

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

2026 Security of Supply Assessment: Reference Case and Sensitivities Consultation

Mercury welcomes the opportunity to provide feedback on the proposed assumptions and sensitivities for the 2026 Security of Supply Assessment (SOSA). The Security of Supply Assumptions document (SSAD) sets out the key assumptions used to forecast future electricity supply and demand, providing a basis for market participants, policymakers, and other stakeholders to make informed risk management and investment decisions. These documents, often published as part of an annual SOSA, help assess the reliability of the electricity grid over the next 10 years by modelling a "reference case" of expected conditions and exploring potential variations through "sensitivity" scenarios.

Given SOSA's central role, the reference case and sensitivities must provide a thorough assessment of future market dynamics using the best quality, most relevant sensitivities and assumptions available. It is also important that these inputs are updated regularly to reflect changes in market dynamics as New Zealand transitions to a predominately renewable electricity system. This applies in terms of both supply side and demand side information. For example, the arrival of data centres or increased electrification of process heat would have a significant impact on system demand. Meanwhile the growth of intermittent supply relative to firm generation impacts peak capacity.

In the aftermath of the fuel supply crunch of winter 2024 Mercury commissioned Sapere to explore the factors influencing system reliability. The report's findings relating to the challenges around balancing demand and supply and the suggestions for improving security of supply assessment remain relevant.¹

In summary our key recommendations are:

- **Refresh SSAD peak assumptions** (thermal, wind) before use; they have not been updated since 2011, while peak demand has outpaced firm capacity.
- **Estimate peak capacity contributions** with forward-looking methods rather than relying solely on limited historical observations.
- **Provide a more granular depiction of demand**, including known near-term growth (e.g., data centres, process-heat electrification), and confirm end-user/retailer consultation.
- **Include contracted demand response** (e.g., NZAS) in Winter Energy Margin assessments and draw on retailers' pragmatic views of realistic DR potential.
- **Add sensitivities for cancelled builds** (distinct from delays) and time-of-use (TOU)-driven load shifting.
- **Adopt probabilistic reliability metrics** (e.g., expected unserved energy, (EUE)) alongside energy/capacity margins.
- **Include a constrained operational capacity** scenario in the Expected Future case.

We have provided responses to the specific consultation questions in Appendix 1. Overall, we would like to see a more granular depiction of the demand side. In addition, Mercury is not convinced that energy and capacity margins remain the sole appropriate measures as the power system continues to evolve.

¹ [Confluence-of-factors-threatening-electricity-reliability-3-September-2024.pdf](#)

More probabilistic measures of security may also need to be considered (e.g. expected unserved energy).

If you have any questions, please reach out.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Sharron Came', with a horizontal line extending to the right.

Sharron Came
Regulatory Strategist



Appendix 1 Consultation Questions

Consultation Question	Mercury Response
Question 1: 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.	Mercury considers that the assumptions (e.g. thermal and wind peak assumptions) in the Security Standards Assumptions Document (SSAD) should be tested to make sure they are valid before they are used (rather than simply applied). These assumptions have not been updated since 2011 while peak demand has been growing faster than firm capacity for at least a decade.² With respect to peak capacity contributions, it may be possible to do better than using observations across a limited history in a market that is changing rapidly.³ Mercury consider that supply might be overstated in the reference case if including all potential investment. In some cases signalled investments may be delayed or cancelled. It is important to ensure near term demand growth that is known/ likely is included by way of consulting end users / retailers. We assume that this has been done, but this does not appear to be made explicit in the document. In our view, known, contracted demand response (such as the NZAS demand response arrangements) should be included in assessments of Winter Energy Margins. A number of retailers are advancing their demand response efforts. Retailers may be able to provide a pragmatic view of what is likely to be possible potentially avoiding the need to use arbitrary numbers.
Question 2: Do you agree that the proposed sensitivities represent the key security of supply uncertainties facing the New Zealand electricity sector over the assessment horizon (2026-2035)? If not, please provide further details and which of the proposed sensitivities you would replace with alternatives or remove (if not needed).	We recommend including a cancelled build sensitivity (i.e. some of the build in the hypothetical pipeline is not delivered). This could be additional to delayed build as both are relevant. It is unclear whether load shifting resulting from upcoming TOU pricing changes are included but would expect such load shift to be included at least as a sensitivity.

² Ibid.

³ Ibid.



Question 3: Do you have any feedback in relation to our proposal to introduce an 'Expected Future' case for SOSA 2026? If so, please provide further details.	This may be of interest but given the uncertainties and the range of possible outcomes this may provide limited value. If this proposal is introduced, given the uncertainties should it be called <i>possible</i> future (rather than expected)?
Question 4: Do you have any feedback on the combination of the Reference case and sensitivities we currently think the Expected Future case should comprise? If so, please provide further details.	It would be useful to include the constrained operational capacity scenario.
Question 5: Do you have any feedback in relation to the changes we propose to make for SOSA 2026 relative to SOSA 2025? If so, please provide further details.	No.
Any other comments:	Mercury is not convinced that energy and capacity margins remain appropriate measures as the power system continues to evolve. More probabilistic measures of security may also need to be considered (e.g. expected unserved energy) as discussed in Sapere "Confluence of factors threatening electricity reliability" September 2024).

