE IMO'S ASSESSMENT

In preparing this Draft Rule Change Report, the IMO must assess the Rule Change Proposal in light of clauses 2.4.2 and 2.4.3 of the Market Rules. This is outlined in the following sections.

### 5.1 Wholesale Market Objectives

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	b, c
Consistent with objective	a, d, e
Inconsistent with objective	

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

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

The proposed rule change supports this market objective by promoting competition as it will help solar facilities, as well as other intermittent generators, to have their capacity certified using the method which more closely reflects their mode of operation, reducing the economic barriers to entry.

- (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;*

The proposed rule change supports this market objective by allowing Certified Reserve Capacity and Capacity Credits for renewable energy sources to be set at a more realistic value, in particular solar facilities, avoiding a potential discrimination in the current rules against this greenhouse gas reducing technology.

The IMO considers the proposal to be consistent with the remaining Wholesale Market Objectives.

### 5.2 Practicality and Cost of Implementation

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 require IT system changes. It has been estimated that the associated changes to Wholesale Electricity Market Systems operated by the IMO will cost approximately AUD \$65,000.

The IMO has found the identified costs to be acceptable as the change will help to promote greenhouse gas reducing technology into the SWIS. No other costs have been identified in relation to the implementation of the proposed changes.

### **5.3 Views expressed in submissions**

In accordance with Clause 2.4.3(c) of the Market Rules, in deciding whether or not to make Amending Rules, the IMO must have regard to the views expressed in submissions on the Rule Change Proposal.

Alinta submitted that the proposal should not be approved as currently proposed. Alinta proposes that the rules be amended to apply only to intermittent solar facilities and that the IMO should undertake a technical study to assist it and Market Participants in assessing whether the amendments proposed for the calculation of Certified Reserve Capacity for solar facilities is consistent with the Market Objectives and should therefore be approved.

In response to Alinta's point that the rules should only apply for solar facilities, the IMO notes that proposing such an amendment may be detrimental to the achievement of market objective (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*. Amending the proposal as suggested by Alinta would treat solar facilities differently from other intermittent generators, which is against the intent of this market objective.

Regarding Alinta's second point, the IMO notes that the Office of Energy has commissioned Econnect to conduct a study titled "Review of the Treatment of Intermittent Generation in the Capacity Market". This is being completed as part of the Renewable Energy Generation Working Group. The review includes a technical assessment similar to that requested by Alinta in its submission.

The IMO understands that the draft report from Econnect is expected by the end of February 2009. The IMO will make it available on its website. Interested parties will assess the report before making submissions during the second submission period for this Rule Change Proposal. The results from the study will be taken into consideration in the Final Rule Change Report for this proposal.

### **5.4 Market Advisory Committee**

In accordance with Clause 2.4.3(d) of the Market Rules, in deciding whether or not to make Amending Rules, the IMO must have regard to the views expressed by the Market Advisory Committee (MAC), where MAC met to consider the Rule Change Proposal.

MAC first discussed the proposed rule change at its meeting on 10 December 2008. At the meeting, Synergy advised that the Rule Change Proposal would lay the groundwork

for the MAC appointed Renewable Energy Generation Working Group, chaired by the Office of Energy.

The IMO queried the robustness of the prediction methods involved in calculating renewable generation output, while one MAC member raised the point that solar power is an excellent source of renewable energy in summer but this is not necessarily the case throughout the year.

In conclusion, MAC agreed that the proposed rule change should be progressed by Synergy.

## 6. THE IMO'S DRAFT DECISION

The IMO's draft decision is to accept the amendments to clauses 4.11.3A and 4.11.3B of the Wholesale Electricity Market Rules as proposed in Synergy's Rule Change Proposal and to implement the amendments to clauses 4.10.1, 4.11.1, 4.11.2, and 4.11.3 as proposed by the IMO in this Draft Rule Change Report.

### 6.1 *Reasons for the decision*

The IMO has made its decision on the following basis:

- The Amending Rules:
  - Will allow the Market Rules to better address the Wholesale Market Objectives (b) and (c);
  - Are consistent with the remaining Wholesale Market Objectives; and
  - Will promote the introduction of greenhouse gas reducing technologies into the South West interconnected system.
- The identified costs associated with implementation of the Rule Change Proposal are acceptable, as the adverse outcome with the current Market Rules has been estimated to be \$65,000.

Additional detail outlining the analysis behind the IMO's reasons is outlined in section 5 of this Draft Rule Change Report.

The wording of the relevant Amending Rules is presented in section 7 of this Report.

## 7. PROPOSED AMENDING RULES

The IMO proposes to implement the following amendments to the Market Rules (added text, ~~deleted text~~):

- 4.10.1. The information to be submitted with an application for certification of Reserve Capacity must pertain to the Reserve Capacity Cycle to which the certification relates and must include:
- (a) the identity of the Facility;
  - ...
  - (i) whether, in assigning the Certified Reserve Capacity or Conditional Certified Reserve Capacity to apply to a Scheduled Generator or a Non-Scheduled Generator, the applicant wishes to nominate the use of the methodology described in clause 4.11.2(b), in place of that described in clause 4.11.1(a), and if so whether the applicant elects the process in clause 4.11.3A or clause 4.11.3B ~~in assigning the Certified Reserve Capacity or Conditional Certified Reserve Capacity to apply to a Scheduled Generator or a Non-Scheduled Generator;~~ and
  - (j) whether the Facility will be subject to a Network Control Service contract.
- 4.11.1 Subject to clause 4.11.7, the IMO must apply to following principles in assigning a quantity of Certified Reserve Capacity to a Facility for the Reserve Capacity Cycle to which the application relates:
- (a) ...
  - ...
  - (d) the IMO must assign Certified Reserve Capacity for Intermittent Generators that are already operating equal to the Relevant Level determined in accordance with clause 4.11.3A or 4.11.3B but subject to (b), (c), (f), (g), (h) and (i).
- 4.11.2. Where an applicant nominates under clause 4.10.1(i) to have the IMO use the methodology described in clause 4.11.2(b) ~~to apply to a Scheduled Generator or a Non-Scheduled Generator,~~ the IMO:
- (a) may reject the nomination if the IMO reasonably believes that the capacity of the Facility has permanently declined, or is anticipated to permanently decline, prior to or during the Reserve Capacity Cycle to which the Certified Reserve Capacity relates. If the IMO rejects the nomination it must ~~process the application as it would if no nomination to use the method described in clause 4.11.2(b) had~~

~~been made~~ use the methodology in clause 4.11.1(a) to process the application;

- (c) must, if it has not rejected the nomination under paragraph (a), ~~must~~ assign a quantity of Certified Reserve Capacity to the relevant Facility for the Reserve Capacity Cycle equal to the Relevant Level. ~~determined in accordance with clause 4.11.3A but subject to clauses. The IMO will determine the Relevant Level under either clause 4.11.3A or clause 4.11.3B (as elected by the applicant in its nomination) but in either case the determination will be subject to the provisions of clauses 4.11.1(b), 4.11.1(c), 4.11.1(f), 4.11.1(g), 4.11.1(h) and 4.11.1(i).~~

4.11.3. [Blank]

4.11.3A. Where an applicant elects under clause 4.11.2(b) to have the IMO determine the Relevant Level in respect of a Facility at a point in time under this clause ~~is determined by the IMO~~ must following these steps:

- (a) take all the Trading Intervals that fell within the last three years, up to, and including, the last Hot Season;
- (b) determine the amount of electricity (in MWh) sent out by the Facility in accordance with metered data submissions received by the IMO in accordance with clause 8.4 during these Trading Intervals;
- (c) If the Generator has not entered service, or if it entered service during the period referred to in step (a), estimate the amount of electricity (in MWh) that would have been sent out by the Facility, had it been in service, for all Trading Intervals occurring during the period referred to in (a) which are prior to it entering service;
- (e) set the Relevant Level as double the sum of the quantities determined in (b) and (c) divided by 52,560.

4.11.3B. Where an applicant elects under clause 4.11.2(b) to have the IMO determine the Relevant Level in respect of a Facility at a point in time under this clause the IMO must follow these steps:

- (a) take all the Trading Intervals that fell within the last full Hot Season;

- (b) identify the 250 Trading Intervals from those referred to in step (a) during which the demand for electricity on the SWIS is highest, where demand refers to total demand, net of embedded generation;
- (c) remove any Trading Intervals from those identified in step (b) during which System Management instructed the Facility to reduce its electricity sent out;
- (d) determine the level of electricity sent out by the Facility during each of those remaining Trading Intervals (ignoring Losses), in accordance with metered data submissions received by the IMO for that Facility in accordance with clause 8.4;
- (e) rank the levels determined under step (d) from highest to lowest; and
- (f) set the Relevant Level as the lowest 10% percentile level of the ranking in step (e).



## 8. 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.