



EnergyAustralia

LIGHT THE WAY

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Dear Leanne,

QUEENSLAND RENEWABLE ENERGY ZONES TECHNICAL PAPER

EnergyAustralia (EA) welcomes the opportunity to comment on the Queensland Government's Technical Paper on Queensland Renewable Energy Zones (QREZ). EA is one of Australia's largest energy companies with around 2.4 million electricity and gas accounts in NSW, Victoria, Queensland, South Australia, and the Australian Capital Territory. EA owns, contracts and operates a diversified energy generation portfolio that includes coal, gas, battery storage, demand response, solar and wind assets. Combined, these assets comprise 4,500MW of generation capacity.

EA is dedicated to building an energy system that lowers emissions and delivers secure, reliable and affordable energy to all households and businesses. This requires being a good neighbour in the communities we operate in. We, therefore, recognise the value in working with Aboriginal and Torres Strait Islander peoples as the traditional custodians of this land and acknowledge and respect their continued connection to all aspects of Country.

EA is appreciative of the Queensland Government's efforts to design efficient and effective technical frameworks for QREZ. Ensuring these are appropriate in light of ongoing and significant market, technological and operational change will be a vital enabler of a rapid and robust energy market transition. The key points in this submission are:

- EA supports the QREZ development objectives and the proposed QREZ Model to achieve them. Implemented well, this will have myriad social, investment, environmental, industrial and economic benefits.
- We acknowledge and support the stated QREZ attributes and consider these should be supplemented with principles of network holism, proportional value release, contestability and cost transparency.
- Regulatory and planning parsimony, along with adherence to national frameworks where possible, will also help to ensure swift and successful Model outcomes.
- A final REZ Management Plan (RMP) could be published at the time of declaration subject to sufficiently detailed information and stakeholder consultation taking place within the notice period. Doing so would improve the quality of proponent proposals and speed up overall development timeframes.

- There are many benefits to the proposed physical access regime. However, we suggest further thought be given to options for tackling the 'free-rider' problem.
- Having each declared REZ in a 'shovel ready' state would speed up development and provide an attractive incentive to minimise undersubscription concerns.
- Further access and stakeholder engagement reflections are provided for REZ Team consideration based on EA's experience developing energy projects throughout Australia.
- Funding and cost recovery should be simple, transparent and equitable. Precision and clarity on what costs generators will face, including their rationale, will be critical for attracting the necessary investment to support optimal employment and community outcomes. Implicit Government underwriting of REZs may be beneficial but has risks if not applied uniformly.
- Incentivising grid-scale storage investments via Network Use Of System (NUOS) charge exemptions, or reduced access fees that reflect the storage contribution to improving network congestion and security, are two ways to better achieve QREZ objectives. Doing so would:
 - lower customer bills,
 - improve customer security,
 - expedite project delivery,
 - reduce investment uncertainty,
 - improve network resilience and utilisation, and
 - keep pace with international developments.
- To ensure QREZ attributes around competition and equity are realised, Network Service Providers (NSPs) should be restricted to providing tradeable market services only through partnership with an independent private entity.
- Technical Working Groups (TWGs) can be invaluable resources to decision-makers in achieving principled and pragmatic policy outcomes. We would happily participate in such a group and also offer our insight directly to the QREZ Team to assist with their deliberations.

Further detail on specific questions is provided below and we would welcome the opportunity to discuss this submission further with you. Should you have any questions, please contact me via bradley.woods@energyaustralia.com.au or on 0435 435 533.

Regards,

Bradley Woods

Regulatory Affairs Lead

QREZ Model

EA supports the QREZ development objectives and the proposed QREZ Model to achieve them. Implemented well, this will have myriad social, investment, environmental, industrial and economic benefits. This will be both for Queensland, in particular, and the National Electricity Market (NEM) more broadly.

The Model will require careful consideration of various and often-times bespoke, technical issues in the Queensland network. Importing the REZ framework of another jurisdiction wholesale is, therefore, unlikely to be an optimal approach. Widely diverging jurisdictional REZ arrangements should be avoided, however, given the market inefficiencies and negative customer impacts that would arise from conflicting investment signals.

These complexities have been acknowledged by both the New South Wales and Victorian jurisdictions in their respective REZ plans. Both have stated preferences for solutions that complement current national frameworks to support and speed the transition where possible¹. EA agrees with this approach and is, therefore, pleased to see similar ideals expressed under attribute six (adaptable and complimentary). However, to provide more substance to this ideal, we suggest any new QREZ Model elements are compatible with and complementary to:

- the National Electricity Objective (NEO), revenue and pricing principles, and other guiding considerations already in the National Electricity Law (NEL) and Rules (NER);
- the Australian Energy Market Operator's (AEMO's) Integrated System Plan (ISP), Renewable Integration Study (RIS) and the Engineering Framework (EF); and
- the new system strength framework recently delivered by the Australian Energy Market Commission (AEMC).

We note that many of these initiatives have benefited from the input of industry experts via Technical Working Group (TWG) arrangements. It has been EA's experience that such groups are invaluable resources to decision-makers in achieving principled and pragmatic policy outcomes. We, therefore, suggest a QREZ TWG be contemplated. We also offer our expertise in market design, regulatory reform, stakeholder engagement, commercial and investment analysis directly to the QREZ Team to assist with their deliberations.

Model Attributes

EA acknowledges and supports the stated attributes. Beyond the comments above specific to attribute six, we consider the following, additional principles will help to ensure the QREZ objectives are achieved.

- **Network Holism** – As noted in the Energy Security Board's (ESB's) Stage 2 Interim REZ consultation paper, REZs can only provide a partial solution to access, system security, reliability and investment issues. REZ objectives cannot, therefore, be considered in isolation given the network and generation assets that lie outside REZs that will contribute to, and be impacted by, REZ development aims. Acknowledging and leveraging this principle will allow for the greatest range

¹ For example, see page 1 of the New South Wales Electricity Strategy and page 10 of the Victorian REZ Development Plan Directions Paper.

of possible solutions to be considered and implemented. In turn, this will lower total system costs and risks thereby increasing customer value.

- **Proportional Value Release** - REZs should maximise the total Queensland generation capacity and associated economic benefits for the lowest \$/MW cost. However, this needs to be based on a holistic and rigorous cost-benefit analysis that compares and considers both intra and inter-REZ solutions. This might be via a Regulated Investment Test for Transmission (RIT-T) appraisal or other robust public benefits test that can deliver investment decisions promptly to underpin investor confidence. Ideally, the Model should reconcile with AEMO's ISP assumptions on wind and solar generation capacities, transmission build limits and system strength mitigation costs. Where departures are significant these should have appropriate justification to ensure both QREZ and the ISP result in optimal planning and investment outcomes.
- **Cost Transparency** – Model assessments should set out any changes to the Transmission Use Of System (TUOS) costs that Queensland customers will have to bear as a result of REZ developments. This is given that any TUOS applied to a project that is fully or partly funded by Government, or that results in unregulated assets being rolled into network Regulated Assets Bases (RABs), will represent a form of double taxation for Queensland customers. The same goes for access fees for investment proponents. It is only once these details are known with sufficient clarity that the contribution to achieving the QREZ objectives can be properly assessed.
- **Contestability** – construction of planned QREZ network developments should be subject to competitive forces. Aside from aligning with, and being complementary to, current transmission connection and planning arrangements, this will buttress attributes two and five. That is, by promoting competition throughout the value chain and creating further regional investment and employment opportunities.

Planning

EA agrees with the planning approach and supports Powerlink being the Designated Planning Body (DPB) in the short term. This aligns most closely with the existing ISP planning processes, will capitalise on Powerlink's knowledge and expertise as the Jurisdictional Planning Body (JPB) and avoid any duplication in costs from the creation of a separate planning entity.

Despite this support, there must be clear governance, transparency, engagement, funding and accountability requirements on the DPB. This is to ensure planning is not simply a tick-box exercise that does not fully consider all stakeholder, technology and environmental concerns. Further, that customers do not face increased network costs from Powerlink acting as the DPB.

Leveraging existing national arrangements will mitigate these risks. For example, by ensuring Distribution network and other private stakeholder considerations are appropriately factored and that costs for acting as the DPB are justified. The Australian Energy Regulator's (AER's) recent ruling on the Humelink Project Assessment Conclusions Report (PACR) dispute is an excellent exemplar of the value of national frameworks in this regard².

² Following a landholder objection, it was found that TransGrid did not consider all credible options and was made to reapply the PACR to account for an alternate route option.

The AEMC is currently undertaking a National Transmission Frameworks Review. The outcomes of which may also need to be factored into the QREZ Model design. In this respect, we suggest that DPB arrangements and the QREZ framework more broadly are reviewed in time. This is to ensure that Powerlink remains the appropriate entity to handle DPB responsibilities and that the Model remains robust in the face of future technological, regulatory and political change.

Notice

EA supports the intent to provide optimal clarity and transparency around proposed REZ developments via the notice stage. EA considers a minimum number of days should be specified as part of the notice stage, with the flexibility to extend timelines to tackle trickier issues as planning progresses. We have no preference on who issues the notice or whether language aligns with other jurisdictional REZ terminology so long as it is clear, timely and publicly communicated.

To ensure desired investment and customer outcomes, however, as much initial detail as possible should be provided in the notice stage. Much of the mooted REZ Management Plan (RMP) information would be useful to project proponents in this regard. For example:

- the desired generation, storage and load portfolio mix including whether technology caps will apply;
- proposed network diagrams and expected impacts on network utilisation inside and outside of the REZ;
- existing or expected system security issues, their proposed solutions including potential for non-network options and the potential costs to proponents;
- relevant technical performance standards that will have to be met by connecting proponents, particularly where these are more or less onerous than current automatic access standards.
- indicative assessment of REZ development risks including geography, environmental, land access or cultural heritage risks;
- expected REZ delivery timing including whether staging is to be used;
- an indicative Cost-Benefit Analysis of varying REZ development options; and
- consultation process timelines and fora details.

Including this information as part of the notice period would improve the quality of proponent proposals and speed up overall development timeframes. It would also help with customer buy-in and engagement outcomes. On this point, we offer the following principles for consideration based on our stakeholder engagement experience from developing projects across Queensland and the rest of Australia:

- **The Engagement Objective Must Be Clear** – engagement activities, timelines and resourcing requirements will differ based on whether the objective is to inform, promote, consult or collaboratively co-partner.
- **Stakeholder Identification Is Critical** – consistent, concerted and continuing effort must be given to identify all stakeholders, particularly the 'quiet voices' who may not be aware of or easily able to initiate direct engagement on their own.

- **Early, Face To Face Engagement Should Be Prioritised** – this is the best forum for identifying and understanding community and stakeholder concerns along with ensuring the requisite ‘down payment’ on community trust and acceptance is made.
- **Authenticity And Accountability Are Paramount** – demonstrably acting on community feedback and being transparently accountable for all commitments is key to achieving and maintaining the necessary social license to support project development.
- **Uncertainty Must Be Minimised** – stakeholders should understand where developments are at, how they came to be and what the next stages are at all times, particularly when ‘bad news’ such as decisions not to proceed with projects are made.
- **Consultation Should Have One Face** – having multiple parties engage the same stakeholders on the same issues will only increase confusion, result in ‘consultation fatigue’ and damage stakeholder interest and acceptance. Careful coordination with entities such as the Wind Commissioner, in its expanded role to oversee network development engagement and complaints, will be critical to avoid these outcomes.
- **Traditional Owner Engagement Should Go Beyond Regulatory Minimums** – As noted above, EA acknowledges Aboriginal and Torres Strait Islander peoples as the traditional custodians of this country and their continuing connection to Country. Prioritising Traditional Owner engagement beyond that specified by cultural heritage management regulation is, therefore, the right thing to do.

Declaration

EA does not see any issues with the proposed declaration approach. As above, we consider there is merit in providing as much RMP information as early as possible in the notice stage. If this was detailed enough and allowed appropriate consultation to take place within the notice period, a final RMP could be published with the declaration. This would speed up REZ development and delivery.

In contrast, we see there will be little merit to including a bespoke planning framework within the declared area. If constructed well, the RMP should provide all the flexibility necessary to support the desired investment. In contrast, a proliferation of planning frameworks is only likely to increase complexity and slow development with consequential deleterious financial impacts for customers.

Specification

As above, EA considers a final RMP could be published at the time of declaration. However, this is subject to sufficiently detailed information and stakeholder consultation taking place within the notice period.

We also consider the RMP should be developed and administered by the DPB. Having another entity undertake this task would add another layer of bureaucracy and duplication, which is only likely to increase administrative inefficiencies.

Creating a new category for REZ assets would allow for differing regulatory treatment compared with current national settings. As noted in the Technical Paper, this could be useful where bespoke connection and access arrangements are required to effect QREZ

objectives. For example, where more onerous technical standards are placed on inverter-based resources to reduce fault level consumption. At this juncture, however, it is unclear the extent to which these are required. Beyond the investment clarity and efficiency benefits noted above, regulatory parsimony lowers the risk of any unintended consequences between conflicting jurisdictional and national arrangements. We, therefore, urge caution in seeking to apply bespoke asset categorisations and suggest existing national arrangements are adhered to where possible.

Connection And Access

There are many benefits to physical access regimes. For example, they are typically:

- simpler and faster to plan, develop and administer;
- minimise the risk of stranded assets and network 'gold-plating';
- increase certainty for investors that sufficient network infrastructure will exist to support generation export;
- avoid the financial complexities and gaming that may result under financial access regimes; and
- avoid notoriously contentious issues such as the degree of firmness of rights, the metric on which rights should be based and what level of grandfathering is appropriate in financial and firm access schemes.

Combined, these factors can result in lower costs to customers from coordinated, right-sized transmission and generation investment. Despite this, REZ development cannot and should not be considered in isolation given the implications for, and leverage that can be derived from, existing assets outside REZs. For example, contracting with existing generators to mitigate system strength concerns. However, the interplay between inter and intra-REZ elements introduces many economic, financial and regulatory challenges that need careful consideration.

In not providing firm or financial access, key investment risk arises from the 'free rider problem'. This is where other generators locate just outside the REZ, taking advantage of the network upgrades stemming from REZ development but which end up constraining REZ generator output. The Technical Paper highlights that the ESB's proposed Congestion Management Model (CMM) might be used to minimise this risk. However, we would caution against relying solely on CMM to address 'free rider' issues at this time.

Access reform has proved a notoriously complex, combative and time-consuming exercise. This is no better demonstrated than with the AEMC's Coordination of Generation and Transmission Investment (CoGaTI) review. After numerous papers, fora and years of consultation, a decision to defer implementing the AEMC's preferred approach was made earlier in 2021. This was so that further analysis and deliberation could occur despite the undeniable need, and virtuous intent of all parties, to improve the current access, planning and investment arrangements.

The CMM proposal is still under consultation and has attracted significant stakeholder opposition despite its noted locational investment incentives. This suggests there is a significant risk that the final CMM proposal may not meet or be compatible with QREZ objectives. Moreover, even if it is, there is no guarantee it will be delivered in time to provide sufficient confidence to underpin timely QREZ investment.

Edify Energy and the Public Interest Advocacy Centre have proposed alternative arrangements as part of the CMM consultation. Various access control mechanisms have also been raised as part of the NSW Central West Orana (CWO) REZ access scheme. We suggest all are investigated further for their utility to the QREZ Model, in conjunction with CMM developments, so that an optimal free-riding solution results.

Beyond these specific points, we offer the following more general comments to assist the QREZ Team in their access deliberations:

- **REZ Characteristics Must Be Clear** – the desired generation mix including export profiles and any caps, technology standards, any TUOS impacts, connection timelines and whether any commitment thresholds need to be met for a REZ to be developed³ must all be clearly articulated to support REZ investment. Defining the 'efficient' REZ hosting capacity using a methodology that accounts for temporal, geographic and generation diversity is recommended. Doing so will incentivise investment in the right mix of technologies to meet supply needs including signalling the value of generation firmness. In turn, this will minimise the risks of excess transmission investment and any unforeseen network remediation to ensure total build costs are as low as possible.
- **Access Must Be Certain** – the benefits or guarantees that physical access and connection charges provide must be clearly specified. This should entail what connection point boundary they will apply to; under what constraint conditions; for how long they will apply for; how later investments including REZ upgrades or remediation will be handled; whether unforeseen headroom will be reallocated to improve network utilisation; how operational flexibility may impact the total REZ export capacity and whether participation in any protection scheme is mandated. Access rights should resolve the 'chicken and egg' dilemma seen with network and generation investment and avoid creating any new one. For example, generators needing to know what other generators access and connection arrangements are before being able to readily assess the impacts for their project(s). These measures will be necessary to allow participants to make informed investment choices that will maximise development efficiency.
- **The Expression Of Interest Process Should Be Practical** – a centrally coordinated, clear and practical Expression Of Interest (EOI) process is required. This is to allow sufficient time to undertake the requisite technical due diligence to make realistic and informed project proposals. This will also require a robust and transparent mechanism for comparing projects with different generation types. For example, solar versus wind versus storage versus hybrid projects. Consideration of project financing and the successful project delivery experience of proponents should be factored in to ensure only genuine and realistic projects are included in the REZ. Joint bids from multiple parties should be accommodated where they can provide more efficient solutions, but care will be needed to ensure such measures are not seen as anti-competitive.
- **Impacts On Other Generation Needs To Be Considered** – existing or new generators outside REZs must be no worse off for REZ developments, both from a connections/queueing perspective and in terms of the ongoing operation of the NEM. Commensurately, the rights of pre-existing generators who are already located within REZ boundaries need consideration. This may require restrictions

³ For example, at least 50% of REZ hosting capacity needing to be met by foundation projects.

around REZ generation types or 'do no harm' like requirements on new connecting generators as noted above. This is particularly relevant in the Southern QREZ which is more highly meshed and subject to interconnection flow complexities.

- **Other Complementary Solutions Should Be Considered** – measures to improve the uptake of residential, behind the meter storage and coincident demand from electric vehicles should be considered to support Queensland's energy transition. For example, by encouraging more efficient locational signals and the use of network infrastructure via cost-reflective tariff reform. Aside from helping to address the issues from excess intra-day generation and potentially obviating the need for some REZ strengthening work, such measures would also help Queensland achieve its stated climate targets ahead of time.

Funding

Funding and cost recovery should be simple, transparent and equitable. Precision and clarity on what costs generators will face, including their rationale, will be critical for attracting the necessary investment to support optimal employment and community outcomes. For example, charges or levies without requisite technical, commercial or social justification will simply see REZ investment capital flow to other states.

In this respect, we highlight that New South Wales has proposed awarding Long Term Energy Supply Agreements based on the delivery of community and employment benefits amongst other criteria. There is, thus, no specific, mandatory fee in the NSW Roadmap to recover the costs of funding community and employment initiatives as is being considered under the QREZ model.

More broadly, beneficiaries should pay their fair share where they can be accurately identified and, where not, equitable treatment for all parties should be sought. However, this should not preclude the ability to negotiate bespoke charging arrangements for projects with larger network benefits.

Ideally, REZ administration should be undertaken by one party under one framework. Multiple funding and cost recovery mechanisms should be avoided on both administrative efficiency and transparency grounds. For example, understanding the impacts on NSP RABs and the burden customers will bear as a result will be essential to evaluating the overall investment efficiency and effectiveness of the Model. Although the National Electricity Rules allow assets to be rolled into NSP RABs under certain conditions, it is not clear how this would work, or be equitable to both proponents or customers, where access fees are bespoke and fund assets as well as community and employment scheme contributions. We, therefore, suggest RAB roll-ins be minimised as far as possible.

EA understands implicit Government underwriting of REZs is being considered. This approach would help to address the 'chicken and egg' problem, lower investment risk and consequently the cost of capital. In turn, this should see lower costs to customers. However, we caution that this is an 'all or nothing' approach. If only some REZ developments are underwritten but others are not, investor confidence will be eroded which will undermine the desired benefits.

Ongoing Management

As above, EA considers the notice stage could be used to speed up project investment. That is, if sufficient technical information was made available and appropriate stakeholder engagement occurred. Beyond this, there would seem to be scale efficiencies to having environmental, cultural, heritage and land use planning assessments coordinated and completed centrally where possible. Having each declared REZ in a 'shovel ready' state would speed up development and provide an additional investment incentive that would help to minimise undersubscription concerns.

Supporting Competitive Industries

EA supports using policy and planning incentives to encourage new generation and large loads to locate where they can complement each other where positive net benefits are quantifiable. For example, from mitigating supply-demand imbalances that would otherwise require additional network reinforcement.

There is perhaps no better or easier lever for achieving QREZ objectives than incentivising more grid-scale storage investments via tariff reform. Such an approach would see any storage asset, whether distribution or transmission connected, whose main purpose is providing generation or grid services, being exempt from TUOS and DUOS in line with the current treatment for generators and Market Network Service Providers (MNSPs)⁴. That is, where energy is *temporarily accumulated or used to ensure the later public provision of generation or security services*, rather than being *ultimately consumed for private end-use*.

Similar ends could also be achieved via reduced access fees that reflect the storage contribution to improving network congestion and security. For example, from charging at times of minimum demand and providing voltage, frequency, system strength and synthetic inertia support. The key benefits arising from these approaches include:

- **Lowering Customer Bills** – from alleviating the perversities of current arrangements such as the effective double-charging of TUOS and DUOS to customers when electricity is imported by storage, but which is later exported and consumed by end-use customers.
- **Improving Customer Security** - in providing further levers to solve problems of minimum demand that might otherwise see residential solar photovoltaic systems disconnected.
- **Expediting Project Delivery** – by obviating the need to negotiate potentially time-consuming, bespoke charging arrangements.
- **Reducing The Investment Hurdle Rate** – by providing more certainty on project costs and reducing the operating margin required to make storage viable against other investments.
- **Improving Network Resilience, Utilisation And Generation Output** – from providing voltage, frequency, system strength and synthetic inertia services to alleviate constraints, minimise congestion and increase generation dispatch.
- **Keeping Pace With International Developments** – such as in the UK and United States where storage and generation treatment has been equalised in

⁴ Neither of these participant types pay TUOS for energy consumed to transport energy between regions or to support generation activity.

recent years. Following suit would allow Queensland to remain an attractive international destination for global storage capital.

Only a level playing field for storage solution providers will ensure these benefits and the stated QREZ attributes around competition and equity are realised. For example, we see great risks and regulatory complexities if NSPs are allowed to own, dispatch and operate batteries for purposes other than essential system services. We, therefore, suggest that if NSPs storage systems are to provide tradeable market services, then this must happen in partnership with an independent private operator. This is to ensure that no unfair competitive advantage flows from their existing monopoly network position.