Independent Market Operator

Wholesale Electricity Market
Rule Change Proposal Submission Form

RC_2010_25 Calculation of the Capacity Value of Intermittent Generation - Methodology 1 (IMO)

Submitted by

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Submission

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

Rule Change Proposal RC_2010_25 acts to apply a methodology to the calculation of Capacity Credits for Intermittent Generators that better reflects the contribution of renewable generators at times of high system demand. This in turn is expected to:

(i) Promote greater system security and reliability by providing certainty to System Management that the capacity available in the market can meet peak demand requirements; and

(ii) Remove a current source of discrimination between Scheduled Generators and Intermittent Generators by determining the level of certification of Intermittent Generators during peak demand periods.

Synergy's Principal Concern

Before addressing this proposed rule change specifically, Synergy wishes to comment on the factors driving investment in intermittent generation and on the continuing operational uncertainties and risks to investors that will remain unresolved if this rule change were implemented.

Synergy agrees with the IMO that the Australian Government's 20% Renewable Energy Target (**RET**) is the principal driver that will result in a continued increase in intermittent generation capacity in the South West Interconnected System (**SWIS**). Synergy does not, however, consider that the level of intermittent generation reserve capacity crediting will impact upon the volume or, to a lesser extent, the choice of Intermittent Generators that will be constructed in the SWIS. The future building of intermittent generation will be what it will be, as it is primarily driven by mandatory requirements and the need to attract an economically efficient mix of renewable capacities. This efficient mix is unlikely to be changed, in any significant way, from modifications to capacity crediting. That is, investment in intermittent generation will largely be caused by Federal requirements and not local market concerns - except to the extent that local investment is reduced due to significant penalties in comparison to the National Electricity Market (**NEM**). Griffin Energy representatives, to their credit, have made these points at the Market Advisory Committee (**MAC**) on several occasions and yet it appears that many have failed to appreciate these simple future forecast truths, believing that changes to capacity crediting of intermittent generation will resolve their operational problems.

In this regard, Synergy is less concerned about the approach adopted for capacity crediting Intermittent Generators but is more concerned that the market has still not progressed how it will manage the expected increase in intermittent generation, particularly wind, and ensure that the market investment signal is clear and not confused, exposing investors to cost and revenue uncertainty. Synergy is particularly concerned that the scope of work for the Renewable Energy Generation Working Group (**REG WG**) did not extend to addressing how to operationally manage an increased volume of intermittent generation; the likely costs this would produce; and how those costs would be allocated over Market Participants. Synergy holds that the future intensity of intermittent generation in the SWIS is largely externally predestined and that all the market can do is determine how it will operate these facilities to promote their economic value whilst maintaining reasonable system security. This critical discussion needs to continue and be resolved promptly, given that investment decisions for further intermittent generation will be made in 2011 using the current operational rules.

With the mandatory RET continuing to drive the expansion of Intermittent Generators in the SWIS, renewable energy investors currently have no clear signal how, in the future, the market will limit their production for system security purposes i.e. will it be achieved by capping the capacity (MW) of wind generation built (a constrained solution) or by curtailing energy production (a market pricing solution). Determining answers to these questions is now critical to minimise the regulatory risk for both existing facilities and those shortly to be decided upon.

Synergy's Comments on the Proposed Rule Change

Synergy does not perceive that market capacity exists for the sole purpose of meeting the system peak. Rather, capacity has the dual requirements, as defined under Market Rule 4.5.9, of meeting the peak demand and having an annual tolerance to limit loss of supply. The proposed rule change is based upon the view that capacity exists solely to meet the peak, failing to recognise that capacity also exists to minimise expected energy shortfalls. Synergy notes that consultants MMA utilised both provisions in their proposals for capacity crediting Intermittent Generators, recognising that Intermittent Generators provide a higher value than that resulting from a simple peak–time coincident assessment. Synergy applies a similar approach (based on a load duration curve analysis) in deciding optimal expansions of, or changes to, its energy portfolio, which reflects the reality that demand must be met and energy supplied throughout the year. The IMO's Rule Change Proposal is insufficient in this regard as it exclusively focuses on the peak and fails to recognise the full capacity value of wind based intermittent generation.

Synergy is concerned that the fleet-based nature of the Rule Change Proposal introduces uncontrolled investment risk given that a new facility, by its locational and technology choice, could deteriorate or improve the crediting of existing facilities through changes in the Capacity Credit value assigned to the fleet of renewable energy generators as a whole. At this juncture, Synergy states that this is an uncertain concern because of ignorance regarding how future investment would ultimately impact Capacity Credits assigned to existing facilities.

Synergy recognises that the Rule Change Proposal, based on load for scheduled generation, may promote diversity of facility location and improve the collective production response. However, the absolute production of renewable energy and RECs may be reduced in response to the diversity mechanism inherent in the fleet-based Capacity Credit approach and so, benefits become uncertain and the overall costs of bringing renewable energy into the SWIS is increased.

Regulatory Risk

A concern that Synergy has previously voiced at the MAC regarding this proposed rule change is that it introduces a perception of regulatory risk, not only to potential intermittent investors but to all market investors. For investment in the SWIS to continue, an economically efficient market needs to be maintained. Reducing the level of capacity crediting to wind production facilities announces that the market will not validate investments made under earlier arrangements. There is already a considerable amount of concern amongst investors that the market is becoming less predictable and as a result current commercial arrangements may not maintain their value into the future. To address this unease, MAC members have suggested grandfathering as an approach to removing the negative perception of regulatory risk,. Synergy's view is that allowing significant regulatory risk to be associated with the Wholesale Electricity Market (**WEM**) is unacceptable and will result in renewable energy investors demanding significantly higher risk premiums, leading to unnecessarily high costs being passed to customers. In this regard, Synergy notes that other markets have acknowledged the potential for such detrimental outcomes and have used grandfathering at times of significant rule change. A local example is the Australian Energy Market Commission (**AEMC**) rule determination concerning restrictions on intermittent generator dispatch, as detailed in their May 2008 final report[1], which introduced grandfathering to counter market concerns.

Synergy's Comments on the Current Approach to Capacity Crediting Intermittent Generation

In making the above comments, Synergy has concerns regarding the present formulation of capacity crediting for intermittent facilities. It is questionable whether the current practice of crediting based solely upon annual energy production satisfies all of the reliability criteria described in Market Rule 4.5.9, as described above, which is undoubtedly biased towards wind technology and against solar technology. It is understood why the current approach was adopted for the commencement of the market, but the approach is not sustainable, lacking the justification delivered via a value based method.

Although there is argument here to change the current capacity crediting formulation for intermittent facilities, Synergy would suggest that the IMO not expeditiously change the method of capacity crediting Intermittent Generators but instead waits until the completion of the Reserve Capacity Mechanism (**RCM**) review and after Synergy's above-mentioned concerns have been modelled and the market has had an opportunity to discuss the results. This adjournment is suggested on the assumption that the results of these two pieces of work may lead the market to seriously consider different solutions.

Conclusion

Synergy does not support this Rule Change Proposal for the following reasons:

- It does not address concerns of increased investment in intermittent generation or reduce the resulting impact that such investment will have upon system operation;
- It replaces the current arbitrary capacity crediting approach with another limited approach that still lacks complete recognition of the capacity value that the market derives from Intermittent Generators; and
- It unnecessarily introduces regulatory risk into the market.

Synergy's main concern is that the real issue of investment in intermittent generation and its impacts upon system operation and cost will not be addressed by the proposed rule change. Synergy considers it imperative that resolution of these issues is progressed as a priority so as to inform

[1] http://www.aemc.gov.au/Electricity/Rule-changes/Completed/Central-Dispatch-and-Integration-of-Wind-and-Other-Intermittent-Generation.html

investors of the potential significant extra costs and constraints facing Intermittent Generators as investment in renewable energy continues to increase.

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

Synergy believes that providing investors in intermittent generation projects with clear market investment signals will address a fundamental value that underwrites the market.

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.

Should this Rule Change Proposal be accepted, Synergy would not require any changes to IT or business systems, nor incur any organisational costs as a consequence of adopting the proposed change.

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

Should this Rule Change Proposal be accepted, Synergy would be able to implement this rule change immediately.