29 May 2023

Anna Collyer
Independent Chair
Energy Security Board

Lodged by email: info@esb.org.au

Dear Ms. Collyer,

Re: Transmission Access Reform Consultation Directions Paper

ACEN Australia is pleased to provide a response to the Energy Security Board (ESB)'s Transmission Access Reform Consultation Directions paper.

ACEN, headquartered in Manila, is one of the largest renewable energy companies in South-East Asia. The company has 2,600 MW of attributable capacity in the Philippines, Vietnam, Indonesia, India, and Australia. It currently has several GW of projects at various stages of development across the National Electricity Market (NEM), including in New South Wales, Victoria, South Australia, and Tasmania. For more on ACEN, visit www.acenergy.com.ph[1]

We wish to acknowledge the ESB's stakeholder engagement and work in developing what we consider to be a sound transmission access model, which incorporates considerable input and thinking from the clean energy sector.

Our core interest in access reform is to make sure it addresses congestion risk (ie. the risk of being curtailed due to congestion). Many gigawatts new renewables are needed to meet ambitious climate change targets and replace retiring coal fired generation capacity. As large numbers of renewable generators enter the NEM and cluster in resource rich areas, competition for scarce transmission capability will intensify. Congestion will become an ever-growing risk for generators and increase the unpredictability of returns from the wholesale market. An efficient, clear, and predictable mechanism for allocating scarce transmission capability will be crucial in giving investors the confidence they need to continue investing in the Australian energy market.

Australia is the only market globally that we are aware of where there is no mechanism or framework for allowing generators to manage congestion risk, such as through access rights or centrally determined compensation.[2] In our view, the ESB's proposed Hybrid Model, which combines the Congestion Relief Market (CRM) with a priority access framework, delivers such a mechanism. It has several potential benefits relative to existing arrangements that help address congestion from both an individual generator and broader efficiency perspective:

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[1] In 2017 ACEN acquired an 80% equity stake in UPC Renewables Australia Pty Ltd, headquartered in Tasmania and part of the global UPC Renewables Group that was established in the early 1990s. The UPC Renewables Group has developed, owned, and operated over 10,000 MW of large-scale wind and solar farms in 10 countries across Europe, North America, North Africa, China, Southeast Asia, and Australia, with an investment value of over $5 billion USD. In 2021 ACEN fully acquired UPC Renewables Australia Pty Ltd to form ACEN Australia.
[2] The UK and many European markets provide compensation to generators who are curtailed due to congestion, with the funds recovered from generators and customers through transmission fees.

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- First, the CRM improves dispatch efficiency relative to the status quo, by creating commercial incentives for generators to bid cost reflectively;
- Second, the CRM promotes more efficient and transparent locational price signals for generators and storage, while maintaining the integrity of the financial contract market;
- Third, the CRM provides for greater revenue opportunities for flexible technologies compared to the status quo, particularly storage; and
- Fourth, and most importantly in ACEN's view, the priority access model will allow generators to better manage their exposure to congestion risk in the NEM and should strengthen the physical access rights that underpin Renewable Energy Zones (REZs).

While additional work is required on several technical implementation issues, the CRM policy design is now largely settled. For this reason, our submission focuses on the priority access component of the hybrid model, for which there remains several important design decisions to be resolved.

Assigning priority by queue versus tiers

The ESB has identified two possible priority access models – one based on a queue and the other centrally determined tiers. In the former, generators are assigned priority access in chronological order of entry (or more precisely, reaching some defined milestone in the connection process or REZ development process). In the latter model**,** a central agency delineates tiers and then assigns generators into those tiers on a first-come-first serve basis or via an auction. Each tier represents a different level of access priority.

While both approaches can be made to work, our preference is for the queue. It appears to be administratively simpler than the tiers model, with lower centralised intervention and judgement required. The tiers approach will require complex modelling and judgements to determine how many generators can fit into different parts of the network and how generators can move between tiers over time.

On the other hand, the queue approach should be mechanical and hands off, with a simple process for assigning queue numbers to generators based on the order of their registration and incorporating this into the dispatch process (a bit like the allocation of loss factors or constraint coefficients).

To us the queue model seems fair and logical. In light of all the complexities and work involved in achieving development and connection approvals, it seems reasonable that those who are 'first ready' for energisation (ie. by reference to achievement of a set of readiness criteria such as those that define committed status in AEMO generation information guidelines) should be 'first served' in respect of a lower (ie better) queue position relative to the next most ready connection applicant.

A powerful aspect of the queue approach is that once a queue number is allocated to it an access seeker will know that whoever comes after will always have a lower priority access. This concept is fundamental to managing congestion risk in our view. It recognises that congestion in a power system dominated by renewables will increasingly be caused by the clustering over time of new entrants in areas of high resource potential, which cannibalises the access of those that were there before them. By allocating available transmission capability to first movers the queue acts as a strong locational signal, encouraging new entrants to locate only in those areas where there is sufficient transmission to accommodate them (or invest in new transmission).

How should queue numbers be assigned?

The consultation paper recognises there is an important distinction to be made between the concepts of 'first come first served' and 'first ready first served' as a basis for assigning queue numbers. Setting too low a bar for assignment of queue numbers (eg. based on a connection enquiry) would inevitably encourage speculative connection enquiries creating the prospect of massive queues, a problem currently bedevilling connection processes in north American and UK energy markets. That said, an approach that assigns the queue numbers too late in the connection process places an excessive amount of risk on the connection applicant. We support the proposed approach put forward by the ESB to manage this trade-off. Queue numbers would initially be assigned on an indicative basis, ie based on

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a connection application or participation in a REZ process, and then confirmed on the basis of key readiness criteria, both financial and technical, such as

- Reaching Financial Close or equivalent NTP
- Execution of a connection agreement
- Lodgement of a bond (fully refunded on reaching COD).
- Use it or lose it provisions.

This approach would provide connection applicants with some early predictability and a strong incentive to meet the appropriate milestones in order to lock in the highly valuable queue position.

We consider the queue approach should fit well with REZ frameworks. In practice this would mean that all generators participating as a cluster (ie batch) in a REZ connection process would receive the same (low) queue number on an indicative basis, as they would all be connecting to new REZ infrastructure at the same time. Individually however, they would still need to meet key milestones associated with the above financial and technical criteria in order to be assured of retaining their queue number throughout the connection process. If a generator falls out of the batched connection process due to technical, performance or financial issues, then they would lose their queue number and would need to re-enter under a different batch (with a different queue number) in order to progress to energisation.

Initial allocation of priority access

As a matter of good public policy and regulatory practice new arrangements targeted at enhancing locational signals, such as priority access, should not be implemented in a way that has adverse retrospective impacts on participants. Such adverse impacts could create perceptions of regulatory risk that may deter future investment. In any case, there would be little efficiency rationale for doing so, as once built a generator has relatively few options to avoid or reduce the congestion it causes, and all such options are likely to come at a considerable cost (such as storage). As a consequence, a locational signal applied to existing generators is unlikely to achieve its intended objectives. It is more effectively applied where it is likely to have the greatest impact on behavioural outcomes, ie at the point at where it can still influence the investment decision.

This suggests the priority access model should only apply to new entrants (ie all existing generators would receive the same low queue number) and plenty of warning is given to the market so new entrants have sufficient time to incorporate the new requirements into their decision calculus. As acknowledged by the ESB, a clear and objective demarcation point will need to be established between what defines an existing versus new generator at commencement of the scheme and no generator defined as existing should be worse off under the new scheme.

The length of the transition period would need to balance providing sufficient notice of the new arrangements against the need for the arrangements to begin to do their work in manage congestion as soon as possible. It is particularly important in our view that implementation of the priority access model coincides with energisation of the first REZ, so it can help underpin the firmness of physical access rights when they first come into play. The 2027 implementation timeframe proposed in the consultation paper represents a reasonable compromise in meeting these objectives.

Competition aspects of priority access

ACEN considers queue numbers should last for the life of the project. Having a priority access level that changes over time through some form of glide path, with the intention of supporting new entrants for example, would be inconsistent with the core objectives of the scheme. This would simply restore poor locational incentives and reintroduce congestion as existing levels of access are ramped down.

The consultation paper notes that one potential drawback of the queue approach is that this could deter or block new entry and therefore undermine competition. ACEN disagrees with this view. The priority access model should only deter new entry in parts of the network that are already filled up, which is precisely the intention of the approach. The policy intent is to guide new entrants to those parts of the network with sufficient capability to accommodate them. New entrants at the back of a queue will have strong incentives to either locate in uncongested areas, fund transmission to improve their access, or participate in a REZ scheme. In each case, new entrants will benefit from having a better queue number then the generators who come after them reducing the cannibalisation risk they themselves will

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face. By providing new entrants with the opportunity to manage their future congestion risk in a way that is not available under the current open access scheme, this should enhance competition and investment, not undermine them.

In our view, priority access is the right model to move towards as curtailment and congestion become growing risks to generators in a power system transitioning to renewables.

Constraint coefficients and priority access

It is important that dispatch rights take priority of constraint coefficients when constraints bind, as otherwise the effectiveness of the priority dispatch model is significantly diluted. If coefficients take priority, the incentive will remain for new entrants with lower coefficients to locate in congested parts of the network, limiting the value of priority access as a tool for managing congestion risk as well as their locational signalling properties. Coefficients should only come into play for generators with the same queue position.

We consider that any dispatch inefficiencies created by a model that favours priority access over constraint coefficients is more than offset by longer term efficiency gains. This is because the future power system will be dominated by generators who will largely all have the same marginal generation costs (effectively zero). Running back one renewable generator with a high coefficient and increasing the dispatch of another with lower coefficient will have a negligible net impact on the cost of supply. On the other hand, the longer-term efficiency gains of a dispatch rights first approach will include both reductions in congestion achieved over time through more efficient locational signals and a higher level of investment in renewable generation due to lower risks of operating in the market (reduced risk of curtailment).

Priority access and transmission outages

ACEN considers that the priority access model should primarily be focused on addressing the issue of access cannibalisation caused by new entry. Priority access should not apply in circumstances where network limitations are caused by planned or unplanned outages, voltage or other non-thermal constraints. These are transmission or system operational related issues that are outside an individual generator's control (ie these issues do not depend on the locational or investment decision of a specific generator but rather arise through interactions of all generators and loads on the network). Further, system stability related issues are managed through generator performance standards and system strength is managed through obligations on transmission network service providers to invest in relevant grid related services.

To conclude, ACEN is supportive of a CRM combined with queue approach to priority access. We encourage the ESB to continue its efforts to fully understand the technical implementation issues of the model, with a view to implementation in 2027. We consider it particularly important for the hybrid model to be implemented in timeframe that coincides with the commencement of the first REZ, so it can immediately begin its work to help strengthen the physical access rights that form a critical foundation to REZ framework.

If you would like to discuss any of the comments in this submission further, then please contact Con Van Kemenade at con.vankemenade@upc-ac.com or phone: 0439399943.

Sincerely,

Dr Michael Connarty
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