imo Independent Market Operator

Wholesale Electricity Market
Rule Change Proposal Submission Form

RC_2010_37 Calculation of the Capacity Value of Intermittent Generation - Methodology 2B (Griffin)

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_37 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 compared with the capacity factor based methodology of the current Market Rules.

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

The proposed rule change has been developed based upon modelling assessments undertaken by consultants MMA. The proposed methodology was created as a simplified version of MMA's original proposal (option 2A) given their initial recommendation was too tedious to maintain. Fortunately, this simplified methodology (option 2B) retains most of the benefits of the original proposal including greater consistency with the reliability criteria as given in Market Rule 4.5.9. In this regard, in Synergy's view, it is superior to the current method of capacity crediting Intermittent Generators which is based upon annual production not aligned to system peaks, and therefore better allocates performance across both wind and solar facilities.

There has been criticism that this simplified methodology has insufficient data to be considered reliable. In particular it has been pointed out that no 1-in-10 year peak demand data was used in its assessment. Synergy understands these comments, but differs in that it believes the data quality questions are overstated and are therefore insufficient in themselves to discount this approach being considered for use in the SWIS. Extra data will arrive with time and will improve the predictability of the method, but given its one-in-three year rolling structure makes it inherently stable, suggesting extra data will only tinker the results.

Synergy also notes that estimated capacity crediting values resulting from using the proposed method would approximate the values currently attributed to wind farms, although would be slightly lower. This methodology, if adopted, would therefore minimise any regulatory risk associated with existing wind farms changing the method of capacity crediting. In saying this, Synergy recognises that capacity crediting levels may change as a result of wind farm annual production and this may produce an even lower figure in future years. This is regrettable, though given 3 year averaging is used to determine the capacity level, it is considered an acceptable risk.

System Management has rightly expressed concern that the market may be paying too much for the capacity crediting of Intermittent Generators, wind in particular, and that any crediting above 20% may be considered too expensive. Synergy considers, given that the method used to determine the level of capacity crediting is based upon the Long Term Projected Assessment of System Adequacy (**LT PASA**) criteria in Market Rule 4.5.9, that the cost value equation inherent in the proposed methodology is balanced and that the resulting crediting value represents a fair value for performance.

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, mentioned 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 supports this Rule Change Proposal for the following reasons:

- The current approach for capacity crediting Intermittent Generators is arbitrary and the proposed methodology is more consistent with the criteria given in Market Rule 4.5.9; and
- This proposal minimises the impact of regulatory risk to 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 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.