

4 August 2010

Mr John Pierce
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 – Supplementary Submission

In its 13 May 2010 submission in relation to the National Electricity Amendment (Scale Efficient Network Extensions) Rule 2010, Grid Australia committed to undertaking a case study to provide further feedback to the AEMC on the proposed Rule change.

This supplementary submission provides additional comments on the proposed SENE Rules and summarises the outcomes of the case study work undertaken by Grid Australia.

Key points made in the supplementary submission include:

- Grid Australia supports commercially negotiated market-based solutions for the development of network extensions, where possible, and considers that these should not be inadvertently crowded out.
- The detailed SENE Rules referenced in the current Rule change proposal vary significantly in terms of service classification from the original approach proposed by the AEMC.¹
- Under the original SENE model, services provided by a SENE are treated as negotiated services, similar to current connection services, and sit outside the RIT-T process. Under this model, it is the role of AEMO to identify those zones where it is considered efficient to build a SENE. Grid Australia considers that the proposed SENE Rules are ambiguous as they do not clearly classify SENE services as a negotiated service, and thereby unintentionally introduce a third category of regulated transmission service into the Rules.

¹ i.e. the concept for the SENE model outlined by the AEMC in its 2009 Second Interim Report on the *Review of Energy Market Frameworks in Light of Climate Change Policies* (Climate Change Review).

- Grid Australia recommends an alternative SENE model closer to that originally proposed by the AEMC (rather than as set out in the proposed SENE Rules²).
- Grid Australia considers that capacity rights on the SENE should not differ from the rights that would apply under the current bilateral approach to network extension, ahead of a comprehensive review of this issue as part of the Transmission Frameworks Review. This removes the potential complexities of differing levels of access and constraint compensation.
- Grid Australia does not consider that a RIT-T approach is required in the SENE process. However, if the RIT-T is to have a role as part of connecting remote generation, then Grid Australia supports an approach where the RIT-T would be applied to incremental investment above the stand-alone network extension cost to connect the initial remote generator (Model 1). Under this model the RIT-T would be undertaken to determine where it is efficient for transmission customers to fund the incremental investment.

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
Chairman
Grid Australia Regulatory Managers Group

² i.e. the detailed suggested Rules included in the AEMC's Final Report on the Climate Change Review, which are referenced in the MCE's Rule Change request.

Scale Efficient Network Extensions Rule 2010

Supplementary Submission

4 August 2010

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1. Introduction

KEY POINTS:

- Grid Australia supports commercially negotiated market-based solutions for the development of network extensions, where possible, and considers that these should not be inadvertently crowded out.
- The detailed SENE Rules referenced in the current Rule change proposal vary significantly in terms of service classification from the original approach proposed by the AEMC.¹
- Under the original SENE model, services provided by a SENE are treated as negotiated services, similar to current connection services, and sit outside the RIT-T process. Under this model, it is the role of AEMO to identify those zones where it is considered efficient to build a SENE. Grid Australia considers that the proposed SENE Rules are ambiguous as they do not clearly classify SENE services as a negotiated service, and thereby unintentionally introduce a third category of regulated transmission service into the Rules.
- Grid Australia recommends an alternative SENE model closer to that originally proposed by the AEMC (rather than as set out in the proposed SENE Rules²).
- Grid Australia considers that capacity rights on the SENE should not differ from the rights that would apply under the current bilateral approach to network extension, ahead of a comprehensive review of this issue as part of the Transmission Frameworks Review. This removes the potential complexities of differing levels of access and constraint compensation.
- Grid Australia does not consider that a RIT-T approach is required in the SENE process. However, if the RIT-T is to have a role as part of connecting remote generation, then Grid Australia supports an approach where the RIT-T would be applied to incremental investment above the stand-alone network extension cost to connect the initial remote generator (Model 1). Under this model the RIT-T would be undertaken to determine where it is efficient for transmission customers to fund the incremental investment.

¹ i.e. the concept for the SENE model outlined by the AEMC in its 2009 Second Interim Report on the *Review of Energy Market Frameworks in Light of Climate Change Policies* (Climate Change Review).

² i.e. the detailed suggested Rules included in the AEMC's Final Report on the Climate Change Review, which are referenced in the MCE's Rule Change request.

The concept of Scale Efficient Network Extensions (SENE) has developed from the initial positions set out in the AEMC's First and Second Interim Reports in 2008 and 2009 in relation to its *Review of Energy Market Frameworks in light of Climate Change Policies*, through to the detailed suggested SENE Rules set out in the AEMC's Final Report for that review, which have been referenced by the MCE in its SENE Rule Change request. The MCE in its review has also now suggested a role for the RIT-T as part of the SENE framework, in its Rule Change request, although this is not reflected in the proposed SENE Rule referenced in the MCE's Rule Change request. It is therefore somewhat challenging to respond to the SENE Rule change, as the MCE request, consultation paper and Rule change to some extent address different issues.

Grid Australia has consistently supported market based arrangements for the development of network extensions and that any proposal to vary the Rules should be consistent with the National Electricity Objective (NEO).

Grid Australia's 13 May 2010 submission in relation to the National Electricity Amendment (Scale Efficient Network Extensions) Rule 2010 included the following key points:

- 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 proposed Rule) is overly complex³ and further work is needed to refine the current proposal and ensure a workable, proportionate, and most importantly effective Rule change is implemented; and
- Grid Australia intends to undertake a case study to provide further feedback to the AEMC on the proposed Rule change.

The purpose of this supplementary submission is to provide additional comments on the proposed SENE Rules and to summarise the outcomes of the case study work undertaken. Further details of the case study undertaken by NERA are included in a separate report attached to this submission.

The case study only considers SENE models in which the RIT-T has a role to play, as suggested by the MCE. Under these models, many of the aspects of the SENE Rule

³ A key aspect of this is that the proposed SENE Rules do not clearly classify SENE services as negotiated transmission services, and thereby risk introducing a third category of regulated transmission service into the Rules.

change are not required (e.g. identification of zones in advance, AER oversight of pricing) because standard NER requirements apply. However, the AEMC may ultimately decide on a SENE model which does not incorporate a role for the RIT-T.

Grid Australia recommends a variant of the SENE model closer to that originally proposed by the AEMC, under which a SENE extension is treated as a negotiated service and sits outside of the RIT-T process. This model gives AEMO the role of identifying prospective SENE zones where it is considered beneficial for the market as a whole to provide additional transmission capacity. TNSPs then have obligations to undertake indicative planning and pricing for extensions in these zones; seek interest from generators once a foundation generator is identified; get approval from the AER regarding pricing of the standard connection agreement should more than one generator be considered likely to connect; and recover the resulting charges from generators and transmission customers.

A key difference between the SENE and RIT-T models is that the SENE model introduces a new framework whereby customers only fund the extra capacity for a time until new generation enters consistent with the forecast that underpinned the SENE investment.⁴ Under the RIT-T model, once a market benefit is established for the incremental capacity then transmission customers fund that capacity on an ongoing basis. This reflects that building the extra capacity delivers benefits for the market as a whole.

2. Objectives Underpinning the Current SENE Proposal

The SENE proposal was developed by the AEMC to address two stated issues: the ‘first mover’ disadvantage and the ‘right-sizing’ of network extensions to connect new generation clusters.

Grid Australia’s position is that any changes to the Rules for the development of the transmission network must positively contribute to the National Electricity Objective (NEO):

- The MCE Rule Change Request focuses on the right-sizing of connections, rather than the first mover disadvantage. Reducing costs for remote generators to connect to the network will not always deliver efficient outcomes (consistent with the NEO). The objective of addressing the ‘first mover disadvantage’ may therefore not be consistent with the NEO and should only drive the development of the Rules to the extent that it provides an overall net benefit to

⁴ or presumably where the service converts to a prescribed service, for example after connection of a distribution network to the SENE.

the market. Network extension costs provide a locational signal for new generation.

- Right-sizing of network extensions should not be interpreted as sizing the extension to accommodate all potential new generation developments in an area. It is again efficient to size extensions partially or fully funded by customers to accommodate additional generation up to the point where this provides a net benefit to the market. This implies a role for the RIT-T (under the existing framework) or AEMO (under the SENE framework) in making such an assessment. Beyond this point additional generation may still connect, but the Rules should not introduce a bias in favour of such further development by reducing the ongoing connection costs such generation faces, since there is no overall benefit to the market.
- The government's wider environmental policy settings should provide the drivers for the development of specific generation technologies, such as renewable generation. Incentives for the development of renewable generation are provided via the LRET and other government policy settings. Where these signals are insufficient to cover the costs of renewable generation plus associated connection and network extension costs, it does not fall to the Rules to provide a further stimulus for development of renewable generation remote from the existing grid.

3. Proposed SENE Rules

Grid Australia does not support the current SENE Rules as proposed by the MCE as the most appropriate approach:

- The SENE model as proposed originally by the AEMC treated SENE extensions in a similar manner to current connection services. The AEMC described them as being a form of negotiated service and of being comprised of connection assets. Grid Australia supports the classification of SENEs as a negotiated service;
- However the detailed SENE Rules⁵ contain several inconsistencies and ambiguities in terms of the classification of SENE services (and the classification of the underlying assets) and appear to introduce a new third category of regulated service.⁶ As a result Grid Australia considers that they

⁵ Published by the AEMC as part of its Final Report on the *Review of Energy Market Frameworks in Light of Climate Change Policies*, and referred to in the MCE Rule change request.

⁶ For example, the proposed Rule contains as part of the Principles in 5.5A.1 the statements that: 'Scale efficient network services are *extensions*. Therefore they are part of the *network* (i.e. they are not

are ambiguous, overly complex and are not proportionate to the issue being addressed, and raise issues in terms of appropriate service classification and interaction with the existing Rules;

- The proposed Rules also introduce the concept of capacity rights for the SENE extension, ahead of the AEMC's wider Transmission Frameworks Review, which is now expected to consider the issue of the appropriateness of capacity rights for the network as a whole. The proposed introduction of capacity rights in this Rule is therefore premature to this imminent review;
- The proposed Rules also involve a high degree of regulatory oversight which Grid Australia does not consider is warranted;
- The MCE's Rule change request has also introduced a role for the RIT-T within the SENE framework, which increases the complexity and ambiguity of the model, and has suggested a greater level of risk exposure for TNSPs be considered, both of which move the framework further from that initially envisaged; and
- The SENE proposal as set out in the proposed Rules does not appear robust across different configurations for new generation connections and the potential for the extensions to form part of the shared network in future.

Grid Australia would continue to support a variant of the SENE model closer to that originally proposed by the AEMC (rather than as set out in the proposed SENE Rules), under which a SENE extension is treated as a negotiated service, similar to current connection services, and sits outside of the RIT-T process (because the AEMO identification of zones replaces this step for SENEs), subject to the caveats discussed above. Grid Australia considers that under this variant, capacity rights on the SENE would not differ from the rights that would apply under the current bilateral approach to network extension, ahead of a comprehensive review of this issue as part of the Transmission Frameworks Review. This is important from a regulatory certainty and regulatory oversight point of view as it removes the potential complexities of differing levels of access and constraint compensation across and between different classes of services.

Notwithstanding the above, Grid Australia recognises that the MCE has proposed a role for the RIT-T as part of the SENE framework.

connection assets). *Scale efficient network extensions* are treated as if they were *negotiated connection services* [..]'. However under the current definitions in the Rules, the components of a *transmission system* which are used to provide *connection services* are defined as *connection assets*.

On this basis, Grid Australia has therefore considered two alternative models that reflect inclusion of the RIT-T. Of these two models, Grid Australia would support, assuming that the RIT-T has a role to play in the SENE framework, an approach under which the RIT-T would be applied to incremental investment above the stand-alone network extension cost that would otherwise be undertaken to connect a remote generator⁷. This model is discussed further below, and then compared to a model involving the partial application of the RIT-T.

4. An Alternative Model: Application of the RIT-T to Incremental Investment (Model 1)

4.1 Description of this model

Grid Australia has identified an alternative SENE model which reflects a more proportionate change to the current Rules than the current SENE Rules proposed by the MCE (Model 1)⁸. Model 1 incorporates the application of the RIT-T, in a manner which Grid Australia believes is workable, and consistent with the MCE Rule change request which proposes that a network business should undertake a RIT-T when it perceives the network assets associated with a SENE can deliver possible net benefits for the shared network.⁹

Model 1 extends the same concept as that proposed by AEMO in relation to ‘generation hubs’ to network extensions to connect new generation. It is also similar to that proposed by the NGF,¹⁰ in that the initial generators face their stand-alone cost, and only receive the benefit of lower charges reflecting economies of scale once the network extension is further subscribed.

The key features of Model 1 are as follows:

- The initial generator(s) pays the stand-alone cost for what would be its normal connection, sized to meet its own needs:
 - This stand-alone cost will reflect standard technical connection requirements; and

⁷ Grid Australia would support this approach if it is assumed that the RIT-T has a role to play in the SENE framework, as suggested by the MCE.

⁸ i.e. ‘Model 1’ in the NERA SENE Case Study Report.

⁹ MCE Rule Change Request – Scale Efficient Network Extensions, February 2010, p. 3 first bullet.

¹⁰ National Generators Forum, Submission 13 May 2010.

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- The standard technical connection will include the ability to expand to accommodate future generators.
 - Where the initial generator agrees, the TNSP would then decide whether to apply the RIT-T on an incremental basis, to a higher capacity extension (and/or a different route/configuration) which would accommodate the connection of additional generators in the same area:
 - There would be no need for AEMO to identify ‘zones’ under this model
 - The incremental investment passes the RIT-T if it provides a net market benefit;
 - The incremental RIT-T assessment would take into account any need for broader network augmentation, as market benefits will only arise where the additional generation is actually dispatched.
 - The costs of the RIT-T assessment would be borne either (i) by the initial generator;¹¹ and/or (ii) prospective generators who may wish to connect in future (which provides a clear market signal of additional generator interest)
 - There would be no enduring capacity rights given to the original or future connecting generators under this model.
 - The initial generator(s) faces a trade-off between:
 - the shorter timeframe to connect under the current bilateral model; and
 - the RIT-T application resulting in: possible deep network augmentation; the prospect of a future reduction in the generator’s network charges where additional generators connect; and higher capacity line which may provide a benefit in terms of a lower loss factor.
 - Customers would bear the costs of the incremental investment, provided it passes the RIT-T:
 - This would reflect the current approach in the Rules, under which, once an investment passes the RIT-T the cost is recovered from prescribed

¹¹ The motivation for the initial generator to fund the incremental RIT-T assessment would be where it perceives benefits from the expanded extension – discussed in the following section.

services. It would also reflect the MCE's proposal¹² that customers 'permanently' fund the cost of investments that pass the RIT-T.

- Where subsequent generators connect to the extension, the charges of the original generator would be reduced accordingly.
- AEMO would retain the role it currently has in relation to the application of the RIT-T by TNSPs, such as providing independent input via the NTNDP.

4.2 Advantages of Model 1

Grid Australia believes that Model 1 has the following advantages compared to the current MCE Rules proposal:

- It is largely accommodated under the current Rules and does not require the introduction of a new framework;
- The model requires there to be at least one generator who is willing to pay the stand-alone costs, i.e. it reflects correct locational signals and allows commercial negotiations to work first and limits the ongoing costs which are under-written by customers;
- If additional generators are willing to fund the RIT-T application, this provides a clear indication of market interest;
- The model addresses the 'right-sizing' of network extensions, up to the point where the additional generation capacity is expected to provide a net market benefit to the market. This provides a clear and efficient limit on the additional costs which are under-written by customers;
- The credible options for the RIT-T assessment would be clearly bounded, as they would relate to alternative capacities and configurations to the stand-alone extension;
- As a result, the application of the RIT-T to the incremental investment is likely to be less subject to controversial assumptions, enabling the investment to proceed in a more timely manner;
- The cost that the initial generator(s) would face would be established by clear reference to the stand-alone cost. This model avoids the difficulty of

¹² Ministerial Council on Energy, Review of Energy Market Frameworks in Light of Climate Change Policies, Response to AEMC Final Report, December 2009, p. 4.

determining the generator contribution on the basis of a RIT-T outcome (see next section);

- The initial generator(s) incentive to try to shift the costs of a stand-alone extension to the incremental investment will be offset to some extent by the risk that the resultant greater incremental cost for a larger extension will then not pass the incremental RIT-T assessment, with the generator not then receiving the benefits from the larger extension;¹³
- The existing Rule provisions in relation to the change in cost allocation where assets are used to provide negotiated services later become used to provide prescribed services could be applied, making the model robust to changes in future network development.
- The initial generator(s) can always decide to connect under the existing bilateral process.

Model 1 does not directly address the ‘first mover disadvantage’ objective identified by the MCE. As argued above, this objective is not necessarily consistent with the objectives set out in the NEO. Model 1 does however provide economic advantages for the first mover, namely that the incremental RIT-T application may result in:

- the prospect of a future reduction in the generators network charges where additional generators connect (and without the initial generator needing to fund this capacity up front, as it would have to under the current bilateral negotiation approach);
- deep network augmentation, relieving constraints on the shared network; and/or
- a higher capacity line which may provide a benefit to the initial generator in terms of lower loss factor; and/or
- a higher reliability line as a double circuit extension may be justified instead of a stand-alone single circuit extension.

5. Model Involving Partial RIT-T Application (Model 2)¹⁴

In its earlier response to the AEMC’s climate change review, the MCE proposed that the NSPs should apply the RIT-T, with the result that where benefits are found to

¹³ Since the cost of the incremental investment will increase, as less is being paid for by the initial generator.

¹⁴ This is ‘Model 2’ in the NERA SENE Case Study Report.

exist, part (or all) of the SENE may be permanently funded by consumers.¹⁵ Grid Australia has considered another alternative model (Model 2) under which potentially connecting generators would be able to make a contribution to offset some of the network capital costs, where an extension does not pass the RIT-T. Under this approach, customers would fund the portion of the extension that passed the RIT-T, with generators funding the remainder.

Grid Australia does not recommend this alternate model. Grid Australia considers this alternative model not to be workable in practice for several reasons:

- A payment made by a generator to a TNSP would be treated as a wealth transfer under the RIT-T, and so the extension would still not be considered to have ‘passed’ the RIT-T. The current Rules do not accommodate a project ‘partially’ passing the RIT-T and would require amendment in order to allow the partial cost of the investment to be allocated to prescribed services in this circumstance.
- The application of the RIT-T under this model would represent an unbounded assessment, with no clear limitation on the range of alternative options to be considered.
- More fundamentally, the ‘amount’ of the required generator contribution may depend on the NPV value of the estimated market benefit. Currently it is the ranking of projects under the RIT-T which is important, rather than the actual NPV outcome. Basing the generator contribution on the RIT-T outcome would therefore be using the RIT-T for a purpose for which it is not well suited. This issue is exacerbated by the difficulty of determining with precision the key drivers of the market benefit estimates for this type of network extension (ie, future generation market development scenarios, relative efficiency of wind generation in different locations).
- This model by itself does not address the issue of efficiently sizing future investment, since it would only be the generator(s) who are currently waiting to connect who would be able to make the financial commitment to pay the ‘shortfall’ in the RIT-T assessment.

¹⁵ MCE, op cit.