

Submission form

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, Endeavour Energy and AusGrid to better understand and respond to issues raised. Please make

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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

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|------------------------|---|
| 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 | Mr A.P.Concannon |
| Organisation | Reach Solar energy |
| Approving author title | CEO |
| Phone | [REDACTED] |
| Email | [REDACTED] |
| Stakeholder group | <input checked="" type="checkbox"/> Energy generation <input checked="" type="checkbox"/> Energy storage <input checked="" 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 type="checkbox"/> Other (please specify) Click or tap here to enter text. |

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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.

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| 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

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| <p>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?</p> | <p>Renewable projects will need to balance connecting outside of the CWO REZ (as there remains pockets of under-utilised grid infrastructure), against the additional cost and non-NEM features of the REZ Access Scheme.</p> <p>There is a real risk the barriers to new entrants are increased by the REZ Access Scheme and the detailed terms of the NSW Roadmap.</p> <p>The NSW Government LTESA tender should permit all NSW renewable projects to participate from the first round of the NSW tender process.</p> <p>A transition arrangement should exit to recognise existing renewable projects (operational or well-advanced) which are within or adjacent to a REZ (existing or future). Care should be taken to ensure project value is not destroyed as part of the REZ Access Scheme.</p> <p>A totally planned regime is not always best. Consider if the NEM in 1998 had guaranteed grid infrastructure with firm unconstrained access to the prevailing fossil-fired generators for say 30 years. In this scenario new technologies including the reduced cost of renewables, distributed demand/ generation schemes, would have been frustrated from entering the market and competition would have been lessened: adversely affecting the electricity price to customers.</p> |
| <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>A potential benefit of the REZ Access Scheme is it could fast-track a generator and/ or energy storage performance standard (PS) and 5.3.4A approval process by using pre-approved PS models.</p> |
| <p>Question 3: Do you agree with the proposed evaluation criteria? What, if any, additional criteria should be considered?</p> | <p>The evaluation criteria need to include the least cost of energy to consumers, and the readiness of the project to proceed.</p> |

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2. Access scheme models

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| <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>Option 1 is preferred.</p> <p>The NEM already provides incentives to increase utilisation by installing energy storage behind the connection point (generation and/ or load), and is changing. The latest being a proposed sub 2 second fast frequency response market by the AEMC, and a suggestion by the Energy Security Board of capacity being valued (generation and/ or load management).</p> <p>Intuitively, energy storage co-located with generation (or load) is likely to have a lower cost than energy storage connected at higher voltages.</p> <p>Under Option 1 the capacity of the Project and/ or energy storage within the REZ Access Scheme should be effectively firm.</p> <p>Option 2 is considered too complicated, will raise the barrier to new entrants (lessening competition), forms a confusing "mini-me" of the NEM, and requires additional systems (and costs) to manage.</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>Click or tap here to enter your answer to question 5.</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>See response to Q2 and Q4.</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>Reach do not see value of trading access rights as mentioned in the Issues Paper.</p> <p>It will create Tier 1, Tier 2 and (potentially) open access users of the REZ Shared Network for a long time period. Reach consider investors will be drawn to T1 and open access (in good locations), not T2.</p> <p>Option 2 is considered too complicated, will raise the barrier to new entrants (lessening competition), forms a confusing "mini-me" of the NEM, and requires additional systems (and costs) to manage.</p> |

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| <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? If a Probability of Exceedance (POE) value is used, what process should be used to verify this?</p> | <p>Reach propose the MW capacity used to determine access rights is equal to the capacity agreed in the project connection agreement.</p> |
| <p>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> | <p>See response to Q4 and Q7.</p> <p>The NEM already incentivises a "hybrid" arrangement (generation/ load and energy storage), and the signals are growing to provide additional services to the grid system and consumers put in place by the AEMC and/ or ESB.</p> <p>Intuitively, it is lower cost to connect than a separate HV network connected project.</p> |
| <p>Question 10: Is there a minimum term (in years) for which access rights would need to apply to benefit project finance?</p> | <p>The access rights should at least match the notional tenor of loans. Banks base the notional life of the loan using project asset life and risk profile. Typically in the Australian market notional loan terms are between 18 and 22 years.</p> <p>Reach prefer the minimum term matches the term of the connection agreement, typically 30 years.</p> |

Option 1: Limited physical connection model

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| <p>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?</p> | <p>The MW capacity should be set based on detailed hourly analysis of the projects proposed to connect to the CWO REZ taking into account seasonal variations and degradation (e.g. Solar PV production), and the engineering and operational constraints of the grid system.</p> |
| <p>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?</p> | <p>Reach do not favour a prescribed mix of generation. Please see response to Q1. Set the framework and let private enterprise/ the market work.</p> |

Option 2A and 2B: Financial compensation models

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| <p>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)</p> | <p>Please see responses to Q7 and Q9.</p> |
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| with sharing arrangements)? If not, what adjustments would need to be made to the access scheme design to incentivise this? | |
| <p>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?</p> | <p>Renewable Projects are likely to favour using their own energy forecasting systems (not AEMO derived). Reach does not consider it can be determined (avoiding multiple disputes) every 5 minutes if a REZ Shared Asset project (generation, load or energy storage) was directly attributable to one or more other REZ Shared Asset projects being constrained down.</p> <p>Other factors include ascertaining T1 availability, a change in grid operational (including power flows between States), force majeure events, and latency in data communications.</p> <p>Please see response for Q7.</p> <p>Reach consider that it will be very difficult to forecast the likely constraints with T2 Access Rights and question T2 ability to raise project finance.</p> |
| <p>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> | <p>Please see response to Q14.</p> |
| <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?</p> | <p>Please see response to Q4.</p> <p>In addition, a T2 asset is unlikely to be commercially viable as its ability to capture high electricity prices is likely to coincide with periods of grid constraint.</p> |
| <p>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?</p> | <p>Reach agree the risk mentioned is valid concern.</p> <p>The key risk of compensation inadequacy arises from a default / bankruptcy in a T2 entity. Please see response to Q14.</p> |

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| <p>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?</p> | <p>Reach consider the Issues Paper does not cover all the risks. Additional risks are:</p> <p>Credit exposure of each project in the REZ Access Scheme to another project. For example if a Tier 2 asset defaults on a payment to a Tier 1 asset.</p> <p>It is also unclear what the contractual remedy and recourse is by a project if the REZ transmission system is delayed and/ or not fit for purpose.</p> <p>If a project defaults on paying the Access Scheme charges then will the remaining projects using the REZ Shared Network be required to increase their connection and Access Scheme charges ?</p> |
| <p>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?</p> | <p>For some projects it might be possible to pass all or a portion of any additional costs/ risk through to the offtaker under the PPA (with a retailer or a corporate customer). If not, it will either reduce the profitability of the project or result in early termination.</p> |

Other models considered but not progressed

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| <p>Question 20: The NSW Government is not proposing to progress the Limited NEM Bidding 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?</p> | <p>Reach agrees with NSW Government that Locational Marginal Pricing within a REZ should not be pursued.</p> |
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3. Access scheme design issues

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| <p>Question 21: How valuable is the ability to trade access rights, and in what circumstances would this be useful?</p> | <p>Please see responses to Q4 and Q7.</p> |
| <p>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?</p> | <p>Please see responses to Q4 and Q7.</p> |
| <p>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?</p> | <p>Reinforces the merit of Option 1.</p> <p>The need for additional trading scheme (costs, people and systems) over and above the needs of the NEM and Clean Energy regulator.</p> |

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| 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? | We envisage under Option 1 that storage is enabled at a generation plant, ie. Hybrid as discussed previously. In this scenario energy storage would not need individual access rights. |
| 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? | The loss covered by “firm access” is likely to be less than consequential loss in the NEM. Please also see response to Q9. |
| 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? | Please see response to Q9. |
| Question 27: If an incentive mechanism for storage is implemented how should the costs of this arrangement be recovered? | Please see response to Q9. |
| 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? | Please see responses to Q9. The NEM and post 2025 by ESB is already proposing changes for valuing capacity (generation, energy storage and/ or load management). |
| 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? | A co-located load with renewable generation provides the customer with wholesale priced electricity with little to no transmission costs. Special treatment to load customers in a REZ may cause resentment by other customers e.g. farmers which high pumping loads who are outside the REZ. |
| 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? | Please see response to Q9. |

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| Question 31: If an incentive mechanism for load is implemented how should the costs of this arrangement be recovered? | Please see response to Q9. |
| 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>The REZ Access Scheme cannot provide a planned outcome for all factors (today and future).</p> <p>It is unlikely that distributed load and embedded generation will be able to fund the costs/ potential liability and systems proposed for the REZ Access Scheme.</p> <p>An AEMO managed distribution-connected register already exists for smaller power plant.</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? | Please see response to Q32. |
| Question 34: If 'use it or lose it' provisions were introduced, how should the utilisation requirements be set/measured? What exemptions or concessions should be considered? | Reach consider a "use it or lose it" provision should exist but the cause of the non-use by a project should also be dealt with i.e. relief provided to the project if the cause is not directly attributable to its action. |
| 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? | Click or tap here to enter your answer to question 35. |
| 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>MLF volatility should reduce but it can be materially affected by other factors including power flows between different States due to say a change in State-Government renewable energy target.</p> <p>This is evidenced for a number of NSW projects in the draft March 2021 MLF by AEMO where Victoria RET scheme has increased power flows to NSW.</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 | The REZ should comply with the same rules as the NEM for DNA/ DCA interfaces. |

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Scheme and access policies on DCAs and DNAs best be achieved?

4. Other coordination initiatives

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| <p>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> | <p>It is not clear how coordination will be facilitated. Individual projects are required to achieve completion and any connections with other projects will probably inhibit completion.</p> <p>Similarly if Project A is reliant on Project B paying its share of the REZ Entry Fee a cross-indemnity will equally be required in the event of Project B failing.</p> <p>Further details are required on how the CWO REZ is expected to be implemented.</p> |
| <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> | <p>Please see response to Q38.</p> |
| <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> | <p>A potential benefit of the REZ Access Scheme is it could fast-track a generator and/ or energy storage performance standard (PS) and 5.3.4A approval process by using pre-approved PS models.</p> |
| <p>Question 41: What, if any, additional connection challenges could be created under the CWO REZ Access Scheme? How could these be mitigated?</p> | <p>Please see response to Q38.</p> |
| <p>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?</p> | <p>A totally planned regime is not always best. Consider if the NEM in 1998 had guaranteed grid infrastructure with firm unconstrained access to the prevailing fossil-fired generators for say 30 years. In this scenario new technologies including the reduced cost of renewables, distributed demand/ generation schemes, would have been frustrated from entering the market and competition would have been lessened: adversely affecting the electricity price to customers.</p> <p>Set-up a sensible and bankable framework, and then let private enterprise work.</p> |

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5. Open comment

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| Question 43: Are there any other matters you wish to raise relevant to this issues paper? | It is critical the LTESA terms are designed properly and do not increase the barrier to new-entrants and in turn lessen competition and increase tariffs. Reach await the LTESA terms and RFP for the first tender round. |
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