

18/03/2016

Laura Walsh  
c/o Network Planning Group  
Australian Energy Market Operator  
GPO Box 2008  
Melbourne, Victoria 3000

Lodged via email

Dear Laura,

**Consultation Paper on 2016 National Transmission Network Development Plan**

TransGrid welcomes the opportunity to respond to AEMO's Consultation Paper on the 2016 National Transmission Network Development Plan (NTNDP). TransGrid understands that the NTNDP aims to provide an independent, strategic view of the efficient development of the National Electricity Market (NEM) transmission network over a 20-year planning horizon. This view helps inform the more detailed plans developed by each of the transmission networks in the NEM. Given such interactions, TransGrid is encouraged by the consultative approach taken by AEMO in developing the 2016 NTNDP.

TransGrid broadly agrees with the four material issues facing the electricity industry highlighted by AEMO. Outlined below are some specific issues for further consideration by AEMO in its development of its 2016 NTNDP.

**Changing network topology due to a changing generation mix**

New generation entering the NEM may occur in different areas to the current generation plant based on a variety of factors such as the availability of fuel sources. In this case, network businesses may need to extend the network to reach these new areas and reinforce the existing network to support changes to power flows through the broader network. Looking further out into the 20-year planning horizon of the NTNDP may also introduce greater uncertainty around the timing of when new generation may enter the NEM. Therefore, the exact siting and timing of new generation may not necessarily be in the least-cost locations and times suggested by market modelling – instead, it may occur in what the modelling may suggest is 'sub-optimal.'

In addition to the introduction of new generation into the NEM, it is possible that some existing generation and transmission assets may also be withdrawn. As transmission assets approach the end of its useful life, changing generation and demand patterns may mean that a like-for-like replacement is not warranted.

The interaction between new generation sources connecting to the NEM, potentially in 'sub-optimal' locations, and existing generation and transmission assets being withdrawn is likely to drive different network topologies. TransGrid suggests that AEMO should examine this interaction further with stakeholders as it develops the 2016 NTNDP. TransGrid considers that

a wide range of likely generator planting possibilities need to be assessed in order to ensure that the transmission network has the flexibility to cater for a range of futures. This is particularly important given the different lead-times for any necessary major transmission line developments and interconnector upgrades.

### **Proposed expansion of scope to identify solutions to address network limitations**

TransGrid supports the NTNDP exploring a range of potential solutions to address identified network security and operating limitations. However, TransGrid is concerned by any attempt to put dollar values in the NTNDP against these potential solutions as the analysis will necessarily be of a high level with various simplifying assumptions. It is unlikely to be of the same detail and robustness as the more targeted analysis which would be undertaken for making an investment decision.

Publishing dollar values in this way may result in erroneous price signalling to the market and distorting the efficient procurement of solutions – both network and non-network. It may also encourage anchoring rather than encouraging robust cost analysis which should underpin any revenue or investment decision.

### **Scenario and sensitivity analysis**

TransGrid understands that AEMO's approach to scenario development and how it will be used is different to previous NTNDPs. As such, TransGrid would welcome further clarification on the development of the proposed scenarios and sensitivity factors in order to better understand AEMO's approach.

### **Further engagement**

TransGrid would be pleased to work cooperatively with AEMO in the development of the NTNDP. Much of planning work involves very detailed considerations in determining feasible augmentation options and the scope of works. A significant range of network development options for the NSW system has already been developed and, in many cases, assessed for physical feasibility and cost. AEMO has proposed minimising the duplication of effort and hence TransGrid sees the NTNDP adding value in terms of the strategic long term plan for interconnector development and integration into the transmission network.

TransGrid looks forward to further engagement with AEMO and other stakeholders in the development of the NTNDP including the sharing of data and detailed modelling as well as assessing how various network and non-network solutions can address the emerging network limitations and challenges.

If you would like to discuss any matter raised in this submission, please contact TransGrid's Power System Analysis Manager, Nalin Pahalawaththa on (02) 9284 3032 or [Nalin.Pahalawaththa@transgrid.com.au](mailto:Nalin.Pahalawaththa@transgrid.com.au).

Yours faithfully,

Gerard Reiter

**Executive General Manager/ Asset Management**