30 June 2016

Tasmanian Networks Pty Ltd
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Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Dear Mr Pierce

Re: Transmission Connection & Planning Arrangements - ERC0192

Thank-you for the opportunity to make a submission to the Transmission Connection and Planning Arrangements, Discussion Paper released by the Australian Energy Market Commission (AEMC) on 26 May 2016.

We contributed to the development of, and fully support, the Energy Networks Association submission. The purpose of this submission is to highlight some key technical challenges in the context of the Tasmanian region.

TasNetworks owns, operates and maintains the transmission and distribution electricity networks in Tasmania and we have diverse sources of connected generation including hydro, wind, rooftop photovoltaic and gas-fired power stations. Our customers range from domestic and commercial customers to major energy users connected directly to the transmission network. We also facilitate the transfer of electricity to and from mainland Australia via a market network service provider interconnector, Basslink.

The Tasmanian transmission system has particular characteristics that affect available capacity of the transmission system at a point in time. These characteristics include a:

- weakly meshed network operating to lower voltages than other regions
- small number of large directly-connected industrial customers
- geographically dispersed distribution network customer load
- relatively large number of small generators with varying output levels at a dispersed geographic locations
- complex set of market and network constraints
- large direct current (DC) interconnector relative to region load and generation; and
- extensive use of dynamic transmission line ratings to release available capacity in real time.

A particular aspect of the Tasmanian power system is compliance with the frequency standards set by the AEMC's Reliability Panel[1] and require that the maximum generator contingency in Tasmania is limited to 144 MW.

[1] http://www.aemc.gov.au/getattachment/310247d0-85a5-408d-b3ae-c4a7cca328bc/Frequency-Operating-Standards-(Tasmania).aspx

In order to achieve the Basslink transfers and connect generation greater than 144 MW, TasNetworks has in conjunction with connecting parties, implemented "system protection schemes". These schemes aim to maintain power system security (in accordance with Chapter 4 of the NER) that enables the Australian Energy Market Operator to meet its obligations.

The specific system protection schemes currently in place are briefly described below:

- Frequency Control System Protection Scheme (FCSPS) - minimises the amount of market ancillary services required to meet Tasmanian frequency operating standards following loss of transfers across Basslink.
- Network Control System Protection Scheme (NCSPS) - supports high transfers across the Tasmanian transmission network that exceed normal levels as required under system security requirements. This scheme is an alternative to significant funded network augmentations.
- Generator Contingency Scheme (GCS) - reduces generator contingencies to less than 144MW.

These schemes are provided by TasNetworks as un-regulated services and impact across the power system and on many individual transmission assets. They are integral to maximising interregional transfers, require commercial agreements and coordination across multiple parties, and are vital for achieving connecting party power transfer expectations.

Any changes to the transmission connection arrangements should be cognisant of these control schemes and consider implications for future connecting parties. The proposals should not inadvertently put in place arrangements that reduce transmission or generator capability and potentially adversely affect existing customers.

If you have any questions in relation to the issues raised please contact Kirstan Wilding on (03) 6271 6696 or via email Kirstan.wilding@tasnetworks.com.au.

Yours sincerely

Bess Clark
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