21 December 2022

Anna Collyer
Chair
Energy Security Board
Level 15,
60 Castlereagh Street
SYDNEY NSW 2000

Lodgement: info@esb.org.au

ESB Directions paper: Transmission Access Reform

Dear Anna,

Energy Networks Australia (ENA) appreciates the opportunity to respond to the Energy Security Board's (ESB's) Directions paper on Transmission Access Reform.

ENA is the national industry body representing Australia's electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.

ENA notes the actionable ISP rules have been in place a little over 2 years. These rules enable transmission projects to be considered based on both committed and anticipated generation development. The transition to net zero requires a step change in the development of new renewables, transmission and essential system services. Transmission networks are a critical enabler of the move to a low emissions economy whilst maintaining an efficient level of congestion.

To achieve Australia's decarbonisation goals for the electricity sector, ENA recognises that power system development needs to be better co-ordinated and not left entirely to decisions of individual investors. ENA agrees that the current open access model is incompatible with co-ordinated system development such as Renewable Energy Zones (REZ).

The ESB is now considering a hybrid solution that signals efficient investment locations to prospective investors and incentivises efficient dispatch outcomes in real time.

In summary, ENA:

- Continues to recommend that these models be subject to an appropriate independent cost-benefit analysis before recommending to Ministers.
- Acknowledges the priority queue model and Congestion Relief Market (CRM) are more complex and whole of system based and appear to require all jurisdictions to opt in. There is benefit in confirming that all jurisdictions will be willing to adopt before continuing to spend more time and effort across industry.
- Welcomes clarification on the interaction of the hybrid model and the Operational Security Mechanism (OSM) arrangements to ensure appropriate outcomes for the power system and consumers;

- Recommends that any preferred models should not introduce a bias, through connection fees or priority queue in dispatch, for new generation to connect at either transmission or distribution level.
- Agrees Transmission Network Service Providers (TNSP) are best placed to provide information relevant to their networks, but is concerned about certain aspects of the ESB's proposal to provide 'enhanced information'.
- Supports mechanistic and simple calculations for congestion information similar to that already provided by TNSPs through business-as-usual activities, noting that applying the same approach in each jurisdiction may not be practical.
- Considers that a congestion fee regime should be transparent (in that the methodology and the input assumptions are clearly identifiable by all parties), efficient (in that it doesn't take a lot of skilled resources to calculate) and repeatable.
- Suggests a need to consider the interaction between Transmission Access Reform (TAR) and other access arrangements, such as those within Designated Network Assets (DNA).
- Supports the congestion fee or priority queue position being flexible until well into the connection process. Any design should avoid incentives to rush the queue together with strong use it or lose it arrangements.

More detail on these points is provided below.

Independent Cost Benefits Test

ENA understands the ESB will progress detailed design and propose a rule change to Energy Ministers by mid-2023. The ESB currently considers that the hybrid models are able to complement state energy policy developments. It is important that a cost-benefit analysis of the options is undertaken to ensure that any additional costs actually deliver net benefits to consumers.

Some options, such as the Congestion Relief Market (CRM), carry significant implementation costs and risks. It should be made clear who will pay for implementation costs. ENA is also concerned that delays in implementation, caused by chasing a perfect solution, will result in foregone benefits.

ENA acknowledges the priority queue and CRM models are more complex and system based and would appear to require all jurisdictions to opt in. There is benefit in confirming that all jurisdictions will adopt the preferred model before continuing to spend more time and effort across industry. This is particularly the case as several state-based planning and access frameworks are being progressed and states may wish to retain control in certain areas.

ENA also notes the concerns raised in the Australian Energy Market Commission's OSM work that the ability to co-optimise multiple markets was difficult and the computational challenge means markets may not solve in the timeframes needed. In firming up the costs, the practicality of co-optimising an energy market and Frequency Control Ancillary Services markets with a possible congestion relief market and OSM should be tested further. ENA welcomes further clarification on the interaction of the hybrid model and the OSM arrangements to ensure appropriate outcomes for the power system and consumers. ENA also recommends the ESB provide an indicative example calculation of this reform and the OSM to clarify the various cashflows and the impact on consumer bills.

Application across transmission and distribution networks

The 2022 ISP requires a nine-fold increase in large scale variable renewables and around a five-fold increase in distributed solar. To balance the intermittent renewables and cater for the times when there is little wind and overcast/dark conditions there will be a need to treble the firming capacity. Firming capacity responds to dispatch signals. Examples include hydro storage, large battery, gas generation and virtual power plants made up of small controllable devices such as batteries behind consumers' meters. Distribution connected generation/storage will increase significantly and needs to be properly considered.

ENA welcomes consultation on the application of the proposed models on scheduled distribution connections. ENA recommends that any preferred models should not introduce a bias for new generation connections between transmission or distribution due to congestion fees or priority queue in dispatch.

The ESB intends that the parties subject to queuing would include scheduled and semi-scheduled generation and load. The paper suggests that Consumer Energy Resources is non-scheduled, has full access and is not part of a central dispatch. The application of the proposed models to distribution connected scheduled generation and load and to scheduled lite generation (single or aggregated multi-site) should be made clear so that stakeholders can consider the implications.

ENA suggests the ESB consider the alignment of transmission and distribution connections in the one reform process. The range of post-2025 reforms should provide a cohesive framework regarding scheduled distribution connections that form part of a priority access queue/pay a congestion fee and whether they can benefit from additional revenue streams in the CRM.

ENA would be happy to organise meetings for the ESB with our Distribution Network Service Provider members to discuss how the proposed transmission access reforms could apply to distribution networks.

Connection arrangements

The ESB notes that a batching arrangement for connections may improve the assessment process. However, the costs to implement (including Australian Energy Market Operator efficiency benefits of batching) are unclear. This also may lead to an inconsistent workload for NSPs and translate to workload cycles in regions which need separate and careful consideration.

ENA is interested in whether the batched connection process will apply to all connections under Chapter 5 and if so, will it constrain any emerging state frameworks or be seen to constrain them. It may also be useful to consider how well the batched process has worked for any state REZs before adopting more broadly across the National Electricity Market (NEM).

Investment timeframe solutions

Congestion information

ENA queries how the proposed 'enhanced information' differs from the information already provided by TNSPs and AEMO as part of annual transmission planning reports and the Integrated System Plan. ENA agrees TNSPs are best placed to provide information relevant to their networks, but is concerned about certain aspects of the ESB's proposal. Specifically:

- The proposed approach to providing hosting capacity information appears to represent a step change in effort for some TNSPs;

- The costs associated with providing this new information would be recovered from customers but primarily benefits generators; and
- The potential risk to networks from parties relying on this information to make investment decisions.

Therefore, ENA supports mechanistic and straightforward calculations for congestion information similar to that already provided by TNSPs through business-as-usual activities, noting that applying the same approach in each jurisdiction may not be practical. For example, requiring a TNSP to calculate hosting capacity based on thermal limits would provide no benefit to an investor looking to establish in a jurisdiction constrained by stability limits.

ENA queries who has ultimate responsibility for the enhanced congestion data. ENA considers there is a risk if generators rely on this information to make investment decisions as opposed to undertaking their own due diligence.

Congestion fee

ENA suggests that the cost and complexity of congestion fees and the priority queue should be considered further. Congestion fees could reduce transmission charges for consumers, however the network and connected parties are not static and there would need to be consideration of how frequently the fee was varied. ENA notes that stable congestion fees and stability of customer bill impacts is desirable.

Any congestion fee regime should be transparent (in that the methodology and the input assumptions are clearly identifiable by all parties), efficient (in that it doesn't take a lot of skilled resources to calculate) and repeatable. Focus should be on intra-regional arrangements not inter-regional

ENA is also concerned that investors would be motivated to dispute their fee should their operating environment change. Furthermore, it is unclear what generators might expect in return for paying the congestion fee, noting that open access arrangements remain in place in the NEM.

ENA continues to consider that congestion information and congestion fees appear to be able to be adopted within and outside of REZs and could operate without costly changes to the NEM dispatch engine and changes to the connection framework.

Priority access queue

ESB acknowledges that the priority access queue appears to only impact the tiebreaker rules in the NEM dispatch engine when all generators behind a constraint bid at the market price floor. ENA agrees that a clear framework for managing the queue, allocating positions and the interaction with the connection process needs to be clear, as does the queue positioning of distribution connected scheduled, semi scheduled, scheduled lite connections. ENA acknowledges that this appears to establish a single NEM queue, managed by AEMO.

There is a need to consider the interaction between TAR and other access arrangements, such as those within the DNA framework. If there is any conflict between the AER approved access arrangements within a DNA and the TAR arrangements, we consider the DNA arrangements should take precedence.

In either investment timeframe model, the congestion fee or priority queue position should not be locked down until well into the connection process. Any design should avoid incentives to rush the queue together with strong 'use it or lose it' arrangements.

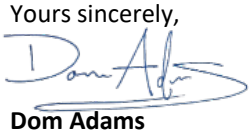
Operational timeframe solutions

Congestion relief market

ENA concurs with the ESB that further work is required to develop a more detailed design of the congestion relief market and ensure it is cost effective and creates no adverse outcomes. The potential additional benefits of the CRM will need to be commensurate with the additional cost and complexity compared to the Congestion Management Model.

Any questions on this response should be directed to Verity Watson, vwatson@energynetworks.com.au.

Yours sincerely,



Dom Adams
GM Networks