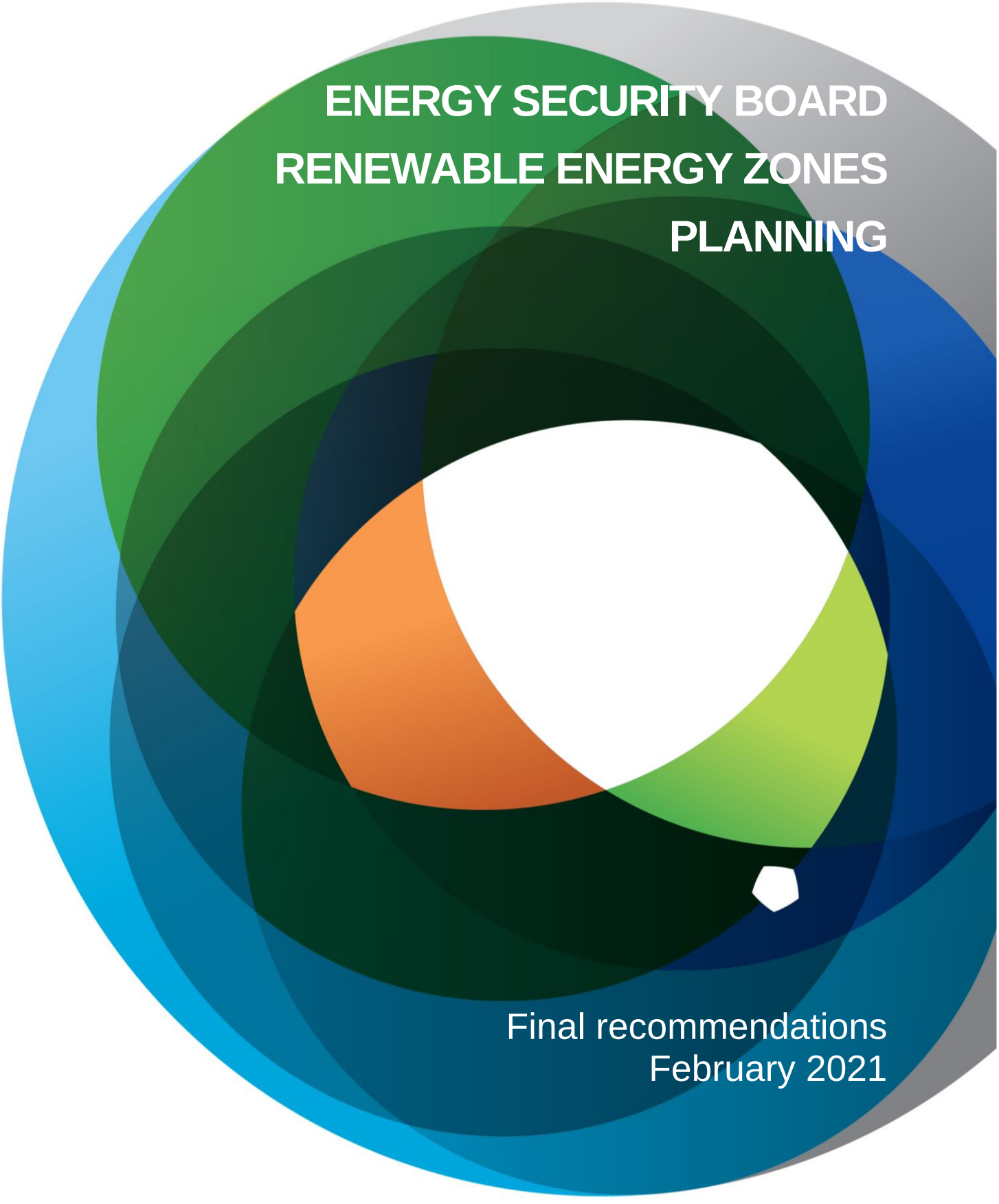
ENERGY SECURITY BOARD
RENEWABLE ENERGY ZONES
PLANNING



Final recommendations
February 2021

Executive Summary

The Energy Security Board (ESB) has developed a set of changes to the National Electricity Rules (Rules) to support the design of Renewable Energy Zones (REZs). The ESB recommends to Energy Ministers the making of the *National Electricity Amendment (Renewable Energy Zone Planning) Rule 2021* (hereafter "REZ Planning Rules").

The REZ Planning Rules build on the actionable ISP Rule changes to co-ordinate the transmission and generation investments in alignment with the optimal development path for the power system in a way that has regard to the needs of communities and developers.

Over the next 20 years, there is a need for large quantities of renewable generation to connect to the power system. There is insufficient transmission network capacity in the right locations to support this forecast generation. To deliver the additional supply at least cost, a mechanism is required to co-ordinate the transmission and generation investments. Orderly renewables development will help to reduce risk associated with network congestion, low marginal loss factors and technical difficulties. REZs are a means of giving effect to orderly renewables development. They can promote more efficient and effective connection of generators including co-ordinated consideration of security issues.

Special considerations apply to REZs within the transmission planning framework due to:

- the importance of co-ordination with generation developers to deliver an efficient solution and
- the potential for significant local community impacts.

In recognition of these differences, the ESB recommends that REZs are subject to a special planning regime that includes measures to take into account evidence supplied by generation developers and the views of local communities. The REZ planning arrangements should also ensure that the REZ leverages and contributes to the efficient design of the broader power system.

To achieve co-ordinated outcomes, the ESB recommends Rules that enable Jurisdictional Planning Bodies to prepare REZ design reports that take into account these needs. The Rules are an incremental refinement of the recently implemented actionable Integrated System Plan (ISP) Rules. The ESB recommends that these changes should form a permanent part of the actionable ISP framework.

Under the recommended Rules, AEMO may require Jurisdictional Planning Bodies to prepare REZ design reports. The REZ design report must include a community impact assessment.

In preparing a REZ design report the JPB must:

- give interested parties who wish to develop energy projects within the REZ the opportunity to submit information about their project, and give local communities the opportunity to present information relevant to the plans set out in the REZ design report.
- meet certain REZ design principles, which ensure that the resulting developments are consistent with the achievement of power system needs, including reliability and security.

The recommended Rules include joint planning provisions that require the JPB and AEMO to work together on the REZ design report.

The ESB recommends that the cost pass through mechanism applies in the event that the TNSP is required to prepare a REZ design report and the AER did not forecast the project in the TNSP's previous revenue determination.

The ESB has undertaken this Rule change process in accordance with section 90F of the National Electricity Law. Under this process the ESB recommends Rule changes to Energy Ministers, who may then recommend to the South Australian Minister that the amending Rule be made.

Contents

1. Introduction

Key points

- This Decision Paper and the final recommended *National Electricity Amendment (Renewable Energy Zone Planning) Rule 2021* recommends changes to require the jurisdictional planning body to prepare REZ design reports in accordance with the ISP.
- The ESB has developed the Rule change package in accordance with section 90F of the National Electricity Law (NEL). Under this process the ESB recommends Rule changes to Energy Ministers (sitting as the Ministerial Council on Energy (MCE)), which can then recommend to the South Australian Minister that the amending Rule be made.

1.1 Purpose & context

The purpose of this document is to describe amendments in the *National Electricity Amendment (REZ Planning) Rule 2021* to give effect to the Energy Security Board's (ESB's) proposed reforms to require the jurisdictional planning body to prepare REZ design reports in accordance with the ISP.

The 20 March 2020 meeting of State and Federal Energy Ministers considered the need for interim arrangements to support the development of a small number of REZs in the NEM ahead of longer term access reforms. The ESB proposed a two-step process:

- Step 1 - Rule changes that require the jurisdictional planner to develop a detailed and staged development plan for each priority REZ identified in the ISP. These changes would build on the actionable ISP Rule changes; and
- Step 2 - the development of a policy framework for the staged development of REZs within a REZ development plan.

Ministers requested that the ESB prepares rule changes to support the development of REZs in accordance with the two-step process.[1]

To progress Step 1 of the ESB's REZ framework, the ESB published a consultation paper and draft REZ Planning Rules in August 2020.[2] The recommendations outlined in this document and included in the recommended final REZ Planning Rule take into account submissions to the ESB's consultation on the draft Rules.

The ESB received non-confidential submissions from twenty five organisations, including from industry groups, generators, network, customer groups and community groups.[3] Submissions are summarised, together with the ESB's response, in an accompanying document. The ESB has subsequently considered issues raised in submissions and developed a set of final recommendations for Energy Ministers. This paper summarises the ESB's recommendations, including a description of changes made to the Consultation draft REZ Planning Rules.

The ESB notes that some stakeholders suggested that it would be premature to proceed with Step 1 until there is further clarity regarding the approach to Step 2. The REZ Planning Rules are designed to be an enhancement to the transmission planning framework established via the ISP Rules. The ESB considers that they have merit irrespective of the outcome of the Step 2 process,

1 For more information, see http://www.coagenergycouncil.gov.au/reliability-and-security-measures/renewable-energy-zones.

2 Energy Security Board, Renewable Energy Zones Planning - Consultation on Draft Rules, August 2020. Available at: http://www.coagenergycouncil.gov.au/publications/energy-security-board-renewable-energy-zones-planning-consultation

3 As above.

and it would be helpful to have a REZ planning framework in place as soon as possible given the long lead times associated with the planning process and the current level of interest in developing REZs.

1.2 Legislative basis

The ESB has undertaken this Rule change process in accordance with section 90F of the National Electricity Law (NEL). The ESB may recommend rules to Energy Ministers (as MCE) if the following requirements are satisfied:

- the Rules are in connection with energy security and reliability of the NEM or long-term planning for the NEM;
- the Rules are consistent with the national electricity objective; and
- there has been consultation on the Rules in accordance with any requirements determined by Energy Ministers.

Any final Rules will be made by the South Australian Minister for Energy on the recommendation of Energy Ministers. Energy Ministers have approved an “ESB Rule Recommendation Process Guide”. The release both of the Consultation Paper and the Draft REZ Planning Rules was carried out in accordance with that guidance, which includes public consultation and responses to submissions.

The ESB does not intend for the REZ Planning rules to apply in the Northern Territory.

2. Reasons for proposed reforms

Key points

- This chapter explains why the ESB recommends the introduction of special arrangements for planning REZs.
- Over the next 20 years, there is a need for large quantities of renewable generation to connect to the power system. There is insufficient transmission network capacity in the right locations to support this forecast generation.
- In order to deliver the additional supply at least cost, transmission and generation investments need to be coordinated. Orderly renewables development will help to reduce risk associated with network congestion, low marginal loss factors and technical difficulties with connection. REZs are a means of giving effect to orderly renewables development.
- Due to their function and scale, special considerations apply to REZs within the transmission planning framework. In recognition of these differences, the ESB recommends that REZs can be subject to a special form of preparatory activities that includes extra measures to take into account evidence supplied by generation developers and the views of local communities.
- The REZ planning arrangements should also ensure that the REZ leverages and contributes to the efficient design of the broader power system.
- A staged approach to REZ development can reduce risk by building in flexibility to adapt to changing market conditions, since stages within the REZ can be accelerated or deferred.

2.1 Explanation of the issues & rationale for proposed solution

Many gigawatts of new renewable generation are expected to be connected to the national grid over the next twenty years. The current grid is essentially designed to shift power from coal fields to major load centres, which are not necessarily aligned with the best locations in terms of wind and solar resources. As the current fleet of fossil fuelled generators retire, the optimal development path for the power system needs to trade off the benefits of being able to access high quality renewable resources against the additional network investment required to deliver those benefits. AEMO's ISP modelling suggests that the most cost-effective solution requires significant investment in the network. The network currently has limited capacity to connect additional renewable generation, with some otherwise attractive areas for investment already at or close to capacity.

The ISP envisages that new variable renewable energy developments in Queensland, primarily in the Darling Downs and Fitzroy REZs, would take advantage of the existing spare network capacity to meet the Queensland government's renewable energy target. There is adequate existing hosting capacity to meet this need although some local projects to facilitate connection and take advantage of economies of scale in connection would be valuable.

Renewable generation investment is also required in Victoria to meet the Victorian government's renewable energy target. There is inadequate transmission capacity available at present to meet this need, and the hosting capacity listed in the Western Victorian REZ is contingent on the major transmission investment projects currently being progressed. Planning to design the next stages of REZ development in Victoria is essential to meeting the need for new connections. Additional development is also likely to be justified, at least in part, by reducing constraints on existing generation.

The NSW government has announced a policy to connect three gigawatts in the Central West Orana REZ, and eight gigawatts in New England. This is significantly above the current hosting capacity of the transmission grid in those areas. A staged plan for the development of these zones is necessary.

2.2 Need for arrangements to support co-ordinated REZ developments

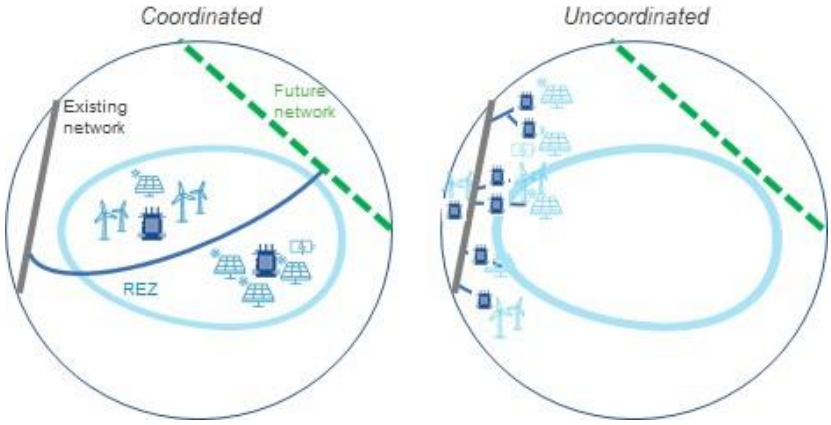
The NEM has operated since its commencement as an open access regime; that is, parties may connect to the grid at any point subject to meeting technical requirements and funding only the cost of the assets required to connect to the shared grid. Over the last twenty years there has only been incremental investment in new generation and this approach has generally proven sufficient.

In recent years that approach has been tested as the generation mix has changed and the capacity of generation seeking to connect to new and different areas of the grid in areas with favourable renewable resources has gone well beyond incremental investment. The need for generation investment to be co-ordinated with transmission network investment has become clearly evident.

There are already areas in the NEM where a lack of coordination, compounded by lack of transparency regarding future investments and available capacity, has resulted in network congestion, low marginal loss factors and technical difficulties. Generators have been exposed to additional costs from their commissioning and lower revenues until remedies can be devised, approved and implemented. Ad hoc generation developments have also precipitated a need for major transmission investments which might not have been needed if the network had evolved differently.

A lack of coordination between generation and transmission investment potentially exposes customers to higher network costs than optimal as there is no assurance that the overall development of the power system through this approach will deliver the most efficient outcome. As generation investment is market driven, commercial investors bear the risk that their investment will not deliver the anticipated benefits. However, where the access regime imposes systemic inefficiencies on connecting generators more broadly, customers will ultimately bear higher costs. Under the current framework, each generator connects on a piecemeal basis, and funds its own individual transmission line, substation and (in some cases) system security assets. This approach is likely to be more expensive than a co-ordinated approach that takes advantage of economies of scale.

Figure 1 Depiction of coordinated vs uncoordinated REZ development



The ESB's actionable ISP Rules help to coordinate power system development by driving transmission investment in line with a whole of system plan. The ESB considers that some REZ-specific enhancements to this framework are warranted, as outlined in Chapter 3.

Special considerations apply to REZs within the transmission planning framework. As well as the economic and technical considerations assessed in the ISP, a REZ that is selected for development needs to have state government and community support. While many transmission investments can have visual amenity impacts, the development of a REZ can also have impacts

on land use, as well as an economic impact on affected communities. Social licence, and the ability to obtain the required permits, is critical. These issues can have just as big an impact on developer costs as network connection issues.

Transmission developments that are intended to connect new generation require more granular local knowledge than projects that seek to transfer bulk energy between regions. REZs can be thought of as cities within the transmission network, where the main transmission flow paths are the highways.

As the function of a REZ is to connect generators, there needs to be strong interest by potential investors in the proposed location. The REZs identified in the ISP each cover large geographic areas. In some cases, the areas identified for development cover tens of thousands of square kilometres.

In recognition of these differences, the ESB recommends that the transmission planning framework that applies to REZs should include extra measures to take into account evidence supplied by generation developers and the views of local communities. The REZ planning arrangements should also ensure that the REZ leverages and contributes to the efficient design of the broader power system.

2.3 Need for a staged approach to REZ development

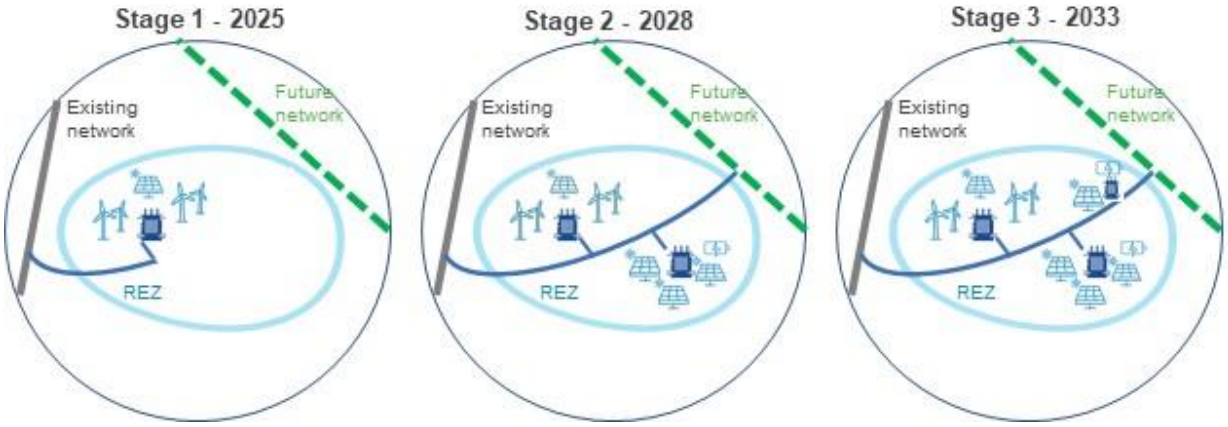
Many of the REZs identified in the ISP rely upon development of the broader national grid as the interconnector augmentations proposed in the ISP both provide benefits of trade across the NEM and allow the connection of additional renewable generation. This reduces some of the financial risks in developing generators within a REZ, but not all.

Under a staged approach to REZ development, the REZ design reports would set out a cohesive, long term plan for the development of the REZ that leverages and contributes to the broader development of the power system. This holistic plan could be broken down into a sequence of projects which are able to be delivered over an extended period (e.g. a decade). A staged approach reduces risk by building in flexibility to adapt to changing market conditions, since stages within the REZ can be accelerated or deferred.

Staging can also help to reduce costs by leveraging planned power system developments beyond the REZ. For instance, a REZ may be designed to take advantage of a future interconnector upgrade which does not occur until after the first part of the REZ is established.

The planning framework needs to take into account not only the transfer capability of the planned network expansion, but also power system security issues and hence effective and efficient hosting capacity released in each stage. This would provide that each stage could be configured and include additional plant that would provide scale efficiencies to parties connecting to that stage of the REZ.

Figure 2 Depiction of a staged REZ development



Once a staged plan has been established, this can feed into AEMO's assessment of the optimal development plan in an ISP, and then whether the REZ (or a stage of it) should be an actionable ISP project. Then each stage would be subject to further development and implementation as part of a regulatory investment test for transmission (RIT-T).

3. Recommendations

Key points:

- Under the recommended Rules, AEMO may require Jurisdictional Planning Bodies to prepare REZ design reports.
- In preparing a REZ design report the JPB must:
    - give interested parties who wish to develop energy projects within the REZ the opportunity to submit information about their project, and give local communities the opportunity to present information relevant to the plans set out in the REZ design report.
    - meet certain REZ design principles, which ensure that the resulting developments are consistent with the achievement of power system needs, including reliability and security.
- The REZ design report must include a community impact assessment.
- The recommended Rules include joint planning provisions that require the JPB and AEMO to work together on the REZ design report.
- The ESB recommends that TNSPs may use the existing cost pass through provisions to apply to the AER for an adjustment to their revenue determination in the event that the TNSP is required to prepare a REZ design report and the AER did not forecast the project in the TNSP's previous revenue determination.

To promote co-ordinated outcomes, the ESB recommends amendments to the transmission planning framework to support the preparation of REZ design reports that take into account technical, economic and social factors. This chapter provides an overview of the framework recommended by the ESB. Chapter 4 details where key elements of the proposed framework constitute modifications to the Consultation Draft REZ Planning Rules.

3.1 Overarching framework for REZ design

This section discusses the scope and objective of the REZ design framework, who should be responsible for the functions and outputs under the framework and when REZ design reports should be prepared.

3.1.1 Scope of REZ planning framework

Location in REZ Planning Rules: clause 11.131.3

The ESB recommends that these planning arrangements should apply to all REZs developed in accordance with the actionable ISP framework. Rather than being an interim feature, these planning arrangements should become a permanent feature of the Rules (subject to any future Rule change process). This is because there are long term benefits associated with having additional targeted planning measures in place to support the design of transmission infrastructure required to integrate new renewable supply.

As the proposed framework is integrated into the actionable ISP framework, the ESB recommends that the REZ planning framework should be included in the AEMC's review of actionable ISP framework, which is scheduled to occur before 1 July 2025.

3.1.2 Who is responsible for planning REZs?

Location in REZ Planning Rules: clauses 5.24.1

The ESB recommends that the jurisdictional planning body (a function under the NER, which has been given to the local TNSP in New South Wales, Queensland, South Australia and Tasmania; and AEMO in Victoria) could be responsible for ensuring that a detailed plan is prepared for each REZ nominated for development in the ISP. The jurisdictional planning body would consider what transmission infrastructure is required for a REZ and consider the best place to locate clusters of generation within a REZ. This approach reflects the actionable ISP framework, where AEMO develops the ISP and TNSPs then do the detailed assessment through the RIT-Ts having regard to the ISP.

We recommend that the obligation applies to JPBs, rather than TNSPs, in recognition of the potential for significant community impacts associated with the development of REZs and hence the need to coordinate with the relevant government planning authorities.

State governments with REZ developments located within their jurisdiction may wish to enter into a Memorandum of Understanding or other arrangement with their JPB to provide a clear framework for government input to the REZ design report. However, these arrangements would sit outside of the NER regulatory framework.

The recommended REZ Planning Rules have been drafted in a way that permits a JPB to rely on consultation undertaken by other parties (such as a government authority) so long as the consultation meets the standard set out in the Rules. This approach is intended to prevent duplication and ensure alignment between government processes and JPB processes.

As per the actionable ISP framework, there would also be a key role for AEMO in identifying the core characteristics of the REZ, and how the REZ should integrate with the broader power system. AEMO's role is discussed further below.

3.1.3 Initiating a REZ design report

Location in REZ Planning Rules: clauses 5.24.1(a)

The ESB recommends that the Rules establish criteria that must be met for a REZ to be selected for development as part of the transmission planning framework. The purpose of the criteria is to ensure that REZs selected for planned development have a baseline level of merit in each of the technical, economic and social realms. Under the ESB's recommended Rules, AEMO may trigger the preparation of REZ design report as part of the ISP. When selecting a REZ for development, AEMO must have regard to the following criteria:

- the development of the REZ must be on the optimal development path within 12 years; and
- the decision to trigger a REZ design report must have the support of the relevant State government.

Stakeholders suggested a range of alternative triggers and/or pre-requisites before a REZ design report can be required. In particular, some stakeholders suggested that a certain level of generator commitment should be required before a REZ design report is triggered. While a threshold level of generator commitment may be appropriate at a later stage in the REZ development process, it is necessary to formulate a view of what the REZ is likely to look like before a generator can commit to connect to it.

Hence, the ESB has retained its position that AEMO's decision to initiate a REZ design report should occur as part of the ISP process. This allows the decision to benefit from the ISP's

comprehensive and transparent stakeholder engagement process. However, in practice, changing circumstances can necessitate changes outside the two-yearly cycle. The ISP Rules provide for ISP updates to ensure that the ISP can adapt in response to new information as part of an ISP update and AEMO's decision to initiate a REZ design report could also be made in an ISP update.

3.2 Objectives and principles to be achieved by the REZ design report

Location in REZ Planning Rules: clauses 5.24.1(a) and (c)

In preparing the REZ design report, the JPB should be required to meet certain overarching principles set out in the Rules. These principles are designed to ensure that the resulting developments are consistent with the achievement of power system needs, including reliability and security.

The ESB also recommends the inclusion of measures to ensure that the REZ design fits within the broader plan. The REZ Planning Rules require AEMO to specify a set of REZ design parameters, which would be specific to the relevant REZ. The REZ design parameters would provide guidance to the JPB in designing a REZ design report that aligns with the ISP.

Table 1 REZ design principles and parameters

REZ design principles	REZ design parameters
Overarching principles to be defined in the Rules	*Project specific requirements to be defined in the ISP*
The REZ design report must set out a plan for the development of the REZ that: • is consistent with the achievement of power system needs set out in NER 5.22.3 • contributes to the efficient development of the power system, consistent with the ISP • reflects the REZ design parameters.	When initiating a REZ design report, AEMO must specify the following REZ design parameters: • description of the proposed location of the REZ • the minimum generation capacity, in MW, that is projected to be developed in the REZ • the forecast timing for each stage under the optimal development path • the proposed location at which each REZ stage will connect to or be integrated with the rest of the transmission network • any other matters that AEMO considers relevant.

As transmission planning is an iterative process, the REZ design parameters would not be fixed. Instead they would be refined over time via the joint planning process, as new information becomes available. The JPB would need to ensure that its plans deliver the minimum generation capacity required at each stage to efficiently meet power system needs, but there would be scope to accelerate the project beyond minimum requirements and explore the option value associated with different approaches. This would then feed back into the ISP, to be considered in AEMO's modelling. Each stage of development within a given REZ would form part of an integrated plan for projected hosting capacity of the REZ.

This detailed assessment of a REZ and its breakdown into a sequence of stages will increase understanding of the relevant zone and may modify the understanding of its costs.

3.3 Preparation of REZ design report

Location in REZ Planning Rules: clause 5.24.1

The REZ design report is intended to act as a bridge between the concept outlined in the ISP and a substantive investment proposal. For instance, the REZ design report could take a future ISP project[4] and develop the project to a level of detail where its first stage is able to be subject to an investment decision making process by triggering a RIT-T. In this respect, the REZ design report is an upscaled form of preparatory activities that recognises the special considerations that pertain to REZs.

The REZ design report would set out plans for the shared transmission infrastructure, taking into account the likely options for generation and storage located within the REZ. The REZ design report would not need to involve detailed plans for negotiated transmission services such as generation connection assets. However, the JPB would need to have considered likely options in sufficient detail to be able to design the shared network in a way that accommodates the optimal overall solution.

In order to perform this function, the ESB recommends that the REZ design report must include, for each REZ stage:

- the outputs of the preparatory activities, including the proposed engineering design, proposed route, and an initial estimate of the costs
- the reasons for the proposed design, including consideration of non-network options;
- if appropriate, an assessment of potential variations; and
- a community impact assessment.

The optimal design of the shared transmission assets is influenced by the characteristics of the connecting generation. Accordingly, the REZ design process should have visibility of what generation is likely to connect. For instance, the NSW government is conducting a registration of interest process to gain an understanding of potential developments within the Central West Orana REZ.

In preparing a REZ design report the JPB must give interested parties who wish to develop energy projects within the REZ the opportunity to submit information about their project, and give local communities the opportunity to present information relevant to the plans set out in the REZ design report. The REZ design report should include a community impact assessment and incorporate an initial estimate of the costs associated with managing community impacts.

The objective of the consultation process should be to design a REZ that strikes an appropriate balance between technical, economic and social licence considerations. The REZ Planning Rules do not prescribe the precise nature of the consultation process given the diversity of potential REZ projects, and the fact that the broader transmission planning framework already includes extensive consultation requirements.

The JPB is required to meet the following stakeholder engagement principles:

- provide stakeholders with information that is clear, accurate, relevant and timely;
- provide stakeholders with sufficient opportunity to consider and respond to the information provided
- enable meaningful stakeholder participation by using:
    - targeted consultation materials, and

4 A future ISP project is a project that is forecast to become an actionable ISP project in the future (but is not needed in the short term).

        - methods of communication tailored to the needs of different stakeholders
- clearly explain to stakeholders their role in the engagement process and how the jurisdictional planning body will take stakeholder input into account.

In addition, the JPB is required to undertake a public consultation inviting written submissions on a draft version of the REZ design report. A minimum consultation period of 6 weeks should apply, and the final REZ design report should describe how the JPB has taken into account information provided by interested parties.

3.4 Incorporating input from AEMO via the joint planning process

Location in REZ Planning Rules: clause 5.24.2

Efficient REZ development is a key component of the ISP and as such, the proposed planning arrangements confer a number of key roles on AEMO, including initiating the REZ design report process and specifying the REZ design parameters.

The actionable ISP Rules establish a continuous planning cycle. Shortly after the publication of a final ISP, work begins on the next one. Hence, while the ISP triggers a REZ design report, the preparation of the REZ design report will occur in tandem with the preparation of a subsequent ISP. The ISP process and REZ design process should be iterative and each should incorporate learnings from the other.

The REZ Planning Rules include new joint planning provisions that require the JPB and AEMO to work together on the REZ design report. Joint planning permits each party to contribute their strengths in order to build robust plans. While both parties have technical expertise, the JPB has specialist knowledge in relation to on the ground community and local network conditions. AEMO contributes expertise in terms of market modelling, the broader development of the power system and any flow on technical impacts, such as in relation to system security.

Following completion of a REZ design report, AEMO will have the power to trigger the process to further test a specific stage of a REZ via a RIT-T. The engineering options identified in the REZ design report should be included as credible options in the ISP modelling. If the credible option identified in the REZ design report forms part of the optimal development path, AEMO would designate the project as an actionable ISP project as part of a subsequent iteration of the ISP or ISP update.

Alternatively, special arrangements for the development and funding of the REZ may be developed. These arrangements would be guided by the policy framework being developed as part of Step 2 of the ESB's interim REZ framework.

3.5 Funding of REZ design activities

Location in Rules: clause 6A.7.3

The REZ Planning Rules are intended to deliver efficient REZ designs that meet power system needs and integrate effectively with the broader power system. REZ design activities should be treated as core planning activities of the TNSP (in their role as JPB).

However, the decision to trigger a REZ design report lies with AEMO rather than the TNSP. Further, the need for a REZ design report may not be clear at the time of a TNSP's revenue determination, particularly where the need for a REZ design report is driven by a change in

government policy. Accordingly, there is a risk that the TNSP's operating expenditure allowance may not provide for every REZ design report that a TNSP is required to prepare.

In light of this issue, the ESB recommends the following approach to cost recovery:

1. For known REZ design reports at the time of the revenue determination – the efficient costs of REZ design would be considered by the AER when it assesses the operating expenditure allowance as part of a revenue determination;
2. For REZ design reports not known at the time of the revenue determination – the existing cost pass through framework could be used to nominate unanticipated REZ design reports as a category of pass through event for a revenue determination.

Under existing Rules, the TNSP can propose a nominated cost pass through event in its proposals and the AER can then make a decision on this pass-through event in its revenue determination.[5] For instance, the TNSP could propose, and the AER could determine, that the trigger for the nominated cost pass through event is the ISP requiring the preparation of a REZ design report.

The approach would enable a TNSP to apply to the AER for an adjustment to their revenue determination if the TNSP is required to prepare a REZ design report and the AER did not forecast the project in the TNSP's previous revenue determination.

While the form of any nominated cost pass through event is a matter to be determined by the AER as part of the revenue determination process, the ESB envisages that the event could be specified in a way that aligns with the transitional arrangements described below.

The ESB considers that the cost pass through materiality threshold should apply, as there is no obvious reason why REZ design reports should be treated differently from other forms of cost pass through event. However, it may be reasonable for TNSPs to group the costs of multiple REZ design reports from an ISP together in a single application. If this was the case, then it is more likely the incremental costs would meet the materiality threshold.

If the participating jurisdiction nominates a party other than a TNSP as the JPB, then the Chapter 6A regulatory framework would not apply and alternative funding arrangements would be required.

3.6 Transitional arrangements

Location in REZ Planning Rules: clause 11.131

The ESB recommends that the REZ Planning Rules come into effect as soon as possible.

As the REZ Planning Rules are an enhancement to the actionable ISP framework rather than a replacement for it, the ESB considers that transitional arrangements are not necessary for in-train projects.

This naturally occurs under the REZ Planning Rules because the requirement for a REZ design report is triggered at AEMO's discretion. The REZ Planning Rules do not mandate that a REZ design report must be prepared for all REZs. If previous planning activities (including activities conducted by government bodies) already covered the relevant issues, there would be no need for another REZ design report and AEMO would not trigger one in the ISP. The REZ design report stage could also be skipped for other reasons, for instance if the proposed REZ was small and straightforward, and normal preparatory activities are sufficient.

5 See NER 6A.7.3(a1)(5).

REZ design activities very similar to those proposed in the REZ Planning Rules are already underway in relation to the Central West Orana REZ and New England REZ. The ISP Rules permit AEMO to designate a REZ project as an actionable ISP project without the need for a REZ design report. Indeed, in the case of Central West Orana REZ, AEMO has already done so.

The ESB considers that there is a need for transitional arrangements in respect of the TNSP costs of preparing REZ design reports during the regulatory period between when the Rules take effect and their next revenue determination, when the funding arrangements outlined in section 3.5 take effect.

With respect to the TNSPs' current revenue determinations, if the costs associated with one or more REZ design reports together exceed the minimum cost pass through threshold[6], then TNSPs may seek an AER determination on a cost pass through under NER 6A.7.3. The recommended transitional provisions clarify that this Rule change, together with an AEMO decision to trigger a REZ design report in the ISP, constitute a positive change event for the purposes of NER 6A.7.3.

6 In order to meet the minimum threshold for a cost pass through, the TNSP must incur, or be likely to incur, costs that exceed one per cent of its maximum allowed revenues for that regulatory year.

4. Changes since the publication of the Consultation Draft REZ Planning Rules

Key points

- The ESB has considered issues raised in submissions to the Consultation Draft REZ Planning Rules and has made a number of changes. Detailed comments, together with the ESB's response, are set out in an accompanying document.
- The content of the REZ design report has been amended to include a community impact assessment.
- The consultation process associated with the REZ design report has been amended to include stakeholder engagement principles, and to clarify that the obligation to conduct a public consultation process involving a request for written submissions applies to a draft version of the REZ design report. The minimum consultation period has been extended from four to six weeks.
- The ESB has introduced a new funding mechanism for REZ design reports that were not anticipated by the AER when it finalised the TNSP's revenue determination. TNSPs would receive a pre-determined REZ design report allowance for each unanticipated REZ design report triggered by AEMO in an ISP.
- Transitional provisions clarify that TNSPs may apply to the AER to recover costs associated with REZ design reports that are triggered before the end of their current revenue determination periods using the cost pass through mechanism (so long as the minimum cost pass through threshold is met).

The purpose of this section is to describe how the ESB has amended the final REZ Planning Rules in response to stakeholder feedback on the draft REZ Planning Rules. The key changes from the Consultation Draft REZ Planning Rules relate to the:

1. Review of framework
2. Initiating a REZ design report
3. REZ design parameters
4. Content of the REZ design report
5. Consultation process
6. Funding of REZ design reports
7. Transitional arrangements
8. Structure of the legal drafting

Stakeholders provided views on a range of other matters. A detailed summary of submissions on the Consultation Draft REZ Planning Rules, together with the ESB's response to the issues raised, is set out in an accompanying document.

4.1 Review of framework

Location in REZ Planning Rules: clauses 11.131.3

While most stakeholders supported the ESB's proposal to make the REZ Planning Rules a permanent feature of the regulatory framework, some stakeholders questioned their value.

In light of this feedback, the ESB recommends that the REZ Planning Rules should be reviewed by the AEMC by no later than 1 July 2025. This timeframe aligns with the AEMC review of the broader actionable ISP framework, which is also required to be reviewed by 1 July 2025.

4.2 Initiating a REZ design report

Location in REZ Planning Rules: clauses 5.24.1(a)

Some stakeholders expressed the view that the threshold for triggering a REZ design report in the draft REZ Planning Rules was too low, with the effect that customers could be required to bear the costs of preparing unnecessary REZ design reports. In light of this feedback, the ESB recommends an amendment to require AEMO to have regard to the following criteria before it may trigger a REZ design report:

- the development of the REZ must be on the optimal development path within 12 years; ~~or~~ *and*
- the decision to trigger a REZ design report must have the support of the relevant State government.

4.3 REZ design parameters

Location in REZ Planning Rules: clauses 5.24.1(4)

Some stakeholders commented that the draft Rules were unclear as to how the geographical location of a REZ would be defined.

The ESB has made an amendment to make it clear that the proposed location of a REZ will be one of the REZ design parameters specified in the ISP. The recommended Rules do not specify the format in which AEMO must specify the location of the REZ. This approach gives the transmission planning bodies flexibility to refine the geographical location as further information about the costs and benefits of different options becomes available.

The ESB has made a consequential change to omit the word “discrete” from the Rules definition of a REZ, on grounds that it is not needed given the amendment to REZ design parameters.

4.4 Content of the REZ design report

Location in REZ Planning Rules: clauses 5.24.1(c) and (d)

Several community groups advocated for a more express requirement that the REZ design report should include discussion of the level of community support for the project.

The ESB recommends that the REZ design report should include the results of a community assessment, including a discussion of anticipated community impacts. The community assessment should identify any barriers to community acceptance and incorporate an initial estimate of any costs associated with overcoming them.

4.5 Consultation process

Location in REZ Planning Rules: clauses 5.24.1(d) and (e)

A number of stakeholders considered that the four week consultation period proposed in the draft Rules was insufficient. Others considered that the consultation framework was overly prescriptive, creating a risk that the minimum requirements will become the standard rather than the minimum.

In light of this feedback, the ESB has added an obligation on JPBs to meet the following stakeholder engagement principles:

- Provide information that is clear, accurate, relevant and timely;
- Provide sufficient time for stakeholders to consider and respond to the information provided;
- Tailor communication materials and methods in recognition of the different needs of stakeholders, so that they are able to participate in a meaningful way; and
- Explain the role of stakeholders in the engagement process, including how their input will be taken into account.

These principles are modelled on the principles set out in the AER's Customer Engagement Guidelines.[7]

The ESB has also clarified that the obligation to conduct a public consultation process involving a request for written submissions applies to a draft version of the REZ design report. The minimum consultation period has been extended from four to six weeks. The requirement to consult on the draft REZ design report is in addition to the obligation to undertake targeted consultation that meets the stakeholder engagement principles described above, which may involve other forms of consultation such as town hall meetings.

In response to an issue raised by network businesses, the Rules have been drafted in a way that permits a JPB to rely on consultation undertaken by other parties (such as a government authority) so long as the consultation meets the standard set out in the Rules. This change is intended to prevent duplication of resources.

4.6 Funding of REZ design reports

Location in REZ Planning Rules: clauses 6A.7.3A

The draft REZ planning Rules proposed that REZ design reports should be treated as TNSP operating expenditure funded via the regulatory determination framework.

Network businesses raised concerns that they would not be adequately funded under this model, particularly if they were required to prepare a REZ design report that was not anticipated at the time of the preceding revenue determination. They also noted that the decision to trigger a REZ design report is outside their control as the decision lies with AEMO.
In light of these issues, the ESB has formed the view that it is appropriate to use the cost pass through framework to ensure that both customers and TNSPs are not required to bear unnecessary costs. To this end, TNSPs could use the cost pass through framework established under clause 6A.7.3 to seek an adjustment to their revenue determination in the event that the ISP triggers a REZ design report that was not anticipated when the TNSP's revenue determination was made. The approach can be given effect using clause 6A.7.3(a1)(5) of the Rules, without the need for further amendments.

When REZ design reports are anticipated at the time of the revenue determination they should be assessed as part of the usual operating expenditure assessment process.

7 AER, Consumer engagement guideline for network service providers, November 2013. Available at: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/consumer-engagement-guideline-for-network-service-providers

4.7 Transitional arrangements

Location in REZ Planning Rules: clause 11.131

The transitional arrangements include provisions to enable TNSPs to apply to recover costs associated with REZ design reports that are triggered before the end of their current revenue determination periods (so long as the minimum cost pass through threshold is met).

Network businesses expressed concern that the two-staged nature of the regulatory change event may not be captured by current definition of a regulatory change event. To address this issue, the transitional provisions clarify that the REZ Planning Rules, together with an obligation to prepare one or more REZ design reports in accordance with 5.24.1(b)(1), constitutes a regulatory change event for the purposes of 6A.7.3.

Network businesses also expressed concern that the minimum pass through threshold will not be met. The minimum threshold is that costs must exceed one per cent of a TNSP's maximum allowed revenues for that regulatory year in order for a cost pass through application to be considered by the AER. The ESB considers that minimum cost pass through threshold should apply to REZ design reports invoked prior to the next round of revenue determinations. However, the TNSP may aggregate the costs of each REZ design report required in a given ISP (where the ISP triggers multiple REZ design reports to be prepared by a JPB) for the purposes of assessing whether the minimum cost pass through threshold is met.

These arrangements should apply only to the current set of revenue determinations. The framework outlined in section 3.5 above would apply to future revenue determinations.

4.8 Structure of the legal drafting

Location in REZ Planning Rules: clause 5.24

Under the draft REZ Planning Rules, many of the key provisions were added to clause 5.22.6, which is the clause that sets out the content of the ISP. Concerns were raised that this approach had the potential to be confusing and could make it difficult for stakeholders to find the relevant provisions within Chapter 5 of the National Electricity Rules.

Accordingly, the recommended Rules remove the key provisions from clause 5.22.6 and establish a separate REZ planning clause at 5.24.

5. Assessment of recommendations

This section describes the ESB's assessment of the recommended REZ Planning Rules. Chapters 2 and 3 provide an explanation of the issues and rationale for the proposed solution.

5.1 Consistency with the national electricity objective and Strategic Energy Plan

Under the National Electricity Law, the ESB may recommend rules to the Energy Ministers if the following requirements are satisfied:[8]

- the Rules are in connection with energy security and reliability of the NEM or long-term planning for the NEM.
- the Rules are consistent with the national electricity objective; and
- there has been consultation on the Rules in accordance with any requirements determined by the Energy Ministers.

The national electricity objective is "to promote efficient investment in, and efficient operation and use of, electricity services for the longer-term interests of consumers of electricity with respect to

(a) price, quality, safety, reliability and security of supply of electricity; and

(b) the reliability, safety and security of the national electricity system."[9]

The ESB considers that the REZ Planning Rules are consistent with the NEO because they will help to efficiently develop the national transmission network and integrate renewable energy into the power system. Given the expected importance of renewable generation in the future supply mix, its efficient connection will minimise future costs for customers. By undertaking more detailed local network design and amending the Rules to require planning bodies to consult with generation developers as they develop detailed proposals for REZs, these provisions would promote efficient investment in the network and generation. The staging of implementation will also assist in managing risks.

The plans must also contribute to the efficient design and development of the shared transmission network as set out in the ISP. The purpose of the ISP is to plan the efficient development of the power system to meet power system needs in the long-term interests of consumers. Power system needs includes the market reliability standard, relevant transmission reliability standards and power system security. The current set of Rule changes refine the planning framework to better equip the JPBs, in collaboration with AEMO, to assess the special issues that arise in relation to REZs.

The ESB is also required by the MCE-approved guidance to consider whether the recommended ISP Rules are consistent with one or more of the high-level outcomes set out in the Strategic Energy Plan.[10] The ESB's REZ Planning Rules promote several of the high-level outcomes set out in the Strategic Energy Plan, including:

- Secure electricity and gas system - system planning and development is informed by clear and transparent rules (S01); and
- Reliable and low emissions electricity and gas supply - electricity and gas sectors efficiently deliver at least their share of emissions reduction target/s while ensuring reliable supply (R01)
- Efficient and timely investment in networks - investment solutions are optimal across all resources (N01).

8 Section 90F of the National Electricity Law.

9 Section 7 of the National Electricity Law.

10 Council of Australian Governments Energy Council, Strategic Energy Plan, November 2019. Available at: http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/Strategic%20Energy%20Plan%20November%202019%20-%2020200120.pdf

5.2 Costs and benefits of the REZ planning Rules

The effect of the REZ Planning Rules is to require JPBs to prepare REZ design reports that:

- take into account evidence supplied by generation developers and the views of local communities
- explore options for staging; and
- leverages and contributes to the efficient design of the broader power system.

The costs associated with the REZ Planning Rules relate to the additional costs incurred by JPBs and AEMO in preparing the REZ design reports, and the additional time required to complete these activities.

The cost of preparing a REZ design report is likely to be less than $20 million for a large, complex REZ, and less than $10 million for a smaller project.[11] However, the majority of these costs would be incurred in any event under the existing transmission planning framework. The ESB estimates that the incremental costs associated with the recommended Rule changes are likely to be less than $5 million per REZ.

Given the need to coordinate with other parties to deliver an efficient solution, and the fact that that the REZ may involve investment worth billions of dollars (when both transmission and generation costs are taken into account), the additional costs of enhanced planning are amply justified.

In terms of the additional time required to conduct the consultation and analysis, the ESB has sought to design a flexible framework that can adapt according to circumstances. Ideally, REZ design reports would be triggered in a timeframe that permits thorough, methodical consultation. However, the framework includes features that allows it to be expedited where necessary

- the ISP update arrangements can be used to progress REZ projects outside the main ISP cycle;
- the ESB has adopted light handed approach to describing the process requirements associated with a REZ design report; and
- AEMO's decision to trigger a REZ design report is discretionary; a REZ project may become an actionable ISP project without the need for a REZ design report if, for some reason, the additional planning activities are superfluous.

On this basis, the ESB considers that the benefits associated with the REZ Planning Rules exceed the costs.

11 For instance, the detailed scoping study for the Central West Orana REZ is expected to cost $16.2 million. See ARENA, Scoping NSW's Central-West Orana as a Renewable Energy Zone, 23 June 2020. Available at https://arena.gov.au/news/scoping-nsws-central-west-orana-as-a-renewable-energy-zone/

A Abbreviations and Technical Terms

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CBA	Cost Benefit Analysis
COGATI	Coordination of Generation and Transmission Investment
ECA	Energy Consumers Australia
ESB	Energy Security Board
ISP	Integrated System Plan
JPB	Jurisdictional Planning Body
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
NSCAS	Network Support and Control Ancillary Services
NTNDP	National Transmission Network Develop Plan
REZ	Renewable Energy Zone
RIT-T	Regulatory Investment Test for Transmission
TNSP	Transmission Network Service Providers

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