COMMERCE COMMISSION NEW ZEALAND
Te Komihana Tauhokohoko

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Transpower's Ōtāhuhu-Whakamaru A and B line reconductoring listed project application

Final decision - reasons paper

2 July 2026

Associated documents

Publication date	Reference	Title
31 January 2012	[2012] NZCC 2	Transpower Capital Expenditure Input Methodology Determination ('principal determination')
13 December 2023	[2023] NZCC 39	Transpower Capital Expenditure Input Methodology (IM Review 2023) Amendment Determination 2023
29 August 2024	ISBN 978-1-991287-75-5	Transpower's individual price-quality path for the regulatory control period commencing 1 April 2025
11 December 2024	[2024] NZCC 40	Transpower Capital Expenditure Input Methodology (treatment of insurance entitlements) Amendment Determination 2024
28 April 2026	[2026] NZCC 09	Transpower Capital Expenditure Input Methodology (Major Capex Incentive Formula) Amendment Determination 2026

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Our final decision

Purpose of this paper

1.1 On 9 December 2025, Transpower New Zealand Limited (Transpower) submitted an application proposing an increase in its base capex allowance to reconductor the Flatbush to Hūnua section (31km) of the Ōtāhuhu – Whakamaru (OTA-WKM) A and B transmission lines in Auckland due to conductor corrosion (the proposal).[1] A summary of the project is set out in Attachment A.

1.2 This paper explains our decision to approve an additional $50.5 million ($ nominal) base capex allowance for the project.

1.3 This paper sets out:

1.3.1 the background to the proposal; and

1.3.2 our final decision to approve the proposal.

1.4 Attachments A to D set out an overview of the project, our decision-making framework, a summary of our evaluation, and the escalation and foreign exchange rates applied.

Summary of Transpower's proposal

1.5 The proposal is to:[2]

1.5.1 procure, install and commission Curlew conductor on the 31 km section of the Ōtāhuhu – Whakamaru A and B lines (from Flatbush to Hūnua), rated to operate at a temperature of 65°C;

1.5.2 carry out works on the foundations and towers for the spans on which Transpower proposes to install the Curlew conductor; and

1.5.3 remove and dispose of the existing conductor.

1.6 Transpower's cost estimate for the forecast capex on the project is $50.5 million ($ nominal). Transpower is requesting we approve adding $50.5 million ($ nominal) to its base capex allowance for the regulatory control period from 1 April 2025 to 31 March 2030 (RCP4).

1.7 Transpower plans to commence work on this project as soon as funding is approved and complete the project by 2028. This places the expected commissioning date for the reconductored lines within the RCP4 regulatory period.

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1 https://www.comcom.govt.nz/regulated-industries/electricity-lines/projects/otahuhu-whakamaru-a-and-b-line-reconductoring-project/.

2 *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, p.4, available here.

Our final decision

1.8 In line with the expected commissioning date in disclosure year ending 30 June 2029, our final decision is to increase Transpower's base capex allowance by $50.5 million ($ nominal).[3]

1.9 We set out below our reasons for approving the $50.5 million amount. Our final decision is the same as our draft decision, on which we received no submissions.

1.10 In Attachment C we discuss Transpower's consultation process and how Transpower has addressed the points raised by Meridian Energy Limited (Meridian) and Vector Limited (Vector) during that process.[4]

The regulation that applies to Transpower

1.11 We regulate the electricity lines services that Transpower supplies to consumers under Part 4 of the Commerce Act 1986 (Act).[5] We determined the revenue and quality requirements that apply to these services for RCP4 in the Transpower Individual Price-Quality Path Determination 2025 [2024] NZCC 26 (IPP).

1.12 When setting the IPP, we approved amounts of base capex for all of the disclosure years of RCP4 but excluded certain 'listed projects' from the base capex allowance.

1.13 We included five base capex projects as 'listed projects' in a schedule to the IPP.[6] These projects were classified as listed projects at the time of the RCP4 IPP reset because:

1.13.1 their costs were expected to exceed $30 million;

1.13.2 the projects involved asset replacement and/or asset refurbishment; and

1.13.3 the projects were each anticipated to commence within the RCP4 regulatory period, but their commissioning dates, scope, or cost in each case could not be forecast with specificity.[7]

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3 In the RCP4 IPP, as published on 20 November 2024, in Schedule I of the OTA-WKM A and B line reconductoring was estimated to cost $61.7 million ($ nominal).

4 The Meridian and Vector submissions are available on Transpower's project website here.

5 The service that Transpower provides is the transport of electricity through the national transmission network, also known as the national grid. The national grid connects large generators of electricity to large electricity consumers and electricity distribution businesses, which then connect to smaller electricity consumers.

6 These projects are listed in Schedule I of the RCP4 IPP.

7 Transpower Capital Expenditure Input Methodology ('principal determination') (Capex IM), clause 2.2.2(7) and (8).

1.14 The rules relating to listed projects are set out in the Capex IM. Under the Capex IM, Transpower may seek approval for additional base capex for listed projects in RCP4.[8] The Capex IM requires Transpower to seek approval for additional base capex for listed projects no later than the last working day in the June twenty-two months before the end of a regulatory period. The cut-off date for listed project submissions during RCP4 is 30 June 2028.[9]

1.15 When seeking approval, Transpower must, among other things, outline its proposed investment, the justification for the investment, the options it has considered, and the costs and benefits of the investment options.[10]

1.16 We may then, at our discretion, approve an additional amount of base capex for the listed project over the remaining years of RCP4, following an evaluation in accordance with the relevant evaluation requirements in the Capex IM.[11]

1.17 During our review we sought additional information from Transpower using a Request for Information (**RFI**) process. Table 1.1 lists the additional information requests.

Table 1.1 Additional information provided by Transpower

Document name	Topic
RFI001	Escalation and foreign exchange rates
RFI002	OTA-WKM A and B line Solution Study Report (SSR)
RFI003	Conductor option capacity ratings
RFI004	Capital cost and CBA spreadsheets
RFI005	Managing planned outages
RFI006	Revenue impact of investment

Our evaluation framework

1.18 We assessed Transpower's proposal against the evaluation framework set out in the Capex IM.

1.19 The evaluation framework is outlined in Attachment B. It requires us to focus on three key areas of assessment:

1.19.1 assess whether Transpower has complied with the consultation requirements in the Capex IM;[12]

[8] Capex IM, clause 3.2.3(1) and Commerce Commission "Transpower's individual price-quality path for the regulatory control period commencing 1 April 2025 - Decision and reasons paper", 29 August 2024, available here.
[9] Capex IM, clause 3.2.3(1).
[10] The information we require is set out in clause 3.2.3(2) and Schedule F of the Capex IM.
[11] At least 22 months before the end of RCP2 – Capex IM, clause 3.2.3(4).
[12] Capex IM, clause 3.2.3(4)(a).

1.19.2 evaluate the application using the criteria in clause 6.1.1 of the Capex IM applicable to a base capex project that qualifies as an identified programme under the Capex IM;[13] and

1.19.3 evaluate the application against clause A of Schedule A of the Capex IM, as if the listed project were an identified programme.[14]

Summary of reasons for our final decision

1.20 In evaluating a reconductoring project like this listed project, our main focus is on determining that:[15]

1.20.1 a clear need driving the project has been identified;

1.20.2 a range of options to deliver the project has been considered;

1.20.3 from that range of options, the best solution has been selected to deliver the project;

1.20.4 the timing to deliver the project is prudent; and

1.20.5 the forecast expenditure to deliver the project is appropriate.

1.21 We briefly summarise below our assessment of Transpower's listed project application against these considerations. We also point to sections in this paper where we provide more information on our assessment against these considerations (Attachment C).

There is a clear need driving the project

1.22 Transpower's conductor assessment has demonstrated that the existing conductors on the Flatbush to Hūnua section (31km) of the Ōtāhuhu – Whakamaru (OTA-WKM) A and B transmission lines are corroding and approaching the end of their serviceable life. Replacing conductors that are corroding will restore the condition of the OTA-WKM A and B lines to the current level of service.

1.23 For more information see our assessment analysis in paragraphs C29 to C55.

A range of options to deliver the project has been considered

1.24 Transpower considered and consulted on a range of potential options to deliver the project and has short-listed those that are technically feasible.

1.25 For more information on the short-listing process, see our assessment analysis in paragraphs C52 to C62.

[13] Capex IM, clause 3.2.3(4)(b).
[14] Capex IM, clause 6.1.1(3A).
[15] Capex IM, Schedule A2.

Transpower's proposed solution delivers the highest net benefit

1.26 Transpower selected the proposed solution on the basis of a cost-benefit analysis as well as a technical feasibility assessment. In that regard, we are satisfied the proposed solution will deliver the greatest benefits out of the short-listed options.

1.27 For more information on our assessment of the proposed solution see our assessment analysis summarised in Table C2.

The timing to deliver the project is right

1.28 In order to deliver the project at the 'right time', Transpower used site specific data on the extent and the rate of deterioration of conductors. We are satisfied this process has helped determine, to the extent possible, that the replacement is scheduled for the right time.

1.29 For more information on the project timing see our assessment analysis in paragraphs C22 to C38.

The forecast expenditure to deliver the project is appropriate

1.30 Transpower used a consultant to identify project scope and to estimate cost using Transpower's costing database and a SSR. This process generally results in a reasonable assessment of the scope of works, because it is based on transmission line design investigations, rather than a desktop study.

1.31 We are satisfied that the process of estimating forecast expenditure is reasonable and our decision provides for a forecast expenditure that is appropriate to undertake this project.

1.32 For more information on the forecast expenditure see our assessment analysis in paragraphs C44 to C51.

Regulatory process to date

1.33 A summary of the regulatory approval process for the OTA-WKM A and B line reconductoring listed project proposal prior to this final decision is as follows:

1.33.1 Transpower consulted on the investment options it had considered in June 2025.[16]

1.33.2 On 9 December 2025, Transpower submitted its proposal to us for our approval.[17]

[16] *Transpower New Zealand Ltd*, OTA-WKM A and B line reconductoring Listed Project consultation webpage, available here.

[17] *Transpower New Zealand Ltd*, Application to the Commerce Commission for the OTA-WKM A and B line reconductoring Listed Project, available here.

1.33.3 On 30 April we published our draft decision.[18]

Draft decision submissions

1.34 We received no submissions or cross-submissions on our draft decision.

[18] *Commerce Commission*, Transpower's Otahuhu-Whakamaru – Draft decision reasons paper, 30 April 2026, available here.

Attachment A Overview of the Ōtāhuhu-Whakamaru A and B line reconductoring project

A1 Transpower is proposing to "replace the existing Goat conductor on the wider Auckland region section of the Ōtāhuhu–Whakamaru A and B lines (OTA-WKM A&B lines), being the section from Flatbush to Hūnua shown as "stage 2""[19], shown in Figure A1.

Figure A1 OTA-WKM A and B line route sections

A2 Transpower notes that the OTA-WKM 220kV A and B lines "are an important part of the upper North Island transmission network, connecting Auckland's network to generation from the south."[20] Based on condition assessments, Transpower has identified that 31 km of each circuit, from Flatbush to Hūnua, needs replacing due to conductor corrosion issues.

A3 Conductor failures on the OTA-WKM A and B lines risk both property damage and compromise safety, may lead to unplanned outages, restrict power flow into the upper North Island, and threaten security of supply during peak demand periods.

[19] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, p.3, available here.

[20] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, p.3, available here.

A4 Transpower considered a number of conductor options, and a key consideration was conductor noise issues as well as capacity and the cost of carrying tower and foundation mitigations. The conductor options Transpower considered are set out in Table A1.

Table A1 Conductor options Transpower considered

	Curlew 54°C	Curlew 65°C	Curlew 80°C	Curlew 65°C/Zebra 80°C	Curlew 80°C/Zebra 100°C
Cost ($m, real 2025)	44.8	45.4	50.9	48.5	53.4
Option capacity ratings (MVA)[21,22]					
Summer	298	354	416	354/372	416/431
Shoulder	326	378	435	378/389	435/445
Winter	353	400	454	400/405	454/458

A5 Transpower has considered a new conductor type, Curlew, as it provides better conductor noise attenuation properties than existing conductor types like the existing Goat and Zebra conductor types.

A6 In its original consultation material, Transpower identified that its preferred solution was to use Curlew conductor at 54°C, but it has amended this in the proposal to now propose Curlew at 65°C. This change is due to "significant narrowing of the cost difference between the 54°C and 65°C options, and an increased likelihood of realising in future the potential increase in capacity that 65°C provides."[23]

A7 Transpower note that its investigations have identified that the "most of the southern section of the OTA-WKM A&B lines (between stage 2 and the Whakamaru substation) will need to be reconductored in RCP5 or RCP6" and that this has been a consideration in its decision to select the 65°C option.[24] We discuss this in Attachment C as we review the economic analysis Transpower has carried out in support of its proposal.

[21] The existing Goat ACSR conductor summer/shoulder/winter ratings are 320/360/390 MVA.
[22] Transpower response to RFI003 – OTA-WKM A and B line reconductoring: Conductor option capacity ratings.
[23] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, p.5, available here.
[24] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, p.5, available here.

Attachment B Evaluation framework

B1 In this attachment, we outline the Capex IM's framework for evaluating listed projects and show the interrelation between the various clauses.

B2 Under the Capex IM's evaluation requirements for a listed project, we must:

- B2.1 confirm that Transpower has met its consultation requirements; and
- B2.2 evaluate the application using the criteria in clause 6.1.1 of the Capex IM which are applicable to a base capex project that qualifies as an identified programme under the Capex IM.[25]

B3 In any decision to approve additional base capex in respect of the listed project, we must apply the forecast consumer price index (CPI) and foreign exchange rates used to determine Transpower's RCP4 base capex allowance under the IPP.[26]

Consultation requirements

B4 The Capex IM sets out consultation requirements for Transpower and us. We are required to seek the views of interested parties on our draft decision, and the written views of interested persons on others' submissions.[27]

B5 Our evaluation includes assessing whether Transpower has met the consultation requirements set out in the Capex IM.

B6 The Capex IM requires Transpower to consult with interested parties on listed project applications. Consultation must be commensurate with the nature, complexity, impact and significance of the project.[28]

The relevant criteria set out in clause 6.1.1

B7 Clause 3.2.3(4)(b) of the Capex IM requires that we assess a listed project proposal against the clause 6.1.1 requirements, specifically, that we consider:

- B7.1 whether the proposal is consistent with the Capex IM and the Transpower Input Methodologies;
- B7.2 the extent that the proposal will promote the purpose of Part 4 of the Act; and
- B7.3 whether the data, analysis, and assumptions underpinning what is proposed are fit for the purpose of us exercising our powers under Part 4 of the Act,

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[25] Capex IM, clause 3.2.3(4).
[26] Capex IM, clause 3.2.3(5).
[27] Capex IM, clause 8.1.1(1).
[28] Capex IM, clauses 3.2.1 and 8.1.2. In our 2023 Input Methodology Review we made some changes that affect listed project proposals by increasing the Capex IM base capex threshold from $20 million to $30 million.

including consideration as to the accuracy and reliability of data, and the reasonableness of assumptions and other matters of judgement.[29]

B8 Additionally, clause 6.1.1(3A) requires us to evaluate a listed project application in accordance with clause A2 of Schedule A of the Capex IM, as if the listed project were an identified programme.

[29] Capex IM, clause 6.1.1(2).

Attachment C Summary of our evaluation

Purpose of this attachment

C1 In this attachment, we explain our evaluation of the application using the framework outlined in Attachment B.

Our evaluation of the proposal

Transpower has met the consultation requirements

C2 Transpower is required to consult with interested parties on listed projects, to the extent commensurate with the nature, complexity, impact and significance of the project.[30]

C3 We are satisfied that Transpower has met its obligations to consult with interested parties through its consultation. Below, we outline the steps Transpower took in consulting on its application and the submissions it received.

C4 In June 2025, Transpower initiated the consultation process by consulting on its list of options and inviting interested parties to comment on its preferred option and the cost-benefit analysis it has carried out.[31]

C5 Transpower received two submissions in its consultation process, namely from Meridian Energy Limited (Meridian) and Vector Limited (Vector).[32]

C6 Meridian suggested that Transpower needed to provide information about the likely transmission charges that customers would likely face "in order to better engage with the proposed solution and understand the costs and benefits to their businesses as well as to consumers."[33] Vector also raised this issue stating that there were "no details whatsoever on the impacts of any of the options on transmission charges for customers which is inadequate."[34]

C7 Transpower did not provide the indicative transmission charge information in its consultation material that it now provides when it consults on capacity-driven major capex projects although it is not required to do so.

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30 Capex IM, clauses 3.2.1 and 8.1.2.
31 Transpower's OTA-WKM A and B line reconductoring project website is available here.
32 The Meridian and Vector submissions are available on Transpower's project website here.
33 *Meridian*, OTA-WKM A and B line reconductoring project consultation submission, p.1, available here.
34 *Vector*, OTA-WKM A and B line reconductoring project consultation submission, pp.1-2, available here.

C8 Meridian was critical of Transpower's use of a 'decommission the OTA-WKM A and B lines' alternative as a counterfactual economic option. However, we consider that this is only used as a base case to demonstrate the relative benefits of different conductor upgrade options and doesn't necessarily need to be considered viable (as it would result in a breach of the N-1 reliability standards according to Transpower). [35]

C9 Additionally, Meridian noted that there was "little detail or description is provided on 'unquantified benefits' despite these being relevant to the overall ranking of options, making it difficult for parties to assess whether such benefits have been considered appropriately".[36]

C10 Meridian also commented that it was "not clear whether this analysis has considered the potential benefits from being able to firm intermittent generation in the upper North Island with generation from elsewhere." Further, "there may be value in modelling (or testing sensitivities of) costs and benefits under a reduced AC grid when other lines are removed for maintenance. Such outages are the major cause of both transmission and generation constraints in the upper North Island, and as such the key drivers of future price instability."[37]

C11 We discuss how Transpower has responded to the option analysis points raised by Meridian in our evaluation of the proposal.

The application meets the criteria set out in clause 6.1.1 of the Capex IM

C12 In the following paragraphs, we provide a summary of our evaluation of the application against the criteria set out in clause 6.1.1 of the Capex IM.

The application is consistent with the input methodologies

C13 We had to consider the consistency of the application with the relevant input methodologies in making our decision.[38] In analysing the application we focused on assessing whether Transpower had provided the information specified in the Capex IM and the certification requirements.

C14 We are satisfied that the application is consistent with the relevant input methodologies.

[35] *Meridian*, OTA-WKM A and B line reconductoring project consultation submission, p.2, available here.
[36] *Meridian*, OTA-WKM A and B line reconductoring project consultation submission, p.2, available here.
[37] *Meridian*, OTA-WKM A and B line reconductoring project consultation submission, p.2, available here.
[38] Capex IM, clause 6.1.1(2)(a).

C15 Transpower has provided a certified copy of the extract of the minutes of a meeting its Board of Directors held on 25 September 2025, and its CEO's certification dated 8 December 2025.[39] This is evidence that its Board of Directors has approved the listed project as a base capex project and details of the quality assurance processes followed in respect of the Board's approval of the listed project, as required under clause 3.2.3(2)(i) of the Capex IM.

The application promotes the purpose of Part 4 of the Act

C16 We consider that Transpower's proposed investment is in the long-term interest of consumers.

C17 Replacing conductors that are corroding will improve the condition of the line to the level suitable to provide quality of service expected by the consumers of the line services.

C18 The counterfactual of not investing is likely to increase the risk of conductor failures and affect the availability of the AC 220kV network into the Auckland region. This will affect security of supply and may require pre-contingent demand management during peak periods if a conductor failed at these times. Conductor failures could also pose a risk to public safety. A prudent operator should improve the condition of conductors to mitigate these risks.

Data, analysis and assumptions in the application are fit for purpose

C19 We are satisfied that the data, analysis and assumptions provided by Transpower are fit for purpose. The main data relevant to our evaluation are:

C19.1 data and assumptions on condition assessment that determines the need for this project;

C19.2 investigations identifying the scope of works and the expected cost of the project; and

C19.3 data on the capacity of the investment options that Transpower considered.

Summary of evaluation against criteria set out in clause A2 of Schedule A

C20 We must evaluate a listed project application in accordance with clause A2 of Schedule A of the Capex IM, as if the listed project were an identified programme.[40]

[39] The CEO certification outlines that the information provided to us was derived from and accurately represents, in all material aspects, the operations of Transpower and that the base capex in respect of the listed project was approved by Transpower in accordance with the applicable requirements of Transpower's capital expenditure approval policies. *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Attachment 5 – Board and CEO certification, available here.

[40] Capex IM, clause 6.1.1(3A).

C21 Clause A2 sets out the criteria for evaluating an identified project and states that in evaluating a base capex proposal, we undertake a review of each identified programme, and such a review may include evaluation of at least the criteria set out in A2(a)-(j). We set out a summary of our evaluation against each criterion below.

(a) whether policies regarding the need for the listed project and its priority demonstrate a risk-based approach consistent with good asset management practice

C22 We are satisfied that the relevant policies reflect good electricity industry practice (**GEIP**) and that Transpower applied them appropriately.

C23 Transpower states that the need for the investment is driven by asset condition. Transpower note that the existing Goat ACSR/GZ conductor is has "aluminium outer strands and steel centre strands" and that "predicting the end of life and degradation of this type of conductor is very difficult as it is prone to accelerated aluminium corrosion near end of life – particularly in corrosive environments such as those found between Flatbush and Hūnua."[41]

C24 Transpower's inspection and testing procedures identified conductor defects, indicating that its replacement criteria were being neared. The conductor replacement criteria are that there is "15% loss of aluminium cross-section or a 20% loss of conductor strength."[42]

C25 Transpower's view is that while present failure risk is considered low, accelerated degradation is likely because in Transpower's experience this conductor type can exhibit accelerated corrosion behaviours based on previous experience.[43]

C26 Transpower supplied the OTA-WKM A and B line conductor condition assessment report in support of its proposal. This report summarises the likely conductor replacement timings based on a range of condition assessment techniques (such as Close Aerial Surveys (CAS)) to identify conductor bulge and 'powder defects', which is a key sign of corrosion acceleration, sample testing and eddy current testing.

C27 From these assessments, Transpower concluded the conductors are reaching end of life and that a replacement plan needed to be enacted (note that the northern section of the lines has already been replaced due to condition issues). Figure C1 sets out the Transpower condition assessment conclusions for the OTA-WKM A and B lines.

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41 *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, Section 1.1, p.7, available here.

42 *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, Section 1.1, p.7, available here.

43 *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, Section 1.1, p.7, available here.

Figure C1 OTA-WKM A and B line route sections

Line Section	Section Name	Structure #	Length (cct-km)	Estimated Replacement Timing (RCP)	Maintenance Approach	Timing Confidence
Stage 1	Otara to Flatbush	OTA – A0489 OTA – B0469	6.8[3] 5.8[4]	complete	No change.	-
Stage 2	**Wider Auckland**	**A0489 – A0407** **B0469 – B0391**	**31.2** **30.9**	**4**	**Increase defect management if works delayed.**	**High**
Stage 3	Bombay to Ohinewai (Stage 2 – OHW)	A0407 – A0310 B0391 – B0296	40.0 38.2	5 (early)	Increase defect management	High
Stage 4	Ohinewai to Hautapu (OHW – HTU)	A0310 – A0197 B0296 – B0185	41.9 (x2)	5 (late)	Increase defect management	High
Stage 5	Hautapu to Whakamaru	A0196 – WKM	71.4 (x2)	6	Collect condition information.	Low

C28 The conductors on these lines are Aluminium Conductor Steel Reinforced conductors (**ACSR**), so the criteria for replacing ACSR conductors apply.[44] We did not evaluate whether the 20% loss of tensile strength and 15% section loss as set out in the above policy are appropriate values for replacement. Such reviews are performed as part of the IPP reset. Rather, we assessed whether the expected condition of the conductors met these requirements for replacement.

C29 Transpower used the following approaches to testing whether conductor replacement was justified, specifically sample testing, eddy current testing, and CAS.

Sample testing

C30 Transpower regularly carries out conductor sample testing of its overhead lines. In 2006 it carried out sample testing on the OTA-WKM A and B lines when it was considering raising the operating temperature from 50°C to 75°C. It concluded that in the stage 2 section of the line relevant to this proposal, there was a mixture of greased and ungreased conductor strung on both lines. This is an early sign of potential conductor core corrosion.[45,46]

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[44] Aluminium Conductor Steel Reinforced (**ACSR**) is a type of conductor used on overhead transmission lines.

[45] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Attachment 1 – Condition assessment report, Section 3.2, p.6, available here.

[46] Greased ACSR conductor features a corrosion-resistant, high-strength galvanized steel core treated with specialized anti-corrosive grease. The grease fills the gaps between the inner steel strands or between the steel and outer aluminium layers, preventing moisture ingress and reducing corrosion in harsh environments like coastal or industrial zones.

Eddy current testing

C31 Eddy current testing is used to assess if there has been any conductor degradation due to conductor coating loss and broken conductor strands.[47] Coating loss occurs when the zinc coating on the steel reinforced core wears away and is due to environmental factors like wind effects causing friction between the aluminium conductor strands and zinc coated steel core, moisture ingress, and salt-laden air in coastal regions.

C32 Once the zinc coating is lost, the steel core becomes prone to oxidation and rust. This causes the steel core to bulge, and conductor strand breakage occurs leading to a loss of overall line capacity. The corrosion effect can occur rapidly in some environments.

C33 The 2016 eddy current testing suggested that the conductors were nearing end of life because zinc coating loss had been observed along the tested section of the OTA-WKM A and B lines, and that these issues were likely in other conductor sections.

Close aerial survey

C34 Transpower note that CAS testing is used when it is suspected that a conductor is nearing end of life. The survey, which is visual in nature, is looking for obvious corrosion defects, conductor bulging effects, and white powder on the surface of the conductor.

C35 Based on the condition analysis drone survey results and testing history, Transpower concluded that the stage 2 section of the OTA-WKM A and B lines needed to be replaced, with other sections likely to need replacement in the RCP5 and RCP6 regulatory periods.[48]

Asset condition conclusion

C36 We are satisfied that Transpower's policy of timing replacement to when there is evidence of significant corrosion in the conductors reflects a risk-based approach and is consistent with GEIP.[49]

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47 ACSR (Aluminium Conductor Steel Reinforced) conductor coating loss refers to the degradation, depletion, or damage of the protective zinc coating (galvanization) on the steel core wires. This coating is designed to prevent rust and galvanic corrosion between the galvanized steel core and the outer aluminum strands.

48 *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Attachment 1 – Condition assessment report, Section 3.2, p.6, available here.

49 The Capex IM adopts the definition of 'good electricity industry practice' specified in clause 1.1(1) of the Electricity Industry Participation Code, which is *"the exercise of that degree of skill, diligence, prudence, foresight and economic management, as determined by reference to good international practice, which would reasonably be expected from a skilled and experienced asset owner engaged in the management of a transmission network under conditions comparable to those applicable to the grid consistent with applicable law, safety and environmental protection. The determination is to take into account factors such as the relative size, duty, age and technological status of the relevant transmission network and the applicable law."*

C37 We are satisfied that Transpower has applied the policy satisfactorily, however, we acknowledge that there are uncertainties in assessing the condition of this type of conductor and the exact timing of replacement. Transpower's approach to break the replacement into stages is reasonable and we consider a more incremental replacement approach than is proposed would not be practical.

C38 We are also satisfied that the results of the above three assessment tests Transpower presented confirm that it is reasonable to replace the conductors within the timeframe Transpower proposes. We note that this section of the line is in a highly corrosive environment.

(b) whether other relevant policies and planning standards were applied appropriately

C39 We are satisfied that Transpower applied other relevant policies appropriately.

C40 Some of the proposed expenditure is to carry out foundation strengthening and tower foundation works and Transpower has mature policies and design standards for these works. We have assessed these as part of our RCP4 review and at the time considered these to be well developed and consistent with GEIP.

(c) Transpower's processes to determine the project's reasonableness and cost-effectiveness including the use of cost-benefit studies

C41 When assessing the reasonableness and cost-effectiveness of a project, we assess whether the project delivers the right solution, at the right time and at the right cost. We are satisfied Transpower's proposed solution, to the extent possible, achieves this.

The right solution

C42 A project is more likely to deliver the 'right solution' if an appropriate number of feasible alternatives are considered. In paragraphs C52 to C62 below, we discuss Transpower's approach to considering alternatives. This process involved technical studies, consultation with the wider industry and using cost-benefit studies to select the proposed solution. We are satisfied that the process has helped ensure that Transpower will deliver the right solution.

The right time

C43 In order to deliver the project at the 'right time', Transpower has used, a range of assessment techniques, its knowledge of conductor rates of corrosion following survey results and site-specific condition data, as discussed in paragraphs C22 to C38 above. We are satisfied this process has helped determine, to the extent possible, that the replacement is scheduled at the right time.

The right cost

C44 Transpower state that its capital cost estimates for the consultation were based on a high-level desk top study and not based on actual line design costings.[50]

C45 In the application, Transpower commissioned a SSR for the preferred option (Curlew rated at 65°C) to refine the transmission line design. The SSR considers tower structure and foundation mitigations, a conductor under-clearance assessment and property requirements to refine the cost estimate. [51]

C46 The new cost estimate of $45.4 million for the preferred option, is approximately 8% lower than the consultation cost estimate for this option.[52]

C47 Transpower also updated costs for the 54°C option by "leveraging similarities between the Curlew 65°C and 54°C designs, rather than create a separate bottom-up estimate. As design of the Curlew 65°C option progressed, the delta between the assumed scope of work for the two options has reduced. This resulted in an updated cost of $44.8m for the Curlew 54°C option."[53] We agree that this approach is reasonable.

C48 Transpower's updated cost estimates for the options it considered are shown in Table C2 with the cost breakdown for the Curlew 54°C and Curlew 65°C options set out in the proposal.[54]

Table C1 Capital cost estimates for the options considered

Conductor option and temperature rating	P50 capital cost ($m, real 2025)	P50 capital cost ($m, 2025 PV at 5% discount rate)
Decommissioning north of Ōhinewai (counterfactual)	51.2	44.2
Curlew 54°C	44.8	40.0
Curlew 65°C	45.4	40.6
Curlew 80°C	50.9	45.5
Curlew 65°C/Zebra 80°C	48.5	43.3
Curlew 80°C/Zebra 100°C	53.4	47.7

[50] *Transpower NZ Ltd*, OTA-WKM A&B reconductoring – Auckland wider region section consultation, Consultation Overview, Section 4.1, p.12, available here.

[51] Transpower response to RFI002 – OTA-WKM A and B line reconductoring: Listed Project: OTA-WKM A and B line SSR.

[52] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, Section 3.1, pp.13-14, available here.

[53] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, Section 3.1, p.14, available here.

[54] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, Table 5, p.15, available here.

C49 To facilitate a realistic cost-benefit analysis, Transpower included costs to reconductor the southern section of the OTA-WKM A and B lines (Stages 3-5 in Figure A1) as the capital costs of modelled projects.

C50 In what Transpower has termed the counterfactual, the stage 3 reconductoring (north of Ōhinewai) is decommissioned, resulting in 39 km less future reconductoring than is needed. This use of a counterfactual is discussed later in this attachment.

C51 Following our review, we consider that Transpower has carried out a robust process to estimate its capital costs. The proposed investment capital cost has been based on an SSR, and alternative option costs have leveraged off the accuracy of the SSR. We agree with Transpower's approach.

(d) Transpower's internal processes for challenging a need for an identified programme and the possible alternative solutions

C52 We have reviewed the alternative solutions that Transpower considered and are satisfied that Transpower chose the appropriate solution. Transpower has demonstrated the analysis and testing it has carried out since 2016 to identify the replacement need and likely timing of that need. This need analysis has guided its internal decision-making.

C53 In its consultation, Transpower consulted on options such as transmission alternatives, dismantling the line, piecemeal replacement of sections and fully replacing the conductors.[55]

C54 Transpower applied its internal option screening criteria it applies to major capex investments, namely whether the option is:

C54.1 fit for purpose;

C54.2 technically feasible;

C54.3 practical to implement;

C54.4 reflects GEIP;

C54.5 maintains existing system security (in this case to meet the N-1 reliability standard); and

C54.6 that indicative costs considerations are factored.

C55 In assessing the long list of options, Transpower discounted some options immediately. Given the existing conductors are corroding and it is not good practice to leave them in service in their present condition, so it concluded that non-transmission solutions were not appropriate.

[55] *Transpower NZ Ltd*, OTA-WKM A&B reconductoring – Auckland wider region section consultation, Overview, Table 2, pp.9-10, available here.

C56 Similarly, dismantling is not an option as these lines are key components of the HVAC network. Removal of the OTA-WKM A and B lines would result in security of supply issues into the Auckland region.

C57 Transpower then short-listed the following options for further studies and development – reconductor 31 km section of line between Flatbush and Hūnua, with one of the following conductor options:[56]

C57.1 Curlew 54°C;

C57.2 Curlew 65°C;

C57.3 Curlew 80°C;

C57.4 Curlew 65°C & Zebra 80°C; and

C57.5 Curlew 80°C & Zebra 100°C.

C58 Goat ACSR conductor (like for like replacement) was not considered because Transpower note that "these conductors can produce corona noise levels higher than an existing aged conductor and constitute both a financial risk as well as a risk to our social licence due to the likely need for noise remediation. To ensure GEIP and compliance with the Resource Management Act concerning lines in the vicinity of dwellings, these are excluded from our short-list."[57]

C59 Transpower also noted that it was also trialling use of High Temperature Low Sag (**HTLS**) family i.e., Aluminium Conductor Steel Supported (ACSS), Aluminium Conductor Composite Reinforced (**ACCR**) and Aluminium Conductor Composite Core (**ACCC**), but that none were expected to be ready outside of the trials they are currently performing. Transpower expect these conductor trials to end in 2026.

C60 When assessing the use of different conductor types and operating temperatures there are a number of factors that need to be considered and these effect the economics of the decision.

C61 Operating conductors at higher temperatures means that they have higher capacity. The trade-off is that higher temperatures mean that the conductors sag more, so they must be installed at connection higher tensions at each tower. If the tension is sufficient then the tower may need to be strengthened, or it may exceed the mechanical strength of the conductor.

[56] *Transpower NZ Ltd*, OTA-WKM A&B reconductoring – Auckland wider region section consultation, Overview, Table 2, p.10, available here.

[57] *Transpower NZ Ltd*, OTA-WKM A&B reconductoring – Auckland wider region section consultation, Overview, Table 2, p.10, available here.

C62 Transpower has considered these factors in its assessment of the different conductor options, and these are reflected in its cost-benefit analysis which we discuss in the next section.

Cost-benefit analysis

C63 The results of the Transpower's cost-benefit analysis are summarised in Table C3.[58]

Table C2 Summary of cost-benefit study

	Curlew 54°C	Curlew 65°C	Curlew 80°C	Curlew 65°C/Zebra 80°C	Curlew 80°C/Zebra 100°C
Net quantified benefit ($m, PV)	36.2	35.7	30.8	33.0	28.5
Cost ($m, PV)	40.0	40.6	45.5	43.3	47.7
Cost ($m, real 2025)	44.8	45.4	50.9	48.5	53.4
Ranking based on quantified benefits	1	2	4	3	5
Option capacity ratings (MVA)[59,60]					
Summer	298	354	416	354/372	416/431
Shoulder	326	378	435	378/389	435/445
Winter	353	400	454	400/405	454/458

C64 Transpower's application of a cost-benefit analysis demonstrates that all the reconductoring options considered are similar in terms of capital costs. The Curlew 54°C and Curlew 65°C provide virtually identical lowest cost solutions which ordinarily would be the deciding factor in a listed project application (including any loss differences between conductor types).

[58] *Transpower NZ Ltd*, OTA-WKM A&B reconductoring – Auckland wider region section consultation, Overview, Table 1, p.6, available here.

[59] The existing Goat ACSR conductor summer/shoulder/winter ratings are 320/360/390 MVA.

[60] Transpower response to RFI003 – OTA-WKM A and B line reconductoring: Conductor option capacity ratings.

C65 In its cost-benefit analysis, Transpower has modelled benefits that accrue to each option against a counterfactual case and also discuss unquantified benefits.[61] Transpower's counterfactual case involves decommissioning stage 3 (north of Ōhinewai) resulting in 39 km less future reconductoring being needed. This avoided cost is considered a benefit for the options considered and results in each option providing a positive net benefit.

C66 However, the cost-benefit test requirement in the Capex IM for base capex is mostly to test options against each other to find the least cost like for like solution, and to ensure that existing reliability levels are maintained.

C67 The OTA-WKM A and B lines are core grid elements and subject to the N-1 minimum reliability standard. Introducing a counterfactual case that breaches the grid reliability standards is not credible and unnecessary in this case.

C68 The base capex cost-benefit test in the Capex IM is not an electricity net market benefit test, so the need to demonstrate that like for like asset replacements provide a positive benefit is not required.

C69 If this were a major capex proposal to increase grid capacity on the core grid then the least cost solution would be all that is required to pass the investment test.

C70 To further elaborate, the real benefit of the OTA-WKM A and B lines is the avoided cost of demand curtailment if they weren't operational (or sections were decommissioned). For example, if some of all of the OTA-WKM A and B lines were decommissioned, demand curtailment in the Auckland region would be needed for long periods to ensure that the market was able to dispatch to its pre-contingent N-1 settings, notwithstanding that this option breaches the present grid reliability standards.

C71 For the above reasons, we have simplified Transpower's explanation of its cost-benefit results to be the choice between the Curlew 54°C and Curlew 65°C options (the least cost options), which in a cost sense are virtually the same.

C72 Transpower argues that there are unquantified benefits that favour the Curlew 65°C option over the Curlew 54°C option. Transpower explains the unquantified benefits as:[62]

> ....the potential to future proof the entire circuit for upgrades. This would favour both the Curlew 65°C and Curlew 65°C / Zebra 80°C options. Higher temperature conductors have higher capacity ratings (as shown in Figure 4), enabling larger transmission capacity into the upper North Island. This benefit could be realised if the remaining sections of the OTA-WKM A&B lines are uprated/reconductored to at least the same rating.

[61] Transpower argues that the counterfactual involves decommissioning stage 3 (north of Ōhinewai) resulting in 39 km less future reconductoring needed.

[62] *Transpower NZ Ltd*, OTA-WKM A&B reconductoring – Auckland wider region section consultation, Overview, Section 3.3, p.16, available here.

C73 Essentially Transpower is arguing that the Curlew 65°C option has higher capacity than the Curlew 54°C option, and that when it comes time to reconductor the remaining sections of the OTA-WKM A and B lines, that this additional capacity has value. We agree with Transpower's reasoning.

C74 Both the Curlew 65°C and Curlew 54°C options mitigate the noise issues that are problematic when using the Goat ACSR conductor, which is another unquantified benefit in favour of the Curlew conductor type.

Technical feasibility assessment

C75 We consider that all of the reconductoring options that Transpower has considered are technically feasible. These are all well tested conductor types internationally and some in New Zealand (particularly Zebra conductor).

C76 Transpower has installed Curlew conductor type in a previous listed project because it provides superior noise performance in urban environments.[63]

C77 Following our review, we support replacing the current conductors with ACSR Curlew conductor on the basis that this is the most economic and technically feasible option.

Capital cost assessment

C78 We have considered the requirements of Schedule A2 clause (e), (f) and (g) as a whole.

C79 These requirements set out an assessment of:

- C79.1 how grid outputs, key drivers, assumptions, and cost modelling were used to determine forecast capital expenditure;[64]
- C79.2 the capital costing methodology and formulation and the quantum of contingencies;[65] and
- C79.3 the effect of the forecast capital expenditure on other cost categories, including the relationship with operating expenditure.[66]

C80 We focused our capital cost review on how the capital costs were arrived at, the quantum of contingency and capital cost relationship with operating expenditure.

How Transpower forecast its capital expenditure

C81 Transpower has assessed which conductor is best suited for the existing route and tower configuration. This is a technical trade-off between capacity, operating temperature, conductor sag, line tension and tower and foundation strength.

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[63] *Commerce Commission*, Decision on Transpower's Bunnythorpe-Haywards Lines A and B major capex proposal, 9 May 2014, available here.
[64] Capex IM Schedule A2, clause(e).
[65] Capex IM Schedule A2, clause(f).
[66] Capex IM Schedule A2, clause(g).

C82 Transpower's SSR is the key technical report that considers these design factors and is a direct input into the likely costs of the reconductoring. The SSR sets out designs and likely cost issues specific to the OTA-WKM A and B lines. Key conclusions reached in the SSR that affected the cost estimates are that:[67]

C82.1 no towers are overloaded in the OTA-WKM A and B line sections investigated;

C82.2 there is incomplete information about the extent of grillage foundation composition;

C82.3 there are a large number of possible tower types, attachment point and insulator set combinations throughout both lines;

C82.4 the conductor under-clearance assessment identified a total of 10 violating spans and a full ground survey will be required;

C82.5 to minimise the number of reconductoring hurdles and low voltage network outages needing to be planned during construction it is recommended that all LV conductor crossings be undergrounded;

C82.6 some conductor blowout (lateral movement under windy conditions) has been identified and will be mitigated using weights on selected spans; and

C82.7 some minor earth potential issues have been identified and mitigations proposed.

C83 We requested Transpower provide cost estimate spreadsheets to check that the options considered were reasonably modelled and that the proposed solution was justified.[68]

C84 Following our review, we are satisfied that Transpower has carried out a reasonable design process at this stage of the project and that the cost estimates are underpinned by suitable design considerations.

The capital cost contingency

C85 Transpower is proposing a contingent amount of $3.4 million ($ 2025) which is 7.5% of the total proposed cost of $45.4 million ($ 2025). This contingent amount is in line with other recent major capex proposal contingent amounts.

C85.1 Net Zero Grid Projects (**NZGP**) stage 1 MCP – 10.8%;

C85.2 Western Bay of Plenty (**WBOP**) MCP – 11.5%;

C85.3 Redclyffe substation resilience MCP – 8.9%; and

C85.4 Upper South Island (**USI**) MCP – 9.1%

[67] Transpower response to RFI002 – OTA-WKM A and B line reconductoring: Listed Project: OTA-WKM A and B line SSR.

[68] Transpower response to RFI002 – OTA-WKM A and B line reconductoring: Capital cost and cost-benefit analysis spreadsheets.

C86 We reviewed the cost estimation process that Transpower has undertaken and consider that it is fit for purpose at this stage of the project, and the contingency estimate is reasonable for a project of this type.

Relationship between capital and operating expenditure

C87 The capital expenditure is not likely to affect other cost categories or opex in RCP4. Apart from the site investigations and Transpower overheads, other costs related to this project are not included in the base capex or opex allowances for RCP4.

C88 All costs incurred for this project will be capitalised as per Transpower's practice.

C89 After the transmission line section is reconductored, maintenance capex and opex for these transmission lines should marginally reduce, and this should be reflected in the RCP5 expenditure proposal.

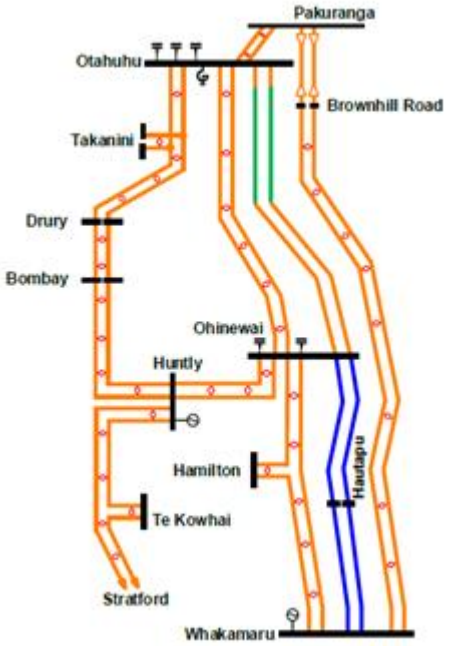
(h) links with other projects or programmes, whether proposed or in progress

C90 Transpower notes that since undertaking consultation for this reconductoring project that most of the southern section of the OTA-WKM A and B lines will need to be reconductored sometime over the RCP5 (2030 – 2035) and RCP6 (2035 – 2040) regulatory periods.

C91 Transpower that this like for like reconductoring cost makes "duplexing the southern section of the OTA-WKM A&B lines and bussing into Ōhinewai substation (see Figure C2) another likely option for the WUNI2 project" which is likely to be submitted to the Commission during 2026.[69]

[69] *Transpower NZ Ltd*, OTA-WKM A&B reconductoring – Auckland wider region section consultation, Overview, Section 3, p.12, available here. WUNI2 is stage 2 of the forthcoming Waikato Upper North Island major capex project proposal.

Figure C2 Upper North Island transmission network[70,71]



(i) mechanisms for controlling actual capital expenditure with respect to the proposed base capex allowances and ensuring performance of proposed grid output targets

C92 The regulatory mechanism that incentivises Transpower to control capex is the 'base capex expenditure adjustment'.[72] This mechanism's intent is to share efficiency achievements between Transpower and its customers, and to allow Transpower to retain a portion of the savings it makes in delivering its capex.

C93 We analysed how the proposed project might impact the grid output measures we set in RCP4.[73] Table C4 sets out this analysis.

[70] *Transpower NZ Ltd*, OTA-WKM A&B reconductoring – Auckland wider region section consultation, Overview, Figure 3, p.13, available here.

[71] The proposed reconductoring works are the line sections highlighted in green. The line sections highlighted in blue are being considered for duplexing in the forthcoming WUNI2 major capex project.

[72] Capex IM, clause B1.

[73] *Commerce Commission*, Transpower's individual price-quality path for the regulatory control period from 1 April 2025, Final Decision reasons paper, Table 3.6, p.52, 29 August 2024, available here.

Table C3 Summary of project impact on RCP4 quality measures

RCP4 quality measure	RCP4 quality measure description	Assessment of project impact
AH: Asset Health	Proportion of assets in poor health for selected asset classes	• Post-project asset health will improve • OTA-WKM A and B lines are part of the list of assets in AH1 measure
AP1: Asset Performance 1 – HVDC capacity availability	HVDC energy availability (%) of the inter-island HVDC system	• N/A
AP1.2: HVDC operational availability	Measures HVDC link's available operational capacity limit calculated against the maximum capacity of the HVDC link	• N/A
AP2: Asset Performance 2 – HVAC selected asset availability	Average percentage of time selected HVAC assets are available during a disclosure year	• OTA-WKM A and B lines are not part of the list of asset types in AP2 measure
AP3: Asset Performance 3 – Return to service	Extent that Transpower keeps to planned outage times in relation to selected HVAC assets	• OTA-WKM A and B lines are not part of the list of asset types in AP3 measure
AP4: Asset Performance 4 – Return to services communications	Extent that Transpower communicates delays to planned outage return times in relation to selected HVAC assets	• OTA-WKM A and B lines are not part of the list of asset types in AP3 measure
CS1: Customer Service 1 – Overall customer satisfaction	Average level of overall customer satisfaction based on responses in an annual customer engagement survey	• Likely to be quantifiable improvement in noise levels particularly for residents near the OTA-WKM A and B line sections that are reconductored • Will depend on whether Huna residents are surveyed
CS2: Customer Service 2 – New and enhanced grid connections	Reports on delivery of new and enhanced grid connections	• N/A
GP1 – Grid Performance 1	Number of unplanned interruptions across all points of service (POS) in a sub-category during a disclosure year	• Impact if there is circuit(s) outage into Auckland region when reconductoring works carried out during peak periods
GP2 – Grid Performance 2	Average duration of unplanned interruptions greater than one minute, across all POS in a sub-category during a disclosure year	• Impact if there is circuit(s) outage into Auckland region when reconductoring works carried out during peak periods
GP4: Energy not served (previously labelled NR and GP3)	Amount of energy demand that is not supplied due to a transmission interruption to supply	• Impact if there is circuit(s) outage into Auckland region when reconductoring works carried out during peak periods

C94 Following works completion, the improvement in conductor asset health will affect Transpower's obligations in meeting the AH quality standard. There is no direct impact on reliability outcomes for Transpower taking the OTA-WKM A and B line assets out of service to carry out the reconductoring works. The key impact will be if there is a subsequent outage on the transmission circuits into Auckland during the works.

C95 In its proposal, Transpower characterised the risk of a conductor failure on either of the OTA-WKM A or B lines as an event that would "restrict power flow between the upper North Island and the rest of the country which may threaten security of supply if it occurred during peak load periods."[74]

C96 We asked Transpower in an RFI how it was planning to manage the project works and considering the effect of a subsequent transmission asset outage.

C97 Transpower responded that:[75]

C97.1 it will schedule only one core grid circuit outage between Auckland and Whakamaru at any given time;

C97.2 outages on the OTA-WKM A and B line for reconductoring will occur outside of peak winter loading periods; and

C97.3 it will investigate breaking the transmission line jumpers at Hautapu substation tee to allow the substation to remain on N-1 security during the reconductoring.

C98 Transpower has confirmed that it plans to carry out the reconductoring work without an interruption to supply to ensure that N-1 supply security into Auckland is maintained. In our view, Transpower's approach will not impact the quality setting outcomes we set in our RCP4 decision.

C99 Once the Curlew conductor is installed Transpower may also see an improvement in its customer survey results due to conductor noise reduction, if Transpower intends to survey residents along the line as part of its CS1 quality measure compliance.

(j) the efficiency of the proposed approach to procurement of associated goods and services

C100 Procurement includes procurement of material, engineering services and construction services. These matters were considered as part of our assessment of the RCP4 proposal.

C101 In our RCP4 IPP decision, we concluded that we were comfortable with the efficiency of Transpower's procurement approach and the plans it was making to ensure timely delivery of assets, and recruitment of staff to carry out the work.[76]

C102 We noted that Transpower had:

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[74] *Transpower NZ Ltd*, OTA-WKM A&B reconductoring – Auckland wider region section consultation, Overview, Section 1.3, p.9, available here.

[75] Transpower response to RFI005 – OTA-WKM A and B line reconductoring: Listed Project: Managing outages.

[76] *Commerce Commission*, Transpower's individual price-quality path for the regulatory control period from 1 April 2025, Final Decision Attachment E - Deliverability expenditure, 29 August 2024, para 2.21-2.23, p.8, available here.

C102.1 developed a detailed procurement method that, while addressing compliance with principles, policies and procedures, is also designed to match the value, risk, criticality, and complexity of the purchase; and

C102.2 new procurement and supply chain processes Transpower had implemented, will improve visibility of plans and procurement need.

Effect on transmission charges

C103 Finally, Transpower has produced estimates of the indicative starting Benefit Based Investment allocations and indicative increases in transmission charges resulting from the proposed expenditure.[77]

C104 Following our final decision and Transpower's final investment decision on this listed project, Transpower state that it will "undertake a formal consultation on the proposed starting allocations for the OTA-WKM Reconductoring stage 2 BBI, as required by the TPM."[78]

[77] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Attachment 4 – Indicative pricing impacts, available here.

[78] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Attachment 4 – Indicative pricing impacts, p.2, available here.

Attachment D Escalation and foreign exchange rates

D1 Under the Capex IM, we must apply the forecasts for escalation factors used to determine the RCP4 base capex allowance.[79] To assess the allowance for this project, we must use the forecast CPI and forecast foreign exchange (**FX**) rates determined when we set the RCP4 IPP in 2024 because the project will be commissioned before the end of the RCP4 period.

D2 Transpower used the following cost escalators in this listed project application:

D2.1 changes in the general rate of inflation as measured by CPI; and

D2.2 changes in FX rates, such as USD to NZD for materials used in the current listed project.

D3 We asked Transpower to confirm that the CPI and FX rates used in in its RCP4 application were the same as those used in this application. Transpower confirmed that this was the case for the CPI figures but that it had used slightly different USD/NZD exchange rates in the application (0.60 per annum in this application and 0.61 per annum in its RCP4 application).[80]

D4 Transpower explain that:[81]

> If we were to update the USD FX rate to match RCP4, our cost estimate would drop by around $16k in real $2025 (from $45,401k to $45,385k). Our listed project capital allowance would drop by around $18k in nominal $ (from $50,541k to $ 50,523k).

D5 The impact of this this error is negligible as Transpower is sourcing the majority of the assets for this project using euros. Transpower provided a breakdown of its asset related exchange rate exposure for this project.[82]

Table D1 OTA-WKM listed project exchange rate purchasing exposure

Currency	Base currency amount	FX rate (RCP4)	FX rate (proposal)	NZD amount (RCP4)	NZD amount (proposal)
EUR	2,996,049	0.54	0.54	5,554,411	5,554,411
USD	416,022	0.61	0.60	683,123	699,196

D6 The forecast CPI and FX rates applied in this final decision are shown in Table D2 below.

[79] Capex IM, clauses 3.2.3(5).
[80] Transpower response to RFI001 - Escalation and foreign exchange rates.
[81] Transpower response to RFI001 - Escalation and foreign exchange rates.
[82] Transpower response to RFI001 - Escalation and foreign exchange rates.

Table D2 CPI and FX rates in this final decision by disclosure year

	1 July 2025 to 30 June 2026	1 July 2026 to 30 June 2027	1 July 2027 to 30 June 2028	1 July 2028 to 30 June 2029
CPI	2.6%	2.0%	2.1%	2.0%
USD to NZD exchange rate	0.60	0.60	0.60	0.60
EUR to NZD exchange rate	0.54	0.54	0.54	0.54

D7 We amended the proposal listed project annual allocation to reflect the use of the USD/NZD FX rate used in the RCP4 application. This change only affects the total interest during construction value, which in the proposal is $2.6 million ($ nominal), and with the corrected USD/NZD FX rate, $2.7 million ($ nominal).

D8 The final decision listed project allowance and cost escalators, by financial year, are set out in Table D3.

Table D3 Listed project capex annual allocation (LPCAA)[83]

Cost by disclosure year (1 July to 30 June)	2025/26	2026/27	2027/28	2028/29	Total
Capex (real $2025)	2.3	9.1	25.0	9.1	45.4
Inflation	0.0	0.3	1.4	0.6	2.4
Interest during construction	0.0	0.3	1.3	1.1	2.7
Total LPCA ($ nominal)	**2.3**	**9.7**	**27.6**	**10.8**	**50.5**

[83] *Transpower NZ Ltd*, OTA-WKM A and B line reconductoring Listed Project Overview, Table 10, p.21, available here.