



ENERGY DIVISION

Level 8,  
11 Waymouth St  
ADELAIDE SA 5000

PO Box 1  
Walkerville SA 5081

Telephone: 08 8226 5500  
Facsimile: 08 8204 1730

ABN 92 366 288 135

Mr John Pierce  
Chairman  
Australian Energy Market Commission  
PO Box A2449  
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

Thank you for the opportunity to comment on the Australian Energy Market Commission's (AEMC) *Transmission Frameworks Review – Directions Paper*.

The Energy Division considers that this review is a critical piece of work in ensuring the transmission sector continues to provide reliable delivery of electricity to meet consumers' needs.

In the Directions Paper, the Commission highlights that the objective of the transmission framework is to ensure generation and transmission is optimised in a manner to minimise total system costs to consumers. Energy Division agrees with this objective but notes that disaggregated commercial investment decisions by the competitive generation sector are optimised by both wholesale and network pricing. Therefore it is vital that the pricing signals in the market send the 'right' signals.

The main area of concern for South Australia is the inefficient locational decisions made by generators which results in congestion on the South Australian transmission network. The development of a framework that provides incentives for generators to locate in uncongested parts of the network is a crucial issue for South Australia.

Congestion is already an issue in some parts of the transmission network in the State. South Australia currently has over 1000 MW of wind capacity in operation. Around 320 MW of this wind generation is installed in the south eastern region of the state, and around 565 MW in the mid-north. We consider there is a risk that current levels and costs of congestion will increase in the future, particularly in these regions where there will continue to be significant penetration of intermittent generation such as wind. AEMO's 2010 SASDO indicates announced wind farm projects at Woakwine (420 MW), Kongorong (120 MW) and Allendale (46 turbines) in the south-east and a further nine announced projects in the mid-north totalling over 1000 MW. This level of additional generation investment in congested areas if the grid suggests that the current framework is not providing the 'correct' signals.

The power transfer capability of the Heywood interconnector, between South Australia and Victoria, is also often restricted due to voltage and/or thermal limits, depending on transfer direction and the demand and generation conditions in the two states.

Work undertaken by AEMO on the Heywood transformer notes that the power transfer capability from Victoria to South Australia of the interconnector was restricted for around 900 hours in 2010 and 625 hours in 2009 due to voltage stability limits. The power transfer capability is lowest when there is high generation in south-east South Australia.

The Energy Division is concerned about constraints on the Heywood interconnector during periods of high demand in South Australia as this reduces competition by limiting the availability to import Victorian electricity during these periods. We consider that the power transfer capability of the interconnector therefore needs to be increased.

The Energy Division is currently seeking further information on the instances and related cost of congestion to South Australia and supports the Commission undertaking further work on the materiality of congestion generally.

In undertaking this work, the Commission should also be mindful of the impact the risk of congestion has on the behaviour of conventional generators. While the existence of congestion on a transmission line can constrain off both renewable and conventional generators, the impact on a conventional generator could be much greater. The lack of dispatched load could result in significant financial losses to the conventional generator through its Power Purchasing Agreements. The closer the market price is to the Market Price Cap the greater the loss to the generator will be.

This risk may result in a conventional generator taking on less contracted load and exposing itself more to the spot price. There is evidence in South Australia of conventional generators taking this approach which has resulted in them employing bidding strategies to increase prices in the spot market during times of high demand. Energy Division is therefore concerned about the impact network congestion has on the energy market and financial market due to the behaviour of conventional generators and their subsequent ability to exert market power.

In addition to the factors that impact on the locational decisions by generators listed by the Commission in its Discussion Paper, various environmental policies and conditions could also be contributing to the amount of congestion occurring on the transmission network. While policies that encourage investment in large scale renewable energy generation may be beneficial for environmental reasons, the best locations of renewable energy source may not be at the optimal parts of the transmission network.

The ERET, for example, requires significant investment in renewable generation which could result in substantial augmentations to areas of the transmission network.

Despite the south-east and mid-north regions of South Australia already suffering from significant constraints, there is a strong possibility that a new renewable generator may connect to these regions due to the optimal conditions that exist in these areas. The incentive therefore exists for these generators to connect to these areas even though they may not be the best locations for network performance.

Energy Division considers that the current framework does not provide sufficient incentives for generators looking to connect in unconstrained areas of the network. The access regime allows for generators to connect to the network where they wish without facing the true costs of their impact on the wider transmission network, for example 'deeper' augmentation costs.

The Energy Division strongly encourages 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. We strongly consider that maintaining the status quo in this area is unacceptable.

One possible approach may be to adopt a model similar to that used to charge for augmentations to the distribution network. Under this model any proponent who causes a deeper augmentation to the network pays for all, or a proportion, of these costs. Energy Division consider this 'causer pays' approach is more appropriate than the current approach where the TNSP funds the augmentations and all costs are then passed on to consumers.

The Energy Division notes that even if generators choose to fund 'deeper' augmentations to the shared transmission network in order to reduce congestion and the impact of constraints, they may receive no benefit for the augmentation, as these benefits may accrue to other generators, including those who subsequently connect. The Commission should consider whether generators should receive some level of service guarantee around access to the shared network so that the transmission network capacity along flow paths is maintained.

The AER has incorporated a market impact component in the TNSPs Service Target Performance Incentive Scheme (STIPS) to incentivise TNSPs to minimise the impact of their outages. This scheme rewards network owners for improving operating practices such as outage timing and notification, the minimising of outage impact on network flows and equipment monitoring. These may be more cost-efficient solutions to reduce congestion than those requiring investment in infrastructure.

While this parameter is relatively recent, with the AER's final decision being released in March 2008, it has already resulted in some TNSPs reducing the number of material outage events. As reported by AEMO, during the period 1 July 2009 – 31 December 2009 TransGrid has reduced its material outage events by 20 per cent from its benchmark, and earned incentive payments of

\$1.3 million. This suggests that financial incentives can encourage TNSPs to maximise network availability and minimise the market impacts of congestion.

The Energy Division is supportive of this mechanism as it provides an incentive for TNSPs to address congestion through improving operational practices. Noting that the scheme is still relatively new there may be scope to review the parameters once more data has been gathered over time.

With regard to constraints on the Heywood Interconnector, the Energy Division notes the joint feasibility study undertaken by AEMO and ElectraNet in 2010 which assessed the feasibility of a range of network options between South Australia and the other NEM load centres. The initial joint feasibility study indicated that a relatively low cost option to increase the capability of the Heywood interconnector between Victoria and South Australia, by means of a third transformer and supporting augmentations, could deliver net market benefits. However, the analysis indicated that it could only be economically justified in 2017–18.

The South Australian Government considered that an augmentation this far in the future was inadequate and investment was required sooner to increase the power transfer capability of the Heywood interconnector.

While we are aware that AEMO and ElectraNet are investigating this issue further, the Energy Division is concerned that, firstly, there was no incentive for these entities to be proactive and undertake a review of the Heywood Interconnector when the ongoing issue of constraints was occurring on the interconnector. Secondly, even once the feasibility study was undertaken, fundamental assumptions were used which gave questionable results. Unfortunately, it would appear that in some cases modelling has substituted for planning rather than informing it.

Energy Division considers an increase in the power transfer capability of the interconnector would benefit the whole market and is concerned that it has taken so long for an adequate review to be conducted. We therefore consider appropriate incentives may not be in place for reviews of this type to be undertaken and encourage the Commission to investigate any potential issues with the existing framework in respect to planning.

Finally, submissions to the Commission's Issues Paper, particularly from the National Generators Forum, suggest that there is a lack of clarity surrounding connection arrangements and, as a result, an inconsistent application of the NER provisions by TNSPs.


We note the concerns of stakeholders in this area and support further consideration by the Commission, in particular, whether the process to connect to the transmission network is too complex, timeframes for the connection process too long and any confusion caused because of the interaction between the chapters of the NER.

Energy Division is aware of a large load customer who was looking to directly connect to the Electranet network but, due to the complexity and time taken to negotiate connection to the transmission network, ended up connecting to the ETSA distribution network. The reason for this may be due to the transmission connections framework being more complex than the equivalent framework for distribution network connections. Energy Division therefore supports the Commission reviewing the process to connect under the transmission connections framework.

As mentioned in the Directions Paper, the ambiguities related to the connection service will be an area of increasing concern as new and remote generation increases on the transmission system in response to both demand and climate change policies. This is of particular concern to South Australia with geothermal and wind generation opportunities in remote areas.

Should you have any questions in relation to this submission, please contact Rebecca Knights, Director, Energy Markets, on (08) 8204 1715.

Yours Sincerely



Vince Duffy  
EXECUTIVE DIRECTOR  
ENERGY DIVISION

26 May 2011