



12 February 2021

Dr Kerry Schott  
Chair  
Energy Security Board

Submitted via email: [info@esb.org.au](mailto:info@esb.org.au)

Dear Dr Schott,

### **ESB – Renewable energy zones stage 2 – Consultation Paper**

Origin Energy Limited (Origin) welcomes the opportunity to provide feedback on the ESB's consultation paper on implementing renewable energy zones (REZs). Our views on key aspects of the proposal are set out below, with further details provided in the attached submission.

#### **We support REZs in principle as they are an important part of the energy market transition**

- Given that a larger number of smaller proponents are looking to connect, coordination with transmission has become more difficult, while collaboration among generators for scale efficiencies remains complex.
- A well-designed framework can help coordinate transmission augmentation with generator connections in an efficient manner. As a result, we support the REZ framework in principle.
- A national framework also provides an opportunity for a consistent approach to implementing REZs across the National Electricity Market (NEM). This is particularly important as the pace of change quickens due to incentives to meet state-based renewable energy targets. Without a national framework, there is a risk of a fragmented and inefficient approach to implementing these targets across the NEM.

#### **The Consultation Paper does not adequately address all the relevant issues that should be considered in developing an effective REZ framework**

- The Consultation Paper focuses on developing access options within the REZ but does not provide sufficient details on other critical elements of the framework. This includes how the tender process would work; efficient risk allocation/any oversizing of assets; the role of the REZ coordinator; broader system security considerations; and the implications for existing generators.
- Sufficient detail on these areas is needed to allow stakeholders to confidently assess the proposal.
- In addition, the ESB should ensure it engages broadly with industry, particularly with project developers, to understand the commercial considerations that they will have in making decisions to invest in a REZ. This is crucial to ensure the REZ design is effective.

**While it may be appropriate to consider access within a REZ, contemplation of locational pricing is a separate issue that should not be dealt with here**

- In our view, the aim of access rights within the REZ should be to ensure that connections are optimal and consistent with the network augmentations identified in the Integrated System Plan (ISP) and REZ planning process.
- To achieve this objective, further development of Options 1 and 2 is appropriate. Origin does not support Options 3 and 4 as they are overly complex, impractical and would result in additional uncertainty and risk.

**It is premature to continue working on broader access reform**

- We do not agree that REZs should be designed and implemented as an interim solution that will ultimately transition to the application of locational pricing across the NEM.
- Any transitional framework is premature and should only be considered after REZs have been implemented and the outcomes assessed.

**The design features are unlikely to be finalised by April**

- In terms of next steps, we are concerned that there is a significant number of issues that are unlikely to be solved by April when the ESB is expected to provide its final recommendations to Ministers. It is not clear why April has been set as a deadline and when any draft rules would be consulted on.
- If the ESB progresses with an overarching framework for REZs in April, it is crucial that it clearly outlines a plan to address and develop all the areas that are relevant to the effective operation of a REZ. This would ensure that the design features of the REZ promote coordination and reduce risks for consumers.

Should you have any questions or wish to discuss this submission further, please contact Sarah-Jane Derby at [Sarah-Jane.Derby@originenergy.com.au](mailto:Sarah-Jane.Derby@originenergy.com.au) or by phone, on (02) 8345 5101.

Yours sincerely,



Steve Reid  
Group Manager, Regulatory Policy

**We support REZs in principle as they are an important part of the energy market transition**

As noted in our submission to the ESB on the Post-2025 market design work, we consider that access-related issues, such as higher-than-expected curtailment rates and connection problems, are symptoms of inefficient coordination, with network upgrades sometimes lagging generation. Given that a larger number of smaller proponents are looking to connect, coordination with transmission has become more difficult, while collaboration among generators for scale efficiencies remains challenging.

While we support the recent changes to the Integrated System Plan (ISP) that provide a foundation for better coordination, this can be improved by an appropriate REZ framework that will allow for the timely build of connection assets and shared network augmentations to support generation entry.

The establishment of such a framework also provides an opportunity for a consistent approach to implementing REZs across the National Electricity Market (NEM). This is particularly important as the pace of change quickens due to incentives to meet state-based renewable energy targets. Without a national framework, there is a risk of a fragmented and inefficient approach to implementing these targets across the NEM.

**The Consultation Paper does not adequately address all the relevant issues that should be considered in developing an effective REZ framework**

The consultation paper provides options for the access regime but does not cover other critical areas of the REZ framework in detail or provide a clear rationale for why certain design features were chosen. It is difficult to assess the proposal comprehensively given the limited information we have on how the REZ would work in practice.

As set out in Table 1, Origin considers that more work is needed on several important issues including efficient oversizing of assets and the minimisation of stranding risk. We provide some feedback and highlight areas for further work below.

Table 1: Feedback on key design features and areas for further work

Design feature	Comments
Tender or auction process	<p>The ESB should focus on working through the details of design features that remain unclear, including:</p> <ul style="list-style-type: none"> <li>• What are generators bidding for in the tender/auction process? The paper briefly touches on some of the potential value of participating in a REZ (e.g., scale-efficient connections) without going into much detail, with the exception of access options. In other words, what are the benefits of participating in a REZ other than the proposed access rights? How will the connections process be improved in practice and how the tender/auction process would facilitate this?</li> <li>• How much auction revenue is likely to be raised? Is there a risk that there will not be enough revenue raised? Who would pay for the shortfall if this eventuates? The paper implies there would be excess revenue to offset transmission use of system charges (TUOS) but it is unclear if that would be the case or what the magnitude of any excess revenue would be.</li> <li>• How far ahead of connecting would the auction/tender process take place and when would the payments be due? Would there be one auction per stage or multiple rounds for each stage? One round per stage may be simpler but may not be the most appropriate solution to capture projects at different stages of commissioning.</li> </ul>

	<ul style="list-style-type: none"> <li>• How will the tender process assess generation projects that are at different stages of commissioning or that have different construction dates? For example, will it favour generators based on connection dates or on optimising the REZ?</li> <li>• What happens to a proponent's financial contribution to the REZ if they fail to connect? Is the revenue foregone?</li> <li>• Will the tender/auction process allow for non-renewable generation?</li> </ul> <p>In addressing the above, the ESB should consider the following:</p> <ul style="list-style-type: none"> <li>• The ESB should carefully design the auction/tender process to promote coordination, enable economies of scale and oversizing of assets and timely connections.</li> <li>• The ESB should factor in the commercial decisions that investors make, including the key milestones they typically have in making investment decisions and the implications of these for the timing and nature of the auction. For example, it may be necessary to obtain access rights to the REZ early for generation projects to progress in a timely manner – so the timing of auctions will be crucial. There is a risk that a poorly designed auction process may deter investment and efficient connections. The ESB should engage early with project developers/investors to ensure it understands these commercial considerations to shape its design of the auction process and the broader REZ framework.</li> <li>• The selection criteria for the tender/auction process should be clearly stated. We support high-level principles being included in the rules as proposed by the ESB but consider that the REZ coordinator should then be required to consult publicly on how it will implement these principles.</li> </ul>
System security	<ul style="list-style-type: none"> <li>• The proposal defers system strength arrangements to the AEMC, which is appropriate to maintain consistency across the NEM.</li> <li>• However, it is not clear who will be in charge of system strength given the additional role of the REZ coordinator. It is also not clear how other system security considerations will be captured by the framework.</li> <li>• It is also unclear how system strength would be managed and maintained in the REZ if the AEMC's reforms are delayed.</li> <li>• The ESB should do further work on this aspect of the framework.</li> </ul>
REZ coordinator	<ul style="list-style-type: none"> <li>• The REZ coordinator should be prescribed in the rules given the breadth and importance of the role in assessing which generators would be able to connect to the REZ.</li> <li>• In our view, AEMO should be the REZ coordinator, given its role in national planning and identifying REZs through the ISP. AEMO is also the most appropriate body to undertake the tender/auction process, noting our comment above that the selection criteria would need to be consulted on and be transparent.</li> <li>• In order to coordinate local issues, AEMO should be required to have regard to advice from the relevant jurisdictional planning body (i.e., the TNSPs in all regions except in Victoria where it would be AEMO). Where appropriate, for example when a REZ connects to an interconnector, advice would be from multiple JBPs.</li> </ul>
Existing generation	<ul style="list-style-type: none"> <li>• The ESB should provide more detail on how existing generation in REZ locations and generators close to REZ boundaries would be treated. Generally, generators should not be penalised for siting decisions that have already been made.</li> </ul>

Risk allocation	<ul style="list-style-type: none"> <li>• It is unclear if revenue adequacy will be an issue, as noted above. However, if there is excess revenue, it would be appropriate for this to offset TUOS.</li> <li>• Many REZs are likely to be brought forward due to government policy and built before firm capacity is committed. There is a risk, borne by consumers for regulated REZs, that transmission augmentation may become stranded. To reduce this risk, it may be appropriate for excess auction revenue to offset the costs to consumers.</li> <li>• The ESB should do more work on risk allocation for REZs.</li> </ul>
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**While it may be appropriate to consider access within a REZ, contemplation of locational pricing is a separate issue that should not be dealt with here**

In our view, the aim of REZ access rights should be to ensure that connections within the zone are consistent with what has been determined to be optimal given the network augmentation identified in the Integrated System Plan (ISP) and REZ planning process.

To achieve this objective, further development of Options 1 and 2 is appropriate. Origin does not support Options 3 and 4 as they are overly complex and premature to implement given that they are a stepping stone to broader access reform, such as locational pricing. We provide feedback on the four proposed options in Table 2.

Table 2: Feedback on access options

Options	Comments
Option 1: Connection access protection model	<ul style="list-style-type: none"> <li>• This approach is simple. However, it would likely lead to inefficient transmission build if the remediation costs are too low or effective closed access.</li> <li>• In the case of the latter, effective closed access could lead to REZ underutilisation if the coordinator has not appropriately planned for capacity. However, assuming capacity has been correctly planned, this option would act as a deterrent to inefficient connections to the REZ, over and above existing signals.</li> <li>• It may also disincentive non-network solutions (e.g., storage) from connecting to the REZ to address congestion.</li> </ul>
Option 2: Financial access protection model	<ul style="list-style-type: none"> <li>• This option could also act as a deterrent to inefficient connections to the REZ, over and above existing signals. Unlike option 1, this option may be favourable to more efficient non-network solutions for alleviating congestion, i.e., through storage participants without access rights.</li> <li>• This option is less likely to lead to inefficient transmission build but is more complex, despite the simplification proposed by the ESB (for REZ generators without access rights to receive zero during congestion).</li> <li>• It is not clear how simple it would be to identify and allocate congestion occurring in the REZ in a meshed/looped configuration. We would welcome clarity on whether this would be easy to identify and transparent to all participants, including prospective generators.</li> <li>• In choosing between real time or ex-post reallocation, the ESB should have regard to simplicity and minimising costs. It is also not clear how the ex-post reallocation mechanism would work, e.g., who would administer the mechanism and how long after settlement would reallocation occur?</li> </ul>

Option 3: REZ as a region	<ul style="list-style-type: none"> <li>It is unclear how REZs as a region would affect broader pricing in the NEM. The ESB also proposes that this option could be combined with locational marginal pricing and financial transmission rights (LMP/FTRs) within the zone to provide firmer access to the REZ reference node price. As noted, we consider that LMP and FTRs are complex and REZ as a region appears impractical and may disincentivise new connections. We oppose this option.</li> </ul>
Option 4: Early allocation of FTRs	<ul style="list-style-type: none"> <li>We oppose this option. The ESB has yet to make a case for introducing LMP/FTRs in the future. This will result in additional uncertainty and risk that will dissuade new investment from connecting to the REZ, even if FTRs are allocated early.</li> </ul>

Regardless of the option chosen, we consider that, if access within a REZ is introduced:

- The ESB should have regard to how simple the regime is and should not choose options based on how complementary they would be to broader access reforms such as LMP/FTRs.
- Protection should apply for the lifetime of the transmission asset to which the rights relate.
- The ESB would need to clarify who “owns” the capacity within the REZ if the barriers to entry are too high and the REZ is undersubscribed. Would it be appropriate to run another tender/auction process for example?

### **It is premature to continue working on broader access reform**

We do not agree that REZs should be designed and implemented as an interim solution that will ultimately transition to the application of locational pricing across the NEM. As we have noted in our various submissions to the coordination of generation and transmission investment (COGATI) process, locational pricing reform would create additional risk and uncertainty in the market leading to higher system costs and dampened investment signals.

Throughout the COGATI process, the problem that the AEMC, and now the ESB, has been trying to solve through LMP/FTRs has changed. Our understanding of the latest rationale from the ESB is that REZs will strengthened locational signals but broader access reforms are still needed to manage future operational congestion issues that may arise (such as more counter-price flows and race-to-the-floor bidding). The ESB considers that these problems may arise in the future as the number of REZs continue to grow across the NEM. However, it has not provided details on the magnitude of these future problems.

Any transitional framework is premature and should only be considered after REZs have been implemented and the outcomes assessed. If there is a problem in the future, then it should be clearly defined, with alternative options considered, including:

- assessing the different components of congestion management (e.g., clamping of interconnectors) and the factors driving congestion outcomes to identify a range of solutions.
- examining simpler approaches to LMP/FTRs if locational signals are found to be lacking.

### **The design features are unlikely to be finalised by April**

We are concerned that the ESB’s process may be rushed. The ESB proposes to finalise its design features by April, which does not leave much time for consultation and working through the substantial amount of detail that is still required to ensure REZs are fit for purpose. It is unlikely that all issues will be resolved by April.

If the ESB progresses with an overarching framework for REZs in April, it is crucial that it clearly outlines a plan to address and develop all the areas that are relevant to the effective operation of a REZ. This would ensure that the design features of the REZ promote coordination and reduce risks for consumers.