



MEM18D0205

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

***Coordination of generation and transmission investment – Discussion Paper
(EPR0052)***

Dear Mr Pierce,

John

Thank you for the opportunity to provide comment on the Commission's Coordination of generation and transmission investment – Discussion Paper.

The changing generation mix and Optional Firm Access

Given the recent changes to the generation mix in the National Electricity Market, South Australia sees this as the ideal opportunity to further consider amendments to the current regulatory framework. We consider improvements to better coordinate transmission and generation investment will assist in delivering a reliable supply of electricity to consumers at least cost.

As the Commission states, historically the shape of the transmission network was driven mainly by demand growth. Whereas today this is driven more by the different location and type of generation investment. This is due to the best renewable energy resources typically being more remote from existing transmission infrastructure. This has been the case in South Australia for some time. We are of the strong belief that the network should be working for consumers, as well as providing appropriate and sufficient incentives for transmission network service providers and generators.

So while the changing nature of the energy system is presenting new challenges, South Australia is at the forefront of this transformation.



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The locational decisions made by generators in the past have led to historically high levels of congestion in South Australia. This has particularly been the case in the mid-north and south-east of the state due to wind generation investment. The congestion heat map presented in AEMO's draft Integrated System Plan (and reproduced on page 41 of the Commission's Discussion paper) suggest that congestion in these regions is still an issue.

Despite the south-east and mid-north regions of South Australia historically suffering from constraint issues, there is an ongoing possibility that a new renewable generator may connect to these regions due to the optimal conditions that exist in these areas.

Further renewable projects are already committed, with projects in South Australia including 220 MW of new solar generation (Bungala One and Bungala Two), 245 MW of new wind generation consisting of Lincoln Gap Stage 1 (126 MW) and Willogoleche (119 MW), all in the mid-north region of the state. Further to this are publicly announced projects, including the Aurora Solar Reserve project near Port Augusta (150MW) which recently secured State Government development approval. DP Energy's Port Augusta Renewable Energy Park has also received Development Approval from the South Australian Government, while the Goat Hill pumped hydro project is moving through development phases.

The incentive therefore exists for these generators to connect to these areas even though they may not be the best locations for network performance.

As the Commission is aware, South Australia has long held concerns that the existing NEM design does not adequately deal with the impacts of congestion on market participants. This may affect participants' ability to enter in to contracts with any confidence, and this is particularly the case for contracting inter-regionally. As indicated in previous submissions, we believe there is a need to develop regulatory frameworks to support a sustainable congestion management regime.

While the Commission's Discussion Paper suggests that congestion in the NEM is limited at this time, we consider the issue is still vitally important given the future connections likely to occur. Future connections may increase at a greater rate now that emissions policy certainty is seemingly becoming closer with the progress being made on the NEG.

The AEMO NEM Constraint Report 2016 released in June 2017 states that "*the 2016 calendar year experienced the second largest number of constraint equation changes since the start of the NEM*" with "*the binding hours in 2016 the largest seen in the past six years*". In addition, "*South Australian constraint equations dominated the top 20 market impact constraint equations.*"



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We understand that AEMO is seeking to undertake modelling showing future congestion patterns in its final Integrated System Plan. We suggest that the future congestion patterns modelled by AEMO are taken in to consideration by the Commission in this review.

Further interconnection may eventually assist in relieving the congestion issue, which the Commission notes is largely limited to inter-regional congestion. Assessment of the feasibility of a new interconnector is underway, with a draft report recently released. However, as the report notes, congestion is also occurring at the ends of the regions, which can in turn translate to congestion on interconnectors. A form of locational pricing may help address this issue.

As we have stated previously, we strongly encourage the Commission to consider the potential impact that accurate locational pricing signals across the market may have on the locational decisions of generators and the subsequent effect this may have on the level of congestion.

As a significant amount of work has previously been undertaken by the Commission in developing the Optional Firm Access framework, we consider this is the right model for further assessment given the current market conditions. Optional firm access would change the way in which transmission and generation investment decisions are made, and would mean generators would bear more of the risk associated with some transmission investment. Generators could choose to pay for a specified level of access to the transmission network in order to manage the financial impacts of network congestion. We believe Generators are best placed to determine the transmission network access they require, and ensuring they have greater involvement in the process will reduce the risk of overinvestment in transmission networks.

The Commission's final recommendation from the *2015 Optional Firm Access, Design and Testing – Final Report* was that, under the investment environment at the time, OFA did not contribute to the achievement of the National Electricity Objective and should not be considered for implementation. However, the Commission considered the model may be beneficial in a future environment where there is a need for additional generation and transmission investment.

It is concerning that, if it is determined that current market conditions suit amendments being made to the regulatory framework, another lengthy assessment of options delays the implementation of the OFA model.

It is also noted that the Terms of Reference under the stage 2 detailed analysis for this work program the Commission should assess whether the OFA model is still fit for purpose, and if so if implementation of OFA would meet the NEO.



The Commission has listed a spectrum of options that could potentially better coordinate generation and transmission investment, however has instead focussed attention on considering renewable energy zones (REZs). While South Australia is supportive of further development of REZs, we also consider the timing appropriate for the Commission to re-examine the implementation of a firm access rights model.

Further consideration could be given to whether the OFA model and REZs could work in conjunction, with the OFA model focussed around transferring the risks anticipated with transmission network spend from consumers to generators in return for financial access, with the development of REZs better facilitating transmission planning outcomes. While the REZ framework may increase the possibility of multiple generators connecting where the transmission system can best cope, it could still result in subsequent generators connecting in this area, constraining off original generators. The addition of an OFA model may assist as these subsequent generators would have the option of providing funding and guidance on the development of new transmission when they connect, or at least ensure they compensate the original generators they may constrain off.

Renewable Energy Zones (REZs)

With regard to the paper's discussion on REZs, South Australia considers the broad definition proposed by AEMO in its ISP is reasonable. While the Commission's options for REZs are worthy of discussion, they do not resemble definitions of what a REZ should be. Rather they appear to be options for implementation of a REZ, and how best to encourage investment in a REZ.

We understand that the AEMO ISP will further consider what makes a successful REZ and how to develop them. Some clarity in the way the market bodies are working together on this issue should be included in future reports. Nevertheless, with regard to the options presented in the Commission's paper, South Australia offers the following comments.

South Australia agrees that a key consideration when determining arrangements for REZs is who is best placed to manage the risk. We concur with the Commission's preliminary view that this risk is likely to be better placed with the generation and transmission businesses themselves.

Given the amount of work still to be considered in this area, the Government's initial view is that any model chosen should avoid placing all the risk on consumers who are least able to manage the risk. This would eliminate any model approaching option 4 on the Commission's spectrum where consumers would bear all the risk of any stranded assets.



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As stated by the Commission, option 2 is similar to the existing Scale Efficient Network Extension (SENE) framework. While this rule sought to provide a framework to capture economies of scale, the framework has not yet been utilised.

The Commission notes in its paper the many concerns provided by stakeholders as to why this has been the case, such as reluctance to take on the risk of asset stranding if projected generator connections did not eventuate, and generators being unwilling to share commercially sensitive information to facilitate coordinated connections. Given the history of the SENE framework, these issues would need to be resolved before this option was favoured.

Option 1 would appear to be the least disruptive option of those presented. Some amendments may be required to various planning documents including the NTNDP/ISP and TNSPs Annual Reports to highlight spare network capacity, available land, favourable resources etc. to prospective connecting parties. The weakness of this option, however, is that this type of information would generally be known by the businesses contemplating connection to the NEM currently.

Further, the Transmission Connections and Planning rule change, in operation from 1 July 2018, requires TNSPs to publish more and better information about how to connect to their network, and provide certain information to connecting parties on request. The post July framework will also enable greater transparency and contestability and make connections easier and cheaper for generators, or potential REZs.

The rule change also requires a dedicated connection asset service provider to prepare, maintain and publish an access policy for its large dedicated connection asset(s) on its website to provide a framework for applicants to obtain access to large dedicated connection asset services. So while the option to enhance information provisions is not entirely opposed, we are unsure of the additional benefit it may provide.

It is also unclear whether a TNSP would undertake the initial speculative investment to build a REZ under option 3. Whilst a clear process and thresholds for speculative investment to become regulated may make this option more attractive, the AEMC is encouraged to assess with TNSP's the likelihood of this option being utilised.

The AEMC should review international examples to determine if there are successful models for speculative transmission investment to meet a forecast need. Further, we consider that the Commission should consider options in the range of the spectrum between option 2 and option 3. That is, options which provide for risk sharing between parties capable of managing that risk.



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The AEMC should consider models which allow risks to be shared by a number of parties to ensure initial investments are undertaken. It should also consider the concept of option value, where transmission investments are undertaken in a manner which provides for future expansion. Models should provide for any foundation parties to benefit from any additional connections made in the REZ and should have clearly defined process and appropriate thresholds to ensure they are utilised and that suitable investments result.

The South Australian Government supports REZs being operationalised in the NEM and therefore encourages the Commission to undertake further assessment of all implementation options, including options additional to the four presented in the Discussion Paper such as that raised above.

Thank you for your correspondence providing an update on this matter. Should you wish to discuss this further, please contact Ms Rebecca Knights, Director Energy Policy and Projects on (08) 8226 5500.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Dan van Holst Pellekaan".

Hon Dan van Holst Pellekaan MP
Minister for Energy and Mining

3/8/2018