



**Australian Energy Markets Commission**

# **Transmission Frameworks Review**

## **Comments on the Issues Paper**

**Submission by**

**The Major Energy Users Inc**

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**A condition by the Consumer Advocacy Panel for making funding available to the MEU to provide this submission is a requirement imposed on it by the Ministerial Council on Energy.**

**This requirement is that this submission must be considered to be a draft until the MCE has the opportunity to review it for accuracies of fact. The MCE review takes two weeks and when MCE approval is granted, the MEU advises the AEMC of any changes to this submission that are required by the MCE.**

**The MCE SCO has reviewed the submission and required the addition of footnote 2 (page 9) and notes 4, 5 and 6 in the appendix 1. With these changes this submission is no longer a draft and may be published on the AEMC website.**

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## Executive Summary

The Major Energy Users Inc (MEU) welcomes the opportunity to provide comments on the AEMC's Issues Paper issued for consultation as part of the Transmission Frameworks Review.

The MEU supports the AEMC's stated intentions in respect of this Review for effective engagement of stakeholders and for an open and transparent process that will fully consider demand-side as well as supply-side issues.

Also supported is the intention to propose a long-term vision for the role of transmission, having regard to the National Electricity Objective (NEO) and the objective for transmission frameworks of minimising **total** system costs.

In this regard, the MEU notes, from the Second Reading Speech in respect of revisions to the National Electricity Law in 2007, that<sup>1</sup>:

“...Environmental and social objectives are better dealt with in other legislative instruments and policies which sit outside the National Electricity Law” . .

It goes to follow that the MEU considers that outcomes from this Review must not be the result of seeking to achieve social and environmental objectives, but be focused on ensuring the NEM Rules provide the least cost to consumers over the long term.

Energy intensive trade exposed industries have been reeling from the massive network charge increases arising from the latest round of economic regulatory pricing reviews of transmission and distribution networks, and this situation will become worse with the introduction of the expanded renewable energy targets and carbon emissions legislation. Because of this the AEMC must ensure that its Frameworks Review does not extend (as required by the NEO) to changing the principles and provisions in the Rules to accommodate environmental or social objectives, such as the recent AEMC initiated MCE rule change proposal for the Scale Efficient Network Extensions (SENE).

The recent massive increases in transmission and distribution network costs (e.g. Powerlink, 11% in 2008/09; Energy Australia, 18% in 2009/10) have their genesis in the AEMC-inspired Chapter 6A Rules applying to the regulation of transmission networks (with its key principles being extended into the regulation of distribution networks). These Rules have not only over-incentivised network investments – itself a major cause of increased network costs – but they have been made worse by proscribing the ability of the Australian Energy Regulator

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<sup>1</sup> South Australia House of Assembly, Hansard, Thursday 27 September 2007, page 964

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(AER) from implementing certain critical review functions, which has demonstrably resulted in large-scale inefficient investments in networks being approved and incorporated into network costs.

These Rules include:

- Removal of the AER's ability to optimise assets before they are rolled into the Regulatory Asset Base.
- Removal of the AER's ability to undertake ex-post prudency tests of new investments
- An unfettered ability to spend the ex ante capital expenditure allowance to suit the transmission network business.
- Automatic roll into the RAB of capex, regardless of whether the investment is inefficient or imprudent

The MEU is especially concerned that the cost implications of continuing with these unbalanced Rules, coupled with the significant costs likely to stem from the introduction of climate change policies, will raise the costs of doing business in this country to such an extent that the economic viability of many downstream industries will be threatened.

For example, the increased costs arising from new lower carbon generation plants and from new transmission and other network investments required to connect these generating plants will be quite unprecedented. These costs will be exacerbated, especially so, if the AER is constrained from optimising assets in the RAB such as, for example, the large amounts of expected significant levels of redundant network assets where currently consumers are expected to pay for these costs in perpetuity.

This Review presents perhaps the most significant opportunity to rebalance the existing Chapter 6A Rules to ensure **efficient** investments in transmission networks moving forward.

The MEU concurs with the Issues Paper that the Review must be made on a holistic basis. This means that all aspects of the Framework, including the extent of incentives for investment, must be addressed.

The MEU also considers that there needs to be an assessment of the current approach whereby the TNSPs (other than in Victoria) provide information to AEMO but decisions are made at the regional level. The MEU considers that, as in Victoria, AEMO should determine forecasts and decide on new investments to manage congestion, including inter-regional investments.

There needs to be a balance between increased maintenance costs of TNSPs and the impact that downtime causing supply loss has on consumers. At the

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moment there is little incentive on TNSPs to schedule maintenance when such has the least effect on reliability of supply.

The MEU agrees with the Issues paper that congestion is an issue that needs to be addressed in detail, and that better locational signals for generation and load are needed.

Finally the MEU is considerably disquieted by some aspects of the AEMC approach in their reviews of certain important issues. For example, in the AEMC development of the SENE, the AEMC approach was heavily reliant on conjecture rather than on hard quantitative assessments regarding a number of core elements.

Likewise, the AEMC used qualitative assessments in the development of the Chapter 6A rules when developing the incentives for transmission network investments. When deciding that further incentives were needed, the AEMC did not carry out any quantitative assessment of the cost implications that over incentivising investment might cause. The result has been a massive surge in investment of which the MEU expects a significant proportion is not efficient because of the “open door” nature of the incentives.

This submission provides responses to the specific questions raised in the Issues Paper. The submission also suggests additional issues that should be addressed, especially those seen from the standpoint of consumers.

## 1. Introduction

The Major Energy Users Inc (MEU) welcomes the opportunity to provide its comments on the AEMC's Transmission Frameworks Review Issues Paper.

The MEU notes and welcomes the AEMC's stated commitment to

“undertaking this review in an open and transparent manner”

and that

“Effective engagement with...stakeholders is essential to ensure that all issues are canvassed and addressed”.

Also welcomed is the following statement, viz:

“We note the MCE's support for the equal consideration of supply-side and demand-side options and implications as part of all future AEMC reviews. In the Transmission Frameworks Review, we intend to consider the arrangements applying to both generation and load, and this will therefore fully include the demand-side as well as the supply-side”.

The outcomes stemming from this Review will be very critical for the economic viability of major industrial users of energy and hence for existing and potential downstream investments and employment. In addition, it is noted that many small consumers are seeing massive increases in their electricity bills, and a significant proportion is experiencing hardship as a result.

This Review, therefore, presents the most significant opportunity to rebalance the existing transmission network revenue Rules to ensure efficient network investments and minimise the likely significant additional cost impacts that consumers face against the background of the implementation of climate change policies.

### 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.

Because the MEU members in many cases have their major manufacturing operations located in regional centres, the members require the MEU to ensure that its comments also reflect the needs of the many small businesses that depend on the existence of large manufacturing operations, and the many residential electricity consumers that make up the members' workforces and contractors.

## **1.2 The MEU view of the energy markets as a whole**

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

- Generator market power (e.g the AER has identified that Torrens Island Power Station in SA has market power when regional demand exceeds 2500 MW) and a significant contributor to this ability to exercise market power is that inter-regional connection is too weak
- Steeply rising transmission and distribution network prices – on average these will rise in real terms by ~50% over the next five years<sup>2</sup>
- The electricity market exhibits excessive volatility in electricity prices, and as a result retailers are including in retail price offerings, large risk premiums which are causing significant retail contract price increases
- Implementation of the proposed carbon emission reduction program (CPRS)
- Implementation of the 20% renewable electricity target (eRET)
- The indirect costs caused by the need to augment networks to meet the CPRS and eRET requirements
- Myriad other Federal and State Government renewable energy and climate change programs and 'initiatives', such as feed-in tariff schemes, climate change levies, energy efficiency programs, etc

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<sup>2</sup> Weighted annualised average increases for the three years 2010, 2011 and 2012 shown in the table in appendix 1 gives an increase of ~40%



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, a significant proportion of which is driven by myriad government interventions in a supposedly competitive market. This is having a ‘chilling’ effect on downstream investments and creating an environment where ability to pay is becoming a major issue for all consumers, ranging from large industrials facing international competition to small consumers, especially in the lowest income quintiles.

There are many fundamental flaws in the current transmission revenue and pricing framework and these are likely to be accentuated by the introduction of governmental policy interventions onto what is supposed to be a competitive independent market. The MEU considers that these are clearly higher priority issues for review than, for example, the issue of a cost re-allocation addressed by a recent proposed MCE rule change. With the proposed rule change lacking any quantification, for example, it is very unclear whether, on a value basis, this proposal should proceed ahead of more pressing issues<sup>3</sup>.

### **1.3 A general view on the monopoly elements of the electricity market**

MEU member companies have been significantly adversely affected by the current round of economic regulatory reviews of transmission and distribution network businesses, with network charges rising by between 30% and 50% in 2010 in NSW alone, with similar orders of magnitude increases being seen in Queensland and South Australia. The MEU sees further substantial increases in prospect over the balance of the current regulatory period.

With significant investments required in renewable and lower carbon generation and new transmission networks in prospect, arising from government imposed climate change policies, MEU members are very concerned that these be undertaken efficiently, in a timely manner, and at locations where they are needed.

If incentives are inappropriate and over-incentivised investments are made in transmission (and distribution) networks – as have been the case under the existing Rules – major industrial users of energy will face significantly higher but arguably unnecessary costs (and hence adversely affect their investments). Even more importantly the Australian economy will be incurring large dead weight losses.

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<sup>3</sup> For example, in the AEMC review of climate change policies, modelling by CRA ( “Updating the Comprehensive Reliability Review quantitative analysis to account for CPRS and MRET”, December 2008) indicated the potential for blackouts and brownouts in SA. However, even though the MEU expressed concerns on this issue, the Final AEMC report was silent on this aspect.

#### **1.4 About the Transmission Frameworks Review**

The AEMC has identified core issues that need to be addressed as part of this review, viz:

- Risks of inefficient transmission investment
- Generation investment uncertainty and congestion
- Risks of inefficient locational decisions.

The AEMC then points out that it intends to assess the transmission frameworks on a holistic basis taking a long term vision of the role played by transmission.

The Advisory Committee established by the AEMC for this review has listed its priorities as:

- The Review will consider the role of transmission, including the meeting of reliability standards and the wider role of transmission in facilitating market competition.
- The Review will take a “long view” of the transmission frameworks in light of a wide range of potential policy and technology developments.
- The Review will consider transmission framework implications for all participants, including TNSPs, generation and load (including demand side participation).
- The Review will focus on achieving system wide efficiencies. This will include consideration of what may be an efficient level of congestion, in a system wide context.
- The Review will acknowledge current reforms to the energy market which have recently been implemented, including the RIT-T and the establishment of the national transmission planning framework.
- Throughout the Review process, the Commission will be seeking clearly argued evidence-based submissions.

To a large degree the Advisory Committee goals tend to mirror the three core elements stated as the AEMC goals in the Issues Paper, but added to the Issues Paper goals, the Advisory Committee intends to examine the meeting of reliability standards.

The MEU considers that the AEMC cannot examine the transmission frameworks in isolation of the costs involved. Indeed, the National Electricity Objective requires that this must be the case. The Objective requires any

assessments to made in terms of the long term interests of consumers in relation to price, quality, safety, reliability and security.

In this regard, it is pertinent to highlight observations made in the Second Reading Speech when the National Electricity Law (NEL) was enacted in 2005. The Minister noted:

“The national electricity market objective in the new National Electricity Law is to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity, and the safety, reliability and security of the national electricity system.

The market objective is an economic concept and should be interpreted as such. For example, investment in and use of **electricity services will be efficient when services are supplied in the long run at least cost**, resources including infrastructure are used to deliver the greatest possible benefit and there is innovation and investment in response to changes in consumer needs and productive opportunities.

The long term interest of consumers of electricity requires the economic welfare of consumers, over the long term, to be maximised. If the National Electricity Market is efficient in an economic sense the long term economic interests of consumers in respect of price, quality, reliability, safety and security of electricity services will be maximised.”<sup>4</sup> (emphasis added)

The Objective was further refined in the Second Reading Speech to revisions made in the NEL in 2007.

“It is important to note that the National Electricity Objective does not extend to broader social and environmental objectives. The purpose of the National Electricity Law is to establish a framework to ensure the efficient operation of the National Electricity Market, efficient investment, and the effective regulation of electricity networks. As previously noted, the National Electricity Objective also guides the Australian Energy Market Commission and the Australian Energy Regulator in performing their functions. This should be guided by an objective of efficiency that is in the long term interest of consumers. **Environmental and social objectives are better dealt with in other legislative instruments and policies which sit outside the National Electricity Law**.”<sup>5</sup> (Emphasis added)

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<sup>4</sup> SA House of Assembly, Hansard Wednesday 9 February 2005, page 1452

<sup>5</sup> SA House of Assembly Hansard Thursday 27 September 2007, page 964

The clear import of these observations is that the intent of the Objective is that consumers are to pay the least cost for supplying the elements comprising the NEM and that environmental and social objectives are to be dealt with elsewhere, and not as a part of the NEM.

**This means that in addition to the three areas the AEMC identifies, it must address the transmission frameworks review so that the outcomes will result in the least cost to consumers and must not include costs that arise from achieving environmental or social objectives. This requires the AEMC to assess the likely costs to consumers that will result from any assessments the AEMC makes in this Review.**

When the AEMC established the Chapter 6A Rules applying to the regulation of the monopoly transmission elements, the AEMC decided that the previous Rules did not provide sufficient incentives for transmission businesses to invest in new transmission assets. To this end the AEMC introduced changes that:

- Removed the ability of the AER to require the transmission assets to be optimised to the actual needs of consumers and generators
- Removed the ability of the AER to assess ex post whether new investments are demonstrably efficient or prudent
- In introducing an ex ante capital expenditure allowance, this allows the transmission businesses to use the ex ante allowance in any way they see fit, and not necessarily to implement the activities the ex ante capital allowance was developed from
- Required the AER to accept what ever capital was expended in the previous regulatory period, regardless of whether the amount was “least cost” for the purpose or even whether the purpose was an acceptable use of the capital allowance
- Provided bonuses should there be outperformance of historical performance targets by the transmission business, even where these improvements were funded by increased capex and opex allowances.

The argument provided by the AEMC at the time in support of these measures, was that if the changes were not made, then the investment for the long term reliability and security of the NEM would not be made. This argument was advanced by the AEMC on a purely qualitative basis but there was no assessment made to identify if the changes would actually result in more efficient investment that had previously been demonstrated by the transmission businesses.

What was not addressed in quantitative (or real world) terms was whether the financial incentive provided by the return a transmission business would receive under the Rules would reflect the same drivers a business in a competitive environment needs to provide investment necessary for its business. In this

regard, it is important to note that a business operating in a competitive environment does not have the security or benefits provided by the five changes made to the Chapter 6A Rules noted above.

A very basic assumption was made that each of the transmission businesses was operating as if it were in competition, where in fact investments made by all transmission businesses are made mostly by government owned or controlled enterprises (Powerlink, TransGrid, VENCORP and Transend). ElectraNet (in SA) is the exception in that it is not government owned.

Despite this the financial rewards for transmission businesses are provided as if they were the average of all businesses listed on the ASX, even though they would be classed as “defensive” stocks with a highly predictable revenue. Defensive stocks are rated as having a lower return to offset the high certainty of revenue.

The outcomes from the regulatory reviews undertaken since the Chapter 6A rules were introduced have shown massive increases capital expenditure allowances. These are shown in Appendix 2.

So by providing transmission businesses with incentives not available to competitive industry but to reward them more than other “defensive” businesses receive is, in the view of MEU, to provide excessive incentives.

What this means that the Transmission Frameworks Review should closely examine the incentive regime offered to transmission businesses to assess whether, in providing the excessive incentives to transmission businesses, these Rules are driving efficient (not over or under) investments in networks and providing the “least cost” to consumers as is required by the NEO.

In regard to the issue of increasing consumer costs and risks as part of providing enhancements for renewable generation (such as the Scale Efficient Network Enhancements – SENE), both the Second Reading Speech (noted above) and accompanying statements provided by government, support the view that environmental objectives are not to be funded from within the NEM Rules.

For example, in the Australian Financial Review on 10 September 2010, it is reported<sup>6</sup>:

“In her letter [to Mr Katter] Ms Gillard said Labor committed during the election campaign to provide \$1 billion over a decade to connect renewable energy to the national power grid ...

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<sup>6</sup> Headline “Katter has his cake, eats it too” by Sophie Morris

Labor would provide up to \$185 million for the transmission line [between Mt Isa and Townsville] from 2012-17 ... from ... funding available under the Connecting Renewables initiative ...”

That such commitments by Government are being made only serves to reinforce the intention of the Objective as clarified in the Second Reading Speech in 2007, that environmental and social objectives are not to be funded under provisions of the National Electricity Law and Rules.

### **1.5 Summary**

**The MEU considers that, in addition to the three aspects it identifies in the Issues Paper, the AEMC must also address:**

- **Whether the current rules should be modified to provide a more balanced approach to incentives provided to transmission businesses**
- **Whether there are elements of the Rules (including new proposals) that increase costs and risks for consumers (arising from social and environmental objectives) that should be excluded from the Rules or modified, with the aim of having them addressed outside of the Rules, in accordance with the expressed intent of the NEL and NER.**

## 2. The MEU and Efficient Network Investment

The Second Reading Speeches for the 2005 and 2007 amendments to the NEL makes it clear that efficient network investment will be where the required reliability of supply is maintained and which delivers the least cost to consumers.

As noted in section 1 above, consumers have seen transmission prices rise dramatically over the past decade, in some cases doubling in prices. The Issues Paper points to this being a result of the need for renewal of aged assets and for increased demand. The Issues Paper goes on to observe that new large scale entry and exit in generation will place significant pressures on the ability of transmission businesses to respond efficiently.

Whilst the MEU acknowledges that there is some merit in the observations made, it considers that perhaps these are overstated. In particular, the overall incentives and the removal of the constraining influences on investment do not necessarily result in efficient investment – in fact the incentives for investment actually provide an environment encouraging over investment and this is an outcome that has been seen right across all electricity networks in the NEM – transmission and distribution.

### 2.1 Environmental objectives

Overshadowing the incentive for over investment, the MCE and AEMC have sought to increase investment in transmission to accommodate environmental objectives, such as those resulting from the renewable energy programs such as eRET and CPRS.

For example, the scale efficient network extensions are not needed within the NEM, but are seen as an adjunct to achieving greater penetration of the eRET scheme. In developing the SENE proposal the MCE and AEMC have undermined 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 as presented does not:

1. Recognise that competitive neutrality has been voided in that it will provide a benefit to some but not all generators

2. Quantify the costs and the benefits of the proposal and provides inadequate analytical and very limited empirical demonstration to support its contention
3. Fully investigate whether the change will mute locational signals for new generators and will more widely encourage all generators to seek to locate on SENEs rather than locate to the benefit of the network

As the Second Reading Speeches point out (see earlier), the MCE and AEMC should not seek to change the principles behind the NEM rules to accommodate environmental objectives.

A second example concerns the impact of the CPRS. However this scheme is finally implemented, the principle behind it is to reduce the amount of carbon emitted, probably by retiring high carbon emitting generation in favour of lower carbon emitting generation. The result of this will be that there will be significant amounts of transmission assets that will become redundant as a result of the changes to achieve this, and new transmission assets will be required to connect the new generation.

Additionally, there will be augmentation required of the shared network to reduce congestion that the introduction of the new generation will cause. Further, the introduction of intermittent generation requires the transmission networks to be oversized to accommodate large amounts of generation from wind and solar but for quite limited periods.

The NEM itself does not require these changes – ie the loss of used and useful coal burning generation, the introduction of new low carbon emitting generation such as gas fired, or the addition of renewable intermittent generation. These are all the result of environmental objectives, but the impact of these will be to cause large amounts of new transmission investment (where unit costs will rise because the assets will be under-utilised) that consumers are to pay for just to provide the ability to accommodate environmental objectives.

The Second Reading Speech for the 2007 NEL amendments quite explicitly precludes these costs being passed onto consumers under the NER provisions.

**The Issues Paper also fails to recognise that in the change from existing used and useful generation to new low carbon generation, there will be considerable amounts of transmission network assets that will become redundant. But the transmission rules (Chapter 6A) quite clearly stipulate that the AER cannot optimise assets in the regulatory asset base (RAB) nor can they excise redundant assets from the RAB.**

**This then poses three conundrums:**



- **Who will pay for the undepreciated element of the connection assets to generators that are no longer able to operate commercially in a low carbon electricity system? Certainly the generators won't because they have no revenue to pay for the assets. This leaves consumers to carry the costs if the transmission businesses are not required to accept the costs of redundant transmission assets.**
- **Who will pay for the surplus capacity on the shared transmission assets that will not be used any longer because the generators that used to provide power to them will no longer be operational? As before, consumers will have to bear the costs if the transmission businesses are not required to optimise their assets to match the needs of the electricity system.**
- **Who will pay for the fact that the massive new investments needed will be under-utilised because of the intermittent nature of renewable generation?**

**Against the above background, the MEU considers that this Review must rebalance the transmission Rules and remove the massive amounts of redundant capital from the Regulatory Asset base and ensure that consumers do not have to pay for these in perpetuity. This is consistent with the intent of the NEL and NER that social and environmental policy objectives be dealt with in other legislative instruments and policies which sit outside the NEL.**

## **2.2 Impact of change on end users**

All the above suggest:

- 1) Consumers are up for huge price increases
- 2) The importance of addressing ways to offset these costs
- 3) The importance of robust economic efficiency criteria being established.

At the same time as there is an expectation of massively increased investment in transmission, the NEM is also seeing a “flattening” and in some cases a fall in consumption<sup>7</sup> of electricity. This reduction in consumption means that unit costs for electricity (in terms of power used) will rise even without new investment.

Despite a fall in consumption, demand continues to rise. The Chapter 6A rules allow the costs of transmission to be more related to demand than consumption but the AER has allowed transmission businesses to continue to charge for most of the electricity in terms of consumption and therefore the signals to

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<sup>7</sup> For example, see recent AER revenue reset decisions in SA and Victoria

reduce demand are quite muted. Increasing signals to reflect demand rather than consumption will have the impact of allocating costs to those that cause the demand increases and will lead to a better utilisation of the transmission assets.

This Transmission Frameworks review should also address the signals consumers see so that the full impact of their usage patterns can be readily assessed..

### **2.3 Summary**

It is quite unfortunate that the Issues Paper focuses more on how the increased costs are to be managed than on how the costs arising from a reduction in the usage of assets will be managed. The clear implication of the Issues Paper, is that consumers are to bear these costs.

But if so, the AEMC needs to assess whether they have complied with the NEL intent that the costs consumers are to bear need to be efficient – that is to provide the least cost to consumers over the long term.

The Issues Paper points out that the review is to be addressed in a holistic manner. The MEU agrees with this approach. Yet in omitting the aspects of whether the current Rules (and prospective changes) will provide for an efficient outcome (ie least cost) for consumers such as:

- Removal of redundant assets
- Optimisation of assets
- What assets are required as a result of environmental objectives (and therefore funded external to the NEM Rules)
- What underlying principles in the NEM are being eroded in order to achieve objectives external to providing an efficient NEM
- Whether the incentives provided in the NEM Rules are excessive
- Stronger signals to consumers reflecting the usage pattern of power

The Issues Paper is only addressing half of the aspects that should be included in such a holistic review.

### 3. Challenges for Transmission Frameworks

#### 3.1 The Investment Challenge and Transmission Frameworks

The MEU notes the AEMC's comment:

"The service provided by transmission is governed by a range of national and jurisdictional legislation and instruments, including the Rules and subordination guidelines and procedures. In this document, we refer to these regulatory and market arrangements, collectively as transmission frameworks. These frameworks set out the detailed arrangements for investment in, and the funding, pricing and operation of, transmission networks." (AEMC, page 10).

The MEU has a long-standing view that the NEM will be well-served by the creation of a national grid body to plan, build and operate inter and intra transmission networks under a uniform, coherent and consistent set of legislation and regulations.

This concept, which was initially raised in 1992 by then Prime Minister, Paul Keating, deserves a reinvestigation. The fact that current arrangements, guidelines and procedures cut across a myriad range of national, State-based legislation and regulations and asset ownership is considered to be less efficient.

Take as an example AEMO's electricity statement of opportunity. In some States, AEMO is responsible, in conjunction with State bodies, for load projections and hence network investment needs. In other States, transmission companies are responsible for their States' load projections, and AEMO has a more passive role.

The MEU considers that a national, consistently coherent set of load projections will likely to be achieved by a national networks body responsible for forecasting, planning and operating a national transmission grid and on which to identify optimum growth for inter-regional connections.

Regional separations are increasing, thereby raising more concerns about the growing incidence of generators exercising market power in regions. The ACCC (in its recent decision on coinsurance arrangements for NSW generators) and the AER (in its State of the Energy Markets Reports 2008 and 2009) agree that this inter-regional separation leads to a situation that enhances the ability for the exercise of generator market power. Exercise of generator market power does not lead to the most efficient dispatch of generation, apart from the economic costs imposed on consumers.

The MEU recognises – as does the AEMC – that significant reforms to the transmission frameworks (such as the establishment of the NTP function in AEMO) have been enacted. We also consider that further reform is critical. For example, we agree that there will be the need to respond to current and likely future changes to policy settings to address climate change concerns and that these policies are likely to exacerbate the challenges facing the transmission sector.

One key aspect, of course, concerns the myriad range of Federal and State climate change policies and programs that really require a firm grip on impacts and consequences for the transmission sector, let alone for downstream investments that require clear and consistent views about transmission network capabilities, and outlooks.

However, the cost impact of these changes should not be passed onto consumers as a result of changing NEM Rules, as this distorts the NEM Rules to accommodate objectives external to the NEM. How to isolate the impact of these changes from the NEM should be an important part of this Review. In addition, the concept of a national grid body responsible for planning, building, and operating inter and intra transmission networks should be reinvestigated. The imperatives for doing so are obvious: the planning, investments, and implementation tasks are enormous and urgent in the light of implementation of climate change policies.

### **3.2 Impacts of Climate Change Policies on Energy Markets**

The MEU notes the AEMC's reference to two framework changes currently under review viz the SENE and inter-regional transmission charges. The AEMC states that it will take account of the progress of these initiatives, but then remained silent on the matter.

The MEU notes that those two reviews raised a number of fundamental principles that should really be assessed under the current "holistic" review, rather than partially in the two named reviews. These principles were raised by the MEU as follows:

- 1) Competitive neutrality between participants
- 2) The need to demonstrate a net economic benefit
- 3) The need for locational signals to generators and consumers to encourage efficient use of network assets.
- 4) The value of prioritisation of issues.

In addition, the Issues Paper raises the need to accommodate the potential increase in congestion as a result of climate change policies. Improved locational signals for generation is an issue that is needed in the Rules regardless of whether it is initiated as a result of climate change policies. As the

MEU pointed out to the AEMC when it developed the Chapter 6A Rules, the signals that the AEMC saw were needed (and then implemented) were extremely weak and did little to achieve the outcome sought. The MEU supports strengthening locational signals for generation so that they are commensurate with those end users see in the NEM.

An important review with wide ranging root and branch implications such as the current Transmission Frameworks Review, should surely begin with a statement of key principles. However, the Issues Paper merely recounts the outcomes sought to meet the objective of accommodating climate change policies.

### **3.3 Potential Impacts of Extreme Weather Events**

The MEU is cognisant of the impacts of extreme weather and generally these impacts can be and should be addressed within the NEM Rules. They are not policies imposed externally (such as eRET and CPRS) and therefore the Rules have to be able to accommodate such issues.

The main concern about the impact of extreme weather is that it affects reliability and security of supply. As the AEMC advised the MCE in its recent report on extreme weather impacts, the AEMC has introduced a number of refinements to the Rules in recent times which should make it possible for the NEM to better accommodate extreme weather events. These include better forecasting and reporting, and enabling AEMO to continue to use the Reserve Trader function. In particular, the expansion of the Reserve Trader function should enable better demand side participation in providing voluntary load shedding rather than using the more draconian involuntary rolling load shedding previously used.

Despite there being a number of extreme weather events in that past decade, the NEM has been able to manage these and still provide a service which is better than the agreed reliability standard.

In its report to the MCE on extreme weather, the AEMC points out that reliability of supply (as measured by Unserved Energy – USE) is only part of the issue of reliability. As the Objective is written in terms of consumers, reliability needs to be assessed in terms of the impact on consumers – that is, at the end of the supply chain of generation, transmission and distribution. Of all these elements, distribution is the most unreliable and therefore needs the most attention.

### **3.4 Summary**

The impact of climate change policies has been used to transfer to consumers costs which quite rightly belong to funding under environmental polices. Such

approaches include the new SENEs and augmented transmission lines which should be funded from other sources.

The emerging problems of extreme weather provide mixed messages for the Review. On one hand there will be needed more maintenance by TNSPs as extreme events cause damage and destruction. On the other hand the way the TNSPs operate the networks to maximise uptime at periods of high usage, has a significant impact of reliability for consumers. This means there is a need to optimise the costs of maintenance against the downstream impact on consumers for loss of supply.

## 4. Determining the Appropriate Role of Transmission

The MEU notes that:

- The AEMC is required to have regard to the NEO in every review or Rule change.
- The key objective of this review will be to assess whether the current transmission frameworks promote efficient outcomes across the supply chain.
- A key factor in the AEMC assessment will be to consider whether the existing frameworks meet the objective of ensuring that investment and operational decisions across generation and transmission are optimised in a manner that minimises the total system costs imposed on consumers.
- AEMC is encouraging respondents to identify those areas where transmission services are considered to be inadequate or would benefit from enhancement.

As noted above the MEU supports the view that the NEO should be the starting point for this Review. Having said that, the MEU also considers that in interpreting the NEO, the AEMC should have cognisance of the Second Reading Speeches which provide direction to interpretation. Essentially, the two Speeches provide two aspects that the AEMC needs to consider

1. That an efficient outcome must lead to the least cost for consumers over the long term
2. Objectives from social and environmental policies are not to be addressed within the NEM but are to be addressed externally.

The MEU is not convinced that the Issues Paper and previous decisions and recommendations of the AEMC have fully reflected these directions. More disconcertingly, is the casual attribution of the additional risks and costs to consumers.

### 4.1 The Objective

#### **Question 1      Application of the NEO**

**Do frameworks governing electricity transmission allow for the minimisation of total system costs and for overall efficient outcomes in accordance with the NEO? What evidence, if any, is there to demonstrate that this is or is not the case?**

**The MEU considers that the NEO is not being applied correctly.**

The MEU agrees that the NEO should be the basis for decision making but despite this the MEU has seen a number of less than efficient outcomes in the NEM. These are:

- 1) Islanding of NEM regions leading to price separations, price spikes and exercise of generator market power. The frequency of these is increasing and the ACCC and AER support this observation.
- 2) Inter-regional congestion and constraints are more frequent and there is an absence of new interconnection investments (reflecting lack of priority given by TNSPs who are more intra-regionally focussed) and the failure of the Regulatory Test to reflect the impact of these cost separations on consumers,
- 3) There are extremely muted locational signals for generators and the AER guidelines are not consistent with the intention of the AEMC Chapter 6A Rules to require the “causer” to pay.
- 4) Unit costs are rising. Peak demand is rising faster than consumption. This, combined with intermittent generation, has resulted in the need for more investment but a lower utilisation of transmission.
- 5) Proposals to accommodate environmental objectives (such as SENE) increases costs and risks to consumers.
- 6) The Chapter 6A Rules do not require the costs of redundant assets to be carried by the transmission businesses nor do they require assets to be optimised in the RAB
- 7) The WACC allowed for transmission businesses is attractive compared to the asset type and the asset/risk balance, increasing costs and risks for consumers.

As a result of not following the basics of the NEO, the current rules allow many inefficient outcomes that are not in the long term interests of consumers. Reiterating these:

- Network investment is over incentivised compared to incentives seen in a competitive environment. As a result network costs have increased massively but consumers have seen little benefit from the increased costs.
- Market power of generators is allowed to be exercised with few constraints and as a result consumers are paying less than efficient costs for generation supply. The most blatant example of this has been seen in recent years in South Australia
- Despite clear price signals occurring when separation between regions occurs, these price signals are ignored as a basis for investing in inter-regional assets. Consumers pay for the costs for transmission between regions yet augmentation is not occurring even though consumers incur the costs of the higher prices for power. This is not efficiency for the benefit of consumers



- The MCE and AEMC are directing that consumers pay for network augmentations to accommodate environmental objectives, against the expressed statement that such is not to be a cost under the NEM Rules.

#### **4.2 Interactions Between Framework Areas**

The MEU agrees that short and long term issues for transmission are interactive. The Issues Paper points out that short term issues can lead to congestion which constrains off some generation, which in turn might cause increases in generation prices for consumers.

Equally, the fact that generation locational signals are so muted generation can and does locate to suit its various needs. For example, the decision to increase the amount of wind generation to Snuggery substation in SA, has resulted in dispatchable generation also connected to Snuggery substation to be constrained off on a regular basis. That the dispatchable generation was built years before the wind generation was a result that the locational signals for the wind generator were so muted that they did not influence the decision to locate there. The incidence of the wind generation at Snuggery has also led to a reduction in transfers into SA from Victoria.

Although the locational signals for generation is not necessarily related to transmission frameworks, it highlights that this review has to examine other aspects of the Rules so that the most efficient NEM (Generation, transmission and distribution) is provided to consumers.

The Issues paper seems to concentrate on how transmission affects generation, the MEU considers that the review also needs to address how generation decisions impact on transmission and how these can be best managed.

Overall, congestion increases costs for consumers, but congestion can be caused not only by inadequate transmission but also by inappropriate generation location. This means that both aspects must be addressed.

#### **4.3 The Role of Transmissions**

##### **Question 2 The role of transmission**

**Is there a need to consider the appropriate future role of transmission in providing services to the competitive sectors of the NEM? What evidence, if any, is there to suggest that the existing service provided to facilitate the market, or the definition of this service, is inappropriate or insufficient?**

**The MEU considers that there a number of aspects of transmission that need to be addressed.**

The role of transmission is essentially twofold.

- Its primary purpose is to deliver power from generators to large load centres, where distribution provides dissemination to many consumers.
- Its secondary purpose is to provide a facility whereby there is overt and strong competition between generators, so that generation is delivered to consumers at the least cost.

In its purest form, the transmission system would provide a true national grid where there are no constraints so that all generators are always in competition. In practice, such an ideal is impracticable, so there is a need to balance the ability of the transmission network not to have any constraints with the benefits that having generation always in competition will bring.

When a constraint occurs, there is a requirement to dispatch a generator out of merit order (a cost to consumers) and to constrain off another generator that should be dispatched. When the constraint occurs within a region, the generator dispatched out of merit order sets the marginal price for the region. All consumers pay the price for power set by the marginal generator. The difference between the price that would apply absent the constraint, and the actual price is a net deadweight cost to the region. Because there is no nodal pricing within a region, these constraint costs are difficult to quantify.

This does not apply between regions. Here, when there is a constraint between regions, price separation occurs, and generators within the islanded region have less competition and in certain circumstances the largest generator in the region can unilaterally set the regional price. This generator is identified as not only having market power, but the opportunity to exercise it. Consumers in the islanded region will pay a price premium because the regional generators have less competition and so can increase their prices.

Relieving the constraint can provide a significant benefit to consumers which can be easily quantified by its relation to the price that applied before the constraint islanded the region. Just as an investor might decide to invest to provide new generation into a region which is frequently islanded, so too should consumers be able to invest in additional interconnection in order to reduce their costs.

The most obvious example of this occurring is between SA and Victoria. Here interconnection is frequently constrained at Heywood. When constraint occurs, the largest generator in SA (Torrens Island PS - TIPS) becomes the dominant generator and when regional demand exceeds 2500 MW<sup>8</sup> TIPS can and does set the regional price.

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<sup>8</sup> This is an assessment by the AER

Despite consumers being required to pay the price for power set unilaterally by TIPS without competition, the Regulatory Investment Test – Transmission (RIT-T) does not recognise that the savings consumers would make by augmenting the Heywood interconnection and so reducing the exercise of market power by TIPS, cannot be included in the benefits that such an augmentation would bring.

The other aspect of the role transmission plays, is that the NEM is intended to be national. In fact, the NEM comprises five regions with at least three regions (Queensland, NSW and Tasmania) having their own responsibility for forecasting and developing their own needs for their region. AEMO has responsibility for a number of functions in SA and Victoria (such as forecasting) but only in Victoria has it the responsibility of forecasting and investing in the transmission network to meet the needs of the region. No one entity has the responsibility to identify **and** invest to meet the inter-regional needs of the NEM.

What should be developed is a national grid concept where the forecasting and investment decisions are made centrally. This approach would result in a national, coherent, uniform and consistent approach that would be best for consumers and generators alike and will enhance:

- Load forecasting, as opposed to the current model of disparate methodologies and procedures by regionally based transmission entities
- Greater integration between NEM regions through enhanced responsiveness to dealing with congestion, constraints and islanding.

#### **4.4 Summary**

The MEU considers that the current approach to transmission does not comply with the requirements and intentions of the NEO. Specifically the MCE and AEMC have not recognised that the current Rules over-incentivise transmission businesses (contrary to the requirement to provide the least cost to consumers) and have proposed changes to the Rules to accommodate environmental objectives which the NEO is explicitly not required to accommodate.

The Review should address aspects where other Rule requirements impact the transmission frameworks.

Transmission plays an important role in maximising competition between generators but this has been minimised by the current approach to the RIT-T. Overall, transmission would be enhanced if forecasting and investment were centrally controlled, creating a truly national grid rather than a series of interconnected regions.

## 5. Key Issues for Efficient Investment

### 5.1 Objectives for Efficient Network and Generation

The AEMC's objectives as stated are very sound. From the MEU's perspective, the promotion of efficient investment is paramount but to be efficient this investment must be at least cost. Inefficient investment such as gold plating – is not in the interest of consumers, as the costs are all carried by consumers.

Inefficient investment also occurs when the assets are under-utilised or are partially or wholly redundant. This is a particular concern – as unit costs rise – in recent years with demand growth exceeding consumption growth because of peak demand needs for air-conditioning during the summer period. But an emerging concern is with network assets connecting remote wind farms to the (new) transmission nodes. These assets will be very substantially under-utilised and unit costs significantly higher per/MWh of electricity generated from these sources.

Inefficient investments also occur when investments in network solutions are the preferred response of TNSPs to managing or improving reliability, rather than looking at non-network alternatives. See box 1 article.

#### Box 1

The Australian Energy Regulator (AER) today released its investigation report into the compliance of TransGrid with clause 5.6.6 of the National Electricity Rules in regard to a proposed 330kV transmission line from Dumaresq to Lismore.

The Electricity Rules require an applicant who proposes to establish a new transmission asset to comply with various planning and consultation procedures, including the conduct of the Regulatory Test. These processes aim to ensure that planning for new investment is transparent and that consultation to elicit alternative proposals is effective. Further, they are designed to ensure that non-network alternatives (such as generation and demand management) are considered on a level playing field with network options.

The AER has found shortcomings in the process conducted by TransGrid in reaching its decision to build the line. Key areas of concern are that:

the application notice did not contain an adequate analysis of all reasonable network and non-network options

neither the application notice (April 2008) nor the final report (March 2009) adequately examined the potential for material inter-network impacts

the final report did not summarise or respond to submissions on the application notice

the decision to limit the Regulatory Test analysis to a single reasonable scenario was inadequately justified and did not meet the requirement to provide a detailed description on why TransGrid consider the asset passed the Regulatory Test.

The investigation report notes that TransGrid has now undertaken further consultation through the issue of a Request for Proposals (RFP) in May 2010 that sought non-network alternatives in the far north coast region. TransGrid has provided the AER with a series of commitments to improve future processes.

Given the importance of these issues, the AER has decided to issue this public report on the outcomes of this investigation on its website at the following address: <http://www.aer.gov.au/content/index.phtml?itemId=656186>. Source: AER

Efficient investments in networks are also enhanced by accurate, timely, credible and reliable information on load forecasts. In the MEU's views the AEMO electricity statement of opportunity could be enhanced through a more uniform, consistent and national approach

Efficient investments in networks also benefit from consistency in AER guidelines with AEMC Rules. Unfortunately, the processes the AER is required to follow in assessing capital investment prevent the AER from ensuring that investments are efficient. For example, the AER is required to allow a service provider to use its capital allowance (assessed on an ex ante basis) in any way it sees fit, without having the ability to assess the efficiency of the investment on an ex post basis. Whilst the use of an ex ante capital allowance has merit, its combination of there being no ex post assessment for efficiency and the automatic roll in of the actual capex, does not ensure that all investment is efficient<sup>9</sup>.

Even where a regulatory test demonstrates that an investment proposal (based on the forecast costs) is efficient, the service provider may overrun the cost allowance, but the AER is required to accept the actual expenditure and add this to the RAB. This does not result in efficient investment and provides a mechanism where a network provider can obviate the requirements of the NEO.

The Issues Paper goes on to state that efficient investment should allow generation plant to deliver reliable supply from generators to load at least cost. The MEU concurs with this sentiment yet points out that to ensure the least cost of generation, investment must be made to maximise competition between generators. If the lack of investment in the transmission system allows a

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<sup>9</sup> This issue has raised some disquiet as seen in the submission by the Victorian Minister for Energy and Resources (dated 18/8/2010) to the AER on its draft determination on Victorian electricity distribution networks pricing review. See <http://www.aer.gov.au/content/item.phtml?itemId=739495&nodeId=438b7c84fcbe1651c1185d9cab713470&fn=Submission%20-%20Victorian%20draft%20distribution%20determination%20-%20Minister%20for%20Energy%20and%20Resources.pdf>

generator to benefit from reduced competition, then the cost of transmission investment needs to be assessed against the benefit to consumers of maintaining or increasing competition. Unfortunately, the Regulatory Test does not include for this benefit to be included as a benefit.

The Issues Paper notes that (page 20):

“TNSPs should also trade off the cost of augmenting the network with the costs of managing congestion, noting that building out all constraints is unlikely to be efficient.”

The MEU agrees that building out all congestion is unlikely to be efficient, but the Regulatory Test, when assessing the cost of congestion, does not use the market price signals as the basis for assessing the cost of the congestion. Whilst there are no market signals providing a cost of intra-regional congestion, there is a clear market price signal in the case of inter-regional congestion because the price separation between regions shows this.

The Regulatory Test needs to be modified to allow the incorporation of market price signals into the cost/benefit equation.

## 5.2 Challenges

The MEU notes that the AEMC’s focus is on the challenges faced by TNSPs given the particular changes that climate change policies are intended to drive. However, consumers faced massive upheavals and challenges in this new paradigm – all of which are the massive cost increases that consumers have to pay in the transition to the new paradigm. Some of these challenges are:

- Ensure that there is the need to isolate the costs arising from the retirement of redundant generating plant and transmission lines from consumers
- Recognise that the need for “efficient investment” is not synonymous with passing on risks to consumers.
- The need to ensure that transmission pricing principles are more tightly based on “causer pays”.
- The need to ensure robust Rules provisions to give equal treatment to network as well as non-network and demand management solutions.
- The need to redress the over-incentivisation of TNSPs under the current Rules
- The need to reassess the ‘propose and respond’ model inherent under economic regulation of TNSPs.
- The need for better locational signals for new generating plants and loads and more equitable costs allocations.

- Reassess the Regulatory Test to account for “consumer benefit”.

As the MEU notes in section 1 above the NEM Rules are not to be used to address social or environmental objectives as these “... **are better dealt with in other legislative instruments and policies which sit outside the National Electricity Law.**”<sup>10</sup> Despite this clear directive the AEMC notes that it sees that this Frameworks Review is to address the “**particular changes that climate change policies are intended to drive**” (page 21). Whilst the MEU agrees that the Review needs to enable service providers to accommodate the impacts of changes in climate, the NEM Rules were not intended to be changed (and the costs paid for by consumers) to accommodate climate change policies.

### 5.3 Transmission Investment

The fact that congestion and constraints are increasing and that NEM regions are increasingly being separated are clear indications that the NEM is not operating efficiently, with the associated costs borne by consumers. Incidents of congestion are increasing as a result of the building of new intermittent generation and new low carbon investment, where locational decisions are being made on the maximum benefit to the generator without taking due cognisance of the very muted locational signals currently operating in the NEM.

This is seen by the MEU as a priority issue for this review.

#### 5.3.1 Transmission Planning Frameworks

##### **Question 3 Transmission planning**

**Does the current transmission planning framework appropriately reflect the needs and intention of the market (including generators, loads and demand side response)? Will this adequately provide reliable information to TNSPs on where and when to invest, or when to defer or avoid investment, in an uncertain planning environment, or is there a case that additional market based signals might be beneficial?**

**The MEU considers that stronger signals are required to ensure that generator locational decisions better reflect the needs of the market. The introduction of SENE further mutes the signals.**

**Planning and execution of investment for all NEM augmentation needs to be removed from the regional TNSPs and given to AEMO, following the approach used in Victoria.**

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<sup>10</sup> Second reading speech for NEL 2007.

There is no doubt that significant amounts of new generation are being added to the NEM but the location of the new generation is driven exclusively by the source of the fuel, and the generators are not addressing the likely impacts that their location will cause to the shared network. The example provided in section 3.2 above regarding Snuggery substation is a case in point.

The decision of the MCE (on the recommendation of the AEMC) to further mute generation locational signals by the rule change proposal for the Scale Efficient Network Extension (SENE) is another example of reducing locational signals.

The requirement that a generator must pay for its own connection to the shared network is a strong locational signal, but even this does not address the fact that when connected the new generator (or other existing generators) may be constrained off due to congestion.

The only market based signals provided to influence generator locations are the losses applied to each generation location. A much stronger signal from the market is required.

As noted earlier, the planning reports are essentially generated by the TNSPs (all of which are regionally based) and therefore can tend to be both self serving and parochial. AEMO is only responsible for augmentation in Victoria. The MEU therefore considers that AEMO which is the only body that can take a national view, should be the dominant party not only in assessing what new investment is required to relieve congestion, but also to ensure that the needed investment is implemented

### 5.3.2 Promoting Efficient Transmission Investment

**Question 4 Promoting efficient transmission investment**

**Will existing frameworks, including the recently introduced RIT-T, provide for efficient and timely investment in the shared transmission network?**

**The MEU considers the RIT-T needs to incorporate market price signals. Further the discipline provided by RIT-T can be over-ridden by the use of the ex ante approval of capex, automatic roll in of actual capex, no ex post prudence and no optimisation.**

As noted above the RIT-T has a number of flaws, in its construction and in the way it can be implemented.

Firstly the RIT-T does not include market based signals in justifying a transmission augmentation to relieve congestion. In intra-regional assessments this is because there is no market price signal, but there is in the case of inter-regional congestion. The reason given for excluding the market price signal is that this is a “transfer of wealth” between generator and load, and there is no net benefit as a result. This argument is spurious, as the market price signal is a



reflection of the reduction in competition applying in a region. If there were no reduction in competition, then the price separation would be modest and reflect the differing short run marginal costs of generation.

If the price separations are long, sustained and significant (for example as seen in recent years in SA) then there is a clear argument that the market price signals are showing there is a reduction in competition in the importing region. To exclude the market price signals merely perpetuates the reduction in generator competition

The NEO requires the price of electricity to be a consideration. Competition is required to ensure that in the competitive elements of the NEM (generation and retail) costs are brought to the long term least cost. In the case of SA, the continued ability of the dominant generator in the region to set the spot price as frequently as it does, has also resulted in a reduction in retail competition in the region. This point was most strongly made by UnitingCare Wesley in its responses to the AEMC during the AEMC review of competition in SA. That the Minister made a decision not to accept the AEMC recommendation that price controls be lifted, indicates that the Minister is also concerned about the reducing retail competition in SA.

If congestion is permitted to continue and thereby reduce competition, greater notice of the market price signals must be taken, and these should be included in the RIT-T

Secondly, the fact that the RIT-T might have been undertaken and demonstrates a case for investment, is not the end in itself. Once the business case is approved, the constraints facing the AER in ensuring such investments are efficient are significant. This point is discussed in section 5.1 above, where the use of the ex ante capex approval, automatic roll in of actual capex and the inability to assess ex post the efficiency of capex all conspire to overcome the intention of the RIT-T investment control.

Until these issues are addressed, the RIT-T only provides a guide as to what might be considered to be an efficient investment

### 5.3.3 Economic Regulation of TNSPs

#### **Question 5 Economic regulation of TNSPs**

**Does the current regime for the economic regulation of transmission lead to efficient network investment? Do the incentives on TNSPs lead to appropriate investment decisions and the efficient delivery of additional network capacity?**

**The MEU considers the current approach to regulation of TNSPs over-rides the discipline of the RIT-T (see section 5.3.2), and over-incentivises investment.**

The MEU strongly considers the current Chapter 6A Rules to be unbalanced and demonstrably over-incentivise TNSPs. The overall consequences of these unbalanced Rules have been a massive expansion in regulated revenues, fuelled largely by massive capital expenditure claims.

The building block approach incentivises TNSPs to make excessive claims for capex and opex and coupled with a high WACC (which was prescribed by the AEMC where the WACC parameters were set at the higher end of possible ranges) produce TNSPs' profits.

The lack of an ex post prudence test when coupled with the lack of any optimisation of the RAB clearly incentivise TNSPs to make excessive capex claims as the profits are made in perpetuity. The "propose-respond" model clearly proscribes the AER from undertaking more intense scrutiny of claims by TNSPs.

The lack of a prudence test, which is not accompanied by requirements for rigorous tendering, supervision and project completion processes, demonstrably incentivise TNSPs to inflate costs. Coupled with an automatic roll-into the RAB at the next revenue reset, the incentives are clearly unbalanced

The MEU considers that the current regime for the economic regulation of transmission has delivered inefficient investments. The data in appendix 1 shows the significant cost increases in network charges seen by consumers. In particular it is important to note the large increases that occurred in transmission after the introduction of Chapter 6A and in distribution following the changes to the NEL and Rules in 2007 when distribution rules were changed to reflect the chapter 6A rules.

Whilst there is more scope to provide for ex ante assessments, the MEU considers that the following should be undertaken:

- Restore the ability of the AER to optimise the roll-in of capex into the RAB at the next revenue reset through ex post prudence analysis
- Redundant capital must be removed from the RAB
- Strict provisions to require appropriate tendering, minimisation of capital implementation costs and measures to remove unwarranted, inflating of costs.
- All assets should be reviewed to ensure they are fully optimised with TNSPs not being permitted a return on the capital for assets not utilised, but to allow the inclusion when the assets are fully utilised

## **5.4 Network Charging, Access and Connection**

### **5.4.1 Network Charging for Generation and Load**

**Question 6 Network charging for generation and load**

**Is a price signal of locational network costs for generators required to promote overall market efficiency? Would there be any consequential impacts on transmission pricing arrangements for load?**

**The MEU considers stronger generator locational signals are required.  
Further signals for load need the better reflect the usage made of the assets.**

The MEU has long been a supporter of generators seeing the costs to the shared network that they impose due to their decision for location. The MEU considers that the cost for the transmission network logically lies with generators and they should pay for this and in return they should receive some firmness in their rights to send their product to market. Allocating the cost of transmission to generators provides very clear pricing locational signals to generators.

The MEU notes the intention of the AEMC to address the costs generators impose on the shared network as a result of their locations. The MEU supports this as an interim step to providing even stronger price signals to generators.

The current Rules allow for some locational signals to be provided to load, but the price signals are muted in regard to usage. About 1/3<sup>rd</sup> of the total transmission costs are allocated on a locational and demand basis. Whilst the balance could be allocated on a demand basis the TNSP has the ability to decide whether it will allocate the remaining costs on a demand or consumption basis. As the cost of networks is related to demand, then a more cost reflective approach would have the cost of transmission allocated on a demand basis. Only one TNSP (in AEMO in Victoria) allocated its non-locational TUoS on a demand basis and all other TNSPs have elected to maintain the approach of pricing non-locational and common service costs at the lower of demand or consumption cost. This approach does not send strong usage signals to load. The option of setting non-locational TUoS and Common Service costs at either demand or consumption needs to be changed so that appropriate pricing signals are provided to reflect usage.

The MEU notes that the AEMC is currently assessing a rule change proposal from MCE to better allocate transmission costs between regions. The MEU supports this concept in principle as it is cost reflective, but the MEU notes that the simplistic approach proposed is likely to create significant inequity.

**5.4.2 Nature of Access**

**Question 7 Nature of access**

**Would it be appropriate for generators and load to have the option of obtaining an enhanced level of transmission service? Would this help generators to manage risks around constraints and dispatch uncertainty?**

**The MEU considers that if a generator wishes to contribute to reducing congestion that affects them, they should be able to do so. If generators contribute to “firming” their access to the shared network they must have some rights to that access compared to generators that do not contribute.**

**An approach such as used in the gas industry could be implemented to address the issue of relieving constraints, cost allocation and firm rights to capacity.**

As noted above, the MEU considers that by allocating the costs of the transmission system to generators, many of the problems raised now and in previous debates could be more readily overcome. If a generator pays for the costs of delivering its product to market (via the transmission system) then it should have primacy of right to that capacity.

This approach is used widely in the transmission of gas, where a shipper<sup>11</sup> buys a fixed amount of capacity and has the rights to that capacity. A new entrant shipper must pay for any augmentation to the transmission system if it wants to firm access. If it elects not to pay for firm access, then it can only use the surplus capacity available and must take the risk as to whether this will be available all the time.

The Issues paper makes reference to its investigations as the interest in generators getting firm access across inter-regional connectors, but advised there was little interest. This is understandable as generators in one region have little interest in selling into another region due to the risks involved and it is preferred that consumers take the risks involved which they do by paying the higher regional price.

The settlements auction is at best only a partial solution to risk management for inter-regional flows. As a result most retailers build a regional portfolio of generation as the basis for providing for their regional customers. In contrast because intra-regional prices are common across the region, risk is lower and generators have a greater interest in seeking firm access.

## **5.5 Connection Arrangements**

### **Question 8 Connection arrangements**

**Do current arrangements for the connection of generators and large end-users reflect the needs of the market? To the extent that more fundamental reforms to transmission frameworks are considered under the review, would it be appropriate to revisit the connection arrangements?**

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<sup>11</sup> A shipper can be a gas producer (equivalent to a generator), an end user, a third party (such as a retailer) or the pipeline owner itself.

**The MEU considers that first hand experience shows that the market power a monopoly has can never be offset by an intending connector (generator or end user) regardless of their size. Because of this any assessment made of the transmission frameworks must reflect this truism.**

**The MEU considers the SENE proposal is fundamentally flawed in concept and should not be allowed or expanded.**

First hand experience in dealing with a monopoly shows that the monopoly always has control, despite the size of any intending connector to the shared assets. The AEMC should take great care in assuming that large generators and end users have the ability to offset the power of monopoly. This especially applies where a monopoly has a guaranteed income with or without the new connection.

The suggestion that the SENE concept might be further expanded to allow more generators to connect under support from consumers will lead to further reduction of locational signals for generators.

The SENE concept was developed to allow for small renewable generators to be able to connect to the shared network on a commercial basis reflecting that there might be a number of small renewable generators which in concert could afford to connect to the shared network if a large enough connection was provided to give economies of scale. The SENE concept was also driven by the thought that renewable generation might have to locate at a distance from the shared network, making their connection costs greater due to distance.

Extending the concept at consumers cost and risk, would appear to be heading in the wrong direction if the aim is to provide stronger signals for generator location. The MEU considers that the SENE concept reduces locational signals, and under the current rules there is inefficient generation location. Stronger signals should result in more efficient location.

## 6. Key Issues for Efficient Operation

The Issues Paper identifies that congestion needs to be assessed in both the short term and long term, especially as the implementation of a long term solution might cause an increase in short term congestion. The MEU considers that TNSPs do need to be incentivised to minimise the impact of these short term increases in congestion.

The Issues paper goes on to state (page 34) that:

“...pricing frameworks should also ensure that generators have an incentive to offer their generation capacity to the market at cost-reflective prices. This will increase the likelihood that demand will be met using the least-cost mix of generation. Network congestion can impede efficient dispatch outcomes by encouraging non-cost reflective bidding behaviour (for example, bidding low or negative prices to ensure dispatch). The increased risks faced by generators as a result of congestion may therefore reduce their contracted volumes or lead them to factor in risk premiums, resulting in higher prices. “

The MEU concurs with this view and points out that congestion (especially at interconnectors) allows dominant generators to exercise their market power. The costs to consumers of congestion at interconnectors are significantly great that this aspect also needs to be addressed as part of this element of the review.

### 6.1 Network Operation

#### **Question 9 Network operation**

**Are more fundamental reforms required to financial incentives on TNSPs to manage networks efficiently and to maximise operational network capability for the benefit of the market? Should further options for information release and transparency on network availability and outages be considered?**

**TNSPs are already incentivised to maximise reliability and “uptime” of their networks through the Service Target Performance Incentive Scheme (STPIS) operated by the AER. Relief of short term congestion could be added to the range of performance targets**

The process for incentivising TNSP performance is already in place through the STPIS. From a consumer viewpoint (bearing in mind that the NEO is written in terms of consumers) consumers see the performance of the NEM as a delivered product – reliability of supply, transmission and distribution combined. Therefore any increased payment to a TNSP for reliability needs to be assessed in terms of the improvement in reliability seen at the end of the supply

chain. Just as the MEU is concerned that continued increase in the market price cap to improve reliability of supply needs to be tempered with the overall reliability of the delivery system, so should any improvement in reliability of the transmission system.

However, it is accepted that congestion needs to be seen not so much as a reliability issue (which in part it is) but also in terms of the impact congestion has on the regional price for electricity. To a large degree competition between generators will set the minimum price a generator has to accept if it wants to be dispatched<sup>12</sup>. Congestion may require some generation to be constrained off and therefore higher priced generation is constrained on because it is not subject to the congestion. This dispatch is inefficient in terms of the market and consumers see higher prices than would otherwise be the case as a result.

At its most basic, the cost of the congestion can be assessed in terms of the difference between what the price would have been compared to the actual price. This sets the cost of the congestion. If a TNSP action can reduce this cost but as a result the TNSP incurs a cost, then there needs to be a method for rewarding the TNSP for providing the saving to the consumer.

If the congestion is short term, then a payment under the STPIS is the logical way of rewarding the TNSP, but the issue becomes one of structuring the reward in terms of the saving provided to the consumer; this requires a method of assessing the savings consumers get.

If the congestion is long term, investment by the TNSP (which is ultimately paid for by the consumer at no risk to the TNSP) is an adequate reward.

## 6.2 Dispatch of the Market and the Management of Congestion

**Question 10 Dispatch of the market and the management of congestion**  
Is there a need for material congestion to be more efficiently managed in the NEM?

**The MEU considers there is a need for material congestion to be more efficiently managed, and that it be addressed in terms of the consumer rather than in terms of losses a generator might have.**

The Issues Paper explains well that congestion does impact on the efficient dispatch of generation, and that lack of congestion provides a number of benefits to the market operation and outcomes.

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<sup>12</sup> Some generators (eg wind) are “price takers” in that they can never set the spot price. Some dispatchable generators must have a minimum of generation in order to be able to be dispatched at all, and are also “price takers” for this minimum output.

Unfortunately, the Issues Paper concentrates purely on the impacts of congestion on generation, where:

- Disorderly bidding might cause low prices because generators bid the minimum just to be dispatched
- Generators lose revenue and face increased risk because they are constrained off by congestion
- Generators constrained on might not receive their full marginal cost of operation because the RRP is lower than their bid price. That this occurs is a flaw in the market design which sets the market price on a regional basis rather than using nodal pricing; nodal pricing would obviate this outcome

The MEU accepts that these are all outcomes of congestion and need to be addressed.

However, what the Issues paper does not address, is where congestion is used by a generator to artificially increase the spot price and garner a massive unearned benefit. It is these episodes that concern consumers most. In fact these episodes are probably more material to the market overall than the three types of market outcomes noted that affect generators.

The Issues Paper focuses on the losses a generator might have because of congestion but not the losses consumers face from the same issue. The MEU considers this is inappropriate when the NEO requires the AEMC to address the issue from the perspective of the consumer.



## Appendix 1

Approximate annual increases in prices for electricity networks

		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Transmission	Powerlink <sup>4</sup>	7%	7%	5%	11%	11%	11%	11%
(nominal \$)	Transgrid	1%	1%	1%	1%	0%	4%	4%
	ElectraNet	3%	4%	4%	22%	5%	5%	5%
	Powernet	3%	3%	3%	3%	4%	4%	4%
Distribution	Real \$							
NSW	EA	2%	2%	2%	2%	18%	12%	12%
	Integral	2%	2%	2%	2%	13%	7%	7%
	CE	3%	3%	3%	3%	13%	12%	12%
Qld	Energex <sup>5</sup>	4%	4%	4%	4%	4%	18%	8%
	Ergon <sup>6</sup>	~15%	5%	5%	5%	5%	30%	5%
SA	ETSA	-2%	0%	0%	0%	0%	12%	6%
						2010	2011	2012
Vic	Citipower	-6%	0%	0%	0%	0%	-7%	0%
DD only	Jemena	-2%	0%	0%	0%	0%	-1%	0%
	Powercor	-15%	0%	0%	0%	0%	-8%	0%
	SP Ausnet	-7%	0%	0%	0%	0%	-4%	0%
	United	-12%	0%	0%	0%	0%	-2%	0%

### Notes:

1. Figures do not include State government imposts
2. For price cap regulation, figures are the  $P_0$  and X factor adjustments
3. For revenue cap regulation, figures are changes in allowed revenue
4. See AER Final decision (June 2007) on Powerlink page 140 second dot point after table 8.4
5. These are the X factor adjustments for Energex included in the AER final decision (May 2010) on Energex table 16.10
6. These are the X factor adjustments for Ergon included in the AER final decision (May 2010) on Energex table 16.12

## Appendix 2

Typical Capex Changes in Current Regulatory Round of Pricing Reviews



