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Powerlink Queensland

Lodged via email: insights@powerlink.com.au

Queensland REZ design and development considerations

Nexa Advisory is a full-service advisory firm, working with public and private clients including renewable energy developers, investors and climate impact philanthropists to help accelerate efforts towards a clean energy transition.

We welcome the opportunity to share our perspectives and insights on Powerlink's role in progressing the development of Queensland Renewable Energy Zones (REZ). We commend the broad work already undertaken by the Queensland Government and Powerlink on their leadership towards the state's decarbonisation - particularly through the Queensland Energy and Jobs Plan, SuperGrid, REZ Roadmap, and early community engagement through Readiness Assessments.

Building on this work, it is critical for Powerlink to design and deliver an efficient and clear REZ scheme - and the associated transmission infrastructure - to deliver the 25GW of large-scale renewable generation and 6GW of long-duration storage required by the state over the coming decade.

Demonstrating the need for jurisdictional access arrangements – *Insight Area 1*

The nature of transmission planning and generation investment has changed significantly over the past decade as we have transitioned to a larger number of smaller-scale, decentralised renewable generators looking to connect more often. This has made coordination with transmission increasingly difficult, particularly given:

- the best renewable resources are often found in areas with little spare transmission capacity;
- the ability to more rapidly deliver renewable generation and storage facilities, relative to traditional thermal plants; and
- limited transparency for investors of competing projects.

Powerlink will be well aware of the need to address the physical requirements of the grid – including managing congestion, curtailment and system strength – as part of its broader role as network operator. Meeting these physical network and operational requirements within REZs is a critical element in building the case for access reform.

In moving away from the national open access arrangements, Powerlink must deliver an efficient access regime which meaningfully adds value to managing the physical system while ensuring investment certainty for generation and storage proponents. As such, access reform should meet the following objectives:

- reduce (rather than eliminate) curtailment risk and provide revenue certainty.
- improve coordination between REZ participants and Powerlink as the REZ; Delivery Body and transmission owner, with the intention of streamlining the connection process;
- not introduce undue regulatory complexity; and
- be feasible to implement.

As part of broader REZ development, it is also critical to provide certainty around the delivery of transmission network development, rather than pass on this risk – and any associated impacts on target curtailment – to proponents. Nexa Advisory have recently analysed the impacts of transmission delays, identifying this as a key challenge causing uncertainty through the transition¹. We encourage Powerlink to consider how this risk may be mitigated through this scheme.

Learnings from other jurisdictional schemes – *Insight Areas 2, 5, 6 and 7*

We encourage Powerlink to consider how it can minimise deviation from the national framework given the resulting uncertainty this can create. At a minimum, where bespoke jurisdictional arrangements are implemented, Powerlink should consider how it can align with other jurisdictional schemes to reduce policy uncertainty for developers undertaking projects across the National Electricity Market. This is particularly important for two key elements of the scheme:

- managing curtailment risk – given this is a core benefit of the scheme for proponents; and
- the approach to tendering – given the effort needed for developers to understand and take part in this process.

While we are yet to see the completed outcome of the REZ schemes implemented by other jurisdictions (i.e., connected projects), Powerlink can leverage the work already undertaken by EnergyCo in New South Wales and VicGrid in Victoria².

¹ Nexa Advisory, [We Plan and the Don't Build](#), June 2024

² Namely, the recently amended [guidelines](#) for allocating access rights in New South Wales and the [Victorian Access Regime](#) released in June.

Powerlink should learn from the consultation and design considerations of these processes. We consider this would provide a higher level of market confidence and reduce any unintended consequences or delayed investment that may be associated with this policy change, given proponents may be familiar with these schemes.

A high-level summary of the key design elements of these schemes and a recommended approach for Queensland is outlined below.

Scheme element	New South Wales	Victoria ³	Recommended approach for Queensland
Access limit	<ul style="list-style-type: none"> Access based on target curtailment level 	<ul style="list-style-type: none"> Access based on technology-specific limit/cap for each REZ Battery energy storage system (BESS) excluded from cap 	<ul style="list-style-type: none"> A physical access model of placing a specific limit on each REZ, while providing certainty around a modest level of curtailment may best achieve the objectives of this reform. While it may not be necessary to set a technology-specific limit, Powerlink should consider the benefit of storage or load in managing the bulk energy profile and system services within REZs. The ‘first-ready, first-served’ approach encourages proponents’ speed and ability to deliver. We encourage Powerlink to consider how project merit is assessed through this approach, while also minimising any unintended consequences this could cause (e.g., projects ‘rushing’ to readiness); milestone requirements or ‘use-it-or-lose-it’ provisions may mitigate these potential adverse outcomes.
Tender process	<ul style="list-style-type: none"> Initial competitive tender Headroom assessment to inform subsequent allocation 	<ul style="list-style-type: none"> ‘First-ready, first-served’ regular tenders until REZ capacity is met ‘Use-it-or-lose-it’ provision 	
Access conditions	<ul style="list-style-type: none"> Eligibility criteria based on maximum capacity (MW) Compliance with REZ access standards 	<ul style="list-style-type: none"> Minimum community engagement requirements, and impact assessment 	
System strength	<ul style="list-style-type: none"> For South West REZ, the national framework will be followed and access rights will not manage centralised system strength⁴ 	<ul style="list-style-type: none"> AEMO Victorian Planning (AVP) is currently responsible for the provision of system strength in Victoria⁵ as part of the national framework. At this stage, it is unlikely this will be changed within REZs. 	<ul style="list-style-type: none"> It may be most appropriate to adopt the national framework, facilitating proponents to either ‘BYO’, or procure system strength from Powerlink as the System Strength Service Provider (SSSP) of the network. While some market participants may consider there are issues with this approach, we note that there is a level of market confidence with how the framework functions – which is critically important given the complexity of this issue.
Access fees	<ul style="list-style-type: none"> For South West REZ, access fees are determined on a fixed per megawatt per annum basis, to cover community and employment initiatives and scheme administration⁶ 	<ul style="list-style-type: none"> Access fees will cover contributions to REZ Community Energy Funds 	<ul style="list-style-type: none"> Access fees should be carefully set to reflect the cost of administering the REZ and connecting proponents, and of community engagement or benefits sharing. However, the latter component may not be necessary given the work already undertaken by the Queensland Government through the REZ Readiness assessments. Powerlink should clarify if the cost of these activities would be recovered through access fees.

³ Based on the Victorian Access Regime. We note that these elements are indicative only and may be changed or further developed by VicGrid.

⁴ The unamended process per the National Electricity Rules (NER) will be followed for connections and system strength. The access rights scheme for the South West REZ is the [only access product](#) which has been opened for tender by AEMO Services in New South Wales to date, and are based on consultation undertaken by EnergyCo.

⁵ AVP has [undertaken work](#) to meet the minimum/efficient level provision of system strength as part of its role, and has shown regard for REZ development.

⁶ The [access fee guidelines](#) for the South West REZ are only to have been put to market by AEMO Services in New South Wales to date, and are based on consultation undertaken by EnergyCo.

REZ Readiness Assessments – *Insight Area 4, 8*

Although not directly related to the access scheme, we support the Queensland Government’s approach to delivering REZ Management Plans, Readiness Assessments and initiatives to support host communities. This is critical to progressing network and project planning, designing and securing social licence. We commend the Queensland Government on this approach, which stands out across NEM jurisdictions given the increased likelihood to deliver regional and community benefits associated with REZ development more effectively than an uncoordinated approach by both transmission and generation proponents.

While this approach would see REZ development informed through the REZ Readiness Assessments and REZ Management Plans, it is not necessarily the role of the access scheme to overcome issues identified in these engagements. For example, if engagement (undertaken in the Readiness Assessment) identifies there may be unmanageable opposition to specific projects (such as a wind farm) in a REZ area, it may be appropriate for this to be reflected alongside the technical renewable generation potential and grid assessment undertaken within the REZ Management Plan, rather than directly through the access scheme.

We consider that the Management Plan could set minimum / merit eligibility criteria around community engagement to be included as part of the tender process for access rights. This is similar to the process undertaken by AEMO Services for the New South Wales scheme and Capacity Investment Scheme. We encourage Powerlink to clarify how and at what stage of connection this would be assessed.

Commercial and industrial loads within REZs

We see a unique opportunity for Powerlink and the Queensland scheme to lead innovation around the treatment of load within REZs – particularly given the establishment of Clean Energy Hubs as outlined in the REZ roadmap. We note the potential for different scales of BESS, as well as industrial⁷ and hydrogen hubs to have a significant role across Queensland’s network, particularly in industrial areas within and nearby REZs. Identifying these loads – and potential aggregated resources such as rooftop solar or Virtual Power Plants (VPP) - and engaging with proponents will be another important element of REZ Readiness Assessments in addition to Powerlink’s broader planning. Powerlink should consider how these resources can be leveraged to contribute to the management of REZ infrastructure.

⁷ Nexa Advisory [recently outlined](#) the potential cost efficiency and flexibility benefits provided by Commercial and Industrial (C&I) Consumer Energy Resources (CER) in New South Wales. A key recommendation was the eligibility for VPPs and aggregated storage to be eligible under the Capacity Investment Scheme or Long-Term Energy Service Agreement scheme in New South Wales.

Concluding remarks

Thank you for the opportunity to provide input on the Queensland REZ design and development process. We welcome the opportunity to further discuss any aspect of our submission - please contact either myself or Jordan Ferrari, Director - Policy and Analysis, jordanferrari@nexaadvisory.com.au if you would like to discuss any issues raised in this submission.

Yours Sincerely,

Stephanie Bashir

CEO and Principal, Nexa Advisory