Major Energy Users Inc.

Australian Energy Markets Commission

CONSULTATION PAPER

National Electricity Amendment (Scale Efficient Network Extensions) Rule 2010

Comments on the Proposed Rule

Submission by

The Major Energy Users Inc

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Executive Summary

This rule change proposal is a major response to one of the recommendations from the AEMC's Final Report to the MCE on Review of Energy Market Frameworks in Light of Climate Change Policies.

In its responses to the AEMC during the preparation of the report, the MEU had raised its concerns that governments were expecting major interventions in energy markets via climate change policies to be accommodated, without significant distortions and without due recognition of the risks and costs that energy consumers ultimately have to bear.

A major aspect of the AEMC Final Report (and one which the MEU repeatedly raised with AEMC) was the failure to assess and quantify the significantly increased cost burdens the AEMC recommendations would cause consumers, who are already confronting significantly increased costs occasioned by the network capital investment explosion in the current networks regulatory pricing round. This massive increase in network capital investment has its origins in the unbalanced AEMC Chapter 6A Rules on transmission revenue setting, which then flowed into the revised chapter 6 Rules for distribution network revenue setting.

The Scale Efficient Network Extensions (SENE) rule change proposal will add further to the risks and costs to be borne by consumers, not only directly, but also indirectly. In contrast, the benefits alluded to by the AEMC and MCE are likely to be very modest at best and virtually nonexistent at worst.

The SENE proposal undermines at least three fundamental principles underpinning the NEL and NER:

1. There is to be competitive neutrality between participants.
2. A decision to invest in regulated assets must demonstrate a net economic benefit.
3. Locational signals are necessary to generators and consumers in order to encourage efficient use of the regulated assets.

This rule change proposal is presented:

1. Without any recognition that competitive neutrality has been voided in that it will provide a benefit to some but not all generators
2. With no attempt to quantify the costs and the benefits of the proposal and provides inadequate analytical and very limited empirical demonstration to support its contention.
3. Without fully investigating whether the change will mute locational signals for new generators and more widely encourage all generators to seek to locate on SENEs rather than locate to the benefit of the network.

An earlier option put forward by some stakeholders during the AEMC review – which was rejected because of concerns over confidentiality issues – now needs to be properly investigated, as a recent rule change on confidentiality provisions removes a key barrier to that option from being realistically considered and adopted.

Be that as it may, the MEU provides its suggested option, as part of this submission, to achieve a similar outcome to the stated purpose of the SENE – but one which the MEU considers will eliminate or minimise risks and costs to consumers and yet still provides an ability for small renewable generation plants to reduce their connection costs by sharing network connections.

Whist there is no doubt that as consumers will likely be funding some of the costs of every SENE as there is a real risk that the funds will never be fully recovered, the only contention that there is a benefit that will accrue to consumers, are the broad statements made by the AEMC and MCE that there will be a saving in network costs by the avoidance of asset duplication for generator connections, and that this will translate into lower energy costs because generators will offer lower prices because their establishment costs are lower. This is a debatable proposition at best and, as it is not proven, it should not be the basis for policy formulation or rule setting.

The MEU does not agree that this benefit will in fact occur.

> Firstly, the energy market is a large one currently exceeding 40,000 MW of installed generating capacity and delivering over 200,000,000 MWh of electricity annually. Considering that there is already significant amount of renewable generation in the NEM, to meet the eRET policy target will only require some 7% increase in total generation through renewable generation projects. Much of this will be through large renewable projects, such as large windfarms, which have already demonstrated they can fund significant network connection costs, and due to their size would probably seek to have dedicated network connections to ensure their firmness of connection capacity.
>
> Secondly, the energy market architecture has been constructed to be pro-competitive and the bulk of the electricity prices are set by large conventionally fired generation. To consider that a small number of renewable generators benefiting from an SENE (and therefore having marginally lower connection costs from having a shared network connection) will cause sufficient pressure to reduce the bulk price of electricity (and thereby deliver a benefit) is a superficial proposition at best.

The proposed rule has not addressed other outcomes that will, as a result of the change, also increase the costs of electricity to consumers:

1. Weakening locational signals for new generator investment will increase the risk of congestion on the shared network. Relieving congestion is a cost to consumers as they pay for the deep connection costs of new generation

2. Increasing congestion has the result of increasing spot prices for electricity, causing a cost to consumers

3. The proposed rule as written does not just provide a benefit for small renewable generation – ostensibly the reason for the proposed change – but will provide a benefit to large renewable and conventionally fired generation, which was not the reason stated by AEMC for the need to change the rules.

4. The proposed rule provides a benefit to some generators (those able to use an SENE) but not to other generators. This means there is a loss of competitive neutrality and it will encourage new generators to locate where an SENE is likely, rather than locating where the generation will provide the best outcome for consumers.

In addition to the other failings of the proposed rule, it provides no parameters to proscribe which generators should benefit from an SENE. As a result, it leaves any assessment of what the rule is supposed to address, to the TNSPs, AEMO and AER. They will see that the rule (as currently drafted) is open ended to allow any generation or any size to reduce their network connection costs to use an SENE. This is despite the fact that the original intention of the change is to provide support for small renewable generation.

The MEU is, therefore, opposed to the proposed rule change. In addition to placing unquantified (but significant) risks and costs to consumers, the rule change proposal will undermine very fundamental principles underpinning the NEM and will distort and corrupt the market. It strongly argues that there are better options and has provided an option, which will eliminate or minimise unnecessary risks and costs to consumers.

1. Introduction

1.1 About the MEU

The Major Energy Users Inc (MEU) represents some 20 large energy using companies across the NEM and in Western Australia and the Northern Territory. Member companies are drawn from the following industries:

- Iron and steel
- Cement
- Paper, pulp and cardboard
- Aluminium
- Processed minerals
- Fertilizers and mining explosives
- Tourism accommodation
- Mining

MEU members have a major presence in regional centres throughout Australia, e.g. Western Sydney, Newcastle, Gladstone, Port Kembla, Mount Gambier, Whyalla, Westernport, Geelong, Launceston, Port Pirie, Kwinana and Darwin.

The articles of the MEU require it to focus on the cost, quality, reliability and sustainability of energy supplies essential for the continuing operations of the members who have invested $ billions to establish and maintain their facilities.

1.2 The MEU view on efficient network investment

The MEU and its members recognise that the larger the scale of the electricity network the more likely that it will provide a more economically efficient outcome than multiple smaller networks, provided that the capacity of the larger network is ultimately used.

This means that in **principle**, the MEU would support the building of larger scale network assets if there is a strong probability that over a reasonable period of time, the surplus capacity of the network will be utilised.

The MEU was a significant contributor to the 2005 and 2006 debates with the AEMC, which ultimately resulted in the 2006 rule changes creating chapter 6A of the NEM rules. Many features of the chapter 6A transmission rules then flowed into the 2008 revision of the chapter 6 distribution rules. At the time the AEMC made it clear that the chapter 6A rules were designed to further encourage investment in transmission assets as the AEMC saw that such investment was in the long term interests of consumers.

A core feature of chapter 6A was that:

- Generators were required to negotiate with the transmission business for new connections to the shared network
- Optimisation of transmission assets would no longer be applied
- Capex would be approved ex ante and there would be no controls on how this capex could be expended
- The ability of the regulator to assess the reasonableness of the quantum of capex claimed was proscribed
- Actual capex would not be assessed ex post for prudency
- Actual capex would be automatically rolled into the regulatory asset base (RAB)

The outcome of these changes is there has been an explosion in capex claims from network owners, and the powers of the regulator have been so limited such that it has been unable to stem the rate at which these large allowances are allowed, causing significant increases in charges for the use of electricity transmission (and distribution) assets. Consumers have been significantly penalised as a result of the unbalanced AEMC rule changes, which have reversed much of the gains from the energy reforms initiated some ten or so years ago.

One aspect of the chapter 6A rules that was discussed at length[1] was that new generators had a modest incentive to locate their plant in the vicinity of the shared network as they are required to pay for the connection costs between the generator and the shared network[2], even though generators still do not have to pay for deep connection costs involved in the shared network.

One aspect that was initially raised by TNSPs in the consideration of the current issue, was that there was a requirement on TNSPs to retain confidentiality of any application to connect to the shared network. This meant that even though multiple applications might be made to a TNSP for connection to the shared network at similar locations, the TNSP was constrained from sharing this information even if there might be a benefit to all those applying for connection. To a significant extent, the Rule change on Confidentiality Provisions for Network Connections 2009, overcome this constraint, and should now allow generators to be aware that there is potential for sharing connection assets needed to connect multiple generators at the same point to the shared network.

Overall, the existing Rules regarding connection to the shared network provide considerable benefit to generators already, but the rules still impose significant risk to, and cost for, consumers.

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[1] AEMC Rule Determination (Pricing of Prescribed Transmission Services) Rule 2006 No. 22, 21 December 2006, pages 22-24.

[2] Generators also pay for transmission losses between the generator location and the regional node, placing some pressure on generators to locate near to the regional node

1.3 The MEU view of the market as a whole

Consumers are already seeing electricity costs rising very quickly, from a range of causes, such as:

- Generator market power (the AER has identified that Torrens Island Power Station in SA has market power when regional demand exceeds 2500 MW)
- Steeply rising transmission and distribution network prices – on average these will rise in real terms by ~50% over the next five years
- Implementation of the carbon emission reduction program (CPRS)
- Implementation of the 20% renewable electricity target (eRET)
- The indirect costs for network augmentation to meet the CPRS and eRET requirements
- Sundry other Federal and State Government renewable energy and climate change programs and 'initiatives', such as feed-in tariff schemes, climate change levies, etc

Overall, there is a general expectation that electricity supply costs will rise in real terms by 100% or more over the next few years as a result of these changes. This is having a chilling effect on downstream investments.

This raises the question as to whether against an expectation of a doubling of electricity supply and delivery costs, consumers will be prepared (let alone should be required) to provide generators with improved options for connections to the shared network by bearing further risks and costs.

1.4 What is the impact of this proposed rule change?

This rule change, if implemented, will increase the cost to consumers of using the electricity transmission transport assets[3]. The rule change proposal makes suggestions as to how these costs consumers will be required to bear, can be minimized.

To offset this increased cost, there is the potential of savings to consumers from lower REC costs and greater competition amongst generators. The issue for consumers is, however, whether the increased costs are less than the potential benefits. Unfortunately, the consultation paper makes no effort to quantify either the costs or benefits of the proposal. Unless there is a cost benefit analysis, it is difficult for the AEMC to maintain, or even suggest, that this proposed rule will be in the "…long term interests of consumers".

[3] If there were no increased costs involved then TNSPs would implement the needed changes under the existing arrangements.

The Regulatory Investment Test for transmission (RIT-T) requires TNSPs to provide a net benefit of an investment before such an investment receives regulatory approval. This rule change proposal does not even meet this basic investment test for benefit quantification. This is a fundamental principle in the NER.

1.5 Summary

Consumers do benefit from investments made with excess capacity (where there is certainty that such excess capacity will be used in the near future) as the excess capacity can be provided in a very commercially efficient manner – duplication at some time in the future might not be as efficient as a holding of excess capacity for a few years.

The proposal will effectively reduce the locational signals for generator investment by allowing new generation to reduce the costs of the locational decisions, in the hope that additional generation might decide to connect at a similar location.

The rule change proposal posits that consumers will accrue significant commercial benefit by the implementation of such a change and therefore should cover the costs that generators and the TNSP would otherwise have to incur. But there is no attempt to quantify either the costs or benefits of the proposal.

2. An overview of the principles behind the proposed rule change

The proposed rule change had its origins from a request of the MCE for the AEMC to assess whether the NEM rules would still be effective with the introduction of the Federal Government decisions to:

- Increase the Mandated Renewable Energy Target from the nominal 5% of the electricity used in the NEM to 20% (eRET), and
- Introduce a cost for carbon emissions via the proposed Carbon Pollution Reduction Scheme (CPRS).

The AEMC undertook a major review process to identify whether there were changes needed to the NEM rules to allow the implementation of these policies. The AEMC came to the view that the NEM rules are robust enough to manage these policy impositions but recommended changes to improve the outcomes of the policies.

It is pertinent to observe that the AEMC advice to the MCE states clearly[4]:

> "The CPRS and expanded RET will result in structural transformation of the Australian energy markets – placing pressure on market participants and consumers to change the way they produce, trade and use electricity and gas. Despite these pressures, we have concluded that the existing competitive energy markets, supported by efficient economic regulation of the monopoly network sector, continue to provide the most effective response to major changes in economic and policy circumstances."

That is, the AEMC concludes there is no need to change the **existing energy market structure** as a result of the imposition of these policies. The AEMC then adds[5]:

> "The changes we have recommended to market frameworks seek to improve and strengthen the ability of the energy markets to respond to the policies while continuing to meet the desired market outcomes of efficient and reliable energy services."

Implicitly the AEMC sees that its "improvements" seek to enhance the ability of the energy markets to provide a better response from the imposed policies.

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[4] AEMC Questions and Answers on the Final Report Review of Energy Market Frameworks in light of Climate Change Policies 30 September 2009

[5] ibid

Effectively the AEMC sees that its recommendations will assist the eRET and CPRS policies rather than make the energy markets more effective.

This implication has significant import. What it means is that, as the changes are not essential outcomes to enable continued efficient market operation, the changes being recommended must have a demonstrable net commercial benefit before they are implemented. Therefore, the changes being proposed need to be able to show a quantifiable benefit for consumers (such as is required under the RIT-T) before they can be introduced.

2.1 The Origins of the Rule change

In particular, this rule change was proposed because the AEMC considered that the new generation from the eRET will tend to be smaller in size than generation that would be built to meet the needs of the NEM. Specifically, the AEMC commented that renewable generation could be disadvantaged[6]:

> "Due to the characteristics of the fuel resources for renewable generation, its entry is likely to be clustered in certain geographic areas. In most cases these areas are expected to be remote from the shared network. This is because suitable wind, solar or geothermal sites are often remote from the network.
> ...
> Given the size of the assets required to connect some forms of renewable generation, and the economies of scale available in network provision, the cost impact on customers from such inefficiencies may be large."

There is no doubt that in the absence of the proposed rule change, the eRET policy will still operate, but the AEMC view is that, **based on a (partial) qualitative assessment only**, it concludes that some renewable energy generation prospects might not proceed due to high costs of connection in relation to the amount of generation they might provide. To overcome this disadvantage for some renewable generation, it proposed that consumers underwrite the development of generation "hubs" because it is considered unreasonable by the AEMC to require a TNSP to incur such a risk of deliberate over sizing of the connection assets (to allow for future generation assets to connect) should the expected additional generation either does not eventuate or is late in connecting.

However, this assessment overlooks the fact that renewable generation has its own incentives. Firstly, there is a policy edict that a certain proportion of all generation must be from renewable sources. This is a significant incentive in its own right, Secondly, there is a penalty imposed if the amount of renewable

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[6] AEMC Final Report Review of Energy Market Frameworks in light of Climate Change Policies 30 September 2009 pages 14 and 15

generation is not provided, and as this penalty is set by the government it can be seen that this means that the required amount of renewable generation must be provided almost regardless of the cost to achieve this outcome[7].

If renewable generation has its own financial rewards embedded in its cost structure, it is feasible that this premium will be sufficient to accommodate the costs of a connection to the shared network. Therefore, in the case of renewable generation options, a low cost renewable generation option located far from the shared network needs to be balanced by a higher cost renewable option which is located closer to the shared network. This then raises the question why it is necessary to give any renewable generation a locational benefit vis-a-vis another option.

2.2 There is a loss of competitive neutrality

What this proposal does, is to give more distant renewable generation a benefit which will not be enjoyed by renewable generation located nearer to the shared network. Locational signals for generation location should be the same for all, and not give a benefit to just some projects.

The MEU can see that a number of smaller generators all located far from the shared network might provide an overall lower “all up” cost for consumers if the costs for the connection assets were shared between a number of renewable generators, but there is a risk that providing some renewable generation such a benefit might breach the requirement for competitive neutrality between generators.

The National Electricity Law and the associated rules require that any decision made to change the rules must ensure that competitive neutrality is maintained. The proposal as it stands will allow the market managers (AEMO and AER) and TNSPs an ability to determine where a new generation “hub” might be, and for those generators located in the vicinity, to be provided a significant benefit not enjoyed by a renewable generator which desires (or has) to locate away from the shared network and the new hub.

What this proposal does is to give distant generation near an independently identified hub a commercial benefit compared to a renewable generator located closer to the shared network or one not able to locate near the hub or the shared network.

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[7] It is recognised that failure to achieve the set percentage of renewable generation will result in the application of a penalty, which caps the financial risk exposure to the cost of renewable generation. If all parties elected to incur the financial penalty rather than have the requisite amount of renewable generation, then the government has the option of increasing the cap, thereby increasing the incentive to utilise renewable generation.

Such an approach is contrary to competitive neutrality and an alternative approach to solving the problem must be identified, and preferably one that does not expose consumers to significant costs and risks.

For example, the "hot rock" renewable technology would appear to have potential in northern South Australia. The "hub" approach would look to identifying if there is potentially enough "hot rock" generation in northern SA to warrant the building of a hub. If there is a decision to build the hub, then these hot rock projects will get a benefit. However, there is also significant wind generation available in SA. Wind generation located on the western side of Eyre Peninsula might be less expensive than the hot rock generation but would not get the commercial benefit of the "hub" proposal, and therefore making the wind option less commercially viable than the "hot rock" generation which gets the hub.

Yet the hub proposal is an option funded by consumers (who have no involvement in the decision-making) giving a benefit to one group of generators and not another.

2.3 All generation benefits, not just renewable generation

What is most concerning is that although the focus of the recommendation is in relation to renewable generation and its unique features, any generation of any size will be permitted to connect to these consumer-subsidised "hubs".

This is despite the AEMC stating in its First Interim Report on the impact of climate change (pages 36 and 37):

> "New gas-fired generation plant factor into their location decisions the direct costs of connecting to both the gas and electricity networks. These bilateral negotiation processes provide an efficient locational price signal as the new plant can factor into its location decision the relative direct connection costs to each energy network. Location decisions may also be informed by the level of congestion on both the gas and electricity networks, but this is a separate consideration and not a direct cost contributable to connection to the energy networks. We consider the effect of congestion on location decisions in Issue 6.
>
> The bilateral negotiation arrangements in place for gas and electricity connections provide efficient locational signals. These arrangements require a connecting party to pay the direct connection costs to each [of] the gas and electricity networks, ensuring the new generation plant factors the relative connection costs in its location decision. While there was little consensus among submissions about whether the different regulatory regimes for gas and electricity skewed locational decision-making, we consider the implications for "access arrangements" on locational decisions in chapter A6."

This clearly shows that the AEMC considers that the existing rules adequately provide locational signals for large conventionally fired generation. Yet the rule change will allow large conventionally fired generation to use the "hubs" which the AEMC considered was not needed for this class of generation.

Whilst allowing any generation to connect might reduce the risks consumers face, the **principle** behind the proposal is for renewable generation to become viable, and not provide a "free ride" for conventional generation to avoid the locational signals implicit in the existing rules.

In effect, the AEMC has made a recommendation (the Climate Change Report) to the MCE under the guise that there is a need to make eRET more effective, but which has the potential to reduce significantly locational signals for all conventional generation as well. That is, this is a rule change introduced for one purpose (to benefit renewable generation) but which has a much wider and distortionary effect than it ostensibly proposes to address (as conventional generation will benefit as well).

Thus the issue of loss of competitive neutrality has an even greater impact as it reduces competitive neutrality between all generators. That this might be the case is easy to foresee.

Using the same example as before where there is a decision to provide a hub to service the hot rock technology in northern SA, it is noted that significant amounts of natural gas are located in northern SA as well. Building a transmission hub in this location would provide potential gas generation an opportunity to connect to the SA regional market that it currently does not have due to the costs of gas transport. This gas generation may "bump" renewable generation opportunities out of contention by using up the excess capacity initially intended for renewable generation. Thus a conventional fuel has gained a benefit not available to its gas fired competitors and at the same time locked out the renewable generation that the rule change is supposed to assist.

2.3 What is the risk consumers' face?

The proposal assumes that:

- The connecting generators will be too small to warrant imposition of the standard requirement that generators must locate in the most efficient place as they bear the costs of connection
- The concept meets the NEO as it avoids the risk of duplication of assets and therefore consumers will get more efficient transport services and eventually will get lower delivered energy prices in the long term.

To receive this benefit, consumers bear the cost of providing oversized assets until sufficient additional generation connects to these oversized assets. In addition, consumers face two other main risks – that the surplus capacity might

never be used (ie stranding of this excess capacity) or that the additional generation connects later than planned (greater holding costs for this excess capacity than was anticipated by AEMO and AER).

The proposed rule change is predicated on the **assumption** that although consumers will bear increased risk and higher network costs, there will be a benefit flowing from the assumption of this cost and the risks associated.

Neither the rule change proposal nor the discussion paper makes any attempt to prove that there will be a net benefit from the proposal.

A key tenet of the network rules, is that the NSP must identify the lowest cost option to achieve the outcomes for a given investment project. Rule 5.6.5B details the requirements[8] that must be followed by a proponent for a transmission investment to proceed. This proposed rule change implements a fundamental shift in risk and cost. As such, as with other investment proposals, this rule change should seek to follow the requirements of the rules in relation to any transmission investment.

Before such a change should be permitted, the following elements of the principles of transmission investment should be addressed by the proponent as they provide a clear guide as to what is necessary to show that there is a net benefit of the change. Specifically, the proposal should include why the proposed option is the most credible for implementation and that a cost-benefit analysis of the most reasonable scenarios demonstrates that this option is the most credible.

> "(b) The purpose of the *regulatory investment test for transmission* is to identify the *credible option* that maximises the present value of net economic benefit to all those who produce, consume and transport electricity in the *market* (the *preferred option*).
> (c) The *regulatory investment test for transmission* must:
> (1) be based on a cost-benefit analysis that is to include an assessment of reasonable scenarios of future supply and demand if each *credible option* were implemented compared to the situation where no option is implemented;"

Whilst it is accepted that this rule change is not a specific project proposal from a TNSP, it should still identify what other options have been reviewed and should attempt to quantify that there is a net positive benefit from the proposal.

The AEMC Climate Change Final Report to the MCE on the impact of climate change policies does not even attempt to identify whether there

[8] The full listing of the principles for the regulatory investment test are included in appendix 1

are other credible options to achieve the same outcome, nor does it provide any proof that there will be a positive net benefit to consumers from its implementation, other than just stating that this is the case. This AEMC assertion is not supported by any quantification of the costs and benefits

The MCE rule proposal is entirely based around the assumption that the proposal reduces the risk of duplication in connection assets and therefore consumers benefit from more efficient energy prices. The MCE accepts (page 6) the unproven and unsubstantiated assertion made by the AEMC that:

> "...the benefits of the new framework are likely to outweigh the costs".

The MCE goes on to state that:

> "In the absence of this framework ... there is a likelihood of connections being planned and built independently at much higher total cost to customers ... because the costs associated with inefficient connection assets for clusters of new generation is likely to be substantial."

There is an incorrect statement made by the MCE in the rule change proposal. It states that inefficient connection assets for clusters of generation will be "...at a much higher cost to customers..." with the implication this will be a cost for consumers. This is not only incorrect but a misleading statement.

Inefficient network connections will be a cost to generators, not consumers. The only way that these inefficient costs will be passed onto consumers is if the cost of the new generation that needs these "hubs" to be viable, must be dispatched at their marginal cost. These generators will be part of the overall mix of generation used in each region and the cost of generation to consumers will be set by the most efficient generation available at any one time. Thus the loss of efficiency in network connection has only an indirect impact on the costs that consumers will carry, yet the proposed rule change makes a very definite requirement that consumers will carry the costs and risks of the unused capacity of the SENE.

Neither the AEMC nor the MCE have quantified the cost for consumers of these inefficient network connections, and this might be because it will be the generators that pay them will receive a reduced return or will elect to connect to the network in a less expensive location, recognising the impact of the locational signals.

The MEU does not disagree that, where clusters of generation might occur, efficiency would dictate that common assets should be used. Where the MEU

disagrees with the MCE (because no one has made the effort to prove it) is that there has not been an effort to show that:

- Consumers will in fact incur increased costs, rather than generators having reduced profits
- The current rules do not provide sufficient control and flexibility to allow the efficient connection of a number of small generators in the same location
- There is not a more credible method for achieving the benefits the MCE desires for allowing small renewable generators to connect efficiently to the network
- The proof that the generators that will benefit from this "cluster connection" will deliver a more efficient outcome than other generation options not given the benefit of the cluster connection

The driving assumption made by the AEMC and MCE to substantiate the need for the rule change is that the generation that will benefit from their proposal is small renewable generation. In fact, the proposal makes no differentiation between renewable generation and conventional generation options and therefore the proposal has the potential to require consumers to provide a benefit to large generators and those using non-renewable fuels.

Nor does the proposal differentiate between the cost structures for small renewable generation options near to the shared network and those more remote, by removing the generation locational signals that are a core feature of the rules.

2.4 Summary

Essentially, the proposed rule change revolves around the AEMC and MCE deciding that the concept of providing scale efficient network extensions is "a jolly good idea" but both have failed to examine options in **detail** and whether the **costs** involved will be offset by **savings** to consumers.

The lack of rigour in detailing the effects of the proposed rule change is clearly demonstrable and this lack of rigour is typified by such essential elements as:

- **What are the benefits of the proposal to consumers and what is the quantum, bearing in mind that the NEO requires the outcome to be assessed in relation to the long term benefit to consumers (not customers of TNSPs which the MCE uses to substantiate its need for the change).**
- **The cost of inefficient network connections for small renewable generation will be a cost to those generators but there is no clear association that this cost will be passed onto consumers, as the generators using these "inefficient" network connections**

still have to operate in the competitive generation supply market.

- **How is the loss of competitive neutrality to be managed as some generators get the commercial benefit of a SENE but others don't?**
- **At what size of generation should there be no SENE applicable**
- **How much generation is necessary to be connected to trigger a decision to build an SENE.**
- **Should large conventionally fired generators be allowed to benefit from this concept, which was intended only to allow for multiple small renewable generators to be exposed to a share of the connection costs?**
- **Over what outlook period should the SENE assessment for likely new generation connection options be carried out, as this has a major bearing on the sizing of the SENE and the risks and costs consumers will have to carry.**

Before allowing the rule change to be implemented these issues must be addressed.

3. Options examined by AEMC

The AEMC did look at broad options for encouragement of small generation in its first Interim Report on the impact of climate change policies. These options were (pages 40 and 41):

Option 1 Maintain the existing bilateral negotiations but allow the TNSPs to declare an "open season" for new connections in a specified geographical area.

Option 2 Create hubs for new connections with these new hubs (called Network Extensions for Remote Generation – NERG) with these sized to allow for estimated future generation capacity, with consumers paying for any unused capacity but generators paying "for their share" of usage of the NERG. The NERG would have to pass an economic efficiency test and the extension would be approved capex under the contingent capex approach

Option 3 As for option 2, but with the decision for the NERG to proceed made by the National Transmission Planner (AEMO)

Option 4 As for option 3, but the NERG would be fully funded by consumers as part of the shared network

The option for remaining as is, was discarded and received the following observations as a reason for its discard.

> "There are some fundamental elements of the existing energy market frameworks that are unlikely to deliver timely and efficient generation connections. The incentives introduced by the expanded RET are likely to heighten the issues related to the ability of TNSPs to process efficiently the expected large numbers of connection applications,
> (i.e. due to large investment in wind farms). The issues include:
>
> - The current framework may hinder commercial certainty and inefficiently increase investment costs for remote generation. This may be exacerbated where there are multiple connecting parties in the same place at the same time or the potential for future connection applications in the same areas as existing generation.
> - The existing bilateral negotiation framework for connections between the TNSP and the connecting party may struggle to deliver efficient and timely investment for remote generation. This issue, however, was not considered a problem for the ongoing connection of new thermal plant.
>
> The reasoning for these conclusions is presented in the following sections."

As is noted in section 2.3, the driver for considering the need for this rule change, is to allow for the impact of climate change policies, especially the need for many small renewable generation plants being required to meet the renewable target. Yet the rule change will allow any new generation large or small, renewable or conventional to connect to the NERGs as discussed in section 2.3.

Options 2, 3 and 4 are all similar but vary the approach and levels of exposure consumers face to the proposal. Option 1 does provide a solution which does not expose consumers to increased network costs, but the AEMC rejects this in its Second Interim Report on the impact of climate change policies (page 22)

> "While Option 1 has the desirable feature of allowing for co-ordination amongst generators ready to connect at the same time, we do not consider it will efficiently accommodate future generation capacity. This view was supported by a number of submissions which indicated that Option 1 could increase the costs of meeting climate change policy objectives because of multiple lines being built incrementally over time. In addition, submissions indicated that Option 1 lacked a strategic approach to network connections. In the absence of a strategic approach it was considered that the efficiency of new generation entry would be compromised."

The AEMC drew this conclusion from submissions made by those parties that do not have to pay for the network extensions and by generators who have a clear incentive to have these costs and risks carried by consumers.

The reference to the option lacking a strategic approach is particularly of interest, especially when it is considered that all generation (not just small renewable generation which is the focus of the change) will benefit from consumers carrying the risks and costs associated with the SENE and the associated generator locational decisions.

What has not been considered in the proposal, or by the AEMC, is what is the timeframe that these "strategic approaches" might take place over? For example, over what period is the decision maker allowing the SENE to be built, to be calculated? This is a key aspect as the window of opportunity for deciding what new generation is likely to connect, becomes a critical element of any analysis to support or deny the work.

Timing is critical. To determine the carrying capacity of the SENE, will require an assessment of what new generation is likely to connect and when. Yet over what period of outlook will be allowed to assess what cost is to be allowed to give an efficient outcome? If all generation options for connection to a SENE are to be identified in a 12 month period, then the SENE design and cost will be different to one that is assessed over a 12 year period for possible new generation options. The risks for consumers for a SENE based on a 12 month outlook are much less than for the 12 year outlook. Despite the obviously

different outcomes for the two outlook periods, the AEMC and MCE have concluded that these risks and costs are offset by the (very loosely defined and not even costed) benefits. The longer the outlook period, the higher the risks, especially including policy change risks.

When the extent of the window of opportunity is considered, this raises the potential of one option that was not considered.

Since the AEMC delivered its report to the MCE, the transmission businesses (Grid Australia) sought a rule change to reduce the requirements for confidentiality in relation to new connections. This rule change proposal was promulgated on 12 November 2009 and therefore was not considered by the AEMC as part of its climate change policy review.

What this change in confidentiality allows is for TNSPs to make better assessments as to where there is potential for new connections to be "commoned" and for new connections to be shared creating more efficient connections. To a degree this option has similarities to option 1 above, but where option 1 is derided by the AEMC as not being strategic, this new option has the ability to recognise where serious interest has been expressed in a new connection, and for the TNSP to evaluate the potential for additional connections likely to occur in a defined outlook period. This regulatory test approach would be overseen by the AER as the provision of these connection assets would be part of the normal capex approval process.

3.1 The MEU option

The MEU considers that with the relieving of the confidentiality constraints on TNSPs this provides a better basis to develop a methodology for providing multiple small renewable generators with a scale efficient network connection.

Following such a path will avoid the broad brush approach suggested by MCE and AEMC which patently has a number of quite negative aspects (summarized in section 2.4 above) and should provide a better outcome for consumers by them not having as much risk and cost exposure to the SENE.

Under the current rules the AER already has the power to allow a TNSP capex to provide an augmentation of the shared network which will take some years to fully utilise all of the capacity being provided. Therefore it is possible for the AER to allow a TNSP to incorporate a common network connection for a number of small renewable generators where some of the capacity is not immediately utilised, but will be in a nominated number of years.

The MEU is convinced that the proposed rule change is not needed, but if it is decided that there is a need to encourage small renewable generation options by providing a SENE connection then there needs to be some controls set so that unintended consequences are avoided. In particular,

if consumers are to carry additional costs and risks, these need to be proscribed by the imposition of some scoping controls which the AER must comply with when assessing a TNSP capex proposal for aggregating a number of small generator connections. These would include:

- When a TNSP is requested by a qualifying generator for a network connection, the TNSP should seek advice as to whether there are likely to be more qualifying generation proposals for connection in the same locale. Based on the feedback, the TNSP should seek agreement from the AER (who might also seek AEMO input) to develop a SENE proposal
- Only renewable generation is to be allowed the SENE benefit (conventionally fired generation would remain exposed to the rules as they were before the climate change policies were introduced)
- Only generation up to a certain size (say 100 MW)[9] is allowed the SENE benefit (generation larger than this should be able to carry the costs associated with network connections as they have under the current rules)
- The network connection should be sized only for the number of new generators that are likely to be connected in that region in the following five years (allowing a term longer than this exposes consumers to too high a risk and costs)
- Once the five year period has expired and there is still unused capacity on the SENE, then the TNSP can sell this capacity to any generation option.
- The TNSP must only build the minimum connection assets initially needed by those generators actually connecting. Such assets would include conductor towers, stringing a single circuit (a second circuit would follow as additional generators join), switchyards (but only fitted out with transformers and switchgear needed for the initial generators) etc. Additional assets would be added when firm commitments are received for connection from the later generators.
- Generators would pay from the start their full share of the SENE. For example, if the SENE was sized for 500 MW, a 100 MW generator connected would pay 20% of the full cost of the SENE as designed.

There is an argument that the cost of the surplus SENE capacity could be levied on all generators as part of their connection costs, but as the other generators are not beneficiaries of the SENE, nor the causers of it, then they should not have to pay.

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[9] The MEU suggests this value as it has seen there a number of renewable generation projects already built which are of this size. This indicates that the current rules provide adequate commercial access for larger renewable generation options.

The real causer of the SENE costs is the government which introduced the eRET scheme and CPRS, but the AEMC does not have the power to implement this, although MCE could attempt to achieve this.

Pragmatically consumers will have to bear the cost of the surplus capacity of SENE, and the MEU proposal considers that if the SENE must be implemented, than the MEU approach minimises the risks and costs to consumers.

The MEU approach would still maintain the integrity of the locational signals for generators and the only rules that need to be modified would be to allow the AER some scope to allow a TNSP capex which requires some time to recover its full benefit from consumers.

4. Response to the specific questions raised

Question 1 Will the proposed framework improve efficiency in the construction of connection assets?

The MEU accepts the principle that a number of small network connections will cost more than a single larger one. Equally, the MEU also sees that there is a point at which a generator is large enough to be able to fund its own connection to the network. The current rules require this explicitly as a locational signal to new generation.

The proposed rule would weaken the locational signals to generators, and as the proposed rule makes no differentiation between small renewable generation (which is the reason for the proposed rule change) and all other generation, the proposed rule would have a much wider effect that that intended by the premise small renewable generation requires assistance.

The MEU points out that renewable generation already enjoys a price premium (for the sale of RECs) and questions why further assistance is needed.

What the proposed rule will do is reduce the competitive neutrality which underpins the NEL, as it provides some generators (those which get an SENE) with a benefit not enjoyed by other generators (those where an SENE is not provided). On this basis, overall market efficiency is reduced.

On balance, the MEU is not convinced that the proposed rule will improve overall market efficiency although it will provide some improved network efficiency for some generators but not others.

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

The MEU does not consider that the proposed rule will increase overall market efficiency as it creates unnecessary distortions and inequalities. The basic premise supporting the proposed rule, is that small renewable generation might not be built due to the high connection costs if the renewable generation is located remote to the shared network.

This might be the case, but other small renewable generation might be built which is closer to the shared network and would therefore provide a more efficient outcome than incurring unnecessary costs to provide access to remote generation. The implication of the proposal is that unless some assistance is given to small remote renewable generation to connect to the share network, then the costs to consumers for the provision of renewable generation will be

lower. Unfortunately the AEMC and MCE do not provide facts to back up this contention.

The MEU considers that the major problem in the introduction of large amounts of renewable generation into the NEM is that, because much of the renewable generation is intermittent, there will be greater congestion on the shared network but this issue is not addressed by the proposed rule.

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

As no one has attempted to quantify the costs this question cannot be answered. The AEMC has provided one (very limited) example in its second Interim Report on the impact of climate change policies, which shows that there will be savings by combining four generators onto one network connection rather than having four separate feeders (see page 14 and appendix E), but such an outcome (which is simplistic and conceptual) is to be expected. What AEMC does not do is assess whether these four generators would still be competitive compared to other renewable options even if they had separate connections. Also, is the framework proposed in the rule change applicable only to this example?

As the proposed rule has much wider effect than for just small renewable generation options (it allows all generation – renewable and conventional – of any size to benefit from the change), it is probable that the inefficiencies caused by the proposed rule are much wider than intended and will create other significant inefficiencies and inequalities that will undermine the market principles.

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

If the proposed rule only applied to small renewable generation, the MEU sees that there might be some improvement of network efficiency, but that this improvement might be offset by a number of introduced inefficiencies such as a reduction in competitive neutrality. Further, the proposed rule does introduce some, possibly unintended, distortions which will reduce the overall market efficiency.

As detailed in the foregoing sections, the MEU sees that the proposed rule has a much wider effect than intended by attempting to provide a more efficient outcome for small renewable generation. In particular, it weakens the entire approach to generation locational signals that are a fundamental principle in the NEM.

The MEU considers that this proposed rule change review must address the whole of the market and not just a small element. Based on this the MEU considers that the detriments of the proposed rule outweigh any benefits.

Question 2 Will SENEs be efficiently sized and located so as to minimise risk to consumers?

The MEU considers that there is no guarantee that this will occur, as there has been no attempt to set any parameters around what the rule is intended to achieve.

In section 3.1, the MEU provides an indication of what parameters should be set around the rule if it is to provide the sought-after outcome. As currently written the proposed rule does not constrain the application of SENEs to just benefit small renewable generation which is the focus of the perceived need of the rule.

Unless some controls are set to limit the scope of SENEs then the risks and costs to consumers will not be contained to efficient sizes and locations.

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

The MEU considers that TNSPs have generally exhibited approaches that do result in efficient outcomes. However, in the absence of parameters such as those proposed by the MEU in section 3.1, there is little constraint as to what is considered to provide a balance between consumers funding generator connections, and providing support for small renewable generation that might not be commercial if it has to pay for a stand alone connection.

It is appropriate to note that no one has quantified the net benefit of reducing the locational signals to generation (as the SENE will do) and the costs consumers will incur as a result, with the benefits that, by giving a select number of small renewable generators a commercial benefit, consumers can offset against the costs they incur.

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

The risk of asset stranding increases with the length of time the proponents of an SENE option allow for the inclusion of additional generation projects. The MEU suggests that there should be set a maximum window of opportunity to

include new generation into an SENE. The longer the window, the greater the risk that alternative renewable options will make those generation options underpinning the SENE less viable. The MEU suggests that the window of opportunity for inclusion should not exceed 5 years.

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

The MEU believes that the rule change does not minimise the risks and costs consumers will face if the rule change is implemented, nor does it consider that the benefits to small renewable generators of the rule change will offset the costs consumers will incur.

Question 3 Are alternative risk mitigation measures more appropriate?

The MEU recognises that the risks to consumers inherent in the SENE approach are significant as are the costs consumers will have to pay. In section 3.1 the MEU proposes an alternative approach to the proposed rule which puts less risk and cost to consumers.

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

The main beneficiaries of the proposed rule are the generators who are connected to the SENE. This reduces the costs of their projects and makes them more competitive compared to generators who do not have the benefit of an SENE.

The MCE proposal and the AEMC reports on the impact of climate change imply that ultimately consumers will benefit as the overall costs they will pay for electricity and RECs will be less because the generators benefitting from the SENEs will offer lower prices to the market.

This is a giant leap of faith.

In theory there should be relatively few small renewable generators using SENEs as the bulk should be able to be commercial without them. This means that the market price for energy and RECs will be set by other generators, and the commercial benefit consumers will get by funding the SENEs will be minimal if any as they will not set the market prices for energy or RECs. On this basis to assume consumers will be beneficiaries is not supportable. Neither the AEMC, nor MCE, have carried out any quantification of the benefit that consumers might get, nor has there been any quantification of the costs of the proposal, to demonstrate any net benefit.

Assets will only be stranded if the generators who advise they will be connecting to the network (and so provision is made for them) but then don't. This means that probably TNSPs are best able to manage the risk of asset stranding as they are the ones who determine the capacity of the SENE, will prepare the business case for it and ultimately will build the assets.

Whilst there is an implicit incentive in the current rules for TNSPs to oversize assets, the AER and AEMO would have input as to whether the proposed SENE is considered to meet the regulatory test, but it will be the TNSP that will have to prove the business case.

However, the current rules already place the onus on generators to provide a constraint on network oversizing of connection assets by TNSPs, and the MEU considers that the proposed rule weakens this power. As already stated the MEU considers generators should pay for their connections without consumers having to underwrite excess capacity, and this approach maintains pressure on TNSPs to provide what is needed and no more.

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

Yes. See section 3.1

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

The current rules provide a market based approach and this approach is preferred by the MEU. The MEU remains unconvinced that the benefits of the proposed rule outweigh the detriments to consumers

The proposed rule will move the market based approach into a regulatory based one as the regulator will determine if the business case meets the regulatory test. A TNSP will not build the asset unless it considers that it will get paid.

The current rules make it clear that the business case for the new generation connection is a cost that is incurred by the generator proponent. If the generator proponent considers that the total cost for the generation asset and the network connection is too great for the reward it might get, then the generator proponent will not proceed with the option and will look at another generation option that meet its investment hurdles.

The MEU considers that the current rules provides appropriate signals for investment and generation location and the proposed rule will dilute these from being market driven to being one influenced by regulatory decision making. The introduction of reducing of confidentiality issues makes it more feasible that TNSPs and multiple generators can overcome the apparent network inefficiency raised by AEMC and MCE within the existing rules.

Question 4 Will generators be able to connect to the SENEs in the most efficient configuration?

The party best able to design the most efficient connection arrangement for more than one generator, is the TNSP. The TNSP will be overseen by the AER to ensure the TNSP has provided the most efficient connection arrangement for the number and location of the generators considered to be part of the SENE.

It is expected that generators would also have a view on the best configuration for them, but the MEU considers that the TNSP should be able to provide the best guidance on how to provide the most efficient arrangement for the connections.

As long as the TNSP provides a design for the connection that is equitable to all generators being considered to be part of the SENE (and the generators should be able to verify this) then the TNSP design is likely to be the most efficient arrangement.

However, the MEU considers that as a starting point, a hub and spoke arrangement is likely to provide the most efficient outcome in most instances.

4.1 Should the draft Rule allow for configurations other than a "hub and spoke"?

The rule should allow the TNSP to vary the design from the hub and spoke if this gives a more efficient outcome, subject to the approval of the AER.

4.2 If so, how could the charging arrangements best promote efficient locational decisions by generators and by NSPs in locating SENEs?

Elements of the shared section of the assets should be charged for in proportion to the capacity used by each of the generators on the shared elements, and full charges should apply to those elements used only by one generator.

If an arrangement different to the hub and spoke arrangement is used, then the principle of capacity providing the basis for sharing should still be applied, along with the value of the assets actually used by each generator. In this approach, the deliberately built excess capacity provided on any element of the SENE would be recovered from consumers.

4.3 Should the costs of the SENE be spread across all generators irrespective of where they locate?

The costs should be allocated as noted in the answer to question 4.2.

Question 5 Will capacity be efficiently allocated to connecting generators?

The decision to provide SENEs was an attempt to allow multiple small renewable generators to benefit from sharing costs. In the absence of such an SENE arrangement a generator would be entitled to the amount of firm capacity it contracted with the TNSP when the network connection arrangement was negotiated. Every attempt should be made to replicate this same outcome on the SENE.

Thus if the SENE is rated to carry 500 MW and there are five 100 MW generators expected to connect, then each generator would pay 20% of the cost of the SENE, even if every generator does not use all its capacity all the time. Just as consumers must pay for the maximum demand they make on a network, so too should generators, especially if they fund the connection asset, which is the ultimate expectation of the SENE.

5.1 Will the framework promote the efficient allocation of capacity on the SENE?

To ensure the outcomes reflect the intention, requires the rules to be specific as to what the cost sharing arrangements must be. The rules should espouse explicit principles for charging and the charging should be overseen by the regulator.

5.2 More generally, will the SENEs framework result in efficient outcomes in the wholesale market?

As noted frequently above, no one (including this discussion paper) has quantified the benefits of this proposed rule. All that has been stated is that by "reducing connection costs, SENEs should promote greater levels of new generation investment than might otherwise occur, reducing prices in the wholesale market by facilitating increased competition" (discussion paper page 21). This assumption has not been quantified to prove it will occur.

The MEU considers that:

1. Either the AEMC and MCE consider the proposed rule will be used widely and extensively causing large amounts of new generation to be built because of it, so that the increased amount of generation will be sufficient to have a market impact, or
2. The proposed rule will be used infrequently and for the purposes intended (ie for benefiting small renewable generation that would be uneconomic) where the amount of generation added to the market will be relatively insignificant, and as a result too little to have a significant market impact.

If the intention of the proposed rule is that there will be significant amounts of new generation added to the NEM fleet, then the proposed rule is not a result of the impact of climate change policies but a "back door" approach to require consumers to augment the shared network so that generator locational signals are all but eliminated.

If the intention of the proposed rule is as is stated to allow small renewable generation to be able to connect to the NEM, then the application of the proposed rule should be relatively modest and as a result have a limited if any impact on the wholesale market.

The MEU considers that the benefits of the SENE are modest for consumers but do provide a significant benefit to those generators which are able to use an SENE.

5.3 Could an interruptible generator connect to the SENE? If so, what arrangements would need to be in place to ensure the full cost of the SENE can be recovered?

Yes. It would pay for the peak capacity it uses, just as a consumer does even though its peak demand is infrequent.

Such an approach replicates the current approach to generator connections where a sole interruptible generator must pay for a connection which can carry its peak generation when required.

Question 6 How could loops to the shared network and load connections to SENEs best be accommodated?

An SENE is intended to replicate a network connection that would otherwise be provided to a single generator. As the generator funds the connection asset, it has firm capacity rights on that connection. If a TNSP built additional assets that created a loop for a single generator connection and that loop caused the generator to have reduced capacity rights, the generator would be entitled to claim compensation form the TNSP.

To avoid such an approach for an SENE would need the TNSP to treat the SENE just as it would a connection for a single generator.

The only exception might be where there is unused capacity on the SENE being funded by consumers. In this case the "spare" capacity is effectively part of the shared network.

In section 3.1 the MEU posited that there should be a fixed time window of 5 years where small renewable generators planning to join the SENE would retain the right to connect. After this time there should be "open season" for any new opportunity to utilise the spare capacity. Such uses would normally be a

conventional or large renewable generator, but it could also be a facility for the TNSP to utilise the spare capacity as an offset to full augmentation of the shared network.

If the spare capacity is used as an offset, then the TNSP would still have to ensure that the generators connected to the SENE still retained firm capacity rights as they have contracted to fund the construction of the connection asset.

6.1 Should SENEs be "ring fenced" from the shared network to enable the framework to operate? If so, should a time limit apply to such ring fencing arrangements?

As the assets are intended to provide firm capacity rights for the generators paying for these, then the SENE should be ring fenced for as long as those capacity rights apply. The capacity rights should be connected to the generation plant that caused the rights to be required and continue for as long as the connection contract applies.

6.2 Alternatively, how could SENEs best be incorporated into the shared network? In particular, how could the challenges arising from capacity rights to the former SENE best be addressed?

The MEU does not consider this to be a very likely scenario as a SENE is most likely to be constructed to have one entry into the share network. If a SENE does have two entry points at some time in the future, this should be addressed at the time, bearing in mind that a generator which has funded some or all of a network connection retains firm capacity rights for its contracted capacity.

5. MEU Views and conclusions

The eRET scheme is a policy decision of government and is the cause of the increase in renewable generation and CPRS is also a government policy decision with the aim of reducing carbon emissions into the atmosphere. Both have an impact on the energy markets, but more so on the electricity market. The AEMC concluded that both policies could be accommodated within the current market structures but some "tweaking" should be made to give better effect to the policies.

The MEU accepts this but makes very clear the distinction that it is not the markets that require adjustment to accommodate the policies but that the market structures could be modified to improve the outcomes of the policies. With this distinction in mind, the MEU has drawn the conclusion that the proposed rule is one that is not required to improve the market, but one which provides a benefit **outside** the energy markets. Therefore, energy consumers should not be required to accept increased costs and risks in the energy market to give better effect to issues outside the market.

There was extensive discussion in 2005 and 2006 about the need to make generators aware that their locational decisions impact the electricity market, and it was concluded that some generator locational signals were essential to ensure the optimum outcome for the electricity market as whole. This proposed rule will weaken these locational signals and will cause consumers increased costs and risks in relation to network costs. The core question that needs to be addressed is, does the change provide a compensating benefit that exceeds the costs and risks that will occur. No one, AEMC in its reports to the MCE, MCE in its proposed rule change, and the AEMC in its consultation paper, has quantified either the costs or the benefits.

Whist there is no doubt that as consumers will be funding some of the costs of every SENE and there is a real risk that these funds will ever be recovered, the only contention that a benefit will result to consumers, are the broad statements that there will be a saving by the avoidance of asset duplication for generator connections, and that this will translate into lower energy costs because generators will offer lower prices because their establishment costs are lower.

The MEU does not agree that this benefit will in fact flow.

> Firstly, the electricity market is a large one currently exceeding 40,000 MW of installed generating capacity and delivering over 200,000,000 MWh of electricity annually. Considering that there is already significant amount of renewable generation in the NEM to meet the eRET will require some 7% increase in total generation through renewable generation projects. Much of this will be through large renewable projects such as large windfarms which have already demonstrated they can fund significant network connection costs, and due to their size would

probably seek to have dedicated network connections to ensure their firmness of connection capacity.

Secondly, the energy market architecture is structured to be pro-competitive and the bulk of the electricity prices are set by large conventionally fired generation. To consider that a small number of renewable generators that will benefit from an SENE (and therefore having marginally lower connection costs from having a shared network connection) will cause sufficient pressure to reduce the bulk price of electricity (and thereby deliver a benefit) is a superficial proposition at best.

The AEMC final report on the impact of climate change (and stated in the interim reports) states that it is small renewable generation projects that need the assistance afforded by the proposed rule change. It is unlikely that the relatively small amount generation (in comparison to the total amount of generation in the NEM) benefitting from a SENE will provide sufficient new generation to impact on energy prices. The theory behind the AEMC and MCE assumption might seem sound but, in practice, when there is an attempt to quantify the benefit the results do not support the contention.

The NEO requires investment to be in the long term interests of consumers and as the NEL is predicated on efficiency being measured in economic terms, this proposed rule demonstrably will increase costs for consumers but is not proven to have clear benefits and therefore it does not meet the requirement there must be a net benefit from the change for consumers.

The proposed rule has not addressed other outcomes that will also impact the costs to consumers of the change:

1. Weakening locational signals for new generator investment will increase the risk of congestion on the shared network. Relieving congestion is a cost to consumers as they pay for the deep connection costs of new generation
2. Increasing congestion has the result of increasing spot prices for electricity, causing a cost to consumers
3. The proposed rule as written does not just provide a benefit for small renewable generation – ostensibly the reason for the proposed change – but will provide a benefit to large renewable and conventionally fired generation which was not the reason stated by AEMC for the need to change the rules.
4. The proposed rule provides a benefit to some generators (those able to use an SENE) but not other generators. This means there is a loss of competitive neutrality

5. There are no parameters set to proscribe which generators should benefit from an SENE although the proposal is based on providing support only to small renewable generation

The MEU has identified a number of detriments implicit in the proposed rule and has struggled to quantify what benefits might flow to compensate consumers.

The MEU has reviewed the current rules (as amended to address the issue of confidentiality) makes it possible for small renewable generators to pool resources in concert with TNSPs to achieve the same outcome as the proposed rule does, but without the need for consumers to accept increased network costs and increased risk.

As the proposed rule has more detriments than benefits (which have not been quantified) for consumers, and there is a credible alternative to meet the needs for small renewable generators, the MEU considers the AEMC should reject the proposed rule change.

APPENDIX 1

5.6.5B Regulatory investment test for transmission

Principles

(a) The *AER* must develop and *publish* the *regulatory investment test for transmission* in accordance with the *transmission consultation procedure* and this clause 5.6.5B.

(b) The purpose of the *regulatory investment test for transmission* is to identify the *credible option* that maximises the present value of net economic benefit to all those who produce, consume and transport electricity in the *market* (the *preferred option*). For the avoidance of doubt, a *preferred option* may, in the relevant circumstances, have a negative net economic benefit (that is, a net economic cost) where the *identified need* is for *reliability corrective action*.

(c) The *regulatory investment test for transmission* must:

(1) be based on a cost-benefit analysis that is to include an assessment of reasonable scenarios of future supply and demand if each *credible option* were implemented compared to the situation where no option is implemented;

(2) not require a level of analysis that is disproportionate to the scale and likely impact of each of the *credible options* being considered;

(3) be capable of being applied in a predictable, transparent and consistent manner;

(4) require the *Transmission Network Service Provider* to consider the following classes of market benefits that could be delivered by the *credible option*:

(i) changes in fuel consumption arising through different patterns of *generation dispatch*;

(ii) changes in voluntary *load* curtailment;

(iii) changes in involuntary *load shedding*, with the market benefit to be considered using a reasonable forecast of the value of electricity to consumers;

(iv) changes in costs for parties, other than the *Transmission Network Service Provider,* due to:

(A) differences in the timing of new *plant*;

(B) differences in capital costs; and

(C) differences in the operating and maintenance costs;

(v) differences in the timing of *transmission investment*;

(vi) changes in *network* losses;

(vii) changes in *ancillary services* costs;

(viii) competition benefits;

(ix) any additional option value (where this value has not already been included in the other classes of market benefits) gained or foregone

from implementing that *credible option* with respect to the likely future investment needs of the *market*; and

(x) other classes of market benefits that are:

(A) determined to be relevant by the *Transmission Network Service Provider* and agreed to by the *AER* in writing before the date the relevant *project specification consultation report* is made available to other parties under clause 5.6.6; or

(B) specified as a class of market benefit in the *regulatory investment test for transmission*;

(5) require a *Transmission Network Service Provider* to include a quantification of all classes of market benefits which are determined to be material in the *Transmission Network Service Provider's* reasonable opinion;

(6) require a *Transmission Network Service Provider* to consider all classes of market benefits as material unless it can, in the *project assessment draft report* or in respect of a proposed *preferred option* which is subject to the exemption contained in clause 5.6.6(y), in the *project specification consultation report*, provide reasons why:

(i) a particular class of market benefit is likely not to affect materially the outcome of the assessment of the *credible options* under the *regulatory investment test for transmission*; or

(ii) the estimated cost of undertaking the analysis to quantify the market benefit is likely to be disproportionate to the scale, size and potential benefits of each *credible option* being considered in the report;

(7) with respect to the classes of market benefits set out in subparagraphs (4)(ii) and (iii), ensure that, if the *credible option* is for *reliability corrective action*, the quantification assessment required by paragraph (5) will only apply insofar as the market benefit delivered by the *credible option* exceeds the minimum standard required *for reliability corrective action*;

(8) require the *Transmission Network Service Provider* to quantify the following classes of costs:

(i) costs incurred in constructing or providing the *credible option*;

(ii) operating and maintenance costs in respect of the *credible option*;

(iii) the cost of complying with laws, regulations and applicable administrative requirements in relation to the construction and operation of the *credible option*; and

(iv) any other class of costs that are:

(A) determined to be relevant by the *Transmission Network Service Provider* and agreed to by the *AER* in writing before the date the relevant *project specification consultation report* is made available to other parties under clause 5.6.6; or

(B) specified as a class of cost in the *regulatory investment test for transmission*;

(9) provide that any cost or market benefit which cannot be measured as a cost or market benefit to *Generators*, *Distribution Network Service Providers, Transmission Network Service Providers* or consumers of

electricity may not be included in any analysis under the *regulatory investment test for transmission*;

(10) specify:

(i) the method or methods permitted for estimating the magnitude of the different classes of market benefits;

(ii) the method or methods permitted for estimating the magnitude of the different classes of costs;

(iii) the method or methods permitted for estimating market benefits which may occur outside the *region* in which the *Transmission Network Service Provider's network* is located; and

(iv) the appropriate method and value for specific inputs, where relevant, for determining the discount rate or rates to be applied;

(11) specify that a sensitivity analysis is required of any modelling relating to the cost-benefit analysis; and

(12) reflect that the *credible option* that maximises the present value of net economic benefit to all those who produce, consume or transport electricity in the *market* may, in some circumstances, have a negative net economic benefit (that is, a net economic cost) where the *identified need* is for *reliability corrective action*