2026 Security of Supply Assessment: Reference Case Assumptions and Sensitivities

Response to Feedback

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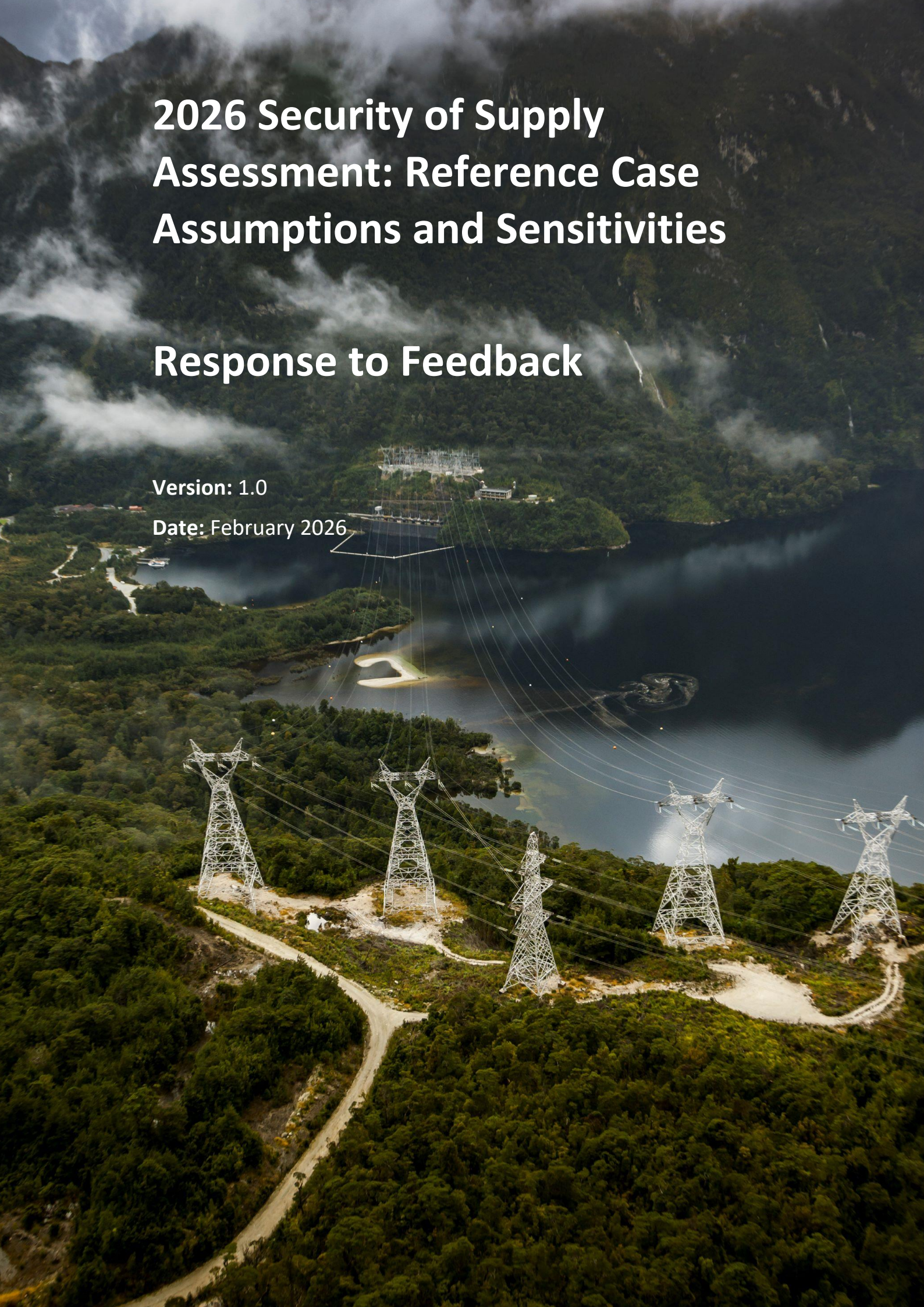

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1 Introduction

1. The purpose of the Security of Supply Assessment (SOSA) is to inform risk management and investment decisions by market participants, policy makers, and other stakeholders. Transpower, as the System Operator publishes the SOSA annually. SOSA 2026 will provide a ten-year view (2026 to 2035) of the balance between supply and demand in the New Zealand electricity system.
2. The SOSA evaluates three security of supply margins and compares them against the respective security standards specified in the Code. The security standards are the:
    - New Zealand Winter Energy Margin (NZ-WEM): adequacy of generation to meet expected national electricity demand under extended dry periods across the winter months
    - South Island Winter Energy Margin (SI-WEM): adequacy of generation and north-to-south transmission capacity to meet expected South Island electricity demand under extended dry periods across the winter months, and
    - North Island Winter Capacity Margin (NI-WCM): adequacy of peaking generation and south-to-north transmission capacity to meet expected peak winter demand.
3. In November 2025 we invited feedback from market participants on the proposed key reference case assumptions and the sensitivities to apply (individually and combined) to the reference case.
4. The Electricity Authority is currently reviewing the security standards and the assumptions used to set them (as specified in the Security Standards Assumptions Document, SSAD), which it set in 2012. To ensure the SOSA continues to deliver valuable information for the industry ahead of this review, for SOSA 2026 we are proposing the introduction of an "Expected Future" case. This case would represent the combination of Reference case sensitivities that (at the time of publishing SOSA 2026) reflect our current view of a most likely outcome for the 10-year modelled period (2026-2035). Our quarterly Security of Supply Outlooks will then report how investment by the market is tracking against the Expected Future case. SOSA 2026 will continue to provide all of the sensitivities so that interested parties can create different combinations of outcomes and assess impacts on the security margins.
5. We received five submissions[1] and thank those who took the time to review and provide feedback on the document *2026 Security of Supply Assessment: Reference Case Assumptions and Sensitivities – Invitation to Comment*. The feedback we received has helped us to refine the 2026 Security of Supply Assessment.
6. This document summarises the feedback we received in submission and our response to it. Please note that some feedback, in particular feedback expressing support for our proposed assumptions or approach has not been noted below. We acknowledge and thank submitters for that supportive feedback, which has also informed our decisions ahead of commencing our SOSA 2026 analysis.
7. We expect to commence consultation on a draft of SOSA 2026 in April, before publishing the final SOSA 2026 and supporting information in June 2026.

[1] From ERA, Fonterra, Mercury, Meridian and MEUG. The consultation paper and submissions are available on our webpage.

2 Summary of key feedback and responses

8. We have made two changes in response to the feedback we received. We have decided to:
    - Add a very low gas sensitivity (using another Enerlytica scenario)
    - Incorporate a review of New Zealand Battery Energy Storage System (BESS) behaviour, with information from other jurisdictions, to better inform our BESS capacity factors

9. The key feedback we received to each of the consultation questions, and our response to it, are summarised below. More detail is provided in section 3.

10. In addition, following the Government's announcement on 9 February[2] that it will establish a liquified natural gas (LNG) import facility, we have decided to also include an LNG gas supply sensitivity if the high gas supply sensitivity does not sufficiently capture the likely impacts.

2.1 Q1: Are the Reference case assumptions appropriate?

11. Most responders agreed with the assumptions we proposed for the Reference case. Other matters raised included:
    - Mercury and Meridian raised issues related to the security standards and SSAD, which have not been updated since 2011, including a need to review technology capacity factors to ensure these remain fit-for-purpose when calculating the relevant margins
    - Fonterra considered a low gas forecast was more appropriate for the Reference case and sought assurance that its industrial electrification and reduced co-generation at its site is included within the demand forecast.
    - Meridian considered that the Reference case should not include any new thermal generation.

Transpower response

12. We agree the security standards and SSAD need to be reviewed. This is part of the Electricity Authority's workstream and we have been working with the Electricity Authority to help inform its review. The Electricity Authority intends to consult on this in the first half of 2026.

13. To ensure SOSA 2026 continues to deliver useful information while this review is underway, we have proposed several changes to this iteration of the SOSA. These include updating capacity factor assumptions, reflecting updated HVDC parameters into the margin calculations and introducing a new "Expected Future" case to capture the combination of sensitivities we consider are the most likely at that time we publish SOSA 2026.

14. Regarding the use of a low gas supply for the Reference case, we propose to use gas producer-supplied forecasts and Enerlytica's mid-range forecast as part of the Reference case. This reflects the intent of the Reference case[3] and leverages Enerlytica's expertise and independence from the gas industry. The risk of a lower gas forecast will still be captured in our low gas supply sensitivity and we will also be producing an Expected Future case which could

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2 The government has announced it will establish an LNG import facility. See here.

3 The Reference case is not intended to represent the most likely outcome but represents the resources expected to be available to the power system over the next ten years. It reflects, where reasonable, a continuation of current conditions.

use a Low Gas Supply if this is considered to be the most likely gas supply trajectory at the time.

15. We confirm that the net electricity load changes raised by Fonterra are captured within the demand forecast.

16. We use customer supplied information (via our surveys) to develop various stages to the supply pipeline. If thermal generation is included in participant supply plans and meets our pipeline criteria then it will be reflected in our analysis. As indicated in our consultation, we will consider a sensitivity of No New Thermal to understand the potential impact without it.

2.2 Q2: Are the proposed sensitivities appropriate?

17. Most responders agreed the proposed sensitivities reflect the key uncertainties facing the power system. Some variations raised for our consideration were:

    - Energy Resources Aotearoa (ERA) responded that a very low gas sensitivity should be used. Meridian also noted that a lower gas sensitivity could be considered if a low gas supply was considered most likely in the Expected Future case.
    - Fonterra indicated that the 100 MW demand step sensitivities, that we proposed to drop, should be retained.
    - Mercury and MEUG raised the impact increased demand response uptake could have on the security margins.

Transpower response

18. We agree that a very low gas sensitivity is reasonable in light of the observed decline in gas supply relative to forecasts in recent years. We propose a Baseline forecast with minimal upstream investments and declining production from existing fields could be a reasonable lower bound. We will explore this further as a very low gas supply forecast.

19. Regarding the 100MW demand step, our high and low demand forecast includes increased and reduced rates of electrification respectively. We consider this is a more reflective indication of this electrification impact than the 100 MW step sensitivity, which was a somewhat arbitrary step.

20. Our demand response sensitivity analysis will consider assumed demand response (as specified in the SSAD), known demand response (such as NZAS demand response agreement with Meridian and other gentailers) and demand response information (including likelihood) provided to us as part of our survey.

2.3 Q3: Should we introduce an Expected Future case?

21. Most responders agreed with including an Expected Future case and our proposal to provide tracking against it in our quarterly Security of Supply Outlooks. Both Meridian and Mercury suggested possible name changes. Mercury suggested changing its name to “Possible Future” given the uncertainties. Meridian suggested calling it a “Combined sensitivity” to reduce confusion between it and the Reference case.

Transpower response

22. We consider the "Expected Future" case name adequately captures the intent of this scenario, which is to reflect our view of the most likely combination of the Referenced case and sensitivities at the time. As discussed earlier the Reference case is not intended to reflect the most likely outcome. We will explain the difference in purpose between the Expected Future case and the Reference case in the SOSA report.

2.4 Q4: Feedback on the proposal to introduce an Expected Future case sensitivities

23. Most responders agreed with the settings for the Expected Future case. Some variations proposed by submitters included:

    - ERA responded that this scenario should consider a prioritisation of gas for essential industries if gas supply declines drastically
    - Fonterra considered a high demand scenario should be used due to the effects of electrification, data centres, etc.
    - Mercury raised the proposal of including the Constrained Operational Capacity sensitivity within the Expected Future case.

Transpower response

24. Our current gas allocation approach assumes that petrochemical users are marginal gas users. This has been observed during recent dry years (2024 and 2025) with petrochemical gas users reduced consumption and on-sold gas for electricity generation when electricity spot prices rose. Given the recent observation in the market, we consider this is a reasonable representation. Remaining industrial gas usage is maintained ahead of electricity generation in the SOSA modelling.

25. Our load forecast scenarios include differing outlooks on electrification with more certain initiatives included in the lower and mid-range forecasts. Our current view is that the low demand scenario is likely to be the most appropriate for the Expected Future case, based on how actual demand has tracked over recent years. We will reassess this when the SOSA 2026 demand forecast is finalised, and how the demand is tracking against this forecast.

26. We do not consider the Constrained Operational Capacity scenario to be reasonable to include within the Expected Future case given it reflects a "moment-in-time" state of the system with worst-case supply availability during peak periods. Assuming this is the expected outcome would be overly pessimistic.

2.5 Q5: Any other feedback on changes proposed between 2026 SOSA and 2025 SOSA?

27. MEUG responded it was comfortable with the changes made to the 2026 SOSA relative to 2025 SOSA and Mercury did not have any other feedback. Other submitters did not respond to this question with specific feedback on issues provided in their responses to the other questions.

2.6 Q6: Other comments?

28. Mercury raised concerns that it is not convinced that energy and capacity margins remain appropriate measures as the power system continues to evolve and that probabilistic measures (e.g., expected unserved energy) need to be considered as the system evolves.

29. ERA proposed introducing a realistic stress test that includes a scenario where industrial demand crowds out electricity sector use.

Transpower response

30. We acknowledge the point raised regarding the use of energy and capacity margins as measures of security. The current security standards are an economic standard that determine the expected unserved energy and the estimated cost of this unserved energy to the system and compares this against the cost of providing reserve energy and capacity. The standard is where these costs are in equilibrium. Any change to the security standard assumptions, including consideration of probabilistic measures such as expected unserved energy, would require a review and update of the security standards and SSAD. The Electricity Authority is currently progressing this review.

31. As discussed in paragraph 24, our current gas allocation approach during dry years models industrial gas usage ahead of electricity generation but after marginal petrochemical gas use has reduced. Given observations in the market during recent dry years (2024 and 2025), we consider this is a reasonable representation.

3 Comprehensive table of feedback and responses

Please note that some feedback expressing support for our proposed assumptions or approach is noted and has not been included in the table below.

<u>Question 1:</u> 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.

Organisation	Comment	Transpower's Response
ERA	We support the reference case as it stands. It is based on confidential information supplied by operators to inform security planning.	Noted.
Fonterra	The Gas reference supply case should be set to the low case and a new lower case used for the sensitivity.	Given Enerlytica's recognised expertise in New Zealand gas forecasting, we intend to use their mid-range forecast for the Reference case and their low forecast for the low gas supply sensitivity. This will provide a consistent assessment of the gas supply scenarios and their underlying assumptions. We also intend to introduce a very low gas supply forecast which represents a scenario with minimal upstream investment.
	Changes to net electricity demand for Fonterra Whareroa and Edgecumbe due to the staged shutdown of the co-generation unit needs to be included in reference case.	Noted. We will ensure these Fonterra's electrification projects are included in the demand forecast used for SOSA 2026 Reference case.
Mercury	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.	The peak capacity contribution determines how each technology contributes to the Winter Capacity Margin. We will review battery peak contribution assumptions with actual operational data from New Zealand batteries as sufficient data becomes available. We will also reference analysis in other jurisdictions who have more experience with batteries operating in their system (like the NEM). For wind and solar, we will analyse simulated average capacity

Organisation	Comment	Transpower's Response
		factors based on historical weather years. We will review our peak capacity factor assumptions based on this analysis to ensure they reflect potential future conditions. The Authority has also commenced a full review of the SSAD.
	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.	See our response above.
	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.	We acknowledge the concern that supply in the Reference case could be overstated if all potential investments are included. This is why the SOSA uses different stages of the supply pipeline. Analysing the Reference case across stages, from existing and committed investments (Stage 1) through to consent likely to be sought (Stage 3) accounts for uncertainty in investment timing and delivery, rather than assuming all signalled projects are guaranteed to proceed as planned.
	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. 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.	Appendix 2 of the 2025 SOSA[4] outlines our demand forecasting process, which accounts for near-term demand growth. The process produces granular forecasts at GXP and half-hourly trading period levels, enabling us to incorporate known developments such as data centres and process heat electrification. A more detailed depiction of demand profiles and near-term growth by category is available in the Appendix 2 charts.
	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	In the Reference case calculation of the NZ-WEM and SI-WEM, demand is reduced by 2% to account for normal demand-side response to electricity prices, as specified in the SSAD. As part of our annual SOSA survey of market participants we gather information for existing and planned demand response / controllable load capacity which is incorporated into the

[4] 2025 SOSA - Final Appendices.pdf

Organisation	Comment	Transpower's Response
	what is likely to be possible potentially avoiding the need to use arbitrary numbers.	assessment. This includes the NZAS DR agreement as well as other demand response captured through our survey process. Survey responses which indicate demand response initiatives which are less certain will be considered for our increased demand response sensitivity.
Meridian	It is clear that the Reference case does not reflect a likely view of the future. This is not surprising given the rapid evolution of the sector and the fact that Security Standard Assumptions Document (SSAD) has not been updated for 13 years. Ideally, the Electricity Authority would progress a review and update of the SSAD urgently to ensure the security standards and underlying modelling assumptions remain fit for purpose.	As indicated in our SOSA Reference Case consultation, the Reference case represents the resources expected to be available to the power system over the next ten years. It reflects, where reasonable, a continuation of current conditions. We will be providing an Expected Future case as part of the SOSA 2026 which will reflect our current view of a most likely outcome for the 10-year modelled period (2026-2035). As noted, a review and update of the SSAD to ensure it remains fit for purpose is required. The Authority has commenced this and intends to consult on it in 2026.
	We agree with the System Operator's proposal to seek the Authority's permission to incorporate Transpower's committed HVDC STATCOM investment into the Reference case (without also having to model the HVDC assumptions in the SSAD).	Noted. We intend to include the HVDC STATCOM investment into the Reference case and will describe the impact of this change from the SSAD assumptions on the assessment.
	We recommend that the 'No new thermal' scenario is included in the Reference case rather than being modelled as a sensitivity. Our understanding is the prospect of new thermal plant being built in the short to medium term is low.	The various supply pipeline stages assessed in the Reference case is informed by market participant survey information, which reflects participants' own expectations and intentions for their asset development and decision-making. To test the impact of no new thermal generation, we include this as a sensitivity rather than in the Reference case, allowing us to maintain the Reference case being informed by survey data while exploring alternative scenarios.
	We note the System Operator has based its assumed battery peak capacity factors on observations in other jurisdictions. We expect the operation of batteries in a New Zealand context will reflect the specific characteristics of our market. As such, we would suggest updating these initial	Noted. We agree that battery operation in New Zealand will reflect the specific characteristics of our market. Our current assumptions are based on international observations as an initial benchmark. We will update these assumptions with actual operational data

Organisation	Comment	Transpower's Response
	assumptions with data on the operation of batteries in New Zealand as this information becomes available.	from New Zealand batteries as sufficient data becomes available to ensure our modelling reflects local conditions.
Major Electricity Users' Group	We agree with the proposed assumptions used for the reference case: We consider that it is pragmatic to use a medium demand growth forecast over the 10-year period, despite electricity demand looking weaker in the short-term, and assume that the reference case will be updated to reflect the Commerce Commission's final determination approving the Huntly strategic energy agreement between the four gentailers.	Noted. The Reference case will reflect the Commerce Commission's final determination approving the Huntly strategic energy agreement between the four gentailers.
	We encourage the System Operator to seek the Electricity Authority's approval to include the HVDC STATCOM investment into the reference case.	We intend to include the HVDC STATCOM investment into the Reference case and will describe the impact of this change from the SSAD assumptions on the assessment.

<u>Question 2:</u> 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).

Organisation	Comment	Transpower's Response
ERA	We recommend that Transpower models as a sensitivity (and introduces as part of the proposed 'Expected Future Case' and the combination of sensitivities Transpower believes should be included): i. the prioritisation of remaining gas for essential industries that rely on gas, should gas production drastically decline; ii. a 'very low gas' or 'gas shock' sensitivity to assist with downside risk modelling; and iii. the discovery of additional gas, based on recent policy decisions to expand the co-investment fund. We recommend that Transpower introduces a realistic stress test that includes a scenario where industrial demand crowds out electricity sector use.	The Reference case is based on confidential information from gas producers and Enerlytica gas forecasts. The high[5] and low gas supply sensitivities capture a wide range of possible futures around the mid forecast. As part of the 2026 SOSA we will also assess a very low gas supply sensitivity. We will also include an LNG sensitivity if the high gas supply is inadequate in capturing this option. To account for evolving dynamics including possible new discoveries, we will update gas assumptions with Enerlytica's latest quarterly forecast as of the time of our analysis. The SOSA forecast attempts to capture market gas allocation, which includes prioritising gas for essential industries. Recent dry years (2024 and 2025) has shown that marginal petrochemical gas usage reduces to enable increased electricity generation. Given the recent observation in the market, we consider this is a more realistic representation. Remaining industrial gas usage is maintained ahead of electricity generation in the SOSA modelling.
Fonterra	The 100MW of electrification in both islands should be left in the sensitivity modelling for demand increases.	We acknowledge the feedback. The high-demand growth sensitivity is designed to capture increased potential electrification impacts and together with the mid and low demand forecasts provides a wide range of future demand scenarios. The 100 MW step-load sensitivity was not based on specific forecast information and hence we intend to remove this sensitivity as the high demand forecast already captures increased potential electrification impacts.

[5] The high gas scenario represents a future where additional gas could be available including through the availability of LNG.

Organisation	Comment	Transpower's Response
		To provide greater transparency, we will include more commentary on the potential impacts of the high-demand forecast in the SOSA, while continuing with our proposed approach.
Mercury	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.	The purpose of modelling the various SOSA pipeline stages is to account for uncertainty in project delivery, including delays or cancellations. This staged approach already captures the risk of builds not being delivered.
	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.	We will include an increased demand response sensitivity which will represent the impact of additional load shifting on the winter capacity margin. We will provide additional commentary in the SOSA on how TOU pricing changes are considered and how it differs across the various demand forecasts.
Meridian	The identification of the sensitivities the System Operator considers should be included in an Expected Futures case raises questions about whether the existing set of sensitivities is appropriate. For example, if the System Operator genuinely believes that the Low Gas Supply sensitivity is the most likely to eventuate, this suggests the Medium Gas Supply case should in fact be the High Gas Supply case and a Lower Gas Supply case should be developed to represent a more pessimistic view of the future.	The purpose of the Expected Future case is to show the combination of sensitivities that we believe is most likely at the time of writing. The Reference case needs to be plausible, but it has other goals as well that can cause the Expected Future case and Reference case to diverge. Specifically, the Reference case reflects, where reasonable, a continuation of current conditions. It reflects an outcome that could be expected based on the status quo and aligned with the Authority's SSAD, and provides a consistent benchmark for assessing supply adequacy shifts over time. Section 3.1 of the consultation document provides a full description of the purpose of the Reference case. As part of the SOSA 2026, we intend to introduce a very low gas supply forecast which represents a scenario with minimal upstream investment. This will be even lower than the low gas supply forecast.
Major Electricity Users' Group	MEUG does have some concerns about the level of demand response uptake signalled for the 2026 SoSA. There is still a limited level of demand response available in the market, based on current bi-lateral agreements and the available market mechanisms. We consider that starting demand response uptake off at a lower level, then ramping it up towards the end of the 10-year period may be more prudent.	Noted. We recognise that demand response uptake is currently limited and will ensure our modelling reflects demand response agreements and available market mechanisms. Our approach starts from the current level of contracted demand response and incorporates likely demand response captured through our survey and any new agreements as they are announced.

<u>Question 3:</u> 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.

Organisation	Comment	Transpower's Response
Mercury	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 possible future (rather than expected)?	We believe the "Expected Future case" name adequately captures the intent of this scenario. It is intended to show the combination of sensitivities that we consider most likely, but many combinations of sensitivities are possible.
Meridian	We support the addition of an 'Expected Futures' case and we agree with the System Operator on the proposed sensitivities for inclusion in this case. It is helpful to present a single scenario that reflects the System Operator's best guess of likely future outcomes. However, the need to develop such a scenario also highlights that the mandatory assumptions and approach underpinning the Reference case are in urgent need of updating. It is clear that the Reference case does not reflect a likely view of the future. This is not surprising given the rapid evolution of the sector and the fact that Security Standard Assumptions Document (SSAD) has not been updated for 13 years. Ideally, the Electricity Authority would progress a review and update of the SSAD urgently to ensure the security standards and underlying modelling assumptions remain fit for purpose. Until this happens, we consider the System Operator's proposal to present an Expected Futures case to be sensible and helpful. It may be worth considering an alternative naming of this case to something more generic (e.g. 'Combined sensitivity') as the existence of both a Reference case and an Expected Futures case is likely to cause confusion.	We agree that there is a need for a review of the SSAD. The Authority has commenced this review. We believe the "Expected Future case" name adequately captures the intent of this scenario. As noted above in response to Meridian's Question 2 feedback, presenting the most likely outcome is not the only goal of the Reference case. We will explain the difference in purpose between the Expected Future case and the Reference case in the SOSA report.
Major Electricity Users' Group	We support the introduction of an "Expected Future" case for SoSA 2026. We consider that quarterly monitoring of progress against this expected future case would provide useful further market insight for stakeholders and decision-maker. It can also help inform the development of future SoSAs (2027 and beyond). We do query whether this expected future case will be updated and monitored annually going forward.	Noted. In terms of monitoring, we are intending to report quarterly on how the market is actually tracking against this Expected future case. In terms of updates to the Expected future case, our current intention is to do this annually through the SOSA process.

<u>Question 4:</u> 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.

Organisation	Comment	Transpower's Response
Fonterra	As outlined above the demand needs to be set to high due to process heat electrification, data centres, and transport electrification. The gas scenario needs to be set to low. The other scenarios are appropriate.	Our current view is that the low demand scenario is likely to be the most appropriate for the Expected Future case, based on how actual demand has tracked against past SOSA demand forecasts. We will reassess this when the 2026 SOSA demand forecast is finalised.
Mercury	It would be useful to include the constrained operational capacity scenario.	The constrained operational capacity sensitivity is designed to represent a highly conservative "moment-in-time" scenario, reflecting worst-case supply availability during peak periods. It will assume zero solar contribution, wind output at the 10th percentile (~8% of installed capacity), and reduced thermal availability (consistent with NZGB Firm scenario assumptions) to stress-test the NI-WCM. Because this sensitivity is intended as a pessimistic stress test rather than a likely future, it is not suited for inclusion in the Expected Future case, which aims to represent the most plausible combination of assumptions (at that time).

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.

Organisation	Comment	Transpower's Response
Major Electricity Users' Group	MEUG is comfortable with the changes made to the 2026 SoSA relative to the 2025 SoSA.	Noted.

Question 6: Other comments

Organisation	Comment	Transpower's Response
Mercury	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).	We acknowledge the point raised regarding the use of energy and capacity margins as measures of security. The current security standards are an economic standard that determine the expected unserved energy and the estimated unserved energy cost to the system and compares this against the cost of providing reserve energy and capacity. The standard is where these costs are in equilibrium. Any change to the security standard assumptions, including consideration of probabilistic measures such as expected unserved energy, would require a review and update of the security standards and Security Standard Assumptions Document (SSAD). We are in discussion with the Electricity Authority and MBIE on evolving the security standards and SSAD.

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