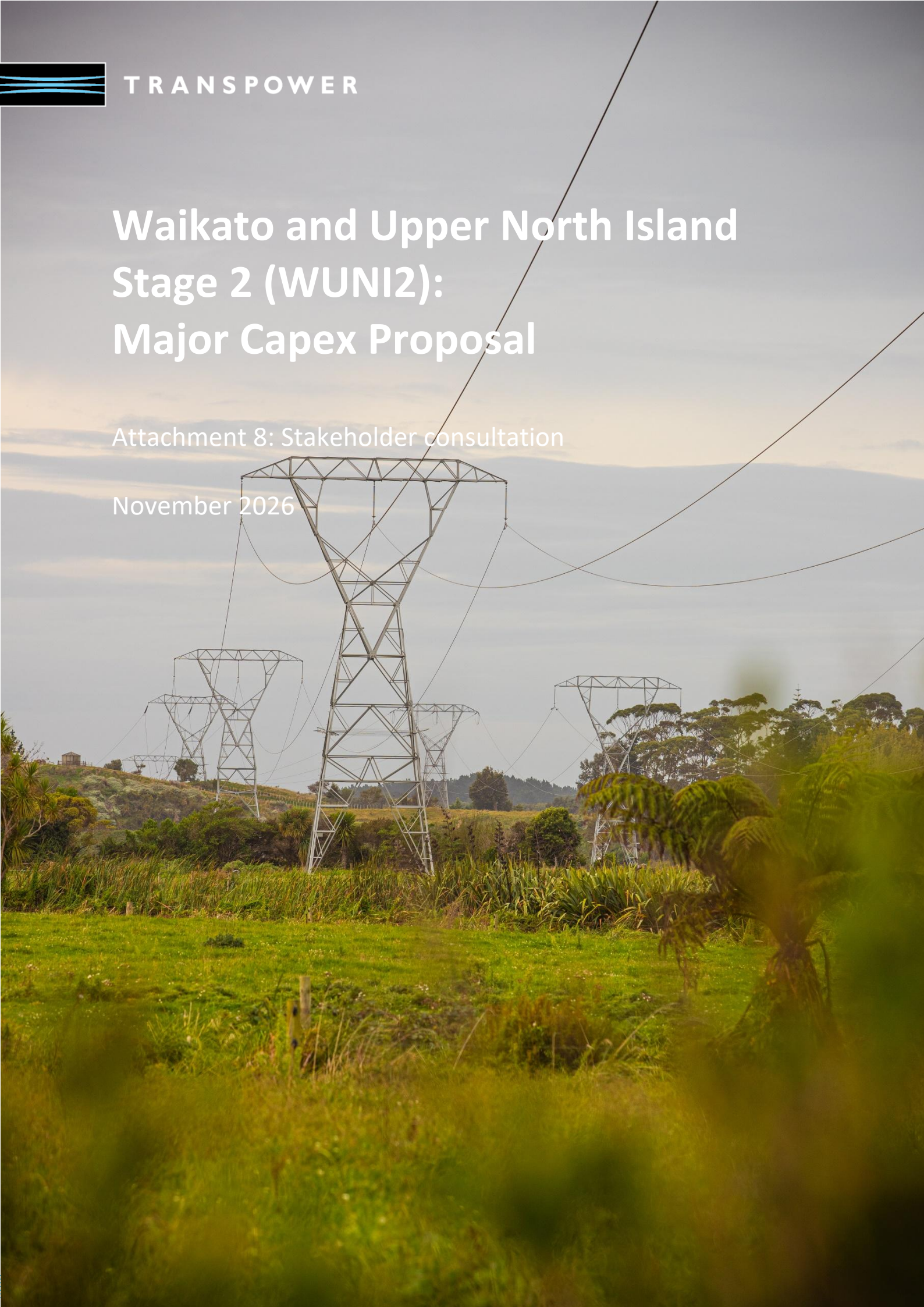
TRANSPOWER

Waikato and Upper North Island Stage 2 (WUNI2): Major Capex Proposal

Attachment 8: Stakeholder consultation

November 2026



Purpose

This Attachment forms part of our Waikato and Upper North Island (**WUNI**) Stage 2 Major Capex Proposal (**MCP**). The purpose of this Attachment is to summarise our consultation efforts on Stage 2 of the WUNI Upgrade major capex project (**Stage 2**) and outline how stakeholder feedback has been incorporated throughout development of this MCP.

In Transpower's letter of intention to the Commerce Commission (**Commission**) to plan Stage 2,[1] we expressed our view that it is reasonable to exclude long list consultation (as described in Schedule I of the **Capex IM**[2]) for Stage 2 and to proceed directly to short list consultation. The Commission approved our proposed consultation programme, including the omission of long list consultation in accordance with clause 8.1.3(2)(b) of the Capex IM.[3]

The following sections summarise the short list consultation and explain how consultation outcomes have been incorporated into this MCP.

1 Transpower, Notice of Intention (NOI)
2 Commission, Transpower Capital Expenditure Input Methodology [2012] NZCC 2.
3 Commerce Commission response to WUNI Upgrade Stage 2 NOI

1 Short list consultation

In January 2026, Transpower consulted on a short list of development plans and our preliminary application of the Investment Test for Stage 2.[4]

This consultation sought feedback from stakeholders on our preferred option (Option 4b), our generation assumptions in the region and the contribution of generators and battery energy storage systems (**BESS**) during the crucial winter peak periods. These assumptions are highly relevant for the calculation of the transmission limits in the WUNI region. The submission period was open from 15 January to 25 February 2026.

The options consulted on were as follows. Common to all options is the installation of a shunt capacitor at Pakuranga substation and a STATCOM at Henderson substation.

- **Option 1 – Series Compensation and Ohinewai Tee:** An investment path integrating reactive power support (shunt capacitors and another STATCOM), series compensation on the Brownhill–Whakamaru circuits, and a new hard tee connection of the Brownhill Whakamaru circuits at Ohinewai to enhance thermal transfer capacity. Series reactors are considered to redirect power flow after 2040.
- **Option 2 – Series Compensation and Brownhill–Ōtāhuhu Cable:** A new 220 kV underground cable between Brownhill Road and Ōtāhuhu, combined with series compensation on the Brownhill–Whakamaru circuits to optimise power flow. Reactive power support is provided by shunt capacitors at various locations. At a later stage, series reactors are considered on the new cable and on other circuits.
- **Option 3 – Ōtāhuhu–Whakamaru Duplexing and STATCOMs:** This path upgrades the two lowest-capacity lines supplying the WUNI region, by duplexing the Ōtāhuhu–Whakamaru A and B lines south of Ohinewai and connecting to the Ohinewai switching station. This increases thermal capacity of the lines while voltage stability is increased with two additional STATCOMs and various shunt capacitors. Series reactors are used to redirect power flow.
- **Options 4a and 4b – Series Compensation and Duplexing:** An investment path integrating reactive power support (shunt capacitors), series compensation on the Brownhill–Whakamaru circuits, and upgrades of the two lowest-capacity lines supplying the WUNI region, by duplexing the Ōtāhuhu–Whakamaru A and B lines south of Ohinewai and connecting to the Ohinewai switching station. This optimises the power flow across the available circuits into the WUNI region and increases the overall transmission limit.

Options 1 and 4a were subsequently removed from further consideration, not as a result of consultation feedback, but because of technical and protection issues associated with the Option 1 tee connection and changes to the input assumptions that rendered Option 4a redundant.

We received submissions from five organisations, including generators, distributors, and major industrial users.

Submissions were received from:

- Vector – the electricity distributor for greater Auckland region
- Powerco – the electricity distributor in the western Bay of Plenty region, amongst other regions
- The Major Electricity Users Group (MEUG) – a trade association representing major electricity users

[4] Waikato and upper North Island (WUNI) stage 2 project short-list consultation | Transpower

- Transpower (as System Operator) – providing a submission in its regulated role as System Operator, distinct from its role as Grid Owner
- Genesis Energy (Genesis) – a major electricity generator and retailer.

1.2 Short list consultation feedback

Overall, submitters supported the need for investment in the WUNI region and broadly supported our preferred option (Option 4b). The key themes raised through submissions were:

- **Investment need:** submitters supported investment to maintain N-1 security and reliable supply in the WUNI region.
- **Preferred option:** Option 4b (duplexing before series compensation) was widely supported as it allows investment to be staged if demand growth is lower than forecast.
- **Demand assumptions:** Submitters agreed that the demand forecast is based on reasonable assumptions, with emphasis on the need for ongoing monitoring of demand growth.
- **Series compensation:** Submitters raised concerns associated with series compensation, including SSR and SSCI[5] risks, and highlighted the need for early coordination across the sector.
- **Non-transmission solutions (NTS):** Submitters supported the use of NTS and flexibility to defer transmission investment but noted that greater coordination is needed between Transpower and electricity distribution businesses (**EDBs**), as well as longer-term contracts and availability payments to incentivise investors to establish new flexibility resources and to lower overall costs to consumers.
- **Generation assumptions:** We received further information on key generation assumptions, including availability of generation at Huntly and plans for increasing BESS capacity.

Submitters did not express any views on our proposal to use only the Reference, Growth and Environmental scenarios from MBIE's Electricity Demand and Generation Scenarios (**EDGS**), with variations.

For a detailed summary of submissions and our responses, please refer to our summary of submissions document.[6]

1.3 Updates based on consultation feedback

One of the most significant outcomes of the short list consultation was updated information on generation availability at Huntly and the expected contribution from existing and future grid-scale BESS during peak demand periods in the WUNI region.

We have considered the feedback received and updated our assumptions. Out to 2035, we now assume:

- **Huntly generation:** all three Huntly Rankine units (240 MW each) and peaking unit 6 (50 MW) are available during peak load periods.
- **Unit 5:** as a prudent assumption, and reflecting uncertainty around gas availability, we have not included the combined-cycle gas turbine at Huntly (unit 5, 400 MW) in the power system modelling.

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5 Sub-synchronous resonance (**SSR**) and sub-synchronous control interaction (**SSCI**) oscillations

6 WUNI2 - Summary of submissions

- **Grid-scale BESS:** 635 MW of grid-scale BESS is operational by 2029, made up of 235 MW already operating and 400 MW under construction or committed. We assume these BESS contribute 15% of their nominal capacity during peak load periods.

We have also updated the peak load forecast by lowering it, as proposed in the consultation document and supported by the feedback received. The updated forecast is based on the July 2024 EDGS at a national level and incorporates local demand growth information provided by EDBs, which we received and consolidated in early 2026. Further detail on the underlying demand and generation assumptions is provided in Attachment 3.

These updates defer the need for the investments and enable us to better align future capacity upgrades with the condition-based replacement of the OTA–WKM A and B conductors. As a result, the timing and staging of the proposed investment differ from those presented in the short list consultation.

Non-transmission solutions (NTS)

Transpower has considered submitters' general support for NTS and the potential for NTS to defer the proposed Stage 2 investments. We do not propose an NTS allowance for investment deferral of the proposed Stage 2 investments in this MCP.

Updated demand forecasts have moved the investment need dates out relative to the short list consultation, and further deferral is constrained by procurement considerations and asset condition.

For the Henderson STATCOM, Transpower has completed a competitive RFP process and secured a competitive price. Given market and supply-chain pressures affecting transmission equipment, including dynamic reactive power devices and associated power electronics, delaying procurement risks higher costs and longer lead times. Transpower considers that proceeding with procurement now, at the price secured through the competitive process, is in consumers' best interests.

Replacement of the OTA–WKM A and B conductors is driven by asset condition and the need to manage the risks of continued operation of the transmission network in the region. NTS would not address these condition-related issues or provide a practical basis for further deferral.

The shunt capacitor investment, planned for 2035, provides a material increase in capacity at relatively low cost. Given the capacity benefit relative to the investment required, Transpower considers that deferral through NTS is unlikely to be practical or economic.

1.4 Engagement with Vector on our latest demand forecast update

After consulting on Stage 2, we completed our annual demand forecasting update, including our annual survey of EDBs and their associated step loads. We discussed the updated forecast with Vector and compared the underlying assumptions.

The forecast used in developing the short list was based on a set of scenarios derived from variations of the 2019 EDGS and consulted on for our Net Zero Grid Pathways Stage 1 MCP. These scenarios were updated with new information from EDBs collected for our 2024 Transmission Planning Report (**TPR**). As noted above, the demand forecast used for this MCP is based on the 2024 EDGS and uses EDB information collected as part of the 2026 TPR update.

Comparing Vector's forecast with ours, we note that Vector's forecast takes a more conservative view in which it is possible for a large proportion of the EV charging to coincide with the GXP peak. Having discussed this with the Vector team and tested alternative 'fixed' charging profiles, it is our view that our forecast represents a reasonable assessment of future load.

The updated demand and generation assumptions allow us to align the need for additional capacity with the condition-driven need to replace the conductors on the OTA–WKM A&B lines. This defers investment in other equipment, including series compensation on the BHL–WKM line. If demand increases faster than expected, these investments may need to be brought forward through future MCPs.

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