



Government of
South Australia

RenewablesSA

Australian Energy Market Commission

Draft Rule Determination

National Electricity Amendment (Scale Efficient Network Extensions) Rule 2011

Green Grid Forum Response

The Green Grid Forum is responding to the opportunity to comment on the Australian Energy Market Commission's (AEMC) Draft Rule Determination: National Electricity Amendment (Scale Efficient Network Extensions) Rule 2011.

The Forum previously provided a submission on this matter. As the AEMC invited comment on each of the five identified Options, the comments of the Forum were limited to its reasons for preferring *Option 1*.

Now that the Commission has decided not to support any of these options, the comment from the Forum is directed at the more general proposition that all of the risks of a SENE should rest with market participants and investors with no residual risk applying to consumers.

AEMC has concluded that:

“On balance, despite the various risk management mechanisms proposed, the Commission remains concerned that the proposed Rule and the five options set out in the Options Paper continue to expose consumers to an unacceptable level of risk.”

In the absence of any quantification or definition of “unacceptable,” it is not possible to determine the level of risk that the Commission might consider to be acceptable.

This is not just semantics. The Commission's view suggests that the only risks consumers are being exposed to is being called upon to partly underwrite SENEs. *“The key advantage of this approach compared to the proposed Rule is that it does not compel anyone to bear the risk and cost of stranded assets.”* (Executive Summary, p ii).

The Forum contends that consumers are being presented with risks either with or without public underwriting of part of the SENE.

It is acknowledged that the AEMC recognises that the absence of SENEs may deprive consumers of the benefits of lower connection costs:

“The principle (sic) benefit in capturing scale economies is the lower connection costs for generators who connect to a SENE. Where lower connection costs lead to a reduction in total system costs, the Commission considers that it is likely that some benefits will be passed on to consumers.

However, it is uncertain whether any savings resulting from better coordinated, and hence more efficient, connections would be fully passed through to consumers. The proportion of any pass through will depend on a number of factors including whether generators connecting to a SENE are price takers (for example wind generators) or price setters (for example thermal generators), as well as the extent of competition in the market. Without a full analysis of each of these factors, it is difficult to establish the extent to which cost savings will be passed on to consumers in any particular case.” (pp 49-50).

The Commission seems to be concluding that the potential benefit to consumers cannot be established without considering the circumstances of each particular case. Yet it proposes a determination which will deter such cases from being developed. There can be little incentive for developing such proposals when the Commission has already determined that, as a general proposition, the risk to consumers to be “unacceptable” from all such cases where consumer underwriting is required.

The Green Grid Forum considers that the draft determination pre-judges the issue of acceptable and unacceptable risk without the benefit of quantification or qualification. Moreover, its conclusion that economies of scale offer the principal benefits to consumers over-simplifies the analysis of risk.

At present, analysis of the industry – its likely costs, operating requirements and rate of growth – is seriously compromised by modellers routinely omitting opportunity cost of powering large-scale wind farms developed in the areas most prospective for wind but which cannot be connected due to the absence of transmission facilities. The costs to the community of this risk come in two forms.

First, there is the cost of market failure preventing exploitation of the best wind resources.

Second, there is the risk of leaving consumers exposed to land use planning interventions which drive up wind farm costs.

In relation to the first of these risks, it is acknowledged that the conventional wisdom in the industry is that an incremental model of transmission augmentations is most likely to deliver the RET at least cost.

For instance a report from ROAM Consulting commissioned by the Clean Energy Council concludes that:

“A moderate approach that accepts some transmission congestion whilst responding to the limitations of the transmission network is likely to produce the highest wind capacity factors, and therefore minimise the amount of installed wind capacity required to meet the Renewable Energy target requirement of 41,000 GWh by 2020.”¹

This study and others like it overlook the practical realities of installing substantial amounts of wind within the existing transmission network.

The same report provides an implicit recognition of this point without any serious development of it.

“Highly concentrated wind development with substantial transmission augmentation to allow export of generation to the NEM does not appear to be the lowest cost way of meeting the RET. However, if highly concentrated wind development does occur (perhaps due to limitations or other factors not taken into account in this modelling), significant transmission augmentation is likely to be justified on a cost minimisation basis to allow efficient export of the renewable generation.”²

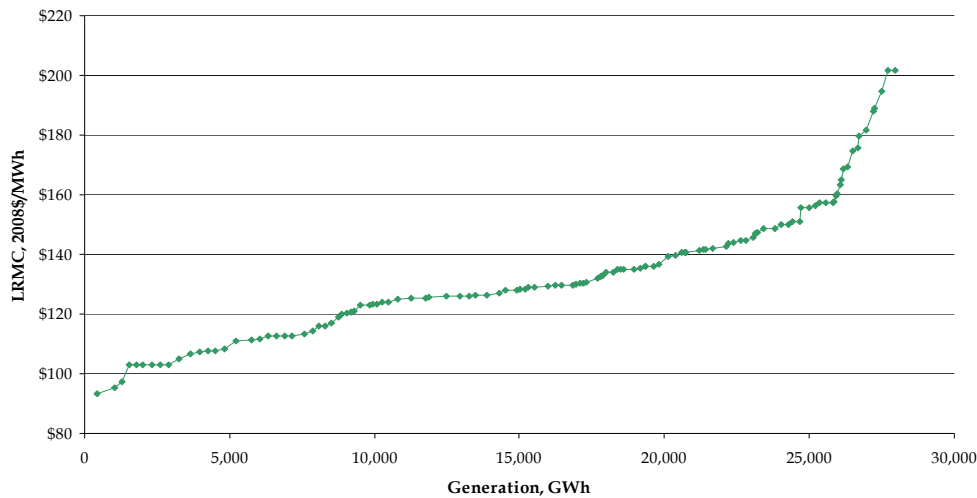
This conclusion makes the self-evident comment that highly concentrated wind is likely to require augmentation. It offers no comment on why highly concentrated wind might occur.

One possible scenario is that costs of installing wind generating capacity may rise as the amount of installed capacity increases. This outcome is illustrated in the following cost curve provided by McLennan Magasanik Associates (MMA).

¹ ROAM Consulting: Transmission Congestion and Renewable Generation, 4 November 2010 (p57)

² ROAM Consulting: Transmission Congestion and Renewable Generation, 4 November 2010 (p50)

Wind proposed to 2020



The MMA curve effectively represents the rising cost of wind as the best sites get taken up progressively. For these purposes, “best” can be defined as those with the lower LRMCs. This, in turn, is a function of access to wind and proximity to transmission and load. The practical effect of the AEMC determination is to oblige consumers to meeting inexorable increases in costs. The AEMC’s implicit assumption is that this represents a better outcome for consumers than facing the risk of asset stranding. This assumption is not proven and warrants quantitative analysis.

Recent events raise the prospect of the cost curve steepening further. As the amount of installed capacity grows, developers may find themselves becoming more constrained in terms of location and configuration of turbines.

Communities are generally accepting of wind farms. However, there are emerging indications of developers facing growing pressure for concessions to accommodate local sensitivities. The pressure will grow as a function of the amount of wind already installed in these communities. We are not aware of either the MMA cost curve or this phenomenon being taken into account in transmission and capacity studies.

This leads to the second consideration, the cost of land use planning interventions. The accommodations routinely made by developers in response to community sensitivities generally add incremental costs to projects. However, there are occasions on which these sensitivities translate into land use planning interventions which add step change to the economics of wind farms.

The most graphic and significant instance of such interventions is the decision of the Victorian Government to require a separation distance of at least two kilometres between homesteads and the nearest wind turbine. Two of the Green Grid Forum members have found that this halves the economic size of their projects in that State.

This decision has the capacity to seriously dampen market appetite for wind farms. The displaced investment will then have to find other spots on the network. This, in turn, will exacerbate the issues referred to previously of costs associated with the best sites being taken up and regulatory intervention through the land use planning system.

The effect of the AEMC decision is to remove the ability of consumers to underwrite SENEs and to thereby oblige those consumers to underwrite the diseconomies imposed by use of less optimal sites and by land use planning interventions.

This is more than just depriving consumers of the potential benefits of economies of scale. The Commission's determination effectively removes the prospect of opening up new provinces for wind. In doing that, it is concentrating wind farms into the existing network thereby ensuring that the diseconomies of concentrating wind farms into the existing network costs of the land use issues are maximised.

In this sense, the determination does not remove risks from consumers – it simply substitutes the risk to consumers of paying for asset stranding with the risks to consumers of paying for diseconomies generated from the existing system. The AEMC identifies one of these diseconomies as foregoing economies of scale but overlooks the other diseconomies associated with relying on progressively less economic siting and the growing costs of regulatory interventions.

The Forum believes the risks that the Commission is creating for consumers could prove greater than the risk of asset stranding that it seeks to avoid.

It could be argued that the framework copes with such imposts insofar as it encourages new provinces to be opened up for wind and for greater use to be made of other renewable technologies as the cost of wind approaches the levelised cost of solar and bio-energy. Transmission providers will therefore make their own assessment of the relative risks and adjust their investment plans accordingly.

This response is compromised by two considerations.

The first is the potential for market failure. The original form of the SENE implicitly recognised the potential for market failure resulting from developers with different timeframes, commercial considerations and financing strategies needing to act in concert to realise economies of scale (and, in the view of this submission, avoid the costs of declining prospectivity of sites and increasing land use planning interventions).

Having exposed consumers to one set of risks instead of another and without quantification of either, the draft determination goes on to propose a set of arrangements to make it even more difficult for SENE to compete against the incremental model by relying on a series of anti-competitive mechanisms for SENE investigation and construction.

The determination proposes that SENE studies need to be carried out by TNSPs. In establishing this monopoly arrangement, the TNSPs have no obligation to satisfy the commissioner of the study or any regulator on costs or quality of the outcome other than to include certain prescribed matters into the study. The AEMC also seems to have assumed that TNSPs have the capability to carry out these studies. That may be a reasonable assumption for the costs of construction but there are obviously limitations on the ability of TNSPs to compare SENE outcomes with the other alternatives when these alternatives do not represent core business for them.

Most importantly, the determination seems to assume that these studies will be carried out as stand alone exercise free from the broader context of the TNSPs overall business opportunities, constraints and strategies. This is unlikely to be the case, especially as the determination proposes to prevent the SENE from being a regulated asset, at least in its initial stages of operation.

If this anti-competitive approach is to remain, there is clearly a need for mechanisms to make TNSPs accountable for the cost, quality and objectivity of these studies. The AEMC is offering no redress for shortfalls in any of these areas apart from codifying certain considerations in the negotiation of the scope of study in the draft rule.

The same anti-competitive thinking is evident in the thinking is applied by the AEMC to the ownership and operation of TNSPs. The AEMC is proposing that "under the Rules, generally only a TNSP could own, operate and control a SENE once built." (pii) and that the rate of return on the assets will be the non-regulated rate.

The determination fails to address the fundamental question of why the AEMC considers that all market power be invested in TNSPs in this way. There may be a reason to prevent a consortium of companies from operating an asset built by them, at their commercial risk to meet their business opportunities. However, the AEMC does not consider there is a need to identify that reason.

The overall impact of these anti-competitive restrictions is to dampen further investor appetite for SENEs.

It is not possible to say with certainty that the AEMC's approach of making SENEs as difficult as practicable will deliver a lower cost outcome for meeting the RET. However, it is hard to see how it provides a superior outcome to one in which investors are able to compete with TNSPs on a commercial basis to manage the cost pressures emerging under the existing framework.

A handwritten signature in black ink, appearing to read 'T. O'Loughlin', written in a cursive style.

Tim O'Loughlin
Commissioner for Renewable Energy

For and on behalf of the Green Grid Forum

5 May 2011