



9 December 2024

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

Draft 2024 Security of Supply Assessment

Meridian Energy Limited (**Meridian**) appreciates the opportunity to comment on the system operator's reference case assumptions and sensitivities ahead of its Security of Supply Assessment (**SOSA**) for 2025.

There is a clear need for review of the 2012 Security Standards Assumptions Document (**SSAD**) and the winter energy and capacity margins in Part 7 of the Code, so that the SOSA (or its successor) remains relevant and instructive throughout the energy transition. We understand that the System Operator agrees with the need for this work and, given that review of the SSAD appears to be in the Authority's pipeline, we will save more structural comments on the SSAD (and the broader documents surrounding the SOSA) for that review. But, as an outline, matters which we consider are in particular need of revision are:

- The treatment of demand response by the SSAD;
- The treatment of hydro storage by the SSAD;
- The relationship between hydro variability and longer-term security forecasts (noting that the SOSA currently does not account for hydro variability directly but assumes historically average inflow and builds variability into the margins indirectly); and
- Whether the assumptions should account for increasing spill under an increasingly renewable market (as failing to account for this will overcount total system energy). We note that MDAG predicts a fourfold increase in spill between 2020 and 2035, and hydro spill to increase by 2,200 GWh over that period.¹ This would suggest that historic inflow averages will increasingly overestimate useable energy. It also speaks

¹ MDAG Issues Discussion Paper (February 2022) at p 45.

to the need to monitor reductions in actual wind and solar capacity factors with increasing renewable penetration.

Our responses to the consultation questions are set out in the table below.

Question	Response
Q1. Do you agree with the proposed assumptions used for the reference case? If not, please provide further details and what you consider would be reasonable alternate assumptions.	<p>Broadly. We acknowledge the SO's comments that the reference case is not a predication of the most likely outcome, but we do think that many SOSA users will treat the reference case as the SO's "headline" findings without deeper consideration of the sensitivities. The reference case therefore holds particular importance.</p> <p>With that in mind, we query:</p> <ul style="list-style-type: none"> - whether TCC should be a part of the reference case for 2025, given Contact's announcements referred to in paragraph 41; - whether Transpower's medium demand forecast has proven to be the most accurate in the recent past or whether a different forecast should be used for the reference case; - whether gas production assumptions are realistic given the events of 2024, and whether the reference case should use something more like the low gas supply sensitivity.² We note that the 2024 SOSA (published 26 June 2024) assumed ~145 GWh/week of gas fuelled generation, but in practice actual generation capped at <110 GWh/week prior to the demand response arrangement with Methanex (and was generally <100 GWh). We understand actual supply from gas for 2024 to be lower than 2024's <i>low gas supply</i> sensitivity.
Q2. Do you agree that the proposed sensitivities represent the key security of supply uncertainties	We are unsure whether the <i>TCC stays</i> sensitivity referred to in paragraph 41 is intended to reflect TCC remaining beyond 2025, or only during 2025 itself (in which case, as

² Sapere has commented in relation to the 2024 SOSA that low gas supply should be in the reference scenario at p 10 of a recent paper on reliability: [Confluence-of-factors-threatening-electricity-reliability-3-September-2024.pdf/](#).

<p>facing the New Zealand electricity sector over the assessment horizon (2025-2034)?</p> <p>If not, please provide further details and which of the proposed sensitivities you would replace with alternatives or remove (if not needed).?</p>	<p>noted above, we think it should be a part of the reference case).</p>
<p>Q3. Do you have any thoughts on our intention to include a section in the Security of Supply Assessment (SOSA) report looking at the implications of increasing the proportion of renewable generation on security of supply margins?</p>	<p>We note the potential increases in spill predicted by MDAG and mentioned above, and wonder whether these effects could usefully be added to the SO's assessment of implications of increasing the proportion of renewable generation.</p>

This submission is not confidential. I can be contacted to discuss any of the points made.

Nāku noa, nā



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