

18 April 2019

Ms Anne Pearson  
Chief Executive  
Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

Attention: Elizabeth Bowron  
CC: [info@esb.org.au](mailto:info@esb.org.au)

## CoGaTI implementation - access and charging review (EPR0073)

Dear Ms Pearson,

Energy Networks Australia welcomes the opportunity to lodge this submission in response to the AEMC's consultation paper<sup>1</sup> on the CoGaTI access and charging review and its subsequent supplementary information paper<sup>2</sup>.

Energy Networks Australia is the national industry body representing businesses operating Australia's electricity transmission and distribution and gas distribution networks, with member companies providing more than 16 million electricity and gas connections to almost every home and business across Australia.

Our members agree with the AEMC's analysis of the current problems of disorderly bidding and congestion, as the market continues its transformation to a lower carbon generation mix. These unprecedented changes are exposing design flaws in the current access and charging arrangements.

Whilst the problems are clearly articulated in the consultation paper and expanded upon in the supplementary information paper, the challenges in resolving them should not be underestimated. While in principle our members support exploring the case for generation firm access, there needs to be a careful consideration of the alternative options and potential unintended consequences before committing to such a major reform. In considering these options, it is imperative that any change delivers improved outcomes for consumers, consistent with the National Electricity Objective.

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<sup>1</sup> AEMC, Consultation Paper - CoGaTI implementation - access and charging, 1 March 2019.

<sup>2</sup> AEMC, Supplementary Information Paper, 4 April 2019.

The feedback from our consumer and stakeholder engagement processes is that affordability remains a primary concern for customers. It is essential, therefore, that the access and charging review remains focused squarely on customer outcomes. In this regard, Energy Networks Australia welcomes the analysis in the supplementary information paper which explains how the proposed reforms may lead to lower costs for customers.

The key messages from our members are summarised below.

### **The case for reform**

- » Congestion remains an on-going issue for TNSPs and generators. The current access and charging arrangements are not providing appropriate signals to generators regarding their locational decisions. In addition, free rider problems prevent generators from financing additional transmission capacity. Any reform that seeks to address these issues should consider what we want the market and regulatory arrangements to look like over the next 10 - 15 years' and beyond. It should also signal the efficient location and size of future connections that may be facilitated through the proposed REZ adjustment fund.
- » The AEMC has laid out a reasonably convincing case for change. Before proceeding, however, there must be a clear demonstration that the benefits of reform outweigh the costs of implementation, which are likely to be significant. At this stage, the AEMC's analysis has not included a quantitative assessment of the benefits of introducing generator firm access. A quantitative cost benefit analysis should be undertaken prior to committing to any reform.
- » Energy Networks Australia considers that the Integrated System Plan (ISP) has an important role to play in addressing the congestion and coordination issues. Any reform of the current access arrangements should be compatible with and complementary to the ISP framework and the resulting network investments. It is important that access reform does not jeopardise or undermine the network investments that will be progressed through the current and future ISPs.
- » The AEMC's timeframe for its review is ambitious, given the extent of the proposed access and charging reforms. Sufficient time should be allowed to consider alternative options to address the identified issues. In addition, any proposed reforms should be thoroughly tested through representative trials before moving to implementation.
- » Energy Networks Australia welcomes the AEMC's advice that it is working closely with the Energy Security Board (ESB) to ensure that the various transmission-related initiatives are coordinated. Having said that, our members would like further information on how this coordination will work in practice given the significant resource commitments that are likely to arise. The post 2025 market design appears to overlap very significantly with this access reform and could fundamentally affect the proposed sale of firm access rights and incentives for generators to pay.

### **Phasing of access reform**

- » Energy Networks Australia broadly supports the AEMC's suggested phasing of its proposed access reforms. As already noted, however, the case for pursuing these reforms has not yet been established.
- » Our members welcome the commentary in the supplementary information paper, which notes that dynamic regional pricing would likely be quicker and cheaper to implement than full firm transmission access, and would deliver some of the same outcomes. As such, the case for introducing the first two phases of the reform (dynamic regional pricing and improved information) before deciding whether to pursue generator firm access should be explored.
- » More broadly, there are likely to be other options to address the issues raised in the consultation paper that should also be considered.

### **Principles for generator firm access**

- » Energy Networks Australia would expect a proposal for a firm access regime to gain support from the generation sector. It is important that any proposed reform is seen as a practical measure to enable generators to secure the transmission access they require, rather than being a purely conceptual improvement to the current market design.
- » If generator firm access was introduced, the arrangements should meet the following design principles:
  - TNSPs and their customers should not be exposed to risks that are outside their control.
  - As a regulated transmission service, TNSPs must be remunerated for the provision of firm access, including any risk of financial penalties if service performance falls short of their contractual obligations.
  - The transmission charging arrangements for generator firm access must ensure that access is priced appropriately and disputes are avoided by providing a transparent methodology in the Rules for valuing firm access.
  - Any reform to the access and charging arrangements should promote the long-term efficiency of both generation and transmission outcomes which will ultimately deliver benefits to consumers.

### **Charging reform**

- » Energy Networks Australia recognises the limitations observed by the AEMC regarding current inter-regional transmission charging arrangements. Rather than focusing on incremental change to the current arrangements, Energy Networks Australia supports a broader review to identify potential alternative inter-regional pricing arrangements.
- » If generator firm access was introduced, consequential changes to the transmission pricing arrangements would be required to give effect to this reform. Energy Networks Australia also recognises that it may be necessary to conduct a broader review of transmission pricing once these consequential changes, if required, have been introduced. A terms of reference and timetable for this

review should be considered following the conclusion of the AEMC's work on network congestion and disorderly bidding.

Energy Networks Australia and transmission members look forward to working with the AEMC and other market bodies as this reform progresses.

If your staff would like to discuss any points raised in this submission, please contact Verity Watson on (02) 6272 1555 or via email at [vwatson@energynetworks.com.au](mailto:vwatson@energynetworks.com.au)

Yours sincerely



Tamatha Smith

Acting Chief Executive Officer

# Energy Networks Australia's Submission: CoGaTI Access and Charging Consultation Paper

## 1 Introduction

This submission addresses the key issues in the CoGaTI access and charging consultation paper and the supplementary information paper. We adopt the same structure as the consultation paper, as follows:

- » Section 2 discusses the rationale for access and charging reform.
- » Section 3 discusses the AEMC's proposed approach to reforming the current access and charging arrangements.

## 2 Rationale for access and charging reform

Our members' objective is to encourage efficient investment in new capacity and efficient use of existing network capacity, to reduce total delivered energy costs for consumers. In this context, our members have previously expressed support for the principles outlined by the AEMC that efficient generation and transmission investment will be facilitated where:

- » the combined costs of generation and transmission are taken into account in investment and operational decisions by generators and TNSPs; and
- » parties that make investment decisions have a direct financial stake in the efficiency of outcomes resulting from these decisions.

Energy Networks Australia considers that the current access and charging arrangements do not provide appropriate signals to generators regarding their locational decisions. As a result, transmission networks are experiencing significant congestion as generators choose to locate in areas with strong renewable resources, but limited transmission capacity. While generators are able to finance additional transmission capacity, this does not occur in practice because the current access arrangements allow open access to all generators, thereby creating a free-rider problem.

In principle, Energy Networks Australia agrees that generator firm access may promote better coordination of generation and transmission investment. It could complement the strategic planning framework of the Integrated System Plan, and in particular, it would address a gap in the current framework by enabling generators to contribute to the costs of augmenting transmission capacity, and obtain firm access rights in return. It is essentially a market-based approach, which enables generators to specify their access requirements and places an obligation on the relevant TNSP to make a service offer, based on the cost of the optimal network or non-network solution.

Energy Networks Australia supports the AEMC's focus on addressing the issues relating to disorderly bidding from generators and grid scale storage, which may lead to inefficient dispatch costs that are ultimately paid for by consumers. Our members agree that the introduction of dynamic regional pricing may drive better outcomes for consumers through better information about the cost of congestion on the network and lower dispatch costs. As discussed later, dynamic regional prices may also incorporate dynamic marginal loss factors that would drive further efficiency improvements.

As noted in the supplementary paper, dynamic regional pricing would likely be quicker and cheaper to implement than generator firm access, and would deliver some of the same outcomes<sup>3</sup>. As such, it remains an open question whether the implementation of generator firm access would be justified on net benefit grounds in light of the improved transparency and coordination of the actionable ISP

Energy Networks Australia's primary concern is that the AEMC's consultation paper starts from the presumption that introducing generator firm access is the best option for addressing the identified issues. At this stage, however, the analysis presented does not provide sufficient information to support this conclusion.

Although Energy Networks Australia recognises the potential benefits of generator firm access, it must be demonstrated that the benefits of reform exceed the implementation costs. The cost benefit analysis should also consider alternative options to ensure that the optimal solution is selected. Energy Networks Australia also considers that any reform of the current access arrangements should be compatible with the ISP framework and the resulting network investments. The introduction of generator firm access cannot substitute for the strategic planning based ISP framework, but could complement this. The AEMC should include this as an objective for the review.

Before proceeding to the implementation stage of any proposed reform, it is also important to ensure that jurisdictional issues are properly understood. It is therefore essential that any proposal must be thoroughly tested through regional and NEM-wide trials before proceeding to implementation. This testing is important in terms of understanding how the reform should be integrated in the current framework; testing the application of the concepts; and ensuring that there are no unintended consequences.

The AEMC's overall timeframe for its review is overly ambitious, given the wide ranging nature of the proposed reforms and the need to conduct additional cost benefit analysis. Whilst Energy Networks Australia recognises the importance of implementing change in a timely manner, the risks associated with such a potentially major reform should not be underestimated.

» Energy Networks Australia welcomes the AEMC's advice that it will coordinate its work with the ESB's post 2025 market framework review. However, given the

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<sup>3</sup> AEMC, Supplementary Information Paper, 4 April 2019, section 3.1.5, page 19.

potentially significant resource commitments in relation to both reviews, our members would also like to understand better how these review processes will be managed and integrated. The post 2025 market design appears to overlap very significantly with this access reform and could fundamentally affect the proposed sale of firm access rights and incentives for generators to pay.

### 3 Access charging arrangements

In the discussion below, Energy Networks Australia responds to the matters raised in the consultation paper on the access charging arrangements.

#### Phasing of access reform

We broadly support the AEMC's suggested phasing of its proposed access reforms; which consists of the following three elements:

- » Dynamic regional pricing to address disorderly bidding and to provide better locational signals to generators and storage devices;
- » Improved information to supplement transmission planning arrangements; and
- » Generators fund transmission infrastructure in exchange for firm transmission rights.

Energy Networks Australia welcomes the AEMC's supplementary information paper, which discusses the relationship between the phases. Whilst Energy Networks Australia considers that the phases are appropriately ordered, there are significant and challenging elements to each phase. Of these, the final phase of introducing generator firm access is by far the most significant and challenging element.

As already noted, it has not yet been demonstrated that the benefits of generator firm access outweigh the implementation costs and whether it can practically achieve the aims it is intended to deliver. Therefore, whilst the phases are appropriately ordered, further work is required to test whether the final phase should be introduced.

#### Phase 1 - Dynamic regional pricing

In relation to dynamic regional pricing, Energy Networks Australia agrees with the AEMC that it may improve the locational signals for generation and storage devices, and discourage disorderly bidding. However, it will be important to demonstrate how dynamic regional pricing works in practice, particularly so that market participants have an opportunity to understand the implications of the new arrangements and any unintended consequences can be addressed prior to implementation.

For example, it is unclear how constraints beyond simple thermal capacity constraints, such as those related to system security considerations, will be handled within the dynamic regional pricing framework. This is of critical importance in jurisdictions, such as Tasmania, where system security considerations can already constrain generation output even though spare thermal capacity exists. Energy Networks Australia therefore welcomes the AEMC's commentary in its supplementary paper, which clarifies that this issue will be considered by its technical working group.

It is important that dynamic regional pricing gives careful consideration to whether dynamic marginal loss factors should be reflected in the locational prices. The

inclusion of dynamic marginal loss factors in the dispatch calculation should reduce costs to customers and provide more efficient locational signals to generators. Energy Networks Australia notes that this issue is discussed briefly in the AEMC's supplementary information paper and welcomes its further consideration through the technical working group.

Energy Networks Australia supports the AEMC in developing arrangements that provide appropriate price signals for storage devices. A first step in this process is the introduction of a separate registration category for large-scale storage facilities. The application of dynamic regional pricing to storage devices is a potentially important step in ensuring that the value provided by storage capacity translates into lower costs for consumers. The AEMC is rightly concerned that the current wholesale market arrangements may drive an inefficient use of these resources, which would ultimately disadvantage consumers as dispatch costs and transmission network costs are likely to be higher than necessary.

### **Phase 2 - Improved information for transmission planning**

In addition to addressing disorderly bidding, the AEMC's consultation paper suggests that dynamic regional pricing will promote better transmission planning and investment.

We accept that dynamic regional pricing may assist transmission planning as an indicator of congestion. However, it is doubtful whether this pricing information will have any direct impact on the economic assessment of transmission investment options, which is provided by the RIT-T. In particular, Energy Networks Australia notes that the RIT-T considers forward-looking congestion costs in its assessment of the costs and benefits of alternative credible options. As such, historical price information does not have a direct role to play in the RIT-T analysis.

In contrast to the first and third phases of the AEMC's reform program, Energy Networks Australia considers this phase to be relatively low key in terms of its implementation challenges and its expected benefits in most NEM jurisdictions. Tasmania is one notable exception, as it may take many years of data before useful conclusions can be drawn due to the variability in hydro inflows.

### **Phase 3 - Generator firm access**

The final phase of the access reform is for generators to fund transmission infrastructure. This is the most complex area, which was explored in detail in the AEMC's OFA review.

Energy Networks Australia supports a reconsideration of generator firm access to develop a solution that will equip the NEM to meet the challenges in the next 10-15 years. As already noted, however, Energy Networks Australia is not convinced that the case for introducing generator firm access has been adequately demonstrated. Further quantitative analysis is required to test this and the alternative options.

In addition, any reform must have practical support in the market, in addition to conceptual and analytical justification. Energy Networks Australia therefore encourages the AEMC to assess generators' appetite for the introduction of firm access as part of its assessment of the competing options. It should also support the



efficient location and size of future connections that may be facilitated through the proposed REZ adjustment fund.

In addition, it is important to ensure that any proposal for generator firm access does not undermine the network investment that will be progressed through the current and future ISPs. Furthermore, it should be recognised that while generator firm access is likely to result in generators making a contribution to transmission augmentation, it may not lead to transmission projects being financed entirely by generators. It is important that the scope of the reform and its likely consequences are properly understood prior to implementation.

### **Principles for generator firm access**

If generator firm access were to proceed, it should satisfy the following design principles:

- » TNSPs and their customers should not be exposed to risks that are outside their control. For example, transmission capacity will be affected by constraints arising from system strength, which may be driven by the availability of synchronous generation. Such operational issues need to be understood and reflected in the design of the firm access arrangements, so that TNSPs are not exposed to inappropriate obligations or financial penalties.
- » As a regulated transmission service, TNSPs must be remunerated for the provision of firm access, including any risk of financial penalties if service performance falls short of the TNSPs' contractual obligations. Energy Networks Australia recognises that generator firm access should carry a risk for TNSPs if the contracted capacity is not provided, but this risk should not include exposure to generation markets. In addition, TNSP's risk must be defined and priced fairly in order to deliver efficient outcomes for consumers.
- » The transmission charging arrangements for generator firm access must ensure that access is priced appropriately and disputes are avoided by providing a transparent methodology in the Rules for valuing firm access. This principle is particularly important given the likely differences between:
  - the capacity and duration of firm access rights that may be sought by generators; and
  - the scale efficient capacity and life of the transmission asset required to meet the generators' requirements.
- » Any reform to the access and charging arrangements should promote the long-term efficiency of both generation and transmission outcomes for the benefit of consumers.

Our members support exploring generator firm access and other options to address congestion that facilitate improved outcomes for consumers. The design principles outlined above promote this objective, by ensuring that generator firm access is priced appropriately.

If generator firm access is introduced, changes will also need to be made to the transmission planning and investment framework to clarify the obligations on the relevant TNSPs and to specify how the RIT-T should apply. Consequential changes

will also be required to the transmission revenue setting arrangements in Chapter 6A of the Rules. The AEMC should allow sufficient time to develop the required changes, if required, and to consult with stakeholders.

### **Charging reform**

The AEMC notes that concerns have been raised about whether the current inter-regional transmission use of system (IR-TUOS) charging arrangements currently satisfy the beneficiary pays principle. It outlines three options for addressing the current charging arrangements, which essentially involve changes to the design of the Modified Load Export Charge.

In developing the current IR-TUOS pricing arrangements, the AEMC commented that long run marginal cost pricing will deliver outcomes consistent with the beneficiary pays principle<sup>4</sup>. The actual methodology adopted by the AEMC has not delivered on this objective. For this reason, this phase of the AEMC's reform program should consider the issue more broadly to identify potential alternative inter-regional pricing arrangements.

Energy Networks Australia supports reform of the transmission pricing arrangements to the extent it is necessary to complement any access reforms and the introduction of any new NEM registration category for storage. Any broader re-examination of the transmission pricing arrangements, if such a review were warranted, should be undertaken as a subsequent exercise under separate terms of reference given the likely complexity and duration of such a review.

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<sup>4</sup> AEMC, Final Report, Final Report on the Coordination of Generation and Transmission Investment, pages 101 and 102.