



TRANSPOWER

TPM DETERMINATION:

Brownhill – Pakuranga B Cable Joint

Refurbishment starting BBI customer
allocations

Decision Paper

10 September 2026



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1 Executive summary

1. This decision paper presents Transpower's determination of the starting benefit-based investment (BBI) customer allocations (starting allocations) for the Brownhill–Pakuranga B Cable Joint Refurbishment BBI, calculated under the transmission pricing methodology (TPM).
2. The starting allocations and covered cost for the Brownhill–Pakuranga B Cable Joint Refurbishment BBI will be used to calculate the BBI's benefit-based charges (BBCs).
3. Transpower owns and operates two 220 kV underground cables (named A and B) between Brownhill and Pakuranga substations in Auckland. The cables were installed in 2012 as part of the North Island Grid Upgrade project and form part of the high-capacity transmission system supplying Auckland and Northland.
4. The B cable has 45 cable joints. The refurbishment replaced all existing joints on that cable to address systemic condition issues and support its continued service.
5. The cable joints on the A cable do not exhibit the same condition issues, do not present the same failure risk, and therefore do not need to be replaced.
6. The investment is a separate high-value post-2019 BBI. Its estimated fully commissioned capital cost is \$53.85 million. Because it is not a resiliency BBI, the price-quantity method applies. The calculation identifies wholesale electricity market benefits only and uses clause 51 of the TPM to calculate market regional net private benefit (NPB).

1.1 Our decision

7. Our decision is to adopt the starting allocations set out in section 5.2. These are the same as the proposed starting allocations published for consultation on 4 August 2026.
8. Regional allocations:

Table 1: Regional Customer group allocations for the Brownhill-Pakuranga B Cable Joint Refurbishment BBI

Regional customer group	Final regional allocation
Waikato and Upper North Island load	36.98%
South Island generation	33.49%
Rest of North Island generation	29.53%

1.2 Determination package

9. The determination package comprises:
 - this decision paper;

- the final record of application of the price-quantity method;
- technical assurance statements from KPMG and Broad Solutions;
- legal assurance from Simpson Grierson; and
- the final post-processing model, including intra-regional allocator values, and supporting modelling inputs and output.

2 Introduction

10. The TPM is in Schedule 12.4 of Part 12 of the Electricity Industry Participation Code 2010 (Code). Part D of the TPM and chapter 3 of the BBC Assumptions Book (Assumptions Book) are relevant to the calculation of covered cost and starting allocations. Unless stated otherwise, references to the Assumptions Book in this paper are to version 3.0 dated 30 June 2026.
11. The starting allocations and the BBI's covered cost will be used to calculate its BBCs. Starting allocations distribute the covered cost among customers in proportion to positive individual NPB calculated under the applicable standard method.

2.1 Consultation and feedback

12. Transpower published the consultation paper on 4 August 2026. Submissions were due by 25 August 2026. We received no submissions (and therefore no cross-submissions) on the consultation.
13. The scope of the consultation was Transpower's application of the price-quantity method, including the proposed regional customer groups, intra-regional allocators and starting allocations.

2.2 Consistency with the TPM and Assumptions Book

14. Our calculation of the starting allocations is consistent with the TPM and Assumptions Book except as otherwise stated in the final record. Section 8 records the independent technical and legal assurance obtained for the determination package.

3 The Brownhill–Pakuranga B Cable Joint Refurbishment

15. The two Brownhill–Pakuranga cables are each approximately 11 km long. Each system comprises three single-core XLPE cables installed in sections and connected in underground joint bays.
16. The B cable joints experienced multiple failures attributable to insulation breakdown, and investigations indicated a systemic issue affecting the remaining joints.
17. The refurbishment replaced all existing joints on the B cable through a coordinated programme of works.
18. As noted above, the A cable joints do not exhibit the same condition issue and were not included. Funding was approved by the Commerce Commission as part of Transpower’s base capex allowances for regulatory control period 4, following consultation on the project and independent verification of the proposed expenditure.

4 Applying the TPM

19. This section sets out the decisions and determinations Transpower has made in applying the TPM. Detailed analysis, supporting evidence, and the reasons for these decisions are provided in the Final Record document, which forms part of this decision package.

4.1 High-value post-2019 BBI

20. The refurbishment is a post-2019 BBI because it:
 - a. is a refurbishment investment;
 - b. was commissioned after 23 July 2019;
 - c. is not an exempt post-2019 investment (it was commissioned after 30 June 2021); and
 - d. is in respect of an Appendix A BBI (the cable was installed as part of the NIGU project, which is an Appendix A BBI – one of the seven historic interconnection investments specified in Appendix A of the TPM that are BBIs).
21. All assets were commissioned during FY2025/26.
22. The investment is high-value because its estimated fully commissioned asset value of \$53.85 million exceeds the applicable base capex threshold of \$30 million.
23. Starting allocations must therefore be calculated using a standard method rather than the simple method.

4.2 Price-quantity method

24. The price-quantity method must be used for high-value post-2019 BBIs that are not resiliency BBIs. The investment need is not primarily attributable to mitigating a risk of cascade failure or a high-impact, low-probability event. We therefore do not classify the BBI as a resiliency BBI and apply the price-quantity method.

4.3 Types of benefits

25. We calculated wholesale electricity market benefits only. We have not calculated reliability benefits because loss of load is unlikely under N-1 security conditions and any such benefits would primarily arise from low-probability events. We do not expect a material reduction in allocable ancillary service costs or any other material and measurable benefits. The investment has material market benefits because it alleviates constraints that would otherwise affect prices and dispatch quantities. We do not otherwise expect the Brownhill Cable Joint Refurbishment to have any material and measurable benefits other than wholesale electricity market benefits.

4.4 We used Clause 51

26. The TPM contains two alternative methods for calculating a BBI's market regional NPB, in clauses 51 and 52. Clause 51 results in market regional NPB in quantity (GWh) terms. Clause 52 results in market regional NPB in dollar terms.
27. To determine the appropriate allocation method for the Brownhill Cable Joint Refurbishment BBI, we assessed whether clauses 51 or 52 of the TPM apply, using the criteria set out in the assumptions book (section 3.3.6.7).
28. Clause 51 applies where most market benefits relate to new large generating plant, while clause 52 applies in certain circumstances where benefits are primarily driven by consumers avoiding high costs during peak demand periods.
29. Our assessment found that most of the positive market regional net private benefit (NPB) from the investment accrues to existing generators and customers rather than new large generating plant. As a result, clause 51(1)(a) does not apply.
30. We concluded that clause 52 does not apply. Only around 2% of total positive consumer benefits arise from consumers avoiding the estimated cost of self-supply during peak demand periods, meaning the threshold in clause 52(1)(b)(i) is not met.
31. We also assessed clause 52(1)(b)(ii) and found that allocations produced under clause 52 were broadly similar to those produced under clause 51. This indicates that clause 51 produces starting allocations that are broadly proportionate to estimated positive net private benefits.
32. Accordingly, when neither of the clause 51 or 52 circumstances apply, then as per the assumptions book, we apply clause 51 unless it does not produce allocations broadly proportionate to EPNPB.
33. Remaining consistent with the assumptions book and given the Brownhill cables form part of the grid backbone rather than being located at the extremity of the grid, we determined that clause 51 is the appropriate methodology to apply for this BBI.



4.5 Key modelling inputs

34. Some key modelling assumptions and inputs we have used in our application of the price quantity method to the Brownhill Cable Joint Refurbishment BBI are as follows:
- a. Five market scenarios based on MBIE's 2024 Electricity Demand and Generation Scenarios, as set out in the Assumptions Book
 - b. A standard method discount rate of 5% per annum
 - c. A 20-year standard method calculation period beginning 1 January 2027, the first 1 January after the effective full commissioning date of 30 June 2026
 - d. Assumptions and inputs consistent with the investment test or, where there was no investment-test equivalent, with the Assumptions Book, except as stated in the final record.

5 Starting allocations

5.1 Regional customer groups

35. The modelled constraints are between demand in the Waikato and Upper North Island (WUNI) region and generation in the remainder of the grid.
36. Without the investment, pre-contingency security constraints are expected to bind more frequently and reduce transfer capacity into WUNI. The investment therefore provides positive NPB to WUNI load and to generation upstream of the constraints in the Rest of North Island (RNI) and South Island (SI).

Table 2: Regional Customer group allocations for the Brownhill-Pakuranga B Cable Joint Refurbishment BBI

Regional customer group	Final regional allocation
Waikato and Upper North Island load	36.98%
South Island generation	33.49%
Rest of North Island generation	29.53%

5.2 Starting BBI customer allocations

37. Each customer's starting allocation is its individual NPB divided by the sum of all customers' positive individual NPB.

38. The allocations are fixed over the life of the BBI, subject to adjustment events under the TPM.

Table 3: Starting allocations for the Brownhill-Pakuranga B Cable Joint Refurbishment BBI

Customer	Starting allocation
Vector Ltd	25.09%
Meridian Energy Ltd	24.49%
Contact Energy Ltd	11.90%
Mercury NZ Ltd	8.16%
Genesis Energy Ltd	7.22%
WEL Networks Ltd	3.53%
Powerco Ltd	2.58%
Manawa Energy Ltd	2.26%
Northpower Ltd	1.98%
Counties Energy Ltd	1.64%
Nga Awa Purua Joint Venture	1.61%
MEL (West Wind) Ltd	1.21%
Kawerau Geothermal Ltd	1.16%
Waipa Networks Ltd	1.08%
Ngatamariki Geothermal Ltd	1.01%
Tararua Wind Power	0.98%
MEL (Te Apiti) Ltd	0.61%
Waverly Wind Farm Ltd	0.57%
Mercury SPV Ltd	0.42%
New Zealand Steel Ltd	0.40%
The Lines Company Ltd	0.32%
Oji Fibre Solutions (NZ) Ltd	0.29%
Southern Generation Ltd	0.29%
Unison Networks Ltd	0.26%
Nova Energy Ltd	0.21%
Top Energy Ltd	0.19%

Customer	Starting allocation
KiwiRail Holdings Ltd	0.17%
Horizon Energy Distribution Ltd	0.11%
Aurora Energy Ltd	0.09%
Whareroa Cogeneration Ltd	0.07%
Westpower Ltd	0.07%
Alpine Energy Ltd	0.03%
Southpark Utilities Ltd	0.001%

6 Covered cost and commencement of BBCs

39. The initial annual covered cost will be confirmed when transmission charges for PY2027/28 are calculated. The consultation estimate used a project cost of \$53.85 million, 20-year accounting depreciation, RCP4 financial parameters and the RCP4 attributed opex ratio. On those assumptions, forecast covered cost rises from approximately \$0.2 million in PY2027/28 to approximately \$6.3 million in PY2041/42.
40. BBCs for the BBI will apply from PY2027/28 because the first assets were commissioned during FY2025/26. Annual BBCs will be calculated using the actual covered cost for the relevant pricing year and the final starting allocations in this determination.

7 Consultation response and final changes

41. Transpower published the consultation paper on 4 August 2026. Submissions were due by 5pm on 25 August 2026. We received no submissions (and therefore no cross-submissions) on the consultation.
42. Therefore, we elected to keep allocations as consulted on in the consultation document¹.

8 Assurance

43. The decision package was independently assured.

¹ [BHL-PAK B Cable Joint Refurbishment starting BBI customer allocations - Consultation paper - Final August 26.pdf](#)

- a. KPMG was engaged to assess whether the proposed starting-allocation calculation and associated disclosures followed the Assumptions Book and TPM requirements.
 - b. Broad Solutions reviewed wholesale market model outputs and post-processing decisions.
 - c. Simpson Grierson assessed legal compliance with the TPM and consistency with relevant aspects of the Assumptions Book.
44. Transpower is satisfied that the calculation and this determination package comply with the TPM and are consistent with the Assumptions Book.

