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7/11/2019

Mr John Pierce
Chair
Australian Energy Market Commission
PO Box A2449
Sydney NSW 1235

Lodged online via: www.aemc.gov.au

Dear John,

Coordination of generation and transmission investment review – discussion papers

TransGrid welcomes the opportunity to respond to the Australian Energy Market Commission's **(AEMC)** coordination of generation and transmission investment – access reform and renewable energy zone discussion papers. We urge policymakers to work together to implement the changes needed to provide a stable regulatory environment that encourages the required investment.

TransGrid is the operator and manager of the high voltage transmission network connecting electricity generators, distributors and major end users in New South Wales and the Australian Capital Territory. TransGrid's network is also interconnected to Queensland and Victoria, and is instrumental to an electricity system that allows for interstate energy trading.

TransGrid considers a regulatory framework that provides for the effective actioning of the Integrated System Plan and the facilitation of energy zones through that process will solve many of the issues the AEMC is seeking to solve. Regulatory reforms currently being progressed by the Energy Security Board to action the Integrated System Plan are therefore critical for a low emissions, relaibile electricity supply at the lowest cost to consumers.

Conceptually, we support the AEMC's proposed access reforms as a useful complement to the actioning of the Integrated System Plan and any additional changes to the regulatory framework that are necessary to enable the development of energy zones. However, it is essential that the AEMC's proposed access reforms do not become a barrier to investment in the new generation required for the energy transition. We therefore urge the AEMC to continue to engage with generators and other stakeholders on the reforms to ensure that any concerns are adequately addressed. In this regard, an assessment of the costs of the proposed reforms against the benefits is also critical.

We appreciate the opportunity to comment on the AEMC's discussion papers and look forward to engaging with the AEMC and other stakeholders further on this important project. If you would like to discuss this submission, please contact Neil Howes, Regulatory Affairs Manager (02 9284 3748) or myself (02 9284 3147).

Yours faithfully

Catriona Webster
Head of Public Policy

Coordination of generation and transmission investment review

Submission to AEMC discussion papers – November 2019

1. Summary

TransGrid welcomes the opportunity to respond to the Australian Energy Market Commission's **(AEMC)** coordination of generation and transmission investment **(COGATI)** – access reform and renewable energy zones discussion papers. We agree that there is an increasing need to invest in the transmission network to facilitate the energy market transition to a low emissions electricity supply that is reliable and low cost and we urge policymakers to work together to implement the changes needed to provide a stable policy and regulatory environment that encourages the required investment.

TransGrid is the operator and manager of the high voltage transmission network connecting electricity generators, distributors and major end users in New South Wales and the Australian Capital Territory. TransGrid's network is also interconnected to Queensland and Victoria, and is instrumental to an electricity system that allows for interstate energy trading.

Australia is in the midst of an energy transformation. This is primarily driven by changing community expectations and choices, advances in renewable energy technologies, retirement of existing generation, and the adjustments required in Australia's economy to meet our international climate change commitments. These changes raise complex issues in relation to the design of the National Electricity Market **(NEM)** which must adapt to these changes and provide the basis for low emissions, reliable supply at the lowest cost to consumers over the long run.

TransGrid understands that the AEMC is seeking stakeholder views on:

> The specification of a proposed access model, which implements dynamic regional pricing and financial transmission rights **(FTR)**.

> Facilitating renewable energy zones, which it considers are a useful first step on the path to holistic access reform and can be implemented earlier.

TransGrid considers the effective actioning of the Integrated System Plan **(ISP)** and the facilitation of energy zones through that process will solve many of the issues the AEMC is seeking to solve in its coordination of generation and transmission investment review. A regulatory framework that allows for the effective actioning of the ISP should facilitate the transmission investment needed, including energy zone investments, to provide a reliable energy supply across the NEM at the lowest price for consumers. Regulatory reforms to action the ISP currently being developed by the Energy Security Board (**ESB**) are therefore critical.

Conceptually, we support the AEMC's proposed access reforms as a useful complement to the ISP and any additional changes to the regulatory framework that are necessary to enable the transmission investment required to develop energy zones. However, it is essential that the AEMC's proposed access reforms do not become a barrier to investment in the new generation required for the energy transition. We therefore urge the AEMC to continue to engage with generators and other stakeholders in the development of the reforms to ensure that any concerns they have are adequately addressed. An assessment of the costs of the proposed reforms against the benefits is also critical.

The AEMC usefully progresses the discussion on how to facilitate transmission investment required for the development of energy zones (**energy zone investment**). In addition to those energy zones which are identified in the ISP, and can be effectively actioned through that process, the regulatory framework should facilitate energy zone investment that is identified by TNSPs in their local planning processes. TransGrid submits that refinements to the regulatory investment test for transmission **(RIT-T)** are urgently required to facilitate these energy zone investments – the RIT-T is currently a barrier to energy zone investments that are in the long term interests of consumers.

The model for facilitating energy zone investments put forward by the AEMC in its discussion paper warrants further consideration as a means of giving generators the ability to fund energy zone

investments should they wish to do so. A key question is what you give generators in return for their investment. Most importantly, in the current environment we understand that generators want to be able to get their energy to market, that is they want to be able to manage their exposure to volume risk created by network congestion.

The AEMC's proposed model for facilitating energy zone investment should not be adopted for energy zone investments which have passed the RIT-T. Given these investments have been determined to be optimal for consumers, the efficient costs of making those investments can be recovered from consumers under the existing framework.

This submission provides TransGrid's views on the issues canvassed by the AEMC in more detail, in particular:

> Chapter 2 sets out our position on the proposed access reforms.
> Chapter 3 sets out our views on how to facilitate energy zone investments.

TransGrid has also contributed to Energy Networks Australia's submission to the AEMC's discussion papers and is supportive of the views in that submission.

2. The AEMC's proposed access reforms are a useful complement to an effectively actioned Integrated System Plan

This Chapter sets out the AEMC's proposals on access reform and TransGrid's views on the proposals.

2.1 AEMC's proposals

The AEMC considers transmission access reform is vital in order for the NEM to effectively manage the current transition underway in generation technologies, whatever this future may look like.

It proposes two key changes to the current access arrangements in the NEM:

1. Large generators and storage receive a local marginal price for supplying electricity at their location. They currently receive a regional price based on the marginal price of electricity at a single node in each jurisdiction. Load will continue to pay a regional price under the AEMC's proposals.[1]
2. Generators and storage can purchase financial transmission rights (FTRs) to help manage congestion risk.

The AEMC no longer proposes to provide a direct link between the sale of transmission hedges and transmission planning and investment. The AEMC has removed this aspect of its proposals following stakeholder feedback.

2.2 TransGrid's view

TransGrid considers an effectively actioned ISP along with the facilitation of renewable energy zones are critical for a reliable, low-emissions and low cost electricity supply and will deliver much of the investment required during the energy market transition.

Conceptually, TransGrid supports the AEMC's proposed access reforms as a complement to an effectively actioned ISP and the delivery of energy zone investments.

We consider the AEMC's proposed reforms should represent an improvement on current access arrangements in the NEM and deliver benefits to consumers in that they should:

> Lead to more efficient outcomes in the wholesale market.
> Improve locational signals for generators.[2]

[1] We note that storage receives a local marginal price for both discharging and charging.

[2] We note that the effectiveness of this signal may be affected by the extent to which generation output is sold pursuant to Power Purchase Agreements (PPAs) or Contracts for Difference arrangements, with the contract prices reducing the signalling effect of wholesale market prices.

- Facilitate the application of dynamic loss factors in the settlement process – dynamic loss factors would more closely reflect actual physical losses on the network.
- Allow generators to partially protect against congestion risk through the purchase of FTRs.

However, it is essential that the AEMC's proposed reforms facilitate the generation investment required during the energy transition in the NEM context.

We have heard from generators that they have some concerns with the proposed reforms including the implementation timeframes, cost, complexity and how the reforms will actually work in practice, in particular we are hearing that generators are concerned about the firmness of the proposed FTRs. TransGrid urges the AEMC to work with generators and other stakeholders to address their concerns.

In this regard, we also support the AEMC undertaking a thorough cost benefit analysis to provide clear evidence that the potential consumer benefits of the proposed reforms outweigh the likely costs of the reforms.

We strongly support the AEMC's proposal to remove a direct link between the purchases of transmission hedges and transmission planning and investment. This proposal could undermine the ISP developed by the Australian Energy Market Operator **(AEMO)** and regional plans developed by TNSPs which will identify transmission investments that are optimal for consumers. It is critical that this does not occur.

We understand that AEMO will manage any settlement residues that arise with the residues going into a fund which would be used to pay out FTRs when congestion arises and, pursuant to the proposed reforms, local marginal prices are lower than regional reference prices. Transmission network service providers **(TNSP)** will no longer be required to manage inter and intra-regional settlements residues and settlement residue auction proceeds. TransGrid supports this as the current arrangements are resulting in significant fluctuations in prices for load customers and causing significant cash flow problems for TNSPs. It is appropriate that the proceeds from the auctions of FTRs are passed on to consumers in the form of lower transmission prices.

We support incentives for TNSPs under the new framework similar to those under the existing market impact component of the service target performance incentive scheme **(STPIS)** as proposed by the AEMC.

3. An effective framework to deliver energy zones is essential

TransGrid understands that the AEMC is seeking stakeholder views on facilitating energy zone investments, which it considers are a useful first step on the path to holistic access reform and can be implemented before those reforms are introduced. This Chapter sets out the AEMC's proposals and TransGrid's views on this issue. TransGrid considers a regulatory framework which facilitates energy zones through the ISP and local TNSP planning processes is essential for the energy transition.

3.1 The AEMC's view

The AEMC categorises energy zone investments into two broad types:

- Type A. These energy zones involve connection assets only.
- Type B. These energy zones involve shared assets in addition to connection assets.

The AEMC considers the issues with facilitating each of these energy zone investments and how they may be overcome.

While the AEMC acknowledges there is a problem of getting generators to coordinate for Type A energy zone investments, it does not propose changes to the regulatory framework to address this issue concern - it considers this issue is not able to be solved by regulatory change.

The AEMC considers there is a free rider and dispatch problem in relation to facilitating Type B energy zone investments. It proposes that generators fund transmission in return for being able to purchase long term hedges as a means of addressing this issue.

3.2 TransGrid's view

Building on the AEMC's discussion paper, TransGrid considers energy zone investments can be categorised into three broad types:

> Type 1: Energy zone investments identified in the ISP or through TNSPs local planning processes and which provide benefits to consumers. These assets will form part of the shared transmission network and be paid for by consumers.

> Type 2: Energy zone investments that generators want to fund (either fully or partially) as part of the shared network.

> Type 3: Energy zone investments that are developed as a dedicated connection asset (consistent with the AEMC's Type A energy zone).[3]

TransGrid's views on how each of these types of energy zones should be facilitated under the regulatory framework are provided below.

3.2.1 Type 1: Energy zone investments identified in the ISP or in TNSPs local planning processes

TransGrid considers the current regulatory barrier to delivering energy zone investments as a service paid for by consumers is the application of the RIT-T. The current RIT-T is not suitable for facilitating energy zone investments that are in the interests of consumers as it does not allow TNSPs to give appropriate weight to expected generation. This may lead to inefficient outcomes for consumers due to inefficiently scaled or delayed transmission investments and a failure to resolve the "chicken and the egg problem" where generation will not connect without transmission but transmission cannot be built without committed generation. This is a critical issue that needs to be resolved as soon as possible.

We note that the ESB is currently developing a regulatory framework to action future ISPs which should address this issue with respect to energy zone investments that are identified as a priority in the ISP.

Regulatory changes are also required to facilitate any energy zone investments which are not identified in the ISP but which are identified in local plans prepared by TNSPs. Consideration could be given to the model for facilitating renewable energy zone investments proposed by the ENA in its submission to the AEMC's COGATI directions paper as a means of overcoming this issue in the longer term. The premise of this model was to provide a mechanism to identify credible generation interest located in the energy zone such that the generation can be assumed to be "committed" for the purposes of the RIT-T.

TransGrid understands that the ENA model involves:

1. TNSP undertakes RIT-T on energy zone investment.
2. In parallel, TNSPs invite generators (and other parties) to make a down payment for the first right to secure long-term transmission hedges for the investment.
3. Down payments do not drive the RIT-T but they would provide greater confidence in the investment.
4. Where an investment satisfies the RIT-T, it would proceed as a prescribed service. Generators who have made down payments would have their down payment returned and receive a right to bid in an auction for long term hedges.
5. Long term hedges are auctioned off. The proceeds from the auction are used to offset TUOS charges.

We note that this model relies on the AEMC's broader proposed access reforms to be implemented to work, so this would not be a short term solution.

3.2.2 Type 2: Energy zone investments that generators or other investors want to fund as part of the shared network

TransGrid supports there being an option for generators or other investors to fund energy zone investments that will form part of the shared transmission network. The key question is what builders and operators of shared transmission can give generators in return for their investment under an open access framework.

[3] While the regulatory framework should not preclude energy zones from being developed under this model, we consider there are technical barriers to developing energy zones this way in addition to the commercial issues which may provide disincentives for generators to coordinate and invest in efficiently scaled connection assets.

TransGrid understands that for generators to underwrite investments in the current environment they need an ability to manage the volume risk associated with congestion. That is, they want to minimise their exposure to not being able to dispatch energy. In this regard, we observe that the AEMC's proposal for long term transmission hedges would address price risk issue by allowing the generator to manage the risk of a difference between the locational marginal price and the regional price but, as currently formulated, does not address the 'dispatch' (volume) issue.

One longer term option for extensions to the existing shared network, rather than expansions or other augmentation deep within the existing shared transmission network, may be to offer generators the right to secure long term hedges up to the point where the extension joins the existing shared network for their investment. In this regard, TransGrid would support further exploration of the AEMC's proposed model for facilitating 'Type B' energy zones where generators want to fund shared transmission investment in an energy zone (in part or in full).

We note this model requires the AEMC's broader access reforms to be implemented to work and so would not be a short term solution. A shorter term option could be to provide funding generators with exclusive access to an extension to the transmission network that they fund (up to the point where the extension joins the existing shared network) in return for their investment. It is essential that any model for generator funding of energy zone transmission investment should allow generators to pay for the transmission investment over the life of their generation plant, and not require full up-front payments for the investment.

We do not support the AEMC's proposed model for energy zone investments for investments that have passed the RIT-T. These transmission investments have been demonstrated to be optimal for consumers. The efficient costs of making these investments can therefore be recovered from consumers under the existing framework.

3.2.3 Type 3: Energy zones investments that are developed as a dedicated connection asset

TransGrid considers that in addition to the broader generator coordination issues identified by the AEMC, there are technical difficulties that arise when connecting multiple parties to a dedicated connection asset, particularly where the connecting generators are unrelated parties, the timing of generator connections to the dedicated connection asset varies or there are many different types of generation technology connecting to an energy zone. There are therefore likely to be significant advantages with facilitating energy zone investments as part of the shared network. However, TransGrid supports the option that exists under the current regulatory framework for generators to fund energy zone investments as dedicated connection assets should they wish to do so.