Australian Energy Market Commission

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Committee Secretary
Senate Select Committee on Electricity Prices
PO Box 6100
Parliament House
Canberra ACT 2600

By email: **electricityprices.sen@aph.gov.au**

Dear Ms Dunstone

Australian Energy Market Commission responses to questions on notice

Thank you for the opportunity to provide further information to the Committee.

We have reviewed the transcript from the Australian Energy Market Commission's appearance at the public hearing held in Sydney on 25 September 2012 and identified the points that we agreed to take on notice. The first enclosure contains our responses to those points.

We also enclose responses to the additional questions on notice received from the Secretariat on 2 October 2012.

Please contact me should you require any further information in relation to the inquiry.

Yours sincerely

John Pierce
Chairman

Enclosure 1: AEMC responses to questions taken on notice during hearing appearance on 25 September 2012

Enclosure 2: AEMC responses to additional questions on notice received on 2 October 2012

Select Committee on Electricity Prices – Public Hearing 25 September 2012:
Australian Energy Market Commission - Responses to questions on notice

1. How the Renewable Energy Target contributes to electricity price increases. [Response to Senator Cormann]

We estimated that the Renewable Energy Target (RET) would contribute 3% to rises over the forecast period (2010/11 – 2013/14) with a price on carbon emissions. The increases are 3.8% for the large scale and -0.8% for the small scale parts of the RET.

2. Has there been any forecasting done on how much more we are paying for power as a result of this rule structure? [Question from Senator Xenophon]

It is difficult to quantify the effect of these frameworks compared to any alternative arrangements. The Australian Energy Regulator (AER) applies the existing rules when it makes its decisions. Likewise the Australian Competition Tribunal (ACT) follows the requirements of the existing limited merits review regime when it makes its decisions. Accordingly, it is very difficult to know what decisions would have been made under different arrangements. In the absence of a clearly definable counter-factual, no estimates or forecasts have been undertaken.

We have proposed a number of amendments to the rules under which the AER makes determinations of the revenue for network businesses. These proposed changes give the regulator more capacity to review businesses' expenditure proposals and provide stronger incentives for efficient investment.[1] The proposed changes include:

- A new rate of return framework that is common to electricity transmission, distribution and gas. It gives the regulator more flexibility to respond to changing market conditions and requires it to take into account a wider range of information;

- A range of tools to provide incentives for network service providers to undertake capital expenditure efficiently. The AER will apply the tools as it considers appropriate with regard to an overall objective that only efficient investments form part of the capital base;

- Improved clarity regarding the power of the AER to interrogate, review and amend capital and operating expenditure proposals. The AER will also be required to publish annual benchmarking reports, setting out the relative efficiencies of network businesses; and

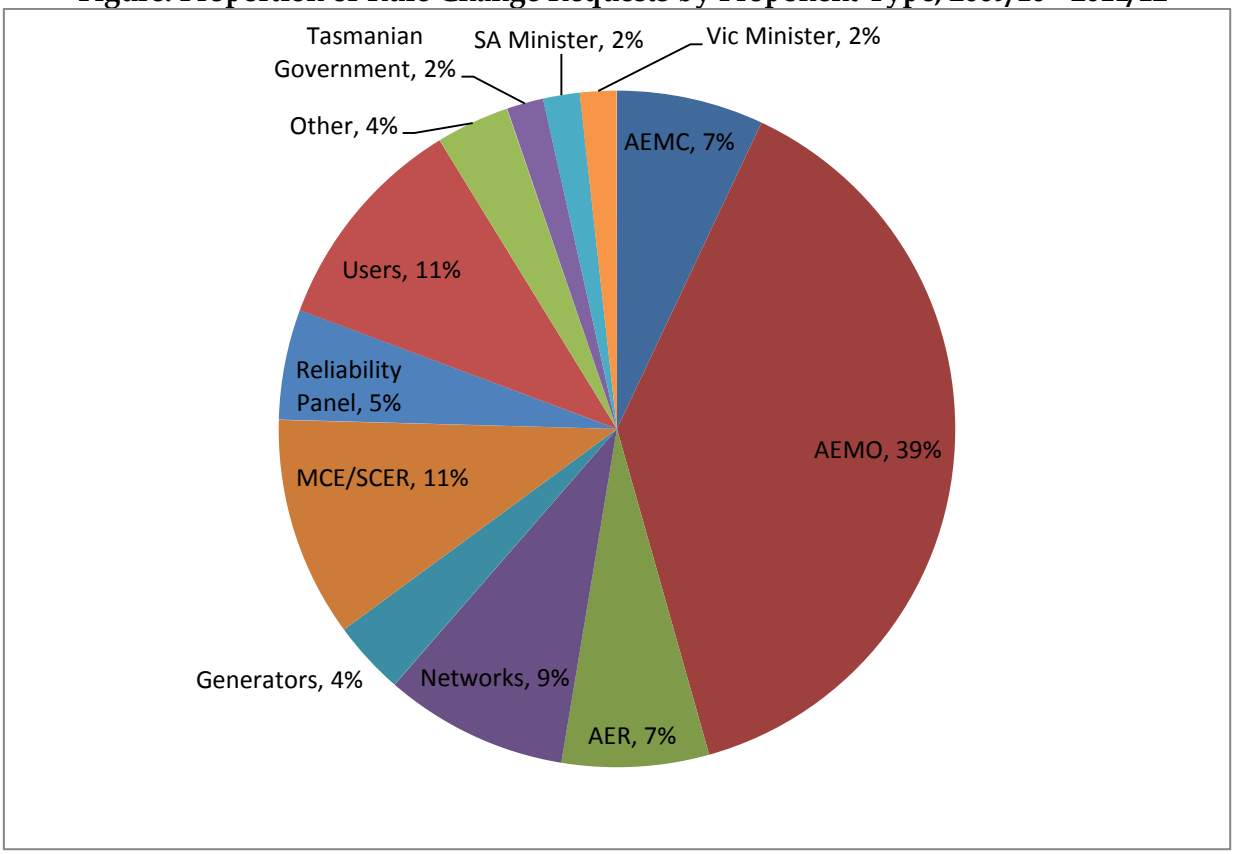
- Improvements to the regulatory process to provide greater engagement between the AER, network service providers and consumers.

[1] AEMC, Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Draft Rule Determinations, 23 August 2012.

3. Composition of rule change proponents. [Response to Senator McEwen]

A request to make or amend a rule can be made by anyone including governments, the AER, and/or any individual or group in the community, except the AEMC.[2] The composition of rule change proponents for the last three financial years is contained in the chart below. It illustrates that we receive rule change requests from a broad range of stakeholders.

Figure: Proportion of Rule Change Requests by Proponent Type, 2009/10 - 2011/12



Note: "Other" includes energy service organisations and non-energy related industry organisations; "Users" includes the Copper Development Centre, an industry organisation.

[2] Note there is a limited exception to this exclusion which relates to minor or non-material changes.

Senate Select Committee on Electricity Prices - Questions on Notice received 2 October 2012

1. What are the costs for generators who want to connect to the electricity network in each state jurisdiction?

Generators connecting to the electricity transmission network are generally required to fund the costs of establishing a substation on the shared network (or modifying an existing substation) to allow a physical connection to be made. Transmission connections are highly bespoke and therefore costs will vary substantially from project to project.

Generators are also required to fund the costs associated with any infrastructure required to be put in place between the generator's facility and the substation on the existing network. The costs of this will depend on the distance between these two locations.

Currently, generators do not pay any of the costs associated with using the shared transmission network, which transports electricity from the generator's connection to customers. In part, this could be viewed as consistent with the fact that generators receive no guarantee that they will be able to use the shared network at all times in order to sell their output. The AEMC's *Transmission Frameworks Review* is considering these matters. In particular, under proposals set out in the review's Second Interim Report generators would pay a proportion of the costs associated with provision of the shared network in return for an enhanced level of service, which would include financial compensation if a generator's use of the network was interrupted.[1]

The costs for generators connecting to distribution networks vary between networks and may also depend on the size of the generator. We are currently assessing a rule change request proposed by ClimateWorks Australia, Seed Advisory and the Property Council of Australia to make a more timely, clearer and less expensive process for connecting generators to distribution networks. We are currently reviewing responses to our consultation and expect to make a draft determination later this year.[2]

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[1] AEMC, Transmission Frameworks Review, Second Interim Report, 15 August 2012.

[2] http://www.aemc.gov.au/Electricity/Rule-changes/Open/connecting-embedded-generators.html

2. Where electricity is transmitted to another jurisdiction does the end consumer pay the 'true price' for that electricity? I.e. a Victorian who consumes electricity generated in South Australia, are they paying the 'true cost' for that electricity? If not, why? What components of the generating, transporting and retailing of that electricity are they not paying for?

Most consumers in the NEM do not currently contribute to the costs of transmission assets in other regions that support electricity flows to their region.

The AEMC recommended, as a part of the recommendations from the National Transmission Planner Review in 2008, that the current lack of an inter-regional transmission charging mechanism could impede the development of a more efficient national transmission network. Introducing a uniform national inter-regional transmission charging solution has the potential to improve the cost-reflectivity of transmission charges and the allocation of costs across regions (especially in the event of changes in transmission flows).

The AEMC received a rule change request from the then Ministerial Council on Energy. The rule change request proposes to introduce an inter-regional transmission charging mechanism to the National Electricity Rules (rules). The AEMC is currently considering the rule change request. A draft rule determination is expected to be published in November.

This issue is also being considered in the *Transmission Frameworks Review*. The second interim report has recommended a market-wide pricing scheme, which would set prices on a consistent basis using a single methodology. In contrast to the inter-regional charging mechanism, it would enable customers to contribute to the specific locational costs of assets from which they benefit in other regions.[3]

[3] AEMC, Transmission Frameworks Review, Second Interim Report, 15 August 2012, section 5.6.

3. The Garnaut Review (amongst others) have identified one of the reasons for over-investment by networks is that public-owned networks can borrow to finance augmentations at rates of 4-5% whilst the AER sets regulated returns based on corporate debt costs. The draft determination in the Economic Regulation Rule Change has rejected proposals to address this issue:

> **As part of its rule change request, the EURCC [a group of major energy users] proposed that the return on debt for state-owned NSPs to be determined differently from privately-owned NSPs. The Commission has considered this and does not support this aspect of the EURCC's rule change request for a number of reasons, including competitive neutrality considerations" (p.iv, executive summary).**

Could you explain why the AEMC does not support aligning the return on debt for state-owned networks with public borrowing costs?

The assertions that state-owned network service providers borrow funds in debt capital markets at rates lower than comparable private-owned network service providers are not correct. State-owned service providers do not access debt capital markets directly, but rather, their debt is managed by the respective state government's Treasury Corporations through the issuance of government bonds, that is, taxpayer backed bonds directly in the market. It is the Treasury Corporations who have access to lower debt funding costs due to the government's higher credit ratings compared to private sector businesses. Governments can generally borrow at lower rates than private firms due to Governments' ability to service the debt through taxation. The Treasury Corporations and State Treasurers lend these funds to the state-owned network businesses at rates consistent with the risk inherent in the businesses as reflected in their stand-alone credit rating. The stand-alone credit rating is the measure of the businesses' credit worthiness independent of explicit or implicit financial support from the State Government.

This difference between the State's borrowing costs and the costs faced by the network businesses, commonly referred to as debt guarantee fees, represents consideration due to State taxpayers for accepting the business' credit risk. This is not dissimilar to the fees charged by the Commonwealth Government for the guarantees it made available to Australian banks and State Treasury Corporations for their offshore term funding during the recent Global Financial Crisis.

From the businesses' perspective, this mechanism ensures that they face borrowing costs that reflect the nature of the businesses, not the taxation powers of their government lenders.

If state-owned network service providers were to access debt capital markets directly, then they would face debt financing rates that reflected their stand-alone credit ratings, which would not be dissimilar to the rates that privately-owned network service providers with the same credit ratings would attract.

This competitive neutrality/government debt guarantee fee is applied to the state-owned network businesses by jurisdictional governments under the Competition

Principles Agreement.[4] These businesses compete with their private sector counterparts and with the rest of the economy more generally for inputs such as capital and labour.

If state-owned network service providers were not required to pay any competitive neutrality/debt guarantee fees to reflect their stand-alone credit ratings, taxpayers in general would effectively be subsidising electricity consumers. Taxpayers would be taking the financial risk of guaranteeing debt repayment by these businesses without any compensation.

Suggesting that the interest rates that Treasury Corporations can secure reflects the actual debt financing costs of network service providers is not correct and ignores the fact that credit risk represents a real cost that should be accounted for. If state-owned businesses did issue their own bonds, without a government guarantee they would face similar borrowing costs and the value represented by the guarantee fees would be transferred to bond holders. Electricity consumers would be no better off.

This is just one of the key reasons why the AEMC does not support the Energy Users Rule Change Committee's rule change request on this issue. The AEMC is of the view that the most appropriate benchmark to use in the regulatory framework for all network businesses regardless of ownership in general is the efficient private sector service provider.

If public sector benchmarks were to be used, it can be equally argued that such government ownership cost distinctions should be extended to labour input markets. The consequences of such a distinction could be that benchmarking the efficiency of state-owned network service providers would not take account of the performance of privately-owned network service providers.

Another important consideration for the Commission in deciding not to distinguish state-owned network service providers' debt costs is the potential effect on businesses' future network investment decisions. The use of private sector benchmark debt costs assists in adding pressure on state-owned network service providers to apply commercial discipline to their borrowing to fund any capital expenditure requirements. Faced with an artificially lower cost of capital, state-owned service providers may view network capital expenditure solutions as comparatively lower cost to non-network solutions (such as embedded generation), as compared to their private sector counter-parts.

The AEMC has provided a more detailed explanation of its view in its rule change draft determination on the economic regulation of network service providers.[5]

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[4] All States and Territories in Australia, including the Commonwealth are signatories to the Competition Principles Agreement. See: AEMC, Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Draft Rule Determinations, 23 August 2012, pp. 80-85.

[5] AEMC, Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Draft Rule Determinations, 23 August 2012, pp. 78-89.

4. The AEMC has recommended re-combining transmission planning and construction into one entity in Victoria. Is this not a conflict of interest? Why does the AEMC not support separating transmission planning and construction by allocating responsibility to the AEMO (or the AER) to conduct competitive tenders for network upgrades across the NEM?

There is no conflict of interest in an entity making investment decisions also owning the assets it has decided to invest in. The two are generally internalised within one company in every other part of the economy. In fact conflicts, or at least inefficiencies, are more likely to arise where the investment decision maker and the asset owner are separated. Where it does happen, contracts are put in place that allocate the investment risk (have we invested in the right asset?) to the investment decision maker and the operational risk to the asset owner (is the asset being operated and maintained efficiently?).

The Australian Energy Market Operator (AEMO), as the investment decision maker in Victoria does not and cannot accept any financial risks associated with its investment decisions. Further, the costs of these decisions by pass the regulatory process and are allocated directly to consumers without any oversight and review by the Australian Energy Regulator (AER).

The relevant issue is not so much whether investment decision making and asset ownership happen in one entity or not, but rather what incentives and regulatory frameworks are in place that would suggest that investment decisions are more likely than not to be efficient.

The current arrangements in Victoria involve a separation of investment decision-making and operational decision-making. If the investment decision maker is a different organisation from the organisation that operates the transmission network, there is a significant risk that efficient trade-offs between investment and operational decisions will not be made.

The AEMC is considering this matter in the *Economic Regulation of Network Service Providers*[6] rule change and the *Transmission Frameworks Review*.[7]

The Commission also observes that:

- It is common practice for all transmission businesses to outsource the construction of network augmentations to construction companies. There is therefore competitive tendering by all transmission businesses to ensure that investments, once decided upon, are delivered efficiently.
- The vast majority of competitive tenders in Victoria have been won by the incumbent transmission business: SP Ausnet has been successful in 13 out of 15 tenders.[8]

[6] http://www.aemc.gov.au/Electricity/Rule-changes/Open/economic-regulation-of-network-service-providers-.html

[7] http://www.aemc.gov.au/Market-Reviews/Open/transmission-frameworks-review.html

- If a wider range of tenderers had been successful in Victoria, this would have brought its own issues in terms of a loss of economies of scale and diffuse accountability for system performance and safety.
- There are non-trivial costs incurred by AEMO and tenderers directly as a result of tendering. These have been estimated as about five per cent of the overall cost of a contestable project.[9]
- The separation of functions implied by the competitive tendering approach in Victoria has had a significant impact on the efficiency of the process through which new generators and load customers are connected to the transmission network. Typically, it is necessary in Victoria for up to 16 agreements to be put in place between a number of parties in order to effect a connection, as opposed to a single connection agreement in other jurisdictions.[10]
- In its role as investment decision-maker in Victoria, AEMO is not subject to any oversight by the AER or any other body.

Integrated, for-profit transmission businesses that are subject to economic regulation, including appropriately designed financial incentives, therefore represent the Commission's preferred approach for the structure of transmission providers across the NEM.

[8] AEMC, Transmission Frameworks Review, Second Interim Report, 15 August 2012, p. 80.

[9] AEMC, Transmission Frameworks Review, Second Interim Report, 15 August 2012, p. 80.

[10] AEMC, Transmission Frameworks Review, First Interim Report, 17 November 2011, p. 149.

Why does the AEMC not support a national approach to transmission construction – does not leaving responsibility with state networks for transmission construction lead to sub-optimal investment in inter-state transmission and higher electricity prices?

The AEMC strongly supports a national approach to the development of the transmission network. However, it distinguishes between the functions of planning the networks from investment decision-making and considers that efficient investment can be best effected through transmission businesses retaining responsibility for investment decision-making with effective economic regulation.

The Commission is not aware of any compelling evidence that there is a sub-optimal level of inter-state transmission capacity in the NEM. The Commission undertakes annual reviews of transmission businesses' activity in this respect (under its "Last Resort Planning Power") and it has yet to identify any shortfall. Presently, potential upgrades between Victoria and South Australia[11] and between New South Wales and Queensland[12] are both being assessed. A conclusion supported by the Productivity Commission in its draft report on Electricity Network Regulatory Frameworks.

The Commission further notes that AEMO's initial analysis of a project to significantly expand inter-state capacity, known as "NEMLink", suggests that substantial increases in capacity are unlikely to be economic, and would therefore unnecessarily increase electricity prices if progressed.[13]

The electricity transmission network on the Australian mainland has been developed as an integrated, meshed AC network. This means that it is impossible, in practice, to completely separate the provision of inter-state and within-state transmission capacity. It is therefore necessary to consider the provision of inter-state transmission capacity within the wider context of transmission planning and investment-decision making.

As previously noted, the AEMC does not support options in which responsibility for transmission investment decision-making is removed from transmission businesses, such as under the Victorian arrangements.

However, AEMO plays a key role in transmission planning through its National Transmission Planner function, which provides information in order to facilitate the coordinated long-term development and investment in the network on a national basis.

In the *Transmission Frameworks Review*, the Commission has proposed an enhanced role for AEMO in this regard. This would involve more active input from AEMO on a shorter-term basis to drive coordination and consistency in transmission businesses' decision-making. Development of the entire network on a holistic basis would mean

[11] ElectraNet & AEMO, South Australia – Victoria (Heywood) Interconnector Upgrade, RIT-T: Project Assessment Draft Report, September 2012.

[12] Powerlink & TransGrid, Development of the Queensland – NSW Interconnector, Project Specification Consultation Report, June 2012.

[13] AEMO, 2011 National Transmission Network Development Plan, December 2011.

that both inter-state and within-state requirements were met in the most efficient manner possible.

The Commission considers that use of existing institutional structures in this way will provide a useful tension between transmission businesses, which have a detailed knowledge and understanding of local conditions, and AEMO, which provides a more strategic perspective. Capturing and testing these different perspectives is likely to reduce the risks that might arise if the views of a single body were relied upon. The capital expenditure of transmission network service providers should also be subject to the scrutiny of the Australian Energy Regulator in the determination of transmission revenues.

As noted, in the *Transmission Frameworks Review* Second Interim Report, the AEMC has proposed a new approach for the service that generators would receive from the transmission network. This would extend to the users of interconnectors between states. The Commission considers that there is considerable merit associated with this approach as it would provide a more robust driver for transmission investment decisions, and would mean that more of the risks associated with investment and operational decisions were borne by generators and transmission service providers, rather than by consumers as at present. The Commission will make recommendations to governments in the *Transmission Frameworks Review* final report in March 2013.

5. What is the AEMC's view on proposals for a mandated demand management target for network businesses?

The AEMC explicitly considered a mandated demand management target for network businesses in its draft report on the *Power of Choice Review*.[14] The following extract summarises the AEMC's view:

> "Reducing peak demand at the distribution network level is clearly beneficial. However, setting a target on distribution businesses to achieve these benefits is not entirely straightforward. Based on consideration of several different ways to set a target that seeks to reduce upward pressure on electricity price, it would appear that there is no perfect solution; that is, no option for setting a target appears to maximise the potential for achieving its aim without running the risk of being gamed, being ineffectual or actually increasing costs, at least in the near term. Network businesses could over invest in DSP through doing DSP for the sake of making the target, without any consideration of the efficiency of the project or its impacts on consumers. For these reasons, we do not consider placing a target on distribution businesses to be appropriate."[15]

[14] AEMC, Power of choice – giving consumers options in the way they use electricity, draft report, 6 September 2012, section 7.3.4.

[15] AEMC, Power of choice – giving consumers options in the way they use electricity, draft report, 6 September 2012, pg. 134.

6. Some submissions to the inquiry have noted that the recommendations of the AEMC do not address the disincentive to network demand management programs (due to differences in the treatment of operational expenditure relative to capital expenditure) and the Demand-Management and Embedded Generation Connection Incentive Scheme is a second-best option (using compensation instead of fixing the distortion). Could you explain the AEMC's approach on this issue?

The AEMC is examining whether the current arrangements provide the right motivation for distribution network businesses to use the potential of demand side participation projects as an efficient alternative to network capital investment as part of the *Power of Choice Review*.[16]

The AEMC has found that there are a number of factors contributing to the preference for capital investment within the business' planning and investment decision making framework. These include:[17]

- the regulatory framework for assessing and approving operating (opex) and capital expenditure (capex) and the potential profit associated with demand side participation projects;
- differing incentive strengths of opex and capex (the regulatory framework has a powerful influence on this);
- the ability of the businesses' planning process and procedures to generate network solutions;
- the businesses' understanding and approach to risk management and decision making at all levels within the organisation;
- the way in which network businesses recover their allowed costs through their tariff structure; and
- the way in which the businesses' planning and investment frameworks supports them in managing the risks and uncertainty associated with demand side participation projects, especially given that the market for them is in the early stages of development and the technology is constantly evolving.

Since this is not one single problem, the AEMC recognised that any solution may have difficulty in adequately addressing all the issues at once. Further that some incentives may not be a direct consequence of the regulatory framework.

To address, in the draft report the AEMC recommended:[18]

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[16] AEMC, Power of choice – giving consumers options in the way they use electricity, draft report, 6 September 2012, chapter 7.

[17] AEMC, Power of choice – giving consumers options in the way they use electricity, draft report, 6 September 2012, pg. 115.

[18] AEMC, Power of choice – giving consumers options in the way they use electricity, draft report, 6 September 2012, pg. 113

- the AER considers reforming the application of the current demand management incentive scheme to provide appropriate reward for demand side participation projects which deliver a net cost saving to consumers. The AEMC put forward two mechanisms and guiding principles for how this could be achieved.
- a two-part approach is adopted to address the issue of business profits being dependent upon actual volumes. Firstly, improvements to the pricing principles to guide network tariff structures and secondly, include allowance for foregone revenue under the demand side participation incentive scheme.
- changes are made to the rules to provide clarity and flexibility for how the AER treats networks' demand side participation expenditure. This is to reflect the different nature of demand side participation related expenditure as opposed to normal capital investment.

In addition, the AEMC has recently completed the *Distribution Network Planning and Expansion Framework* rule change. It requires distribution network service providers to develop a demand side strategy including an obligation to engage with non-network providers and consider non-network options in accordance with the strategy. The requirements will provide greater transparency on how distribution network service providers assess and consider non-network options in their planning processes.[19] The AEMC has also proposed more tools for the AER on capital expenditure incentives as part of the *Economic Regulation of Network Service Providers* rule change.[20] These tools enable the AER to better align the incentives between operating and capital expenditure incentives.

[19] AEMC, Distribution Network Planning and Expansion Framework, Rule Determination, 11 October 2012, section 7.

[20] AEMC, Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Draft Rule Determinations, 23 August 2012, section 9.