OFFICE OF THE CHIEF EXECUTIVE

Ref: A2961462

14 August 2018

Attention: Mr Chris Cormack and Dr Stuart Johnston
Australian Energy Market Operator, and
Energy Networks Australia

Email: derprogram@aemo.com.au

Dear Mr Cormack and Dr Johnston

Open Energy Networks Consultation

Powerlink welcomes the opportunity to provide input to the Australian Energy Market Operator's (AEMO) and Energy Networks Australia's (ENA) joint Open Energy Networks (OEN) consultation on integrating Distributed Energy Resources (DER). Powerlink strongly supports the intent of the OEN study and appreciates the consultative manner in which AEMO and ENA are progressing the work.

This study is an opportunity to establish the foundations which will underpin the integration of DER in the years ahead. Powerlink has intentionally adopted a long-term perspective in its response and views DER as an important element of the power system that, if developed appropriately, will reduce investment and operational costs in distribution and transmission networks. This in turn will place downward pressure on network prices and ensure network businesses are delivering valued solutions for customers at the lowest long-run cost.

The overall challenge is to establish market arrangements that will promote the efficient deployment and operation of DER so as to maximise value for all consumers rather than individual consumers. By way of example, the challenge includes how to complement a regional spot price that is reflective of the state-wide power supply balance with more localised signals that promote the cost-effective utilisation of the network. Whilst this challenge is not new, the anticipated increase in DER and changes in consumer behaviour will require previously established conclusions to be reconsidered. This issue is particularly acute in Queensland given high levels of DER, the long and thin topology of the power system, and the potential for substantially varied weather conditions to occur concurrently throughout the geographically large supply area.

Powerlink's recommends four improvements to the current OEN models to ensure the strategic value of DER can be appropriately considered and fully realised:

1. Enabling network support from DER is a critical design requirement that is presently missing from the OEN models. Consideration should be given to how the models can be extended to facilitate this. Utilising network support from DER may enable the network to manage times of high local demand or network outages more economically, reducing costs to customers.

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2. The proposals rely heavily upon DER being centrally dispatched. Central dispatch is appropriate for a subset of loads. There is additional load which is not suitable for dispatch but for which a consumer may elect to respond to appropriate price signals. This is already the case in the NEM generally, where the voluntary curtailment of price-responsive load reduces the need for investment in generation and networks. The proposed design should make allowance for such loads, maximising the amount of DER which can dynamically respond to local network needs, reducing the cost of local transmission and distribution services for customers.

3. The consultation document frames power system issues in a binary manner, either as broad system issues or local distribution issues. In two of the three proposed options, responsibility for managing these issues is divided between two tiers of system operator. Powerlink considers that power system issues occur along a continuum and that the potential for future interaction between DER and transmission may be underappreciated. It is important to ensure that the proposed arrangements will seamlessly respect network limitations at whatever level they occur and facilitate network support services.

4. This reform should be progressed with regard to other challenges facing the NEM, with consideration given to potential holistic solutions. Other relevant challenges include:
    - the potential for marginal loss factors (MLF) to be made more dynamic to more accurately reflect network losses; and
    - measures that could incentivise load to respond to sub-regional transmission congestion in a manner that maximises the utilisation of renewable generation and reduce constraints on the transmission network.

    Where possible, preference should be given to mechanisms which can holistically address a range of issues.

Powerlink appreciates the collaborative manner in which AEMO and ENA are progressing the OEN study, and looks forward to working together to further investigate these points. If you have any questions in relation to this submission, please contact Norike Ganhão, General Manager Strategy, via the details below.

Yours sincerely

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