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Dear David

Consultation paper: Step 2 of the Interim Renewable Energy Zones Framework

AusNet Services welcomes the opportunity to make this submission in response to the ESB's consultation paper on Step 2 of the Interim Renewable Energy Zones (REZ) Framework.

The Interim REZ Framework is being developed as a mechanism to coordinate generators' connection and investment in the network while managing the risk of over or under investment in transmission network. Step 2 includes establishing a framework for coordinating connections, as well as options for a REZ Coordinator and access reform within REZs.

AusNet Services is a member of Energy Networks Australia and supports that submission. Our submission focuses on providing a Victorian perspective on the Step 2 proposal.

While we acknowledge the potential for this framework to deliver benefits for some renewable energy zones, it will be easier to implement for some REZs than others and the relative benefits and costs will also vary. In the case of Victoria and its six candidate REZs identified by AEMO, the proposal will be complex to implement. This is because the meshed nature of the Victorian transmission network makes carving out the geographical boundary where firm access would apply difficult, and because REZ investment does not resolve technical constraints on the wider shared network.

In this context, the ESB should consider how Step 2 of its Interim REZ Framework will apply to REZs with different concept designs, architecture and shared network conditions, including whether the framework should apply in all cases.

The request of Energy Ministers to develop an Interim REZ Framework, reflected an urgency around planning and developing REZs. The Interim REZ Framework, including Step 1 which is aimed at improved planning and greater consideration of local community and environmental needs, addresses some of the important hurdles to REZ development, but should be viewed as part of a suite of necessary tools that can be deployed on a case-by-case basis to address the specific needs of each REZ.

The attached submission provides further detail of specific issues that the framework will need to address or accommodate as it is developed in more detail. If you have any questions regarding our submission please contact Katie Yates, Manager Energy Policy by email at katie.yates@ausnetservices.com.au.

Sincerely,



Adrian Hill
Acting EGM, Regulation and External Affairs
AusNet Services

AusNet Services' submission in response to the ESB's consultation paper on Step 2 of the Interim Renewable Energy Zones (REZ) Framework.

The ESB's consultation paper argues that open access applied in combination with the actionable ISP carries risk of over or under investment in transmission assets, since generators invest based on commercial investment decisions which may not align with centrally planned transmission investments made under the ISP.¹

In light of these challenges, the ESB has developed the Interim REZ Framework as a mechanism to coordinate generators by making it more attractive for them to connect to and invest in the network. Key benefits include:

- Cheaper connections realised by scale efficient connection assets.
- Avoidance of costly delays to commissioning through streamlined connections and approvals processes.
- Greater revenue certainty by providing for access rights which limit subsequent connections and reduce the risk of network congestion, volatile marginal loss factors and technical constraints being placed on operational projects.
- Lower overall system costs through more efficient use of transmission capacity.²

While we acknowledge the potential for this framework to deliver benefits for some REZs, it will be easier to implement for some REZs than others and the relative benefits and costs will also vary. Detailed consideration is needed as to how the framework will apply to REZs with different concept designs, architecture and shared network conditions, including whether the framework should apply in all cases.

Further details of the challenges with applying the Interim REZ Framework in Victoria are set out below.

While technical constraints on the wider Victorian shared network remain, the Interim REZ Framework will be limited in its ability to unlock REZ investment.

The nature of the issues currently being experienced in Victoria largely relate to technical constraints on the shared network. Activity across broad expanses of the Victorian network have the potential to contribute or alter these constraints.

AEMO's latest Victorian Annual Planning Report includes a map of the most significant Victorian transmission network constraints during the 2019-20 financial year based on a combination of constraint impact and binding hours.³ It identified 13 network constraints across the state, including two in the North Western Victoria and Murray Region which, due to voltage stability issues, had combined indicative constraint impact on dispatch outcomes in excess of \$6 million.⁴

Step 2 of the Interim REZ Framework will only be a partial solution to unlocking investment in REZs across the NEM. REZ investment does not resolve network constraints on the wider shared network that could impact the viability of the REZ. While these issues are unresolved, potential proponents involved in the development of the REZ will be focussed on identifying the impact of the next constraint and may attribute low value to locating within the REZ.

The meshed nature of Victoria's transmission network makes the Interim REZ Framework difficult to implement.

The Interim REZ Framework provides a localised solution that establishes carve outs from the open access regime. However, due to the meshed nature of Victoria's transmission network a REZ Coordinator would likely face significant difficulty in determining the fundamental features of the Interim REZ Framework. For example, carving out small 'REZ' sections of network in a way that can be meaningfully shielded from changes to the network outside that boundary, will be challenging.

REZ attributes that may be difficult to define include:

¹ ESB, *Step 2 Renewable Energy Zones Consultation Paper*, page 16.

² *Ibid*, pages 16-27.

³ Constraint impact is measured as the sum of the marginal values for a constraint and provides indicative impacts on dispatch outcomes.

⁴ AEMO, 2020 *Victorian Annual Planning Report*, pages 37-38.

- The geographical boundary of the REZ (e.g. the carve outs where firm access arrangements would apply).
- The maximum capacity of generation and storage assets that could locate within the REZ.
- The likely level (or ‘firmness’) of access provided to those seeking to connect to the REZ.

The challenges presented by Victoria’s meshed network are expected to lower the potential benefits of renewable energy investors seeking to locate within the REZ and impact their willingness to pay for access rights. Given this, we expect the Interim REZ Framework will be difficult to implement in the Victorian context.

Consideration should be given to how Step 2 of the Interim REZ Framework will apply to REZs with different concept designs, architecture and shared network conditions.

The ESB’s consultation paper outlines the challenges of allocating physical access rights on meshed alternating-current-networks. It also acknowledges that the AEMC has provided a framework for radial REZ development through its connection to dedicated connection assets (DCA) rule change process.⁵ Beyond this, the Interim REZ Framework seeks to apply a common approach to facilitate all regulated REZs in the NEM.

The Victorian-specific network challenges outlined earlier in this submission highlight the complexities of applying the proposed Step 2 approach to some REZs. For example, for the majority of REZs in Victoria the expected technical solution is either a ‘new link’ between existing transmission lines or duplication of existing lines, both of which would provide network benefits outside of the nominated geographical area. The ESB should look at modelling examples of how its Interim REZ Framework will apply to REZs with different concept designs, architecture and shared network conditions. This would provide a clearer view of the benefits, and whether the framework should be applied for all ISP REZs or only ones with certain characteristics.

While many of the REZ’s identified within the ISP are still very early in the planning stage, or not yet committed projects, there are upcoming REZs from which the applicability of the Interim REZ Framework could be explored. This will ensure the proposed benefits of the framework can be accessed for all REZs across the NEM.

There are further issues to resolve in developing Step 2 of the Interim REZ Framework

While AusNet Services supports the intent of this reform, there are further issues that should be resolved in the development of Step 2 of the Interim REZ Framework. These issues include:

- **Addressing the ‘precommitment problem’ and sequencing of investment decisions** – There are a variety of auction models that could be adopted to facilitate an orderly connection process. Regardless of the preferred model, renewable energy investors will at some point in the REZ development process be required to make investment decisions around whether or not they want to participate in the REZ, and the amount they are willing to pay for access.

Typically, renewable energy developers only proceed with a project when they have a material off-take agreement. While infrastructure investors (e.g. transmission investors) usually require a committed material usage agreement in place. This creates a pre-commitment problem that – depending on the specific funding needs of a REZ - will see the investment decisions of transmission infrastructure investors tied to the commercial decisions of renewable energy developers.

It is currently unclear how the Interim REZ Framework would overcome this problem or what other solutions the ESB consider necessary. For example, the need for access rights to be temporarily or permanently tradeable or transferable, or renewable energy developers to have timely access to off take agreements via competitive generation investment schemes such as the Victorian Renewable Energy Auction Scheme or NSW Electricity Infrastructure Investment Safeguard.

- **Managing the responsibilities and liabilities of the REZ Coordinator versus the TNSP** – The Interim REZ Framework establishes a REZ Coordinator who will have responsibility for coordinating the development of the REZ in accordance with a framework set out in the National

⁵ Ibid, page 20.

Electricity Rules. At present, the scope of the REZ Coordinator is only described at a high level in the ESB's paper.

In cases where the State Government appoints a specialist government entity as the REZ Coordinator, the ESB should ensure that the responsibilities and liabilities of the TNSP and REZ Coordinator are clearly defined, workable and efficient. This is particularly relevant in the context of Victoria's unique transmission planning and connection arrangements and contestable framework for delivering ISP and other augmentations to the transmission network, which may add further complexity.

The Interim REZ Framework, including Step 1, address some important hurdles to REZ development but should be viewed as part of a suite of necessary tools that can be deployed on a case-by-case basis

The request of Energy Ministers to the ESB to develop an interim REZ Framework, reflected an urgency around planning and developing REZs. The Interim REZ Framework, including Step 1 which is aimed at improved planning and greater consideration of local community and environmental needs, address some of the important hurdles to REZ development, but should be viewed as part of a suite of necessary tools that can be deployed on a case-by-case basis to address the specific needs of each area.

This suite of tools may include current regulatory frameworks applied within the national electricity rules that could enable shared access in conjunction with or separate to the Interim REZ Framework. For example, the application of funded network augmentation provisions.

AusNet Services will continue to work with policy makers to solve this challenge in a Victorian context. This may require investigating alternative solutions that provide for greater flexibility to REZ Coordinators, particularly given Victoria's unique transmission planning and implementation arrangements. For example, policy makers could develop other proposals through the Victoria's REZ Development Plan study, which by mid-2021 seeks to understand how continued renewable investment could impact the required transmission build for Victoria.⁶

To the extent it can be applied in Victoria, the Interim REZ Framework should be implemented on a standalone basis without broader access reform.

The ESB's consultation paper describes the REZ access regime as a stepping-stone towards an enduring whole of system access solution that will overcome the problems associated with a localised nature of REZs.⁷

NEM-wide access reform is unnecessary to the development of an Interim REZ Framework. National access reform should be given sufficient time and resources to be developed and tested, acknowledging the COGATI reforms were not broadly supported by stakeholders and are complex in nature. To the extent it can be applied in Victoria, the Interim REZ Framework should be implemented on a standalone basis without broader access reform.

⁶ AEMO, 2020 *Victorian Annual Planning Report*, page 90.

⁷ *Ibid*, page 23.