AER Submission

National Transmission Planning Arrangements

Response to AEMC Scoping Paper

September 2007

Introduction

The Australian Energy Regulator (AER) welcomes the opportunity to respond to the AEMC's scoping paper for the implementation of new national transmission planning arrangements.

Effective electricity transmission planning arrangements are important in fostering the objectives for economic regulation set out in Chapter 6A of the National Electricity Rules (NER). In particular, transmission planning directly relates to the capital expenditure objectives (clause 6A.6.7(a)).

The AER has developed considerable experience in carrying out its role of regulating the revenues of Transmission Network Service Providers (TNSPs) in the National Electricity Market (NEM) and promulgating the regulatory test. The AER considers there are significant weaknesses in the current arrangements and is keen to see establishment of improved arrangements for national transmission planning. The AER considers these have the potential to significantly enhance the efficiency of the NEM.

The AER notes the scoping paper is separated by the three main work streams for the implementation plan, namely:

- developing an implementation plan for the national planning function, including arrangements for an annual National Transmission Network Development Plan (NTNDP) to replace the Annual National Transmission Statement (ANTS)

- a revised network planning and consultation process (PAC) based on integrated limbs of the regulatory test, to replace the current test

- consideration of the case for simultaneous AER revenue re-sets to replace the current sequential approach.

The AER notes that the above areas of focus are inter-related.

The first section of this submission is a discussion of arrangements for a national planning function, which the AER views as the most important aspect of this review. The AER considers that the key issue being considered concerns the national transmission planning arrangements. Previous reviews have highlighted deficiencies with transmission planning arrangements in the NEM. The approach that is adopted to the national transmission planning arrangements will determine whether these deficiencies are addressed or remain an issue into the future. The approach that is adopted to the national transmission planning arrangements also fundamentally influences the approach to the other two aspects of the review.

The second section of the submission provides responses to the specific questions raised in relation to the project assessment and consultation process.

The final section discusses the issues and practicalities to be considered in relation to the proposal to align transmission revenue resets.

National Transmission Plan

What is the appropriate area of focus for the transmission national planner?

How do we ensure effective interaction between the TNSPs and the national planner whilst ensuring the national planner adds value?

What are the appropriate governance, consultation and communication arrangements for the new National Transmission Planner?

What are the appropriate settings for planning arrangements within jurisdictions and their interaction with national planning arrangements?

Of the three issues being considered by the review, the most important is the implementation of appropriate arrangements for a national transmission plan and the governance of the national transmission planner.

Successive reviews have highlighted the weaknesses of current transmission planning arrangements. Two main weaknesses of the transmission planning arrangements need to be highlighted.

First, TNSPs conduct their own planning (except for SP AusNet which relies on the augmentation planning undertaken by VENCorp). In South Australia, Electranet has regard to the Annual Planning Report published by the Electricity Supply Industry Planning Council (ESIPC) in preparing its transmission plans.[1] As part of a revenue reset process the AER reviews the transmission plans prepared by the TNSPs as well as their consistency with plans developed by other bodies where relevant. The weaknesses in these arrangements are twofold. As highlighted by ERIG there is a conflict of interest between the TNSPs' planning obligations and their commercial interests as asset owners; and there is significant information asymmetry between the TNSPs and the AER. The AER is not (and should not be) a transmission planner. While the AER engages consultants to advise it, there are significant limitations in this approach since, inherently, the consultants are limited in their resources and detailed knowledge.

Second, also highlighted by ERIG, the current arrangements promote an intra-regional focus of the TNSPs. Current planning is focused on state rather than national outcomes. TNSPs are not required to factor in the impact of investment decisions on the whole network and planning of investments with intra regional impacts relies on voluntary cooperation between TNSPs. ERIG considered that this regional approach had resulted in under-investment in national flow paths and reduced efficiency and competition in the NEM.

[1] Each year, the Planning Council is responsible under both the *National Electricity Rules* and the *Electricity Act* 1996 (SA) for publishing an *Annual Planning Report* (APR) for the South Australian electricity supply industry. The resulting document describes the current state of South Australia's electricity supply system. It presents information on the South Australian load forecasts, an assessment of the adequacy of the generation, fuel and transmission network capacity and reviews system augmentation projects.

These weaknesses can be addressed by establishing an independent national transmission network development plan (NTNDP) that is robust and rigorous.

The scoping paper notes that clarification is required on the scope of projects to be considered under the NTNDP. The COAG decision requires the national planner to consider the broad development of the power system, including the capability of the national transmission network. The AER considers that at a minimum, the scope of projects should cover the national transmission flow paths (NTFPs) as described in clause 5.6.5 of the National Electricity Rules and not simply augmentation of interconnection between regions. This is essential in order to overcome the current intra regional focus of planning.

There could be additional benefits (by further reducing conflict of interest and information asymmetry problems) by extending the scope of the plan beyond the NTFPs.

The NTNDP should provide a framework to guide network development. It should be sufficiently detailed to allow an understanding of the drivers for network investment and assessment of the merits of individual augmentation project options proposed by the TNSPs as part of their revenue reset applications and the AER's revenue resets.

This approach would allow the NTNDP to act as an overarching national plan, with the current planning and consultation processes then conducted by TNSPs for the assessment of individual projects. This model is clearly contemplated in the COAG decision which notes that:

> The NTNDP will provide information to the market on the longer term efficient development of the power system in order to guide network investment decisions…[2]

The NTNDP would be an input considered by TNSPs in their planning process. COAG made it clear that the model should in no way bind transmission companies to investment decisions contemplated in the NTNDP.

This arrangement would improve the effectiveness of the regulatory role of the AER. In respect of projects assessed as part of the NTNDP, the AER could largely focus on setting benchmark capital expenditure allowances by assessing the consistency between TNSP proposals and the NTNDP, and the efficiency of the costing of the proposals. To the extent that TNSPs put forward proposals in their submissions that are different to the NTNDP, the AER would need to assess the merits of the TNSP's proposal in a manner similar to the current revenue setting process. However, the availability of an independent national plan would, compared to the existing arrangements, be an invaluable input to this assessment process.

To the extent that projects are outside the scope of the NTNDP, such as more localised projects that did not have a major impact on national transmission power flows, the AER would assess these projects as it does now.

[2] COAG, *COAG National Reform Agenda – Competition Reform April 2007*, p 4

In preparing the ANTS, NEMMCO currently develops conceptual augmentations in consultation with jurisdictional planners, taking into account their Annual Planning Reports (APRs). The scoping paper comments that similarly 'it would also be possible for the national planner to actively form its own views on augmentations to be considered.' The AER submits that it is crucial that the national planner put forward its own independent views on the needs and appropriate development of the transmission network. The success of the national planner model depends on the ability of the planner to provide frank expert advice.

The AER suggests the national planner would be responsible for:

- developing criteria (incorporating the principles of the regulatory test) by which the national plan will be developed
- developing and managing information sharing and consultation arrangements with relevant planners, TNSPs, AER and stakeholders
- analysing the drivers for investment including overall electricity load forecasts scenarios, generation development scenarios, analysis of transmission constraints, and security and reliability standards
- preparing or reviewing proposals for significant project options relating to the transmission network in the NEM
- publishing an initial annual NTNDP and updating it on an annual basis
- publishing other appropriate information from time to time
- developing criteria for the project and consultation process based on the integrated limbs of the regulatory test version 3
- contributing to the development and review of national planning standards
- advising the MCE on matters relating to the future capacity and reliability of the NEM transmission system

This model where the NTNDP acts as overarching national plan with a planning and consultation process then conducted by TNSPs for the assessment of individual projects has the potential to offer meaningful improvement to the current planning arrangements.

In places the scoping paper suggests a more limited national planning approach than envisaged by the AER above:

> It would also be possible for the national planner to actively form its own views on augmentations to be considered. This might promote greater contestability in transmission planning but could also run the risk of inconsistent views on the inputs to and desirable outcomes from the planning process.[3]

[3] AEMC, *National Transmission Planner, National Transmission Planning Arrangements: Scoping paper,* August 2007, p 11

The AER believes that the success of the national planner model rests on whether it provides its own views on the development of the grid. If the national planner does not present its own analysis and advice to the market, it is difficult to see what possible improvements the NTNDP will deliver on the ANTS arrangements.

Elsewhere the AEMC notes that the COAG decision:

> … appears to reflect a view that there are substantial gains to be realised from improved national planning and coordination, and that these gains are best delivered through planning and investment decisions by regional (or in some cases sub-regional) entities.[4]

The AER disagrees with this interpretation of the COAG decision. The COAG decision states that the national planning arrangements:

> … are intended to assist transmission companies, when undertaking planning and putting forward their revenue proposals to the AER, to demonstrate that projects are aligned with the NTNDP.[5]

This contemplates that the NTNDP involves a level of planning above that conducted at the regional level.

Appropriate governance arrangements are important. The key factors to be considered in developing governance arrangements are:

- the need for a rigorous and robust NTNDP to be independently developed
- the need to establish effective working relationships
- recognition that the views of the national planner will necessarily have commercial consequences for participants in the market

These factors suggest the main principles for governance should be independence, accountability and appropriate quality controls. In particular:

- The national planner board should be predominantly independent of the commercial interests of any one sector or business, including the interests of TNSPs and generators.
- The board should comprise members with appropriate experience and expertise.
- The national planner should consult closely with governments, the AER and stakeholders on the details of information that should be published from time to time.

[4] AEMC, *National Transmission Planner, National Transmission Planning Arrangements: Scoping paper,* August 2007, p 10
[5] COAG,(2007) *COAG National Reform Agenda – Competition Reform April 2007*, p 4

- It should adopt formal consultation arrangements where governments, the AER and stakeholders are consulted on the collection and publication of information.

- The board should develop proposals and consult on how its performance should be assessed.

To reiterate the AER's main arguments from this section:

- An independent NTNDP that is robust and rigorous would represent a major step forward in promoting greater efficiency in the NEM and assist the AER in better undertaking its regulatory reset role.

- The national plan should form a framework to guide the TNSPs. It needs to be sufficiently detailed to allow assessment of the merits of individual projects by the TNSPs and the AER.

- The plan should cover intra-regional projects as well as interconnectors, especially where the projects have an impact on inter-regional flow paths.

- The governance arrangements underpinning the national planner are very important. While this role requires expertise in transmission planning, it requires independence from individual network and generation interests.

Network planning and consultation (PAC) process

What options should be considered in implementing a new planning and consultation process?

The AEMC must advise the MCE on amalgamating the regulatory test criteria of reliability and market benefits and broadening the latter's definition to include national market benefits. This is intended to allow proposed transmission projects to be assessed against meeting both local reliability standards and their ability to maximise benefits to the national market.

The scoping paper sets out the two limbs of the test and discusses the following possible approaches to integrating the two limbs:

Option 1. *value reliability and base all assessments on a cost-benefit decision (ie: market benefits assessment)*: This would involve valuing the benefits of meeting reliability (and other mandatory obligations) in the analysis. This would effectively mean that mandatory obligations were only met when they had a positive NPV (or when they were combined with market benefits sufficient to justify the investment).

Option 2. *base assessments on a least cost decision criterion*: This approach is the one adopted in the regulatory test to assess reliability augmentations to ensure they are least cost.

Option 3. *retain the status quo and expand reliability assessments*: this would involve retaining a least cost assessment for investments to meet mandatory obligations. However, where these investments also provided market benefits, those additional benefits could be valued and incorporated in the assessment.

Option 2 is inappropriate as it is only applicable to projects that will meet reliability requirements and not those that will deliver benefits to the electricity market. This means it would rule out valid options which may increase the efficiency and effectiveness of the transmission grid.

The AER considers option 1 would provide greater rigour to efficient project selection and enhance transparency around reliability requirements through valuing reliability benefits. However it is perceived as a more complex and onerous assessment process for reliability investments.

The scoping paper seems to consider option 3 the best approach because it appears consistent with the status quo. The only difference between option 3 and the status quo is that the partial analysis of option 3 allows for the inclusion of added benefits to boost a project's attractiveness whilst retaining the safety net of the reliability limb. This currently occurs as TNSPs (applying a broad interpretation of costs under the test) take account of the effect of an option on the costs of other network projects that may be required in the future in their regulatory test assessments. The concern with adopting this kind of approach is that it would continue to allow the bias in conservative interpretations of reliability requirements whilst allowing for additional

benefits to be added to the analysis. This would result in more reliability projects satisfying the process. In its final report ERIG warned of the inherent problems in adopting such an approach:

> …the ERAA is concerned that if the two limbs of the Regulatory Test were merged, without any remedial action being taken to fix the distortions created by the reliability limb, the pure economic test of the market benefit limb would also become distortionary. ERIG agrees with this concern.[6]

The AER considers that option 3 is only viable if the PAC process requires other market costs, such as the impact of an augmentation on generation fuel and capital costs to be included in the analysis. This would take option 3 closer to option 1, but retain the fall-back of the least-cost assessment for reliability augmentations.

Where the AEMC considers it unfeasible to implement a market-benefits approach to the PAC process, the AER urges the AEMC to build in safeguards so that *all relevant market costs,* for example generation costs, are required in any assessment that involves cost-benefit analysis and not just benefits. Otherwise, the integrated limbs of the regulatory test will be open to gaming, and NSPs will be tempted to cherry-pick only the costs and benefits which assist in validating their proposed projects.

How should the review address the interaction between the national plan, the institutional arrangements for the last resort planning power and the new network planning and consultation process?

The national plan was intended to act as an over-arching national plan with a planning and consultation process to be followed for the assessment of individual projects under the national plan. As highlighted in Section A, this arrangement would be entirely consistent with the COAG decision.

The AER also considers that this arrangement would not affect the ability of TNSPs to undertake timely investment. The AER notes that the AEMC is keen to implement a regime that would avoid adversely impacting on 'urgent and unforeseen' transmission investment. The AER submits that given the extensive lead-up times that are standard in transmission projects, it is very rare for a project to be 'urgent and unforeseen.' Further, given that:

- the NTNDP will not be binding
- flexibility is provided in a TNSP's ex ante capital expenditure allowance and
- TNSP's have access to a contingent projects mechanism

TNSPs would continue to be free to invest in any urgent and unforeseen projects.

[6] ERIG, *Energy Reform – The way forward for Australia: A report to the Council of Australian Governments by the Energy Reform Implementation Grou*p, January 2007, p 187

Aligning revenue resets

What are the costs and benefits of alignment which should be considered within the review? Do simultaneous revenue resets assist the AER in forming views on efficient investment requirements from a national perspective?

The AER agrees investment decisions in one network can affect investment requirements in other networks. However, it is not clear that simultaneous reviews are required to address these externalities. An effective national plan updated annually would appear to provide a more targeted response on this issue than mere alignment of regulatory periods. It is difficult to envisage what information on efficient investment requirements beyond that in an annually updated properly developed national plan would be obtained from simultaneous revenue resets.

Recent changes to the Rules also mean that large inter-regional projects can be handled in a streamlined manner even where revenue caps are not aligned. In particular, the contingent projects mechanism enables an aligned trigger for funding for inter-regional investments, even where the revenue caps themselves are not aligned. For example, the funding of a potential upgrade to the QNI interconnector would be aligned in New South Wales and Queensland even though the timing of the revenue cap determinations is not aligned. The flexibility offered by the contingent projects mechanism means that staggered regulatory control periods do not pose a significant impediment to assessing the efficiency of major investment requirements.

The AER also notes some practical difficulties with the alignment proposal. As highlighted in the table below, under the current Rules, there would need to be an extended transition to a simultaneous revenue reset process which would take some 12 years to fully achieve.

Under the current Rules a simultaneous revenue reset process could only commence from 2019. As the Victorian and South Australian revenue processes are well underway and the New South Wales and Tasmanian revenue proposals are currently being developed, the transition path to simultaneous revenue reviews could only commence with the next Powerlink revenue reset in Queensland in 2012. In the absence of transitional rule changes or cutting short forthcoming regulatory periods, the likely timing for transmission revenue re-sets is set out below.

A seven year regulatory period in Queensland from 2012, followed by a six year revenue period in South Australia, and the minimum five year period in Victoria, New South Wales and Tasmania would only appear to allow the simultaneous revenue reset process across the NEM to commence from 2019.

Transition to Simultaneous Revenue Reviews

State	Current regulatory period	Forthcoming regulatory period	Transitional regulatory period
Queensland	2007-2012	N/A	2012 → 2019
South Australia	2003-2008	2008-2013	2013 → 2019
Victoria	2003-2008	2008-2014	2014 → 2019
New South Wales	2004-2009	2009-2014	2014 → 2019
Tasmania	2004-2009	2009-2014	2014 → 2019

Revenue reset processes are highly technical and involve significant internal resources and consulting input. A "big bang" reset programme would make it significantly difficult for the AER (in particular) and regulated businesses to maintain ongoing internal competency and simultaneously obtain a sufficient number of suitable consultants.

Are there greater synergies to be gained from aligning reviews of transmission revenues within one jurisdiction with distribution reviews in the same region?

The AEMC questions whether instead of seeking simultaneous transmission reviews, there may be greater synergies in conducting simultaneous transmission and distribution reviews within the one jurisdiction.

The current South Australian transmission review has uncovered some issues (most notably the CBD re-inforcement) which could potentially be addressed by transmission or distribution solutions or a combination of the two. These synergies may not be captured by a national transmission plan.

Further, there are other factors, such as load growth, which will impact on both transmission and distribution capex requirements. A simultaneous transmission and distribution review would enable a consistent treatment of these issues.

However, many of the gains of simultaneous transmission and distribution reviews within one jurisdiction may be achieved through the single regulator (AER) making transmission and distribution decisions under a regulatory framework that is consistent for transmission and distribution.

The AER notes that the next New South Wales transmission review will coincide with the distribution review. This will allow an assessment of the merits of conducting simultaneous transmission and distribution reviews within the one jurisdiction.