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EXPANDING NSW-QLD TRANSMISSION TRANSFER CAPACITY – PROJECT ASSESSMENT DRAFT REPORT

Origin Energy Limited (Origin) welcomes the opportunity to comment on TransGrid's and Powerlink's Project Assessment Draft Report (PADR) which examines potential options to expand the NSW-QLD transmission transfer capacity.

We understand that the main advantages of the preferred model are driven by the need for new investment due to the retirement of plant from the market, with the main benefits accruing due to avoided capital expenditure on gas plants.

Given that the replacement of retiring capacity can be met in a number of ways, it is important for TransGrid and Powerlink to be satisfied that the net benefits are robust to a realistic set of assumptions and scenarios. For example, if assumptions are too conservative, the modelling may overestimate the net benefits associated with upgrading QNI, including under the preferred option. It may also skew the preferred option to a network, rather than a non-network option.

To that end, Origin welcomes the changes to inputs and assumptions made in response to feedback from stakeholders, including using the latest available assumptions when available. We also support TransGrid and Powerlink considering the materiality of changes in assumptions that have recently occurred as part of the Project Assessment Conclusions Report (PACR) assessment.

Having reviewed the modelling report provided by EY alongside the PADR, we provide some comments aimed at improving our understanding of the inputs and assumptions, as well as the robustness of the analysis.

Forced outage rates

According to the EY modelling report, TransGrid and Powerlink opted to use forced outage rates that are different from AEMO's rates. For example, the rates used for Liddell and Gladstone appear to be significantly higher, while the rate used for Loy Yang B appears to be lower. We would welcome further explanation on the rationale for deviating from AEMO's forced outage rates.

EY also provided an explanation of the methodology used to calculate forced outage rates. Origin understands that as a first step, EY counted zeros in historical dispatch from 2013-14 to 2018-19. We note that counting zeros does not appear to take into consideration that some units may be at zero for reasons other than an outage. This may lead to overestimation of outage rates, which may in turn overestimate the net benefits of the upgrade.

We also suggest that it may be worth applying different planned maintenance rates to different units, as maintenance requirements are unlikely to be the same for all plant.

Demand

We understand that EY has used the 2018 ESOO demand forecasts in its model. AEMO's 2019 ESOO demand forecasts are lower than its 2018 ESOO demand forecasts, especially for the neutral/central and fast/step change scenarios. If the modelling cannot be rerun to incorporate 2019 demand forecasts, then we suggest EY should include a sensitivity analysis for demand. Overestimating demand could overstate the size of the gap left by retiring generation and any consequent net benefits.

It is Origin's understanding that the modelling does not explicitly incorporate a significant demand shock scenario (such as a large energy user shutting down). Given the potential for some large energy users to shut down over the medium term, it may be worth considering the impact of such a demand shock as a sensitivity.

Fuel prices

We understand that the coal and gas prices used by EY in the modelling are sourced from AEMO's ISP forecasts. Origin would welcome an explanation of the assumptions underpinning these fuel price forecasts.

Scenarios

We suggest that TransGrid and Powerlink consider weighting the central scenario higher, assuming that this scenario is considered to be the most likely scenario. If that is the case, it is not clear why each scenario would be given an equal weighting.

System security requirements

Transfer capacity on QNI has recently been reduced due to voltage constraints resulting from the impact of new generation.¹ It is not clear to what extent the modelling captures the impact that future generation may have on transfer capacity due to additional system security requirements. Origin welcomes clarification on this matter.

Consideration of the comments above would promote confidence that the net benefits associated with the preferred option are robust.

Should you have any questions or wish to discuss this submission further, please contact Sarah-Jane Derby at Sarah-Jane.Derby@originenergy.com.au or by phone, on (02) 8345 5101.

Yours sincerely



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¹ Under a voltage constraint introduced in early 2019, output from the Sapphire Wind Farm limits flows south on QNI, which contributed to a 11% reduction on the QNI's southerly transfer limit. See AEMO, Quarterly Energy Dynamics Q3 2019, p. 17.