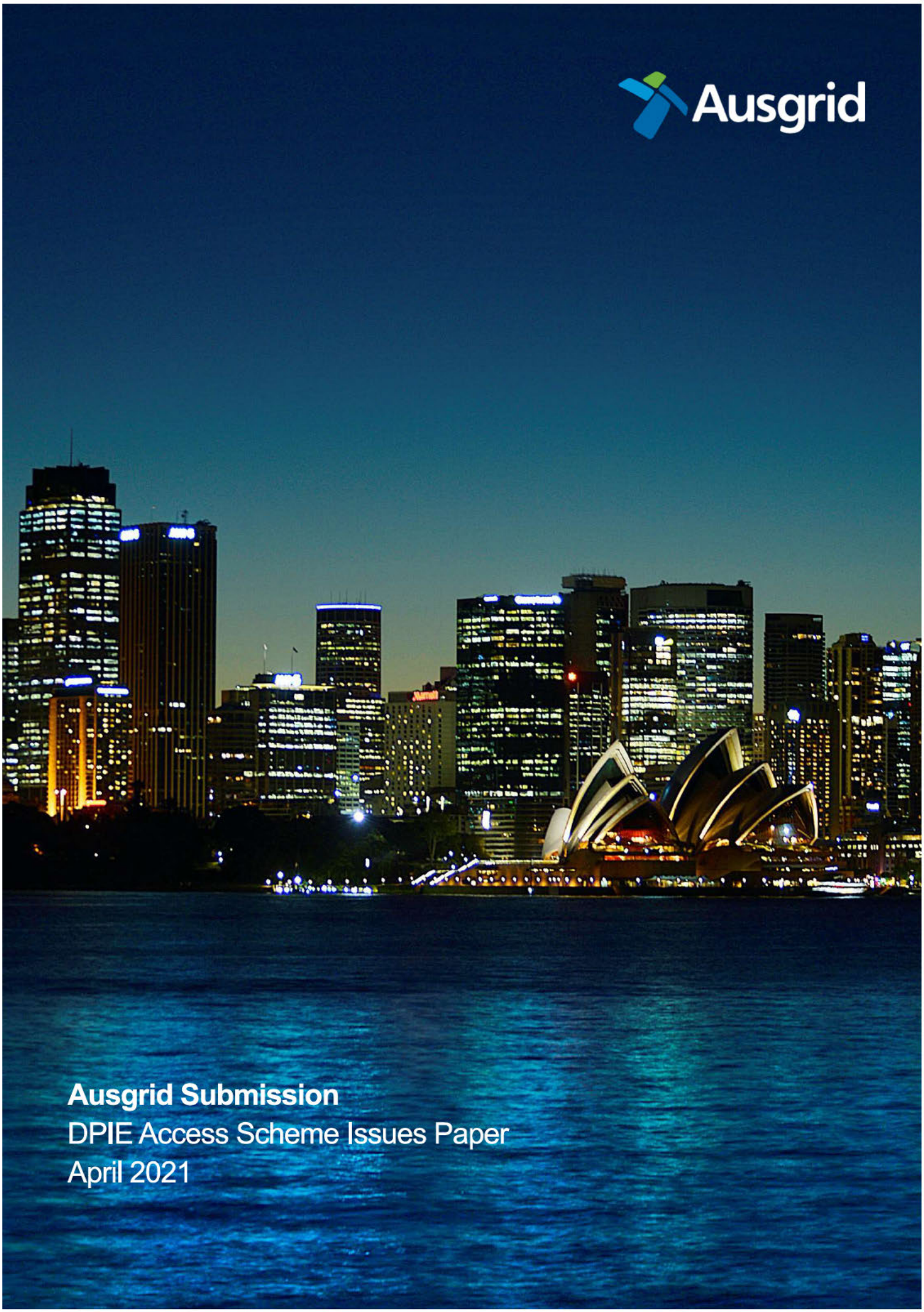

Ausgrid Submission

DPIE Access Scheme Issues Paper

April 2021

30 April 2021

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Attn: James Hay
Chief Executive, Energy Corporation of NSW
Depute Secretary Energy, Climate Change and Sustainability
Department of Planning, Industry and Environment

Lodged via email: rez@planning.nsw.gov.au

Dear Mr Hay

Ausgrid welcomes the opportunity to comment on the Department of Planning, Industry and Environment's (**DPIE**) Central-West Orana Renewable Energy Zone Access Scheme Issues Paper (**Issues Paper**).

Our electricity infrastructure can support the objectives of the NSW Energy Infrastructure Roadmap (**Roadmap**) and unlock benefits for customers and local communities. This is through the operation of a shared electricity network that powers the homes and businesses of more than 4 million Australians living and working in an area that stretches from the Sydney CBD to the Upper Hunter. We also have proven capabilities in emerging technologies, such as community batteries.

We are pleased that the Issues Paper acknowledges the role Ausgrid can play in furthering the achievement of the Roadmap's objectives. Our submission elaborates on the support we can offer and puts forward our views regarding key design elements of the Central-West Orana (**CWO**) Access Scheme. The main points we make are:

- Ausgrid can foster support for investment in renewable generation, storage and network infrastructure by transforming communities into renewable energy hubs
- Distribution-level initiatives should play an important role in delivering or supporting the capacity of shared network infrastructure in the CWO renewable energy zone (**REZ**)
- Renewable generation and storage embedded in the NSW distribution networks should be eligible for long term electricity service agreements (**LTESAs**)
- We favour options 1 and 2B in the Issues Paper based on the evaluation criteria.

Our response to specific questions in the Issues Paper is outlined in Appendix A. If you have any queries in respect of this submission, please contact Shannon Moffitt on [redacted] or [redacted]

Yours sincerely

Rob Amphlett Lewis
Chief Customer Officer

Appendix A: Our submission

Our submission begins with providing 'open comments on the Issues Paper' (question 43). It then steps through our response to questions 3, 29, 32 and 40.

Question 43: Open comment on the Issues Paper

The NSW electricity distributors can foster support for investment in renewable generation, storage and network infrastructure by transforming communities into renewable energy hubs

We support provisions in the Roadmap legislation providing that a component of the fees paid by access scheme participants will go towards community purposes.[1] We furthermore welcome the Issues Paper stating that distribution-level initiatives will play an important role in delivering benefits to local communities.[2]

Our distribution network criss-crosses through urban and regional areas, including a declared REZ located in the Hunter-Central Coast region. This embeds our infrastructure within local communities and, through this closeness in proximity to more than 4 million Australians, puts Ausgrid in the best position relative to any other section of the electricity supply chain to deliver community benefits.

We have proven capabilities in innovative, community-based energy solutions. In February 2021, we launched our first community battery in Beacon Hill. By allowing customers to store their excess solar, this project aims to deliver the most cost-effective way to bring renewable energy into the grid. Our analysis indicates that a community battery could deliver annual savings of between $100 and $300 a year to participating customers.

In a world first, we have partnered with a Sydney based electric vehicle (EV) charging network company, JOLT, to create a free, fast EV charging network. The Roadmap offers an opportunity to scale up this EV charging trial and, together with community batteries, create the backbone for renewable energy hubs in locations across NSW.

There may be a more immediate role for electricity distributors to play at the Hunter-Central Coast and Illawarra REZs. At these sites, it may be beneficial to fast-track investment in renewable projects underpinned by community batteries, EV charging and other distribution led initiatives. This would have the advantage of fostering community support for the Roadmap ahead of these REZs becoming 'shovel ready'.

Distribution-level initiatives should play an important role in delivering or supporting the capacity of shared network infrastructure in the CWO REZ

The Roadmap should be agnostic in its treatment of transmission and distribution infrastructure. This will drive lower cost outcomes for customers, by allowing all credible options for the REZ Shared Network to be considered on an equal footing. Transmission investment could even be avoided if an existing element of the distribution network is used to deliver REZ capacity. Embedding renewable generation or storage within the distribution network can also lead to efficiencies by reducing network losses and relieving transmission network congestion.

It is welcome that the Issues Paper states that in delivering the CWO REZ 'consideration will be given to ways to maximise the efficient connection of generation, storage and load across the REZ Shared

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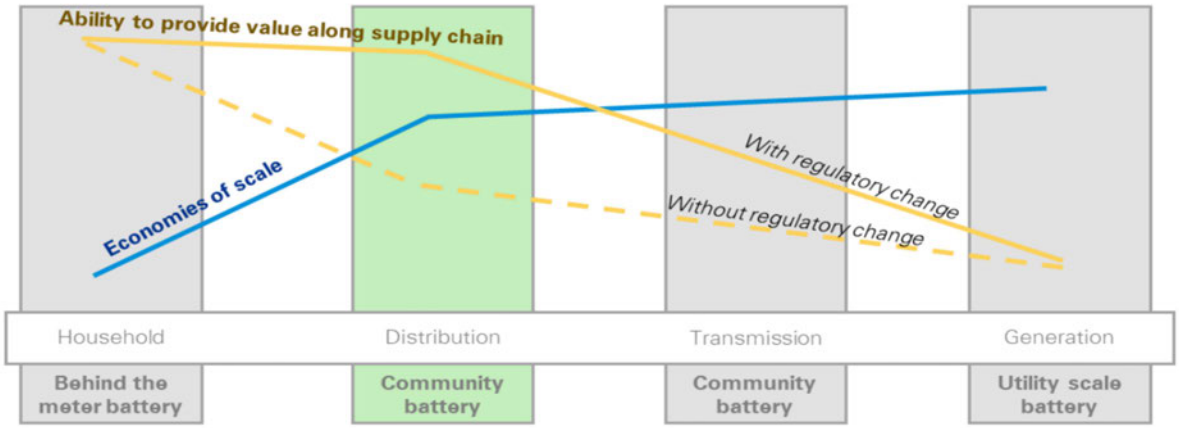
1 Electricity Infrastructure Investment Act, section 26(2)
2 DPIE, Renewable Energy Zones – Access Scheme, March 2021, p. 10.

Network and distribution network in the REZ, to reduce whole-of-system costs'.[3] We encourage EnergyCo, DPIE and TransGrid to closely work with the NSW distributors to identify where efficient distribution network options are available.

Community batteries embedded in distribution networks should be eligible for LTESAs

The Issues Paper states that 'LTESAs will target projects within REZs but will also be available to outstanding projects outside of the REZs'.[4] We welcome the scope for LTESAs to be awarded to projects located outside of a REZ and emphasise the importance of community batteries embedded within the distribution network being able to qualify for these long-term agreements.

Community batteries placed in the distribution network have the combined advantages of capturing economies of scale while providing maximum value along the energy value chain, as set out in the diagram below. The Roadmap could deliver these whole-of-system benefits, at scale, if community batteries had a streamlined eligibility for LTESAs.



More generally, we recommend the promotion of broad access to LTESAs. This is by allowing the Consumer Trustee to award LTESAs to any project outside a REZ without reference to the 'outstanding merit' requirement referred to in the Issues Paper.[5] Broadening access will deliver savings to customers and maximise Roadmap benefits. This is by awarding LTESAs to the most efficient projects regardless of whether they are located within a REZ or embedded within the distribution network.

Question 3: Do you agree with the proposed evaluation criteria for the access models? What, if any additional criteria, should be considered?

We broadly agree with DPIE's assessment approach, subject to an amendment outlined below. We favour options 1 and 2B in the Issues Paper based on our application of the evaluation criteria.

Scope for full integration into the national framework should be left open

Our preference is for consistency at the national and NSW jurisdictional level, where possible. We therefore suggest amending the criterion 'coexist with proposed national reform' to the following:

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3 DPIE, Renewable Energy Zones – Access Scheme, March 2021, p. 13.
4 DPIE, Renewable Energy Zones – Access Scheme, March 2021, p. 9.
5 DPIE, Renewable Energy Zones – Access Scheme, March 2021, p. 9.

Co-exist with, ***or allow for transition to***, proposed national reforms (edits emphasised in blue italics).

Some access options may be more capable of transitioning to the national reforms. For example, option 1 (limited physical connection) could initially be implemented at the CWO REZ with a pathway set for potentially adopting the Electricity Security Board's (**ESB**) post 2025 access reforms at a later date. This outcome would offer benefits (full integration with the national framework) that should be more explicitly incorporated into the evaluation criteria.

We recommend option 1 on a transitional basis or option 2B from the outset

The 'efficient investment in and utilisation of the REZ shared network' should be given significant weight when applying the evaluation criteria, along with 'co-exist with, ***or allow for transition to***, proposed national reforms' (our suggested amendments emphasised). This leads us to recommend:

- option 1 (limited physical connection) should initially be adopted as an intermediary measure, with a view to transitioning to the national access framework when possible; or
- alternatively, if it is judged that it will not be possible to eventually transition to the national framework then the option that unlocks the most efficient utilisation of REZ infrastructure should be pursued from the outset i.e. option 2B (enhanced financial compensation).

Question 29: How should load be integrated into REZs and what types of incentives (if any) would be needed to attract load to connect to the REZ Shared Network?

We would support the access regime offering well-balanced incentives to large load customers.

More efficient outcomes should result if well-balanced incentives are offered

Lower network losses and greater REZ exports are likely to result if incentives are offered to loads that select efficient sites for their operations relative to a REZ location. This is particularly if the load is flexible or capable of drawing electricity during peak times. The value of the incentives is likely be well balanced if it reflects the additional 'headroom' for generation and storage that is unlocked for a REZ due to a load connecting at a particular site.

Incentives for efficiently located loads should incorporate the distribution network

Benefits from efficiently located loads can be unlocked regardless of whether a customer is placed behind or before the boundary point of the REZ Shared Network. Incentives should therefore be made available to loads on both transmission and distribution network infrastructure, to maximise the opportunities for efficient outcomes.

Ausgrid has proven capabilities in connecting large loads embedded within our distribution network. These include customers which have made significant contributions to the communities in which they are located, such as the new Leading Edge Data centre in Mayfield West which has strengthened the digital economy of Newcastle and the Hunter region.[6]

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6 https://hunterheadline.com.au/blog-post/construction-of-new-leading-data-centre-underway-in-the-hunter/

Question 32: How should the potential impact in distribution load and embedded generation on the CWO REZ hosting/export capacity be incorporated into the REZ Access Scheme design and implementation?

The Issues Paper identifies that changes in load and embedded generation within the distribution network could have an impact on the hosting and power capability of a REZ. Our views on this matter, which emphasise a technical rather than an access scheme solution, are outlined below.

Technical solution to reverse energy flows should be prioritised

Investigations should be undertaken to understand current and future flows in the CWO REZ. Where prudent, technical solutions should be pursued. These could include the placement of flexible loads or large-scale batteries before the boundary point of the REZ Shared Network to capture reverse energy flows before they cause congestion.

Community batteries, embedded within the distribution network and potentially linked via a virtual power plant (**VPP**), offer another technical solution which could be leveraged as part of the Roadmap. Ausgrid is a leader in this technology, with our first community battery installed in Beacon Hill in February 2021 under a two-year trial arrangement. Our analysis indicates that community batteries offer the most cost-effective storage solution for customers. They would also foster community support for renewables and could be deployed to support the capacity of the REZ Shared Network by avoiding reverse energy flows.

The access regime should consider offering incentives to storage and large load customers to efficiently locate their operations relative to a REZ. These incentives should be agnostic to whether a battery or load is located within the transmission or distribution network, so that the most efficient option can be selected. The value of any incentives should be reflective on the benefits delivered in terms of mitigating the risks associated with reverse energy flows or other REZ congestion issues.

Reverse flows from the distribution network should not trigger compensation

We would not support reverse flows from the distribution network being included in compensation arrangements implemented under options 2A or 2B. Our understanding is that this aligns to DPIE's position based on this statement in the Issues Paper:

> ***compensation*** only extends to situations where Tier 1 access right holders are constrained off due to congestion created by Tier 2 right holder connected to the REZ Shared Network and ***does not extend to congestion outside the REZ Shared Network, or caused by projects connected outside the REZ Shared Network*** (emphasis added).[7]

It would furthermore be inequitable if distribution network customers and embedded generators were required to pay compensation. This is because they would be asked to bear potentially significant financial risks yet receive none of the benefits of being located within the REZ Shared Network.

Question 40: What opportunities exist for the NSW Government to improve connection processes in the CWO REZ? What improvements would deliver greatest value?

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[7] DPIE, Renewable Energy Zones – Access Scheme, March 2021, p. 13.

We agree with the observation in the Issues Paper that the existing connection process was not established to accommodate the unprecedented volume of connection applications that are currently being received. There are likely significant benefits from having a dedicated body for connections in the REZ. This could ensure the full generation capacity is developed in a timely manner and would improve the value proportion of the REZ Shared Network.

Thank you
Ausgrid