

8 June 2022

David Katz

System Operator

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

Dear David

2022 Security of Supply Annual Assessment submission

1. This is a submission from the Major Electricity Users' Group (MEUG) on the draft 2022 Security of Supply Annual Assessment (SOSAA 2022) published 18th May 2022.¹ MEUG members have been consulted in the preparation of this submission. This submission is not confidential. Members may lodge separate submissions.
2. MEUG appreciates those aspects we submitted on in the initial consultation round in March that were addressed in the draft. This submission focusses on new information and themes that might be considered in the SOSAA consultation next year.

Demand overstated?

3. There is a marked increase in near-term demand due in part to EDB advice on expected electrification of existing large thermal fuel loads and new stand-alone electricity intensive users' (e.g., data centres). Those large step changes in predicted demand may be overstated for two reasons. First EDB have an incentive to err towards high demand forecasts because, for many EDB, customers rather than shareholders bear the cost of over-building. Second summing individual EDB lists of new lumpy demand does not consider aggregate national supply and contractor constraints that might limit implementation.
4. A solution may be for the SOSAA to categorise large new and electrification of existing large thermal loads into the same categories for forecast new generation, i.e.,²
 - Consented and committed to be developed.
 - Consented, on hold.
 - Consented, on hold, requiring consent.
 - Consent expected.

¹ Draft document URL <https://www.transpower.co.nz/sites/default/files/bulk-upload/documents/2022%20SOSA%20-%20For%20Consultation.pdf> at <https://www.transpower.co.nz/system-operator/stakeholder-interaction/invitation-comment-draft-security-supply-assessment>

² See categories, for example, consultation paper table 1.

Flexible Tiwai demand post 2024?

5. Another possible reason demand for SOSAA 2022 may be overstated is that Tiwai demand post 2024 is assumed to have the same profile as the current pre-2024 arrangement. We suggest the reference case for SOSAA 2023 investigate the Tiwai load having a greater degree of flexibility to assist manage dry-year events than the current contract.

Gas supply understated?

6. Ara Ake published a report “Carbon Dioxide Removal and Usage in Aotearoa New Zealand.”³ This is a good summary of Carbon Capture, Utilisation and Storage (CCUS) and barriers to implementation in NZ. The Government Emissions Reduction Plan published 16th May foresees gas as an option to transition to net zero emissions by 2050. CCUS could physically be an option in the next 10-years and hence should be considered in SOSAA 2023.
7. The NZ Energy Corporation (NZEC) announced 25th May that analysis of seismic data for the Tariki gas field indicates more than 10PJ of gas can be stored.⁴ In comparison the Lake Onslow pumped hydro scheme would hold about 18 PJ. NZEC say “We expect Tariki will have a greater storage capacity than Ahuroa” and a gas storage project could be developed between 15 and 24 months for as little as \$100m”. Flexible gas storage at Tariki appears to be a feasible by 2032 and therefore should be considered in SOSAA 2023.

What physical spill is predicted with the scenarios in section 6?

8. It would be interesting to know forecast physical levels of renewable energy spilled each year for each of the five thermal generation scenarios in section 6.⁵ This would assist readers appreciate an important physical attribute of alternative supply scenario in lieu of the economics of those not being part of the analysis.⁶

Ability for the Lake Onslow pumped storage proposal to manage consecutive dry years

9. The potential contribution from Lake Onslow to security margins in table 7, p76, for the “No THM” scenario, appears to be a snapshot for a single year. It would be interesting to know the contribution of the Lake Onslow pumped storage proposal to manage security margins over consecutive dry years.

Yours sincerely



Ralph Matthes
Executive Director

³ Refer <https://www.araake.co.nz/insights/ccus/>

⁴ Refer <http://www.newzealandenergy.com/>

⁵ See scenarios listed in consultation paper table 6, page 70.

⁶ Section 6.1, p69, notes “This analysis is exclusively focused on security of supply and we have not investigated economic or technical issues outside of this brief. Consistent with our margin forecasts presented in Section 5.0, we do not attempt to forecast or otherwise determine the likelihood of whether any of these scenarios could occur”