



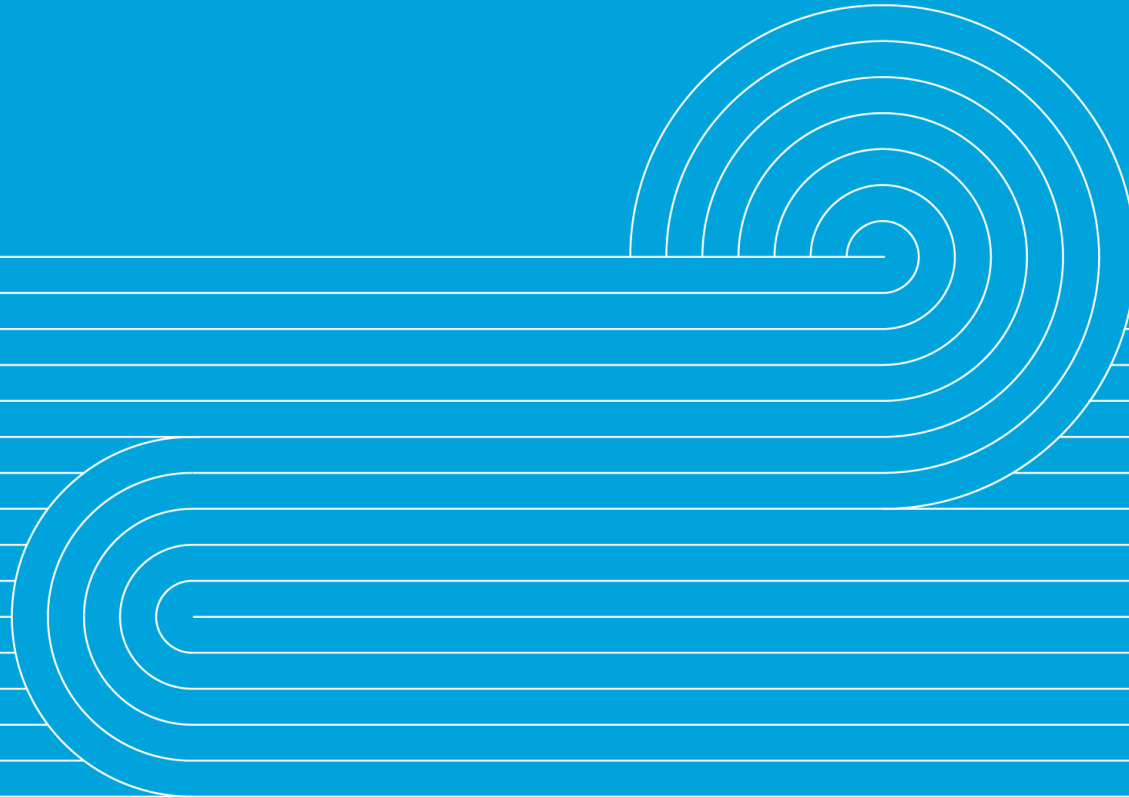
TRANSPower

NZGP1 Shortlist Consultation

Indicative covered costs and starting BBI customer allocations

Webinar

26 July 2022



**Whakamana i te mauri hiko tū
mai Aotearoa.** Empowering the
energy future for New Zealand.



Supporting paper:

Indicative covered costs and starting BBI customer allocations

The purpose of the supporting document is to assist stakeholders responding to our NZGP1 shortlist consultation to understand the possible impact of the preferred NZGP1 option on their transmission charges.

It presents, for the preferred NZGP1 option:

- indicative covered cost profiles
- starting BBI customer allocations
- indicative charges



Recap: NZGP Phases

NZGP will be a long- term development plan for the grid to enable electricity's contribution to New Zealand achieving net zero carbon by 2050

Undertaken in two phases:

Phase 1

Changes needed to the backbone grid by 2035

Phase 2

Changes needed to the backbone grid and regional grids out to 2050

Major Capex Proposals developed as required



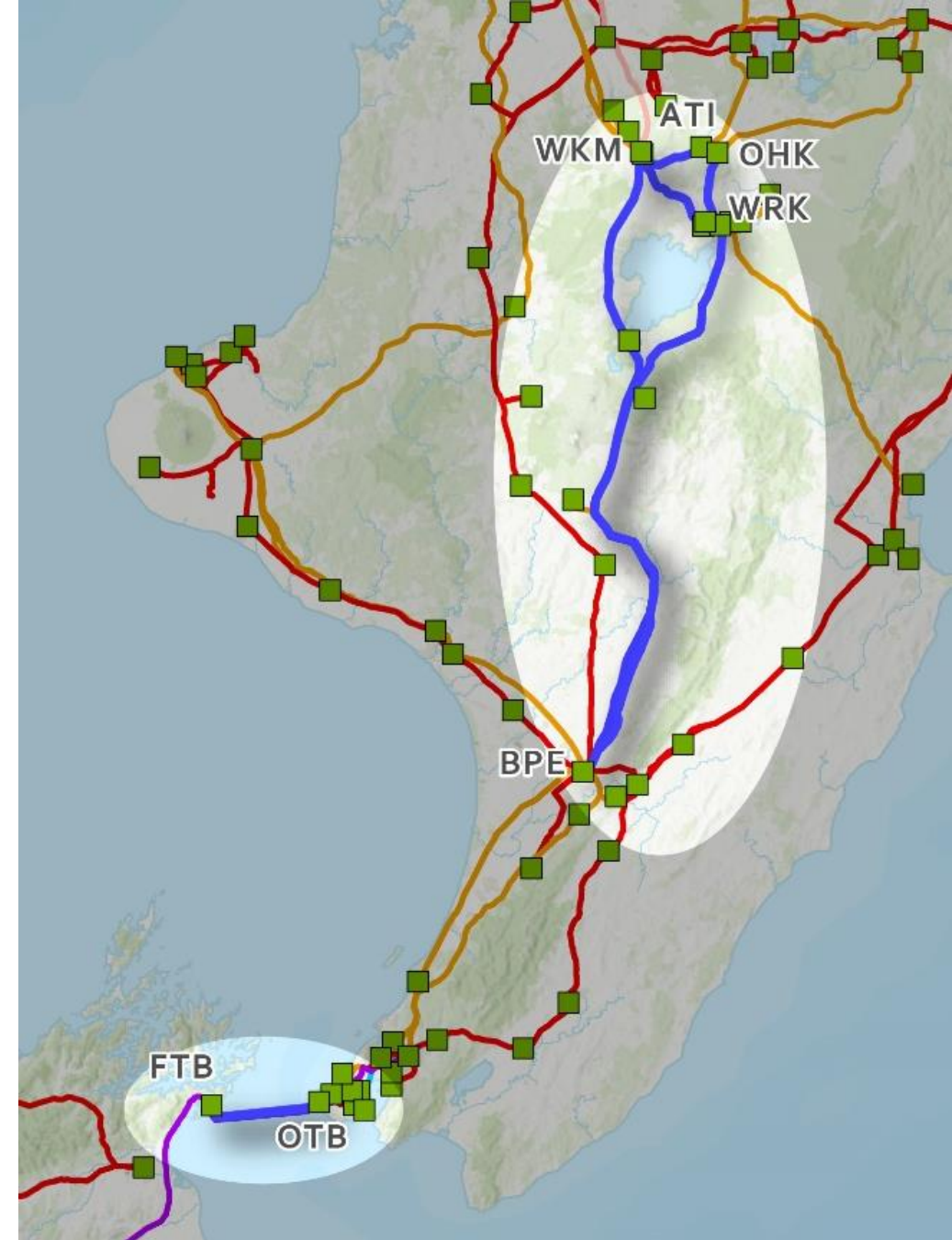
Recap: NZGP Phase 1

NZGP Phase 1 has initially identified HVDC, Central North Island and Wairakei Ring capacities as likely constraints prior to 2035.

Our preferred option for Stage 1 requires investments in added grid capacity of approximately \$350 million:

- HVDC (\$128m)
- Central North Island (\$182m)
- Wairakei Ring (\$13m).

NZGP1 is the first major capex investigation undertaken as a part of NZGP. This MCP evaluates the combined benefits of investment in those three elements of the backbone grid



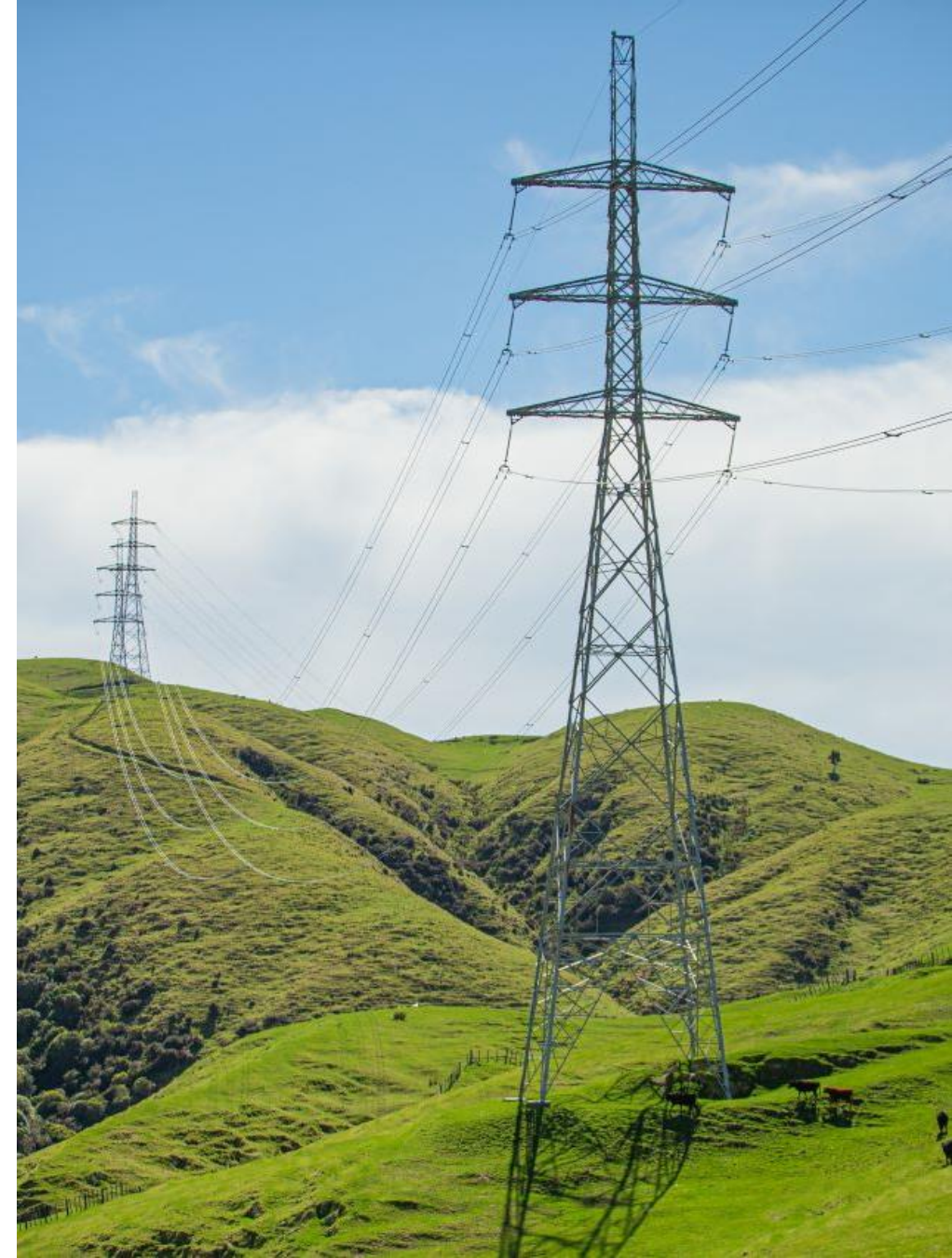


A new TPM

The new TPM

The new transmission pricing methodology (TPM) recovers the covered cost of post-2019 benefit-based investments (BBIs) from the expected beneficiaries

The TPM contains the methods for calculating charges for BBIs (benefit-based charges or BBCs).


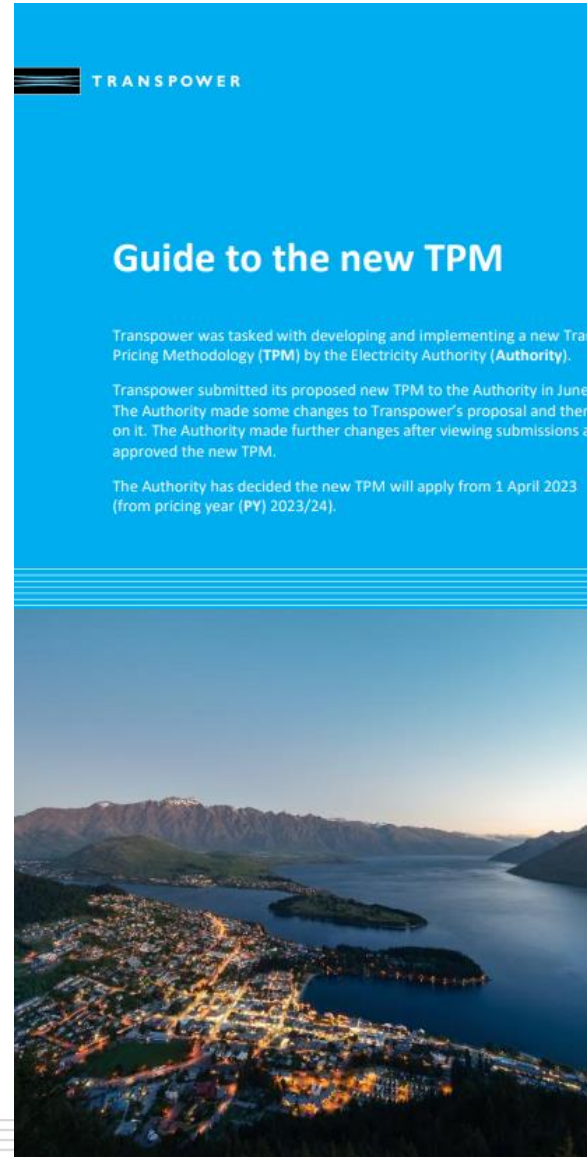


Short guide to the new TPM, and the draft assumptions book

To help people understand the new TPM we have published:

- a short Guide to the TPM
- a consultation schedule
- the first in a series of information sheets that explain aspects of the TPM.

Further information sheets are in production.



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Guide to the new TPM








Transpower was tasked with developing and implementing a new Transmission Pricing Methodology (TPM) by the Electricity Authority (Authority). Transpower submitted its proposed new TPM to the Authority in June 2021. The Authority made some changes to Transpower's proposal and then approved it. The Authority made further changes after viewing submissions and approved the new TPM. The Authority has decided the new TPM will apply from 1 April 2023 (from pricing year (PY) 2023/24).

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Version: 1.0, June 2022

Transmission pricing under a new TPM: Consultation schedule

On 12 April 2022, the Electricity Authority (Authority) announced its decision to adopt a new Transmission Pricing Methodology (TPM). Transpower is now working to implement the new TPM into prices that will take effect from 1 April 2023. This is our current indicative timeline for consultation planned as part of implementing the new TPM.

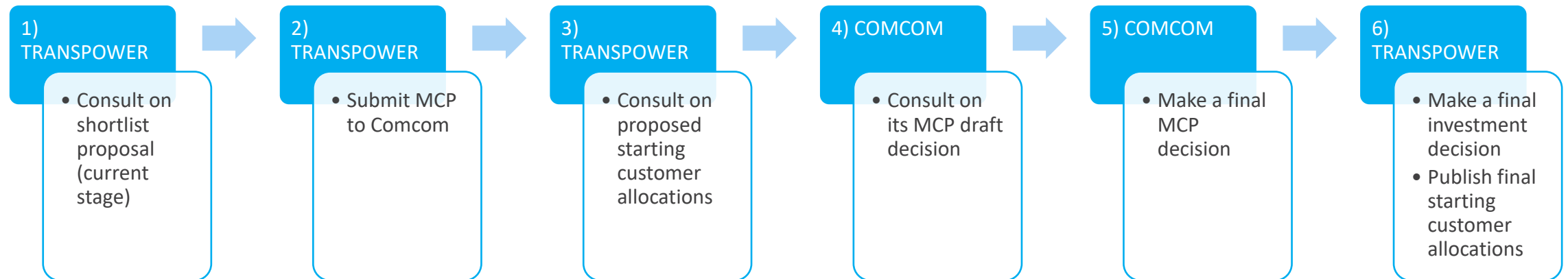
	BBC Assumptions Book	Consult May 2022 Publish September 2022
	Proposed starting BBI customer allocations (CUWLP)	Consult May/June 2022 Publish September 2022
	Proposal to reclassify interconnection assets principally providing connection services	Consult June/July 2022 Publish August 2022
	Grid asset building blocks replacement costs update (an input for connection charges)	Consult July 2022 Publish August 2022
	Annual pricing inputs engagement with each transmission customer	Engage September 2022
	Prudent discount practice manual	Consult November 2022 Publish February 2023
	Communicate final pricing FY 2023/24	Communicate pricing December 2022

Consultation on proposed allocations to come

At this stage, we are not consulting on the indicative allocations set out in this document.

We plan to consult on the proposed starting BBI customer allocations after we have submitted the NZGP1 MCP and before the Commission consults on its draft decision on the MCP.

Following the Commission's final decision, assuming the Commission approves the proposed NZGP1 option, Transpower will make its final investment decision, at which time we will publish the final starting BBI customer allocations for the NZGP1 high-value BBI(s).



Interaction with the Capex IM

The combined investment value of the preferred NZGP1 option is currently estimated at \$342 million and its constituent parts are enhancement investments.

So the option is a major capex project under the Capex IM - Transpower must submit an MCP to the Commission for approval.

Under clause 7.5.1(1) of the Capex IM, an MCP must include information about the expected increase in transmission charges due to the proposed expenditure.

We will include this information in the NZGP1 MCP.

The NZGP1 MCP will also include the market scenarios and other modelling assumptions and parameters we use to apply the Capex IM investment test to the major capex project.

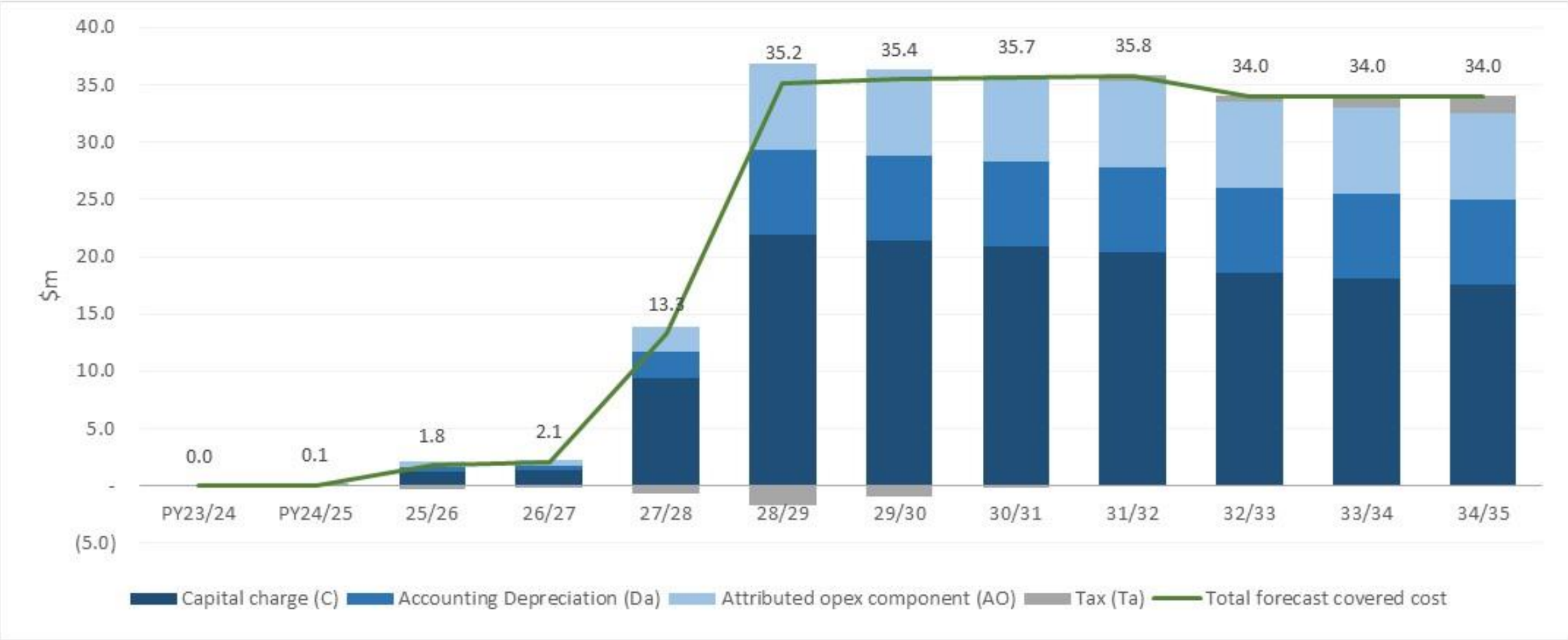
Clause 43(5) of the TPM generally requires consistency in approach with the Capex IM's investment test when we calculate starting BBI customer allocations for a high-value BBI.



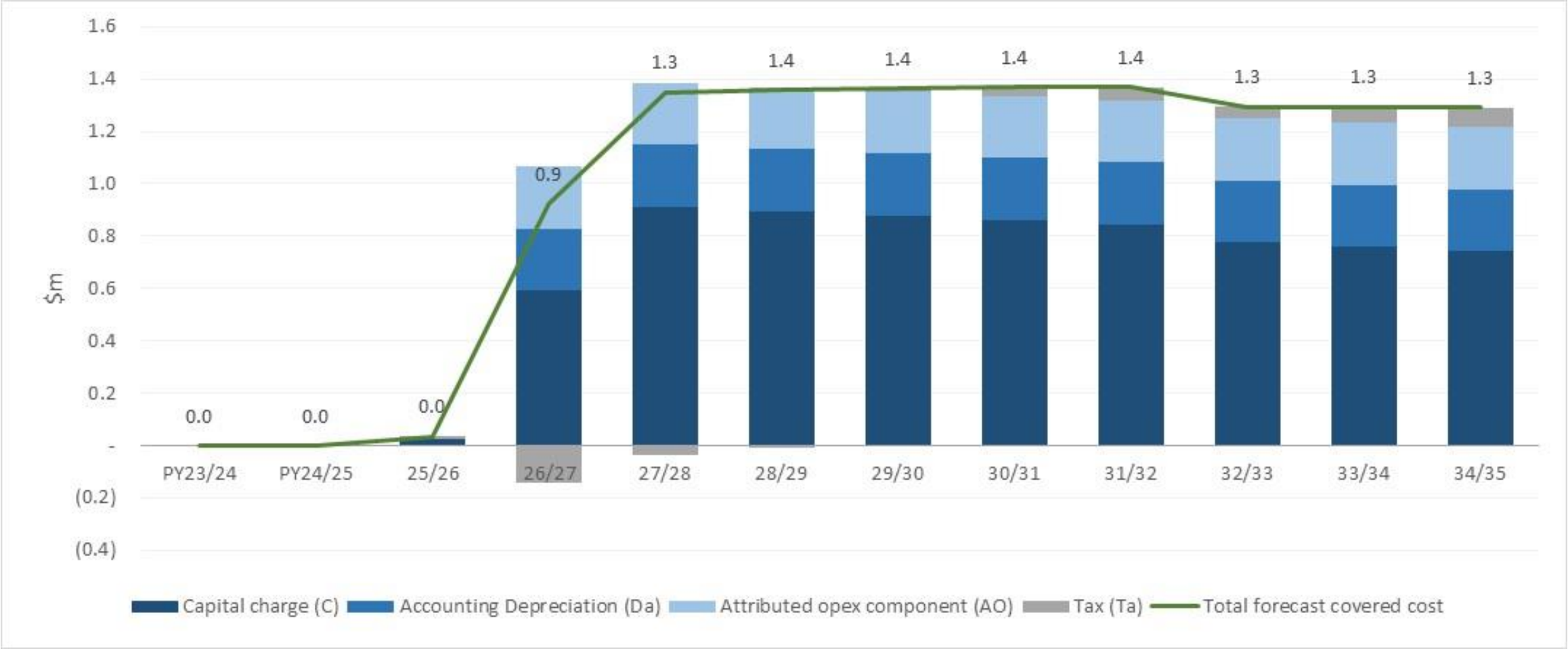


Indicative covered cost for NZGP1

HVDC/CNI indicative covered cost



Wairakei Ring indicative covered cost



The background image is a landscape photograph showing a lush green field in the foreground. In the middle ground, a tall high-voltage power line tower stands on the left, with several power lines stretching across the sky. In the distance, there are rolling hills and a line of trees under a sky with soft, colorful clouds, suggesting a sunset or sunrise. A large, white, stylized circular graphic with concentric lines and small loops is centered over the image, partially obscuring the tower and the sky.

Indicative allocations for HVDC/CNI BBI

Market scenarios and other key modelling assumptions

Key modelling inputs used in our application of the price-quantity method to the HVDC/CNI BBI are:

- Expected market benefits and disbenefits have been discounted at 7% per annum, per the investment test
- For indicative allocations, we used a single market scenario – the Growth scenario.
- In general, modelling assumptions used in the NZGP1 shortlist consultation are consistent with chapter 2 of the draft assumptions book. Where they are different, we have adopted the assumption used in the application of the investment test so there is consistency between the investment decision and the allocations.



Modelled regions and market regional net private benefit

- To determine the modelled regions for the HVDC/CNI BBI we analysed prices in the counterfactual at each modelled node in the network. We calculated the correlation coefficient between all pairs of nodes, and grouped nodes into a region if they had a high correlation.
- This resulted in the following modelled regions:
 - Upper North Island (UNI) including Bay of Plenty and Hawke’s Bay
 - Lower North Island (LNI) including Taranaki and Manawatu-Whanganui
 - South Island (SI).
- We then calculated market regional NPB:

Table 3: Indicative allocations of positive regional NPB to regional customer groups

Modelled region	Regional customer group	Regional NPB share
UNI	Load	50.6%
LNI	Load	4.2%
SI	All generation	44.2%
LNI	Wind Generation	1.0%



Indicative starting BBI allocations for the HVDC/CNI

Customer Code	Customer Name	Starting BBI customer allocation (%)	BBI relevant to this BBI in PY 2031/32 (\$k)
MERI	Meridian Energy Limited	30.58%	10,949
VECT	Vector Limited	25.24%	9,037
CTCT	Contact Energy Limited	9.78%	3,500
POCO	Powerco Limited	8.35%	2,989
UNIS	Unison Networks Limited	3.84%	1,375
NPOW	Northpower Limited	3.18%	1,137
WELE	WEL Networks Limited	2.85%	1,019
GENE	Genesis Energy Ltd	2.55%	911
UNET	Wellington Electricity Lines Limited	1.80%	645

Many more rows – see appendix..





Indicative allocations for Wairakei Ring BBI

Indicative starting BBI allocations for the Wairakei ring

Customer Code	Customer Name	Starting BBI customer allocation (%)	BBC relevant to this BBI in PY 2031/32 (\$k)
VECT	Vector Limited	28.8%	394
GENE	Genesis Energy Ltd	11.4%	156
CTCT	Contact Energy Limited	9.1%	125
POCO	Powerco Limited	6.7%	91
UNET	Wellington Electricity Lines Limited	5.9%	81
MRPL	Mercury NZ Limited	5.4%	74
MERI	Meridian Energy Limited	4.2%	57
NPOW	Northpower Limited	3.7%	51
WELE	WEL Networks Limited	3.3%	45
UNIS	Unison Networks Limited	3.0%	41
NAPA	Nga Awa Purua Joint Venture	2.3%	32
PANP	Pan Pac Forest Product Limited	1.5%	20

Many more rows – see appendix..

NZGP1 shortlist consultation - Next steps

Process step	Timing
Short-list consultation	Closes 15 Aug 2022
Submit NZGP1 MCP to Commerce Commission	30 November 2022
Commerce Commission approval	31 August 2023



NZGP1 Consultation questions

Written feedback by 5pm 15 August 2022 to nzgp@transpower.co.nz

Questions

1. Do you agree with our staged approach to this major capital investment programme?
2. Is our approach to NTS reasonable?
3. Is our reduced list of options for enhancing capacity of the HVDC reasonable?
4. Is our reduced list of options for enhancing capacity of the CNI 220 kV corridor reasonable?
5. Is our reduced list of options for enhancing capacity of the Wairakei Ring reasonable?
6. Are our scenario weighting sets reasonable?
7. Is our shortlist of HVDC and CNI options reasonable?
8. Is our shortlist of Wairakei Ring options reasonable?
9. Is our choice of preferred option reasonable?
10. Is our conclusion that upgrading existing assets rather than bypassing the existing grid reasonable?
11. Do you agree that our choice of preferred option is robust against sensitivity analysis?



Questions



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Appendix – full tables for slides 17 and 19

Indicative stating customer allocations and indicative charges



Indicative starting BBI allocations and BBC relevant to this BBI (PY31/32) for the HVDC/CNI

Customer Code	Customer Name	Starting BBI customer allocation (%)	BBC relevant to this BBI in PY 2031/32 (\$k)
MERI	Meridian Energy Limited	30.58%	10,949
VECT	Vector Limited	25.24%	9,037
CTCT	Contact Energy Limited	9.78%	3,500
POCO	Powerco Limited	8.35%	2,989
UNIS	Unison Networks Limited	3.84%	1,375
NPOW	Northpower Limited	3.18%	1,137
WELE	WEL Networks Limited	2.85%	1,019
GENE	Genesis Energy Ltd	2.55%	911
UNET	Wellington Electricity Lines Limited	1.80%	645
COUP	Counties Power Ltd	1.64%	587
PANP	Pan Pac Forest Product Limited	1.47%	526
NZST	New Zealand Steel Limited	1.45%	519
WAIP	Waipa Networks Limited	1.19%	426
CNI	Manawa Energy Limited	1.18%	421
HRZE	Horizon Energy Distribution Ltd	1.10%	394
EAST	Eastland Network Limited	0.86%	308
WTOM	The Lines Company Ltd	0.57%	203
TOPE	Top Energy Ltd	0.48%	171
HORO	Electra Limited	0.26%	93

WNST	Winstone Pulp International	0.19%	68
MSVP	Mercury SVP Ltd	0.27%	96
TRNZ	KiwiRail Holdings Limited	0.12%	45
MELW	MEL (West Wind) Limited	0.23%	81
TARW	Tararua Wind Power	0.20%	70
DUNE	Aurora Energy Limited	0.10%	34
CHBP	Centralines Limited	0.09%	33
WAV1	Waverly Wind Farm Ltd	0.16%	58
SCAN	Scanpower Limited	0.07%	23
MELT	MEL (Te Apiti) Limited	0.10%	36
KUPE	Beach Energy Resources NZ (Holdings) Ltd	0.05%	17
METH	Methanex New Zealand Ltd	0.04%	14
OMVP	OMV NZ Production Ltd	0.04%	14
SHPK	Southpark Utilities Limited	0.001%	0
MRPL	Mercury NZ Limited	-	0
NAPA	Nga Awa Purua Joint Venture	-	0
BOPD	Southern Generation Ltd	-	0
ORON	Orion New Zealand Limited	-	0
ALPE	Alpine Energy Ltd	-	0
MPOW	Mainpower New Zealand Limited	-	0
TASM	Network Tasman Limited	-	0

EASH	EA Networks	-	0
MARL	Marlborough Lines Limited	-	0
WATA	Network Waitaki Limited	-	0
OTNT	OtagoNet	-	0
WPOW	Westpower Limited	-	0
NELS	Nelson Electricity Ltd	-	0
BUEL	Buller Electricity Ltd	-	0
ESLL	PowerNet Limited	-	0
SKOG	Norske Skog Tasman Limited	-	0
TOD3	Todd Generation Taranaki Limited	-	0
KIWI	Whareroa Cogeneration Limited	-	0
TBOP	Nova Energy Limited	-	0
KRGL	Kawerau Geothermal Ltd	-	0
NZAS	NZ Aluminium Smelters Limited	-	0
POWN	Powernet Ltd	-	0
RAYN	Daiken Southland Limited	-	0
SOLE	GTL Energy New Zealand Ltd	-	0



Indicative starting BBI allocations and BBC relevant to this BBI (PY31/32) for the Wairakei ring

Customer Code	Customer Name	Starting BBI customer allocation (%)	BBC relevant to this BBI in PY 2031/32 (\$k)
VECT	Vector Limited	28.8%	394.1
GENE	Genesis Energy Ltd	11.4%	156.4
CTCT	Contact Energy Limited	9.1%	124.7
POCO	Powerco Limited	6.7%	91.3
UNET	Wellington Electricity Lines Limited	5.9%	80.5
MRPL	Mercury NZ Limited	5.4%	74.0
MERI	Meridian Energy Limited	4.2%	57.2
NPOW	Northpower Limited	3.7%	50.5
WELE	WEL Networks Limited	3.3%	44.7
UNIS	Unison Networks Limited	3.0%	41.0
NAPA	Nga Awa Purua Joint Venture	2.3%	31.5
PANP	Pan Pac Forest Product Limited	1.5%	20.0
NTRG	Ngatamariki Geothermal Ltd	1.4%	19.4
NZST	New Zealand Steel Limited	1.4%	19.1
COUP	Counties Power Ltd	1.3%	17.7
SKOG	Norske Skog Tasman Limited	1.2%	15.9
MSVP	Mercury SPV Limited	1.1%	15.6
HRZE	Horizon Energy Distribution Ltd	1.0%	14.3
HORO	Electra Limited	1.0%	13.4
TARW	Tararua Wind Power	0.8%	11.3

WNST	Winstone Pulp International	0.8%	10.5
WAV1	Waverley Wind Farm	0.7%	9.3
EAST	Eastland Network Limited	0.5%	7.2
WTOM	The Lines Company Ltd	0.5%	7.0
TOPE	Top Energy Ltd	0.5%	6.3
ORON	Orion New Zealand Limited	0.4%	5.3
NZAS	NZ Aluminium Smelters Limited	0.2%	2.3
CHBP	Centralines Limited	0.2%	2.2
TRNZ	KiwiRail Holdings Limited	0.1%	1.9
SCAN	Scanpower Limited	0.1%	1.5
ALPE	Alpine Energy Ltd	0.1%	1.2
KUPE	Beach Energy Resources NZ (Holdings) Ltd	0.1%	1.2
DUNE	Aurora Energy Limited	0.1%	1.1
KWGL	Kawerau Geothermal Limited	0.1%	1.0
MPOW	Mainpower New Zealand Limited	0.1%	1.0
TASM	Network Tasman Limited	0.1%	1.0
OMVP	OMV New Zealand Production Ltd	0.1%	1.0

METH	Methanex New Zealand Ltd	0.1%	0.9
EASH	EA Networks	0.1%	0.8
POWN	Powernet Ltd	0.1%	0.7
MARL	Marlborough Lines Limited	0.0%	0.5
TOD3	Todd Generation Taranaki Limited	0.0%	0.5
WATA	Network Waitaki Limited	0.0%	0.5
CNIR	Manawa Energy Limited	0.0%	0.4
WPOW	Westpower Limited	0.0%	0.2
MELT	MEL (Te Apiti) Limited	0.0%	0.2
SOU2	Southern Generation GP Limited	0.0%	0.1
KIWI	Whareroa Cogeneration Limited	0.0%	0.1
TBOP	Nova Energy Limited	0.0%	0.1
NELS	Nelson Electricity Ltd	0.0%	0.1
SCGL	Southdown Cogeneration Ltd	0.0%	0.1
BUEL	Buller Electricity Ltd	0.0%	0.1
MELW	MEL (West Wind) Limited	0.0%	0.0
SHPK	Southpark Utilities Limited	0.0%	0.0
RAYN	Daiken Southland Limited	0.0%	0.0
SOLE	GTL Energy New Zealand Ltd	0.0%	0.0

