

30 April 2021

James Hay  
Deputy Secretary Energy Climate Change and Science  
Chief Executive, Energy Corporation of NSW  
Department of Planning, Industry and Environment

By email: [rez@planning.nsw.gov.au](mailto:rez@planning.nsw.gov.au)

Dear Mr Hay,

## **CENTRAL-WEST ORANA (CWO) RENEWABLE ENERGY ZONE (REZ) ACCESS SCHEME ISSUES PAPER**

Origin Energy Limited (Origin) welcomes the opportunity to provide comments to the Department of Planning, Industry & Environment (DPIE) on its Issues Paper on access schemes for the CWO REZ. We broadly support the DPIE's work on implementing renewable energy zones and consider that REZs have an important role to play in ensuring an orderly transition.

### **DPIE should refine the design features of the proposed access schemes**

- The appropriate access scheme should include the following design features:
  - Flexibility – granular or interval-based rights are crucial. We do not support flat, 24-hour rights as they are inflexible and impractical for renewable energy and storage.
  - Firmness – Proponents need confidence in the level of firmness of the access rights they purchase. The design should therefore look to address potential issues that can undermine firmness, such as insufficient revenue for compensation under a financial model or if the REZ cap is too high in a physical access model.
  - Long tenure – the term of access rights should be long enough for projects to be financeable (i.e., for the life of the project). DPIE could also consider allocating rights for the life of the transmission asset if the rights are tradeable and portable.
- Generally, Origin considers that more information is needed on the design features, including how access rights would work in practice; and how caps and sub-caps would be implemented.
  - Capacity caps – More detail is needed for Origin to form a firm view on this aspect. However, we provide some preliminary views below.
    - If centrally determined caps are being considered, the basis on which this would be done should be made clear with the approach subject to consultation.
    - Factors that could be considered in setting the cap include: the level of congestion proponents are willing to bear; the likely generation profile of plant; system security requirements; and the risks of under or over utilisation.
    - As far as practicable the approach in setting caps should be market driven. Under Option 2B, the market could determine the total cap of the REZ – e.g., tier 2 rights could be allocated for free without any hard caps on capacity. Tier 1 rights would still be capped and allocated through a competitive auction process.
  - Storage – We agree that DPIE should undertake further work to incentivise storage to participate in a REZ. Incentives should ideally be aimed at alleviating congestion and supporting a more smoothed profile of generation from the REZ.
  - Non-storage load could also be incentivised to participate, for example, through reduced user charges.

**Finalising the other key features of the REZ framework is a necessary precondition in understanding the implications of the various access design choices**

- DPIE should look to finalise other key features the framework, including on the development of new infrastructure within the CWO REZ and how this will be accessed by participants. This is crucial in providing proponents with the necessary information to make informed decisions around the design choices, and their participation in the REZ process.
- DPIE should therefore commence consultation on the rest of the framework which should include discussions with developers to get a better understanding of the key commercial drivers. In our view this work will need to precede any capacity allocation process. Issues that will need to be resolved include:
  - Allocation process: The timing and workings of the allocation process and how it interacts with the long-term energy service agreements (LTESA), and clarity on how access fees will be set.
  - Connections and boundaries: Further details on hubs, boundary points and boundaries are needed to ensure projects are being developed in a way that allows them to benefit from the proposed access scheme. This includes providing indicative locations for hubs as soon as practicable; more information on how they will be used; clarity on whether connections would only occur via the hubs; and details on how the REZ boundary will be finalised.
  - Opportunities for improving coordination of the connection process through the REZ planning framework: For example, in choosing the location of hubs, the planner could consider the practical connection requirements of generators (e.g. direct feeder routes). There may also be opportunities for coordination in terms of broad system security considerations.

The above points are discussed in greater detail in Attachment A. Should you have any questions or wish to discuss this submission further, please contact Sarah-Jane Derby at [REDACTED] or by phone, on [REDACTED]

Yours sincerely



Steve Reid  
Group Manager, Regulatory Policy

## ATTACHMENT A: SUBMISSION DETAIL

### DPIE should refine the design features of the proposed access schemes

DPIE should continue to explore potential access schemes by focusing on refining the various design features through consultation. This would enable stakeholders to form a firmer view on which access scheme is preferable. In doing so, DPIE should consider hybrid options that draw on preferable design features from either option or new proposals.

Each of the proposed options has strengths and weaknesses:

- Option 1 can be implemented simply, although it would be blunt and inflexible. It could lead to sub-optimal REZ utilisation if the caps are not chosen appropriately. Our primary concerns with this option relate to the lack of clarity on how the type of access rights proposed would work in practice; and the potential lack of incentives for storage to connect to the REZ.
- Options 2A and 2B are more complex to implement but are likely to be more efficient given the additional flexibility provided. Our primary concerns with Option 2B relate to the firmness of tier 1 rights, value of tier 2 rights and potential problems in identifying constraints. In our view, option 2A is unworkable as flat, 24-hour rights are not impractical for renewables and will not necessarily incentivise hybrid systems.

We provide greater detail on these initial observations and our views on the optimal access regime in Table 1 below.

**Table 1: Feedback on proposed access schemes**

Design feature	Comment
<b>Key design features</b>	
Cap on capacity	<p><u>More details on capacity caps are needed</u></p> <ul style="list-style-type: none"><li>• While hard caps on the REZ may minimise congestion risk, implementing them may be complex.</li><li>• We welcome additional information on how the caps and sub-caps would be developed and expected to work.</li><li>• With respect to Option 2, the Issues Paper implies that the REZ administrator would choose a cap for both tier 1 and tier 2 rights. It is not clear how this would work in practice and how proponents would value tier 2 rights, given that they would only provide partially firm access to the network.</li></ul> <p><u>The methodology for choosing caps should be consulted on and made transparent</u></p> <ul style="list-style-type: none"><li>• There is a risk of inefficient REZ utilisation if the caps are not chosen appropriately, which would affect the firmness of the access rights.</li><li>• DPIE should consult on its approach for choosing caps and the final methodology should be transparent. The allocated caps and sub-caps should also be made clear prior to the allocation of rights.</li><li>• Some key principles to consider in setting the methodology include: the level of congestion proponents are willing to bear; the likely generation profile of plant; system security requirements; and the risks of under or over utilisation (and who will bear those risks).</li></ul> <p><u>DPIE should explore market-led options for determining REZ utilisation</u></p>

	<ul style="list-style-type: none"> <li>• We support exploring options to determine “caps” or utilisation through a market-driven process.</li> <li>• Under a physical access scheme, this could be achieved by developers and generators having input into the development of caps and any technology-specific sub-caps.</li> <li>• Under Option 2B, tier 2 rights could be allocated for free by the REZ administrator, without any hard caps on capacity. The market would decide what the efficient level is by choosing whether to connect as tier 2 access holders (or a mix of tier 1 and tier 2). Proponents wishing to access tier 2 rights would face the financial risk of having to compensate tier 1 holders if they cause congestion in the REZ. This would send efficient connection signals and would lead to optimal outcomes, without the need for a hard cap. Tier 1 rights would remain capped and subject to a competitive auction process.</li> <li>• DPIE should explore this option further, noting further work may be needed on how interval-based rights would work under this option and how capacity would be optimised within the REZ.</li> <li>• The REZ administrator could still have a role to play in managing power system security requirements at connection, noting that it is unclear how this would be dealt with under the current access proposals.</li> </ul>
Shape, coverage and nature of rights	<p><u>Flat, 24-hour rights would be impractical – flexible rights are a necessity</u></p> <ul style="list-style-type: none"> <li>• We do not support flat, 24-hour rights. These rights are impractical for renewable generation and may not necessarily incentivise firming in an efficient manner.</li> <li>• Generally, we would not support options that require generators to purchase access when it is not needed (e.g., nameplate capacity at night for a solar farm).</li> <li>• We support interval-based rights – granular rights chosen by each proponent based on its generation profiles would be the most efficient option.</li> </ul> <p><u>More information is needed on how access rights would work under both options</u></p> <ul style="list-style-type: none"> <li>• The paper states that, under Option 1, proponents would need to purchase rights for their nameplate capacity and technology type, and not based on their generation profile (as with Option 2B). It is not clear how this would work in practice and how the rights would be priced.</li> <li>• We would welcome clarity on how tier 1 and tier 2 rights under Option 2B would be optimised in the allocation process. More detail is needed on how the requirement to hold rights to cover nameplate capacity (as noted in the Issues Paper) would apply in practice under this option – e.g., would proponents be required to hold nameplate capacity for a certain amount of dispatch intervals but not others?</li> </ul>
Trading of rights	<p><u>The ability to trade access rights would improve efficiency of the REZ</u></p> <ul style="list-style-type: none"> <li>• We generally support the ability to trade access rights where possible – trading would improve flexibility and may improve incentives to connect. However, we acknowledge that trading may not always be practical or possible.</li> <li>• Regardless of the trading approach (bilaterally or centrally), transparency will be important to underpin transaction confidence. We support the establishment of a publicly available register of rights – including ownership and volume details.</li> </ul>



Treatment of storage	<p><u>Incentives for storage should be explored</u></p> <ul style="list-style-type: none"> <li>We support DPIE exploring incentives for storage to help alleviate congestion or to support a more smoothed generation profile within the REZ.</li> </ul>
Calculating and identifying compensation	<p><u>The size of any revenue adequacy issue should be assessed</u></p> <ul style="list-style-type: none"> <li>The firmness of tier 1 access rights would be eroded if tier 2 revenue is insufficient.</li> <li>Revenue adequacy could be improved by using access revenue when shortfalls occur, rather than capping compensation at the revenue of tier 2 holders.</li> </ul> <p><u>It is unclear how the proposed compensation identification approaches</u></p> <ul style="list-style-type: none"> <li>The proposed methods for identifying if compensation is payable appear to be a simplification of a counterfactual analysis to assess if tier 1 holders would have been dispatched absent congestion.</li> <li>However, it is unclear how this method differentiates between constraints that occur within the REZ (i.e. those caused by tier 2 holders) and constraints that arise outside of the zone (i.e. those caused by other generators) but affect generators inside the REZ. Tier 1 holders should only be compensated for congestion within the REZ to be consistent with the type of access right purchased (to the REZ boundary point).</li> </ul>
<b>Additional design features</b>	
Non-scheduled generation	<ul style="list-style-type: none"> <li>We expect that the types of non-scheduled generation likely to connect to transmission would be relatively large (in the 5MW-30MW range, noting the AEMC is currently assessing a request to reduce the scheduling threshold to 5MW) and could affect congestion/power flows on the REZ.</li> <li>We therefore consider that generation connecting to the REZ should either be scheduled or semi-scheduled. If they remain non-scheduled, they should count towards the cap and their impact on congestion and system security should be assessed.</li> </ul>
Load	<ul style="list-style-type: none"> <li>We support exploring incentives for load (in addition to incentives for storage).</li> <li>Load could be incentivised to connect through reduced charges (transmission use of system – TUOS – or whichever cost recovery charge is implemented).</li> </ul>
Use it or lose it provisions	<ul style="list-style-type: none"> <li>It is difficult to comment on this aspect without understanding who will ultimately bear the risk of transmission build.</li> <li>For example, if too many rights are returned (for compensation), will consumers bear that risk? The exact cost recovery method and framework is yet to be worked through and it is unclear how significant generator funding (through access fees) will be as a share of total transmission costs.</li> <li>The need for such provisions would also depend on the term of the rights – for long-term rights, closure provisions may be necessary, particularly if trading is not allowed.</li> </ul>
Term of access rights	<ul style="list-style-type: none"> <li>The term should be long enough to allow projects to be financeable – ideally, this should be for the life of the project.</li> <li>There is also an option for the rights to be allocated for the length of the transmission asset – however, this design choice would depend on whether the rights can be transferred to a new or upgraded plant (at the same location) or traded.</li> </ul>



Treatment of dedicated connection assets (DCAs)	<ul style="list-style-type: none"> <li>The approach set out in the paper appears sensible.</li> <li>DPIE could also explore the option to use existing DCAs for the REZ if it is more efficient and practical to do so, e.g. by using existing sub-stations instead of building new ones.</li> </ul>
---	--

**Finalising the other key features of the REZ framework is a necessary precondition in understanding the implications of the various access design choices**

The NSW Government expects the CWO REZ to be shovel-ready by the end of 2022 and has noted its intention to run a competitive process to allocate capacity in the CWO REZ in 2021-22. In addition, the paper states that “timely implementation” is an evaluation criterion for this access scheme.

We are concerned that the timing may be rushed given the significant amount of work that is yet to be completed before access rights can be allocated, including the rest of the implementation plan (such as how the allocation process will be run) and technical details of the REZ itself (such as boundaries and new sub-station locations). This is crucial in providing proponents with the necessary information to make informed decisions around the design choices, and their participation in the REZ process.

We acknowledge that the Issues Paper focuses on the topic of access rights within a REZ and that other work is under way on the rest of the framework. However, it is important that the outstanding issues highlighted in Table 2 below are resolved prior to any auctioning of capacity. Proponents will need to be clear on the nature of the access rights, the auction process, how and where they will connect to the REZ shared network and what the boundaries are.

Consultation on these areas could include additional papers and formal submissions, technical working groups with a range of industry representation, and one-on-one meetings with developers to get a better understanding of the key commercial needs.

**Table 2: Key areas for further work**

Areas	Comment
<b>Auction allocation process</b>	<p><u>The auction allocation process should be consulted on and details made transparent</u></p> <ul style="list-style-type: none"> <li>It is not clear whether the process will be a competitive auction or how access fees will be set by the Consumer Trustee. It is also unclear if these access fees are separate from the auction allocation process.</li> <li>It is also not clear how the allocation of rights interacts with the auction for long-term energy service agreement (LTESAs).</li> </ul> <p><u>Timing considerations will need to be accounted for</u></p> <ul style="list-style-type: none"> <li>Investors will need clear information on a wide range of design features prior to the auction, such as the boundary points, location of hubs, nature of access rights, so that they understand exactly what they are bidding for.</li> <li>In addition, for projects to be financeable, access rights will need to have been allocated prior to financial close, meaning that auction timing is crucial.</li> </ul>
<b>Connections: hubs and boundary points</b>	<p><u>More details are needed on how hubs would work</u></p> <ul style="list-style-type: none"> <li>For example, it is unclear if there will one or multiple hubs for connecting to the REZ.</li> <li>Would a generator be able to connect anywhere along the REZ at their own cost (i.e., clarity on whether connections would be limited via hubs or whether new privately developed sub-stations would be allowed would be welcome)</li> </ul>

	<ul style="list-style-type: none"> <li>• Would sub-stations at hubs be the responsibility of generators or part of the shared network? This would likely affect access and the viability of projects.</li> <li>• Should the access scheme rely on the development of new sub-stations or hubs, it is important that indicative locations are shared with participants as soon as possible to allow for efficient planning and project development.</li> <li>• Similarly, the number and location of boundary points would also affect access.</li> </ul> <p>While some of these details may be worked through progressively, they will need to be made clear prior to the allocation of access rights. This will ensure projects can benefit from the proposed access schemes.</p>
<b>Choice of boundary</b>	<p><u>More details are needed on how REZ boundaries will be chosen</u></p> <ul style="list-style-type: none"> <li>• We also understand that DPIE will be consulting further on the exact boundary of the CWO REZ later in the year – we welcome clarity on how the REZ boundary will be chosen and whether it would be subject to change as the project develops. For example, will the boundary of the REZ solely be based on geographical location or will it be electrical?</li> <li>• It is also unclear how existing lines and generation within the indicative CWO REZ boundaries will be treated. Presumably, generation connected to (or new generation connecting to) existing lines located inside the geographical boundary of the CWO REZ will not form part of the REZ and will be unable to connect to it/purchase rights.</li> </ul>
<b>Coordination of the connection process</b>	<p><u>The practical connection requirements should be factored into the planning process</u></p> <ul style="list-style-type: none"> <li>• It is not completely clear what the role of the government (versus the TNSP) is in the REZ planning process and so it is difficult to comment on the potential for additional coordination in terms of connection.</li> <li>• Generally, we consider there may be opportunities to improve coordination of the connection process through the planning of REZs.</li> <li>• For example, the planner may consider the following: <ul style="list-style-type: none"> <li>○ In assessing where to locate a sub-station, the planner should factor in the routes that generators will need to use to access the sub-station.</li> <li>○ Feeder routes within the REZ that involve crossing multiple properties to get to the sub-station may be problematic, while more direct routes would be preferable.</li> </ul> </li> <li>• As noted earlier, it is unclear what role, if any, the REZ administrator would have in coordinating power system security when allocating capacity, to ensure that connection issues are minimised.</li> </ul>