



Coordination of generation and transmission review - renewable energy zones

Context for this review

The *Coordination of generation and transmission investment (COGATI)* review is focused on examining *when* the transmission frameworks will need to change, and, if so, *what* they will need to change to. This review is undertaken pursuant to a terms of reference received in 2016 from the Council of Australian Governments (COAG) Energy Council.

The current review has two key focusses:

1. developing the specification of the **proposed access model**, which implements dynamic regional pricing and financial transmission rights
2. facilitating **renewable energy zones**, which are a useful first step on the path to holistic access reform and can be implemented earlier.

These focus areas are being undertaken through two different work streams, however both of the proposed models are consistent with each other.

The electricity sector transition that is currently under way is changing the dynamics of the power system. Traditional thermal plants are closing, and more renewable and asynchronous generators are coming to the power system. The transformation of the electricity system is also leading to a small number of large and more centrally located generators being replaced by a large number of relatively small, flexible, asynchronous and geographically dispersed generators. In the next 10 years alone, generation roughly equal to the current size of the NEM (50 GW) is expected to connect to the grid. The national electricity market will replace most of its current stock by 2040.

Transmission access reform is therefore vital for the NEM to effectively evolve, transition and co-ordinate investment resulting in least-cost wholesale outcomes for consumers.

Renewable energy zones could be a useful first step on the path of more holistic access reform and can be implemented earlier. Therefore, considering ways to facilitate renewable energy zones through a separate work stream allows the Commission and stakeholders to focus on the changes needed to the regulatory framework to facilitate renewable energy zones.

There are different concepts for renewable energy zones

The concept of a 'renewable energy zone' is not defined in the existing regulatory framework, and it has been used by different parties to describe different ideas and concepts, depending on what a particular party wants to achieve and do.

This paper seeks to provide some clarity as to the different ways a renewable energy zone can be characterised, how these can be achieved under the current framework, the various issues that arise under those different characterisations, and how they can be better facilitated in the future.

Renewable energy zones can be characterised in two broad ways:

- Type A is a cluster of generators sharing **connection assets**. Type A renewable energy zones can already be facilitated under the current regulatory framework. To the extent that these opportunities are not being pursued, it is often due to factors outside the regulatory framework such as commercial and confidentiality considerations.
- Type B is a cluster of generators sharing the same geographic area of the **shared transmission network**. One of the main barriers to facilitating type B renewable energy zones is that there are no incentives under the current framework for different generators to

collectively fund assets for the shared transmission network. A generator that invests in the shared transmission network faces a free-rider problem and a risk of not being dispatched, despite the investment.

The discussion paper considers a number of models for facilitating renewable energy zones and presents the Commission's preferred model that seeks to overcome these problems. These could work in conjunction with identification and implementation of REZs through the Integrated System Plan.

A recommended model for implementing renewable energy zones

This paper presents a model that seeks to facilitate type B renewable energy zones and overcome the free-rider problem.

The proposed model provides a way for generators to make a financial contribution to investment in the shared transmission network required for a renewable energy zone. In return for that investment, the generator receives a long-term hedge that provides some guarantee about its financial return for making that investment.

This model would work alongside the usual transmission planning and investment decision-making processes undertaken by the Australian Energy Market Operator and transmission network service providers.

We are interested in stakeholder feedback on this model.

Next steps

The Commission invites stakeholder feedback in response to the questions raised in the discussion papers. Submissions are due by **8 November 2019**. In addition, a public forum will be held in Melbourne on 18 October to discuss the reforms. Stakeholders should register for the forum or its webcast via the Commission's website.

A final report covering both renewable energy zones and access reform will be submitted to the COAG Energy Council and published in December 2019. It is anticipated that the proposed changes to the rules consistent with the proposed model will be submitted to the Commission to be progressed through the rule change process in early 2020.

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