
Agenda item 5e:

Wholesale Electricity Market Pre Market Rule Change Discussion Paper

Submitted by

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Urgency:	Medium
Change Proposal title:	Treatment of New Small Generators
Market Rule(s) affected:	4.28

Introduction

This Pre Market Rule Change Discussion Paper can be posted, faxed or emailed to:

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The discussion paper should 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:

The timing of the Reserve Capacity Mechanism (RCM) is primarily designed around the delivery of large open cycle gas turbine peaking units for delivery of capacity to the South West interconnected system (SWIS). This is based on the assumption that delivery and installation of the turbine and electrical components, and the associated civil works will take around two years from the Wholesale Electricity Market project approval point in the RCM.

Recent changes to the Wholesale Electricity Market Rules (Market Rules) have allowed projects with longer lead times (typically base load coal fired generation) to receive certainty when developing projects¹ via 'earlier' certification than the nominal 2 years so as to grant certification further out and avoid the commitment of capital before certification is granted.

Section 4.28B (Treatment of New Small Generators) of the Market Rules partly covers the small end of the generation spectrum by allowing developers of Non Scheduled Generators below 1MW nameplate to enter the market in timeframes less than the nominal two-year period. In doing so, projects entering the market under this mechanism take all development and delivery risk and are only assigned Capacity Credits when the project is operational.

However, section 4.28B of the Market Rules limits project proposals to Non Scheduled Generators that:

- have commenced operation;
- have a nameplate capacity not exceeding 1MW;
- have not previously held Capacity Credits for past Reserve Capacity Cycles and do not hold Capacity Credits for the Reserve Capacity Cycle for which Capacity Credits are sought; and
- have not been provided an opportunity to apply for certification of Reserve Capacity for the Facility for which the Capacity Credits are sought since the Facility became a Registered Facility.

It is understood that at the time these rules were introduced, the only small generators operating in the market were small land fill gas units which are classified as intermittent and are therefore non-scheduled. However, no generators have entered the market under this mechanism since it was introduced over 2 years ago. This is partly due to the fact that sub-1MW projects are relatively expensive on a per unit basis because project overheads are largely independent of facility size and network and connection charges contain large fixed components. Further, the lead times of such projects are generally so short that delays of over a year are built into the project schedule in order to avoid committing capital that will not earn a return. This also complicates the raising of finance as it makes the project

¹ For additional detail see: [RC 2009 10](#): Early Certified Reserve Capacity

unnecessarily futuristic. As a further impediment to entering into the market, a network access agreement is required as a condition of certification and as a result network charges can be incurred as much as 2 years prior to commissioning and the earning of income.

Section 4.28B of the Market Rules does not cover small peaking units which can be developed quickly and which can be used to meet peaking load (such as solar). The current market entry pathway does not facilitate these projects because:

- Equipment suppliers for this type of plant operate on much shorter delivery timeframes than the two years of the normal RCM,
 - Subsequently it is almost impossible to receive the certainty of delivery required by the IMO for certification purposes.
- Banks find it difficult to provide lending arrangements to small projects with such a long cash-flow delivery point (two years before cash flows can be guaranteed through the RCM).

Compounding this, non-scheduled peaking plant, which is not intermittent and sometimes has high load factors, may bid into the market, but cannot be relied on to deliver its capacity at all times. Whereas Intermittent Generation is certified according to the Relevant Level defined in 4.11.3A (the three year average capacity factor) and are not eligible for certification under clause 4.28B of the Market Rules.

Distributed (embedded) generation, such as small scheduled generators connected to the distribution system, can also reduce network losses and alleviate network feeder congestion. They can also be connected very quickly in response to contingencies, potentially alleviating the need to call for Supplementary Reserve Capacity in the event of unexpected capacity shortfalls.

Whereas the current rules reference the nameplate capacity of the generating unit as setting the limit on eligibility, it is further proposed that the nameplate capacity be increased to 10MW subject to the Capacity Credits being limited to 5.0MW. While this would have no material impact on the power system and the market, beyond upgrading the existing 1MW limit to 5MW, it would permit 'oversizing' of the units for future use, with the unused capacity to be subsequently certified in the standard manner.

This proposal aims to change the Treatment of New Small Generators rules in the following way:

1. Allow small scheduled generation plants to be covered; and
2. Increase the maximum size of generation plants covered from 1 MW to 5 MW in declared sent out capacity.

2) Explain the reason for the degree of urgency:

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 ~~strikethrough~~ where words are deleted and underline words added)

4.28B.1. This section 4.28B is applicable to Registered Facilities to which the following conditions apply:

- (a) the Facility is a Non-Scheduled Generator or a Scheduled Generator and has commenced operation;
- (b) the Facility has a nameplate capacity not exceeding ± 10 MW, subject to clause 4.28B.1(e);
- (c) the Facility has not previously held Capacity Credits for past Reserve Capacity Cycles and does not hold Capacity Credits for the Reserve Capacity Cycle for which Capacity Credits are sought; ~~and~~
- (d) there has been no opportunity for the Market Participant to which the Facility is registered to apply for certification of Reserve Capacity for the Facility for the Reserve Capacity Cycle for which Capacity Credits are sought in accordance with clause 4.9 since the date upon which the Facility became a Registered Facility; and
- (e) the Capacity Credits must not exceed 5.0MW, even if the nameplate capacity exceeds this amount pursuant to clause 4.28B.1 (b).

4.28B.3. An application made under clause 4.28B.2 must include all the information required by clause 4.10 for a Non-Scheduled Generator or a Scheduled Generator, with the modification that the decommissioning date required by clause 4.10.1(d) is only required if the Facility will be decommissioned prior to the end date defined in clause 4.28B.6.

4.28B.6. If the IMO approves the granting of Capacity Credits to the Facility then the Capacity Credits and the Reserve Capacity Obligations associated with that Facility are to apply from the commencement of the Trading Day commencing on the start date until the end of the Trading Day ending on the end date where:

- (a) the start date is the next occurrence of the date 1 October after the date on which the IMO grants approval, ~~or if the IMO grants approval prior to Energy Market Commencement then the date of Energy Market Commencement~~; and
- (b) the end date is the earlier of:
 - i. the first date that Reserve Capacity Obligations could apply to the Facility where such Reserve Capacity Obligations relate to Capacity

- Credits secured in accordance with clause 4.20 at the earliest possible opportunity following the registration of the Facility;
- ii. the first date that Reserve Capacity Obligations actually apply to the Facility due to Capacity Credits secured in accordance with clause 4.20 prior to the registration of the Facility;
 - iii. the first instance of the date 1 October after the start date; and
 - iv. the decommissioning date of the Facility;

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;*

Greater diversity of generation plant on the SWIS would improve the reliability of supply and embedded generation (distribution connected) could alleviate network congestion and reduce loss factors. Generation could also be brought on line in time to assist with unexpected capacity shortfalls, thereby potentially avoiding the calling for Supplementary Reserve Capacity.

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

Allowing a wider diversity of participants and plant on the system would help promote competition among generators. This rule change would improve the ease with which small generation plant could enter the WEM.

The investment timeframes associated with small generation projects does not work within the normal RCM and create an impediment for Market Participants developing small generation projects.

- (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;*

This rule change would facilitate the development of renewable energy projects and distributed generation.

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

Benefits:

- This change will remove an impediment to investors and participants developing small generation plants. The Treatment of New Small Generators provisions allow participants to build scheduled generation plant and enter the market under the RCM while managing all of the development risk.

Costs:

- There may be some increased costs to IMO in processing additional applications.
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