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Access Schemes are a key part of the NSW Government's work to coordinate and encourage investment in Renewable Energy Zones (REZ) and realise the objectives of the Electricity Infrastructure Roadmap and enabling legislation. The Central-West Orana REZ Access Scheme will be the first of its kind in the National Electricity Market.

The Department has published the Central-West Orana Renewable Energy Zone Issues Paper (the Issues Paper) to facilitate consultation on the access scheme models being considered for the Central-West Orana REZ. This form is for use by stakeholders who wish to make a submission on the Issues Paper to provide feedback to the Department. This form is not required to have your say on the Issues Paper - the Department also welcomes free form submissions.

Submission response options

We encourage stakeholders to use this form to respond to the specific questions raised in the Issues Paper. This will help us interpret and incorporate your responses into our decision making process.

We also welcome free form submissions and responses instead of, or in addition to, this submission form.

Please email your submission form and/or free form response to: rez@planning.nsw.gov.au with 'CWO REZ Access Scheme Issues Paper' in the subject line. Please identify if you would like your submission to be confidential or anonymous.

Disclaimer

The Department encourages publication of submissions to build transparency in the decision-making process and ensure that a variety of views are understood by the public and relevant stakeholders.

Providing submissions is voluntary, is not assessable, and will not impact an entity's participation in, or be used in the assessment of, any future procurement or competitive process regarding the Central-West Orana REZ or other NSW Government programs.

All submissions will be made publicly available on the Department's website unless a submission author indicates a preference below for confidential treatment. In the absence of an explicit declaration to the contrary, the Department will assume that all information can be made public.

The Department may disclose appropriate confidential information provided by stakeholders to:

- the NSW Minister for Energy and Environment or Minister's office
- the NSW Ombudsman, Audit Office of NSW or as may be otherwise required for auditing purposes or Parliamentary accountability
- directly relevant Department staff, consultants, professional service providers and advisers
- other parties where authorised or required by law to be disclosed.

Participants should also be aware that provisions of the *Government Information (Public Access) Act 2009 (NSW)* may apply to any documents submitted (and information should be submitted on that basis) and to any summary report compiling key information and feedback.

Submissions may also be shared with the Australian Energy Market Operator, Australian Energy Market Commission, Australian Energy Regulator, the Energy Security Board, TransGrid, the Clean Energy Finance Corporation, Australian Renewable Energy Agency, Essential Energy,

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Endeavour Energy and AusGrid to better understand and respond to issues raised. Please make clear in your form response below or otherwise in your submission if you do not want your submission to be shared with the above parties.

Submission type and contact details

Submission type	<input type="checkbox"/> Individual <input checked="" type="checkbox"/> Organisation <input type="checkbox"/> Other Click or tap here to enter text.
Approving author name	Rynhardt Grove
Organisation	Bright Sparks
Approving author title	Committee Member
Phone	
Email	
Stakeholder group	<input type="checkbox"/> Energy generation <input type="checkbox"/> Energy storage <input type="checkbox"/> Ancillary services <input type="checkbox"/> Electricity distribution provider <input type="checkbox"/> Transmission provider <input type="checkbox"/> Energy industry/market body <input type="checkbox"/> Financial institution of financial services <input type="checkbox"/> Consumer advocacy <input type="checkbox"/> Government <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Other (please specify): Community group

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Confidentiality and submission publication preferences

Submissions may be published in whole or in part on the Department's website. Authors may elect for some or all of their submission to be confidential.

Would you like your submission to be confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Some confidential submissions may be shared with the Australian Energy Market Operator, Australian Energy Market Commission, Australian Energy Regulator, the Energy Security Board, TransGrid, the Clean Energy Finance Corporation, Australian Renewable Energy Agency, Essential Energy, Endeavour Energy and/or AusGrid to better understand and respond to issues raised. Would you like your submission to be kept confidential from these parties?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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If you do not want your personal details or any part of your submission published, please state this clearly in your submission. We may be required to release the information in your submission in some circumstances, such as under the *Government Information (Public Access) Act 2009*.

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Questions

The fillable fields for answers to these questions will expand to accommodate the length of your response.

1. Objectives and evaluation

Question 1: If the CWO REZ Access Scheme delivers on the proposed objectives and benefits, how would connecting projects value connecting under this Scheme rather than elsewhere under current NEM network access arrangements? Should proposed benefits be given weightings, and if so, what should these be?

The value of connecting under the Scheme would likely be estimated as the difference in total benefits and costs relative to connecting outside of the Scheme. This is not trivial to calculate because connecting under the Scheme could have multiple impacts on project financials (e.g. lower/higher cost of capital, lower congestion risk, etc) so a connecting project would possibly model two pathways, one connecting under the Scheme, one connecting outside the Scheme. This would likely involve conversations with providers of debt and equity to understand what the impact of the Scheme would be on key metrics like cost of capital. The value of connecting under the Scheme would be the difference between the NPVs of each pathway.

Bright Sparks supports the following principles in regards to the Scheme, which broadly align with the proposed objectives and benefits outlined in the Issues Paper:

- Lowest cost for consumers - government intervention must deliver lower cost in long run against a counterfactual open access regime
- Efficient decarbonisation - the Scheme should not slow down roll-out of clean energy
- Simplicity - both in administration (establishment and operational) and regulation (reporting, monitoring and compliance)
- Replicability - the Scheme should be capable of being implemented in other areas, and contribute to streamlining development and financing
- Longevity - the Scheme should endure for the future, and be future-proofed with regards to proposed market reforms

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<p>Question 2: What, if any, additional benefits should the CWO REZ Access Scheme deliver to provide value to connecting generation and storage projects?</p>	<p>The Scheme could deliver information sharing benefits that aid in coordinating projects. This could include publication of modelling, guidance on connection applications (if a streamlined process were implemented), or even obligations on TNSPs to share details with applicants.</p>
<p>Question 3: Do you agree with the proposed evaluation criteria? What, if any, additional criteria should be considered?</p>	<p>See principles above, particularly in regards to decarbonisation and longevity.</p>

2. Access scheme models

<p>Question 4: Which of the shortlisted models presented is preferred? Which best balances the need to deliver value to investors with the need to maximise utilisation of the REZ, and together achieve the access scheme's objectives?</p> <p>In particular, does the 'non-firm' connection right, under Option 1 provide sufficient certainty to investors to be of value? If it does not, is this outweighed by the increased utilisation of the REZ that would result under such non-firm connection rights?</p>	<p>We believe that Option 2B should be the preferred option as it should, in theory, lead to greatest utilisation of the REZ network out of the three proposed schemes.</p> <p>However, we acknowledge that Option 2B is the hardest to administer, and that both Option 2A and 2B will unfortunately be regarded as similar to the AEMC's Financial Transmission Rights (FTR) proposal, which has been widely panned by generators.</p>
<p>Question 5: Are there other access models that you consider would be superior to the shortlisted models in this paper? If so, what are these models, and what are their strengths in comparison to the shortlisted models?</p>	<p>No comment.</p>
<p>Question 6: How could the characteristics of either Option 1, 2A or 2B be adjusted to improve them in a manner that achieves the access scheme's objectives?</p>	<p>No comment.</p>
<p>Question 7: Characteristics such as more granular access rights (for example, rights defined in five-minute intervals) and tradeable rights can provide flexibility to access right holders, but also make the access scheme more complex. How should the trade-off between flexibility for access right holders and simplicity of the access scheme be assessed? Which better achieves the access scheme's objectives?</p>	<p>We suggest that the highest priorities when considering increased flexibility that comes with tradeable rights are:</p> <ul style="list-style-type: none"> - can the attribution of congestion still be reliably and accurately calculated? - does the additional flexibility enable gaming/abuse of market power?
<p>Question 8: If not nameplate capacity, what is the appropriate level of capacity that should be used to determine requirements for access rights coverage that would better achieve the scheme's objectives?</p>	<p>Bright Sparks agrees that nameplate capacity should be used, for the reasons mentioned in the Issues Paper, as well as for the reason that this is the common value used in many other</p>

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If a Probability of Exceedance (POE) value is used, what process should be used to verify this?	processes and instruments e.g. Registration, PPAs, etc.
Question 9: How should the allocation of access rights to hybrid (storage plus generation) assets be approached? What 'shape' of access rights would suit a hybrid asset? How could projects which use some of their maximum capacity 'behind the meter' be accounted for in determining the appropriate level of capacity for access rights coverage?	<p>Our understanding is that if Option 2B were implemented, any asset could purchase access rights to suit their expected generation profiles, including hybrid assets.</p> <p>For projects that use some of their maximum capacity behind the meter, we believe they should still be assessed at their generation nameplate i.e. the capacity of the inverter connecting the project to the grid.</p>
Question 10: Is there a minimum term (in years) for which access rights would need to apply to benefit project finance?	<p>Yes, this needs to align with the economic life of assets as best as possible. Our understanding is that the first 5-7 years tend to be the most critical for financed assets, so access rights would need to exist for at least this amount of time.</p> <p>The obligation to retain rights for financing purposes should be the responsibility of the rights holder. However, there must be the option to renew for existing rights holders.</p>

Option 1: Limited physical connection model

Question 11: Under Option 1, connected generation capacity could be capped above the capacity of the REZ Shared Network. How should generation and storage capacity be set or capped to optimise REZ Shared Network utilisation without introducing too much constraint risk?	No comment.
Question 12: How could network capacity be allocated between different generation types? Should it, for example, be based on a particular, pre-defined generation profile ("shape") for different types of generation technologies?	No comment.

Option 2A and 2B: Financial compensation models

Question 13: How would 24-hour access rights impact the value and efficiency of a financial compensation model? If access rights were defined as flat, 24-hour, access rights, would access right holders be incentivised to firm up their generation to make efficient use of the access rights (either technically, or commercially with sharing arrangements)? If not, what adjustments would need to be made to the access scheme design to incentivise this?	<p>Flat 24-hour access rights would in theory incentivise storage, however it may also lead to underutilised capacity.</p> <p>We are unclear on the reasons for additional incentives for storage. Storage should already be incentivised by the value of being able to dispatch during low-generation periods, thereby avoiding the need for Tier 1 rights i.e. incentivised by the avoidance of Tier 1 rights costs.</p>
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Question 14: Would currently available information, including solar and wind forecasts for corresponding Tier 1 generators, be sufficient for Tier 2 access right holders to make a reasonable assessment of the risk of being constrained off? Or would additional data need to be available to achieve this?	There are several companies that provide dispatch forecasts currently and we believe that this information should be sufficient.
Question 15: With reference to Appendix B, to what extent should curtailment (and therefore the compensation mechanism) take bid price or market settlement price into account? In particular, what would be the downside to limiting compensation to only the bids from Tier 1 access right holders that are below the market settlement price?	<p>This requires careful consideration of the strategic bidding that generators engage in and the intricacies of AEMO's dispatch engine. Some detailed modelling is likely required here.</p> <p>That said, we think the risk of gaming by generators is higher if bid price were used, and therefore favour the use of settlement price.</p>
Question 16: In what ways could the proposed models and compensation mechanism design result in changes to the bidding strategies of Tier 1 and Tier 2 access right holders? Would this be expected to have a material impact on the NSW market?	No comment.
Question 17: There could be circumstances in which the revenue earned by Tier 2 access right holders will not equal the revenue lost by the Tier 1 access right holders through subsequent curtailment. This includes instances of intra-REZ constraints, and when MLFs for Tier 2 generators are systematically lower than for Tier 1 generators. What are the other circumstances, if any, in which potential 'compensation inadequacy' may occur? How material is this risk for Tier 1 access right holders in comparison to the open-access regime?	We do not believe this is a material risk to the value of Tier 1 access rights. If there was a systematic "gap" in compensation, and if rights are tradeable, it would be reasonable that this would eventually be priced into the Tier 1 access right price.
Question 18: Does this Issues Paper identify the key risks associated with the Financial Compensation Models? Can the risks be sufficiently managed through the design features of the models and the proposed compensation mechanism referred to in this Issues Paper?	No comment.
Question 19: How would the implementation of the financial compensation models impact existing contracts, such as PPAs? Could the compensation mechanism be appropriately accounted for in the design of new contract structures?	No comment.

Other models considered but not progressed

Question 20: The NSW Government is not proposing to progress the Limited NEM Bidding	No comment.
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and REZ Locational Marginal Pricing models further at this time. Are there elements unique to these two models which should be considered for integration into the models that have been shortlisted?

3. Access scheme design issues

Question 21: How valuable is the ability to trade access rights, and in what circumstances would this be useful?

Likely valuable, particularly as a risk management tool.

Value of access rights partly depends on frequency of ability to change or adjust access rights over time (i.e. auction process each day / month). If relatively frequent, trading within the scheme is less important. If trade is not centrally managed, trading between participants should be encouraged (i.e. seasonal adjustments to access rights).

Access rights should be designed to be technology neutral and tradable across technologies.

It is proposed that there be a one day interval between trades (i.e. long enough to decrease risk of gaming).

Question 22: To what extent would flexibility to trade access rights increase the value of access rights for their holders? How flexible and unrestricted would access rights trading need to be to provide value?

See Q21.

Allows participants to revise expectations. Allows participants to better use storage based on availability of rights.

Question 23: Would the introduction of a central access rights trading platform be of benefit to access right holders? If so, why? If beneficial, then which party would be best placed to design, maintain and operate this trading platform?

This depends on the level of administration and control of a central administrator of the REZ. (i.e. managing compensation regime). Trading may happen directly between generators, but must be reported via an exchange or platform e.g akin to ASX clearing house. This promotes transparency and price discovery (i.e. lowest price). Trade information does not need to identify generators but needs to show bid quantity and offer price.

REZ Administrator to manage, with the possibility of outsourcing to a competent organisation.

Question 24: For generation projects connecting to the REZ, how important is it that storage is required to purchase access rights (i.e. that total connecting storage capacity is limited)? If storage was not to be required to purchase access rights, how high is the risk of storage competing with (i.e. curtailing) generation dispatch?

Storage should have to purchase access rights unless sharing an inverter with generation, in which case the project as a whole is required to purchase access rights.

As far as possible, the Scheme should be designed to be technology neutral, so storage should be subject to the same requirements. It

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	<p>should be kept consistent with classifications as per NEM rules / AEMO.</p> <p>If a storage operator is confident that they can dispatch at times such that they cause no congestion, then they can simply purchase (presumably cheaper) Tier 2 access rights (i.e. the spread in price between Tier 1 and Tier 2 access rights is an incentive).</p> <p>Storage can cause congestion when dispatching just like wind and solar. Therefore, it should not be exempt from purchasing at least Tier 2 access rights i.e. it should still be liable for compensation.</p>
<p>Question 25: Would proponents of storage projects value firm access rights? In the financial compensation models, how would storage operations differ under Tier 1 versus Tier 2 access rights? How could an access scheme provide sufficiently flexibility for storage to connect in future as technology costs come down and the market evolves?</p>	<p>Yes, there will be a greater guarantee that power will be able to be dispatched without congestion, provided that there are suitable rights. More likely, storage projects will value the cost avoided by not having to purchase Tier 1 access rights (given storage is controllable and can dispatch at periods of low congestion).</p> <p>The benefits for storage would be apparent in situations where generation with rights is not suited to supply the demand (e.g. purchasing tier 2 rights for storage to discharge at night when solar generation is low can be more reliable when it is known that competition from wind won't be adverse)</p> <p>Up to storage projects to determine how much risk they want to take on, should not be limited to one tier and not the other. Dispatch control management will deal with this risk.</p>
<p>Question 26: Would prevailing market signals provide sufficient and appropriate incentive for storage to operate in a manner that is aligned with the needs of the REZ? If not, then what REZ-specific types of incentive mechanisms should be considered to incentivise load and storage to consume electricity when the REZ Shared Network is congested?</p>	<p>We understand that currently in the NEM, pricing is regional, so providing REZ-specific congestion signals is not currently possible on an interval basis. MLFs should provide this signal on an annual basis (i.e. connecting load to congested areas of the networks generally improves MLFs considerably).</p> <p>If additional measures were introduced to incentivise load and storage, they should be consistent with and not distort existing market signals.</p>
<p>Question 27: If an incentive mechanism for storage is implemented how should the costs of this arrangement be recovered?</p>	<p>N/A. No recommended separate incentive for storage.</p>
<p>Question 28: How should the treatment of storage under the CWO REZ Access Scheme account for differences between long-duration storage and fast-firming technologies?</p>	<p>In the absence of a dedicated incentive mechanism for storage, they should be treated the same.</p>

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<p>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?</p>	<p>Integrate load with existing and develop strategies as applicable (e.g. government support for rollout of fast chargers).</p> <p>However, we do not believe that incentives for load is an issue to be addressed within the REZ Access Scheme. We understand that there are benefits of having load connecting close to generation, but creating an incentive scheme and then recovering the costs of the scheme from those who benefit may be a complicated exercise, possibly controversial, and likely a separate body of work.</p>
<p>Question 30: Would additional incentives be necessary, beyond market-based commercial incentives, to encourage storage/load to increase their electricity use during periods of REZ network congestion?</p>	<p>Ideally, flexible users should be preferenced for load connections. And ideally, if commercial loads, they would be at least partly spot exposed to ensure they respond to periods of REZ network congestion (when prices would presumably be low). However, it is unclear whether this could be implemented/enforced.</p>
<p>Question 31: If an incentive mechanism for load is implemented how should the costs of this arrangement be recovered?</p>	<p>Incentives could in theory be funded by revenue from access rights. Cost to each rights holder should be proportional to dispatch over a set period (e.g. 1 month).</p>
<p>Question 32: How should the potential impact of changes in distribution load and embedded generation on the CWO REZ hosting/export capacity be incorporated into the REZ Access Scheme design and implementation?</p>	<p>Load should be reviewed in set periods (e.g. annually) or as needed. New rights should be added if there is a surplus of proposed load inside the REZ shared network that can be served without significant additional network expansion. Note that this must be done with caution, so as not to undermine the benefits of consistently good MLFs for project financing purposes.</p> <p>The risk of embedded generation along the distribution network reducing the need for large-scale generation and transmission is one that is already borne by generators and the public. It is unclear if this is a risk that can or should be addressed by the Access Scheme specifically.</p>
<p>Question 33: Should non-scheduled generation and exempt generators be required to hold access rights under the CWO REZ Access Scheme, and/or should the total capacity of non-scheduled generation or generation from exempt generators permitted to connect be capped? Is there an alternative approach to the treatment of non-scheduled generation or generation from exempt generators which should be considered?</p>	<p>Non-scheduled generation and exempt generators should not be required to hold access rights - it would be unreasonable to expect the owners of such generation to be capable of dealing with access rights (particularly under Option 2A/B).</p> <p>In principle a cap on capacity sounds reasonable, but is likely to prove unpopular.</p>
<p>Question 34: If 'use it or lose it' provisions were introduced, how should the utilisation requirements be set/measured? What</p>	<p>Utilisation measures should be based on installed capacity or progress in developing capacity with set milestones matching purchased rights.</p>

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exemptions or concessions should be considered?	<p>Apply sunset period clauses similar to property planning/development where a builder must begin construction within a set time frame or lose planning rights.</p> <p>In the unlikely event that a connected generator is not using its access rights but is still willing to pay for and hold them, consider a utilisation measure like dispatched capacity or bid capacity vs nameplate capacity and set a reasonable threshold e.g. 5%.</p>
Question 35: If an access right holder was required to return some or all of its access rights under the 'use it or lose it' provisions, how should these provisions be structured?	<p>The possibility of revoking rights should be reviewed with the generator prior to actioning. Progress milestones for setting up capacity should be reviewed at set milestones to determine if setbacks are justifiable.</p> <p>Rights should not be revoked arbitrarily without potential reallocation. Allowances should be made for genuine extenuating circumstances.</p>
Question 36: What impact do you consider capping of connection in a REZ, and the proposed access scheme models, will have on reducing the risk of volatile MLFs? Are additional measures warranted? If so, what measures?	<p>We agree in principle that MLFs could be better, or at the very least more stable, under an access scheme relative to the open access regime.</p>
Question 37: What are your views on the appropriateness of the principles for managing the interface between the CWO REZ Access Scheme and common DCAs/DNAs? How could consistency between the CWO REZ Access Scheme and access policies on DCAs and DNAs best be achieved?	<p>No comment.</p>

4. Other coordination initiatives

Question 38: Would a process to coordinate connection assets for multiple projects be of interest? If so, what coordination initiatives would be of interest?	<p>No comment.</p>
Question 39: Given the unique nature of connecting to coordinated REZs, such as the CWO REZ, the barriers to coordination of connection assets may be reduced. What further barriers to coordination will still need to be overcome, and how could this be achieved?	<p>No comment.</p>
Question 40: What opportunities exist for the NSW Government to improve connection processes in the CWO REZ? What improvements would deliver greatest value?	<p>One of the major challenges connecting large generation assets to the grid is understanding costs for transmission upgrades. By having dedicated and well understood infrastructure, the scheme should provide transparency on any</p>

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	connection costs that will be incurred within the REZ. Dedicated support staff and single point of contact for managing connections.
Question 41: What, if any, additional connection challenges could be created under the CWO REZ Access Scheme? How could these be mitigated?	The REZ access scheme will presumably result in multiple new projects jostling to connect at the same time. This would create a long connection queue for the network service provider to process. This risk could be mitigated by implementing a streamlined connection process, by allocating resources for increased staff to process connection requests (e.g. a dedicated team for CWO REZ connections), and by providing timeline guidance to connecting projects to manage expectations.
Question 42: What value could be delivered to generation and storage projects through centralised approaches to connection and system services, and what are the trade-offs? For example, would projects be willing to forego optionality around aspects of their project through requirements like minimum equipment standards, to reduce costs and the risk of potential delays to commissioning?	No comment.

5. Open comment

Question 43: Are there any other matters you wish to raise relevant to this issues paper?	Please see the concerns raised in our cover letter about access schemes more generally.
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