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Transpower
96 The Terrace
PO Box 1021
Wellington 6140

By email: system.operator@transpower.co.nz

Security of Supply Annual Assessment 2020

Meridian appreciates the opportunity to provide feedback to Transpower on the draft Security of Supply Annual Assessment 2020 (SOSAA).

We note that the margins that define the security of supply standards are set in the Code. However, Transpower has a broad discretion to determine plausible scenarios and sensitivity tests. Meridian questions whether the chosen scenarios and sensitivities are a representative sample of plausible futures.

Demand growth scenarios

All scenarios anticipate demand growth in excess of current rates with even the low demand scenario assuming demand growth averages 0.9 per cent across the decade. This is much more than what we have seen in recent years and while this is entirely plausible we wonder whether it would be useful to also have a scenario that assumes persistence of the current levels of demand growth. As an example, the Ministry of Business, Innovation and Employment’s Electricity Demand and Generation Scenarios (EDGS) include a Global scenario, in which the recent trend of 0.5 per cent demand growth per annum continues. Demand projections are highly uncertain, it therefore seems unusual that in developing a range of scenarios to test the plausible boundaries of the future, Transpower has not included a scenario in which electricity demand growth over the next ten years follows the trends recently experienced.
Change in peak transmission pricing sensitivity

Transpower has included a sensitivity assessment that assumes an increase in peak demand for a short period of time as the industry adjusts to a change in peak transmission pricing. Very little detail is provided on the rationale for testing this sensitivity or on the assumptions that were made in carrying out the assessment. The web-application to view sensitivities also does not show this particular sensitivity, it is unclear why.

The draft SOSAA states that:

“This sensitivity explores a change in peak transmission pricing which results in distributors and large, grid-connected consumers reducing or stopping their load control or demand response activities (currently employed to reduce their share of transmission interconnection charges). We expect that this loss will be temporary as other arrangements are likely to be made for the use of this load control to, for example, manage wholesale risk or local transmission constraints.

We conservatively assume winter peak demand increases (from forecast levels) in 2023 by 150 MW in the North Island and 200 MW ins the South Island. [This is our estimate of existing load control in both Islands.] In 2024, this increase in winter peak demand is reduced by 50%, and in 2025 winter peak demand returns to forecast levels.

This sensitivity appears extremely conservative in assuming that all existing load control in New Zealand will cease upon a change in transmission pricing. This seems highly unlikely for two reasons. Firstly, the current transmission pricing proposal from the Electricity Authority allows for the continuation of peak congestion charging at Transpower’s discretion during a transitional period.

Secondly, the long lead-in times for any reform of transmission pricing will provide parties ample opportunity to adapt so that they are able to extract revenue and consumer benefit from their load control capabilities in year one of implementation. Transpower seems to agree that this process of adaptation will occur (in two jumps over two years) but for some reason thinks that parties will wait until a new transmission pricing methodology is implemented before changing practices. Meridian does not consider this to be a plausible assumption.

1 https://www.transpower.co.nz/system-operator/security-supply/annualassessment-results
Transpower’s assumptions about the behaviour of load control have also been challenged by Concept Consulting in a report commissioned by the Electricity Authority. According to Concept, Transpower assumes 70% of hot water ripple control operates during RCPD periods, and that all such response would cease in the absence of peak demand charges in the first year of implementation. Concept’s analysis on the other hand suggests that a lot of hot water load control will continue to operate during peak periods for other purposes, including:

- offering into the reserves market;
- managing peak demand within a distribution network to reduce network expenditure;
- offering into Transpower’s demand response programme; or
- collaborating with retailers or aggregators to manage peak energy prices.

We encourage Transpower to consider the analysis carried out by Concept and to reconcile the assumptions in the SOSAA’s sensitivity test with Concept’s findings.

Confidence in the market

We note that major generators have the capabilities to develop their own supply and demand scenarios as well as an understanding of the market, which together enables them to optimise the timing of their generation investments.

The broad range of market participants, expertise, and perspectives drives efficient investment decisions and the diversification of risks. Over the past decade of the market, plant retirements, refurbishments, and new builds have occurred seamlessly, and security of supply standards have been efficiently maintained. This dynamic process in ongoing and Meridian is confident the market will continue to deliver for New Zealand over the next decade.

Please contact me if you have any queries regarding this submission.

Yours sincerely

Sam Fleming
Regulatory Counsel