Energy Resources Aotearoa
POWERING A BETTER NEW ZEALAND TOGETHER

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Submission on the draft Security of Supply Annual Assessment 2025

Introduction

1. Energy Resources Aotearoa is New Zealand's peak energy sector advocacy organisation. We represent participants across the energy system, providing a strategic sector perspective on energy issues and their adjacent portfolios. We enable constructive collaboration to bring coherence across the energy sector through and beyond New Zealand's journey to net zero carbon emissions by 2050.

2. This document constitutes our submission on the Invitation to Comment: 2025 Security of Supply Assessment: Reference Case Assumptions and Sensitivities (the consultation document). See our previous submission from 2023.

3. It is clear and widely acknowledged that batteries provide excellent peak management but cannot cover multiple months in a dry year period. Thermal power stations will be vital to ensuring New Zealand's long term energy security and resilience.

4. Long term duration energy storage[1] could make a smaller but increasingly important contribution to back up. Transpower could consider modelling the introduction of such storage over the 10-year horizon to keep up with technological advancement.

Responses to questions

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.

5. The Security of Supply Assessment (the 'SOSA') covers the 10 years to 2035. We understand that the single reference case will be built upon assumptions based

[1] One such example is Technology | Highview Power

on information from market participants, and that it should be interpreted as market possibilities, rather than likelihoods.

6. We support the retention of the gas supply assumption and the assessment that uncertainty around future gas exploration and production means that there is a possibility of gas generation deratings beyond the second year of the 10-year horizon.

7. We also support the inclusion of two corresponding sensitivities on gas supply – one that is constrained and one for additional gas – to provide for scenarios in either direction. Long term gas supply is currently very uncertain, despite policy changes to encourage investment.

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 (2025-2034)? If not, please provide further details and what you consider would be reasonable alternate assumptions.

8. Considering the demand response offered by Methanex over the winter of 2024, we think it is premature to remove sensitivity 6.2.

> **6.2 Removed Sensitivities:**
> ***Low gas demand flex:*** *In light of reduced petrochemical gas consumption observed over the past five winters, increasing gas available for electricity generation, and the proposed indefinite idling of one of two methanol production trains at the Methanex Motunui facility[2], we propose to remove this sensitivity.*

9. As Transpower notes, Methanex has a track record of providing gas into the market during winter. Reduced gas availability and the consequent reduction of operations from three trains (in 2021) to one (the situation from April this year) reduces Methanex's flexibility, and economic output. However, the experience from this year suggests Methanex will continue to play a role in winter energy security and that removal of this sensitivity is premature.

10. We think that gas demand response is currently a feature of the electricity system and should not be taken for granted.

11. As such, it should be retained as a sensitivity in the modelling. It is likely that the market will respond to events of winter 2024 with a more planned approach to flexibility and may contract demand response ahead of time. However, when weather dependencies are forever so uncertain, there is only so much planning that can be done, and profitability will always feature as a key driver.

2 Another blow for industry: Methanex proposes idling one plant indefinitely, job cuts - NZ Herald

12. We repeat our previous support of the Gas Industry Company's comments on security of supply issues that electricity security margins should not come at the expense of the gas sector's security. Nor should it impose unwarranted impacts on gas-users or the New Zealand economy.

13. For similar reasons, we support the inclusion of all three new sensitivities:

> **6.3 New sensitivities:**
> ***TCC stays:*** *This proposed sensitivity will assume that the Taranaki Combined Cycle plant is not decommissioned and remains in service.*
>
> ***Reduced coal availability:*** *This proposed sensitivity will model the impact on the energy margins with reduced coal availability to run the Rankine units at Huntly.*
>
> ***Additional gas:*** *This proposed sensitivity will model an increase in gas available for power generation. This could come from additional gas storage capacity, gas import, or further reduction in industrial gas usage.*

14. While we do not know what the future has in store for energy security over coming ten years, it is sensible to include 'known unknowns' in the modelling, such as the three new sensitivities identified by Transpower. This is because:

    a Taranaki Combine Cycle (TCC) is likely to remain in the system until at least the end of 2025 or until its end of life (we understand TCC has a remaining operational life of around 3000 hours);

    b we know that Huntly is likely to transition from coal to renewable black pellets within the next ten years, and likely sooner, as it becomes economic; and

    c additional gas *is needed* and must be modelled, despite not knowing where it might come from. We acknowledge the difficulties in predicting the supplies of natural gas that can be used for electricity, given the constrained supply in recent years. However, we note that recent Government policies to revitalise the natural gas sector, such as the unwinding of the 2018 ban on new oil and gas exploration, may change the outlook.

Question 3: Do you have any thoughts on our intention to include a section in the SOSA report looking at the implications of the proportion of renewable generation on security of supply margins?

15. Yes, we support the intention. As the proportion of renewable generation increases so does the risk posed by intermittency. This creates uncertainties and volatility that the market must internalise.

16. Findings from this proposed section could influence market behaviour, for example, connection rules for intermittent generation to be installed alongside a firming solution. It could also inform government, and Transpower's, planning and oversight of the market so that it is better prepared for the impacts, such as increased risks of peaks and troughs in hydro levels with corresponding impacts on electricity security and prices.

Concluding remarks

17. We thank Transpower for its ongoing governance and monitoring of the electricity system and the opportunity for input to the assumptions and sensitivities included in the 10-year forward looking modelling of electricity security in the SOSA. We welcome further discussion if needed.