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Dr John Tamblyn
Chairman
Australia Energy Market Commission
Level 5, 201 Elizabeth Street,
SYDNEY NSW 2000

By email to submissions@aemc.gov.au

Dear Dr Tamblyn

AEMC Review of Energy Market Frameworks in light of Climate Change Policies

EnergyAustralia welcomes the opportunity to respond to the Australian Energy Market Commission (AEMC) 2nd Interim Report on the Review of Energy Market Frameworks in light of Climate Change Policies. There is broad agreement across the energy industry that the Federal Government's proposed Carbon Pollution and Reduction Scheme (CPRS) and expanded Renewable Energy Targets (eRET) will have significant impacts on various aspects of the national energy market. The Review being undertaken by the AEMC is essential to identify the required modifications to existing frameworks that will ensure network asset management decisions and outcomes are effective and efficient, encourage efficient and timely investments, and continue to provide secure and reliable energy to customers.

In response to the AEMC's 1st Interim Report, EnergyAustralia sought to highlight the likely impact that climate change policies will have on businesses including the impact on energy security, energy prices, changes in energy consumption and changes in the role of the network for example for embedded distributed generation. In the 2nd Interim Report, the AEMC confirms that the current frameworks are inadequate to address the risk of capacity shortfalls in the short term and that the introduction of the CPRS may pose a challenge to the viability of retailers and retail market development in those jurisdictions where retail price regulation is retained. These are serious findings and the proposed responses may not fully mitigate these risks.

In the following attachment, EnergyAustralia provides comments on the AEMC's review, analysis and recommendations on:

1) The robustness of existing frameworks to support the likely affects of CPRS and eRET;

2) The proposed flexible arrangements for regulation of retail prices to include the cost of carbon;

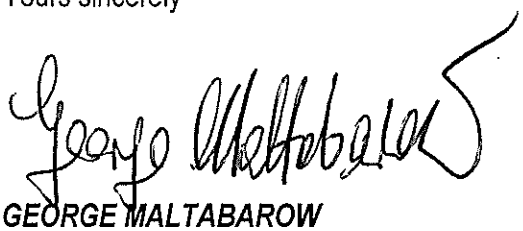
3) aspects needing to be addressed in order for an innovation allowance for distribution businesses to be effective; and

Partner

4) feedback on AEMC's proposal to address the planning and funding issues for the efficient connection of clusters of generation in remote areas.

Please contact my office on 9269 2115 at any time should you have any questions in relation to this submission.

Yours sincerely



GEORGE MALTABAROW
Managing Director

Attachment: Response to aspects of AEMC's 2nd Interim Report "Review of Energy Market Frameworks in light of Climate Change Policies"

Attachment: Response to aspects of AEMC's 2nd Interim Report, Review of Energy Market Frameworks in light of Climate Change Policies

In the 2nd Interim Report, the AEMC have acknowledged that there is likely to be a period of substantial change for retail businesses and distribution networks as a result of the Carbon Pollution Reduction Scheme (CPRS) and an expanded Renewable Energy Target (eRET). The AEMC considers that the existing frameworks are sufficiently robust to support consequent changes in the operations and costs of distribution businesses. However, the AEMC confirms that the current frameworks are inadequate to address the risk of capacity shortfalls in the short term and that the introduction of the CPRS may pose a challenge to the viability of retailers and retail market development in those jurisdictions where retail price regulation is retained. These are serious findings and the responses do not go fully to mitigate these risks.

In the section below EnergyAustralia provides commentary on the capability of existing frameworks to continue to ensure market efficiency objectives are delivered after the introduction of climate change policies, and the merits and challenges associated with an allowance for businesses to recover the costs of accredited innovation projects.

1. The robustness of existing frameworks to support the likely affects of CPRS and eRET

1.1. Energy-Only Market operations and capacity shortfalls

Given the potential for significant market disruption and costs, the AEMC recommends that AEMO's options to procure reserves be expanded and canvasses views on mechanisms to provide short notice reserve capacity for periods close to dispatch and the need for some form of standing reserve panel whereby members would receive long-term payments for having capacity available to generate when called upon. EnergyAustralia considers that these interventions will introduce more market distortions to the energy-only market (in addition to the retail price caps) and introduce significant capacity-like charges. A market design change to introduce capacity payments may be warranted and should be more broadly and openly considered, for example by a Comprehensive Reliability Review, rather than incremental regulatory approaches such as standing reserves. EnergyAustralia refers to the esaa submission on this matter.

1.2. Capacity of the NEM framework to maintain transmission reliability at efficient cost

EnergyAustralia notes the reference to the MCE's intention to move to a common framework of planning standards across jurisdictions in the NEM[1]. The report discusses this issue in relation to electricity transmission, but it is not clear whether the MCE's intention applies equally to distribution. The NSW Government has already established design, reliability and performance standards and has incorporated these standards into our operating licence. EnergyAustralia considers that these standards are appropriate and would be very concerned if the MCE were to impose a set of standards that were inconsistent with those already in place in NSW. If the MCE's intention is restricted to transmission standards only, we note that EnergyAustralia's transmission assets are assets that operate in support of TransGrid's assets and do not form part of the main grid. We consider that any standards to be applied should be considered in terms of the main grid only, and if extended to other transmission assets, should be set in a manner appropriate for the function performed by those assets, which may differ substantially from assets that make up the main NEM grid.

[1] p76 AEMC 2nd Interim Report – Review of Energy Market frameworks in light of Climate Change Policies

1.3. Impact on energy consumption and distribution businesses revenue

In EnergyAustralia's previous response to the AEMC on the 1st Interim Report, we sought to highlight the impact climate change policies may have on energy consumption and hence the impact on distribution business' revenue where revenues are regulated through a price cap mechanism. Our submission outlined that:

- The magnitude and timing of energy volume impacts caused by climate change policies is not known with certainty and as a result, introduces risk that actual consumption will vary significantly from the forecast used to set prices. This has significant and possibly severe implications for revenue recovery for businesses that are regulated through a price cap.
- The current regulatory framework provides no mechanism for the recovery of foregone revenue in the event that energy consumption is significantly lower than that forecast at the time of the determination.

As a result of the unknown timing and extent of the impacts of CPRS, future volumes of energy consumption have never been as uncertain or as difficult to forecast. As there is no mechanism in the current regulatory framework for a business to 'reopen' the energy forecasts during the 5-year regulatory period, the introduction of the CPRS and eRET schemes bring with them significant financial ramifications for distribution businesses, not due to the policies themselves, but as a result of their application within a regulatory framework that is largely inflexible. The changes in volumes that are likely to accompany the introduction of these schemes are well beyond the normal forecast uncertainty typically borne by businesses operating under a price cap. The introduction of these schemes is not part of normal business operations and therefore cannot be catered for by the existing regulatory framework. If energy forecasts are overstated compared to actual volumes, distribution businesses under a price cap will face cash flow problems that may jeopardise business operations, particularly where large capital programs are in underway and involve significant cash outflow.

It should be noted that where a distribution business is subject to a revenue cap rather than a price cap, the impact of variations in energy volumes can be largely mitigated using existing "unders and overs" mechanisms. The issue raised here relates only to distribution businesses subject to price cap regulation.

1.4. Additional AEMC recommendation: More accurate reporting on demand side capability

To address the risk of generation shortfall resulting from climate change polices, the AEMC has recommended that the Rules be amended to promote more accurate reporting to AEMO of demand side capability and utilising the potential for distribution connection generation to alleviate capacity shortfalls. Whilst EnergyAustralia will provide available information on demand side capability to AEMO as required, EnergyAustralia notes that unlike gas or cogeneration that have a strong likelihood of being available to contribute to generation shortfall, the availability of other forms of generation such as sun or wind powered, does not often align with times of system constraint. While these demand side responses are supported and timely for carbon abatement, there is less correlation with generation shortfall in times of system constraint.

2. Regulated Retail prices

EnergyAustralia notes that, long term, the removal of price regulation is the preferred outcome. However, EnergyAustralia supports the Commission's findings and recommendations in relation to jurisdictions where there is regulation of retail energy prices. EnergyAustralia proposes the following arrangements for the form and frequency of a regulated price adjustment mechanism for carbon prices:

- EnergyAustralia does not believe that regulators should attempt to determine an energy purchase cost allowance based on a 'carbon inclusive' price. EnergyAustralia agrees with submissions to the Commission that forecasting the unbundled price is difficult. However, permits will have an observable price and a forward market.
- Regulators should use a cost pass-through mechanism to capture the carbon costs arising from the emissions trading scheme or carbon tax during the first determination period covering the introduction of these schemes and at least one year. EnergyAustralia recommends that the AEMC issue guidelines for best practice with respect to the pass-through methodology.
- The form of regulation of retail prices should be unbundled, that is:

  "N" + "R" + "C"

  where N = Distribution and transmission service charges

  R = Retail energy and services charges

  C = Carbon charges

- There is currently a range of pass through carbon charge calculation mechanisms available in wholesale contracts that would be included in the "C" calculation:
  - Average NEM co-efficient
  - Retailer to supply permits to the generator (and so incur direct permit costs)
  - Embedded carbon cost
  - Treatment or consideration of compensation (free permits) received by coal generators.

- The allowance in regulated prices for the cost of carbon should be on the basis of cost plus margin, to maintain allowed retail margin.

3. Providing distribution businesses with a "time-limited innovation allowance"

EnergyAustralia concurs with the AEMC's comments that the existing framework does provide businesses with some incentives for innovation. The current regulatory framework is structured such that the benefits associated with innovation are shared between customers and the network in such a way that the network business keeps the 'opex' savings for the remaining 5 year regulatory period, but savings are represented in lower prices for customers at the next reset. As such, the framework encourages innovation where cost savings are realised in the short term because the business is allowed to keep the operational savings within the regulatory period. However, such a scheme does not encourage innovation where costs actually increase in the short run even though these costs may provide longer term benefits. This is because the AER's efficiency benefit sharing mechanism penalises businesses that overspend operating allowances not only in the current year, but the penalty carries forward into future years.

Higher costs in the short term are subject to the AER's discretion for approval. AER approval can be difficult to secure where the benefits of investment in innovation are difficult to quantify and/or the timing of the benefits is not known with certainty. Even if the business is allowed an increase in opex allowance in the short term to cover higher costs, under the current regime, the business will not receive the longer term benefits (as these are delivered back to customers through lower prices either during the period or at the next reset). These factors can remove any business incentive to invest in long term innovation.

As a recent example of funding innovation, the AER has approved the capital expenditure for Advanced Metering Infrastructure (AMI) trials, however the operating expenditure (opex) required to facilitate the trial was not approved. The AER's consultants argued that such costs should be found within the base level of opex, even though the trial was to be undertaken in addition to normal operational activities. This is an example where the AER's discretion to approve or reject costs can act against business' incentive to invest.

It is important to note that the Demand Management Innovation Allowance (DMIA) as referred to in the AEMC 2nd Interim Report is focused on demand management and therefore is relatively narrow in its focus. It does not include innovations to other areas of network operations such as innovative maintenance techniques, system control, design, or smart grids unless they can be specifically linked to DM outcomes.

The AEMC has requested stakeholder views as to the merit of introducing formal (but temporary) arrangements for innovation funding and whether this will assist distribution businesses in accelerating the process of responding to change imposed by climate change policies. For reasons as outlined above EnergyAustralia supports the introduction of an innovation allowance. However, for the scheme to be effective, a number of areas need to be clarified including:

- **Scope:** What is the scope of the 'innovation'? What is the criteria to determine if something fits within this mechanism? Is the business provided with complete discretion?
- **Thresholds:** Will there be a threshold before the innovation allowance can be sought? Will the innovation allowance be capped?
- **Approval:** What is the process for approval of the allowance? What guidelines are in place? And who approves the allowance?

4. Impact of increased volume of embedded generation connected to distribution network

It is anticipated that climate change policies are likely to result in an increase in the number of embedded generators connecting to the distribution network. EnergyAustralia noted in its submission on the First Interim Report, that increasing amounts of embedded generation were likely to impact on the safety and reliability of distribution networks. In the 2nd Interim Report the AEMC agrees that "*concerns about reliability can arise with increasing levels of generation connection on the distribution network* [and]*...network businesses will increasingly have to have regard to the impact on fault levels....A significant increase in the number of generating units connected directly to the distribution network will impact on the unpredictability of network flows, and consequently the difficulty in meeting network performance requirements.*"

The AEMC concluded that the current regulatory framework is capable of providing sufficient scope to manage these concerns on the basis that distribution businesses are able to claim to the regulator for the amount of revenue they need to meet service obligations. Furthermore, we note the AEMC's explicit reference to discretion that distribution businesses have to set reliability and

security standards for generators connecting to the distribution network. It is important that this discretion remain intact to protect the network for the benefit of all consumers.

EnergyAustralia also raised concerns that distribution businesses may struggle to meet reliability and security standards where there are large numbers of embedded generators connected to urban networks. It should be recognised that as numbers of embedded generators increase the complexity of planning and operating the network, requiring additional time and cost to assess connection applications. Issues will also arise with respect to deep and shallow connection costs particularly with respect to issues such fault levels. This needs to be considered as part of future reviews of connection frameworks for generators.

We note that the Reliability Panel found that no specific standards were required for connection of embedded generators because any effect is localised within the distribution network and therefore could be relatively easily managed. EnergyAustralia agrees with this position in the context of a single embedded generator connection within a location. However, we consider that network reliability could be severely impacted by the presence of multiple embedded generator connections within an area (i.e. Sydney CBD). In such a case, such connections could have significant implications for the reliability and operation of the distribution network within an economically significant local area, and may well have implications for network reliability and operation beyond the bounds of the local area.

EnergyAustralia is concerned the implicit position of the Reliability Panel that no requirement are necessary for embedded generation means that distribution businesses will be open to criticism where they do exercise their discretion to impose restrictions or specific technical or contractual requirements on connections. While EnergyAustralia is keen to facilitate embedded generation, we consider our primary role is to protect the operation and reliability of our distribution network for all customers, and that this must not be jeopardised by connection of embedded generators.

Hence, EnergyAustralia considers that the Reliability Panel should revisit this issue and establish a set of minimum standards that apply to embedded connections within an urban environment to ensure reliability and quality of service is maintained in networks with multiple embedded generator connections. We also consider that the ability of the DNSP to exercise discretion to require standards above the minimum standards should be maintained in order to preserve the network operability specific to each location. We also consider flexibility to require interruptability clauses within connection contracts or similar mechanisms that enable flexibility should be explicitly considered within the Rules.

The AEMC separately addressed the planning and funding issues for the extension of networks for the connection of clusters of generation in remote areas (NERGs) in Chapter 2 of the 2nd Interim Report. EnergyAustralia's response on this matter is included below.

4.1. Connecting remote generation

The expanded RET, and to some extent the CPRS Emissions Trading Scheme, will stimulate investment in renewable generation capacity and it is expected that, at least in the short to medium term, this will be primarily met by wind-powered generation. This type of generation is likely to be clustered in certain geographic areas that are remote from existing networks requiring efficient and timely investments in network expansion.

The AEMC has proposed that a new framework be introduced to the National Electricity Rules (NER) to address deficiencies in the existing framework and to facilitate efficient connection of remote generation to distribution and transmission networks where clusters of generators in the same locations are expected to seek connection. In proposing this new framework, the AEMC notes that a new type of network service would be required and adjustments to the current regimes for planning, charging and revenue recovery would be necessary. In making these

recommendations, the AEMC considers that inefficiencies arising from the existing framework could have large cost impacts to consumers.

The AEMC proposed model for connection of clusters of generation is purported to remove cost barriers to 'first-mover" generators in remote locations, with generators only paying for the share of assets they use and network users' funding the efficient expansion of the network until other generators eventuate.

EnergyAustralia supports a proposal that means distribution businesses are not expected to meet the costs within existing regulatory allowances or fund the expansion of the network until the assets are fully utilised by generators. EnergyAustralia interprets the revenue recovery arrangements proposed by the AEMC to operate in a similar manner to an allowed pass-through event mechanism and consider this to be appropriate. Changes to the Rules would need to allow distribution businesses to recover the costs through network prices as the network investment occurs. AEMO's role in identifying likely areas of remote generation and providing forecasts of future generation remote from the shared network will assist in the approval by the AER prior to investment by distribution businesses. Forecasting the likely connection of future generation to distribution networks is not a role currently performed by distribution networks nor is it an area of expertise and as such EnergyAustralia agrees that AEMO is better placed to perform this function.

The process proposed appears to provide similar incentives to the existing capex framework where capital investment is triggered by load growth at a location and networks consider a range of options by which to supply the load, and the option identified as being the least cost is approved by the AER. The only apparent difference is that the trigger for the investment will be identified by AEMO, and the approval by the AER occurs outside the 5-yearly price review (similar to the pass-through mechanism). If a pass through style mechanism is not what is being contemplated by AEMC, businesses could be penalised by being required to expand network to connect generators where this connection was not identified when the program was developed and therefore is not incorporated into the revenue / price determination made at the last review. The effect would be that network businesses effectively fund the expansion of the network to facilitate connection of remote generation at the expense of their own profitability. This would not be consistent with the national electricity objective.

As noted by the AEMC, the proposed model for connection of remote generation will require numerous changes to many aspects of existing frameworks of the National Electricity Market including establishing a revenue recovery arrangement, modifying planning obligations for the NSPs, and the establishment of a new network service and associated "standard contract". As such, EnergyAustralia submits that further, separate reviews using the Rule change process would ensure modifications to the existing frameworks are workable, efficient and operate in a manner as described above.