



14 May 2021

Dane Gunnell  
Manager – Price-quality regulation  
Commerce Commission  
44 The Terrace  
Wellington

Dear Dane

## Application for amendment of major capex project outputs for the Bombay-Otahuhu regional major capex project

This is an application to:

- amend the major capex project outputs (MCPOs) the Commerce Commission (Commission) approved for the Bombay-Otahuhu regional major capex project (BOB-OTA Project). The application relates to reconductoring the Otahuhu-Wiri section of the Bombay-Otahuhu A line
- increase the major capital allowance for the BOB-OTA Project by \$15.8 million (increasing the major capital allowance to \$51.7 million) to reflect the addition of the new MCPOs.

In March 2021 the Commission approved the Bombay-Otahuhu regional major capex project proposal (Proposal). As part of its decision, the Commission approved certain MCPOs the BOB-OTA Project must deliver:

- procuring, installing and commissioning two 150/175 MVA 220/110kV transformers at Transpower's Bombay substation
- procuring, installing and commissioning a connection for these transformers to the 220kV Huntly-Otahuhu A line
- undertaking preparatory works, including additional investigation, consultation and design work, for reconductoring the Otahuhu-Wiri line.

Reconductoring the Otahuhu-Wiri line section was part of the preferred option set out when we sought approval of our Proposal. However, at the time the Proposal was submitted we had not completed sufficient investigation to understand the cost of reconductoring the Otahuhu-Wiri section of the Bombay-Otahuhu A line to an appropriate accuracy for inclusion in the Proposal. We therefore only included preparatory works for that part of the BOB-OTA Project. We have now completed the reconductoring cost estimates and updated our analysis. That work means we are able to make this application for an amendment to the MCPOs to include outputs relating to reconductoring the Otahuhu-Wiri section of the Bombay-Otahuhu A line.

In recognition of the concerns raised during the MCP consultation, we have provided Vector as the party most affected by this amendment, advance information on the pricing impacts for Wiri.

We expect the incremental project cost for adding the Otahuhu-Wiri reconductoring to the BOB-OTA Project to be \$15.8 million, increasing the major capex allowance from \$35.9 million to \$51.7 million.



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Enclosed with this letter are:

- an application to amend approved major capex outputs
- the supporting information required in accordance with the Transpower Capital Expenditure Input Methodology Determination (Capex IM)
- the Transpower Chief Executive's certificate required under the Capex IM.

Please let me know if you have any questions.

Yours sincerely

John Clarke  
GM Grid Development

## Application

This is an application under clause 3.3.6(1)(c) of the Capex IM to amend the major capex project outputs (MCPOs) the Commerce Commission approved for the Bombay-Otahuhu regional major capex project (BOB-OTA Project) in its “Decision and reasons on Transpower’s Bombay-Otahuhu regional major capex project”, dated 19 March 2021 (Decision). The amendment is requested pursuant to clause 3.3.6(1)(c) of the Capex IM. The amendments requested in this application are to add the following major capex project outputs to those already specified:

- removing the existing conductor, and procuring, installing and commissioning Goat ACSR conductor, on the Otahuhu-Wiri section of the Bombay-Otahuhu A 110 kV transmission line
- works on the foundations and towers required for the spans on which the Goat ACSR conductor is installed.

(Together, the MCPO Amendments.)

We also request, under 3.3.6(8) of the Capex IM, a commensurate incremental increase of \$15.8 million to the major capex allowance (MCA) to complete these additional grid outputs. This would increase the total MCA of the BOB-OTA Project to \$51.7 million<sup>1</sup>.

No other amendments pursuant to clause 3.3.6(1) of the Capex IM are sought in this application.

## Background to the BOB-OTA Project<sup>2</sup>

The BOB-OTA Project investment need is to maintain a reliable supply of electricity in the Bombay-Otahuhu region. This region is currently supplied through our 110kV network. As set out in the Bombay-Otahuhu regional major capex project proposal (Proposal), the drivers for this need are:

- the existing assets in the Bombay-Otahuhu region are operating near to capacity
- future demand growth in the region
- asset condition on the Bombay-Otahuhu A 110kV line.

Condition assessment of the conductors on the Bombay-Otahuhu A line has identified numerous conductor defects beyond Transpower replacement criteria,<sup>3</sup> and that the conductor must be replaced to ensure continued safe operation.

In developing the Proposal, we considered several options to maintain a reliable supply in the Bombay-Otahuhu region and the Proposal reflects that option which passed the Investment Test:

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<sup>1</sup> Refer Appendix 3 for further information on the calculation of the MCA.

<sup>2</sup> Further detail on the BOB-OTA Project is contained in Transpower’s [Bombay-Otahuhu Regional Major Capex Project – Major Capital Proposal, May 2020](#).

<sup>3</sup> Refer section 2.1.3.1 of the [Bombay-Otahuhu Regional Major Capex Project – Major Capital Proposal, May 2020](#).

- installing 220kV/110kV transformers at our Bombay GXP and connecting them to a nearby 220kV line
- reconductoring the Otahuhu-Wiri section of the Bombay-Otahuhu A 110kV line with a larger conductor
- dismantling the Bombay-Wiri section of the Bombay-Otahuhu line.

Although reconductoring the Otahuhu-Wiri line section was part of our preferred option in the Proposal, when the Proposal was submitted we had not completed sufficient investigations to understand the cost to an appropriate accuracy for inclusion in the Proposal. We therefore only included preparatory works for that part of the project in the Proposal. Our investigations are now complete and this application is to include the reconductoring work in the grid outputs for the Project and amend the MCA to include the additional costs.

We have updated our Investment Test analysis to reflect our new cost estimate and, as shown below, the Proposal passes the Investment Test.

### Application of the Investment Test

The costs to upgrade the Otahuhu-Wiri transmission line to Goat ACSR conductor are less than we assumed in the Investment Test analysis in our Proposal. We have updated these costs and re-run the test analysis.

The result of the Investment Test analysis is in Table 1, which is a version of Table 8 in our Proposal but with revised costs for the Otahuhu-Wiri reconductoring. The numbers which have changed are in red text.

**Table 1: Investment Test summary (Present Value \$m)**

		Option 1 Base Case	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7
Capital cost	<b>A</b>	31.2	34.6	50.6	32.2	35.3	51.4	54.5
Refurbishing cost, lines south of Bombay	<b>B</b>	22.0	0.0	0.0	22.0	0.0	0.0	0.0
Operating and maintenance costs	<b>C</b>	4.7	0.7	0.9	4.7	0.7	0.9	1.3
Dismantling cost	<b>D</b>	0.0	6.4	5.5	0.0	6.4	5.5	3.4
Dispatch cost difference	<b>E</b>	0.0	22.0	22.0	1.4	22.0	22.0	22.0
Estimated unserved energy costs	<b>F</b>	0.5	1.6	1.6	0.3	0.0	0.0	0.0
<b>Total cost</b>	<b>A+B+C+D-E+F</b>	58.4	21.3	36.6	57.8	20.5	35.8	37.3
<b>Net Benefit (relative to Base Case)</b>		0.0	37.1	21.8	0.6	37.9	22.6	21.1

Transpower indicated in the Proposal that Option 5 was preferred and therefore the proposed investment for the BOB-OTA Project. Table 1 shows that Option 5 still passes the Investment Test.

A comparison of the net benefit for each option, in our Proposal and in this amendment application, is in Table 2.

**Table 2: Net benefit comparison – Proposal and including grid output amendment (Present Value \$m)**

	Option 1 Base Case	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7
Proposal	0.0	37.1	21.8	0.7	38.0	22.7	21.2
Including grid output amendment	0.0	37.1	21.8	0.6	37.9	22.6	21.1
<b>Difference</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>

Given the minor change in the net benefits between options, we have not recalculated the sensitivities or considered unquantified benefits, as we are confident doing so would not change the net benefits.

### Cost and electricity market benefit implications

The Investment Test analysis completed as part of the Proposal<sup>4</sup> included the costs and benefits of the outputs sought in this amendment application. Therefore, the full electricity market benefits which supported the Proposal will be realised only when the additional MCPOs in this amendment application are commissioned.

### Pricing Implications

The pricing implications of commissioning the requested additional MCPOs are in Appendix 2. These are estimates only, because:

- the actual impact on prices depends on the final cost of the BOB-OTA Project compared to the approved major capex allowance
- the TPM is currently being reviewed.

The dominant change shown in the pricing implications is a change to Vector’s and to a lesser extent Counties Power’s transmission charges when the Otahuhu-Wiri section of the Bombay-Otahuhu A 110 kV transmission line and assets at the Wiri GXP become connection assets.

These pricing implications are based on the current TPM, which is under review. We do not anticipate the connection charge methodologies will change significantly in the new TPM. However, the replacement cost building blocks used to calculate connections charges may be updated before or within the first few years of the new TPM. The impact of the new replacement costs on connection charges is difficult to predict. Other

<sup>4</sup> Bombay-Otahuhu Regional Major Capex Proposal – S3.4 Investment Test.

transmission charges will change significantly in the new TPM, and we are unable to provide indicative prices for those transmission charges at this time.

## Appendix 1: Supporting information

This Appendix 1 contains supporting information for the application under clause 3.3.6(1)(c) of the Capex IM for amendment of the approved major capex project outputs (MCPOs) for the Bombay-Otahuhu regional major capex project (BOB-OTA Project).

All clause references in this Appendix 1 are to clauses of the Capex IM.

The application is made to amend the MCPOs in the approved Bombay-Otahuhu regional major capex project.<sup>5</sup>

The application proposes adding the following MCPOs:

- removing the existing conductor and procuring, installing and commissioning Goat ACSR conductor on the Otahuhu-Wiri section of the Bombay-Otahuhu A 110 kV transmission line
- works on the foundations and towers for the spans on which the Goat ACSR conductor is installed.

The application also seeks, under 3.3.6(8) of the Capex IM, a commensurate incremental increase of \$15.8 million to the major capex allowance (MCA) to complete these additional grid outputs.

### Compliance with clause 7.4.2

Clause 3.3.6(2)(a) requires that this application complies with the requirements of clause 7.4.2.

Clause 7.4.2(1) requires:

- (1) *An application under clause 3.3.6(1)(a) to 3.3.6(1)(c) must be received by the Commission by the date on which Transpower provides its annual compliance statement to the Commission for the disclosure year in which the commissioning date or completion date of the approved major capex project in question occurs.*

The BOB-OTA Project is expected to be completed and commissioned by 2024. This application is therefore made within the required timeframe.

Clause 7.4.2(2) does not apply to this application because this is not an application under clause 3.3.6(1)(d).

Clause 7.4.2(3) requires:

- (3) *An Application under-*
  - (b) *clause 3.3.6(1)(c) must contain the information specified in Schedule H Division 2;*

The information required by *Schedule H Division 2* is set out in this Appendix 1. The application itself contains a comprehensive summary. We have restricted the information to that relevant to the MCPOs we are applying to add. Other information about the BOB-OTA Project is unchanged from the Proposal.

Clause 7.4.2(4) requires:

- (4) *An application under clause 3.3.6 must contain the certificates specified in clause 9.3.1.*

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<sup>5</sup> Paragraph 69 – [Commerce Commission: Bombay-Otahuhu Regional Major Capex Proposal - Final decision and reasons paper - 19 March 2021](#)

The required certificate is included with this application.

## Schedule H Division 2 information

### H7 Information to be provided

*For the purpose of clause 7.4.2(3)(b), the amendment application must include the information listed or described in this division.*

In this Appendix 1 we provide the required information.

### H8 Project identification and specifications

*identification of relevant **approved major capex project** and its **approved major capex project outputs**;*

The relevant approved major capex project is the "Bombay Otahuhu regional major capex project" (BOB-OTA Project). The approved MCPOs are:

- procuring, installing and commissioning two 150 MVA 220/110 kV transformers at Transpower's Bombay substation
- procuring, installing and commissioning a connection for these transformers to the 220 kV Otahuhu-Huntly 1 and 2 circuits
- undertaking preparatory works, including additional investigation, consultation and design work, for reconductoring the Otahuhu-Wiri 110 kV transmission line.

### H9 Amendment sought

*(1) proposed amendments to the approved major capex project outputs;*

We are proposing to add the following MCPOs:

- removing the existing conductor and procuring, installing and commissioning Goat ACSR conductor on the Otahuhu-Wiri section of the Bombay-Otahuhu A 110 kV transmission line
- works on the foundations and towers required for the spans on which the Goat ACSR conductor is installed.

*(2) explanation as to how each proposed amendment was arrived at;*

The proposed amendment to include reconductoring the Bombay-Otahuhu A 110kV transmission line between Otahuhu and Wiri with a higher capacity conductor was modelled in the Proposal as part of the preferred option. Reconductoring will address deterioration of the conductors on the Bombay-Otahuhu A 110kV line.

The Proposal only included preparatory works for the reconductoring because at the time of submitting the Proposal we had not completed sufficient investigations to understand the cost of the reconductoring to a sufficient accuracy for inclusion in the Proposal. Our Proposal indicated we would apply for a grid output amendment to include additional outputs once investigations were complete and we could estimate the P50 cost with more accuracy.

Our investigations are complete, and we have prepared the reconductoring cost estimates. We are now in a position to apply to amend the MCPOs.



- (3) *description of the extent to which each proposed amendment reflects a change to the-*  
(a) *assets to be commissioned;*

This application is to add additional MCPOs. The amendment will not change the assets to be commissioned as specified in the already-approved MCPOs, but it will add additional assets to be commissioned, as described in this application. Those additional assets are:

- installing and commissioning Goat ACSR conductor on the Otahuhu-Wiri section of the Bombay-Otahuhu A 110 kV transmission line
- works on the foundations and towers for the spans on which the Goat ACSR conductor is installed.

- (b) *functional capability of the grid;*

This amendment will not change the functional capability of the grid as there are no new assets being connected. However, the replacement will increase the potential supply capacity to Wiri to meet forecast growth.

The need for the BOB-OTA Project is to maintain a reliable electricity supply to the Bombay-Otahuhu region including managing capacity issues and asset condition on the Otahuhu-Wiri section of the Bombay-Otahuhu A 110kV transmission line. Replacement of the conductor on the Otahuhu-Wiri transmission line with a higher capacity conductor maintains the functional capability of the grid by supporting further demand growth in the region and addresses asset condition issues.

- (c) *quantum of electricity market benefit or cost elements directly related to the supply of electricity transmission services that are likely to be achieved as a result of undertaking the project;*

Reconductoring of the Otahuhu-Wiri section of the Bombay-Otahuhu A 110kV transmission line was included in the Investment Test analysis to identify our preferred option (Option 5) in the Proposal (see page 30). The quantum of electricity market benefit or cost elements does not change (compared to the Proposal), but to fully realise the modelled benefits in the Proposal the proposed MCPO amendments must be completed<sup>6</sup>.

- (d) *in the case of a non-transmission solution, description of the extent to which each proposed amendment reflects a change to any relevant service provided by a third party;*

Not applicable

## H10 Progress of project

In respect of our answers to (a) to (e) below, we provide these answers in the context of the recently approved BOB-OTA Project.

*description of progress made on the approved major capex project, including as applicable details of-*

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<sup>6</sup> Refer Proposal, Section 3.4

(a) *planning processes undertaken;*

The BOB-OTA Project is being implemented using our standard project delivery procedures and processes and project specific management plans for all phases of the works. Project planning identified a constraint on earthworks that applies over winter periods as a potential programme issue. As risk mitigation, the earthworks to create a level substation platform for the new transformers at Bombay were brought forward as enabling works from the timing initially indicated in the Proposal and have now been completed.

(b) *resource management consents, other regulatory consents, and property rights and access rights obtained;*

The BOB-OTA Project is being designed and implemented to comply with all applicable environmental and property legislation. Transpower is the owner of the Bombay site (no property access rights are required) and building consents have been obtained for the enabling earthworks at Bombay Substation.

(c) *construction and labour contracts and arrangements made;*

Only components of the detailed design and enabling earthworks for the Bombay transformer platform construction have commenced at this time. All contracts will be executed in accordance with our standard project delivery procedures and processes.

(d) *construction completed;*

Enabling works to excavate and prepare the new transformer platform ahead of civil construction have been completed. These were advanced to avoid the restrictions placed on winter earthworks by Auckland Council. We have not commenced construction of the substation or line connection.

(e) *testing undertaken;*

Testing will be carried out under our standard asset commissioning procedures and processes for the works completed. Commissioning the upgraded lines will be carried out once the conductor is installed.

## H11 Current and forecast expenditure

(1) *in the case of a transmission investment:*

(a) *major capex incurred;*

Spend to date is comprised of:

Bombay Transformer and line connection investigation	\$2.2m
Bombay platform enabling works	\$2.0m
BOB-OTA Line reconductoring investigation	\$1.0m
Total spend to date	\$5.2 million

(b) *forecast remaining major capex;*

\$30.7 million (\$35.9 million approved major capex allowance less spend to date of \$5.2 million).

(2) *in the case of a non-transmission solution:*

(a) *total costs incurred proposed to be classified as recoverable costs;*

Not applicable

*(b) total costs incurred in relation to assets to be commissioned in relation to the non-transmission solution;*

Not applicable

*(c) forecast remaining costs proposed to be classified as recoverable costs;*

Not applicable

*(d) forecast remaining costs incurred in relation to assets to be commissioned in relation to the non-transmission solution.*

Not applicable

## H12 Reasons for making the application

*(1) reason for applying, including*

*(a) description of key factors leading to the application;*

The preferred option in the Proposal for the BOB-OTA Project included reconductoring the Otahuhu-Wiri line section. Our Proposal indicated we would apply for this MCPO amendment once our investigations were complete and we could estimate the P50 cost with more accuracy (see footnote 2, page 6 of the Proposal). We have now carried out those further investigations and have sufficient certainty about cost to make this application.

*(b) commentary on the extent to which each key factor is within Transpower's control and actions taken to mitigate it;*

This is an anticipated amendment application to address an issue known at the time we submitted the Proposal. As we have completed further investigations to give sufficient certainty about the cost of reconductoring the Otahuhu-Wiri section of the Bombay-Otahuhu A 110kV line, we are in the position to apply for amendments to the MCPOs relating to the reconductoring and associated work.

*(c) commentary on the extent to which each key factor was reasonably foreseeable by Transpower before approval of the relevant approved major capex project;*

Refer to our response to H12(1)(a) above.

*(2) description and, where relevant, quantum of any current key assumptions different to those relied upon in applying the investment test in the major capex proposal;*

Refer to our response to H9(3)(c) described above. The differences in cost and electricity market benefits resulting from the addition of the proposed outputs are minimal. The Investment Test analysis completed as part of the Proposal included the costs and benefits of the proposed outputs in the analysis. Therefore, the full electricity market benefits which supported the Proposal can be realised only when the proposed outputs in this application are commissioned. There are no current key assumptions which differ to those relied upon in applying the Investment Test in the Proposal.

*(3) description of the outcome of applying the investment test as it was applied in the major capex proposal modified by the proposed amendments and key assumptions described in subclause (2), including all relevant calculations and justifications for any exercises of judgment;*

Since the Proposal we have refined the capital costs for reconductoring the Otahuhu-Wiri section of the Bombay-Otahuhu A 110kV transmission line. The cost has reduced by nearly \$3 million compared to our assumptions at the time of submitting the Proposal. We have therefore updated the Investment Test analysis to include this new information (see table 1 on page 4 of this document). Consistent with our assessment of input assumptions remaining similar to those relied upon in applying the Investment Test in the Proposal, the outcome of applying the Investment Test again is unchanged or very similar.

*(4) explanation as to why making the proposed amendment would promote the long-term benefit of consumers taking account of-*

*(a) the outcome referred to in subclause (3);*

Refer to our response to H12(3). The proposed MCPO amendments support the solution specified in the Commission's decision for the BOB-OTA Project<sup>7</sup> because the solution continues to maximise net benefits for electricity market participants amongst the options considered. The proposal to reductor the Otahuhu-Wiri section of transmission line continues to maximise net benefits to electricity consumers<sup>8</sup>. Also refer to our response to H9(3)(c).

*(b) any costs that are sunk;*

The proposed MCPO amendments are independent from the project costs we have incurred so far.

*(c) the context in which the major capex proposal was made;*

The main driver of our Proposal was to maintain a reliable electricity supply to the region and to manage demand growth and asset condition on the Bombay-Otahuhu A transmission line. The preferred option for the BOB-OTA Project included the proposed reductoring of the Otahuhu-Wiri line section. Our Proposal indicated we would apply for this output amendment when our investigations were complete and we could estimate the P50 cost with more accuracy.

*(d) the context in which any subsequent amendments to the approval were made by the Commission;*

There have not been any subsequent amendments.

*(5) where no application for amendment to the maximum recoverable costs, is being made concurrently, an explanation as to why those costs will remain appropriate were the proposed amendment to approved major capex project outputs made;*

Not applicable as maximum recoverable costs are only applicable to non-transmission solutions and the BOB-OTA Project is not a non-transmission solution.

*(6) an explanation as to the appropriate major capex allowance if the proposed amendment to the approved major capex project outputs were made.*

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<sup>7</sup> [Commerce Commission: Bombay-Otahuhu Regional Major Capex Proposal - Final decision and reasons paper - 19 March 2021](#)

<sup>8</sup> Refer Proposal, Section 4.

If the proposed amendment is approved, then a commensurate amendment to the major capex allowance will be required to cover the costs of the proposed MCPOs. We expect the incremental project cost for adding the Otahuhu-Wiri reconductoring to the approved MCPOs to be \$15.8 million, increasing the major capex allowance to complete the BOB-OTA Project from \$35.9 million to \$51.7 million.

Further information on our calculations of the costs associated with reconductoring the Otahuhu-Wiri line is in Appendix 3.

## Appendix 2: Pricing implications of grid output amendment for Vector and Counties Power

We have determined the transmission pricing implications of the grid output amendment for both Vector and Counties Power, under the existing Transmission Pricing Methodology, as shown in the tables below. The pricing implications may change as a result of the Transmission Pricing Methodology review. However because the new Transmission Pricing Methodology is still under development, we cannot provide indicative prices for transmission charges under the proposed methodology. The connection charge methodology is not expected to materially change (although the replacement cost building blocks might change).

We have included with this application a separate *pricing implication by GXP/GIP supplement* for information.

### Project timing assumptions

	Effective Date	Pricing change takes effect in PY	Comments
BOB works commissioned	Jun-23	2023/24	The BOB substation is currently an interconnection node. The BOB works are on the 220/110 kV level, so assets created by this project would be interconnection.
OTA-WIR works commissioned	Nov-23	2023/24	The BOB-OTA line including the OTA-WIR section is currently interconnection. The OTA-WIR section would remain interconnection after the reconductoring.
BOB-WIR line decommissioned	Jun-24	2025/26	The disconnection of the BOB-WIR section would change the OTA-WIR line from interconnection to connection allocated to Vector at Wiri.
BOB-HAM decommissioned	Jun-28		
TAK-HAM decommissioned	Jun-32	2033/34	The disconnection of the BOB-HAM and TAK-HAM lines from BOB would reclassify BOB to a connection node. This means that all assets at BOB (except voltage support assets) would become connection assets.

### Indicative charges

Indicative charges have been modelled using the rates applicable for the pricing year effective April 2020, including capacity factors (Regional Coincident Peak Demand, RCPD) for that year. These estimated charges use the RCPD MW from the year to 31 August 2019, for all forward years. We have not attempted to forecast how RCPD values may change.

	OTA-WIR Works (\$ change)								
	Vector			Counties Power			Total for Vector & Counties Power		
	Interconnection	Connection		Interconnection	Connection		Interconnection	Connection	
RCPD, MW	\$ '000	\$ '000	RCPD, MW	\$ '000	\$ '000	RCPD, MW	\$ '000	\$ '000	
2022/23	1,614	0	0	100	0	0	1,714	0	0
2023/24	1,614	112	0	100	7	0	1,714	118	0
2024/25	1,614	113	0	100	7	0	1,714	120	0
2025/26	1,614	0	390	100	0	9	1,714	0	399
2026/27	1,614	0	388	100	0	9	1,714	0	397
2027/28	1,614	0	386	100	0	9	1,714	0	395
2028/29	1,614	0	384	100	0	9	1,714	0	393
2029/30	1,614	0	382	100	0	9	1,714	0	391
2030/31	1,614	0	380	100	0	8	1,714	0	389
2031/32	1,614	0	379	100	0	8	1,714	0	387
2032/33	1,614	0	377	100	0	8	1,714	0	385
2033/34	1,614	0	375	100	0	8	1,714	0	383

OTA-WIR Works (cents/kWh change)						
	Vector		Counties Power		Total for Vector & Counties Power	
	Interconnection (cents/kWh)	Connection (cents/kWh)	Interconnection (cents/kWh)	Connection (cents/kWh)	Interconnection (cents/kWh)	Connection (cents/kWh)
2022/23	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2023/24	0.0013	0.0000	0.0012	0.0000	0.0013	0.0000
2024/25	0.0013	0.0000	0.0012	0.0000	0.0013	0.0000
2025/26	0.0000	0.0045	0.0000	0.0016	0.0000	0.0043
2026/27	0.0000	0.0045	0.0000	0.0016	0.0000	0.0043
2027/28	0.0000	0.0045	0.0000	0.0015	0.0000	0.0043
2028/29	0.0000	0.0045	0.0000	0.0015	0.0000	0.0043
2029/30	0.0000	0.0044	0.0000	0.0015	0.0000	0.0043
2030/31	0.0000	0.0044	0.0000	0.0015	0.0000	0.0042
2031/32	0.0000	0.0044	0.0000	0.0014	0.0000	0.0042
2032/33	0.0000	0.0044	0.0000	0.0014	0.0000	0.0042
2033/34	0.0000	0.0044	0.0000	0.0014	0.0000	0.0042

OTA-WIR Works (% change)									
	Vector			Counties Power			Total for Vector & Counties Power		
	Interconnection (%)	Connection (%)	Total (%)	Interconnection (%)	Connection (%)	Total (%)	Interconnection (%)	Connection (%)	Total (%)
2022/23	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2023/24	0.07%	0.00%	0.07%	0.07%	0.00%	0.06%	0.07%	0.00%	0.07%
2024/25	0.07%	0.00%	0.07%	0.07%	0.00%	0.06%	0.07%	0.00%	0.07%
2025/26	0.00%	3.25%	0.23%	0.00%	0.98%	0.08%	0.00%	3.09%	0.22%
2026/27	0.00%	3.23%	0.23%	0.00%	0.97%	0.08%	0.00%	3.07%	0.22%
2027/28	0.00%	3.22%	0.23%	0.00%	0.95%	0.08%	0.00%	3.05%	0.22%
2028/29	0.00%	3.20%	0.22%	0.00%	0.94%	0.08%	0.00%	3.04%	0.22%
2029/30	0.00%	3.19%	0.22%	0.00%	0.92%	0.08%	0.00%	3.02%	0.22%
2030/31	0.00%	3.17%	0.22%	0.00%	0.91%	0.08%	0.00%	3.01%	0.21%
2031/32	0.00%	3.15%	0.22%	0.00%	0.89%	0.08%	0.00%	2.99%	0.21%
2032/33	0.00%	3.14%	0.22%	0.00%	0.88%	0.08%	0.00%	2.98%	0.21%
2033/34	0.00%	3.12%	0.22%	0.00%	0.86%	0.07%	0.00%	2.96%	0.21%

## Appendix 3: Major capex allowance

We are seeking approval to increase the Major Capex Allowance (MCA) for the Proposal from \$35.9 million to \$51.7 million as a part of this grid output amendment application.

We consider the already approved incentive rate of 15% to be appropriate for the grid output amendments sought in the application.

The MCA increase we are seeking is \$15.8 million. The table below shows our MCA calculation for this amount, being the extra P50 cost we expect to incur in delivering the grid output amendment plus inflation and financing costs. We assume the grid output amendments are fully commissioned by 30 November 2023, based on the need and our current forecast of the delivery phase of the BOB-OTA Project.

Item	\$000
Capex P50 estimated cost, real \$2021	14,697
Inflation	601
Interest during construction	497
<b>Major Capex Allowance</b>	<b>15,795</b>

As with any project, and consistent with the incentive regime, we intend to deliver the BOB-OTA Project as efficiently as possible.

Of the proposed MCA of \$51.7 million, \$10.8 million has been approved by the Commission as RCP3 base capex. To ensure Transpower does not over-recover capex associated with this major project, any RCP3 revenues coming from the already-approved base capex will wash-up and be returned through prices in RCP4.

To ensure correct treatment when calculating incentive benefits under the base capex incentive mechanism, Transpower will remove the already-approved amount from the base capex allowance consistent with the treatment prescribed in the Capex IM (through the use of the *g* term in Schedule B, Division 1).



## Appendix 4: Chief Executive Certification

### **Chief Executive Officer's Certification under Clause 9.3.1 of the Transpower Capital Expenditure Input Methodology Determination 2012 (Capex IM)**

I, Alison Moira Andrew, Chief Executive Officer of Transpower New Zealand Limited (**Transpower**) hereby certify, in relation to all information provided in accordance with Schedule H of the Capex IM (**Information**) with respect to Transpower's Application for Amendment of Outputs for the approved Bombay-Otahuhu regional major capex project (**Application**), that having made all reasonable enquiries it is my belief that:

- (a) the Information was derived from and accurately represents, in all material respects, the operations of Transpower; and
- (b) all parts of the major capex project to which the Information relates have been approved in accordance with the applicable requirements of Transpower's director and management approval policies; and
- (c) the Application complies, in all material respects, with the requirements of clause 7.4.2 of the Capex IM.

DATED:

13 May 2021



**Alison Moira Andrew**

Chief Executive Officer