

A tall steel lattice tower under construction against a clear blue sky. Three workers in red safety gear are visible, each in a suspended basket or platform, working on different levels of the tower. The tower's structure is a complex lattice of steel beams. The background is a clear, light blue sky.

**TPM CONSULTATION:**

**NZGP1.1 – Updated CNI & HVDC**

**Reactive Support proposed starting BBI  
customer allocations**

**Consultation paper**

**Date: 23 February 2026**

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# 1 Executive Summary

1. Transpower is seeking feedback on our updated proposed starting benefit-based investment (**BBI**) customer allocations (**starting allocations**) for the Central North Island (**CNI**) and High Voltage Direct Current (**HVDC**) Reactive Support BBIs, calculated under the [transmission pricing methodology \(TPM\)](#). The original BBIs were set in 2023 and based on modelling that assumed the Tiwai Point aluminium smelter would close in 2024 or 2034. With Tiwai Point now expected to stay open until 2044, this has significant impacts on our modelling assumptions, and how electricity is expected to flow around the country.
2. The remodelled starting allocations will not be finalised in time to be incorporated into charges for the 2026/27 pricing year starting 1 April 2026 (PY2026/27). Therefore, the allocations for the CNI BBI for PY2026/27 are the same as those we consulted on in April 2023. If we decide to update the CNI BBI allocations (after remodelling and consulting on them), these will not apply until the 2027/28 pricing year (PY2027/28). Any updates will depend on the outcome of consultation and may be subject to seeking, and to the Electricity Authority approving, a TPM amendment or exemption to allow the allocations to be updated.
3. We previously decided to treat each of the CNI, HVDC Reactive Support and Wairakei investments as separate BBIs. We are not reconsulting on this matter.
4. The Wairakei BBI is a low-value BBI and its starting allocations will be calculated using the simple method.<sup>1</sup> We are not reconsulting on this matter.

## 1.1 Net Zero Grid Pathways Phase 1

5. [Net Zero Grid Pathways \(NZGP\)](#) is our project to develop plans for evolving the transmission grid as New Zealand pursues a goal of achieving net zero carbon emissions by 2050. In December 2022, we submitted our major capex [proposal for the first stage of phase 1 of NZGP \(NZGP1.1\)](#) to the Commerce Commission (our **NZGP1.1 proposal**). We submitted an [updated version](#) of the NZGP1.1 proposal to the Commission in September 2023. The Commission made its [final decision](#) to approve the NZGP 1.1 proposal in February 2024.
6. NZGP takes a staged approach, aimed at enhancing the grid backbone prior to 2035. Staging allows us to start investing, while continuing to refine the scope and costing of future projects that will not commence until the late 2020s.

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<sup>1</sup> The Wairakei investment has an expected cost of \$23m. This is below the \$30m high-value BBI threshold in the TPM, which is linked to the base capex threshold in the Transpower Capital Expenditure Input Methodology (**Capex IM**).

7. The BBIs comprised in NZGP1.1 are as follows:
  - HVDC Reactive Support BBI: New reactive plant at Haywards to enhance the availability of maximum transfer over the HVDC link, filter banks and associated equipment ([\\$103m](#)).
  - CNI BBI: Tactical thermal upgrades (**TTUs**) of the Tokaanu-Whakamaru and Bunnythorpe-Tokaanu lines and duplexing of the Tokaanu-Whakamaru lines, and other components<sup>2</sup> to enhance the capacity of transfer through the central North Island (\$257m).
  - Wairakei BBI: TTU of the Wairakei-Whakamaru C line to enhance the capacity of the Wairakei Ring and TTU of the Edgecumbe-Kawerau 220 kV circuit (\$23m).

## 1.2 Decision to reconsult

8. We [consulted](#) on proposed starting allocations for NZGP1.1 in April 2023 prior to the Commerce Commission's [approval](#) of our NZGP1.1 proposal in February 2024.
9. The modelling associated with the starting allocations assumed the Tiwai Point aluminium smelter would close in December 2024 or December 2034<sup>3</sup> with equal weight given to both timings, as the timing of closure was uncertain at the time. We did not receive any submissions.
10. In May 2024, NZAS (the owner of the smelter) and [Meridian announced](#) they had negotiated a new electricity supply contract for the smelter to 31 December 2044.
11. While there is no explicit requirement to remodel or reconsult on starting allocations following this development, we assessed that the change in the status of the smelter would have a material impact on the distribution of benefits from the CNI and HVDC Reactive Support BBIs and their starting allocations. The assumptions about how long the smelter will remain in operation is a significant modelling input into the calculation of the starting allocations. We are also mindful of the cost impacts to customers of the BBIs.

## 1.3 Proposed changes

12. As we did not receive any submissions in response to our April 2023 consultation, we did not make any changes to the proposed starting allocations as a consequence of that consultation.
13. We now propose a substantive change to the modelling assumptions for the CNI and HVDC Reactive Support BBIs, being the revision of the timing of the closure of the smelter from

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<sup>2</sup> Implementing variable line ratings (VLR) on the 220 kV circuits on the Tokaanu-Whakamaru and Bunnythorpe-Tokaanu lines, splitting the 110 kV circuit on the Bunnythorpe-Ongarue A line at Ongarue, upgrading protection on the 220 kV Huntly – Stratford 1 circuit on the Huntly-Taumaranui A line and Stratford-Taumaranui A line, and replacing the special protection scheme at Tokaanu.

<sup>3</sup> See section 4.4 in the [BBI record](#) and section 1.6.3.1 in the [NZGP1.1 updated proposal](#).

December 2024 or December 2034 to remaining in operation throughout the entire standard method calculation period for each BBI.

14. We propose to use the April 2023 modelling cases to be as consistent as reasonably practicable with the original application of the Capex IM investment test to NZPGP1.1. This means we have used the assumptions from [Assumptions Book \(1.1\)](#). We do not intend to update the committed generation plants based on the latest information or make any other changes to align with the latest [Assumptions Book \(2.0\)](#). Other relatively minor modelling changes are detailed in Section 5.
15. We have needed to make some changes in our approach to ensure the modelled outcomes are sensible (e.g. ensure revenue adequacy of the generation plant that is built) and to use an updated version of the modelling software (Stochastic Dual Dynamic Programming, or **SDDP**).
16. To comply with clause 65(6) and the definition of CMP B in the TPM, we also propose to update the intra-regional allocator (**IRA**) values used to calculate the starting allocations for each BBI to those for the period 1 September 2018 to 31 August 2023.<sup>4</sup>
17. As noted above, we have used the input assumptions in version 1.1 of the Assumptions Book because they reflect the input assumptions we used in the application of the investment test to NZGP1.1. The changes to the analytical steps in chapter 3 of the Assumptions Book between version 1.1 and version 2.0 (the current version) of the Assumptions Book do not affect materially the application of the price-quantity method to the CNI or HVDC Reactive Support BBI. All references in this consultation paper to paragraphs of the Assumptions Book are to paragraphs in version 1.1 of the Assumptions Book, unless stated otherwise.
18. The updated assumption regarding the Tiwai Smelter closure results in significant changes to the modelled benefits for the HVDC Reactive Support BBI compared to our previous modelling. To produce starting allocations that are broadly proportionate to positive net private benefit, we have had to apply clause 52 of the TPM to calculate proposed starting allocations for the HVDC Reactive Support BBI. Previously, we applied clause 51 of the TPM to calculate proposed starting allocations for this BBI.

## 1.4 Feedback requested and next steps

19. The consultation period is six weeks commencing Monday 23 February 2026. Submissions are due by 5pm on Wednesday 8 April 2026. If needed, we will also allow one week for cross-submissions.
20. We welcome any feedback on the modelling changes to calculate the updated proposed starting allocations for the CNI and the HVDC Reactive Support BBIs.

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<sup>4</sup> The TPM specifies that the IRA values for a BBI must be calculated for the five-year period ending on the last trading period of the most complete capacity year (ending 31 August) before the final investment decision date for the BBI. The final investment decision dates for the CNI and HVDC Reactive Support BBIs were in June 2024 and August 2024 respectively. Therefore, we propose to update the IRA values used to calculate the starting allocations for each BBI to those for the period 1 September 2018 to 31 August 2023.

21. Following consideration of feedback from this consultation, we will finalise our calculation of the updated starting allocations for the CNI and HVDC Reactive Support BBIs.
22. As the updated starting allocations will not be finalised in time to be incorporated into charges for PY2026/27, the allocations for the CNI BBI for PY2026/27 are the same as those consulted on in April 2023. If we decide to update the CNI BBI allocations (after remodelling and consulting on them), these will not apply until PY2027/28. Any updates will depend on the outcome of consultation and may be subject to seeking, and to the Electricity Authority approving, a TPM amendment or exemption to allow the allocations to be updated.
23. The HVDC Reactive Support BBI has an expected commissioning date of mid-2028, with charges to commence in PY2029/30.<sup>5</sup> As we expect to finalise the HVDC Reactive Support BBI starting allocations in early 2026, the updated starting allocations for the HVDC Reactive Support BBI will apply from the start of its benefit-based charges (**BBCs**).
24. We are not reconsulting on our decisions to treat the CNI, HVDC Reactive Support and Wairakei investments as separate BBIs or on the treatment of the Wairakei BBI as a low-value BBI and the use of the simple method to calculate its starting allocations.

## 1.5 Proposed regional customer groups and regional allocations

25. Tables 1 and 2 show the updated proposed regional customer groups for the CNI and HVDC Reactive Support BBIs and the regional allocation each group receives.

**Table 1: Updated proposed regional customer groups and their allocations for CNI BBI**

Proposed regional customer group	Proposed regional allocation (2 d.p.)
Upper North Island Load	53.05%
South Island Controlled Hydro and Solar Generation	38.29%
Lower North Island Wind Generation	7.69%
Lower North Island Cogeneration	0.43%
Lower North Island Run-of-River Hydro and Solar Generation	0.22%
Lower North Island Generation with Embedded Load	0.17%
South Island Run-of-River Hydro and Wind Generation	0.12%
Lower North Island Peaking Generation	0.04%

<sup>5</sup> The expected commissioning date discussed in this paragraph is the date that triggers the commencement of BBCs for the HVDC Reactive Support BBI (ie, the start pricing year), and is different to that used for modelling the expected benefits of the BBI (which is the same as that used in the 2023 starting allocation calculations, consistent with the assumptions used in the applying the investment test (as per clause 43(5)(b) of the TPM)).

**Table 2: Updated proposed regional customer groups and their allocations for HVDC Reactive Support BBI**

Proposed regional customer group	Proposed regional allocation (2 d.p.)
South Island Load	46.59%
North Island Non-Industrial Load and Load with Embedded Generation	40.85%
North Island Wind Generation	8.50%
North Island Thermal Generation	3.46%
North Island Cogeneration	0.28%
North Island Industrial Load	0.26%
South Island Load with Embedded Generation	0.06%

## 1.6 Updated proposed starting BBI customer allocations

26. Tables 3 and 4 show the updated proposed starting allocations for the CNI and HVDC Reactive Support BBIs. The indicative BBCs are for information only and based on an estimate of the annual covered costs (\$26.3m for the CNI BBI (PY2035/36) and \$13.5m for the HVDC Reactive Support BBI (PY2029/30)).

**Table 3: Updated proposed starting allocations and indicative BBCs for the CNI BBI**

Customer name	Proposed starting allocation (2 d.p.)	Indicative BBC in PY35/36 (\$k)
Vector Ltd	26.62%	7,000.3
Meridian Energy Ltd	26.57%	6,987.9
Contact Energy Ltd	8.55%	2,249.5
Powerco Ltd	7.64%	2,009.9
Unison Networks Ltd	4.07%	1,070.5
WEL Networks Ltd	3.69%	971.6
Northpower Ltd	2.46%	648.0
Genesis Energy Ltd	2.31%	608.7
Mercury SPV Ltd	1.99%	524.6
Counties Power Ltd	1.89%	496.1
MEL (West Wind) Ltd	1.78%	468.8
Waverly Wind Farm Ltd	1.57%	412.0
Tararua Wind Power	1.45%	380.5
New Zealand Steel Ltd	1.39%	366.0
Waipa Networks Ltd	1.30%	342.8
Manawa Energy Ltd	1.12%	293.4
Pan Pac Forest Product Ltd	1.06%	279.8
Eastland Network Ltd	0.90%	237.3
MEL (Te Apiti) Ltd	0.90%	236.5
The Lines Company Ltd	0.76%	200.0
Winstone Pulp International	0.68%	178.9

Customer name	Proposed starting allocation (2 d.p.)	Indicative BBC in PY35/36 (\$k)
Horizon Energy Distribution Ltd	0.46%	119.7
Whareroa Cogeneration Ltd	0.43%	112.4
KiwiRail Holdings Ltd	0.11%	30.0
Aurora Energy Ltd	0.11%	27.8
Westpower Ltd	0.08%	20.0
Nova Energy Ltd	0.05%	13.8
Alpine Energy Ltd	0.04%	9.3
Wellington Electricity Lines Ltd	0.01%	3.6
Southpark Utilities Ltd	0.00%	0.4

**Table 4: Updated proposed starting allocations and indicative BBCs for the HVDC Reactive Support BBI**

Customer name	Proposed starting allocation (2 d.p.)	Indicative BBC in 2029/30 (\$k)
NZ Aluminium Smelters Ltd	16.58%	2,237.7
Vector Ltd	16.55%	2,234.9
Orion New Zealand Ltd	11.21%	1,513.2
Powerco Ltd	8.60%	1,161.6
Wellington Electricity Lines Ltd	4.24%	572.6
PowerNet Ltd	3.89%	525.8
Aurora Energy Ltd	3.67%	494.8
Alpine Energy Ltd	2.64%	356.9
Unison Networks Ltd	2.53%	341.8
Genesis Energy Ltd	2.49%	335.9
WEL Networks Ltd	2.30%	310.2
Mainpower New Zealand Ltd	2.09%	281.6
Network Tasman Ltd	1.90%	256.8
Mercury SPV Ltd	1.76%	237.9
Meridian Energy Ltd	1.73%	232.9
MEL (West Wind) Ltd	1.57%	212.6
EA Networks	1.57%	212.0
Northpower Ltd	1.53%	206.9
Waverly Wind Farm Ltd	1.38%	186.8
Marlborough Lines Ltd	1.30%	175.3
Tararua Wind Power	1.28%	172.5
Counties Power Ltd	1.17%	158.4
Network Waitaki Ltd	0.91%	122.2
New Zealand Steel Ltd	0.87%	116.8
Waipa Networks Ltd	0.81%	109.4
MEL (Te Apiti) Ltd	0.79%	107.2
Contact Energy Ltd	0.63%	84.6
Eastland Network Ltd	0.56%	75.8

Customer name	Proposed starting allocation (2 d.p.)	Indicative BBC in 2029/30 (\$k)
Electra Ltd	0.50%	68.1
The Lines Company Ltd	0.47%	63.9
Westpower Ltd	0.41%	56.0
Nova Energy Ltd	0.35%	46.7
Horizon Energy Distribution Ltd	0.28%	38.2
Whareroa Cogeneration Ltd	0.28%	37.6
Centralines Ltd	0.22%	30.4
Daiken Southland Ltd	0.19%	25.5
Nelson Electricity Ltd	0.16%	21.9
Scanpower Ltd	0.16%	21.3
Buller Electricity Ltd	0.12%	16.1
Pan Pac Forest Product Ltd	0.12%	15.6
Winstone Pulp International	0.07%	10.0
Top Energy Ltd	0.03%	4.6
Beach Energy Resources NZ (Holdings) Ltd	0.03%	3.4
Methanex New Zealand Ltd	0.02%	2.2
OMV NZ Production Ltd	0.01%	1.8
KiwiRail Holdings Ltd	0.01%	1.8
GTL Energy New Zealand Ltd	0.00%	0.0
Southpark Utilities Ltd	0.00%	0.0

## 2 Purpose

27. The purpose of this consultation is to seek feedback on the updated proposed starting allocations for the CNI and HVDC Reactive Support BBIs, calculated under the TPM.
28. The BBIs comprised in NZGP1.1 are as follows:

- **HVDC Reactive Support BBI:** New reactive plant at Haywards to enhance the availability of maximum transfer over the HVDC link, filter banks and associated equipment (\$103m).
- **CNI BBI:** Tactical thermal upgrades (TTUs) of the Tokaanu-Whakamaru and Bunnythorpe-Tokaanu lines and duplexing of the Tokaanu-Whakamaru lines, and other components<sup>6</sup> to enhance the capacity of transfer through the central North Island (CNI) (\$257m).
- **Wairakei BBI:** TTU of the Wairakei-Whakamaru C line to enhance the capacity of the Wairakei Ring and TTU of the Edgecumbe-Kawerau 220 kV circuit (\$23m).

29. We previously decided that the CNI, HVDC Reactive Support and Wairakei projects will be treated as separate BBIs and we are not reconsulting on this.
30. The CNI and HVDC Reactive Support BBIs are both post-2019 BBIs because they will be commissioned after 23 July 2019. The CNI and HVDC Reactive Support BBIs are both high-value post-2019 BBIs because their estimated capital costs when fully commissioned are more than \$30m.
31. The Wairakei BBI is a low-value BBI and its starting allocations will be calculated using the simple method.<sup>7</sup>
32. We have defined some terms in this consultation paper for convenience. Please also reference the glossary in Assumptions Book (1.1), which we have applied to calculate the proposed starting allocations. Other terms used in this consultation package have the meanings given to them in the TPM. All clause references are to clauses in the TPM, unless stated otherwise.

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<sup>6</sup> Implementing variable line ratings (VLR) on the 220 kV circuits on the Tokaanu-Whakamaru and Bunnythorpe-Tokaanu lines, splitting the 110 kV circuit on the Bunnythorpe-Ongarue A line at Ongarue, upgrading protection on the 220 kV Huntly – Stratford 1 circuit on the Huntly-Taumaranui A line and Stratford-Taumaranui A line, and replacing the special protection scheme at Tokaanu.

<sup>7</sup> Clause 43(2) of the TPM requires that assessment of whether a BBI is high-value or low-value is made with reference to the value of the assets when fully commissioned. At that point in time, the Wairakei BBI will be low value under the \$30m threshold which means its costs are to be allocated using the simple method.

## 3 Consultation process and scope

### 3.1 Decision to reconsult

33. We notified our customers that we would consult on updated proposed starting allocations for the CNI and HVDC Reactive Support BBIs in our September 2025 communications at the start of our annual pricing consultation for PY2026/27, and again at the 15 October 2025 [Transpower Customer Webinar](#).
34. We initially [consulted](#) on starting allocations for the BBIs in April 2023 prior to the Commerce Commission's [approval](#) of our NZGP1.1 proposal in February 2024. The modelling associated with the starting allocations assumed the Tiwai Point aluminium smelter would close in December 2024 or December 2034<sup>8</sup> with equal weight given to both timings, as the timing of closure was uncertain at the time. We did not receive any submissions.
35. In May 2024, NZAS (the owner of the smelter) and [Meridian announced](#) they had negotiated a new electricity supply contract for the smelter to 31 December 2044.
36. While there is no explicit requirement to remodel or reconsult on starting allocations following this development, we assessed that the change in the status of the smelter would have a material impact on the distribution of benefits from the CNI and HVDC Reactive Support BBIs and their starting allocations. The assumptions about how long the smelter will remain in operation is a significant modelling input into the calculation of the starting allocations. We are also mindful of the cost impacts to customers of the BBIs.

### 3.2 Consultation package

37. This consultation package comprises:
  - this consultation paper;
  - the draft record for the CNI BBI;
  - the draft record for the HVDC Reactive Support BBI;
  - technical assurance on aspects of the method and calculations for the proposed starting allocations, from KPMG and Broad Solutions, as explained in section 8 below;
  - legal assurance on the compliance of this consultation package with the Assumptions Book and TPM, from Simpson Grierson, as explained in section 8 below; and

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<sup>8</sup> See section 4.4 in the [BBI record](#) and section 1.6.3.1 in the [NZGP1.1 updated proposal](#).

- the outputs from the post-processing models used for calculating the NZGP1.1 CNI and HVDC Reactive Support BBI's respective proposed starting allocations, which include the list of existing customers included in each regional supply group and regional demand group, and IRA values, as explained in the draft records.

### 3.3 Consultation process

38. The consultation period is six weeks commencing Monday 23 February 2026. Submissions are due by 5pm on Wednesday 8 April 2026. If needed, we will also allow one week for cross-submissions.
39. Please send submissions to [pricingteam@transpower.co.nz](mailto:pricingteam@transpower.co.nz). We will acknowledge receipt of all submissions. Submissions will be published on our [website](#).
40. If your submission contains confidential material, please ensure this is clearly identified and provide a version of your submission that can be published.
41. Please note that all information provided to Transpower is subject to potential disclosure under the Official Information Act 1982.
42. If you have any questions about this consultation, please send them to [pricingteam@transpower.co.nz](mailto:pricingteam@transpower.co.nz). Your questions and our responses to them will be published on our [website](#) for reference by other submitters and stakeholders.

### 3.4 Feedback sought

43. We welcome feedback on our proposed updates to the starting allocations for the CNI and HVDC Reactive Support BBIs, including responses to the questions below.

Q1. Do you support our proposal to update the proposed starting allocations for the CNI and HVDC Reactive Support BBIs rather than use the proposed starting allocations in the April 2023 consultation?

Q2. Do you support the revision of the assumptions as to the timing of the closure of the smelter from December 2024 and December 2034 to remaining in operation throughout the entire standard method calculation period for both BBIs?

Q3. Do you agree we should use the [Assumptions Book \(1.1\)](#) assumptions used at the time of the April 2023 consultation for both BBIs?

Q4. Do you agree we need to update the IRA values for the period 1 September 2018 to 31 August 2023 for both BBIs?

44. We are not seeking feedback on our decision to treat the CNI, HVDC Reactive Support and Wairakei investments as separate BBIs. Nor are we seeking feedback on our determination that the Wairakei BBI is a low-value BBI.

### 3.5 Next steps

45. Following consideration of feedback from this consultation, we will finalise our calculation of the updated starting allocations for the CNI and HVDC Reactive Support BBIs.
46. As the updated starting allocations will not be finalised in time to be incorporated into charges for PY2026/27, the allocations for the CNI BBI for PY2026/27 will be the same as those consulted on in April 2023. If we decide to update the allocations for the CNI BBI (after remodelling and consulting on them), these will not apply until PY2027/28. Any updates will depend on the outcome of consultation and may be subject to seeking, and to the Electricity Authority approving, a TPM amendment or exemption to allow the allocations to be updated.
47. The HVDC Reactive Support BBI has an expected commissioning date of mid-2028, with charges to commence in PY2029/30.<sup>9</sup> As we expect to finalise the HVDC Reactive Support BBI starting allocations in early 2026, the updated starting allocations for the HVDC Reactive Support BBI will apply from the start of its BBCs.

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<sup>9</sup> The expected commissioning date discussed in this paragraph is the date that triggers the commencement of BBCs for the HVDC Reactive Support BBI (ie, the start pricing year), and is different to that used for modelling the expected benefits of the BBI (which is the same as that used in the 2023 starting allocation calculations, consistent with the assumptions used in the applying the investment test (as per clause 43(5)(b) of the TPM)).

## 4 The NZGP1.1 Major Capex Project

48. NZGP is a multi-year programme of work through which Transpower will investigate, plan, consult on and seek investment approval for large projects to deliver the transmission system New Zealand needs to electrify our economy and meet decarbonisation targets in the future.

### 4.1 About Net Zero Grid Pathways

49. NZGP looks at the system-wide requirements and dependencies that will enable new generation to connect to the grid, accommodate both new and growing customer load bases, move power to where it is needed, and continue to provide a secure and reliable power system. NZGP has two phases:
- Phase 1 - enhance the existing grid backbone to 2035
  - Phase 2 - address the likely need for a larger grid backbone with new interconnections beyond 2035 (including regional grid developments).
50. In the past, significant investments have been proposed individually to the Commerce Commission. Through NZGP, we have proposed and will propose tranches of investment to the Commerce Commission in a staged process. This provides efficiencies and recognises the projects enable system-wide network benefits when delivered as a coordinated programme (rather than addressing specific, more localised needs through discrete projects).

### 4.2 Phase One: Enhancing the existing grid backbone between now and 2035

51. When we started this work, our focus was to enable the renewable energy used by NZAS at the smelter to be transmitted northwards – at the time, the smelter was tipped for closure in mid-2021. In March 2021 we expanded our focus to include addressing how we would enable new renewables and electrification across all of Aotearoa out to 2035 through developments in the grid backbone.
52. On 5 December 2022 we submitted a [major capex proposal](#) to the Commerce Commission, requesting \$393 million to deliver three key projects to get more out of existing grid assets in the central North Island, around the Wairakei area, and the HVDC link between the North Island and South Island. In submitting this proposal (our NZGP1.1 proposal), we were mindful of the time it takes to build new transmission infrastructure and how quickly wind and solar generation can be developed. We submitted an updated version of the NZGP1.1 proposal to the Commerce Commission in September 2023. We received approval from the Commerce Commission on 28 February 2024 and work is now underway on these projects.<sup>10</sup>

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<sup>10</sup> [See more information on Phase One.](#)

## 5 Proposed modelling changes

53. We did not receive any submissions in response to our April 2023 consultation on proposed starting allocations for the CNI and HVDC Reactive Support BBIs so did not make any changes to the proposed starting allocations as a consequence of that consultation. We are now proposing to make the following modelling changes:
- Update the smelter exit demand forecast assumptions to the smelter remaining for the entire standard method calculation period for each BBI.
  - Retain use of the original modelling case inputs as much as is reasonably practicable. This means we have used the [Assumptions Book \(1.1\)](#) assumptions used at the time of the April 2023 consultation.
  - To implement the updated smelter assumption and use an updated version of our dispatch modelling software (SDDP), some other changes have needed to be made, which include:
    - manually adjusting the generation expansion plans to ensure future generation build is revenue adequate (and to pass our current quality assurance checks),
    - modelling the HVDC counter-factual expansion plans ignoring AC constraints (to be consistent with the HVDC factual expansion plans); and
    - minor updates to ensure SDDP inputs are compatible with SDDP version 17.3.
  - Update the IRA values used to calculate the starting allocations to those for the period 1 September 2018 to 31 August 2023, which is CMP B for both BBIs.

### 5.1 Treatment of the smelter

54. The only substantive change to the modelling assumptions for the CNI and HVDC Reactive Support BBIs that we propose is the revision of the timing of the closure of the smelter from December 2024 or December 2034 to remaining in operation throughout the entire standard method calculation period for each BBI.
55. In the application of the investment test to NZGP1.1, the smelter was assumed to close in December 2024, with a sensitivity of it closing in December 2034 (as noted in section 1.5.1 of the NZGP1.1 proposal).

56. Clause 43(5) of the TPM says that the assumptions and other inputs used to calculate the starting allocations for a post-2019 BBI “must be as consistent as reasonably practicable with the assumptions and other inputs used in applying the investment test to the post-2019 BBI” but we can use different assumptions if “alignment would not produce BBI customer allocations that are broadly proportionate to positive NPB [net private benefits] from the post-2019 BBI...provided they do not contradict what Transpower determines were its key drivers for proceeding with its investment in the post-2019 BBI as at the post-2019 BBI’s final investment decision date.”
57. The smelter is the largest single consumer of electricity in New Zealand, accounting for around 13% of New Zealand’s electricity demand. We consider that any significant change in the smelter’s forecast longevity is likely to have a significant impact on the distribution of private benefits from the CNI BBI. Therefore, we consider that not remodelling the benefits from the CNI BBI “would not produce BBI customer allocations that are broadly proportionate to positive NPB from the [CNI BBI]”.
58. The other requirement of clause 43(5) is that using the revised smelter assumption “[does] not contradict what Transpower determines were its key drivers for proceeding with its investment [in the CNI BBI].” At the times of our final investment decisions for the CNI and HVDC Reactive Support BBIs (June 2024 and August 2024 respectively) we already knew about the smelter’s new electricity supply contract, which NZAS and Meridian had announced in May 2024. Clearly, our April 2023 assumption about when the smelter would close was not a key driver for either final investment decision.

## 5.2 Application of the Assumptions Book

59. If it were not for the new electricity supply contract for the smelter, we would not have remodelled the benefits of either the CNI or HVDC Reactive Support BBI. For that reason, and to maintain consistency with the application of the investment test to NZGP1.1 in accordance with clause 43(5) of the TPM, we have used the [Assumptions Book \(1.1\)](#) assumptions used at the time of the April 2023 consultation for the remodelling. We do not propose to update the committed generation plants based on the latest information or make any other changes to align with the latest [Assumptions Book \(2.0\)](#).
60. However, we have needed to make some changes in our approach to ensure the modelled outcomes are sensible (e.g. ensure revenue adequacy of the generation plant that is built) and to use an updated version of SDDP.

## 5.3 Intra-regional allocators

61. We propose to update the IRA values used to calculate the starting allocations for each BBI to those for the period 1 September 2018 to 31 August 2023.
62. The TPM specifies that the IRA values for a BBI under a standard method must be calculated for the five-year period ending on the last trading period of the most complete capacity year (ending 31 August) before the final investment decision date for the BBI.

63. In our April 2023 draft records published alongside our consultation paper, we stated that while the proposed IRA values for both the CNI and HVDC Reactive Support BBIs were calculated for the period between 1 September 2017 and 31 August 2022, we expected to make a final investment decision after the Commerce Commission’s final decision later in 2023. We noted it was possible our final investment decision could occur after 31 August 2023, in which case CMP B<sup>11</sup> for each BBI may be a different period of time.
64. The final investment decision dates for the CNI and HVDC Reactive Support BBIs were in June 2024 and August 2024 respectively. Therefore, we propose to update the IRA values used to calculate the starting allocations for each BBI to those for the period 1 September 2018 to 31 August 2023.

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<sup>11</sup> From clause 3 of the TPM, CMP B is defined to mean: for a BBI, the period ending on the last trading period of the most recent complete capacity year before the final investment decision date for the BBI (capacity year n) and starting on the first trading period of capacity year n-4. CMP B is relevant to calculating benefit-based charges for BBIs under a standard method.

## 6 Updated proposed starting BBI allocations for CNI

### 6.1 We applied clause 51 for the CNI BBI

65. For market BBIs (BBIs that are expected to have a material impact on prices or quantities in the wholesale electricity market) there are two methods in the TPM for calculating benefits, which are set out in clauses 51 and 52. Clause 51 measures market benefits by the *quantity* of energy supplied during periods of benefit, plus the total change in quantity between the factual and counterfactual. Clause 52 measures market benefits in terms of *price* and *quantity*.
66. We have applied clause 51 for the CNI BBI because:
- Constraints in the counterfactual rarely bind and result in very little deficit. Most of the market benefit is not due to consumers avoiding the cost of self-supply, so clause 52(1)(b)(i) does not apply.
  - Clause 52 is sensitive to prices and in this case the modelled prices are less reliable than usual due to:
    - the explicit treatment of losses in only a subset of CNI circuits; and
    - spring washer<sup>12</sup> prices at Mataroa, Ohakune, National Park, and Ongerue in the counterfactual. Spring washer prices are particularly sensitive to market conditions, or in a model, to its input assumptions.
67. For these reasons we are not confident that clause 52 would produce allocations that are more proportionate to positive NPB than clause 51. As stated in paragraph 300 of the Assumptions Book, we have applied clause 51 as the “default” method.
68. The underlying modelling, the choice of clause 51 or 52, and the resulting proposed starting allocations for the CNI BBI are all similar to those we consulted on in April 2023 consultation because, unlike the HVDC Reactive Support BBI, the market benefits of the CNI BBI are not particularly sensitive to the “Tiwai staying” assumption.

### 6.2 Regional customer groups

69. We applied the process in section 3.3.6.13 of the Assumptions Book to determine the proposed regional customer groups.

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<sup>12</sup> The Transpower website hosts an animation which describes the spring washer phenomenon, which can be found [here](#).

70. The CNI BBI reduces losses on energy transported through the central North Island and reduces transmission constraints in the same region.
71. The benefits are primarily to generation upstream and load downstream of constraints.
72. By reducing losses and constraints on energy transport through the central North Island, the CNI BBI is expected to deliver positive NPV to load north of the investment, and generation south of the investment. This is primarily because the prevailing flow of energy across the constraint is south to north, meaning load downstream of the constraint will experience lower energy prices due to reduced losses, and generation upstream of the constraint will receive higher energy prices and be more competitive with generation downstream as price separation reduces. Similarly, load will disbenefit in the region where generation benefits, and vice versa.
73. We applied paragraph 348 of the Assumptions Book (1.1) to determine if potential regional customer groups should be combined. As a result of this process, the CNI BBI has the proposed regional customer groups shown below.
74. The regional customer groups and their allocations are broadly similar to those presented in the April 2023 consultation paper.

**Table 5: Proposed regional customer groups and their allocations in the 2023 consultation**

Proposed regional customer group	Proposed regional allocation (2023 consultation) (2 d.p.)
Upper North Island Load	56.12%
South Island Controlled Hydro Generation	34.62%
Lower North Island Wind and Cogeneration	7.04%
Lower North Island Run-of-River Hydro and Solar Generation	1.90%
Lower North Island Peaking Generation	0.14%
South Island Run-of-River Hydro, Wind, and Solar Generation	0.11%
Lower North Island Generation with Embedded Load	0.08%

**Table 6: Proposed regional customer groups and their allocations in the 2026 consultation**

Proposed regional customer group	Proposed regional allocation (2026 consultation) (2 d.p.)
Upper North Island Load	53.05%
South Island Controlled Hydro and Solar Generation	38.29%
Lower North Island Wind Generation	7.69%
Lower North Island Cogeneration	0.43%
Lower North Island Run-of-River Hydro and Solar Generation	0.22%
Lower North Island Generation with Embedded Load	0.17%
South Island Run-of-River Hydro and Wind Generation	0.12%
Lower North Island Peaking Generation	0.04%

### 6.3 Proposed starting allocations

75. We calculated each customer's proposed starting allocation for the CNI BBI as the customer's individual NPB divided by the sum of all customers' individual NPB (clause 43). This results in the allocations (to two decimal places) set out in Table 7.
76. We note the allocations for a BBI are fixed over the lifetime of the BBI, subject to specific adjustment events such as customer or large plant entry or exit.
77. The indicative charges are for information only and based on the indicative covered cost for the CNI BBI for PY2035/36 of \$26.3m.<sup>13</sup>

**Table 7: Proposed starting allocations for the CNI BBI**

Customer Name	Previous proposed starting allocation (2 d.p.)	Updated proposed starting allocation (2 d.p.)	Previous indicative BBC in PY 2035/36 (\$k)	Updated indicative BBC in PY 2035/36 (\$k)
Vector Ltd	28.08%	26.62%	7,384.7	7,000.3
Meridian Energy Ltd	24.05%	26.57%	6,325.3	6,987.9
Powerco Ltd	7.89%	7.64%	2,076.1	2,009.9
Contact Energy Ltd	7.75%	8.55%	2,038.6	2,249.5
Unison Networks Ltd	4.37%	4.07%	1,149.3	1,070.5
Genesis Energy Ltd	3.64%	2.31%	958.6	608.7
WEL Networks Ltd	3.27%	3.69%	860.6	971.6
Northpower Ltd	2.53%	2.46%	665.0	648.0
Counties Energy Ltd	1.98%	1.89%	520.6	496.1
Mercury SPV Ltd	1.79%	1.99%	471.5	524.6
MEL (West Wind) Ltd	1.62%	1.78%	426.5	468.8
New Zealand Steel Ltd	1.51%	1.39%	397.1	366.0
Waipa Networks Ltd	1.38%	1.30%	361.7	342.8
Pan Pac Forest Product Ltd	1.36%	1.06%	357.8	279.8
Tararua Wind Power	1.30%	1.45%	341.9	380.5
Horizon Energy Distribution Ltd	1.19%	0.46%	312.1	119.7
Manawa Energy Ltd	1.08%	1.12%	284.8	293.4
Waverly Wind Farm Ltd	1.07%	1.57%	282.5	412.0
Eastland Network Ltd	0.97%	0.90%	254.5	237.3
MEL (Te Apiti) Ltd	0.76%	0.90%	199.0	236.5
Winstone Pulp International	0.74%	0.68%	195.4	178.9
The Lines Company Ltd	0.72%	0.76%	188.6	200.0
Whareroa Cogeneration Ltd	0.49%	0.43%	129.4	112.4

<sup>13</sup> PY2035/36 is the year we expect the covered costs for the CNI BBI to peak.

Customer Name	Previous proposed starting allocation (2 d.p.)	Updated proposed starting allocation (2 d.p.)	Previous indicative BBC in PY 2035/36 (\$k)	Updated indicative BBC in PY 2035/36 (\$k)
KiwiRail Holdings Ltd	0.13%	0.11%	33.7	30.0
Nova Energy Ltd	0.12%	0.05%	32.1	13.8
Aurora Energy Ltd	0.09%	0.11%	23.3	27.8
Westpower Ltd	0.07%	0.08%	18.6	20.0
Alpine Energy Ltd	0.03%	0.04%	8.7	9.3
Southdown Cogeneration Ltd	0.01%	N/A	1.8	N/A
Southpark Utilities Ltd	0.00%	0.00%	0.4	0.4
Wellington Electricity Lines Ltd	N/A	0.01%	N/A	3.6

## 7 Updated proposed starting BBI allocations for HVDC Reactive Support

### 7.1 We applied clause 52 for HVDC Reactive Support

78. According to clause 52(1)(b)(ii) of the TPM, we must calculate benefits for a market BBI using clause 52 when using clause 51 would not produce starting allocations for the BBI that are broadly proportionate to positive NPB.
79. Around 45% of the market regional NPB of the HVDC Reactive Support BBI derives from consumers avoiding having to pay the cost of self-supply. Although this means that clause 52(1)(b)(i) is not quite satisfied (i.e. 45% is not *most* of market regional NPB) it does mean that deficit and the cost of self-supply have a significant impact on prices downstream of the constrained HVDC in the counterfactual. As stated in paragraph 301(a) of the Assumptions Book (1.1), clause 51 will not be appropriate for BBIs where we expect the change in price between the factual and counterfactual to be of a significantly greater magnitude for one group of beneficiaries compared to another.
80. The “Tiwai stays” assumption results in significant periods later in the standard method calculation period where the HVDC link is binding with north to south flow. If using clause 51, the periods of benefit for North Island load customers when the HVDC link is north binding are almost exactly cancelled out by the periods of disbenefit when the HVDC link is south binding. This would leave North Island load customers with no positive NPB and no allocations. Similarly, for South Island load customers the periods of north binding disbenefit are largely cancelled out by the periods of south binding benefit leaving a small positive NPB and the only allocations would be to load customers. This outcome, where load allocations are based on small differences between north and south binding benefits and disbenefits is sensitive to assumptions regarding the geospatial distribution of future demand and generation.
81. In clause 52, load customers in both islands benefit because the downstream price reductions due to constraint alleviation outweigh the upstream price increases. This outcome is relatively stable and represents the real-world effects of deficit and marginal generation costs.
82. Accordingly, we consider we must use clause 52 because clause 52(1)(b)(ii) applies.

### 7.2 Regional customer groups

83. We applied the process described in section 3.3.6.13 of the Assumptions Book (1.1) to determine the proposed regional customer groups.

84. The HVDC Reactive Support BBI increases the average operational capacity of the HVDC link for flow in both a north and south direction.
85. By reducing constraints between the North Island and South Island, the HVDC Reactive Support BBI is expected to deliver benefits to load in both Islands, and to generators in the North Island. Load customers in both islands benefit because the downstream price reductions due to constraint alleviation outweigh the upstream price increases. Some North Island generators, particularly wind farms, benefit by being able to supply the South Island at times with low inflows and high South Island demand.
86. We applied paragraph 348 of the Assumptions Book (1.1) to determine if potential regional customer groups should be combined. As a result of this process, the HVDC Reactive Support BBI has the proposed regional customer groups shown below.

**Table 8: Proposed regional customer groups and their allocations in the 2023 consultation**

Proposed regional customer group	Proposed regional allocation (2023 consultation) (2 d.p.)
North Island Load	57.33%
South Island Hydro Generation	42.54%
North Island Load with Embedded Generation	0.14%

**Table 9: Proposed regional customer groups and their allocations in the 2026 consultation**

Proposed regional customer group	Proposed regional allocation (2026 consultation) (2 d.p.)
South Island Load	46.59%
North Island Non-Industrial Load and Load with Embedded Generation	40.85%
North Island Wind Generation	8.50%
North Island Thermal Generation	3.46%
North Island Cogeneration	0.28%
North Island Industrial Load	0.26%
South Island Load with Embedded Generation	0.06%

### 7.3 Proposed starting allocations

87. We calculated each customer's proposed starting allocation for the HVDC Reactive Support BBI as the customer's individual NPB divided by the sum of all customers' individual NPB (clause 43). This results in the allocations (to two decimal places) set out in Table.
88. We note the allocations for a BBI are fixed over the lifetime of the BBI, subject to specific adjustment events such as customer or large plant entry or exit.
89. The indicative charges are for your information only and are based on the indicative covered cost for the HVDC Reactive Support BBI for PY2029/30 of \$13.5m.<sup>14</sup>

<sup>14</sup> PY2029/30 is the year we expect the covered costs for the HVDC Reactive Support BBI to peak.

**Table 10: Proposed starting allocation for the HVDC Reactive Support BBI**

Customer Name	Previous proposed starting allocation (2 d.p.)	Updated proposed starting allocations (2 d.p.)	Previous indicative BBC in PY2029/30 (\$k)	Updated indicative BBC in PY2029/30 (\$k)
Meridian Energy Ltd	29.48%	1.73%	3,979.7	232.9
Vector Ltd	22.28%	16.55%	3,007.5	2,234.9
Powerco Ltd	11.52%	8.60%	1,554.7	1,161.6
Contact Energy Ltd	9.39%	0.63%	1,267.5	84.6
Wellington Electricity Lines Ltd	5.81%	4.24%	784.7	572.6
Unison Networks Ltd	3.47%	2.53%	468.1	341.8
WEL Networks Ltd	2.60%	2.30%	350.5	310.2
Genesis Energy Ltd	2.44%	2.49%	328.9	335.9
Northpower Ltd	2.01%	1.53%	270.8	206.9
Counties Energy Ltd	1.57%	1.17%	212.0	158.4
New Zealand Steel Ltd	1.20%	0.87%	161.7	116.8
Waipa Networks Ltd	1.09%	0.81%	147.3	109.4
Pan Pac Forest Product Ltd	1.08%	0.12%	145.7	15.6
Manawa Energy Ltd	1.00%	N/A	134.9	N/A
Horizon Energy Distribution Ltd	0.94%	0.28%	127.1	38.2
Electra Ltd	0.81%	0.50%	108.9	68.1
Eastland Network Ltd	0.77%	0.56%	103.7	75.8
The Lines Company Ltd	0.66%	0.47%	89.2	63.9
Winstone Pulp International	0.59%	0.07%	79.6	10.0
Centralines Ltd	0.31%	0.22%	41.7	30.4
Scanpower Ltd	0.22%	0.16%	29.1	21.3
Beach Energy Resources NZ (Holdings) Ltd	0.19%	0.03%	25.6	3.4
Methanex New Zealand Ltd	0.13%	0.02%	17.0	2.2
Aurora Energy Ltd	0.11%	3.67%	14.7	494.8
KiwiRail Holdings Ltd	0.11%	0.01%	14.5	1.8
OMV NZ Production Ltd	0.10%	0.01%	13.9	1.8
Westpower Ltd	0.09%	0.41%	11.7	56.0
Alpine Energy Ltd	0.04%	2.64%	5.5	356.9
Top Energy Ltd	0.02%	0.03%	2.9	4.6
Southdown Cogeneration Ltd	0.01%	N/A	0.8	N/A
Southpark Utilities Ltd	0.00%	0.00%	0.2	0.0
NZ Aluminium Smelters Ltd	N/A	16.58%	N/A	2,237.7

Customer Name	Previous proposed starting allocation (2 d.p.)	Updated proposed starting allocations (2 d.p.)	Previous indicative BBC in PY2029/30 (\$k)	Updated indicative BBC in PY2029/30 (\$k)
Orion New Zealand Ltd	N/A	11.21%	N/A	1,513.2
PowerNet Ltd	N/A	2.75%	N/A	370.6
Mainpower New Zealand Ltd	N/A	2.09%	N/A	281.6
Network Tasman Ltd	N/A	1.90%	N/A	256.8
Mercury SPV Ltd	N/A	1.76%	N/A	237.9
MEL (West Wind) Ltd	N/A	1.57%	N/A	212.6
EA Networks	N/A	1.57%	N/A	212.0
Waverly Wind Farm Ltd	N/A	1.38%	N/A	186.8
Marlborough Lines Ltd	N/A	1.30%	N/A	175.3
Tararua Wind Power	N/A	1.28%	N/A	172.5
OtagoNet	N/A	1.15%	N/A	155.1
Network Waitaki Ltd	N/A	0.91%	N/A	122.2
MEL (Te Apiti) Ltd	N/A	0.79%	N/A	107.2
Nova Energy Ltd	N/A	0.35%	N/A	46.7
Whareroa Cogeneration Ltd	N/A	0.28%	N/A	37.6
Daiken Southland Ltd	N/A	0.19%	N/A	25.5
Nelson Electricity Ltd	N/A	0.16%	N/A	21.9
Buller Electricity Ltd	N/A	0.12%	N/A	16.1
GTL Energy New Zealand Ltd	N/A	0.0003%	N/A	0.0

## 8 Assurance of the consultation package

90. The contents of this consultation package have been subject to independent assurance.
91. This consultation package contains assurance for the technical aspects of the consultation package e.g. data inputs and sources.
  - KPMG was engaged by Transpower to assure our determination of the proposed starting allocations for the CNI and HVDC Reactive Support BBIs, and associated disclosures in the respective draft records, in accordance with the Assumptions Book (1.1) and the requirements of the TPM.
  - Broad Solutions was engaged by Transpower to review the outputs of our market model, and to assure our discretionary decisions made in undertaking the modelling were reasonable.
92. This consultation package contains assurance for the legal aspects of this consultation package. Simpson Grierson assessed legal compliance of this consultation package, specifically whether the draft records comply with the TPM and are consistent with the Assumptions Book (1.1).
93. Through this consultation process Transpower will consider all submissions. The assurance letters provided with respect to this consultation package do not limit this in any way.

