

8 November 2019

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By online submission: AEMC EPR0073

Dear Mr Pierce

## **Renewable Energy Zones - Discussion Paper**

Thank you for the opportunity to submit to the COGATI – Renewable Energy Zones Discussion Paper (the REZ Paper).

AEMO agrees that the AEMC’s characterisation of Type A and Type B REZs is a helpful way of classifying the issues that arise when developing a regulatory framework that apply to REZs. However, we consider that the groupings describe regulatory arrangements that can help to support a REZ, rather than define what a REZ is. REZs should not be defined in a way that precludes different types of regulatory arrangements.

We broadly agree with the AEMC’s outline of the three key issues, including overcoming commercial and competitive tension when trying to coordinate generators, free-rider and dispatch problems and the provisions of incentives to invest in transmission infrastructure.

With this in mind, the actionable ISP reforms will help to overcome barriers to efficient transmission investment to support REZs. These reforms will overcome the current “chicken and egg” problem where transmission can only be built once generation is committed and vice versa. There will be a clear path for the development of the power system, taking a whole of system approach that takes into account the need to develop new sources of supply as the current generation fleet reaches retirement age.

AEMO notes the issues of generator coordination can be addressed through changes to the regulatory framework. There are many examples of alternative market arrangements that have more orderly and transparent connections processes. For example, market designs that feature queuing mechanisms tend to have more orderly and transparent connections processes.

AEMO is open to exploring different mechanisms that enable generators to fund transmission infrastructure over and above what is delivered by the actionable ISP, such as the model put forward by the Energy Networks Association. As part of this work, we would like to ensure that the proposed model does not result in misalignment between the ISP and RIT-Ts.

We would welcome the opportunity to discuss the matters raised in this submission further. Should you have any questions, please contact Kevin Ly, Group Manager Regulation at [Kevin.Ly@aemo.com.au](mailto:Kevin.Ly@aemo.com.au)

Yours sincerely

A handwritten signature in blue ink, appearing to be 'P. Geers', with a long, sweeping line extending upwards and to the right.

**Peter Geers**  
**Chief Strategy and Markets Officer**

## ATTACHMENT 1: AEMO's submission to AEMC's Renewable Energy Zones – Discussions Paper

### Question 1: Types of REZs

***Do stakeholders agree with the characterisation of these two types of REZ?***

***Are there any other ways to characterise REZs?***

The REZ paper characterises REZs as either:

- Type A – a cluster of generators sharing connection assets and connected to the shared network at a single point
- Type B - a cluster of generators located within the same geographic area of the shared transmission network.

We agree that the broad Type A/Type B groupings are helpful in characterising the issues. However, we consider that the groupings describe regulatory arrangements that can help to support a REZ, rather than define what a REZ is. REZs should not be defined in a way that precludes types of regulatory arrangements.

AEMO notes that the question of the definition of a REZ is also being considered in the context of the ESB's actionable ISP reforms.

### Question 2: Scope of Issues

***Do stakeholders agree that these are the relevant issues for REZs? Are there any other?***

***Which issue(s) do stakeholders think REZs should address?***

The AEMC outlines three key issues to overcome in order to facilitate REZs:

1. Competitive tensions and commercial challenges
2. Free-rider and risk of not being dispatched
3. Incentives for efficient transmission infrastructure.

We agree that the issues identified by the AEMC are relevant, although we consider that the actionable ISP reforms are designed to resolve the incentives for efficient transmission infrastructure.

The actionable ISP reforms will overcome the current “chicken and egg” problem where transmission can only be built once generation is committed and vice versa. There will be a clear path for the development of the power system that takes into account the need to develop new sources of supply as the current generation fleet reaches retirement age.

The new framework will trigger the investment decision making process for shared transmission infrastructure. It will also support efficient investment decisions by market players as they will have greater clarity regarding the future development of the power system, including information about where and when opportunities will arise.

AEMO's ISP development process includes extensive stakeholder engagement. As part of this process, AEMO engages with state governments on REZ identified in the ISP as critical to the optimal development pathway. In the future, there may be scope to further integrate

these processes such that ISP-aligned REZs receive expedited planning approvals. These arrangements have the potential to be an important input to generator location decisions.

In addition to the issues outlined in the REZ paper, the AEMC should consider measures to promote the cost-effective provision of transmission infrastructure. There is scope to give third party TNSPs (or merchant TNSPs) a bigger role in delivering efficient REZs. This is discussed further below.

### **Question 3: Type A REZs**

***Do stakeholders agree with this assessment of type A REZs?***

***Have stakeholders experienced issues when connecting to a DCA? If so, have they been managed or is a regulatory solution required for these issues?***

***Are there any other barriers to facilitating a type A REZ?***

We do not agree that the issue of coordination between generators cannot be resolved through changes to the regulatory framework. Rather these issues are a product of NEM design choices. By international standards, the NEM is something of a free-for-all. AEMO notes that market designs that feature queuing mechanisms tend to have more orderly and transparent connections processes.

For instance, connection assets and security infrastructure for a Type A REZ could be built on a regulated or commercial basis, with the capacity of the REZ made available to generators via auction or other process. For such investment to occur on a commercial basis, it would be necessary to amend the Rules to encourage merchant transmission services.

Merchant TNSPs may be willing to take on greater levels of risk than incumbent TNSPs in building scale efficient connection assets and associated system security infrastructure (including synchronous condensers). For instance, a merchant TNSP may be willing to build extra bays in a substation and make the additional capacity available to subsequent connecting generators. The information made available via the ISP regarding REZ development opportunities may help to give merchant TNSPs confidence that their assets will be fully utilised.

The current connections framework does not preclude such arrangements, but it does create a number of obstacles. Reforms to permit the operation of identified user shared assets by the owner of the asset (rather than the local TNSP) could help to stimulate the merchant provision of transmission connection services. The system strength framework may also present difficulties for parties seeking to develop a Type A REZ.

Scale efficient connection assets have the potential to reduce costs to generators, both through economies of scale and by simplifying and expediting the connection process. It would also help to limit the impact of REZ developments on communities, by reducing the need for duplicative connection infrastructure.

#### **Question 4: Type B REZs**

***Do stakeholders agree with this assessment of type B REZs?***

***Are there any other barriers to facilitating a type B REZ?***

As outlined in our response to question 2, we consider that the actionable ISP reforms will help to overcome barriers to efficient transmission investment to support REZs. However, given the current open access regime, further measures may be required to promote efficient generator location decisions.

Such measures should aim to address subsequent connection risk; i.e. the risk that a generator will be constrained, or have their loss factor worsen, as a result of a subsequent generator's location decision.

#### **Question 5: Stakeholders' views on models**

***What are stakeholders' views on the five models presented in this paper for REZs? In particular, do stakeholders think the preferred model (described above) should be pursued further?***

***Are there any other ways of addressing the 3 issues identified in this paper that have not been considered?***

AEMO is open to exploring mechanisms that enable generators to fund transmission infrastructure over and above what is delivered by the actionable ISP, such as the model put forward by the Energy Networks Association. As part of this work, we would like to ensure that the proposed model does not result in misalignment between the ISP and RIT-Ts.

A variation of this model could potentially be used to:

- refine the detailed technical solution used to give effect to shared transmission investments identified via actionable ISP framework, for instance, by influencing the path of a network augmentation; and/or
- enable generators to invest in transmission in addition to the optimal development path identified in the ISP.

Historically, it has been difficult to create incentives for generators to invest in the shared transmission network given the 'dispatch' and 'free-rider problems'. Under the model outlined in Chapter 4 of the REZ paper, this issue is addressed using long term transmission hedges. We have concerns about the workability of this approach, including how long-term transmission hedges might interact with other elements of the regulatory framework.