



Ms Chloe Hicks
Director, Energy Infrastructure and Zones,
NSW Department of Planning, Industry and Environment
By email: rez@planning.nsw.gov.au

30 April 2021

Dear Ms Hicks,

Response to Issues Paper – Central–West Orana Renewable Energy Zone Access Scheme

The Clean Energy Investor Group (CEIG) welcomes the opportunity to provide feedback on the NSW Department of Planning, Industry and Environment Issues Paper published in March 2021 on the *Central–West Orana (CWO) Renewable Energy Zone (REZ) Access Scheme* (the Issues Paper).

CEIG represents domestic and global renewable energy developers and investors, with around 5GW of installed renewable energy capacity across 49 power stations and a combined portfolio value of over \$9 billion. CEIG strongly advocates for an efficient transition to a clean energy system from the perspective of the stakeholders who will provide the low-cost capital needed to achieve it.

CEIG welcomes the release of the NSW CWO REZ Access Scheme and commends the NSW Government for continuing to show leadership by consulting on the detailed design of its access regime for the priority CWO REZ.

Overall, CEIG supports the objectives and principles of the CWO REZ Access Scheme outlined in the Issues Paper and agrees with the NSW Government that a well-designed and implemented access scheme has the potential to reduce the cost of capital for projects connecting to a REZ as a result of greater certainty around the risks of congestion and volatile transmission losses.

CEIG provides detailed responses to the questions outlined in the Issues Paper in Attachment 1.

KEY POINTS

- CEIG welcomes the release of the NSW CWO REZ Access Scheme and commends the NSW Government for continuing to show leadership by designing an access regime for the CWO REZ.

- CEIG supports the objectives and principles of the CWO REZ Access Scheme outlined in the Issues Paper and agrees with the NSW Government that a well-designed and implemented access scheme has the potential to reduce the cost of capital for projects connecting to a REZ as a result of greater certainty around the risks of congestion and volatile transmission losses.
- CEIG's preferred access regime model is option 2b as it promotes greater utilisation of the upgraded REZ transmission infrastructure and the more granular access rights can be better aligned to forecast generation or dispatch schedules.
- As storage assets have the potential to relieve curtailment in a REZ, they should have the opportunity to hold Tier 1 and Tier 3 access rights (new category):
 - Tier 3 right holders to compensate Tier 1 if they cause congestion;
 - Tier 3 category to be uncapped to incentivise storage to locate in a REZ; and
 - Possible limited ability for storage assets to purchase firm Tier 1 rights to favour original generation and avoid wasting of energy.
- The ability to trade access rights could provide additional value for generation and storage owners and lead to greater network utilisation. CEIG encourages the NSW Government to provide a platform that allows trading to be done easily and at low administrative costs.
- CEIG also supports the introduction of eligibility criteria for the allocation of REZ access rights. The eligibility criteria should ensure participation from projects that can demonstrate that they are sufficiently advanced and the allocation process should be designed to avoid speculative hoarding practices.
- Capping a REZ's hosting capacity provides some form of 'firm' access within the REZ which is critical to improving revenue certainty for investors. However, in the context of the NSW Government's Roadmap and its 12GW target, achieving the expected benefits of REZs may require commensurate investment in the transmission infrastructure 'backbone' between some REZs and network loads as protection will be limited while the open access regime continues to apply beyond the REZ. CEIG encourages the NSW Government to mitigate the risk of shared network degradation over time
- Although a REZ Access regime is likely to reduce the risk of volatile Marginal Loss Factors (MLFs), fundamental concerns remain around the risks to investment in clean energy brought on by the current MLF methodology. CEIG believes that MLF reform remains a key issue to enable an efficient energy transition and that there is still a need to address it through a change in the National Electricity Rules (NER).
- CEIG supports the coordination of the connection process for a REZ as it has the potential to unlock significant benefits around the timing of connections and economies of scale around the sizing of required connection assets (noting that those benefits are contingent on appropriate process design and implementation).

CEIG thanks the NSW Government and the NSW Department of Planning, Industry and Environment for the opportunity to provide feedback on the proposed CWO REZ Access Regime and looks forward to continued engagement on this issue and on the Electricity Infrastructure Roadmap more broadly. Our Policy Director Ms Marilyne Crestias can be contacted at marilyne.crestias@ceig.org.au if you would like to discuss any elements of this submission.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'S|C.', with a vertical line separating the 'S' and 'C'.

Simon Corbell
Board Chair & Chief Executive Officer
Clean Energy Investor Group

ATTACHMENT 1– CEIG RESPONSE TO ISSUES PAPER

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?

CEIG agrees that a well-designed CWO REZ access scheme can deliver the benefits listed in the Issues Paper (p. 16). One key REZ access regime design feature from investors' perspective is the provision of some form of 'firm' access within the REZ (including the capping of hosting capacity) as this will provide some level of revenue certainty that will in turn be critical to securing a lower cost of capital that consumers will ultimately benefit from.

CEIG also firmly believes that REZs will provide a sufficient long-term locational signal. By providing a recommendation for how to develop the system at least cost to consumers, the Australian Energy Market Operator (AEMO)'s Integrated System Plans (ISPs) and the associated REZs effectively provide generators and investors with underlying economic information that will drive siting choices for new generation capacity. REZs will provide an effective way (combined with government and AEMO action) to prioritise and coordinate where generation investment should occur and allow to focus on the build out of all required infrastructure in a planned and considered manner. The REZs' success will depend on the careful design of regulatory processes (e.g. improved connections process) and market incentives (e.g. design of government auctions and contracts; design of access regimes) but overall, they will deliver a strong investment signal for generators and investors. REZs will also allow for transmission investment to consider all potential generation in an area and to be sized at once, enabling the delivery of associated economies of scale.

Notwithstanding the expected benefits of REZs, CEIG notes that in the context of the NSW Government's Roadmap and its 12GW target, achieving the expected benefits of REZs may require commensurate investment in the transmission infrastructure 'backbone' between some REZs and network loads (noting that the NSW Government modelling will be able to identify whether this is required for the CWO REZ itself). A REZ special access regime will not provide sufficient certainty that a REZ output will not be unreasonably congested due to other generators establishing their plants between a REZ and a load. While the open access regime continues to apply to the wider network beyond a REZ, the protection provided by a REZ 'firm' access regime will be limited. This 'shared network degradation risk' can be expected to be reflected in the bids for REZ access rights.

Shared network degradation risk could materialise:

- If a large proportion of new generation continues to locate outside REZs over the next decade (including due to a large number of Long Term Energy Service Agreement (LTESAs) being awarded outside REZs), undermining REZ investments; or
- If open access regime issues continue post 2030 once the 12GW Government target is met (foundational REZ projects will still have 20 to 25 years of operation remaining, leaving those projects subject to the changing open access shared network for the majority of their life).

If left unaddressed, the uncertainty of the shared network's degradation over time could reduce what generators are prepared to pay for REZ access rights and could affect projects' ability to complete Financial Investment Decision (in turn delaying REZ capacity allocations).

CEIG notes that a broad review of the existing open access regime is required to protect the expected benefits of REZ policies and to preserve the technical integrity of the network. A modified open access regime outside of REZs - with some form(s) of access restriction – will be needed and should be considered to ensure that the benefits of REZ policy development are not eroded away. This would support the integrity of REZ investments that are about to be undertaken for the ultimate benefit of consumers.

A broad review of Chapter 5 and part of Chapter 4 of the NER could more holistically capture consideration of changes to the access regime both inside and outside of REZs. Although CEIG acknowledges that this would be a significant undertaking, it could generate material benefits considering the scale of investment required over the next two decades to ensure the security and reliability of the power system as envisaged by AEMO in its ISPs.

CEIG is cognisant that such a broad review is beyond the scope of this Issues Paper. However, the NSW Government may wish to consider whether section 19 (2) of its *Electricity Infrastructure Investment Act 2020* could be utilised to help preserve REZ investments and mitigate the risks of shared network degradation over time (for those shared assets located outside REZs). For example, AEMO and TransGrid could advise the NSW Government around which shared assets would be most at risk of degradation over time, with those assets in turn being captured through section 19(2).

Question 2: What, if any, additional benefits should the CWO REZ Access Scheme deliver to provide value to connecting generation and storage projects?

NSW has noted that it is working with the Australian Energy Market Commission (AEMC) on the application of the *Dedicated Connection Assets* rule change request (ERC 0294) and the *Efficient management of system strength on the power system* rule change request (ERC 0300).

The benefit 'Reduced cost of capital for connecting projects' can be increased if the NSW Government provides certainty around how Dedicated Connection Assets (DCAs)/ Designated Network Assets (DNAs) will be treated in the CWO REZ access regime and what long-term system strength requirements will apply in the CWO REZ.

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

CEIG agrees with the proposed evaluation criteria outlined on page 17. From an investor's perspective, the following evaluation criteria should carry the highest weights as they are crucial to lowering the cost of capital:

- 'Greater certainty and lower costs of capital for generation and storage investors'; and
- 'Efficient investment in and utilisation of the REZ Shared Network'.

Access scheme models

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? 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?

CEIG's preferred access regime model is option 2b as it promotes greater utilisation of the upgraded REZ transmission infrastructure and the more granular access rights can be better aligned to forecast generation or dispatch schedules (despite some access rights being non-firm).

CEIG agrees that for options 2a and 2b, sufficient information about expected generation from generators connected to the REZ Shared Network will need to be made available to facilitate assessments of congestion risk before offers to dispatch can be made, particularly for Tier 2 right holders.

Having the ability to trade access rights could also provide additional value for generators and more particularly for storage, and lead to greater network utilisation:

- Short-term: a plant may be well-placed to temporarily use another plants' access rights (e.g. storage could dispatch during a planned wind or solar farm outage);
- Long-term: changes in generation and consumption behaviour over time might alter the relative potential value of intervals under option 2b (noting however that for most plants, the main driver for dispatch – availability of wind and sun – is not likely to materially change over time).

Overall, although CEIG has a preference for option 2b, it believes that either of the 3 proposed models (Options 1, 2a and 2b) could be workable and deliver the Scheme's objectives:

- All options provide greater certainty around constraint risk (compared to business-as-usual);
- However, both options 1 and 2a are at risk of leaving the REZ severely underutilised during the night if a significant number of solar generators are successful participants:
 - Option 1 would be simplest to implement but suffers from a lesser ability to maximise network utilisation;
 - Option 2a would also be suitable, although its ability to maximise network utilisation is likely to be lesser than option 2b.

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?

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?

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?

CEIG agrees that there are upfront costs in the design and implementation of systems for payments and trades. CEIG however encourages the NSW Government to pursue greater flexibility for access right holders as this is expected to generate long-term value that consumers will ultimately benefit

from. It should also be expected that the bulk of the design and governance work could be re-utilised for other NSW REZs.

The Issues Paper notes that trading under Option 2b could suffer from liquidity issues:

The generic nature of these shapes [Option 2a] may provide greater tradability of the access rights relative to bespoke shapes specific to each generator's output profile [Option 2b].

This could be mitigated under Option 2b by making five-minute intervals the basic unit for trading (as opposed to seeking to trade the 'full bespoke' shape that a generator may hold).

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?

CEIG supports the use of nameplate capacity as a consistent way to measure the potential generation of each plant across various technologies.

CEIG agrees with the proposal to oversubscribe the access rights in the REZ, provided that the level of oversubscription:

- is set at a reasonable level that seeks to maximise utilisation of network infrastructure and based on independent scientific assessments;
- is known upfront; and
- is designed to remain constant over time (with any new REZ entrants having to ensure they do not erode the value of existing access rights).

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?

See question 24 for CEIG's comments on the treatment of hybrid assets.

Projects that use some of their capacity 'behind the meter' could be asked to nominate what maximum amount of capacity would be sent out through the REZ Shared Network (for example 80MW out of a 100MW plant, with 20MW dedicated to 'behind the meter' usage). In this case, access rights (and the corresponding transmission network upgrades) would only be made available for the 80MW.

Question 10: Is there a minimum term (in years) for which access rights would need to apply to benefit project finance?

The REZ access rights need to be designed in a way that deters short-term opportunistic bidding whereby a proponent who does not intend to operate an asset may bid a low price for short-term access rights and not consider the longer-term access issues that may arise. There is a risk that such projects might struggle to find debt and equity investors, with their access rights having to be re-auctioned if the project fails. CEIG's preference is therefore for long-term REZ access rights (15 years or more) to be auctioned.

Option 1

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?

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?

Options 2A and 2B

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?

24-hour access rights do not provide as much flexibility as more granular access rights. However, they would be simpler to administer and would provide incentives for generators to firm up their generation to maximise the use of those access rights. This is likely to become more valuable over time as storage costs fall further.

Other features such as trading are also important – see CEIG’s response to questions 4, 7 and 21.

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?

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?

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?

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?

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?

CEIG agrees that the key risks have been identified in the Issues Paper.

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?

Pre-established projects connected to an existing transmission line that was to be captured in a REZ boundary would be expected to fall under a REZ access regime, which would likely trigger a reopening of the PPAs they hold. PPAs have tended to use the Regional Reference Price as the strike price. A material change in market design and/or pricing methodology – such as the introduction of REZ access rights – would likely cause the re-opening of PPA pricing to re-assess the balance of risks between counterparties. In terms of mechanism, this might be triggered by ‘Change in law’ clauses, depending on the terms and conditions of each contract. This question also relates to the broader treatment of pre-established REZ projects. For example, the REZ access regime should clarify whether pre-established projects are eligible to participate in the allocation of REZ access rights, whether they are eligible to opt in (or opt out) of any REZ access regime and what rights, obligations and requirements will be placed on those projects if they are to benefit from a REZ’s improved network.

Pre-established projects will not be connecting to a REZ’s new transmission line since their connection will already have been established. As they’re not benefiting from the REZ transmission upgrades, those projects should not be subject to the REZ access regime (nor be compelled to make any payments that recover some of the REZ upgrade costs). However, to maintain investor confidence, it would be useful for the NSW Government to demonstrate through detailed modelling that the proposed REZ infrastructure upgrades (including upgrade of transmission capacity) will be sufficiently sized to not adversely impact those pre-established projects.

Other models considered but not progressed

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?

CEIG agrees that the Limited NEM bidding model would be too complex to implement and administer.

CEIG agrees that implementing the REZ Locational Marginal Pricing (LMP) model would also not be appropriate. CEIG believes that LMPs do not provide an appropriate locational signal and provide too much uncertainty for future investment. An LMP provides a signal for where to locate in that specific five-minute interval. The pattern of historical LMPs is not sufficient to provide a robust long term locational signal as it does not incorporate sufficient high quality long-term information and does not allow for effective predictions of future LMPs. CEIG’s preference is that options for long-term access reform remain broad, rather than assume that a version of the COGATI Proposal with LMPs and Financial Transmission Rights would or should be put in place. Since the COGATI Proposal was first discussed, the NEM has changed considerably, and it is not clear that LMPs and Financial Transmission Rights are the optimal solution.

Access scheme design issues

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

The ability to trade access rights is useful, provides flexibility and generally adds value. However, that trading ability needs to be designed to avoid speculative trading and only be accessible to parties with a genuine interest in the relevant REZ.

Additional information is available in CEIG's response to question 4.

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?

For options 2a and 2b, having the ability to trade access rights could provide additional value for generators (and particularly for storage) and lead to greater network utilisation both in the short-term (e.g. across a few days) and long-term (to potentially re-align a plant's generation schedule with the most valuable times to dispatch).

Additional information is available in CEIG's response to question 4.

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?

For options 2a and 2b, particularly if trading is envisaged to be applied to relatively short duration events (e.g. during plant outages), it is imperative that trading can be done easily and at low administrative costs (in terms of time and resources required to complete the trade).

A central, digital platform operated by an energy market body or NSW government entity (such as the REZ administrator or EnergyCo) would provide the relevant assurances to participants and consistency with the delivery methods for other REZ administration tasks.

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?

Treatment of storage-only projects

CEIG agrees that storage assets (both long-term duration assets such as pumped hydro and fast-charging assets such as battery storage) should be encouraged to locate in REZs who will benefit from their ability to relieve congestion.

CEIG considers that for their dispatch function, storage assets should have an obligation to hold access rights, similar to REZ generators. Storage assets (both long-term duration or fast-charging) should have the opportunity to purchase Tier 1 or Tier 3 access rights. Asset owners will decide on the appropriate mix of rights to suit their commercial operating model and the value they place on certainty of dispatch.

The new Tier 3 access rights category should have the following characteristics:

- Shape of Tier 3 access to be flat 24-hour rights, available to storage assets only (i.e. assets offering both 'dispatch' and 'charge' capabilities);

- Tier 3 right holders to compensate Tier 1 right holders if they cause congestion;
 - Compensation should not be payable if a storage asset is directed by a market body or contractually obligated to discharge into the grid (for example for the provision of system strength services).

- Uncapped volume of Tier 3 rights to be made available to storage-only assets:
 - This provides an incentive for storage assets to locate in a REZ and relieve curtailment;
 - A known drawback is the potential that this could limit Tier 2 right holders' ability to forecast congestion although this can be partly offset by the firmness of Tier 1 rights and the ability for plant owners to bid for a mix of Tier 1 and Tier 2 rights that delivers additional revenue certainty compared to status quo.
 - It is also noted that this could diminish any benefits around more stable MLFs for REZ participants (although CEIG notes that the REZ access regime should not be the main mechanism to remediate issues associated with the current MLF methodology).

- Storage-only assets may only require a limited ability to hold Tier 1 access rights:
 - The ability to hold Tier 1 rights will be valuable to some storage asset owners;
 - Since Tier 3 rights would be 24-hour flat rights, the NSW Government should conduct some modelling to consider whether there might be net benefits from capping the volume of Tier 1 rights made available to storage assets to favour original generation (i.e. to minimise storage Tier 1 holders curtailing wind and solar plants) and avoid unnecessarily wasting of energy;
 - Storage Tier 1 right holders should be subject to the same nameplate capacity requirements as other access right holders (to ensure that their capacity is taken into account when calculating the total REZ rights allocation).

Treatment of hybrid projects (i.e. energy storage paired with wind and/or solar)

As some hybrid projects may only have one meter, the market may find it difficult to identify which component is discharging at any given time. To mitigate this risk, the maximum amount of Tier 1 (and Tier 2) rights that hybrid projects could access should not exceed the sum of the installed capacity of the wind & solar components (in the initial auction). Such hybrid projects should however be able to hold additional Tier 3 storage rights.

Treatment of loads

Loads (including storage assets) can bring value to a REZ by relieving congestion when they charge from the grid. As such, a different type of access rights (a 'right-to-charge' as opposed to the 'right-to-dispatch' discussed elsewhere in the Paper) could be created to recognise the different behaviour of those assets and the value they may bring to a REZ.

CEIG agrees with the NSW Government that the system-wide benefits offered by loads are the same as those provided by charging or pumping for storage, and they therefore should be offered the same treatment and same ability to participate in the REZ access regime. 'Right-to-charge' access rights could therefore be required to be held by storage assets and traditional loads (whether they are single-site loads such as industrial sites or loads connected through distribution networks serving a wider network of consumers, as described in the Issues Paper) if they will have an impact on a REZ by being located in a REZ or connected to it. This would effectively create a more complete and more future-proofed two-sided access regime.

In future, it can be expected that loads will become more active market participants, with a greater ability to actively control the level of their demand and its timing. Allowing loads to participate in the REZ Access regime can provide them with a locational signal similar to the one provided to generators. For example, as large manufacturers become more active market participants, the ability to connect to a REZ may provide a commercial incentive compared to locating elsewhere in the NEM and missing out on the opportunities offered by the REZ access regime.

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?

See response to question 24.

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?

See response to question 24.

Question 27: If an incentive mechanism for storage is implemented how should the costs of this arrangement be recovered?

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?

See response to question 24.

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?

See response to question 24.

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?

See response to question 24.

Question 31: If an incentive mechanism for load is implemented how should the costs of this arrangement be recovered?

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?

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?

Having a cap on the total amount of non-scheduled generation and exempt generators that is allowed to connect to the REZ is useful to deliver certainty around the total amount of generation and storage that will be able to connect. Having certainty around the hosting capacity of a REZ is a benefit valued by investors as it provides a greater ability to forecast congestion.

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?

CEIG supports the introduction of access rights 'use it or lose it' provisions as they will help to maximise the value of the access rights and will promote the efficient use of REZ infrastructure.

CEIG supports the introduction of eligibility criteria for participation in the allocation process for REZ access rights such as references to some 'REZ boundary' element (for example only proponents of projects sited within the REZ can participate). The eligibility criteria should ensure participation from projects that can demonstrate that they are sufficiently advanced and the allocation process should be designed to avoid speculative hoarding practices.

The allocation process needs to be designed in a way that deters short-term opportunistic bidding whereby a proponent who does not intend to operate an asset may bid a low price for short-term access rights and not consider the longer-term access issues that may arise. There is a risk that such projects might struggle to find debt and equity investors, with their REZ access rights having to be re-auctioned if the project fails.

For example, the NSW Government could consider applying eligibility criteria that demonstrate that:

- sufficient levels of financing pre-commitments are prepared to be made available to the project (such as the provision of letters of intent for debt or equity finance);
- the project is sufficiently advanced along the development approval pathway; and
- the project is sufficiently advanced in securing access to land.

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?

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?

CEIG agrees that the capping of connections in a REZ and the upgrades to the transmission network that will accompany the REZ build out will be useful in reducing the risk of volatile MLFs for generators within the REZ compared to the status quo.

However, because of the MLF methodology currently in place, many generators will continue to suffer from volatile revenue streams due to volatile and uncertain MLFs, particularly in regional areas that are further from regional reference nodes.

Having a REZ Framework and an upgraded transmission network will not guarantee that MLFs will not be volatile and/or that they will be closer to 1 as MLFs are constantly impacted by:

- the level of generation from neighbouring generators; and
- the flows towards or away from the regional reference node. Those flows can be impacted by elements outside of the generators' control such as changes in the quantum and direction of imports/ exports from a region and the location and quantum of neighbouring generation as new entrants are encouraged by State governments' policies and programs.

Although it is beyond the scope of this Issues Paper, fundamental concerns remain around the risks to investment in clean energy brought on by the current MLF methodology, the volatility of MLFs and the increasing difficulty of forecasting revenue for generators. CEIG believes that MLF reform remains a key issue to enable an efficient energy transition and that there is still a need to address it through a change in the NER.

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?

CEIG supports the proposed principles for managing the interface between the CWO REZ Access Scheme and common DCAs/ DNAs and more generally supports the application of consistent principles.

CEIG would however like to bring to the attention of the NSW Government that investors may not be neutral between the DNA and the NSW REZ Framework if transmission investment cost recovery principles differ across DNAs and REZs.

In its Draft Determination on DCAs/ DNAs (ERC0294), the AEMC proposed that a DNA does not form part of the shared transmission network and that

“the assets forming a DNA are not provided by the Primary Transmission Network Service Provider as a prescribed transmission service, as they are not subject to revenue regulation or funded by consumers through prescribed Transmission Use of System charges.”

In its submission to the AEMC, CEIG outlined its concern that this principle appeared to exclude any form of cost recovery from parties other than generators (such as governments, consumers or other commercial parties) who may benefit from a DNA. This is despite the fact that those other parties could derive net market benefits from a REZ developed using the DNA Framework, which would in turn justify some element of cost recovery for part of the transmission infrastructure investment in the DNA.

Because DNAs have the potential for supporting the development of REZs (as noted in the NSW Issues Paper), the CWO REZ could include some areas subject to the AEMC's DNA Framework while other areas would be subject to the NSW Government REZ cost recovery framework. This could create discrepancies around who ultimately pays for the costs of investment in transmission infrastructure to facilitate that REZ – with those discrepancies in cost recovery treatment seemingly due to part of a REZ being developed in a radial formation rather than being meshed as part of the shared network and occurring despite the benefits generated by the overall REZ.

CEIG has argued to the AEMC that because of the potential application of the DNA Framework to REZs, CEIG believes that cost recovery from other parties for DNAs should not be ruled out where there are demonstrable benefits.

When it designs its REZ network infrastructure cost recovery principles, the NSW Government should aim to support the application of consistent principles between REZs and DNAs. If the AEMC does not change its position on cost recovery principles within DNAs, this may require the NSW Government making specific arrangements for DNAs that are within its own REZs to ensure consistency within a REZ.

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?

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?

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

Considering the scale of connection and commissioning (C&C) activity that will occur in REZs, CEIG supports the introduction of a REZ connection coordinator role (either the REZ Administrator, EnergyCo or another government entity) to facilitate the coordination of the C&C process. This has the potential to unlock significant benefits around the timing of connections and economies of scale around the sizing of required connection assets. Since a lot of generators would likely seek to connect within a short amount of time, appropriate coordination of the C&C process and sufficient resourcing will be required.

CEIG however notes that achieving benefits from a coordinated C&C process is contingent on that process being appropriately designed and implemented by the responsible entity(ies), including giving due consideration to lessons learnt in recent years.

Ideally, a coordinated C&C process should be supported by an improved modelling capability. The NSW Government could encourage AEMO and Network Service Providers (NSPs) to consider larger investments in improved internal capabilities to better deal with the increased complexities of a power system dominated by inverter-based technologies:

- NSPs could consider developing and utilising additional internal modelling capability, conducting wide area PSCAD studies to better identify interactions across assets and expanding their servers' capability; and
- AEMO could consider changes to its internal processes and similar investments to those suggested to NSPs to ensure it can process multiple connection requests simultaneously.

Question 41: What, if any, additional connection challenges could be created under the CWO REZ Access Scheme? How could these be mitigated?

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? CEIG believes that there could be benefits in centralised approaches to connections that could include setting minimum standards to be met. However, the success of such measures would be contingent on how those standards are set (they need to be clear, transparent and reasonable) and implemented.

CEIG's preference is generally for outcomes not to be prescriptive in how they are achieved to leave maximum flexibility and maximum opportunities for innovation and to encourage minimum costs.

Question 43: Are there any other matters you wish to raise relevant to this Issues Paper?

CEIG would like to clarify whether the NSW Government will apply similar design features to access regimes in other NSW REZs or whether each NSW REZ access regime will be bespoke to account for each REZ-specific factors.

CEIG supports the effective integration of the processes for allocating LTESAs and access rights. CEIG believes that well-designed auctions - by promoting competitive tension between proponents - would enable efficient price discovery processes.

CEIG would like to clarify what obligations will be placed on NSPs to maintain the level of transmission capacity throughout the life of a REZ. CEIG notes that risks around new connections are accounted for in the Scheme design but would like to confirm whether/ how NSPs will be obliged to maintain the REZ's 'foundation' network capacity over the life of the REZ.

Finally, the NSW Government notes (p.9) that

"LTESAs will target projects within REZs but will also be available to 'outstanding' projects outside the REZs."

CEIG would like to clarify the eligibility criteria for LTESAs, the estimated share of total projects outside a REZ that the NSW Government expects would be eligible and whether the number of projects outside the REZs will be capped.