grid australia
BACKBONE OF THE NEM

13 May 2010

Mr John Tamblyn
Chairman
Australian Energy Market Commission
Level 5, 201 Elizabeth Street
Sydney NSW 2000

Via website: www.aemc.gov.au

Dear John,

Scale Efficient Network Extensions Rule 2010

Grid Australia makes this submission in response to the Australian Energy Market Commission (AEMC) Consultation Paper in relation to the National Electricity Amendment (Scale Efficient Network Extensions) Rule 2010.

Grid Australia agrees with the AEMC's identification of potential hurdles facing investment in the transmission network to connect some new areas of generation under the current framework, and supports the AEMC's objectives in addressing this issue.

However, while the objectives of the SENE proposal are sound, its practical implementation (as outlined in the current draft Rule) is overly complex. Further consideration, exploration and discussion are necessary to refine the current proposal and ensure a workable, proportionate, and most importantly effective Rule change is implemented.

Grid Australia intends to undertake a case study to this end and considers it will be in a better position to provide useful feedback to the AEMC on the proposed Rule change once this study is completed. Grid Australia expects to provide the AEMC with feedback from this case study analysis by early July for its consideration prior to making a Draft determination in late July.

Grid Australia looks forward to working with the AEMC and stakeholders in further developing the Rule change proposal. If you require any further information, please do not hesitate to contact me on (08) 8404 7983.

Yours sincerely,

Rainer Korte

Rainer Korte
Chairman
Grid Australia Regulatory Managers Group

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Scale Efficient Network Extensions Rule 2010

Response to AEMC Consultation Paper

13 May 2010

Powerlink Queensland | TransGrid | ElectraNet electricity transmission | TRANSEND | SP AusNet A member of Singapore Power Group

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1. Introduction

KEY POINTS:

- Whilst connection arrangements for some new generation can be (and are being) successfully advanced under the existing arrangements, Grid Australia agrees with the AEMC's identification of potential hurdles facing investment in the transmission network to connect some new areas of generation under the current framework, and supports the AEMC's objectives in addressing this issue.
- However, while the objectives of the SENE proposal are sound, its practical implementation (as outlined in the current draft Rule) is overly complex. Further consideration, exploration and discussion are necessary to refine the current proposal and ensure a workable, proportionate, and most importantly effective Rule change is implemented.
- Grid Australia intends to undertake a case study to this end and considers it will be in a better position to provide useful feedback to the AEMC on the proposed Rule change on completion of this study. It is expected that this analysis will examine the practicality and efficacy of the draft Rules as they currently stand in achieving the objectives of the proposed Rule change.
- Grid Australia expects it could provide the AEMC with feedback from this case study analysis by early July for its consideration prior to making a Draft determination in late July.

Grid Australia makes this submission in response to the Australian Energy Market Commission (AEMC) Consultation Paper in relation to the National Electricity Amendment (Scale Efficient Network Extensions) Rule 2010.

Grid Australia notes that the proposal for Scale Efficient Network Extensions (SENEs) arose out of the AEMC's *Review of Energy Market Frameworks in Light of Climate Change Policies* ('Climate Change Review'). As part of that review, the AEMC identified that in extending the existing transmission network to connect potential new clusters of generation, the scale economies associated with transmission investment mean that, under the current arrangements, generators may face a 'first mover' hurdle in financing such extensions.

In addition, the capacity of such extensions may end up being less than is optimal from the perspective of the overall market, as the initial generators may not be willing or able to bear the financial costs and associated risk of building extensions which provide greater capacity than they themselves need. This issue is important in the context of the expanded Renewable Energy Target (RET) scheme, given that the

RET scheme is expected to drive investment in renewable generation, some of which may be at sites remote from the current transmission network.

Whilst connection arrangements for some new generation can be (and are being) successfully advanced under the existing arrangements, Grid Australia agrees with the AEMC's identification of potential hurdles facing investment in the transmission network to connect some new areas of generation under the current framework, and supports the AEMC's objectives in addressing this issue.

Grid Australia is also mindful of the need to ensure that such extensions of the transmission network occur, in order to facilitate meeting the 2020 RET target. However, Grid Australia considers that the current SENE proposal (as set out in detail in the AEMC's Final Report in its Climate Change Review, and again as part of the MCE's Rule change request) still requires further consideration, exploration, and discussion to identify the most appropriate and proportionate means of achieving these objectives.

Grid Australia therefore supports the open approach which the AEMC has taken in its Consultation Paper of revisiting the fundamental issues in relation to whether the introduction of the SENE framework is needed. This includes assessing whether there are other arrangements that may represent a more robust solution. Grid Australia considers that it is fundamentally important to ensure that changes to the Rules are made on a clear basis. In contrast, the current SENE proposal is highly complex, and may involve introduction of further complexity to address some issues raised in the MCE's Rule change request. As flagged by the AEMC in its Consultation Paper, the current model raises many important implementation issues.

The key points made in the remainder of this submission are:

- Grid Australia supports market-based arrangements for the development of extensions where possible and considers that these should not be inadvertently crowded out. Grid Australia therefore supports the AEMC considering further options to facilitate market-based development of network extensions, as part of its consideration of the Rule change proposal;

- Where changes to the Rules are required in order to address the issues identified with facilitating network extensions to some new generation areas, these changes should be introduced in a manner that is consistent with the existing features of the Rules as far as possible, and any changes to existing arrangements should be proportional to the issue being addressed. Where possible, Grid Australia favours incremental changes over wholesale changes, in the interests of maintaining regulatory certainty and stability;

- Grid Australia believes that the objectives of the SENE proposal are sound. However, its practical implementation as outlined in the current draft Rules is overly complex. Grid Australia believes that further consideration, exploration, and discussion are necessary to refine the current proposal and ensure a

workable, proportionate, and most importantly effective Rule change is implemented.

- Finally, Grid Australia proposes that some of the wider issues beyond the scope of this Rule change should be deferred to the forthcoming transmission frameworks review, including questions of network access, locational investment signals, and congestion management.

Planned Case Study Analysis

Grid Australia does not intend to outline in detail the areas of complexity in the proposed SENE Rule change. Rather, separate to this submission, Grid Australia intends to undertake a case study analysis of the proposed SENE Rule change. This case study will test the practical implementation of the proposed Rule change as it currently stands and help identify any aspects of the current SENE proposal which may be unnecessary (i.e. can be accommodated within the existing Rules), or disproportionate (i.e. create additional work or complexity over and above the outcomes they achieve). Alternative frameworks may also be considered as part of this review.

Completion of this case study analysis will place Grid Australia in a better position to respond to some of the key questions asked by the AEMC in its Consultation Paper (particularly those in relation to appropriate sizing and location of SENEs and risk mitigation measures), and to provide more useful feedback to the AEMC on the current Rule change request.

Grid Australia understands the need to complete this case study analysis in a timely manner so as to not delay the proposed implementation of the Rule change by late 2010. Grid Australia considers the case study analysis, including where necessary consultation with other industry stakeholders (e.g. AER, AEMO etc.) could be undertaken by early July 2010. This would enable Grid Australia's feedback to be considered by the AEMC prior to it making a Draft determination on the Rule change in late July 2010.

2. Is There a Need to Amend the Rules?

The AEMC has posed the following questions:

1.1 Under the existing Rules, are inefficiencies likely to arise as a result of the significant new investment in renewable generation?

1.2 If so, do the costs associated with these inefficiencies justify amendments to the Rules?

1.3 Do you agree that the proposed Rule change will lessen the risk of the inefficient duplication of assets?

3.3 Would a market-based approach to the sizing and location of SENEs be more appropriate? If so, what form might it take?

Grid Australia supports the AEMC's approach in its Consultation Paper of posing the fundamental question of whether there is a need to amend the Rules to make specific provision for extensions of transmission and distribution networks to new generation clusters, outside the existing arrangements for network investment and generator connection.

The AEMC's earlier review identified as a key issue ensuring that any geographical extension of the transmission network that is needed to connect new renewable generation sites is appropriately sized. From an overall market efficiency perspective, any expansion of the transmission network to new locations where there are significant renewable resources (e.g. wind generation in the Eyre Peninsula in South Australia; geothermal generation in the Cooper Basin) should be sized optimally, taking into account the potential for several competing generators to locate in these areas over time. As part of its proposed evaluation framework for the Rule change proposal, the AEMC has stated that it intends to consider the implications of the proposed Rule for investment in network and connection assets which is efficient in respect of size, location and timing.[1]

Under current arrangements, the cost of any geographical expansion of the network to connect generation is met by the connecting generator(s). There are significant economies of scale associated with transmission investment. As a result, a generator will be likely to be better off (i.e. it will face lower expansion costs) if it can share the cost of any required extension with other generators that later utilise the expansion. However, this may represent a 'first mover hurdle' for the initial generator, as it must

[1] AEMC, Consultation Paper, National Electricity Amendment (Scale Efficient Network Extensions) Rule 2010, p.9.

be able to bear the financing costs associated with an expansion sized above its own requirements, together with the risk that additional generators do not in the end eventuate in that area in a suitable timeframe.

In the face of this risk and the upfront financing costs involved for a large scale investment, the generator may decide to invest in a transmission extension that is sub-optimal from the point of view of the market as a whole.

Grid Australia therefore agrees that there are issues in appropriately sizing an extension of the transmission network to areas of new generation clusters, and intends to explore these issues in greater detail as part of its planned case study analysis. More specific feedback to the AEMC on the consultation questions posed above may be able to be provided following completion of this analysis. Grid Australia is mindful of the need to ensure that such extensions of the transmission network occur, in order to facilitate meeting the 2020 RET target, and is targeting to provide the AEMC with any feedback eventuating from its case study no later than early July 2010 (for the AEMC's consideration prior to making a draft determination).

2.1 Support for Market-based Approaches

Grid Australia supports market-based development of extensions to the network where possible, and considers that these should not be inadvertently crowded out by the introduction of a new framework. Not only do such market-based arrangements shield customers from the risk of underwriting developments which turn out to be unnecessary, but they are also likely to be able to be completed on a timelier basis, given that there is no need for any formal regulatory approval process.

The AEMC refers to the following market-based approaches as possible alternatives to the SENE framework in its Consultation Paper:

- the 'open season' approach, which would enable TNSPs to declare 'open seasons' for connections in their Annual Planning Reports;
- allowing generators to purchase options (which would be time limited and tradeable) for the right to contract for capacity on a proposed SENE. In its discussion of this alternative, the AEMC noted that while its use would not significantly reduce the risk borne by consumers it would provide 'commercially robust market information' about the needs of generators with respect to the sizing and location of SENE assets; and
- requiring generators to make a capital contribution prior to the construction of the network extension.

Grid Australia previously noted in its submission to the AEMC's earlier Climate Change Review[2] the potential to use the 'open season' approach as a complement to the existing bilateral negotiation framework for connections. Grid Australia noted that this approach would address some concerns with needing to deal with a large number of connection applications, through:

- enabling the application process to be streamlined; and
- improving the efficiency of the network planning process because it allowed for a 'group study' approach for applications in a similar area.

However, although an open season approach could assist in facilitating improved coordination of connections by different generation developers, it does not address the underlying problem of not all generators being ready to commit during the open season.

As part of the proposed evaluation framework for the SENE Rule change proposal, the AEMC intends to consider the potential for groups of generators to fund their own network extensions, as part of the status quo against which the proposed SENE rule change will be assessed.[3] In this context, Grid Australia notes that different generators are likely to be at different stages of their project development. Consequently, getting a financial commitment from all potentially interested parties at the same time is likely to prove difficult. The more parties that are involved in the negotiations, the more difficult those negotiations are likely to be. Grid Australia members have already experienced reluctance of individual connection applicants to tie their project delivery to the timelines of third parties. In the case of a single generator, the financing of additional capacity upfront and the risks it implies may result in an insurmountable hurdle to such extensions. Whilst improved through a recent Rule change[4], the confidentiality which surrounds connection enquiries also remains a sensitive and challenging issue.

Grid Australia strongly supports the AEMC's further consideration of potential market-based approaches as part of its consideration of this Rule change request.

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2 Grid Australia submission in response to the AEMC's 1st Interim Report in relation to its Review of Energy Market Frameworks in light of Climate Change Policies.

3 AEMC, Consultation Paper, National Electricity Amendment (Scale Efficient Network Extensions) Rule 2010, p.9.

4 AEMC, National Electricity Amendment (Confidentiality Provisions for Network Connections) Rule 2009 No. 20, 12 November 2009

2.2 A Proportionate Modification to the Existing Arrangements

While Grid Australia recognises the role to be played by market-based approaches, it also considers that it is unlikely to be prudent to rely solely on these approaches, given the practical difficulties referred to above, which should not be underestimated.

Grid Australia therefore considers that some amendments to the existing arrangements are likely to be needed in order to support the extension of the existing network to areas of new generation clusters, particularly in the light of the 2020 RET targets.

Grid Australia considers that any changes to the Rules to address this issue should be guided by the following principles:

- market-based approaches should be supported to the extent possible;
- where necessary, arrangements for customers to under-write costs should not preclude market-based approaches that can proceed without such support;
- changes to the Rules which seek to introduce new arrangements should complement, rather than replace or complicate, existing arrangements;
- incentive-based arrangements lead to better outcomes than imposing obligations; and
- responsibility for investment decisions and the operation and performance of transmission networks should remain with TNSPs (consistent with the governance arrangements adopted by COAG).

Grid Australia considers that the opportunity for market-based developments of extensions should be preserved and encouraged. Sufficient flexibility should be incorporated in the Rules to enable alternative market-based developments to emerge over time. Grid Australia considers that market-based arrangements can sit alongside an alternative framework, with the latter being used in circumstances where a market-based solution is unlikely to deliver an optimally scaled connection asset. These include circumstances where there are a large number of prospective generators, and/or the period over which these generators are expected to connect is protracted.

Grid Australia believes that while the objectives of the SENE proposal are sound, its practical implementation as outlined in the current draft Rules is overly complex. Grid Australia's planned 'case study' analysis will assist in further identifying implementation issues associated with the current Rule change proposal, and possible improvements or alternative options.

Grid Australia remains committed to working with the AEMC and other stakeholders to address the issues of the first-mover disadvantage and 'right-sizing' transmission extensions, in a proportional and robust way.

2.3 Additional issues relating to the SENE proposal

The proposed Rule change to facilitate the introduction of the SENE arrangements set out in the MCE's Rule Change request (and also in the AEMC's earlier Final Report in relation to its Climate Change Review) represents a substantive change to the current arrangements. Grid Australia has some concerns that these changes may be disproportionate to the issue that the SENE framework is intended to address.

The SENE proposal introduces a highly complex new framework into the Rules. Grid Australia considers that there may also be alternative approaches which could achieve the same objectives, but represent a less fundamental change to the current arrangements.

Specific issues which Grid Australia wishes to note with the SENE arrangements, as currently proposed:

- the proposal appears to introduce a third category of regulated transmission service into the Rules, as a SENE does not fall comfortably within the existing negotiated (or prescribed) service categories;
- the SENE arrangements may not be robust to future developments of the network, including greater interconnection of the SENE with the shared network, and the connection of load to the SENE; and
- the SENE arrangements introduce the concept of capacity rights to the services provided by SENE assets. This may be premature ahead of the expected wider review of the issue of access to the transmission network.

The SENE arrangements do not appear to sit comfortably within the definition of 'negotiated services' under the current Rules, given the shared nature of the services provided by the SENE assets and enduring capacity rights proposed. Negotiated services are established and funded on a commercial basis under bilateral arrangements and generally involve dedicated assets (with provision for conversion in the event that the nature of the services provided by these assets changes over time).

Grid Australia is concerned that the SENE arrangements in effect introduce a third category of regulated transmission services into the Rules, in addition to the current 'prescribed' and 'negotiated' service categories.

The complexity referred to arises principally from classifying the SENE as a negotiated asset, when the costs and benefits of the investment are shared between generator and customer. This results in a regime which is termed 'negotiated' but in substance subject to 'heavy handed' regulatory scrutiny, including:

- regulatory oversight of investment decisions;
- regulatory determination of price to be charged; and
- regulatory determination of terms of connection.

The robustness of the SENE arrangements to different network configurations and future network developments is also unclear. Grid Australia previously noted in its submission on the AEMC's 2nd Interim Report that further clarification would be required in the SENE framework to set out what would occur in the event that either:

- the SENE is used to provide shared network services; or
- a customer connects to the SENE, but the extension is not considered to be part of the shared network.

It appears likely that once the SENE extension is built, that over time it will become more interconnected with the shared network. Grid Australia agrees with the AEMC that artificially limiting such interconnection (for example, via 'ring-fencing' SENE developments) is likely to inhibit efficient developments.

Grid Australia notes that these issues in relation to practical implementation of the SENE framework have been raised by the AEMC in its Consultation Paper, in particular:

- Section 6.1.2 (and the AEMC's Question 4) on the discussion on alternative configurations of SENEs; and
- Section 6.2.2 (and the AEMC's Question 6) on distinguishing SENEs from the shared network.

Grid Australia also notes that the SENE arrangements outlined in the draft rule would face significant practical difficulties in Victoria, given that jurisdiction's transmission network investment approach.

Finally, Grid Australia notes that there is a difference in treatment in terms of capacity rights between the current shared network arrangements and the proposed SENE framework. The issue of capacity rights for transmission in general is expected to be subject to a wider review initiated by the MCE.[5] The MCE has already noted that the AEMC's proposals around SENEs (and inter-regional TUOS) could have a significant impact on electricity networks and that any future work will need to take into account the interaction of these initiatives with the electricity market as a whole. The

[5] Ministerial Council on Energy, Review of Energy Market Frameworks in Light of Climate Change Policies, Response to AEMC Final Report, December 2009, p. 6-7.

introduction of the concept of capacity rights as part of the SENE framework is therefore premature ahead of this wider review, and this and other broader issues such as location investment signals and congestion management approaches should be deferred to that review.

3. Comments on Other Issues

This section of the submission provides some brief comments in relation to some of the other specific questions raised by the AEMC in its Consultation Paper, and in particular on the issues which the MCE has introduced as part of its response to the AEMC's earlier Climate Change Review and its own subsequent Rule change request.

3.1 Who Should Bear the Risk of Asset Stranding?

The AEMC has raised the following questions:

2.1 Are NSPs likely to construct SENEs that are efficiently sized and located? Is there a significant risk of over-investment?

2.2 Are the risks associated with asset stranding outweighed by the potential efficiency gains from efficiently sized network extensions?

2.3 Does the proposed Rule change provide sufficient checks and balances to minimise risks to consumers?

3.1 Who will benefit from the development of SENEs and who is best placed to manage the risk of asset stranding?

Under the original SENE framework proposed by the AEMC, consumers (rather than generators and/or NSPs) bear all the risks associated with asset stranding in relation to SENEs.

The MCE has instructed as part of its Rule change request that provisions also be included in the Rules to ensure that NSPs have an 'internal incentive to prudently-size SENEs to ensure appropriate discipline is applied to develop accurately sized proposals'.[6] Grid Australia notes that no further detail on the form that this regime would take has been provided in the MCE's Rule change request.

Under the SENE Rule change proposal, the NSPs receive the regulatory WACC on investment associated with SENE assets. Given this approach, it would not be appropriate to expose NSPs to additional risk in relation to SENE assets, without a

[6] Ministerial Council on Energy, Rule Change Request – Scale Efficient Network Extensions, p. 4.

compensatory increase in the return that the NSPs are allowed to earn. As a consequence, if the SENE framework is retained, Grid Australia strongly supports the approach in the proposed Rule for the risks of under or over-utilisation of SENE assets to be borne by customers, and for NSPs to be guaranteed cost recovery.

In general, Grid Australia members are in favour of incentive arrangements. However in the case of SENE developments, Grid Australia agrees with the AEMC's assessment that it appears difficult to develop an incentive regime for TNSPs within the confines of the SENE Rule change as proposed. The SENE Rule change proposal includes significant roles for AEMO and the AER, which would act as a 'check and balance' on NSPs' proposed SENE developments, and which substitute for explicit incentives on NSPs in relation to SENE development. If incentives on NSPs were to be introduced into the SENE framework then the roles of AEMO and the AER would need to be re-thought.

In addition, the AEMC has correctly identified that a key risk affecting the likely stranding of SENE assets is any change in government policy, given that the expected increase in the development of renewable generation is driven by the expanded RET scheme.[7] NSPs are not well placed to manage this risk.

3.2 Should an Explicit Economic Test be Applied when Developing SENEs?

The AEMC raises the following question:

3.2 Should the framework include a more explicit economic efficiency test? If so, what form might it take?

In its response to the AEMC's *Final Report on the Review of Energy Market Frameworks in Light of Climate Change Policy*, the MCE proposed the imposition of an obligation on NSPs to consider any benefits that may accrue to consumers as a result of the SENE and to apply the RIT-T (with the result that where benefits are found to exist, part (or all) of the SENE may be permanently funded by consumers).[8] This proposal is reflected in the MCE's Rule change request.[9]

Grid Australia notes that the application of the RIT-T to a proposed extension of the transmission network to connect an area in which there are several potential generation projects represents the current *status quo* arrangement for investment in the shared network. In this context, the AEMC has noted that its assessment of the

[7] AEMC, Consultation Paper, National Electricity (Scale Efficient Network Extensions) Rule 2010, p.13.

[8] Ministerial Council on Energy, Review of Energy Market Frameworks in Light of Climate Change Policies, Response to AEMC Final Report, December 2009, p. 4.

[9] Ministerial Council on Energy, Rule Change Request – Scale Efficient Network Extensions, p. 3.

current arrangements will include a consideration of the potential for TNSPs to use the RIT-T to justify the development of a network extension.[10]

Where an extension of the network is shown to have the greatest net market benefit under the RIT-T (compared with alternative options), then the TNSP would be justified in undertaking the investment and the costs would be fully recovered under the current Chapter 6A arrangements applying to prescribed services, i.e. via TUOS charges. Under this arrangement, customers would bear the risk of future asset stranding, in the event that the forecast generation developments did not eventuate.

The SENE framework represents an *alternative* to the current Chapter 6A arrangements and the application of the RIT-T. If the network extension satisfies the RIT-T, then the SENE arrangement would not be needed. In effect, under the MCE's proposal the RIT-T would be used as a filter to distinguish between:

- those network extensions to areas of new generation clusters that will deliver net benefits to the market and should therefore be rolled into the regulatory asset base (RAB) for the shared network and recovered from customers via TUOS charges; and

- those network extensions to areas of new generation clusters that are unlikely to pass the RIT-T and should therefore be considered further within the SENE framework (or under the existing bilateral negotiation framework for connections).

Grid Australia supports consideration of the proposal by the MCE to use the RIT-T in circumstances where the extension is likely to have significant market benefits. This would enable the (efficient) extension of the network to be undertaken under the existing provisions in the Rules.

[10] AEMC, Consultation Paper, National Electricity (Scale Efficient Network Extensions) Rule 2010, p.9.