

# Transmission Connection and Planning Arrangements

Response to AEMC Draft Determination – ERC0192  
(27 January 2017)

## Contents

Overview	3
Transmission Connections	5
Transmission Planning	9
Jurisdictional Specific Issues	11
Summary of Recommendations and Proposals	12

## Overview

Energy Networks Australia welcomes the opportunity to provide a submission to the Australian Energy Market Commission's (AEMC) Draft Determination and draft rule on the COAG Energy Council's Transmission Connection and Planning Arrangements rule change request, published on 24 November 2016 (the Draft rule).

Energy Networks Australia is the national industry body representing businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to virtually every household and business in Australia.

The Draft Determination proposes significant changes to transmission connection arrangements in the National Electricity Market (NEM). Energy Networks Australia supports the intent of the reforms subject to their implementation in a practically effective manner which maintains the efficiency, security and reliability of the electricity system which customers rely on.

Energy Networks Australia endorses the intent of reforms which seek to:

- » Improve transparency around connections and negotiations,
- » Promote contestability around transmission connections,
- » Improve clarity and consistency in relation to connection terminology,
- » Clarify accountability for shared network outcomes through workable interface arrangements with Transmission Network Service Providers (TNSPs), and
- » Enhance transmission planning, reporting and decision-making frameworks.

Energy Networks Australia highlights the importance of any proposed reform establishing a predictable and resilient regulatory framework in which roles, responsibilities, obligations and liabilities are clear.

The infrastructure connecting customers to the shared transmission network and the connection agreements underpinning these connections often last many decades. The regulatory framework underlying these connection arrangements therefore needs to be predictable, resilient and robust to accommodate a wide range of current and potential future circumstances.

The increased contestability proposed in the Draft Determination would change the relationship and role of a number of NEM participants, as well as the nature and function of some assets. This introduces new complexities into the connection framework which the AEMC has sought to address through the Rule change process.

However, due to the extent of change and the timeframes of the determination process, there remains some substantial uncertainty as to how these altered

relationships and roles apply in a range of potential circumstances. Ambiguity in roles, relationships and functions of any of these participants or assets is contrary to the intent of revised frameworks to promote transparency, clarity and consistency.

Energy Networks Australia seeks further clarification regarding the operation of the transmission connections framework across a range of scenarios. This will help to minimise the potential for future disputes and ensure processes are more streamlined and predictable across the NEM. Energy Networks Australia appreciated the opportunity to meet with the AEMC and workshop particular issues with our members on 21 December 2016. A number of the issues identified below are drawn from that workshop and we understand the AEMC is working through some of those issues concurrently, with the consultation that is taking place.

In this submission, a number of jurisdictional-specific issues and potential options are also provided for the AEMC's consideration.

Energy Networks Australia notes that the consultation periods for both the proposed Final Determination including the Rule and the Savings and Transitional provisions are very short for such a significant change to transmission connection arrangements in the NEM.

The AEMC's inclusion of clarifying examples provided in its 12 January 2017 Savings and Transitional Consultation Paper is also appreciated and helped inform this submission.

In summary, Energy Networks Australia seeks further written explanation of the operation of the framework under a number of different scenarios for further comment by all stakeholders prior to the release of the Final Determination. This can be done efficiently without undue delay. However, to the extent that sound regulatory development does require some delay to the Final Determination and its implementation, the Commission should recognise this as a prudent approach. Energy Networks Australia recommends the Commission should avoid introducing the new framework until the practical effect of its application in key areas is sufficiently clear and well understood by NEM participants. Premature finalisation of the rule creates the potential for unforeseen operational consequences which may have implications for the safe and reliable operation of the electricity system.

Energy Networks Australia intends to provide submissions on the AEMC's "Consultation Paper – Proposed Savings and Transitional rule", by 10 February 2017. However, those comments are unlikely to change the substantive issues raised in this submission.

# Transmission Connections

## Overview

Energy Networks Australia supports the intent of the Rule change to pursue a more contestable and competitive approach to new transmission connections arrangements. This position was made clear in our previous submission to the AEMC's Discussion Paper<sup>1</sup>. Energy Networks Australia also considers that a robust transmission connection framework should provide clear roles and accountabilities for relevant parties involved in such arrangements.

Energy Networks Australia notes that in the AEMC's Discussion Paper two main contestability models were considered. In brief, 'Model A' proposed an approach where contestability is to be limited to construction and ownership, with the incumbent TNSPs having an obligation to operate, maintain and control assets and therefore remain accountable for all aspects of the shared network. Model B was a fully contestable approach allowing contestable construction, ownership, operation, maintenance and control of identified user shared assets.

In terms of the submissions to the AEMC's Discussion Paper, Energy Networks Australia notes that the majority of stakeholders supported the Model B arrangements in comparison to Model A. However, it is not clear from the Draft Determination why the AEMC considered that proposed Model B was significantly different, and less workable than its preferred 'modified Model A' regime. Therefore, Energy Networks Australia seeks further clarity from the AEMC on this matter and to better understand the roles of the *Primary TNSP* under a broader range of connection scenarios.

Notwithstanding, these concerns, Energy Networks Australia looks forward to further collaboration to ensure that any arrangements for transmission connections are workable for all parties and allow for the continued secure and reliable operation of the shared network. To this end, the submission outlines a number of issues and suggestions for the AEMC to consider.

## Contestability criteria for Identified User Shared Asset components

Energy Networks Australia considers that the AEMC's proposed contestability criteria in relation to *identified user shared asset (IUSA's)* are positive additions. The inclusion of criteria aids in the practical workability of the regime for all stakeholders to the extent that the contestability of the service is understood and is distinct and definable from services provided to the rest of the shared network.

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<sup>1</sup> [Energy Networks Australia submission to AEMC - 30 June 2016.](#)

In respect of an appropriate threshold for contestability, Energy Networks Australia submits that the AEMC's proposed \$10 million threshold should be retained, at a minimum. The AEMC should consider indexing the threshold either each year or at regular intervals similar to the existing approach to escalation of thresholds under clause S6A.2.3 (a) (1) (ii) of the NER.

## Applying new contracting arrangements for a range of scenarios

Energy Networks Australia appreciated the opportunity to workshop potential connection scenarios with the AEMC on 21 December 2016. While this provided a useful forum for discussion, Energy Networks Australia and network participants considered the workshop reinforced the need for the AEMC to provide more clarity on how its proposed arrangements are intended to work. This is not only important for network businesses but for all stakeholders, including AEMO to be in a position to effectively manage potential power system and security issues.

Members found that while the arrangements appeared to be workable in relation to relatively simple dedicated connection arrangements, further clarification on the roles and responsibilities of each party is required in more complex, multi-party and staged connection scenarios.

Energy Networks Australia considers that it would be useful if the AEMC were to provide further supporting discussion and explanatory diagrams of the likely impacts on various parties under a range of more complex connection scenarios.

Some examples include:

- » The arrangements between ownership and operation & maintenance (O&M). There appears to be some uncertainty around distinctions made between O&M for replacement purposes and spares.
- » The extent to which functional specification and O&M interact (or do not) may have been over-simplified in the Draft Determination and Draft Rule. There are a number of material issues which are legitimately expected to be resolved at the outset of the new regime, including the need for a technically assured understanding of testing and commissioning processes, the nature of assets and the question of compatibility of protection and control (secondary) equipment. Energy Networks Australia is seeking: (a) AEMC confirmation that secondary systems assets will be treated as non-contestable; and (b) a holistic assessment of the risk implications for all parties, and in this particular case, the IUSA owner.
- » The potential conversion of a Dedicated Connection Asset (DCA) to a prescribed asset "to the extent" it provides a prescribed service. The practical interpretation is currently unclear and may be unsuitable for future situations that could reasonably be contemplated.

In Box 1 below, Energy Networks Australia outlines the following plausible example and related issues for the AEMC's consideration.

***Box 1: Scenario Exemplifying Uncertainty related to conversion of Direct Connection Assets***

A TNSP may undertake a Regulatory Investment Test – Transmission (RIT-T) to support an existing Distribution Network Service Provider’s (DNSP) connection point. Potential options may include:

- (i) Augmenting the transmission network to the distribution connection for \$100 million
- (ii) Seek to convert part of an existing large DCA that goes near the distribution connection point, or
- (iii) Seek a network support option for the distribution connection point.

In addition, should option (ii) be pursued clarity is sought as to what arrangements and what definition of “to the extent” would apply if: The large DCA is 100kms in length and has a 300MW capacity, with a generator using 200MW.

- 1) If the distribution connection point was located some 60kms along that DCA with a capacity requirement of 50MW, then should the term “to the extent” be interpreted as:
  - based on the ratio of the load MW and capacity of the line for the portion of the line to be converted – 50MW/300MW of the value of the DCA to the 60km point? OR
  - based on the proportion of line length that was to be used by the dx load (but not proportionate to load) – 60km/100km of the full value of the line? OR
  - some other number?
- 2) Would the large DCA owner have rights to maintain the original capacity or would it be considered to be on the shared network and thus subject to dispatch constraints?
- 3) Would the large DCA owner become subject to economic regulation and have to undertake a revenue reset and earn a regulated Weighted Average Cost of Capital?
- 4) To what extent do the arrangements allow an owner to offer a network support arrangement at a contract price less than the augmentation alternative as opposed to the owner converting the asset. Does the primary TNSP have the ability to prefer an outcome in this circumstance?
- 5) While the trigger event may occur at some future stage rather than immediately, the current Draft Rule would introduce prospective commercial and operational uncertainty for existing and future investment. The frameworks for DCA and future conversions must provide reasonable certainty of their applications within reasonably foreseeable scenarios that may eventuate over the next 10 to 20 years.

It appears that a scenario in which a local TNSP undertakes augmentation to facilitate load connected via a new connection is not adequately contemplated (if at all), by the AEMC

It is important that the Final Determination be clear and predictable in terms of its interpretation and practical consequences in all feasible circumstances. Energy Networks Australia considers that this cannot be achieved solely on the basis of the Commission's consideration of current consultation responses on the Draft Determination and Draft Rule. We would welcome the opportunity to workshop further reasonably foreseeable, if potentially complex, scenarios with a view to constructively finalising a workable regime which achieves the benefits of contestability intended. Such a process would allow the AEMC to establish improved explanatory information with generators and TNSPs prior to the Final Determination.

### Case Studies – Distribution connections in NSW

Energy Networks Australia is aware that Ausgrid will be raising queries in relation to different contestability models, as part of a separate submission. It provides a number of case studies and the mixed experiences in NSW at a distribution connections level. Energy Networks Australia supports consideration of these issues by the AEMC, as they relate to the following scenarios:

- (i) Asset(s) built by a customer and successfully transferred to Ausgrid
- (ii) Asset(s) built, owned, maintained and operated by a customer, and
- (iii) Assets built and owned by a customer/maintained and operated by Ausgrid.

### Greater AEMC Guidance on AER Ring-Fencing linkages and impacts

Energy Networks Australia notes that the AEMC has not yet considered how the draft Rule is intended to interact with ring-fencing arrangements for electricity transmission. Energy Networks Australia encourages the AEMC to provide guidance to the Australian Energy Regulator (AER) on this matter to inform any future review of ring fencing arrangements for transmission. This may include in relation to the ownership of dual function assets.

### System Security Issues

Energy Network Australia is mindful that Australia's power system security is highly valued by small and large energy customers and is critical to economic, social and community well-being. The proposed rule change is intended to introduce additional changes to operational, commercial and investment frameworks in the high voltage electricity system in Australia at a time when significant energy transformation is already underway with implications for power system security.

The Commission is, in parallel to this rule change, leading substantive changes to power system security frameworks with the Australian Energy Market Operator which



have the potential to change, or increase the complexity of, interactions between market participants and use of infrastructure in a system with declining synchronous generation, increasing levels of variable renewable energy, and a rapid increase in the number and nature of market participants.

In this context of substantial changes in physical infrastructure, markets and regulatory frameworks, there is a heightened need for additional rigour and prudence to be applied to proposed reforms such as contestability for transmission connections. The System Black incident in South Australia highlighted the need to ensure that any changes to the transmission connection framework provides complete clarity regarding the roles and responsibilities of shared transmission assets in all foreseeable circumstances, rather than assuming an iterative or experimental approach to resolving such uncertainties after commencement of the Final Rule.

While Energy Networks Australia supports the potential positive benefits for energy customers from the proposed Rule change increasing contestability in transmission connections, this should not require any compromise to system security and accountability for shared network outcomes within a region.

## Publication of information requirements on TNSP websites

Energy Networks Australia acknowledges the desire from other market participants for more useful and timely information to be released in the public domain and notes the AEMC's additional information requirements in this regard.

The experience of members in facilitating connections also indicates that the majority, if not all, connections are bespoke and will require specific interaction, extensive two-way information provision and negotiation between the connecting party and the relevant TNSP.

## Transmission Planning

Energy Networks Australia supports the AEMC's proposed changes to the transmission planning framework and notes that in some respects the Draft Rule operates to formalise the existing approach and initiatives already adopted by TNSPs, particularly as they relate to improving Transmission Annual Planning Reports (TAPR) and associated processes.

## AER guideline on consistency of TAPR

Energy Networks Australia supports the intention of the draft Rule to promote consistency across TNSPs' TAPRs through the development of a guideline by the AER. However, such activities should also be mindful of the progress that TNSPs have made to date in publishing more information in their TAPRs and through other NSP-related

forums<sup>2</sup>. Consistent with good regulatory practice, the final Determination should recognise that:

- the proposed AER guideline should only seek to achieve greater consistency in areas that would provide significant value to the market;
- any guidance from the AER is reasonable and practical to implement; and
- such consistency should not prevent individual TNSPs from including other information it considers necessary to meet its own, local, stakeholder requirements.

## Greater clarity around TAPR data (forecasting) requirements

Energy Networks Australia acknowledges that stakeholders may value, where possible, more detailed commentary on constraints and network demand in their respective TAPRs. The proposed new data requirements to be published in the TAPR as they relate to forecasts include:

- *a description of high, most likely and low growth scenarios in respect of the forecast loads (clause 5.12.2(c)(i)(ii) of the draft Rule); and*
- *an analysis and explanation of any aspect of forecast loads provided in the TAPR from the previous year which are significantly different from the actual outcome (clause 5.12.2(c)(1)(iii)).*

Energy Networks Australia notes that with respect to forecast loads, some members receive bulk supply point forecasts from DNSPs which are then published in their TAPRs. Further, it should be recognised that not all DNSPs produce forecasts with high, medium and low scenarios for each bulk supply point. Inconsistency in forecasts between transmission and distribution will run counter to the AEMC's intent of providing more valuable information to stakeholders. This may also impose significant additional burden on TNSPs and DNSPs if these scenario forecasts were to be developed for all bulk supply points.

To mitigate unnecessary burden and inconsistency, the Rules should allow TNSPs to publish the same information provided by the DNSP, where the TNSP relies on this information and the DNSP information is consistent with the above requirements.

## Cross-regional investment options

Energy Networks Australia acknowledges that, in some circumstances, investments in an adjacent jurisdiction may be an efficient means to address network limitations in the 'home' jurisdiction. As identified in our earlier submission to the AEMC's Consultation Paper, these sorts of considerations and assessments are already

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<sup>2</sup> For example, area planning forums and forecasting forums.

undertaken by TNSPs/DNSPs in the normal course of joint planning.

Energy Networks Australia notes the AEMC's proposal for a 'home' TNSP potentially paying a regulated O&M allowance to procure a service provided by a TNSP in an adjacent region which has expended capital on a contestable basis to solve a problem in the local TNSP region. Conceptually this is similar to a TNSP procuring a non-network service in lieu of an augmentation.

However, the adjacent region's TNSP has no obligation to build the proposed solution and the payment to the adjacent TNSP would not currently satisfy the criteria to be a network support arrangement. As a result, the operating expenditure required to pay the adjacent TNSP would not be included in the local TNSP's prescribed revenue allowance unless contemplated in the relevant revenue determination.

This could be ameliorated by amending the definition of network support so as not to limit the payment to a *generator* and to the deferral of an augmentation. Nevertheless, the AEMC should consider the practical workings of the proposed arrangements through examples and ensure stakeholders are clear on the outcomes.

Energy Networks Australia suggests that further consideration should be given to the intended treatment of market benefits driven versus reliability driven investments.

While inter-regional Transmission Use of System charging is imperfect it is a mechanism which has been developed after many years of consideration by policy makers and the AEMC itself, to address this issue.

Notwithstanding this, consideration should be given to amending the definition of what constitutes a network support payment to encourage the uptake of non-network solutions and to allow such payments to be recognised when used not only to defer augmentation but in lieu of a wider range of capital expenditure.

## Jurisdictional Specific Issues

Energy Networks Australia understands that there may be some jurisdictional issues that also need to be addressed as part of this Rule change. For instance, greater clarity is sought around:

- » whether potential new arrangements will apply for dual function assets in NSW, and
- » what are deemed to be transmission assets in Tasmania. TasNetworks (as the jurisdictional TNSP) operates connection assets below 66kV. TasNetworks has asked that the AEMC ensures that this does not create any definitional issues with how transmission services are defined, as these assets are currently deemed to be transmission assets in that jurisdiction.

Energy Networks Australia members will also raise a number of jurisdictional issues in their direct submissions to the Commission.

## Summary of Recommendations and Proposals

Given, the significant concerns outlined in this submission, Energy Networks Australia seeks greater:

- » clarity for complex scenarios and new contracting arrangements
- » AEMC guidance to the AER in relation to ring-fencing linkages and impacts,
- » Prudent consideration of the practical effect of the proposed Rule Change, particularly in the context of system security-related issues, and
- » clarity around cross-regional investment option arrangements and mechanisms.

Energy Networks Australia proposes that the AEMC give due and prudent consideration to extending the timing of its scheduled publication of its Final Determination beyond the current deadline of 9 March, 2017. This would allow more fulsome consideration of outstanding concerns, further written AEMC explanation of the operation of the framework under a number of different scenarios, and a further round of stakeholder consultation, prior to the release of the AEMC's Final Rule.

The AEMC could conduct workshops with all interested stakeholders ahead of its final determination, applying a similar approach to that taken in the recent metering replacement rule change<sup>3</sup> (albeit in that case, the engagement process was conducted ahead of the release of the AEMC's Draft Determination).

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<sup>3</sup> Refer: <http://www.aemc.gov.au/Rule-Changes/Meter-Replacement-Processes#>