grid australia
BACKBONE OF THE NEM

15 March 2013

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Via website: www.aemc.gov.au

Dear John

Transmission Frameworks Review Second Interim Report – Reference EPR0019

This supplementary submission responds to a late submission from the Australian Energy Market Operator (AEMO) to the Transmission Framework Review (TFR) Second Interim Report in which AEMO has proposed an alternative model for connecting generators and loads to the transmission network.

Grid Australia has a number of concerns with AEMO's proposed alternative model that it wishes to highlight to the AEMC before it publishes its Final Report for this review.

The model introduces a new role for AEMO to facilitate the contestability of connection services that are presently treated as Negotiated Transmission Services. This would include both shared assets and fully dedicated connection assets. [1]

Grid Australia supports the use of competition where it is in the long-term interests of consumers. However, Grid Australia is concerned that the AEMO proposal will not create a framework that delivers the most cost efficient electricity transmission investment for either connecting parties or for those that benefit from the shared network more broadly. Reasons for this include:

- It would unnecessarily split the accountability for connections planning from shared network planning
- AEMO would have significant influence over connections, but generally no accountability for the impact of these connections on service outcomes for connected parties including in the shared network

[1] Grid Australia notes that connection services that occur outside the boundary of the existing network that are fully attributable to connecting parties are already contestable services (i.e. extensions). As such, this submission focuses only on the proposal that contestability also be introduced for those connection services that are presented classified as Negotiated Transmission Services.

- Additional issues for maintaining necessary service performance objectives efficiently could be expected to arise where there are multiple transmission owners and split accountabilities for network operation

- AEMO's proposed involvement in the connections process is unnecessary and could be expected to lead to a slower, inflexible and more costly connections process, and

- AEMO's proposal would not promote national consistency beyond what is currently the case with local TNSPs under the current national Rules framework – those commercial matters and innovations that are of most importance to connecting parties will, by necessity, always remain bespoke.

Grid Australia is also concerned that the AEMO proposed model, or any other alternative contestable connections model, would represent a fundamental change to the current connections framework. As such, more information, consultation and time is required before a change to a more contestable connections model is made (recognising that such proposals have arisen very late in the AEMC review process). This includes consideration of how the change may interact with other reform proposals such as Optional Firm Access.

Please do not hesitate to contact me on (08) 8404 7983 if you wish to discuss any aspect of this submission.

Yours sincerely

Rainer Korte

Rainer Korte
Chairman
Grid Australia Regulatory Managers Group

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Transmission Frameworks Review

Supplementary Submission to AEMC
Second Interim Report

March 2013

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1 Introduction and overview

This submission responds to a late submission from the Australian Energy Market Operator (AEMO) to the Transmission Framework Review (TFR) Second Interim Report in which AEMO has proposed an alternative model for connecting generators and loads to the transmission network.

Grid Australia has a number of concerns with AEMO's proposed alternative model that it wishes to highlight to the AEMC before it publishes its Final Report for this review. The model introduces a new role for AEMO to facilitate the contestability of connection services that are presently treated as Negotiated Transmission Services. This would include both shared assets and fully dedicated connection assets. [1]

Grid Australia is primarily concerned that the AEMO proposal will not create a framework that delivers the most cost efficient electricity transmission investment for either connecting parties or for those that benefit from the shared network more broadly.

1.1 Summary of Grid Australia's response to the AEMO Paper

The key points raised in this submission are as follows:

- Grid Australia supports the use of competition where it is in the long-term interests of consumers. However, no compelling case has yet been presented by AEMO to demonstrate a clear economic benefit from a move to its proposed model. Conversely, the competitive procurement already undertaken by Transmission Network Service Providers (TNSPs delivers the benefits of AEMO's model without the associated additional overheads, inefficiencies and costs.
  - Grid Australia's experience is the innovative connection solutions which can deliver the greatest cost savings to connecting parties typically involve elements deeper into the shared network. These might include a forced generator tripping arrangement that avoids the need to reinforce the transmission backbone. Given the understanding of the deeper shared network that is necessary for these solutions, they are likely to be delivered more efficiently by incumbent TNSPs.

[1] Grid Australia notes that connection services that occur outside the boundary of the existing network that are fully attributable to connecting parties are already contestable services (i.e. extensions). As such, this submission focuses only on the proposal that contestability also be introduced for those connection services that are presented classified as Negotiated Transmission Services.

  - Concerns about whether cost savings achieved by TNSPs are passed on to connecting parties are better addressed through incremental changes such as the increased transparency of the negotiations framework proposed by the AEMC in its Second Interim Report.

- While AEMO's proposal to remove itself from the commercial aspects of a connection negotiation would be an improvement in Victoria, its proposed new role in every other National Electricity Market (NEM) jurisdiction is highly unlikely to lead to efficient connections or broader network services, in particular because:

  - It unnecessarily splits the accountability for connections planning from shared network planning. As such, AEMO would not bear the consequences of a connection that it has significant influence over. For example, a low cost arrangement may lead to reliability reductions for other connected parties, particularly those more proximate to the new connection arrangement. Further there are additional issues for maintaining necessary service performance objectives efficiently which might also arise where there are multiple transmission owners and split accountabilities for network operation

  - AEMO's proposed involvement in the connections process is unnecessary and could be expected to lead to a slower, inflexible and more costly connections process, and

  - AEMO's proposal would not promote national consistency beyond what is currently the case with local TNSPs under the current national Rules framework. Those commercial matters and innovations that are of most importance to connecting parties will, by necessity, always remain bespoke.

- The AEMO proposed model, or any other alternative contestable connections model, would represent a fundamental change to the current framework. As such, more information, consultation and time is required before a change to a more contestable connections model is made. This includes consideration of how the change may interact with other reform proposals such as Optional Firm Access.

2 Issues with the AEMO connections model

AEMO's proposed model for the connection of generators and loads in the NEM would apply to all assets beyond those required to directly interface with the existing network in order to facilitate a connection. This includes both shared assets and fully dedicated connection assets. Grid Australia understands that the stated objective of the model is to facilitate contestability for those connection services that include the construction of shared network assets.

A motivation for AEMO's proposed model appears to be to address one of the core concerns raised by connecting loads and generators with its involvement in Victoria, specifically as a not-for–profit entity its inflexible, and non-commercial, role with respect to the negotiation of the commercial aspects of a connection. Removing AEMO from the commercial aspects of a connection negotiation in Victoria may address a contentious issue in that jurisdiction, but the proposed model would establish a new role for AEMO in every other jurisdiction. While the consideration of options to improve the Victorian arrangements is encouraged, achieving this by complicating the arrangements in every other NEM jurisdiction will not promote the National Electricity Objective (NEO).

The remainder of this section describes a number of material concerns that Grid Australia has with AEMO's proposed connections framework, these relate to:

- The split of shared network and connections planning responsibilities
- The scope for slower, inflexible and more costly connections process, and
- The prospects of achieving national consistency on those matters that are of most importance to connecting parties.

2.1 Split of shared network and connections planning responsibilities

AEMO's proposal for it to receive connection applications and determine a functional specification for the connection unnecessarily separates shared network planning and connections planning. The key implication from separating these functions is that the party responsible for determining the functional specification for connections has no accountability for outcomes on the shared network.

If contestability is introduced for services that are presently treated as Negotiated Transmission Services it is important that the party accountable for network performance, namely the local TNSP, is also responsible for specifying the functional requirements of the connection service.

Under the current arrangements, one of the key objectives for a TNSP when connecting a new generator or load to the network is to ensure that its connection does not adversely impact on the reliability or quality of supply for other connecting parties and the broader customer base. This means designing a connection that has the necessary configuration and protection equipment such that an issue at the generator/ load side does not lead to a loss or degradation of supply that impacts on others.

To perform the connections specification function effectively a detailed understanding of the local network conditions now, and into the reasonably foreseeable future, is necessary. This local knowledge enables the development of connection solutions

that comply with reliability and service performance standards and any unique operational aspects of the local network[2]. Local and intimate knowledge of the network also better facilitates decisions on where there is scope for a lower level of reliability connection to proceed for a particular connection if that meets the customer specification.

Grid Australia further notes that the AEMC has again been tasked with reviewing the development of a national approach for transmission reliability standards.[3] An outcome of this review might be that economic assessments for determining relevant shared network planning standards become more localised across the NEM. This in turn will heighten the need for the party responsible for shared network planning and operation to consider the possible costs and reliability trade-offs that might be imposed by alternative connection configurations. Grid Australia considers that TNSPs, with their local knowledge of the network, planning resources and accountability, are in the best position to perform these functions effectively.

In addition to certain regulatory obligations, such as planning the network on the basis of reliability standards, TNSPs also face financial incentives related to service performance. Specifically, through the Service Target Performance Incentive Scheme (STPIS) TNSPs are provided with a financial incentive to have regard to the impact to customers from a line outage. One of the implications of this incentive is that TNSPs have a financial motivation to have regard to the potential adverse impacts of a new connection on the reliable supply for other customers. In practice, this might be realised through a substation design that avoids a line outage when subsequent connections occur.

Outside Victoria, AEMO does not have responsibility or accountability for the performance of the shared network and would not face financial incentives to have regard to the impact of a new connection on the reliable supply to customers.[4] In this circumstance, AEMO might focus on a solution that delivers costs benefits to connection proponents in the short term at the expense of imposing longer term costs onto customers; such as those caused by line outages for subsequent connections.

The not-for-profit status of AEMO also means that it is not possible to impose financial incentives upon it to make trade-offs on connection options or to take on risk. As such, it is not flexible or responsive to customer needs in the same way that a commercial entity can be to accommodate the requirements of a contestable connections process.

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2 Examples of these local factors include fault level issues, bus couplers or lines normally open, harmonic issues, intertrip schemes, load shedding schemes and short term overload capability.

3 See: http://aemc.gov.au/Market-Reviews/Open/review-of-the-national-framework-for-transmission-reliability.html

4 Note, however, that AEMO does have responsibility for maintaining system security which it manages through the application of constraint equations.

2.2 Increased scope for a slower, inflexible and costly connections process

Grid Australia considers that the role AEMO has proposed for itself would significantly complicate the connections process without delivering a discernible or demonstrable benefit.

Under AEMO's proposed model it would be required to respond to connection enquiries and applications in each NEM jurisdiction. It would also be required to develop a functional specification for all new shared network assets associated with a connection. Grid Australia is concerned, however, that AEMO's 'up-front' involvement in the connections process does not accord with the highly interactive process taken for connections. Typically through the process of developing the connection there are numerous factors that will change the design and specification of the connection solution, these include:

- the choice of connection voltages if more than one voltage is present and available,
- the choice of connection point location if more than one alternative exists,
- the power transfer capability of the shared network immediately beyond the connection point, and
- the location of reactive compensation equipment.

The iterative process of a connection and the need for ongoing interaction between connecting parties and TNSPs means that having AEMO as an additional party to that process is likely to make it significantly slower, inflexible and costly. Given the value that connecting parties place on a timely connection, such outcomes would clearly not promote the NEO. It is also notable that given AEMO's not-for-profit status it is not possible to attach financial incentives to the timeliness of its involvement in the connections process. Conversely, as mentioned above, under the current framework TNSPs and connecting parties can, and do, negotiate penalty arrangements for process delays caused by the TNSP.

It is also notable that AEMO cannot assess technical standards and requirements in isolation of the local TNSP. Its capacity to make this assessment is dependent on AEMO being party to all of a TNSP's obligations under other connection agreements which may be affected by the new connection and also any unique operational aspects of the network with the incumbent TNSP. Grid Australia considers that this transfer of information is unnecessary and costly and introduces risks of AEMO not having proper regard to information put forward by local TNSPs.

2.3 National consistency does not accord with an innovative and flexible connections objective

AEMO often advocates that its involvement in certain processes will facilitate national consistency. Grid Australia agrees that national consistency is a desirable objective. While there is scope for improvement in some areas, there is already national consistency, outside Victoria, for network connections. AEMO's model, however, will not address consistency for those critical aspects of a connection, namely the commercial arrangements, which are of most importance to connecting parties.

The regulatory framework already facilitates national consistency for connections. This includes regulatory tools such as the connections process obligations in Chapter 5 of the Rules, the AER's involvement in developing negotiating frameworks, or legislative instruments such as Corporations Law. Further to this, Grid Australia members have enhanced national consistency through the development of a Connections Configuration Guideline.[5] This guideline provides an explanation of the principles and practices that Grid Australia TNSPs take into consideration when designing connection arrangements to meet customer specifications.

It is Grid Australia's experience that those aspects of a connection that are typically of most importance to connecting parties, namely the commercial arrangements on matters such as timing and who takes on what risk, will always be bespoke. This is because these factors depend on the specific circumstances of the connection, including the nature of the connecting party.

It is also worth noting that it may be counterproductive to a contestability model to standardise elements such as the equipment used for connections on a national basis. This is because TNSPs tend to use, and therefore have experience with, different standard equipment. As such, an equipment standard that was different to what is presently used by a TNSP would impose costs such as for the retention of spares for that new equipment, and costs associated with familiarising staff with the technical characteristics and limitations of the new equipment.

3 Further considerations related to potential connection framework changes

3.1 Additional analysis and consultation is necessary before a fundamental change is made to the connections framework

It is appropriate for competitive markets to be the starting point when deciding on the most efficient structure of a market. Indeed, the potential for inefficient outcomes from

[5] The Connections Configuration Guideline can be found here: http://gridaustralia.com.au/index.php?option=com_content&view=category&layout=blog&id=157&Itemid=216

competitive markets must be high before regulation is applied. This is to recognise that regulation imposes substantial costs, and the benefits of regulation need to exceed those costs.

The relevant question when assessing whether contestability should be introduced into certain services is whether the cost efficiencies and innovation that might be expected to come from competition outweigh the other costs that might be imposed. This is not a simple question to answer. It requires consideration of the upfront disruption and administration costs of making the change as well as a view about the effectiveness of the market in avoiding substantial and sustained use of market power.

The TFR, however, is nearing its completion. The AEMO proposal has arrived very late into a long process and has the potential to confuse the conclusion of the review. Grid Australia is concerned that there is insufficient time remaining in the TFR to fully analyse alternative connection models and consult on them prior to the publication of the Commission's Final Report. In particular, analysis is required on how potential contestability models interact with other more substantial reforms such as Optional Firm Access.

As discussed in the following section, Grid Australia is concerned that there is no clear case that contestability for connection services that are presently treated as Negotiated Transmission Services is in the long-term interests of consumers. The AEMO proposed connections model, however, goes far beyond merely introducing contestability to some connections services. It proposes a vastly expanded role for AEMO and would be a fundamental change to the entire connections process. Given the timing of AEMO's proposal, the extent of changes it proposes, and the lack of compelling evidence that such a change would be in the long-term interests of consumers, Grid Australia does not consider it is possible to subject the proposed changes to the standard of analysis and consultation that the AEMC would usually apply.

3.2 The economic case for a move to a contestable connections model is not yet clear

Grid Australia considers that it is far from clear that introducing contestability onto those services that are presently regulated as Negotiated Transmission Services would deliver material efficiency gains, or any efficiency gains at all.

The perceived advantages of a contestable connections model appear to be centred on minimising the construction costs of connections. As indicated to the Commission in previous submissions, all major works that are undertaken by TNSPs, including connection related works, are subject to a competitive tender process. In addition, while TNSPs do have internal design teams, this function is also commonly subject to competitive tender. The fact that construction, and often design, are subject to

competitive tender means that these services are already subject to competitive rivalry and its associated benefits.

Grid Australia's experience also suggests that the innovative solutions that can offer the most benefit to connecting loads or generators are those that penetrate deeper into the shared network. Examples of these innovations that occur deeper into the shared network might include forced tripping under particular contingency conditions in order to avert the need to reinforce the transmission backbone. Given the works and assets required to implement such schemes are far deeper into the shared network than shared assets in or around the connection point, these are far more likely to be efficiently delivered by incumbent TNSPs rather than third parties.

In addition, while TNSPs are not the only party capable of operating and maintaining network assets, it is not clear that third party operators would be able to perform this function in a materially more cost effective way than TNSPs.

Conversely, a contestable connections model would introduce obvious costs. These include:

- Costs related to more complex procedural and negotiation arrangements due to the introduction of third parties. These costs will be further, and significantly, compounded should the proposed Optional Firm Access proceed given the need to negotiate complex access arrangements with connecting parties

- New service performance and service quality costs and risks associated with fragmentation of shared transmission system ownership; particularly where the new network owners are smaller operators with less extensive experience with the requirements for operating a transmission system, and

- As discussed in more detail above, proposals such as AEMO's that introduce 'independent oversight' into the process would create procedural delays and new costs without a corresponding benefit

While it is clear, from an economic efficiency perspective, that material gains from a contestable connections model are unlikely, it is nevertheless understood that connecting parties are concerned about whether the benefits from competitive tendering undertaken by TNSPs is being passed onto them. It is Grid Australia's understanding that this was the primary concern that drove the AEMC's proposal for more transparency in the TNSP negotiating framework. This process would provide connecting parties with the same information that would be available under a contestable connections model. That is, they would be provided with information of the tender responses from companies and know how this is reflected in the price they pay for connection services to enable effective negotiation.

To the extent there are also concerns about the timeliness of connections, it is not clear that timeliness would be improved with a contestable connections model. As discussed above, the addition of a third party into the process would likely increase

the chance of delay to manage necessary interactions between parties. Should connecting parties place significant value on the timeliness of connections, the current framework allows for rewards or penalties related to the timing of certain actions to be negotiated under commercial terms.