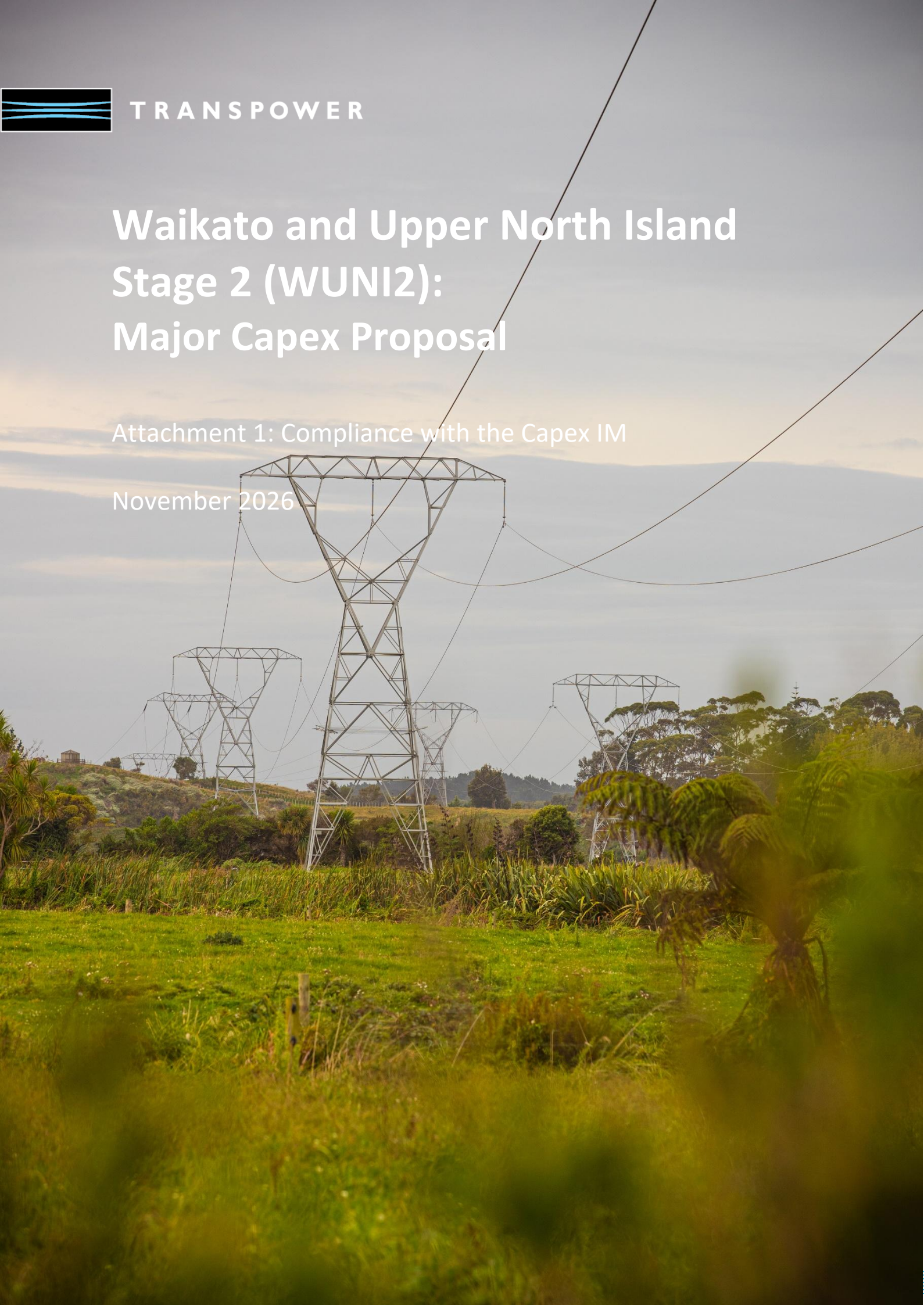
TRANSPOWER

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

Attachment 1: Compliance with the Capex IM

November 2026



1 Introduction

The *Transpower Capital Expenditure Input Methodology Determination 2012* (as amended) (**Capex IM**) contains requirements Transpower must comply with in preparing a major capex proposal, and requirements the Commerce Commission (**Commission**) must follow in determining whether to approve the proposed investment.

The purpose of this document is to satisfy the Commission that Transpower has met the compliance requirements as set out in the Capex IM for its Waikato and Upper North Island Stage 2 Major Capex Proposal.

This attachment should be read in conjunction with the rest of the major capex proposal documents.

The Capex IM was amended in 2023 to, among other things, increase the base capex threshold to $30m. The amendments made in 2023 apply to major capex proposals notified on or after 1 April 2025. Transpower notified the Commission of its intention to plan the major capex project to which this major capex proposal relates on 8 December 2025, so the Capex IM with the 2023 amendments applies.

The relevant version of the Capex IM is Transpower-Capital-Expenditure-Input-Methodology-consolidated-as-at-1-April-2025-4-June-2026.pdf.

2 Information requirements for Major Capex Proposals

The Capex IM includes some specific requirements for major capex proposals. The tables below describe how this major capex proposal meets these requirements.

Clause	Requirement	Compliance
1.1.5(2), definitions of "major capex project" and "major capex project (staged)"	***major capex project*** *means a* ***project*** *of* ***major capex*** *undertaken to address or enable a specific* ***investment need*** *to be met, which may be either or both,* ***a transmission investment*** *or* ***non-transmission solution****;* ***major capex project (staged)*** *means a* ***major capex project*** *consisting of two or more* ***projects*** *and includes any* ***major capex project*** *that is a continuation of an existing* ***major capex project (staged)****;*	Compliant. This project (Stage 2 of the Waikato and Upper North Island Upgrade major capex project (**Stage 2**)) is a major capex project and major capex project (staged) because: • the expenditure will be incurred to provide a net electricity market benefit; • the expenditure for Stage 2 (and the previous stage and potential future stages of the Waikato and Upper North Island Upgrade major capex project) is forecast to be capital expenditure in excess of the base capex threshold ($30m); • the expenditure will not be incurred in relation to the base capex categories of expenditure; • the expenditure is not funded under a new investment contract; and • Stage 2 is a continuation of the staged Waikato and Upper North Island Upgrade major capex project. The forecast capital expenditure for Stage 2 is $322.8m with a major capex allowance of $408.4m.
3.3.1(1), (2)	*(1)* ***Transpower*** *must notify the* ***Commission*** *of its intention to plan a* ***major capex project*** *that may become a* ***proposed investment****.* *(2)* ***Transpower's*** *notification under subclause (1) must include the following detail about the* ***major capex project*** *if it is planned to be a* ***major capex project (staged)****-* *(a) all the proposed* ***staging projects*** *being planned; and* *(b) if it is a continuation of an existing* ***major capex project (staged)****, all related previously approved* ***staging projects*** *and whether those* ***staging projects*** *have been completed.*	Compliant. Transpower notified the Commission of its intention to plan Stage 2 on 8 December 2025.[1] Stage 2 is a continuation of Transpower's staged Waikato and Upper North Island Upgrade major capex project. Stage 1 of the Waikato and Upper North Island Upgrade major capex project (**Stage 1**), approved by the Commission in September 2020[2], focused on improving voltage stability. Stage 1 involved installing two STATCOMs at the Hamilton and Ōtāhuhu substations. These works were successfully completed in 2023 and 2025.

1 Notice of intention to initiate Stage 2 of the Waikato and Upper North Island Upgrade

2 Decision and reasons on Stage 1 of Transpower's Waikato and Upper North Island Voltage Management staged major capex project

Clause	Requirement	Compliance
3.3.1(3)-(8)	*(3) The **Commission** and **Transpower** must, in the two-month period following a notification, under subclause (1) use reasonable endeavours to agree in respect of that **major capex project**-* *(a) a consultation programme for a **transmission investment** or **non-transmission solution**, in accordance with clause 8.1.3;* *(b) an approach to ensure appropriate consideration of **non-transmission solutions** to meet the **investment need** giving rise to the **major capex project** in accordance with clause 8.1.3;* *(c) an **application submission date**; and* *(d) an **approval timeframe**.* *(4) Where the **Commission** and **Transpower** have not agreed on each of the matters in subclause (3) within the two month period following a notification under subclause (1), the **Commission** must, after considering the views expressed by **Transpower**, specify those matters that have not been agreed within two weeks of the expiry of the two month period.* *(5) The consultation programme referred to in subclause (3)(a) may also include any consultation processes that the **Commission** intends to follow.* *(6) The **Commission** and **Transpower** must publish the matters agreed under subclause (3) or specified under subclause (4) as soon as reasonably practicable.* *(7) The **Commission** and **Transpower** must regularly review whether the matters published under subclause (6) (or published in amended form under subclause (8)) remain appropriate and reasonable and the **Commission** may, after considering **Transpower's** views, amend any of those matters to ensure that they remain appropriate and reasonable.* *(8) Where the **Commission** materially amends any of the matters under subclause (7), the **Commission** and **Transpower** must publish the amended matters or a summary of them as soon as reasonably practicable.*	Compliant. The Commission confirmed the matters for agreement with Transpower under clause 3.3.1 of the Capex IM in its letter of 14 September 2026. Transpower's notice of intention can be found here and the Commission's response here. Information about the consultation programme, approach to considering non-transmission solutions (**NTS**), application submission date and approval timeframe is published on Transpower's website at Waikato and upper North Island (WUNI) Upgrades | Transpower Under clause 8.1.3 of the Capex IM, the Commission agreed that the consultation programme for this project does not need to cover a long-list consultation. Transpower has considered the potential for NTS to defer the proposed Stage 2 investments but does not propose an NTS allowance for Stage 2 investment deferral in this major capex proposal. The investment need dates have been deferred from those set out in the short list consultation as far as possible considering updated demand forecasts and additional project-related factors. These factors include the cost and supply chain risks associated with further deferring procurement of the Henderson STATCOM, and the condition-driven replacement requirements for the Ōtāhuhu–Whakamaru A and B lines conductors. These factors leave little scope for further economic deferral of the proposed Stage 2 investments, limiting the usefulness of NTS.
3.3.1(9)	*(9) **Transpower** must consult interested persons in accordance with the published consultation programme and follow the published approach for consideration of **non-transmission solutions**.*	Compliant. Information about the short list consultation on Stage 2 is published at Waikato and upper North Island (WUNI) stage 2 project short-list consultation | Transpower. Please refer to: • Overview, Sections 3.2 and 4.1; • Attachment 4: Short List of Development Plans, Sections 3 and 4; and • Attachment 8: Stakeholder Consultation.

Clause	Requirement	Compliance
3.3.3(1)	*(1) **Transpower** must submit a **major capex proposal** to the **Commission** when it seeks approval for-* *(a) a **major capex project** that is not **major capex projects (staged)**; or* *(b) one or more **staging projects** of a **major capex projects (staged)**. For the avoidance of doubt, any application by **Transpower** to the **Commission** for approval of subsequent stages of a **major capex project (staged)** must be made in a **major capex proposal** separate from a proposal submitted for a previously approved stage.*	Compliant. This project is a major capex project (staged).
3.3.3(2)	*(2) Where **Transpower** seeks approval of one or more **staging projects-*** *(a) the aggregate forecast **capital expenditure** and forecast **maximum recoverable costs** for all **staging projects** that comprise the **major capex project (staged)** must exceed the **base capex threshold**;* *(b) the forecast **capital expenditure** and forecast **maximum recoverable costs** for a **staging project** for which approval is sought need not exceed the **base capex threshold**.*	Compliant. The expenditure for Stage 2 (and the previous stage and potential future stages of the Waikato and Upper North Island Upgrade major capex project) is forecast to be capital expenditure in excess of the base capex threshold ($30m). The forecast capital expenditure for Stage 2 is $322.8m with a major capex allowance of $408.4m.
3.3.3(3)	*(3) A **major capex proposal** may be submitted at any time during a **regulatory period**.*	Compliant.
3.3.4	*The **Commission** may reject a **major capex proposal** where-*	
3.3.4(a)	*(a) **Transpower** has not complied with the requirements specified in clause 3.3.1; or*	We consider we have complied with the requirements of clause 3.3.1 of the Capex IM. See above.
3.3.4(b)	*(b) the **major capex proposal** does not comply with clause 7.4.1.*	We consider this major capex proposal complies with clause 7.4.1 of the Capex IM. See below.

Clause	Requirement	Compliance
7.4.1(1)	*(1) A **major capex proposal** must-*	
7.4.1(1)(a)	*(a) comply with Schedule G; and*	We consider this major capex proposal complies with Schedule G of the Capex IM. See below.
7.4.1(1)(b)	*(b) contain the certificates specified in clause 9.2.1 [Chief executive officer certification].*	Compliant. Please refer to Attachment 10: CEO Certification.
7.4.1(2)	*(2) The number of **investment options** contained in a **major capex proposal** must be appropriate given the magnitude of the estimated expenditure and the complexity of the **investment need** associated with the **proposed investment**.*	We consider this major capex proposal complies with this requirement, having regard to the estimated expenditure and investment need. We short-listed three development plans (Options 2, 3 and 4b), which were assessed as investment options using the investment test. Please refer to: • Overview, Section 3.2; and • Attachment 2: Need.
7.4.1(3)	*(3) With respect to each **investment option** described in such a proposal, the-* *(a) specificity of information; and* *(b) rigour and comprehensiveness of the analysis,* *must be commensurate with the estimated expenditure and complexity of that option.*	We consider this major capex proposal complies with this requirement, having regard to the estimated expenditure and complexity of the investment options. Please refer to: • Overview, Sections 3 and 5; • Attachment 4: Short List of Development Plans; • Attachment 5: Investment Test; • Attachment 6: Costing; and • Attachment 7: Benefits Modelling.
7.5.1(1)	*(1) All **major capex proposals** and **listed project applications** must include-*	
7.5.1(1)(a)	*(a) a description of the benefits the proposed expenditure is expected to deliver to **Transpower's** customers;*	Compliant. Please refer to: • Overview, Section 5; • Attachment 5: Investment Test, Section 3.1; and • Attachment 7: Benefits Modelling.
7.5.1(1)(b)	*(b) to the extent reasonably possible, a quantitative estimate of the benefits the proposed expenditure is expected to deliver to **Transpower's** customers; and*	Compliant. Please refer to: • Overview, Section 5; • Attachment 5: Investment Test, Section 3.1; and

Clause	Requirement	Compliance
		• Attachment 7: Benefits Modelling.
7.5.1(1)(c)	*(c) an estimate of the expected increase in **Transpower's** transmission charges due to the proposed expenditure, including estimated increases in transmission charges-* *(i) per kilowatt hours of energy supplied; and* *(ii) for each affected grid exit point and grid injection point.*	Compliant. The proposed Stage 2 investments will comprise a high-value post-2019 benefit-based investment (**BBI**), the covered cost of which will be recovered through benefit-based charges under the transmission pricing methodology (**TPM**). The proposed Stage 2 investments are not resiliency investments so the price-quantity method in the TPM will be used to calculate beneficiary customers' starting allocations for the BBI. Please refer to: • Attachment 9: Indicative Pricing Impacts.

Clause	Requirement	Compliance
G1	*For the purpose of clause 7.4.1(1)(a)-* *(a) a **major capex proposal** must include the information listed or described in this schedule;*	We consider this major capex proposal complies with this requirement. See below.
G2	*Explanation of the **investment need**, including-* *(a) information on its nature, extent, location and timing;* *(b) commentary as to how the **investment need** is consistent with the most recent **integrated transmission plan;** and* *(c) a summary of consultation participants' views on the **investment needs** and how **Transpower** had regard to those views and if not, why not.*	Compliant. Consultation respondents supported the investment need. Please refer to: • Overview, Section 2; • Attachment 2: Need, Section 1.3.1, which provides commentary on how the investment need is consistent with the most recent Integrated Transmission Plan; • Attachment 4: Short List of Development Plans, Sections 1, 3, and 4; and • Attachment 8: Stakeholder Consultation, Section 1.2.
G3(1), (2)	*(1) Detailed description of each **demand and generation scenario variation**, including-* *(a) an explanation of the major variations between the **demand and generation scenario variation** and the related original **demand and generation scenario**;* *(b) the rationale for the variations; and* *(c) a summary of consultation participants' views on them;* *(2) In respect of each **relevant demand and generation scenario-*** *(a) the relative weighting of each scenario; and* *(b) where that weighting was determined by **Transpower**, the methodology used to determine it; and*	Compliant. We have used demand and generation scenario variations (i.e. reasonable variations to MBIE's 2024 Electricity Demand and Generation Scenarios (**EDGS**)) in the investment test. Our short list consultation was based on MBIE's 2019 EDGS with variations from assumptions book v2.0. Following consultation, we decided to use MBIE's 2024 EDGS with variations from assumptions book v3.0 for the investment test. The assumptions book v3.0 variations are broadly consistent with the assumptions book v2.0 variations we consulted on. Consultation respondents did not express any views on those variations. Please refer to: • Attachment 3: Demand and Generation Scenarios, Sections and 2 and 3; • Attachment 5: Investment Test, Section 2.1; and • Attachment 8: Stakeholder Consultation, Section 1.2.
G3(3)	*(3) A detailed description of the **counterfactual case**, including-* *(a) an explanation of the major assumptions underlying the **counterfactual case**;* *(b) the rationale for the assumptions; and* *(c) a summary of consultation participants' views on the option.*	Not applicable to this project. Counterfactual cases are intended to apply to proposed investments that facilitate renewable generation on the grid,[3] which is not the investment need for this project. We have used a base case (do nothing) to assess the relative expected net electricity market benefits of the investment options. However, the base case (which we refer to

[3] See paragraph 3.51.2 of the Part 4 IM Review 2023 – Final decision – Transpower investment topic paper – 13 December 2023. Counterfactual case is defined in the Capex IM as "a feasible and reasonable future generation option where no major capex is incurred."

Clause	Requirement	Compliance
		as the "counterfactual" in this major capex proposal) is not a counterfactual case in the Capex IM sense.
G4	*In relation to each **investment option** contained in the **major capex proposal**-*	
G4(1)	*(1) description of the **investment option**;*	Compliant. Please refer to: • Overview, Section 3.2; and • Attachment 4: Short List of Development Plans, Section 3.
G4(2)	*(2) **net electricity market benefit** of each **investment option** under each **relevant demand and generation scenario**;*	Compliant. Please refer to: • Attachment 5: Investment Test, Table 5 (the single scenario sensitivities in particular).
G4(3)	*(3) in respect of each **investment option**, quantum of-* *(a) each **electricity market benefit or cost element**;* *(b) each **project cost**;* *(c) aggregate **electricity market benefit or cost element**; and* *(d) the **P50**,* *used to calculate each **net electricity market benefit**;*	Compliant. Please refer to: • Overview, Section 5, Table 4; • Attachment 5: Investment Test, Section 3.1, • Attachment 6: Costing, Section 4; and • Attachment 7: Benefits Modelling, Section 6.
G4(4)	*(4) methodology used to determine the quantum of all information provided pursuant to subclause (3), including details commensurate with the estimated **capital expenditure** and **consequential opex**, and with the complexity of the **investment option**, of any-* *(a) internal and external benchmarking and how the results were applied;* *(b) relevant existing or proposed supply or procurement processes;* *(c) modelling tools or techniques; and* *(d) key publications and data sources;*	Compliant. Please refer to: • Attachment 5: Investment Test, Section 3, • Attachment 6: Costing; and • Attachment 7: Benefits Modelling.
G4(5)	*(5) key assumptions used to determine the **net electricity market benefit** of each **investment option**, including-* *(a) **discount rate**;* *(b) **calculation period**; and* *(c) cost per megawatt hour used to determine the **value of expected unserved energy**; and*	Compliant. We have not included reliability benefits in our application of the investment test and therefore have not used a value of expected unserved energy in our benefits calculation. Please refer to • Attachment 5: Investment Test, Sections 2.2, 2.3 and 3.1; • Attachment 6: Costing; and • Attachment 7: Benefits Modelling.
G4(6)	*(6) **expected net [electricity] market benefit** of each **investment option**.*	Compliant.

Clause	Requirement	Compliance
		Please refer to: • Overview, Section 5, Table 4; and • Attachment 5: Investment Test, Section 4, Table 4.
G5	***Information relating to proposed investment only***	
G5(1)	*(1) Identification of the* ***proposed investment*** *and, where the* ***proposed investment*** *is a* ***major capex project (staged),*** *provide-* *(a) a description of all the proposed* ***staging projects*** *of the* ***major capex project (staged)****;* *(b) full details of each* ***staging project*** *for which approval is being sought;* *(c) reasons for the proposed staging, including the extent to which splitting the* ***major capex project (staged)*** *into stages has the potential to reduce the timing, scope or cost uncertainties of the* ***major capex project****; and* *(d) the estimated* ***project costs****, proposed* ***major capex project outputs*** *and planned timing of each* ***staging project*** *for which approval is being sought;*	Compliant. The proposed investment is a major capex project (staged) in at least two staging projects. Please refer to: • Overview, Sections 1 and 6, • Attachment 6: Costing, Sections 4 and 6.
G5(2)	*(2) Detailed description of the components of* ***the major capex project*** *or* ***staging projects****, including at least-* *(a) identification of the extent to which the* ***major capex project*** *or each* ***staging project*** *includes a* ***transmission investment*** *or a* ***non-transmission solution****;* *(b) a summary of requirements for completion of the* ***major capex project*** *or each* ***staging project****, such as property or property right acquisition, resource management approvals, asset purchases, asset construction and site remediation;* *(c) any proposed* ***major capex allowance*** *for the* ***major capex project*** *or each* ***staging project****, which must be the* ***P50****, of* ***capital expenditure*** *and the estimated probability distribution of the* ***P50****;* *(d) where a* ***major capex allowance*** *is applicable, the* ***commissioning date assumption*** *and rationale for it;* *(e) any proposed* ***maximum recoverable costs****;* *(f) where* ***maximum recoverable costs*** *are applicable, the* ***completion date assumption*** *and rationale for it;* *(g) the* ***major capex incentive rate*** *where a different rate to the default rate of 15% is proposed and the rationale for it;* *(ga) the* ***P30*** *and* ***P70*** *for the* ***project****;* *(h) all relevant supporting technical information and costing information;* *(i) where the* ***major capex project*** *or a* ***staging project*** *includes a* ***non-transmission solution****-*	Compliant. There are no proposed non-transmission solutions or proposed maximum recoverable costs. Please refer to: • Overview, Sections 1, 6 and 7, including Table 2. • Attachment 6: Costing.

Clause	Requirement	Compliance
	*(iii) the proposed **recovery scheme**; and* *(iv) an explanation of the relationship between any proposed **major capex allowance** and any proposed **maximum recoverable costs** for that **non-transmission solution**; and* *(j) proposed **approval expiry date** and rationale for it;*	
G5(3), (4), (5)	*(3) Detailed description of the rationale for the **proposed investment**;* *(4) Detailed information of the rationale for any **consequential opex,** including information on any **consequential opex** that is expected to be ongoing;* *(5) Summary of the key evidence that supports the rationales such as contracts, reports, memos, financial or other data, results of modelling exercises, customer documentation and letters, and statements from **directors**;*	Compliant. The proposed investment is required to maintain N-1 reliability in the core grid and in the Waikato and Upper North Island region in particular. There is no consequential opex for the proposed investment. Please refer to: • Overview, Section 2; • Attachment 2: Need. • Attachment 8: Stakeholder Consultation.
G5(6)	*(6) Commentary as to how consistent the **proposed investment** is with the most recent **integrated transmission plan**, and if not, why not;*	Compliant. The proposed investment is consistent with our latest Transmission Planning Report (2026), which is part of the suite of documents making up the Integrated Transmission Plan. Please refer to: • Attachment 2: Need, Section 1.3.1.
G5(7), (8)	*(7) Identification of anything associated with the **proposed investment** falling under any of clauses D4(1)(a) to D4(1)(g) that did not meet the definition of **electricity market benefit or cost element** only by virtue of its being unlikely to affect the **net electricity market benefit** to an appreciable degree;* *(8) Description of considerations, assumptions and calculations used to determine that something falling under any of clauses D4(1)(a) to D4(1)(g) did not meet the definition of **electricity market benefit or cost element** by virtue of its being unlikely to affect the **net electricity market benefit** to an appreciable degree;*	Not applicable.
G5(9)-(11)	*(9) Outcome of **sensitivity analysis;*** *(10) Description of the methodology applied in undertaking **sensitivity analysis;*** *(11) Explanation as to how robust to **sensitivity analysis** the **proposed investment** is;*	Compliant. The proposed investment is robust to sensitivity analysis. Please refer to: • Attachment 5: Investment Test, Section 3.2.
G5(12)	*(12) Reasons for any selection of a-* *(a) **discount rate** other than 5%; and* *(b) **calculation period** other than 20 years;*	Compliant. We have used the default discount rate of 5%, and a bespoke 22-year calculation period. We have not included reliability benefits in our application of the Investment Test and therefore have not used a value of expected unserved energy in our benefits calculation.

Clause	Requirement	Compliance
	*(c) cost per megawatt hour determined using paragraph (b) of the definition of **value of expected unserved energy**;*	Please refer to: • Attachment 5: Investment Test, Sections 2.2 and 2.3.
G5(13)	*(13) A description as to how consistent with **good electricity industry practice** the **proposed investment** is;*	Compliant. Please refer to: • Attachment 5: Investment Test, Section 3.4.
G5(14)	*(14) Rationale for determining that the **proposed investment** may satisfy the **investment test** by reference to each subclause and paragraph of that test; and*	Compliant. More detail about how the proposed investment satisfies the investment test is provided below.
G5(14)	*(15) A plan for monitoring costs, **project** milestones and deliverables that reflects the best information available to **Transpower**.*	Compliant. Please refer to: • Attachment 6: Costing, Section 8.
G6	*In relation to the **major capex project** or, each **staging project** for which **Transpower** seeks approval-*	
G6(1)-(4)	*(1) the **major capex project outputs** that are proposed;* *(2) the quantum of each proposed **major capex project output**;* *(3) the rationale for the proposed **major capex project outputs**, including-* *(a) description of key factors and key assumptions relevant to their determination including the uncertainty associated with each such factor or assumption; and* *(b) explanation of the extent to which the quantum of each proposed **major capex project output** reflects:* *(i) the assets to be **commissioned**;* *(ii) the forecast changes to the functional capability of the **grid**;* *(iii) the quantum of forecast **electricity market benefit or cost elements** directly related to the **supply** of **electricity transmission services**; and* *(iv) in respect of a **non-transmission solution**, any service provided by a third party;* *(4) explanation of the relationship between the proposed **major capex allowance** and the quantum of each **major capex project output** that is proposed including the sensitivity of the quantum of each **major capex project output** that is proposed to changes in the proposed **major capex allowance**, including commentary in terms of increases or decrease in the scope of the **project**;*	Compliant. There is no flexibility in the quantum of the major capex project outputs. The major capex project outputs will either be provided (for a cost up to the major capex allowance) or they will not. There are no proposed non-transmission solutions in Stage 2. Please refer to: • Overview, Sections 1 and 6, including Table 2; and • Attachment 4: Short List of Development Plans.
G6(5)	*(5) description of factors that may affect **Transpower's** ability to achieve each **major capex project output** that is proposed, including identification of each factor, with reasons, as within or outside **Transpower's** control; and*	Compliant. Please refer to: • Attachment 6: Costing, Section 8.

Clause	Requirement	Compliance
G6(6)	*(6) in the case of a **non-transmission solution**, a description of the **transmission investment** it avoids in terms of both assets and expected costs avoided.*	Not applicable to this project. There are no proposed non-transmission solutions in Stage 2.
G7	*In respect of consultation, the specified information is a description as to how the consultation programme referred to in clause 3.3.1(9) was followed, including-* *(a) a list of the relevant consultation steps and confirmation by **Transpower** that each occurred;* *(b) a list of respondents to the consultation;* *(c) a description of all issues raised by interested persons in response to **Transpower's** intended **major capex proposal**;* *(d) a summary of the arguments raised in respect of each issue to which paragraph (c) applies; and* *(e) an explanation of how the arguments referred to in paragraph (d) were taken into account when determining the **investment options** and applying the **investment test**.*	Compliant. Information about the short list consultation on Stage 2 is published on Transpower's website at Waikato and upper North Island (WUNI) stage 2 project short-list consultation | Transpower. Please refer to: • Attachment 8: Stakeholder Consultation. A description of all issues raised, a summary of arguments raised on each issue and Transpower's responses are summarised at: WUNI2 - Summary of submissions.pdf
G8	*In respect of **non-transmission solutions**, a description as to how the requirements of Schedule I Division 2 were met, including-* *(a) summary of the process followed to identify and assess **non-transmission solutions**;* *(b) description of **non-transmission solutions** suitable to meet the relevant **investment need** identified either by **Transpower** or by consultation participants;* *(c) explanation as to how the **non-transmission solutions** to which paragraph (b) applies were taken into account when determining the **investment options** and applying the **investment test**; and* *d) description and justification of how any assets that would be **commissioned** by **Transpower** form part of the **non-transmission solution**.*	Not applicable. Transpower has considered the potential for NTS to defer the proposed Stage 2 investments but does not propose an NTS allowance for Stage 2 investment deferral in this major capex proposal. The investment need dates have been deferred from those set out in the short list consultation as far as possible considering updated demand forecasts and additional project-related factors. These factors include the cost and supply chain risks associated with further deferring procurement of the Henderson STATCOM, and the condition-driven replacement requirements for the Ōtāhuhu–Whakamaru A and B lines conductors. These factors leave little scope for further economic deferral of the proposed Stage 2 investments, limiting the usefulness of NTS.
G9	*Any additional supporting material **Transpower** reasonably considers is relevant to the decision of the **Commission** under clause 3.3.5.*	We consider we have included all relevant information in this major capex proposal.

3 Application of the Investment Test

Clause G5(14) of the Capex IM requires a major capex proposal to include Transpower's rationale for determining that the proposed investment may satisfy the investment test in Schedule D of the Capex IM, by reference to each subclause and paragraph of the test. The table below describes how the proposed investment satisfies the investment test. The proposed investment is Option 4b (Stage 2 and potential future stages of the Waikato and Upper North Island Upgrade major capex project).

Clause	Requirement	Compliance
D1(1)	*(1) The **investment test** is satisfied in respect of a **proposed investment** if the **proposed investment** is an **investment option** that-*	
D1(1)(a)	*(a) is sufficiently robust under **sensitivity analysis**;*	Compliant. The proposed investment is robust to sensitivity analysis. Please refer to: • Attachment 5: Investment Test, Section 3.2.
D1(1)(b)	*(b) has a positive **expected net electricity market benefit** unless it is designed to meet an **investment need** the satisfaction of which is necessary to meet the deterministic limb of the **grid reliability standards**; and*	Compliant. The proposed investment has positive expected net electricity market benefit. Please refer to: • Overview, Section 5, Table 4; and • Attachment 5: Investment Test, Section 4, Table 4.
D1(1)(c)	*(c) has-*	
D(1)(c)(i)	*(i) the highest **expected net electricity market benefit**, where only quantified **electricity market benefit or cost elements** are considered; or*	Compliant. The proposed investment has the highest expected net electricity market benefit of the investment options considered. Please refer to: • Overview, Sections 5, Table 4; and • Attachment 5: Investment Test, Section 4, Table 4.
D1(1)(c)(ii)	*(ii) the highest **expected net electricity market benefit** including a qualitative assessment to take into account the contribution of associated unquantified **electricity market benefit or cost elements**, if the **proposed investment** has a similar **expected net electricity market***	Not applicable as the proposed investment is the investment option with the highest positive expected net electricity market benefit of the investment options considered.

Clause	Requirement	Compliance
	benefit *to the* ***investment option*** *with the highest* ***expected net electricity market benefit*** *where only quantified* ***electricity market benefit or cost elements*** *are taken into account.*	
D1(2)	*(2) For the purpose of subclause (1)(c)(ii)-*	
D1(2)(a)	*(a) a similar* ***expected net electricity market benefit*** *is one where the difference in quantum, subject to subclause (3), is 10% or less of the aggregate* ***project costs*** *of the* ***investment option*** *to which the* ***proposed investment*** *is compared; and*	Not applicable as the proposed investment is the investment option with the highest positive expected net electricity market benefit of the investment options considered.
D1(2)(b)	*(b) an* ***electricity market benefit or cost element*** *may be treated as unquantified where-* *(i) the cost of calculating its quantum in accordance with clause D6(4) is likely to be disproportionately large relative to the quantum; or* *(ii) its expected value cannot be calculated in accordance with clause D6(4) with an appropriate level of certainty due to the extent of uncertainties in underlying assumptions or calculation approaches.*	Not applicable as the proposed investment is the investment option with the highest expected net electricity market benefit of the investment options considered.
D1(3)	*(3) For the purpose of subclause (2)(a), the* ***Commission*** *may, at its discretion, adopt an alternative percentage to 10% as proposed by* ***Transpower****.*	Not applicable as the proposed investment is the investment option with the highest expected net electricity market benefit of the investment options considered.

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