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Transpower investment topic paper

Part 4 Input Methodologies Review 2023 - Draft decision

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All above documents can be found on our website.

Commerce Commission
Wellington, New Zealand

Glossary

Acronyms	Definition
The Act	Commerce Act 1986
The Authority	The Electricity Authority
ABAA	Accounting-based allocation approach
ACA	Anticipatory connection asset
ACAM	Avoidable cost allocation methodology
ACE	Accessibility, Consistency and Effectiveness
AMP	Asset Management Plan
AV	Asset valuation
Capex	Capital expenditure
Capex IM	Transpower Capital Expenditure Input Methodology
CBA	Cost-benefit analysis
CCRA	Climate Change Response Act 2002
CFP	Cut-off for Penalty
CFR	Cut-off for Reward
CPI	Consumer price index
CPP	Customised Price Path
DERMS	Distributed Energy Resources Management System
DPP	Default price-quality path
DR	Demand response
E&D	Enhancement and development
EDB	Electricity distribution business
EDGS	Electricity demand and generation scenarios
EGR	Electricity Governance Rules
EMC	Exempt Major Capex
FMS	Flexibility management services
GPB	Gas pipeline businesses
GUP	Grid Upgrade Projects
HILP	High-impact, low-probability
ICT	Information communication technology
ID	Information disclosure
IMs	Input methodologies
IM Review	Input Methodologies Review 2023
IPAG	Innovation and Participation Advisory Group
IPP	Individual Price Path
IRIS	Incremental Rolling Incentive Scheme

Acronyms	Definition
IST	Information Services and Technology
MBIE	Ministry of Business, Innovation and Employment
MCA	Major capex allowance
MCP	Major capex project
MEUG	Major Electricity Users' Group
NBT	Net benefit test
NIC	New Investment Contract
NPV	Net present value
Opex	Operating expenditure
OVABAA	Optional variation to accounting based allocation approach
RAB	Regulated asset base
RBNZ	Reserve Bank of New Zealand
RCP	Regulatory control periods
ROI	Return on Investment
SOO	Statement of opportunities
SRTP	Social rate of time preference
TCSD	Term credit spread differential
TPM	Transmission Pricing Methodology
Transpower IM	Transpower Input Methodology
Type 2 FMD	Type 2 first mover disadvantage
VoLL	Value of Lost Load
WACC	Weighted Average Cost of Capital
WUNI	Waikato Upper North Island

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Executive summary

Purpose of this paper

X1 The purpose of this paper is to explain our draft decisions and reasons on our review of the input methodologies relevant to Transpower, the Transpower Input Methodologies (**Transpower IM**) and the Transpower Capital Expenditure Input Methodology (**Capex IM**),[1, 2] and changes to areas where improvements can be made in accordance with our decision-making framework. This chapter mainly considers changes to the Capex IM with limited reference to the Transpower IM. Further changes to the Transpower IM are considered in the Report on the Review, CPPs and In-period adjustments, Cost of Capital, and Financing and incentivising efficient expenditure during the energy transition topic papers.[3]

We invite your views

X2 We invite your submissions in response to our draft decisions on the IM Review, which are presented in our draft Report on the Review, draft topic papers, and draft IM amendment determinations. We intend to publish submissions we receive and invite cross-submissions on those submissions at that point.

X3 Submissions are due by 5pm on 19 July 2023. Cross-submissions are due by 5pm on 9 August 2023.[4]

X4 We list the components of our draft decision package for the IM Review at paragraph 1.6 below and outline how submissions and cross-submissions can be made from paragraph 1.12.

Transpower investment and the Part 4 regime

X5 The Part 4 regime seeks to promote the long-term benefit of consumers of regulated services; which are electricity line services (including transmission services provided by Transpower), gas pipelines services and specified airport services at Auckland, Wellington, and Christchurch international airports.

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1 *Transpower Input Methodologies Determination 2012* [2012] NZCC 17 and *Transpower Capital Expenditure Input Methodology Determination* [2012] NZCC 2.

2 The review of the Transpower IM and Capex IM is being conducted under s 52Y of the Commerce Act 1986 (the **Act**), which requires us to review the IMs within 7 years of setting them.

3 Chapter 3 of our *Financing and incentivising efficient expenditure during the energy transition* topic paper sets out our draft decision to index Transpower's RAB to inflation from RCP4 onwards and to enable Transpower to apply for an alternative depreciation approach where doing so would better promote the Part 4 purpose.

4 The Transpower IM amendment determination and the Transpower Capex IM amendment determination will be published on 21 June, one week later than the rest of the draft decisions package. As with the other amendment determinations, a seven-week consultation period will apply for these two amendment determinations.

X6 The Commission promotes the long-term benefits of those consumers by promoting outcomes that are consistent with the outcomes produced in workably competitive markets.[5]

X7 Under Part 4, Transpower is subject to two types of regulation:

X7.1 Individual price-quality path (**IPP**) regulation: The IPP we set under this regulation determines the maximum revenues that Transpower can recover from its customers, for each five-year regulatory period, and the quality standards it must meet, for each year within the regulatory period; and

X7.2 Information disclosure (**ID**) regulation: This form of regulation enables us to set requirements on Transpower to publicly disclose certain information to allow interested persons to assess whether the Part 4 purpose is being met.

X8 These regulatory mechanisms are supported by IMs, which set out the underlying rules, requirements, and processes that must be applied to those forms of regulation. The purpose of IMs is to provide certainty to both regulated suppliers and consumers about the rules, requirements and processes applying to Part 4 regulation.[6] A stable and predictable regime provides suppliers and investors in regulated firms with the confidence to invest in long-lived infrastructure that provides essential services to all New Zealanders.

X9 There are two IMs determinations that apply to Transpower:[7]

X9.1 Transpower IM Determination 2010 [2012] NZCC 17. This determination was reviewed as part of the 2015-2016 IM Review. It sets out methodologies for: cost allocation, asset valuation, treatment of taxation, cost of capital, specification of price, Incremental Rolling Incentive Scheme (**IRIS**), and reconsideration of the price-quality path; and

X9.2 Transpower Capex IM Determination 2012 [2012] NZCC 2. The two major functions of the Capex IM are to provide for the scrutiny of Transpower's proposed and actual investment, and to incentivise Transpower to deliver those investments efficiently.[8]

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5 Commerce Act 1986, s 52A.

6 Commerce Act 1986, s 52R.

7 *Commerce Act (Transpower Input Methodologies) Determination 2010* [2012] NZCC 17 (29 June 2012); *Transpower Capital Expenditure Input Methodology Determination* [2012] NZCC 2 (31 January 2012).

8 Commerce Commission "Transpower capex input methodology review – decisions and reasons" (29 March 2018), para X9.2.

Framework for the IM Review

X10 The Transpower IM was set in 2010 and reviewed in 2016 with other amendments in 2014 and 2019. The Capex IM was set in 2012 and was reviewed in 2018. This review of the IMs is being conducted under s 52Y of the Act, which requires us to review the IMs at least every 7 years. We are publishing our draft decisions on the IM Review in June 2023 and we plan to publish our final decisions and determinations by the end of December 2023, following a period for consultation.

X11 In reaching our draft decisions on the IM Review, we have applied the framework set out in the Part 4 Input Methodologies Review 2023 – Framework paper.[9] That means we have proposed to only change the IMs where this is likely to meet one or more of our overarching objectives:

X11.1 promoting the Part 4 purpose in s 52A more effectively;

X11.2 promoting the IM purpose in s 52R more effectively (without detrimentally affecting the promotion of the s 52A purpose); or

X11.3 significantly reducing compliance costs, other regulatory costs, or complexity (without detrimentally affecting the promotion of the s 52A purpose).

X12 In our consideration of the overarching objectives, we have also had regard to the following where we consider it is relevant and consistent with promoting the s 52A purpose:[10]

X12.1 whether there are alternative ways to address the identified issues with the relevant IM that do not involve changing the IMs as part of the review;

X12.2 the permissive considerations under s 5ZN of the Climate Change Response Act 2002 (**CCRA**);

X12.3 decisions made under the Electricity Industry Act 2010, in accordance with s 54V of the Commerce Act; and

X12.4 promoting incentives and avoiding disincentives for Transpower to invest in energy efficiency and demand-side management and reduce energy losses, in accordance with s 54Q of the Commerce Act.

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[9] Commerce Commission "Part 4 Input Methodologies Review 2023 – Framework paper" (13 October 2022). Summary of the framework is set out from paragraph X16 onwards of the executive summary.

[10] Commerce Commission "Part 4 Input Methodologies Review 2023 – Framework paper" (13 October 2022), para X21.2.

Overview of the incentives that apply to Transpower under price-quality regulation

X13 Under the regulatory regime applied to Transpower, we set incentives that are intended to encourage Transpower to invest and operate efficiently. We set an allowance (representing the forecast efficient costs) that is fixed at the beginning of a regulatory period with the intention of allowing Transpower to cover its efficient costs.[11] Transpower can earn increased profits by delivering services more efficiently than assumed when the allowance was set.

X14 The fixed allowance feeds into a revenue path. Once a path is set, Transpower has incentives to outperform that path and over time the incentives lead to lower actual costs. The reduced costs are then reflected in future decisions about the operating expenditure (**opex**) and capex needs of Transpower, and consumers gain from the subsequent lower revenue allowances approved for Transpower (leading to lower prices for consumers).

X15 We use specific adjustment mechanisms to promote constant incentives over time for Transpower to make cost efficiency savings over the regulatory period. The absence of these mechanisms would result in the efficiency incentive varying over time (the natural incentive). Transpower's profitability would then depend on the timing rather than just the absolute level of expenditure, which may not lead to efficient outcomes for consumers.

X16 Although incentive regulation provides Transpower with incentives for cost efficiency once a revenue path (or allowance) is set, it also provides Transpower with incentives to overstate the opex and capex costs it needs to recover when we set the IPP or any major capex allowance. If we approve overstated costs, then Transpower can earn additional profits without improving its efficiency.

X17 In our review of the Transpower IMs and the Capex IM, we have considered the incentives acting upon Transpower and how the IMs can best give effect to proportionate scrutiny of Transpower's investment decisions in promotion of the Part 4 purpose and the s 52R purpose of IMs.

Overview of the focus of our review

X18 We reviewed the Capex IM and Transpower IM with the understanding that Transpower is facing significant change and an uncertain investment landscape. Decarbonisation, and the likelihood that many fossil-fuel based energy users may electrify, has resulted in forecasts of increased demand and a significant uplift in new renewables generation enquiries.

[11] There are some exceptions to the fixed allowance, such as listed projects and major capex projects.

X19 We reviewed the Capex IM investment mechanisms with this uncertainty in mind with the aim of allowing Transpower to make timely investments to meet these demands, balanced against the need for proportionate scrutiny of investments in promotion of the Part 4 purpose.

X20 We made changes to the Capex IM that, in particular, reflect this changed landscape, while ensuring proposed expenditure is adequately justified by Transpower and scrutinised by us.

X21 We addressed a number of workability issues identified by submitters in response to our Process and issues Paper,[12] or that have come to light since our last review in 2018.

X22 We made changes and clarifications to streamline the major capex project (**MCP**) proposal preparation and approvals process where this is appropriate in accordance with our decision-making framework. These changes and clarifications should reduce the major capex proposal preparation burden on Transpower and improve the efficiency of our review process.[13]

X23 We consider that our decisions result in a package that appropriately balances the various trade-offs, including promoting Transpower's incentives to improve cost efficiency, innovate and invest, retain investment optionality, while limiting Transpower's ability to earn excessive profits, and controlling the administrative and regulatory costs to an appropriate level.

Overview of our draft decisions

Investment test

X24 Our draft decision is to amend the Capex IM to make the following key changes to the investment test for Transpower:

X24.1 clarifying the extent of modelling Transpower is required to carry out when it applies the investment test. Our draft decision is to amend Schedule D3 to remove any ambiguity so that, where Transpower varies an MBIE EDGS scenario, it is only required to model the varied scenario and not the original unvaried scenario;

X24.2 making explicit the requirement that Transpower should use a counterfactual scenario when it carries out economic analysis to justify transmission capacity to facilitate new generation. The counterfactual

[12] Commerce Commission "Part 4 Input Methodology Review 2023 – Process and Issues Paper" (20 May 2022).

[13] Our review of major capex proposals typically takes between 6-12 months, depending on proposal complexity. While the review process has a fixed consultation requirement, the Capex IM changes and clarifications we are making should improve review efficiency.

scenario will involve modelling the economic effect of major transmission investment not occurring to meet demand, and that demand is met by some other means;

X24.3 reducing the investment test discount rate used in the investment test to 5%, which represents the average of pre-tax real Transpower WACC estimates between 2011 and 2022, ranging from 3.3% to 7.2%, with a sensitivity range of 3% to 7%, which recognises the substantial uncertainty; and

X24.4 introducing a major capex allowance (**MCA**) incentive rate deadband between P30 and P70. This is to balance the cost efficiency intent of cost incentives and the uncertainty of a P50 level of cost accuracy.

X25 These investment test changes are intended to reduce Transpower's analysis workload when it prepares MCPs, particularly the scenario analysis clarification.

X26 The change in discount rate will have the effect of placing appropriate weight on longer term benefits associated with renewables generation, and the benefit of longer term transmission loss reduction which is consistent with the s 54Q requirements.

X27 The clarification of the counterfactual scenario requirement will ensure Transpower is consistent with its economic analysis approach when justifying transmission investment to facilitate renewables generation.

X28 Our draft decision is to commence these changes from RCP4.

Listed projects

X29 Our draft decision is to amend the Capex IM to make the following key changes for Transpower by adding additional project categories into the listed project mechanism:

X29.1 transmission line reconductoring projects driven by deteriorating conductor condition, even where there is an increase in transmission line capacity; and

X29.2 major non-recurring Information Services and Technology (**IST**) projects (such as Transpower's TransGo project which was formerly considered base capex).

X30 Extending the listed project mechanism to include non-recurring IST lifecycle replacement project capex, will enable Transpower to remove these from base capex proposals and mitigate the significant cost uncertainty with these when a base capex proposal is being prepared.

X31 Additionally, we have allowed transmission line reconductoring projects, where there is an increase in capacity, to be listed projects. The proposed change means Transpower is not required to engage in the full MCP process where the reconductoring project is primarily driven by deteriorating conductor condition.

X32 Our draft decision is to commence these changes from RCP4.

Base capex threshold

X33 Our draft decision is to amend the Capex IM base capex threshold from $20 million to $30 million for Transpower. This is to adjust for the effect of inflation, which has effectively increased our level of scrutiny in the period since the $20 million threshold was set.

X34 By raising the base capex threshold to $30 million, we will maintain our proportionate scrutiny of larger investments, while reducing the process and analysis burden on Transpower when it prepares base capex proposals and major capex proposals.

X35 Our draft decision is to commence these changes from RCP4.

Major Capex Projects (staged)

X36 We have clarified the Capex IM MCP project staging mechanism for Transpower:

X36.1 to address a perceived ambiguity so that subsequent stages of staged MCPs require Transpower to only submit updated supporting analysis and information, rather than carrying out the full MCP process; and

X36.2 to clarify that the level of consultation required for a subsequent project stage of an MCP (staged) will be commensurate to the materiality of any changes with reference to earlier project stages.

X37 We consider these clarifications of the MCP project staging mechanism will improve understanding of the process steps giving rise to improved certainty for regulated suppliers and consumers, and reduced compliance burden.

X38 Our draft decision is to commence these changes from RCP4.

Anticipatory Connection Assets

X39 Our draft decision amends the Capex IM to ensure that anticipatory connection asset (**ACA**) capacity investments, following the Transmission Pricing Methodology changes on 1 April 2023, are subject to the Capex IM:

X39.1 a proposed ACA capacity investment, where the ACA capacity component of the associated connection asset exceeds the base capex threshold, will be economically tested using the investment test in an MCP;

X39.2 a proposed ACA capacity investment, that is under the base capex threshold, will be considered to be enhancement and development (**E&D**) capex in a base capex proposal; and

X39.3 ACA capacity capex that is MCP capex, or E&D capex in a base capex proposal, will be subject to the project cost incentive rate of 15%.

X40 Including ACA capacity investments in the Capex IM will ensure Transpower has a well understood and repeatable process to justify these investments.[14]

X41 Our draft decision is to commence these changes from RCP4.

Major Capex proposal and approval processes

X42 We have made draft decisions to introduce further flexibility into the MCP process, while maintaining sufficient scrutiny of the proposed investment in accordance with the major capex evaluation criteria and investment test.[15] Our draft decisions are to:

X42.1 introduce a mechanism allowing Transpower to amend the grid outputs in a major capex proposal after it has been submitted, but before the Commission has issued its draft decision on the proposal. The Commission may recommend Transpower reconsiders its proposal or Transpower may give notice of its intention to do so; and

X42.2 clarify that the Commission may approve the proposed investment with some, but not all, of the outputs proposed by Transpower in an MCP – if we consider that the proposed investment, with the inclusion of some of the outputs, does not satisfy the investment test. That is, in the event the Commission is satisfied that the removal of one or more outputs would increase the net electricity market benefit of the proposed investment.

X43 We consider that these decisions will allow Transpower and the Commission to respond with more flexibility and regulatory efficiency to changes in the electricity market, particularly in light of the reasonably foreseeable changes occurring as a result of decarbonisation and electrification. Primarily, this means that Transpower is not required to submit a new major capex proposal if it considers there is a need to change certain outputs within that proposal or if the Commission is not satisfied that the proposed investment, with the inclusion of one or more proposed outputs, will satisfy the investment test.

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[14] This mechanism will allow justification and cost recovery of transmission capacity associated with Transpower's Renewable Energy Zone (REZ) strategy, where there is a committed first mover – see https://www.transpower.co.nz/projects/renewable-energy-zones

[15] *Capex IM*, Schedule C (evaluation criteria) and Schedule D (investment test).

X44 Our draft decision is to commence these changes from RCP4.

Independent verification

X45 Our draft decision is to amend the Capex IM to ensure that base capex and opex proposals from RCP5 onwards are subject to pre-submission verification. This will provide certainty to Transpower about its engagement and terms of reference for verifiers, give Transpower more certainty when it prepares its base capex proposals, and improve process efficiency.

X46 Our draft decision is to commence these changes from RCP4, in order to apply to the RCP5 IPP proposal.

Opex related to Major Capex and Enhancement and Development Projects

X47 We have reconsidered E&D and MCP opex, and in draft, have decided to amend:

X47.1 the E&D capex reopener mechanism in the Transpower IM to allow non-transmission opex solutions as an alternative to capex; and

X47.2 the Capex IM to allow that, in an MCP application, Transpower can seek approval for uncapitalised opex that is incurred as a consequence of that MCP.

X48 Our draft decision is to commence these changes from RCP4.

Effectiveness review

X49 Having undertaken a full effectiveness review of the Capex IM and Transpower IM, we have decided to make a number of changes to implement policy decisions more effectively, clarify existing rules, remove ambiguities, and correct errors. These changes are to improve certainty, reduce regulatory complexity and compliance costs. They and are set out in Chapters 10 and 12.

X50 Our draft decision is to commence these changes in RCP4, except for changes related to the amended definition of operating costs and the valuation of assets acquired in related-party transactions or from other regulated suppliers. These exceptions are to commence immediately from the date the amendment determination comes into force.

Investing ahead of need

X51 We have also considered Transpower's view that transmission needs to be available well-ahead of the investment need. Transpower controls when it submits MCPs and needs to ensure that it does so in a timely fashion to enable adequate time for the approvals process.

X52 Our draft decision is that no change to the Capex IM is necessary. Transpower already has the option to provide information on its assumptions around investment timing, when it provides information on investment need in an MCP.

X53 The investment timing does not necessarily need to match the investment need date identified by analysis. If there are other considerations, including a risk assessment that would justify earlier investment than that determined by the analysis, then Transpower can make the case for that early investment.

Chapter 1 Introduction

Introduction to this topic

1.1 Transpower is regulated by two separate input methodologies under the Part 4 Regime. These are the Transpower IM and the Capex IM.

1.2 The Transpower IMs promote regulatory certainty for Transpower and consumers by setting out a number of the key 'inputs', to information disclosure regulation and individual price-quality regulation. These IMs set out methodologies for calculating the regulated asset base, revenue recovery, cost of capital, asset valuation, cost allocation, taxation, prices and pass through costs and price path reconsideration mechanisms.

1.3 The Capex IM has two major functions. These are to provide for the scrutiny of Transpower's proposed and actual capital investment, and to incentivise Transpower to deliver those investments efficiently.

1.4 This topic paper considers the policy settings for a number of issues relating to scrutiny of Transpower investment, incentives, and information required for regulatory functions. The paper sets out:

1.4.1 the issues stakeholders and we have identified with the Transpower IM and Capex IM;[16, 17]

1.4.2 our draft decisions in relation to those issues;

1.4.3 the reasons for our draft decisions;

1.4.4 how we have taken stakeholders' submissions into account in considering the above; and

1.4.5 how we have given effect to our draft decisions in the draft Transpower IM and Transpower Capex IM determination.

[16] The review of the Input Methodologies is being conducted under s 52Y of the Commerce Act 1986.

[17] This chapter primarily considers changes to the Capex IM with a few limited considerations of issues relevant to the Transpower IM. Further changes to the Transpower IM are considered in the Report on the Review and the Cost of Capital, and Financing and incentivising efficient expenditure during the energy transition topic papers.

1.5 Alongside this paper, we have published an accounting guidance worksheet showing how the 'nil valuation' approach will work in practice, as defined in the draft determination.[18] This worksheet illustrates the accounting for changes in ACA capacity.

Our draft decision package for the IM Review

1.6 This paper forms part of a package of draft decisions papers on the IM Review. Alongside this paper, we have published and invite stakeholders' views on:

1.6.1 our draft EDB, GDB, GTB, and Airports IM amendment determinations.[19] We will take account of submissions on these amendment determinations. These documents, with changes in response to submissions as appropriate, will be finalised and will then give legal effect to our final IM decisions;

1.6.2 our draft Summary and Context paper;

1.6.3 our other Topic papers, which explain our draft IM policy decisions relevant to the following key topics:

1.6.3.1 Financing and incentivising efficient expenditure during the energy transition;

1.6.3.2 Cost of capital;

1.6.3.3 CPPs and in-period adjustments; and

1.6.4 our draft Report on the IM Review, which summarises for every IM policy decision:

1.6.4.1 any changes we propose making;

1.6.4.2 where we have considered changes but not made them; and

1.6.4.3 where we have not found reason to consider changes.

[18] See the ACA Capacity accounting guidance spreadsheet published alongside this paper as part of our pack of decisions.

[19] The Transpower IM amendment determination and the Transpower Capex IM amendment determination will be published on 21 June, one week later than the rest of the draft decisions package. As with the other amendment determinations, a seven-week consultation period will apply for these two amendment determinations.

Structure of this paper

1.7 The substantive decisions are set out in chapters 3-12. These set out our findings for key topics in the Transpower IM and Capex IM Review.

1.8 The following Capex IM topics are discussed:

1.8.1 Capex IM investment test issues, including changes to the demand and generation scenarios, and discount rate (Chapter 3);

1.8.2 Listed project mechanism (Chapter 4);

1.8.3 Major capex project staging mechanism (Chapter 5);

1.8.4 Anticipatory connection assets (Chapter 6);

1.8.5 Base capex threshold (Chapter 7);

1.8.6 Major capex proposal and approval processes (Chapter 8);

1.8.7 IPP independent verification (Chapter 9); and

1.8.8 Summary of Miscellaneous clause issues (Chapter 12).

1.9 The following chapters discuss topics relevant to the Transpower IM:

1.9.1 Anticipatory connection assets (Chapter 6);

1.9.2 Accessibility, Consistency and Effectiveness (**ACE**) issues (Chapter 10); and

1.9.3 Other price path reopener provisions (Chapter 11).

1.10 Each of the chapters broadly follows the following structure:

1.10.1 Introduction to the key topics;

1.10.2 Description of the relevant problems identified or raised by stakeholders;

1.10.3 Our draft decision; and

1.10.4 An explanation of our proposed solution, the reasons for deciding on it, and how it will be implemented.

1.11 There is one attachment to this paper:

1.11.1 Attachment A sets out a table comparing actual major capex project costs and the approved Major Capex Allowance that informs analysis in Chapter 3.

How you can provide your views

Process and timeline for making submissions

1.12 Submissions on our draft decisions are due by 5pm on 19 July 2023. We then invite cross-submissions by 5pm on 9 August 2023.

1.13 Submissions and cross-submissions can be made to the Input Methodologies Review 2023 mailbox (IM.Review@comcom.govt.nz). Please clearly indicate in your email subject line and submission which of our draft decisions your submission relates to.

1.14 We request that submitters clearly confirm in their submission and covering email that the submission can be published on our website and does not include confidential information. If your submission does include confidential information we set out our process below.

Confidentiality

1.15 The protection of confidential information is something the Commission takes seriously. If you need to include commercially sensitive or confidential information in your submission or cross-submission, you must provide us with both a confidential and non-confidential/public version of your submission that are clearly identified. We intend to publish the non-confidential/public version of all submissions we receive on our website. This also applies to cross-submissions.

1.16 You are responsible for ensuring that commercially sensitive or confidential information is not included in a public version of a submission or cross-submission that you provide to us.

1.17 All submissions and cross-submissions we receive, including any parts of them that we do not publish, can be requested under the Official Information Act 1982. This means we would be required to release material that we do not publish unless good reason existed under the Official Information Act 1982 to withhold it. We would normally consult with the party that provided the information before we disclose it to a requester.

Chapter 2 Framework and context

Purpose and structure of this chapter

2.1 This chapter provides a summary of the key elements of the IM Review decision making framework paper, which provides the basis for our decisions on each topic and issue.

2.2 The chapter also details some background and context of the external environment, most relevant to Transpower, that we have kept in mind when considering our decisions.

Decision-making framework

2.3 In identifying which IMs to consider changing, and in reaching draft decisions on changing IMs, we are guided by three overarching objectives for the IM Review. We will only change an IM if we consider it will achieve one or more of the overarching objectives from our decision-making framework:

2.3.1 promoting the part 4 purpose in s 52A more effectively;

2.3.2 promoting the IM purpose in s 52R more effectively (without detrimentally affecting the promotion of the s 52A purpose); and

2.3.3 significantly reducing compliance costs, other regulatory costs, or complexity (without detrimentally affecting the promotion of the s 52A purpose).

2.4 Section 54Q of the Act is also relevant to the Capex IM. Section 54Q requires us to promote incentives and avoid imposing disincentives, for suppliers of electricity lines services to invest in energy efficiency and demand-side management and to reduce energy losses. Demand-side management and reduction of energy losses are of particular relevance to the Capex IM. The Capex IM provides for such matters to be taken into account in the assessment of Transpower's capital expenditure proposals. For example:[20]

2.4.1 loss reductions are included as a market benefit under our quantitative investment test for major capex.[21] This is intended to promote investment options that result in lower transmission losses over those that do not (other factors being equal); and

[20] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 1.3.11-1.3.12.

[21] The investment test is an assessment of the costs and benefits of potential investments using discounting of relevant costs and benefits in the electricity market over a defined calculation period to identify a preferred investment option (set out in Schedule D of the *Capex IM*).

2.4.2 we require close attention to be given to the process for identifying and considering transmission alternatives such as demand-side management initiatives.[22] This is intended to result in greater consideration being given to investment options that improve network utilisation: for example, load shifting or peak shaving, demand-intertrip schemes and operation of local generation.

2.5 Where we consider it relevant and consistent with promoting the s 52A purpose of Part 4, we may have regard to:

2.5.1 whether there are alternative ways to address the identified issues with the relevant IM that do not involve changing the IMs as part of the review;

2.5.2 the permissive considerations under s 5ZN of the Climate Change Response Act 2002; and

2.5.3 decisions made under the Electricity Industry Act 2010 (per s 54V of the Commerce Act).

2.6 In applying the overarching objectives, we have had regard to whether our draft decisions promote the s 52R purpose of the IMs more or less effectively than the status quo in providing certainty for regulated suppliers and consumers in relation to the rules, requirements, and processes applying to regulation under Part 4.[23]

2.7 Several of our draft decisions (eg, on our MCP output amendment mechanism and extending the listed project categories) have involved tension between making IM changes to improve the regime and better promote the s 52A Part 4 purpose on the one hand, and certainty in terms of the s 52R IM purpose, on the other.[24] In such cases, we have taken careful account of the certainty effects, while ensuring that promoting s 52A remains at the forefront of our decision-making – both in considering which IMs to change and in reaching decisions on changing IMs.[25]

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[22] Transmission alternatives are alternatives to investment in the grid. Where use of a transmission alternative avoids a transmission investment that would otherwise be major capex, the transmission alternative is classified as a 'non-transmission solution' (see the definition of 'non-transmission solution' in the Capex IM).

[23] Commerce Commission "Part 4 Input Methodologies Review 2023: Framework Paper" (13 October 2022), para X21.1.

[24] Commerce Commission "Part 4 Input Methodologies Review 2023: Framework Paper" (13 October 2022), paras 2.22 – 2.23.

[25] Commerce Commission "Part 4 Input Methodologies Review 2023: Framework Paper" (13 October 2022), para X22.

2.8 For further detailed discussion on the decision-making framework, please see the Input Methodologies 2023 Decision Making Framework Paper.[26]

Context for our decisions

2.9 We consider that the IMs relevant to Transpower are largely still fit for purpose. The Capex IM and Transpower IM are permissive enough to address most of the issues submitted by stakeholders without requiring IM changes. Where this is the case, we have clarified the interpretation of the relevant IMs and how the interpretation can address the issue.

2.10 Although the IMs are broadly still fit for purpose, we consider that there are certain aspects that can be amended to better promote the overarching IM Review objectives.

2.11 We have considered submissions received from the industry and have identified areas where, from our experience, we consider regulatory processes can be streamlined.

2.12 We recognise the industry is currently undergoing changes. The drive toward decarbonisation presents both risks and opportunities for regulated suppliers. Over the coming years we expect to see higher rates of electrification, more intermittent renewable generation, less thermal generation, and a more distributed energy system. We are aware of the challenges the industry faces in adapting to these changes and the uncertainty of forecasting them.

2.13 It is foreseeable that industry players will need to invest to meet increasing demand and supply and adapt existing infrastructure to meet these needs. One key issue the electricity industry faces is uncertainty surrounding the scale and pace of change, in particular the level, location and timing of demand increases and the feasibility of supply solutions to meet that demand.

2.14 While we recognise that new transmission investment will be needed, we must promote the long-term benefit of consumers by ensuring Transpower has the ability to propose solutions and have these considered in a timely manner.

2.15 In this review, we have considered whether the IMs promote the s 52A and s 52R purposes by ensuring investments are sufficiently scrutinised and that Transpower's incentives to invest are aligned with those of its customers (consistent with the key economic principles). In addition, we have made draft decisions to make changes where we expect that these will reduce costs and complexity.

[26] Commerce Commission "Part 4 Input Methodologies Review 2023 – Framework Paper" (13 October 2022).

Chapter 3 Major capex proposal development issues

Purpose and structure of this chapter

3.1 The purpose of this chapter is to set out our draft decisions on how we plan to address a range of major capex proposal development issues raised by Process and issues paper submitters and following our Capex IM workshop.

3.2 We have made decision to:

3.2.1 clarify the number of demand and generation scenarios Transpower must analyse when it applies the investment test;

3.2.2 make explicit the use of a counterfactual scenario when Transpower proposes economic investments;

3.2.3 adopt an investment test discount rate of 5% and sensitivities of 3% and 7%; and

3.2.4 introduce a cost estimation deadband, where an incentive rate of 0% applies, to the major capex incentives scheme.

3.3 We also discuss other Capex IM issues raised in submissions, and discussed at the workshop, where we consider Capex IM changes are unnecessary. These include:

3.3.1 the Capex IM evaluation criteria and whether investment should be required to meet a prudent and efficient test;

3.3.2 the threshold where unquantified benefits can be included in MCPs;

3.3.3 sensitivity analysis flexibility;

3.3.4 resilience expenditure requiring its own framework in the Capex IM;

3.3.5 sustainability expenditure for biodiversity reasons; and

3.3.6 how uncertainty can be factored into the investment test costs and benefits, and investment value.

The Capex IM investment test

3.4 The Capex IM investment test uses a cost-benefit analysis which discounts relevant costs and benefits in the electricity market over a defined calculation period to identify a preferred investment option in an MCP.

3.5 The costs and benefits to be included in the investment test are those accruing to participants in the electricity market. Accordingly, the investment test is called a 'net electricity market benefit test' and the costs and benefits are those "accruing to participants in the electricity market".[27]

3.6 In our 2012 Capex IM decision we reasoned that "focusing the test on participants in the electricity market is consistent with standard cost-benefit analysis and that approach captures any relevant impacts in other markets that are workably competitive."[28]

3.7 The Capex IM investment test has been used by Transpower since 2012 to justify numerous transmission upgrades to meet demand, and for generation access to the electricity market.[29]

3.8 While the investment test sets out a prescriptive framework about the demand and generation scenarios Transpower must use, the costs and benefits it must quantify, and the sensitivity analysis it must perform, it also gives Transpower a lot of flexibility to apply its judgement about the reasonableness of many factors.

3.9 In reviewing the investment test, we have considered submissions, feedback gathered at our Capex IM workshop, and used our experience in assessing Transpower major capex proposals since 2012. Where we have identified the investment test can be improved, in accordance with our decision-making framework, we have made draft decisions to change the relevant IMs. Where we consider that the present investment test mechanisms are still fit for purpose or just need more explanation, we have not proposed changes and explained why.

Issue #1 – Demand and generation scenarios

Problem definition

3.10 The Capex IM requires Transpower to model and analyse each of the five Ministry of Business, Innovation and Employment (**MBIE**) developed electricity demand and generation scenarios (**EDGS**). Transpower can reasonably vary those scenarios where appropriate. The Capex IM have been interpreted by some submitters to require Transpower to model and analyse the impact of all five EDGS and any variations it proposes, resulting in a disproportionate analytical burden

[27] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para X26.

[28] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para X27.

[29] The Capex IM investment test is based on the grid investment test in the now revoked Electricity Governance Rules.

Draft decision

3.11 Our draft decision is to amend the Capex IM to remove any ambiguity as to the extent of modelling that Transpower must carry out. Where Transpower varies one of the MBIE EDGS scenarios, we consider that it is not required to also model and analyse the equivalent unvaried scenario. In other words, the variation is a replacement for, not an addition to the EDGS scenario. It is our expectation that there will be a total of five scenarios (either EDGS or a variation) analysed.

3.12 This clarification will reduce MCP proposal preparation cost and complexity by lessening supporting analysis requirements when Transpower applies the investment test.

Stakeholder views

3.13 Transpower submitted that the prescriptive requirements to model all EDGS scenarios, and any demand and generation scenario variations it considers are appropriate, are giving rise to practical resourcing issues, particularly when modelling the dispatch effects of wind generation.[30]

Analysis

3.14 The Capex IM requires that Transpower calculate the expected net market benefits in respect of an investment option, using the weighted average of the net electricity market benefit under each relevant demand and generation scenario (which could be interpreted to include the MBIE EDGS scenarios and any demand and generation scenario variations).[31]

3.15 The Capex IM defines a demand and generation scenario as a hypothetical future situation relating to forecast electricity demand and generation for the purpose of the preparation or evaluation of major capex proposals. The scenarios are used to the test the technical robustness of transmission solutions and to help evaluate the economic benefits of existing and future generation connections.

[30] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), pp. 13-14.

[31] Note that the most recent MBIE EDGS were produced in 2019 and are likely to be updated in 2023.

3.16 EDGS are produced by MBIE and "explore potential future electricity demand, and the generation capacity needed to meet that demand, out to 2050."[32] There are presently five EDGS generation scenarios that forecast a future generation energy mix of wind, gas, geothermal, hydro, demand management and other generation. Transpower can also propose and use variations of those generation and demand scenarios.[33]

3.17 In its Process and issues paper submission, Transpower considers that the present Capex IM requires it must analyse all EDGS scenarios and any variations of those scenarios when it applies the investment test. Transpower notes this is analytically burdensome, because scenario analysis is time-consuming and resource intensive when carrying out analysis to support economic transmission investments.

3.18 Transpower also noted in the Capex IM workshop that there is a high analytical burden when attempting to capture the economic impact of intermittent wind generation and peaking generation effects. This requires more granular generation dispatch and demand modelling, which extends analysis timeframes.

3.19 In our 2012 Capex IM reasons paper, the original policy intent was that Transpower had flexibility to add, remove and alter scenarios. We stated that:[34]

> Transpower may amend the scenarios (including the SOO scenarios) by adding, removing, or altering scenarios (and associated probabilities), including further developing scenarios or adding, amending or removing projects to ensure feasibility or to incorporate new information. This should improve the appropriateness of the scenarios for the investment need that is being considered.

3.20 Schedule D3(4) defines the relevant demand and generation scenarios that must be used to calculate the net expected market benefits as all demand and generation scenario variations plus all current demand and generation scenarios that have not been varied. We have traditionally interpreted the Schedule D3(4) provisions in accordance with the original policy intent.

3.21 Where Transpower varies the MBIE EDGS scenarios, it is not required to model the variations in addition to the equivalent unvaried scenario. Transpower must model all five of the MBIE EDGS, and each of those may be reasonably varied. Where there are variations, those variations replace the equivalent unvaried scenario, to a total of five scenarios only.

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[32] MBIE "Electricity Demand and Generation Scenarios" (2023) <www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-modelling/electricity-demand-and-generation-scenarios/>

[33] *Capex IM*, Schedule D – Major Capex – Investment Test Schedule D3.

[34] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 7.4.48.

Proposed solution

3.22 Our draft decision is to clarify that Transpower is not required to analyse all the MBIE EDGS in addition to all 'reasonable variations' of demand and generation scenarios, in support of an investment proposal. Where one or more scenarios has been reasonably varied, Transpower is only required to analyse the scenarios as varied and any other unvaried scenarios (making a total of five scenarios in all to be analysed).

3.23 This clarification meets the overarching objectives of our decision-making in the IM Review by reducing compliance costs and complexity (without detrimentally affecting the s 52A purpose) and promotes regulatory certainty, consistent with the s 52R purpose. Removing any ambiguity in clause D3 will reduce Transpower's MCP proposal preparation cost and complexity by lessening the requirements for supporting analysis when Transpower applies the investment test.

Implementation

3.24 To remove any perceived ambiguity in the IMs, i.e., that Transpower must analyse the MBIE EDGS and all 'reasonable variations', our draft decision is to amend Schedule D3 to require that, where Transpower varies the MBIE EDGS scenarios, it is not required to model the equivalent unvaried scenario.

Issue #2 – Decarbonisation benefits and a counterfactual scenario

Problem definition

3.25 Transpower submitted that justifying transmission investment to meet New Zealand's decarbonisation goals is difficult with the present Capex IM. Transpower suggested that the Capex IM be amended to consider inclusion of a demand-side decarbonisation benefit or counterfactual scenario for this purpose.

Draft decision

3.26 Our draft decision is to:

3.26.1 not include a demand-side decarbonisation benefit in the Capex IM, because this effect is already factored into the analysis through the wholesale electricity price and demand forecasts;

3.26.2 clarify that Transpower is able to use a counterfactual scenario to enable it to economically justify transmission that facilitates renewables generation on the grid.[35] The counterfactual scenario:

[35] The counterfactual scenario would be a scenario where no transmission is built to meet demand and demand increases are met by notional thermal generation plant at each Grid Exit Point (**GXP**). The benefit

3.26.2.1 will be relevant when Transpower applies the economic limb of the investment test in an MCP;

3.26.2.2 must be a reasonable hypothetical future of demand and generation that avoids major capex investment; and

3.26.2.3 must be consulted on and reasonably have regard to the views of interested persons prior to Transpower carrying out its analysis in support of a proposal.

Stakeholder views

3.27 Transpower submitted that since the last Capex IM Review, "climate change issues and electrification have increased the need to invest in the grid" and that these changes were "game-changers".[36]

3.28 Transpower has been signalling that climate change drivers and a decarbonised future will be driving a significant increase in demand as the transport sector and industry move away from fossil fuels to electrification. Additionally, a decarbonised future will require a significant step change in generation to meet additional demand and this generation will be largely renewables based such as wind and geothermal.[37]

3.29 While Transpower considers the IMs are fundamentally fit for purpose, it holds the view that Capex IM needs to "be more permissive of recognising uncertainty in decision-making and the changes that will be needed as New Zealand transitions to a low emissions economy".[38]

3.30 Transpower also stated that the inability of its being able to "consider any decarbonisation benefits on the demand side where transmission investment is able to accelerate the connection of renewables relative to the counterfactual of no transmission" was undervaluing the benefit to consumers of transmission enhancement to connect renewables generation.[39]

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of the transmission to enable the renewables generation is the economic benefit of avoiding the counterfactual scenario occurring.

[36] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 1.

[37] https://www.transpower.co.nz/about-us/our-strategy/whakamana-i-te-mauri-hiko-empowering-our-energy-future

[38] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 11.

[39] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), p. 3.

Background

Demand-side decarbonisation benefits

3.31 The Capex IM requires that transmission upgrades to accommodate new generation capacity, or to relieve a generation constraint, must result in a positive net electricity market benefit. [40]

3.32 In previous MCPs, Transpower's approach has been to calculate the economic benefit of connecting new renewables generation by displacing existing thermal generation i.e., the long-run marginal cost of the new renewables generation is less than the short-run marginal cost of the displaced thermal generation in a net market benefit sense.

3.33 As more renewables generation is being connected, it is slowly displacing the existing fossil-fuel based thermal generation. There is now less thermal generation plant to displace, and less benefit available to justify transmission investment using the approach Transpower has adopted.

3.34 Transpower's view is that a demand-side decarbonisation benefit should be included where transmission facilitates electrification of fossil fuel-based process heat and transport. This is in addition to it modelling carbon costs on the supply side when it calculates wholesale electricity market price benefits of new renewables generation displacing fossil-fuel based thermal plant.

3.35 However, our draft decision is to reject a demand-side decarbonisation benefit approach because this would double count these effects. In our 2012 Reasons we explained the analytical basis for the standard practice in cost-benefit analysis of focusing on the costs and benefits arising in the market directly affected by the proposed investment. We specifically noted that the Resource Management Act process addressed environmental factors.[41] We also noted that the environmental costs of carbon emissions are internalised through modelling of relevant generation costs.[42]

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[40] *Capex IM,* Schedule D, cl. D1(1)(b).

[41] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 7.2.10.

[42] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 7.2.11.

The counterfactual scenario approach

3.36 The problem identified by Transpower appears to have arisen as a result of the approach to cost benefit analysis that Transpower has adopted for transmission capacity upgrades that are not necessary to meet the deterministic limb of the grid reliability standards (economic investments). Specifically, Transpower does not always identify an appropriate counterfactual scenario against which to measure the major capex investment proposal particularly when it seeks to upgrade transmission capacity to facilitate new renewables generation.

3.37 This means that the alternatives against which Transpower is testing its proposal are other major capex investment options. These may have very similar costs and benefits and therefore may not appear to provide sufficient positive net market benefits.

3.38 We consider it is worthwhile to make explicit in the IMs that Transpower should test its major capex proposal investments, that are economic investments, against a counterfactual scenario. This scenario would reflect the economic effect if major transmission investment did not occur to meet demand, and that demand was met by some other means. The costs and benefits of each investment option in a major capex proposal would be measured against this counterfactual scenario.

3.39 This is not a change in the investment test. Cost benefit analysis sometimes requires the use of a counterfactual scenario (sometimes called a "do nothing" or "do minimum" scenario). In this case the 'do nothing' refers to a scenario where transmission investment does not occur, and that demand increases are met by some other means. Establishing an appropriate counterfactual is not always straightforward, but it is important to ensure that the best alternative is identified.

3.40 Our draft decision is to make the identification and use of a counterfactual scenario explicit in the Capex IM. We consider this promotes the Part 4 purpose in s 52A more effectively by ensuring the net electricity market benefit of a proposed investment is appropriately measured and better promotes the s 52R IM purpose through increased certainty of the application of the investment test.

Issue #3 – Discount Rate

Problem definition

3.41 Since the Capex IM investment test discount rate was originally set in 2012, interest rates have changed considerably, as have inflation expectations, and the present discount rate of 7% is no longer fit for purpose or appropriate. Additionally, some fundamental discount rate drivers are likely to have changed since 2012 and need to be reviewed.

Draft Decision

3.42 Our draft decision is to set the Capex IM investment test discount rate from 7% to 5% with a new sensitivity range of 3% to 7%.

Stakeholder views

3.43 Transpower and Contact Energy both submitted that the Capex IM discount rate should be reviewed.

3.44 Contact states that a lower discount rate would "better achieve the purpose statement of the legislation", "enable more grid investment, thereby promoting the country's decarbonization objectives" and would be "more consistent with international best practice".[43]

3.45 Contact also makes the point that a lower discount rate will better "promote the country's decarbonisation objectives" by placing a "greater value on future benefits" of decarbonisation.[44]

3.46 Transpower's view is that the discount rate should link to "NZ Treasury's discount rate for infrastructure and consider whether a social rate of time preference (**SRTP**) discount rate should be used for social benefits".[45]

Background

3.47 The Capex IM investment test requires that, when Transpower proposes a major capex proposal, it needs to take a cost-benefit analysis approach, to test investment options and to identify its preferred solution (the **proposed investment**).

3.48 Depending on which limb of the Capex IM investment test economic test is triggered, the proposed investment will either maximise the expected net electricity market benefit or be the least cost solution.[46]

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[43] Contact Energy "Submission on IM Review Process and Issues Paper and Draft Framework Paper" (11 July 2022), p. 1.

[44] Contact Energy "Submission on IM Review Process and Issues Paper and Draft Framework Paper" (11 July 2022), p. 3.

[45] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 9.

[46] *Capex IM,* Schedule D cl. D1(1).

3.49 The Capex IM requires that when Transpower calculates the quantum of an electricity market benefit or cost element, it must be calculated using the specified discount rate or a non-standard rate that may be more appropriate in the circumstances. The present standard discount rate is a pre-tax real rate of 7%.[47, 48]

3.50 Under the current Capex IM Transpower may apply an alternative discount rate if it considers the default rate value is not appropriate and must also apply discount rate sensitivities of 4% and 10% to test the economic robustness of investment options.[49]

3.51 In the 2018 Capex IM Review we considered changing the discount rate but decided against this because it was considered at the time that:[50]

3.51.1 the discount rate is used when ranking different investment options and does not impact revenue;

3.51.2 there is some benefit from a consistent discount rate over time;

3.51.3 an alternative discount rate can be applied by Transpower; and

3.51.4 the sensitivity analysis covers a range of 4% to 10% to ensure robustness against alternative discount rates.

3.52 We have reviewed the Capex IM investment test discount rate, considered submitter material and additional reasons why it could be changed, such as better promoting the s 52A and s 52R purpose and decarbonisation goals, and aligning it with the appropriate method to estimate it.

Proposed solution and analysis

Why we should change the discount rate

3.53 When considering what discount rate best promotes s 52A under the overarching IM Review objectives, we are largely considering s 52A(a) incentives to innovate and invest and s 52A(b) incentives to provide services at a quality that reflects consumer demands.

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47 *Capex IM,* Schedule D cl. D6(2) and cl. D6(3).

48 Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), at para 7.4.25.

49 *Capex IM,* Schedule D, cl. D6(3)(b) and cl. D7(3).

50 Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), p.64.

3.54 The discount rate differentiates between alternative projects and how to weigh these where the stream of benefits (and costs) may differ in timing between alternatives.

3.55 The s 52A purpose is best promoted where the discount rate best broadly reflects the opportunity costs of capital accepting the inherent difficulty in estimating this. Using the correct discount rate will promote the long-term benefit of consumers to correctly discount the NPV of levels of benefit, allowing Transpower to select the project with the highest net market benefit, which is consistent with the s 52A purpose.

3.56 The submissions we received on the discount rate suggested that the discount rate should be reviewed (and reduced), that a lower discount rate may promote decarbonisation objectives for long-lived environmental investments and is more consistent with international best practice. It has also been suggested that the rate should be linked to the NZ Treasury's discount rate for infrastructure and a social rate of time preference should be considered.

3.57 Since the discount rate was originally set in 2012 and since the last review of the Capex IM in 2018, interest rates which underlie discount rate calculation have changed considerably. We note that stakeholders have also drawn attention to both domestic and international comparators where discount rates used for similar purposes have moved downwards over this time period.

3.58 We consider that it is reasonably likely that some fundamental drivers of an appropriate discount rate have changed over the past ten years. Consequently, we have tested how the discount rate may have changed.

Our analysis of the discount rate

3.59 For private investment, the choice of discount rate is straightforward—it is the relevant cost of capital. However, there are conceptually different approaches to setting discount rates in the context of public sector or public interest cost-benefit analyses.

3.60 Transpower state that the social rate of time preference (**SRTP**) discount rate should be considered due to the social benefits of transmission investment. However, it provided no evidence to support an SRTP discount rate as the most appropriate rate.

3.61 Treasury also rejects the use of SRTP in public sector investment in its guidance, noting that "…most exponents of this view recognise that the opportunity cost of capital… should be recognised where the alternative is for the funds to be invested in the private sector".[51]

3.62 A discount rate based on the simplified Brennan-Lally capital asset pricing model has been adopted by Treasury to estimate discount rates for public sector investment.[52] This approach considers the opportunity cost of capital as the basis for the discount rate, which is the same broad approach we take to calculate Transpower's cost of capital under the IMs.

3.63 We have reviewed the submission material and Treasury guidelines including considering whether the Capex IM investment test discount rate should align with the discount rates used to test the economics of public sector investment.

What discount rate should apply?

3.64 To calculate an opportunity cost of capital, we converted the Information Disclosure (**ID**) Weighted Average Cost of Capital (**WACC**) estimates from 2011 to 2022 for Transpower into pre-tax real estimates to be comparable by using an effective tax rate assumption of 24%.[53, 54]

3.65 We then converted the WACC estimates from nominal to real using RBNZ inflation forecasts at the time the WACC estimates were made and the mid-point of their target range for inflation, for those dates beyond the forecast.

3.66 Given the discount rate is for the long-term we averaged the pre-tax real estimates based on ID WACCs for Transpower across 2011 to 2022.

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[51] New Zealand Treasury, "Public Sector Discount Rates for Cost Benefit Analysis", (4 July 2008), Treasury Guide, <https://www.treasury.govt.nz/publications/guide/public-sector-discount-rates-cost-benefit-analysis-html>

[52] See also our reference to using the simplified Brennan-Lally CAPM for cost of capital estimation in our *2010 EDB and GPB IM Reasons Paper* at para 6.3.36.

[53] We have used the Treasury recommended effective marginal tax rate of 24%. See <https://www.treasury.govt.nz/information-and-services/state-sector-leadership/guidance/financial-reporting-policies-and-guidance/discount-rates>.

[54] Using the pre-tax real WACC is consistent with the original Capex IM decision to use a pre-tax real discount rate, see "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 7.4.25.

3.67 We have considered the impact of a longer term than the five years we use for regulatory ID and price control purposes. The discount rate is for long-term investment spanning multiple regulatory periods, so we considered the impact of lengthening the risk-free rate and debt premium terms to 10 years and removed swap costs.[55]

3.68 We have considered alternative effective tax rates for converting to pre-tax WACCs given Transpower's accounts suggest 28% rather than an economy wide measure the NZ Treasury have used of 24%.[56]

3.69 In making these adjustments, we have considered the fact that the discount rate is not only used to find the best investment option, but also provides Transpower with indicative investment timing. A lower discount rate gives appropriate weight to longer term benefits of investment, such as enabling decarbonisation.

3.70 Following our analysis, our draft decision is that a Capex IM investment test discount rate of 5% with a sensitivity range of 3% to 7% is appropriate. The rationale is:

3.70.1 5% is consistent with the information and analysis before us, and represents the average of pre-tax real Transpower five-year WACCs between 2011 and 2022;

3.70.2 5% represents a material downward revision and this is not inconsistent with changes in the Treasury (8% to 5%) and Waka Kotahi (6% to 4%) investment discount rates (accepting the time periods of those changes do differ);[57] and

3.70.3 the sensitivity range recognises the substantial uncertainty in estimating this type of rate and reflects the range of pre-tax real Transpower WACC estimates between 2011 to 2022 that range from 3.3% to 7.2%.

3.71 We also note that Transpower still can use an alternative discount rate where appropriate (and consulted on).

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[55] We have used Reserve Bank New Zealand (**RBNZ**) statistics on the spread between 5-year and 10-year bonds to adjust the risk-free rate for the relevant month and the Term Credit Spread Differential (**TCSD**) to estimate the impact on the debt premium.

[56] Analysis of Transpower Accounts for 2017 to 2022.

[57] Waka Kotahi NZ Transport Agency, "Discount Rate and Analysis Period: A technical paper prepared for the Investment Decision-Making Framework Review", November 2019.

3.72 We also considered the Transpower suggestion of linking the discount rate to the NZ Treasury infrastructure investment discount rate. This discount rate can vary and is currently 5%. However, we rejected the NZ Treasury approach because, while there is a great deal of underlying consistency between the NZ Treasury's methodology and ours, there are also differences. For example, the Treasury approach uses an asset beta of 0.65 for infrastructure which would not be consistent with the evidence before us specific to the electricity sector where we use an asset beta of 0.35 for Electricity Distribution Businesses (**EDBs**) and Transpower.[58]

3.73 By fixing the discount rate within the IMs we are promoting certainty in line with the purpose of the IMs under s 52R and is consistent with the s 54Q requirements. This choice of discount rate is explicitly set within the relevant Part 4 context. The Treasury, which is setting a discount rate for government investment, is not bound to consider the statutory purpose of the IMs. For example, it could change methodologies to address issues facing Central Government that are not necessarily relevant to the statutory purpose under Part 4 of the Commerce Act.

Issue #4 – P50 cost estimation and incentives for major capex

Problem definition

3.74 When Transpower seeks approval for major capex proposals, these projects are at an early phase of the project lifecycle, and cost estimates are subject to relatively high levels of uncertainty. Transpower notes that the time taken to refine its estimates, to be confident to a P50 level of cost estimation accuracy, adds unnecessary cost and complexity when it prepares proposals.

Draft decision

3.75 Our draft decision is to introduce a major capex allowance (**MCA**) incentive rate deadband for major capex projects. We have set a deadband between the P30 to P70 cost accuracy levels where no expenditure incentive will apply. This will reduce the risk that there are early cost estimation inaccuracies and help manage cost uncertainties more efficiently.

[58] Asset Beta is an important component in the WACC calculations as it 'weights' the cost of equity by accounting for risk of the equity.

Stakeholder views

3.76 Transpower submitted on the requirement to propose MCPs with P50 cost estimates stating that "The shift to a P50 approach (although we note the introduction of low incentive rate offsets some of the risk to Transpower) has increased the time required to prepare MCP proposals by three to six months."[59]

3.77 Transpower also suggest that "for certainty on how to treat highly uncertain cost areas, the Commission should consider introducing a process to better balance the risk between Transpower and consumers and speed the process up" and that an incentive deadband could be introduced to mitigate the cost estimation risk for some projects with a high degree of uncertainty.[60]

Background

3.78 When we approve a major capex proposal, we set an MCA. The MCA is an expenditure cap where any project cost over or under-spend will be subject to incentives to penalise or reward Transpower. The incentives are there to encourage cost control and efficiencies.

3.79 Prior to the 2018 Capex IM Review, we set the MCA at a P90 estimate of project cost. P90 refers to a level of confidence about the cost estimate such that there is a 90% chance the final project cost is below this project cost estimate and a 10% chance that it exceeds this estimate.

3.80 The first Capex IM did not specify a project cost estimation probability, but we followed the former Electricity Commission's practice, which was based on their experience with setting the allowances for Grid Upgrade Projects (**GUP allowance**) under the old Electricity Governance Rules (**EGR**).[61] We considered the P90 estimate was appropriate under the pre-2018 MCP regime given the asymmetric incentives regime. [62]

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[59] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), p. 8.

[60] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), p. 8.

[61] The Electricity Governance Regulation was revoked on 1 November 2010 and replaced by the Electricity Industry Participation Code. At that time, the Commission also took over the responsibility for approving Transpower's major capex projects. Under the Electricity Governance Regulations, major capex projects were referred to as grid upgrade projects.

[62] Where the major capex overspend adjustment penalised project cost overspend with a 100% incentive rate, underspends were subject to a 33% incentive rate. See "Transpower capex input methodology review Decisions and reasons" (29 March 2018), para 90.

3.81 The EGRs allowed Transpower to seek an increase in its GUP allowance if this was required. In the former Electricity Commission's experience, the number of applications from Transpower seeking to increase the GUP allowance was high when this was set at a value less than a P90 level of cost estimation accuracy. Eventually, the Electricity Commission revised its requirements and set GUP allowances at a P90 level of cost accuracy to avoid these amendments.

3.82 In our 2018 Capex IM Review, we revised the Major Capex Incentive Scheme (**incentive scheme**).[63,64] We decided to require that major capex allowances are set at a P50 level of cost accuracy. A P50 cost estimate is the estimate such that there is 50% chance the project will come in under this value, and a 50% chance that it comes in above it, i.e., there is an equal chance of over/underestimation.[65]

3.83 We made this change in 2018 and acknowledged that while "using a P50 estimate to set the maximum recoverable costs may expose Transpower to significant risk, we consider that the risk is mitigated because the Capex IM allows Transpower to apply for an amendment of the approved maximum recoverable costs."[66]

3.84 Transpower notes in its Process and issues Paper submission that attaining a P50 level of cost estimation accuracy, as required by the Capex IM when it submits MCPs, adds time to the MCP process because it has to refine "cost estimates to be confident in the P50 value".[67] Transpower also suggest that "symmetric use of exempt capex could help us manage cost uncertainty more efficiently".[68]

Proposed solution

3.85 We have considered the issues Transpower has raised, particularly the time taken to reach a P50 level of cost estimate accuracy when it prepares major capex proposals. In addition, we have drawn on our experience reviewing Transpower proposals since 2018.

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63 Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), paras 74-108.

64 Prior to 2018, the major capex incentive scheme was based on identifying specific efficiencies in the delivery of all major capex projects within an RCP. Transpower was entitled to rewards for any identified efficiency gains and penalised for inefficiencies. This scheme was difficult to implement so we did not attempt to use this. The revised scheme is based on the actual project costs with respect to the MCA and applies to separately to each Major Capex Project.

65 Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), para 73.2.

66 Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), para 93.

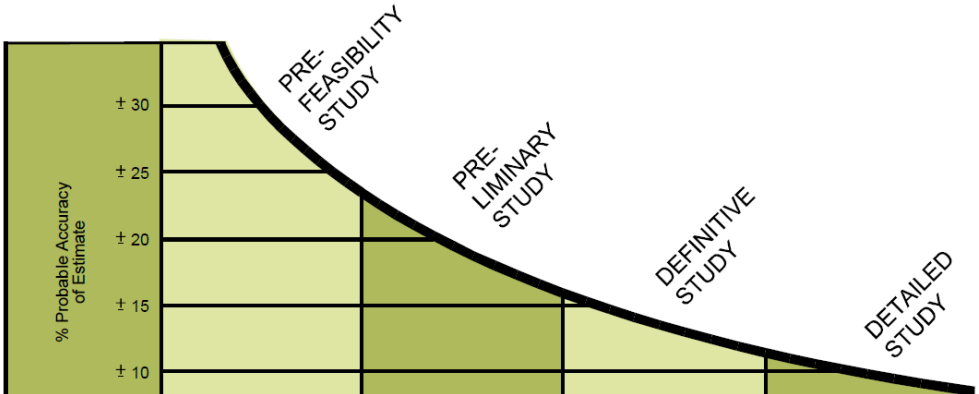
67 Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 16.

68 Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 16.

3.86 Our view is that the bespoke nature of transmission projects (eg, projects to upgrade transmission lines), may be a driving factor for cost estimation risk when estimating an MCA to a P50 level. Estimates at an early phase of such projects have a greater margin of uncertainty than estimates at later phases of a project.

3.87 Figure 3.1 below shows standardised levels of uncertainties that can be expected for estimates prepared at various phases of a project development.[69] The level of inaccuracy is due to the expected uncertainties in the documentation and scope at the project phase.

Figure 3.1: Standard transmission project estimate accuracy levels



Type of Estimate	Order of Magnitude	Preliminary	Definitive	Detailed
Provided Documentation	• Product capacity and Location • Cost Data on Similar Projects • Major Equipment List	• Preliminary Equipment List • Engineering Line Diagram • Plant Outline General Arrangement • Maps and Surveys • Bench Test Results • Nature of Facilities	• Equipment Specifications and Vendor Quotations • Construction Schedule • Electrical One Lines • Piping and Instrumentation Flow Diagrams • Soil Data and Architect Features • Site Survey and Labour Complete	• Bulk Material Specifications and Vendor Quotes • Construction Specification and Sub Contractor Quotations • Engineering Advanced Approximately 10%
Definition of Scope of Work	Conceptual	Approximate	Clearly Described Essentially Complete	Complete. Well Detailed
Estimating Procedure	Factoring	Combination of Factoring and Quantity Take-Off	Most Quantity Take-Off. Very little Factoring	Complete Quantity Take-Off
Use of Study	Comparison/ Rejection	Final Feasibility	Budget	Funding

[69] Synergies Economic Consulting "Supplementary information in support of the Independent Verification Report", February 2019, para 74.

3.88 Figure 3.1 illustrates that, at the pre-feasibility study stage, project cost estimates can vary by +/- 40%. A P50 estimate, which is a probabilistic value using the ranges of uncertainties, calculated at this phase of the project, may have an inaccuracy of +/- 40%. Similarly, a P50 calculated at the definitive study stage may have an inaccuracy of +/- 15%.

3.89 Transpower has previously sought approval for major transmission line projects with cost estimate inaccuracies of approximately +/-40%. Major capex proposals involving assets at substation sites, where site conditions are better known, typically have cost inaccuracies of approximately +/-30%.

3.90 When we previously set MCA at the P90 estimate of costs, the consumer faced the risk associated with cost estimation inaccuracy. Using P50 equalised the incentive but did not recognise the level of uncertainty faced by Transpower or the time taken to reach a P50 cost estimate.

Setting a symmetrical incentive scheme using a deadband

3.91 In its Process and issues Paper submission Transpower suggest that a way of dealing with project delivery uncertainties is to exempt these from the incentive mechanism, and that "the MCP should include the total expected cost of these uncertainties rather than the P50 estimate as required by the Capex IM."[70]

3.92 In its Capex IM workshop supplementary material Transpower propose an option for the Commission to "move away from specifying a point estimate to specifying a symmetrical range for the major capex allowance." If the project was delivered in the range, then no incentive reward or penalty would apply, only if the project exceeded the top of the range would a penalty result, and we would only receive a reward if the project was delivered below the range."[71]

3.93 We consider there is merit to Transpower's suggestion that we exempt some capex from the incentives and mitigate some of its issue with the time taken to estimate costs to a P50 level of cost accuracy. We discussed this possibility when setting the MCA and incentive scheme for the Waikato and Upper North Island Voltage Management (WUNI) major capex project.[72]

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[70] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 17.

[71] Transpower "Supplementary Information to Submission on IM Review Transpower Capital Expenditure Workshop" (11 December 2022), p. 3.

[72] https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-transmission/transpower-capital-investment-proposals/transpower-major-capital-proposal/waikato-and-upper-north-island-voltage-management.

3.94 The present Capex IM has a provision to exempt major capex from the incentives scheme and gives us the ability to set an incentive deadband if we consider that the additional cost and time to attain a P50 level of cost accuracy is outweighed by the benefit of having incentives apply around a P50 cost estimate.

3.95 The Capex IM also does not specify the value at which we set the reward/penalty threshold for an incentive scheme. It allows that an incentives deadband can be introduced by using the exempt major capex mechanism while retaining symmetrical incentives.

3.96 A deadband would set a range of costs where Transpower's major capex project expenditure would not be subject to the incentives scheme and could provide a mechanism to allow Transpower to prepare project cost estimates with an accuracy range outside of the P50 estimate. It would neither penalise nor reward Transpower for major capex project costs that are within the deadband and allow it to better manage any uncontrollable project costs or uncertainties more confidently.

3.97 For example, if we set the 'Cut-off for Penalty' (**CFP**) at a P70 cost estimate, we would set the 'Cut-off for Reward' (**CFR**) value at the P30 estimate cost. There will be neither reward nor penalty if actual cost is in between P30 and P70 (**deadband**).

3.98 The deadband means that Transpower will not gain incentive rewards nor incur penalties due to uncertainties in the cost estimate and project delivery risks included within the MCA.

Historical cost estimation inaccuracies

3.99 To demonstrate the levels of cost estimation inaccuracy Transpower may face in developing its MCP proposals we can look at cost estimation inaccuracies in approved MCPs. For example for transmission line and substation projects, we have historically seen cost inaccuracies of between +/-30 to +/-40% when Transpower provides its MCP application.

3.100 These inaccuracies can be largely explained by the uncertainties regarding the nature of the assets and the geotechnical environment, which may not come to light until the later stages such as the definitive study stage.

3.101 For example, when Transpower carries out a transmission line upgrade investigation, it needs to assess the existing tower structure loading capability and make qualitative estimates of tower structural member condition. There are also potential and sometimes unknown tower foundation issues.

3.102 Due to these uncertainties, and our understanding of previous project cost estimate accuracies by project type, we consider there is sufficient evidence that there are cost uncertainties (which may create undue cost estimation burden) at the point at which Transpower submits its proposal.

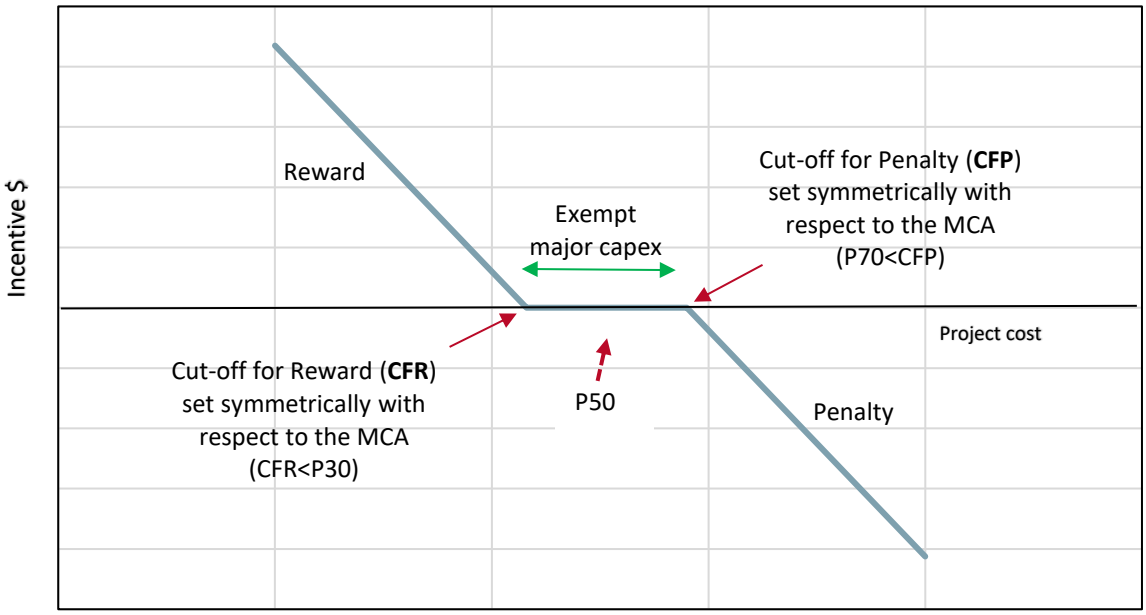
Implementation of a symmetrical incentive scheme using a deadband

3.103 We have decided in our draft decision to implement deadband into to MCP incentive scheme. We have decided to set a Cut-off for Penalty (**CFP**) at the P70 levels of cost estimation accuracy to reflect the historical cost estimation inaccuracies. Similarly, we have decided in draft to set the Cut-off for Rewards (**CFR**) at P30 cost estimates. This will retain the symmetrical incentive scheme with a deadband around the P50 cost estimate.

3.104 We understand that probabilistic cost estimate accuracies are not linear, in the sense that mapping 50% of an observed +/-40% cost accuracy related to a P50 MCA does not directly translate to implementing a deadband of P50 +/-20. However, we have made this assumption as a starting point and are interested whether different deadband upper and lower bounds are more appropriate.

3.105 Figure 3.2 below, illustrates our proposed approach to setting incentives with a deadband.

Figure 3.2: Proposed incentive setting



3.106 Under the proposed approach, the rewards stop when the actual project cost equals the value of CFR. Actual project costs between the CFR and the CFP will not result in any reward or penalty. If actual project costs exceed the CFP, Transpower will be penalised according to the incentive rate.

3.107 We also considered setting different deadbands for projects with different asset types, such as for substation and transmission line projects. However, we decided against this as the benefit of it would likely be outweighed by the cost and complexity of Transpower administering it.

Alternative approaches

3.108 In its Capex IM workshop supporting material, Transpower also proposed a two-step approach to setting the MCA. This would involve providing a provisional MCA in the MCP, which we would approve in principle, and then review again later as a refined MCA set to a P50 level of accuracy.

3.109 Our main concern with this approach is that Transpower would have to prepare, and we would be required to review, the cost estimates twice; first, when the major capex proposal for the 'in principle' decision is prepared and reviewed, and again when Transpower submits the refined MCA for our final approval.

3.110 We did not consider this option further as it did not appear to reduce cost estimation work Transpower needed to carry out and added an additional review to the Commission's approval process.

3.111 While this is a workable solution, we consider that this does not meet the objectives of the IM Review framework because it will not reduce cost and complexity and offers little benefit above our adopted approach.

3.112 We also considered an option to implement different deadbands, according to project types:

3.112.1 a deadband range between P30 to P70 for transmission line projects;

3.112.2 a deadband range between P35 and P65 for substation project; and

3.112.3 a deadband range between P25 and P75 for all other capex not falling into the above categories.

3.113 Our draft decision is to introduce a single deadband for all projects, instead of multiple deadbands for different project categories as set out above.

3.114 Although we note there are differences in the estimation accuracy for different types of projects, we consider this difference is not so material as to support a more complex application of the incentive scheme. In terms of our decision-making framework, we consider the potential benefits of this option, in terms of promoting the Part 4 purpose, are outweighed by the additional complexity of applying the deadbands on a disaggregated basis – particularly where we assess the materiality of the potential benefits to be relatively low.

Gains and losses with an incentive deadband

3.115 If we set the CFPs and CFRs as proposed, Transpower will make fewer incentive gains and incur fewer incentive losses when compared to current symmetrical approach of setting the MCA at P50, due to the incentive rate deadband. We consider this better promotes the Part 4 purpose than the status quo.

3.116 As an example, if P50 is $100 million, the CFR is $90 million, and the final project cost is $80 million, using the incentive rate of 15%, then:

3.116.1 under the current IMs, Transpower will be entitled to a reward of $3 million [(100-80) * 0.15]; and

3.116.2 under the proposed scheme, Transpower will be entitled to a reward of $1.5 million [(90-80) * 0.15].

3.117 If the P50 estimate is $100 million, the CFP is $110 million, and the final project cost is $120 million, using the incentive rate of 15%, then:

3.117.1 under the current IMs, Transpower will be subject to a penalty of $3 million [(120-100) * 0.15]; and

3.117.2 under the proposed scheme, Transpower will be subject to a penalty of $1.5 million [(120-110) * 0.15].

3.118 In the above example, if the final project cost is $91 million, then:

3.118.1 under the current IM, Transpower will be entitled to a reward of $1.35 million; and

3.118.2 under the proposed scheme, Transpower will not receive any reward.

Controlling costs in the deadband above the CFR

3.119 With the introduction of a deadband into a symmetrical incentive scheme like this, if project costs exceed the CFR, the question arises about what incentive there is for Transpower to control costs in the deadband range.

3.120 We consider that, while it is possible that Transpower may decide to stop controlling costs efficiently if it recognises its project is in the project cost deadband, this is low risk. If Transpower does not actively control costs in any project, these can easily exceed the CFP.

3.121 Uncertainties such as weather delays, outage restrictions due to the electricity market needs, resourcing issues etc., can arise during the final stages of a project, and Transpower may not be able to control these costs. The introduction of a deadband is a reflection of this and the time taken to attain a P50 level of cost accuracy.

3.122 Table A.1 in Attachment A shows the MCA and actual project costs of some completed major capex projects. This suggests that Transpower is trying to complete projects, to the extent possible, below the approved MCA.

Advantages of the proposed approach

3.123 We consider that the proposed approach will reduce the time it takes Transpower to prepare MCA proposals compared with proposals prepared to a P50 level of cost estimation accuracy and reduce proposal preparation costs. This promotes our overarching objectives of reducing compliance costs and complexity.

Uncontrollable costs should be Exempt Major Capex

3.124 Transpower also submitted that the Exempt Major Capex (**EMC**) mechanism should be amended to include "all uncontrollable costs".[73] However, the Transpower IMs or Capex IM do not define uncontrollable costs, and Transpower has not provided any information about what costs are uncontrollable.

3.125 On this basis we decided not to make a change in response to this submission. We invite Transpower to provide further information on what costs are uncontrollable and why these are uncontrollable.

3.126 We have concluded that this option does not meet the objectives of the IM Review framework as we have insufficient information.

Issue #5 – Investment test issues raised with no changes proposed

3.127 We discuss several Capex IM investment issues where we have made draft decisions that no changes are necessary.

[73] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 9.

Evaluation criteria

3.128 Transpower submitted that the Capex IM evaluation criteria needs to be more principles based, like the Fibre IMs investment test. It reasoned that the Fibre IMs investment test has "much clearer and more tightly focussed evaluation criteria" and that a prudent and efficient test would be better suited to challenges that the electricity industry faces as it transitions to a low emissions economy.[74]

3.129 We explained in the Capex IM workshop that the prudent and efficient test was implemented in the Fibre IMs because, at the time, the type of capital expenditure for fibre and the nature of costs and benefits, and how to quantify these, was unclear.[75]

3.130 Over time, as investments and the means to define costs and benefits, and a measure of loss of service costs are linked to reliability, the Fibre IM investment test is likely to become more prescriptive.

3.131 We consider that even if a prudent and efficient test was implemented in the Capex IM, we would require Transpower to justify investments using the costs and benefits defined in the Capex IM Schedule D4. We know these costs and benefits can be quantified and they have successfully supported previous MCP applications.

3.132 In reaching our draft decision, and following our Capex IM workshop, we are not satisfied that restricting the evaluation of investment proposals to the prudent and efficient test in the Fibre IMs is more appropriate than the present Capex IM evaluation criteria.

3.133 Our draft decision is that we will not implement the Fibre IM evaluation criteria in the Capex IM. This approach does not meet the objectives of the IM Review framework because it will not reduce cost and complexity and offers little benefit above the current Capex IM.

Unquantified benefits

3.134 Transpower submitted that the Capex IM investment test unquantified benefits should not be capped at "10% or less of the aggregate project costs" and that the "arbitrary cap curtails the extent to which non- quantified benefits can be taken into account."[76]

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[74] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 10.

[75] Commerce Commission, "IM Review 2023 – Capex IM Workshop: Stakeholder Discussion slides" (11 November 2022). Recording of workshop is available at https://www.youtube.com/watch?v=Ql3byTCSbdk.

[76] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 12.

3.135 Transpower also noted that given the unquantified benefit threshold was based on the project cost differences of investment options, that it should be 30% as this was the extent of cost estimate accuracy when it submits a proposal.[77]

3.136 The Capex IM allows Transpower to propose a different unquantified benefit threshold in an MCP application if this is supported.

3.137 When we originally set the 10% threshold, we set it based on project cost differences and not on the difference of the NPV summed net market cost or benefit of the investment options because this was the cost faced by consumers.[78]

3.138 We considered Transpower's views but concluded that an unquantified benefit threshold of 10% was reasonable. Unquantified benefits are available to Transpower to enable it to qualitatively distinguish between investment options with a similar NPV result. Unquantified benefits are not able to be used to qualitatively justify an investment option that may have insufficient quantified benefit.

3.139 Our draft decision is that increasing the unquantified benefit threshold to 30% is not supported and does not meet the objectives of the IM Review framework in promoting the Part 4 purpose in s 52A more effectively.

Sensitivity analysis

3.140 Transpower submitted that the sensitivity analysis requirements in the Capex IM are unduly prescriptive when compared with those in the Fibre IMs but that it supports the retention of its ability to "justify the choice of sensitivity analysis and the analysis is sufficiently robust to rely on to demonstrate an investment option should be approved".[79]

3.141 The Fibre IMs investment test is at an early stage of its development, and it will mature as the type of investments become clearer. This means the sensitivities that need to be applied in the Fibre IMs are likely to develop in time.

[77] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), p. 10.

[78] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), paras 7.2.14 – 7.2.16 and paras 7.3.25 – 7.3.26.

[79] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), pp. 13-14

3.142 The Capex IM specifies sensitivities that Transpower must consider but also gives it the option to propose additional sensitivities, and to tailor its sensitivity analysis "save where it is neither reasonably practicable nor reasonably necessary". We consider the current threshold is appropriate and allows Transpower sufficient flexibility to apply a tailored sensitivity, provided it has a robust justification for doing so.

3.143 Our draft decision is not to change the sensitivity analysis requirements given that the flexibility Transpower seeks already exists in the Capex IM, and any change would not promote the Part 4 purpose in s 52A more effectively.

Resilience

3.144 Transpower submitted that the Capex IMs should be flexible enough to consider funding for proactive resilience projects, and that base capex asset replacement and refurbishment expenditure should extend towards resilience.[80,81]

3.145 We agree that Transpower should take a pro-active resilience investment approach and that this approach should be underpinned by sound economic analysis to identify the high-impact, low-probability (**HILP**) exposures on the grid. We have accepted Transpower's previous proposals for this type of investment and accepted the analysis approach taken.[82]

3.146 We disagree that the Capex IM needs to change to facilitate resilience expenditure. Resilience investments are to mitigate for multiple asset outages that affect the ability to meet demand. They are investments that need to provide a positive net market benefit because they are investments that are not necessary to meet the deterministic limb of the grid reliability standards.[83]

3.147 The Capex IM also gives Transpower the ability to propose an alternative Value of Lost Load (**VoLL**) for use in resilience analysis if it can demonstrate that an alternative VoLL is more appropriate in situations where resilience events involve long duration outages.[84]

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[80] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 30.

[81] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 5.

[82] Upper South Island Grid Upgrade Stage 1 Aug 2012 available at <https://comcom.govt.nz/__data/assets/pdf_file/0029/59438/USI-Reliability-Proposal-Capex-Proposal-June-2012.pdf> and Transpower Regulatory Control Period Expenditure Proposal page 68 available at <https://comcom.govt.nz/__data/assets/pdf_file/0034/78469/Transpower-Expenditure-proposal-for-Regulatory-Control-Period-2-dated-December-2013.pdf>

[83] *Capex IM*, Schedule D, cl. D1(1)(b).

[84] *Capex IM*, cl. 1.1.5.

3.148 Our draft decision is that we make no change to the Capex IM for resilience expenditure because it is unnecessary to make a change. Resilience expenditure has been proposed by Transpower in previous base capex and major capex proposals and we have accepted these and the analysis approach that has supported them. The regulatory framework does not prevent resilience expenditure being proposed and Transpower can follow the approach it has taken in the past.

3.149 We consider that changing the Capex IM to specifically include resilience expenditure would not reduce compliance costs or complexity or promote the part 4 purpose more effectively.

Sustainability expenditure

3.150 Transpower submitted on how it might justify sustainability investment, such as investment to improve environmental outcomes, when it may not pass the investment test, but where it was supported by customers and/or consumers.[85]

3.151 Our draft decision is that Transpower should not recover expenditure for the purpose of improving biodiversity, as such expenditure relates to an amenity benefit that sits outside the electricity net market benefit test. We explained our reasoning for how amenity benefits should be considered in our 2018 Capex IM Review Final Decision reasons paper.[86]

3.152 We consider that changing the Capex IM to include sustainability expenditure for the purpose of improving biodiversity does not promote the part 4 purpose more effectively.

Investment value, cost, and benefit uncertainty

3.153 Transpower submitted that the prescriptive requirements of the Capex IM means that it results in a 'one size fits all' approach and does not consider investment specific matters such as the value of the investment or the extent of uncertainty around costs and benefits.[87]

3.154 However, the Capex IM contains several tools to deal with uncertainty, for example:

[85] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), p. 12.

[86] Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), paras 202 - 207.

[87] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 11.

3.154.1 sensitivity analysis tools to test robustness of investment options (Capex IM Schedule D cl. D7);

3.154.2 the ability to define and use real option value (Capex IM Schedule D cl D4(1)(h)); and

3.154.3 the major capex project staging mechanism when there are future cost uncertainties to break a project into stages and ensure transmission solutions can progress (Capex IM cl 3.3.5).

3.155 Transpower also considers that the investment test could better account for the value of the investment by considering the option value of future participants and consumers, and/or take a least regrets option. Further, more costly investments may be more beneficial from a least-regrets perspective i.e., produce overall lower regrets when considering the range of possible future scenarios. [88]

3.156 This links to Transpower's issues surrounding the economic justification of transmission investment to enable renewables to meet decarbonisation goals, and the considerable uncertainty surrounding renewables generation location, timing and transmission capacity required to accommodate it.

3.157 We have addressed this issue by deciding that Transpower should take a counterfactual scenario approach, which models the economic impact of no transmission being built to facilitate renewables generation and that demand must be met by some other means in paragraphs 3.36 to **Error! Reference source not found.**

3.158 Our draft decision is to make no additional provisions in the Capex IM to address investment value, cost, and benefit uncertainty, as these additions would not reduce compliance costs, other regulatory costs, or complexity (without detrimentally affecting the promotion of the s 52A purpose).

[88] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), p. 10.

Chapter 4 Listed Project Mechanism

Purpose and structure of this chapter

4.1 This chapter details our decision on the proposed amendments to the listed projects mechanism in the Transpower Capex IM.

4.2 The decisions fit into two main categories:

4.2.1 extending the listed project mechanism to include:

4.2.1.1 transmission line conductor replacement projects, where the primary driver is the deteriorating conductor condition; and

4.2.1.2 major information system and technology (**IST**) replacement projects; and

4.3 Further, this chapter addresses refinements to the listed project mechanism to remove ambiguity.

Issue #1 – Extending the listed project mechanism to include transmission line conductor replacement projects

Problem definition

4.4 The present Capex IM requires that potential listed project proposals to replace transmission line conductors due to conductor condition, with higher capacity conductors, will trigger the major capex proposal process. Using the MCP process for this purpose adds unnecessary cost and complexity.

Draft decision

4.5 Our draft decision is to extend the listed project mechanism to include transmission line reconductoring projects, driven by deteriorating conductor condition, where there is likely to be a capacity increase.

4.6 We have made this change because there is usually a limited range of feasible solutions available to Transpower when it seeks to reconductor existing transmission lines, and that the listed project mechanism will provide an appropriate level of scrutiny for these projects.

4.7 We consider this change meets the overarching objectives in the IM Review by reducing regulatory costs and complexity (without detrimentally affecting the promotion of the s 52A purpose) by simplifying the process for Transpower to propose, and for us to approve, transmission line conductor replacement projects.

Stakeholder views

4.8 There were no submissions on this topic.

Background

4.9 Under the present Capex IM, transmission line reconductoring projects are categorised as either base capex or major capex, depending on whether line capacity upgrades are proposed:

4.9.1 a base capex transmission line reconductoring project is for conductor replacement where the capacity of the transmission line will not increase or is estimated to cost less than $20 million.[89, 90] Such a project can be carried out using the listed project mechanism or included in a base capex proposal; and

4.9.2 a major capex transmission line reconductoring project is for conductor replacement where the capacity of the transmission line will increase, and the estimated project cost is more than the base capex threshold. Major capex projects must be carried out using the Capex IM's major capex process.

4.10 The major capex process and the listed project mechanism have separate requirements when considering the range of solutions, and consulting with interested parties:

4.10.1 the process for developing a major capex project is complex. It requires Transpower to consider a wide range of potential solutions and consult with interested parties twice, including in relation to its proposal, before we evaluate the proposal and consult on its draft decision. The major capex process also requires Transpower to invite proposals for non-transmission solutions. Typically, this process takes over two years; and

4.10.2 the much simpler listed project process requires Transpower to consult once and does not require it to consider solutions outside those associated with reconductoring transmission lines, such as transmission alternatives. It is also a much simpler and less time-consuming evaluation process as the evaluation is based on the Capex IM Schedule A requirements for base capex, and not the full MCP review process.

[89] In practice there can be some increase due to modern equivalent conductors.

[90] Note that we have made a draft decision to amend this amount to the defined **base capex threshold**: see decision at paras 4.54-4.56 below.

4.11 We have identified that, in the current reconductoring project process, when Transpower develops a solution for a condition-based transmission line reconductoring project, the project may transition from base capex to major capex, or vice versa, depending on whether the solution results in a capacity increase.

4.12 This potential to transition from base capex to major capex deters Transpower from following the simplified listed project process when it starts to develop proposals for such projects.

4.13 Instead, Transpower tends to follow the more complex major capex proposal process to avoid having to restart the project development phase, if studies show that in replacing the conductor, that the capacity is not like for like. Any capacity increase triggers the major capex proposal process.

4.14 Currently, most transmission line reconductoring projects (including projects that increase the service potential of an existing transmission line) are driven by the need to replace ageing conductors.

4.15 In the future, we expect that most transmission line reconductoring projects will involve an increase in transmission line capacity, driven by increased demand due to decarbonisation and electrification.

4.16 When replacing transmission line conductors, the foundations and towers are usually retained and, if necessary, strengthened, and do not have the same range of potential solutions as projects where the driver involves an increase in transmission line capacity.

4.17 A proposal to investigate an increase in transmission line capacity driven by demand increases necessitates a full MCP process to test a range of options, and whether transmission alternatives are feasible and available.

Proposed solution

4.18 Our view is the preparation and evaluation burden associated with an MCP is unnecessary for transmission line conductor replacement projects, driven by the deteriorating conductor condition, where there is likely to be a capacity increase .

4.19 We have decided that the listed project mechanism will provide appropriate scrutiny of these projects because the range of economically viable potential solutions is usually limited. This change will save considerable proposal preparation time and cost for Transpower.

Reasons for solution

4.20 Our assessment shows that if the Capex IM allowed Transpower to develop and propose all transmission line reconductoring projects as listed projects, this will significantly reduce the time required for it to develop proposals for such projects, and for us to evaluate them.

4.21 We estimate that the amendment will reduce Transpower's proposal development time to around 12 months from more than 24 months. Together with our assessment period of four months, a proposal for a listed project could be developed by Transpower and approved in approximately 16 months. By comparison, the current process takes about 30 months.

4.22 Transpower is forecasting three listed projects in RCP4 with an estimated aggregate cost of $137 million.[91] Transpower has also indicated there could be reconductoring projects with an estimated aggregate cost of $350 million in RCP5 and $458 million in RCP6. [92]

4.23 In the absence of the proposed changes, most of the forecast reconductoring projects in RCP5 and RCP6 would need to be assessed as major capex proposals.

4.24 By amending the listed project mechanism, we are providing certainty that Transpower can use the listed project mechanism for all conductor replacement projects driven by deteriorating conductor condition. We consider that this change will reduce regulatory burden while ensuring appropriate scrutiny of proposals.

Issue #2 – Extending the listed project mechanism to include IST renewals projects

Problem definition

4.25 The Capex IM does not categorise IST lifecycle replacement projects and other non-grid major capex, as listed projects. Some IST lifecycle replacement projects would benefit from being considered as listed projects, and not in base capex proposals, to better manage project cost and timing uncertainties.

Draft decision

4.26 Our draft decision is to amend the listed project mechanism in the Capex IM to allow Transpower to include IST lifecycle replacement projects, with estimated costs that exceed the base capex threshold, as listed projects.

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[91] Transpower "Integrated Transmission Plan 2022 – Schedules" (2022), table 4.

[92] Ibid.

4.27 We consider that this change will meet the overarching objectives of the IM Review as it will reduce regulatory cost and complexity (without detrimentally affecting the promotion of the s 52A purpose) by mitigating the risk of cost and timing uncertainties associated with major IST projects at the base capex proposal preparation and submission stage.

Stakeholder views

4.28 There were no submissions on this topic.

Background

4.29 Under clause 2.2.2(7)(b) of the Capex IM, listed projects are limited to base capex projects that are asset replacement or asset replacement or asset refurbishment. This excludes other categories of base capex including IST lifecycle replacement projects.[93]

4.30 Transpower's IST lifecycle replacement projects do not normally have the uncertainties in timing or cost that apply to listed projects. However, for RCP4, Transpower has identified at least one IST lifecycle replacement project (**TransGo**) that would be better funded via the listed project mechanism because of cost and timing uncertainties. [94]

4.31 During our discussions with Transpower on RCP4 planning, Transpower advised that the TransGo project is a lifecycle replacement project, so it could recur every ten years.

4.32 When we introduced the listed project mechanism in 2014, Transpower sought a mechanism to apply for additional capex (of any kind) within a regulatory period, beyond the immediately identified need for large reconductoring projects. However, at that point, Transpower had not demonstrated specific projects or programmes for which a listed project mechanism might be needed beyond RCP2.[95]

4.33 Our view at the time was that the listed project mechanism was a temporary solution only for RCP2. On that basis, we considered that extending the availability of a listed project mechanism beyond base capex projects for asset replacement and asset refurbishment purposes was unwarranted.

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[93] Non grid capex is capex unrelated to the grid assets, such as office furniture.

[94] The Capex IM defines information system and technology assets as assets used in operating or supporting the operation of the grid, including-

(a) Transpower's telecommunications network;

(b) SCADA; and

(c) devices which provide data to SCADA and grid systems.

[95] Commerce Commission "Amendments to input methodologies for Transpower to provide a listed project mechanism" (27 November 2014), para 72.

4.34 Our main reasoning for this view at the time was that we were concerned that extending into a broad and general mechanism potentially ran counter to incentives around Transpower's forecasting, modelling, and managing of its base capex and opex requirements.[96]

4.35 In 2014, Transpower did not demonstrate specific non-grid asset refurbishment or replacement projects for which a listed project mechanism might be appropriate (or needed).[97] However, in its RCP4 proposal preparatory work Transpower has identified one project that could benefit from the listed project mechanism. This is the IST lifecycle replacement project – TransGo.[98]

4.36 Transpower has informed us that the main issue with the TransGo project is obtaining a reasonable estimate of costs by the time it submits its RCP4 proposal in December 2023.[99] Transpower's estimated project cost for TransGo is between $88 million and $155 million with a P50 estimate of $113 million.[100]

4.37 Since funding for the base capex allowance is based on the P50 estimate of costs, an expenditure above $113 million will incur a penalty under the base capex incentive scheme irrespective of the cause. Similarly, an expenditure below $113 million will incur incentive rewards to Transpower potentially without any real efficiency gains.

Proposed solution and reasons for solution

4.38 Our view is that there is considerable cost and timing uncertainty for major IST projects and that continuing to include these in base capex proposals is not consistent with the s 52A purpose.

4.39 By allowing Transpower to propose major IST projects using the listed project mechanism, Transpower can mitigate these uncertainties, while ensuring that major IST project proposals are appropriately scrutinised by us.

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96 Commerce Commission "Amendments to input methodologies for Transpower to provide a listed project mechanism" (27 November 2014), paras 73-74.

97 Commerce Commission "Amendments to input methodologies for Transpower to provide a listed project mechanism" (27 November 2014), para 72.

98 Transpower "RCP4 Consultation" (September 2022), para 3.9.1.1.1.

99 Transpower "RCP4 Consultation" (September 2022), para 3.9.1.1.1.

100 Transpower "RCP4 Consultation" (September 2022), section 7.1; Transpower "Planning for RCP4 – Material Portfolios – RCP4 Customer Webinar" (4 August 2022), p. 26.

4.40 We consider this change will reduce regulatory cost and complexity without detrimentally affecting the promotion of the s 52A purpose. Retaining major IST projects within base capex proposals means there is a risk that cost estimates and investment timings are inaccurate; risk that will be better managed with the listed project mechanism.

Issue #3 – Capex IM listed project mechanism clarifications

Problem definition

4.41 The clarity and effectiveness of the current drafting of some listed project mechanism clauses in the Capex IM could be improved. These clauses can be refined to provide more clarity and resolve ambiguity.

Draft decision

4.42 Our draft decision is to:

4.42.1 clarify the listed project mechanism to better give effect to our intended policy and allow listed projects to be delivered over two or more regulatory control periods (**RCPs**); and

4.42.2 specify that listed projects will be assessed using the base capex identified project evaluation criteria set out in Schedules A2 of the Capex IM – Evaluation of Identified Programmes.

4.43 We consider these decisions will meet the overarching objectives of the IM Review in better promoting the IM purpose in s 52R by providing greater regulatory certainty as to our policy intent for delivery timeframe for listed projects and our evaluation criteria for listed projects.

Stakeholder views

4.44 There were no submissions on this topic.

Background and reasons for solutions

Asset is commissioned within a single RCP

4.45 The current wording in clause 2.2.2(7)(a)(iii) of the Capex IM is that 'at least one asset is likely to have a commissioning date in the RCP'. The wording may give rise to unintended consequences when a project involves transmission line reconductoring. This is because Transpower considers the whole transmission line as one asset.

4.46 Transpower interprets the clause as excluding reconductoring projects involving transmission lines that cannot be completed within one RCP from the listed project mechanism.

4.47 Transmission line conductor replacement projects are usually executed in sections over several summers due to the length of outages required to deliver these projects. Reconductoring of longer transmission lines require multiple summer outages and cannot always be completed within an RCP.

4.48 When we designed the listed project mechanism in 2014, our policy intent was that listed projects could extend over two RCPs. [101]

4.49 Our draft decision is to clarify the listed project mechanism to better give effect to our intended policy and allow that listed projects can be delivered over two or more regulatory control periods (RCPs).

Clarification of the assessment criteria

4.50 The Capex IM does not specify the criteria we use to assess listed project proposals. To date, when we have assessed listed projects, we have been using the base capex identified project evaluation criteria set out in Schedule A2 of the Capex IM: evaluation for identified programmes.

4.51 We consider that these assessment criteria are appropriate as they allow us to carry out a top-down policy and planning guideline assessment, in conjunction with a bottom-up cost effectiveness and efficiency assessment, of listed projects.

4.52 We have decided to specify that listed projects will be assessed using the base capex identified project evaluation criteria set out in Schedule A2 of the Capex IM – Evaluation of Identified Programmes.

4.53 This will help promote the IM purpose in s 52R as it provides greater regulatory certainty as to how a listed project proposal will be assessed.

Clause 2.2.2(7)(a)(i) reference to the base capex threshold

4.54 Clause 2.2.2 of Capex IM sets out the key decisions we are required to make when we set a base capex proposal and includes a reference to a monetary value of $20 million for the base capex threshold related to listed projects.[102]

4.55 Our draft decision is to change the "$20 million" threshold in clause 2.2.2 to refer to "the base capex threshold" to ensure that the listed project mechanism is triggered for projects over the prevailing base capex threshold.

4.56 This amendment ensures the policy intent is reflected in the drafting. The draft change to the base capex threshold is discussed in Chapter 7.

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[101] Commerce Commission "Amendments to input methodologies for Transpower to provide a listed project mechanism" (27 November 2014), paras 78, 84 and 86.

[102] *Capex IM Determination 2012* as at 29 January 2020 Clause 2.2.2(7(a)(i)

Chapter 5 Major Capex Project Staging

Purpose and structure of this chapter

5.1 This chapter considers two issues regarding the Staged MCP mechanism:

5.1.1 Clarification of the MCP project staging mechanism; and

5.1.2 Viability of an 'approval in principle' mechanism for staged MCPs.

Background to MCP Project Staging mechanism

5.2 The project staging mechanism allows Transpower to apply for MCPs in stages where there are uncertainties relating to the cost and benefits of later stages of an MCP and investment timing. Where a project is staged, Transpower may apply for further stages of a project when the costs and benefits, and investment timing, have the necessary level of certainty.

Issue #1 – Clarification of Project Staging Mechanism

Problem definition

5.3 Transpower considers that the present investment test MCP project staging mechanism needs to be clarified and that:

5.3.1 an application for subsequent stages of a major capex project (staged) should be commensurate with the estimated expenditure and complexity of the staging projects; and

5.3.2 approval should have regard to the information provided in previous stages and the materiality of changes made since the approval of previous stages.

Draft decision

5.4 Our draft decision is to:

5.4.1 amend the clause 3.3.3(1) clarifying statement to further clarify that when Transpower submits an MCP application for a subsequent stage of a staged MCP, it is not required undertake a full MCP analysis, and that it can rely on material from previous stages of a staged MCP.

Stakeholder views

5.5 Transpower stated in its Process and issues paper submission that the MCP project staging mechanism needs to be reviewed to "increase the speed of regulatory funding approvals" and that "the Commission's approach to accepting and assessing staged projects would benefit from clarification". [103]

5.6 Transpower's concern is the extent of the information it needs to provide and what process it needs to engage in, when applying for subsequent stages of an MCP (staged).

5.7 It noted that the Capex IM could clarify that an MCP (staged) application should have regard to information provided in previous stages of an MCP (staged) and it should be commensurate with the expenditure applied for, and the complexity and materiality of any changes.[104]

5.8 Transpower noted also that clauses 3.3.1(1) and 7.4.1(3) could both benefit from clarification, as well as the consultation requirements in Schedule I, clause I6 (3).

Analysis – amendment to clause 3.3.3(1)

5.9 Transpower need only provide updated information where an MCP relates to a subsequent stage of an MCP (staged).[105] The current wording of clause 3.3.3(1) of the Capex IM is intended to provide clarity that Transpower is not required to carry out a full MCP process when applying for a subsequent stage.

5.10 There is a perception that the wording "new **major capex proposal**" in the 'for avoidance of doubt' provision of clause 3.3.3(1) implies an obligation on it to undertake the same level of analysis as would be required for a 'new' MCP. The original intent was that Transpower did not have to submit a separate major capex proposal for each subsequent stage of an MCP (staged) which we discussed in our 2018 Capex IM Review reasons paper.[106]

Analysis – interpretation of existing clauses

5.11 Apart from the 'for avoidance of doubt' provision in clause 3.3.3(1) which needs to be clarified, we consider that the current drafting in the Capex IM supports the interpretation that:

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[103] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 17.

[104] Transpower "Supplementary Information to Submission on IM Review Transpower Capital Expenditure Workshop" (11 December 2022), p. 4.

[105] *Capex IM*, Schedule G, cl G1.

[106] Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), p. 78.

5.11.1 Transpower may rely on information previously submitted from an earlier stage of an MCP (staged); and

5.11.2 information in support of a subsequent stage of an MCP (staged) should be commensurate to the change from the previous stage.

5.12 We have reviewed the relevant clauses in the Capex IM, related to information, subsequent stages of an MCP (staged), and consider the Capex IM MCP project staging mechanism has many of the features that Transpower is seeking.

5.13 Schedule G, clause G1 sets out the requirements for information that is required in a MCP. Clause G1(b), which is focussed on the information in an MCP (staged) states that:

> where the **major capex proposal** relates to the continuation of an existing **major capex project (staged)**, the information may be provided as updates to the information previously supplied for the **major capex project (staged)** and previously approved **staging projects**.

5.14 The intent of clause G1(b) is that subsequent stages of a staged MCP can utilise an update of previously provided information. Clause G1(b) gives Transpower discretion about what it considers to be update information as opposed to new information.

5.15 We would expect that, in a subsequent stage of an MCP (staged), that Transpower will demonstrate what is update information and what is new information when it submits a proposal for a subsequent stage of a staged MCP.

5.16 Transpower also noted that update information in a subsequent stage of a staged MCP needs to be commensurate with the expenditure applied for. Clause 7.4.1 sets out the key principles and requirements of an MCP. It also provides Transpower with the means to apply judgement about the number of investment options it needs to test and the extent of the information and supporting analysis it must provide.

5.17 Clause 7.4.1(2) gives Transpower the ability to manage the extent of the investment options it must consider in a proposal, requiring that the number of options needs to be appropriate. In the second and subsequent stages of an MCP (staged) there may be limited appropriate investment options available, and this is left to Transpower's judgement.

5.18 Clause 7.4.1(3) allows Transpower the ability to manage the specificity of information, and rigour and comprehensiveness of the supporting analysis for each investment option considered, and that it is "commensurate with the estimated expenditure and complexity of that option."

5.19 Finally, regarding the consultation requirements of a subsequent stage of an MCP (staged), there are Capex IM mechanisms in place that allow Transpower to apply its judgement about the extent of the consultation it needs to carry out.

5.20 Schedule I sets out the specific components required in an MCP consultation, which includes the core consultation requirements in clause I1, and the long-list and short-list requirements in clauses I2 and I3 respectively, while Part 8 sets out the consultation process requirements.

5.21 Clause 8.1.3 contains a number of consultation discretion provisions for Transpower to judge the extent of the consultation it needs to carry out for an MCP (staged). Clause 8.1.3(2)(a)(i) allows that the consultation programme and approach must have regard to "the complexity, nature and quantum of expenditure associated with the major capex project" while clause 8.1.3(2)(a)(v) allows that relevant prior consultation can be considered.

5.22 We consider these existing Capex IM mechanisms address Transpower's submission concerns, and that this clarification is sufficient to address the clarity issue and no further IM changes are required, consistent with the IM Review framework.[107]

Proposed solution

5.23 We have decided in draft to amend the 'for avoidance of doubt' provision in clause 3.3.3(1) to clarify the original intent of that clause. This will help support the interpretation that Transpower is not required to undertake a full MCP analysis and consultation when it submits a subsequent stage of an MCP (staged).

5.24 We clarify the original policy intent that Transpower is only required to provide an update to the information submitted for a previous stage of an MCP (staged) to the extent it would be commensurate to do so, as shown in our analysis of existing clauses.

5.25 In applying the IM Review decision-making framework objectives, we consider this change will meet the IM purpose in s 52R of the Act by promoting the certainty as to the major capex proposal requirements for subsequent MCP stages and does not detrimentally affect the s 52A purpose.

[107] Commerce Commission "Part 4 Input Methodologies Review 2023: Framework Paper" (13 October 2022), para 3.16.2.

Issue #2 – 'Approval in principle' for staged MCP

Problem definition

5.26 A regulatory 'approval in principle' mechanism allowing stages in a staged MCP, or a full MCP to be assessed with a final allowance determined later, could be useful in providing the mandate to obtain property rights and designations ahead of need to reduce project lead times for new transmission lines.

Draft decision

5.27 Our draft decision is to not incorporate a regulatory 'approval in principle' for staged MCPs. We do not have sufficient evidence to assess the appropriateness of an 'approval in principle' mechanism, particularly the information Transpower needs to progress to a property rights and designation process.

Stakeholder views

5.28 Following the Capex IM workshop, Transpower provided information about how the MCP project staging mechanism aligned with the new transmission line build process. Transpower noted that before it can progress the consenting and designation process, it needs a clear mandate for the need for a new line that comes from it being part of a Major Capital Project approval process. [108]

5.29 Transpower raised the possibility of regulatory 'approval in principle' for staged MCPs where stages of an MCP can be assessed but the major capex allowances can be approved at a later time.

5.30 Its view was that this would enable it to obtain property rights and designations ahead of need, presumably to reduce the lead time for any new build transmission lines.[109]

Analysis

5.31 While Transpower stated that an 'approval in-principle' mechanism may be useful, it has not elaborated on what information it needs to progress to a property rights and designation process. We do not have sufficient information to judge if an in-principle approvals mechanism is appropriate and why the MCP project staging mechanism could not be used for this purpose.

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[108] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), pp. 8- 9.

[109] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), pp. 8-9.

5.32 We have also considered Transpower's view that transmission needs to be available well-ahead of need. Transpower controls when it submits MCPs and needs to ensure that it does so in a timely fashion to enable adequate time for the approvals process.

5.33 We note that Transpower already has the option when it provides information on investment need in an MCP, to provide information on its assumptions around investment timing.

5.34 The investment timing does not necessarily need to match the investment need date identified by the analysis. If there are other considerations, including a risk assessment that would justify an earlier investment than the analysis concludes, then Transpower can make the case for that early investment.

Chapter 6 Anticipatory Connection Assets

Purpose of this chapter

6.1 The purpose of this chapter is to set out our draft decision on how we plan to treat anticipatory connection asset (**ACA**) capacity investments made by Transpower. ACA capacity is the capacity of a connection asset that excludes any New Investment Contract (**NIC**) connection asset capacity.

6.2 The recently enacted Transmission Pricing Methodology (the **TPM**) took effect on 1 April 2023 and introduces the ability of Transpower to cost allocate costs for an ACA to alleviate Type 2 FMD issues. [110]

Draft decision

6.3 Our draft decision is to change the Capex IM to require that ACA capacity investments are tested and can be included in base capex proposals. We have also addressed how ACA capacity investments will be consulted on and how we intend to treat these when they enter the RAB and when they subsequently exit the RAB once subject to an NIC.

6.4 Our draft decision is that:

6.4.1 when ACA capacity is being proposed as an MCP, Transpower:

6.4.1.1 is only required to perform a short-list consultation; and

6.4.1.2 must disclose in that short-list consultation and MCP proposal submission material, the division of costs allocated to the New Investment Contract (**NIC**) component, and the ACA capacity component, of the connection asset, based on the calculation method set out in clause 26(4) of Schedule 12.4 of the Code.

6.4.2 when ACA capacity is being proposed in a base capex proposal as E&D capex, Transpower must identify those ACA capacity investments.

6.4.3 when Transpower consults on ACA capacity investments that are MCPs or as E&D capex in a base capex proposal, it will have the flexibility to manage commercially sensitive information in relation to the party related to the NIC but must provide sufficient information so consumers and affected parties can meaningfully submit on the ACA capacity investment;

[110] Electricity Authority "Electricity Industry Participation Code Amendment (Transmission Pricing Methodology) 2022, Amendment 2022" (21 November 2022), Sch 12.4.

6.4.4 the base capex and major capex incentive rate mechanisms will apply to the ACA capacity component of the total build cost of the connection asset; and

6.4.5 when ACA capacity investment assets are recognised in the RAB a 'nil valuation' approach will apply to the proportion of the connection asset that is subject to an NIC, based on its total capacity. The same approach will apply to capacity included in a subsequent NIC. The reduction in anticipatory capacity recognised in the RAB will be reflected as a disposed asset. For information disclosure purposes the reduction in the RAB value will be offset by an equivalent value of disposed asset proceeds.

6.5 Finally, when we next consult on changes to Transpower's Information Disclosure requirements, we will likely raise for consultation, amongst other things, that Transpower discloses:

6.5.1 the ACA capacity investments it has made as E&D base capex; and

6.5.2 how it has assessed the division of costs between the NIC component of the connection asset and the ACA capacity investment.

Information disclosure

6.6 As a consequence of our decisions in relation to ACA capacity we consider there will be a need to reconsider aspects of the Transpower Information Disclosure (**ID**) determination, as set out above. This is because some of the Capex IM calculations will rely on information disclosed under ID requirements and elements of the ID requirements will draw on the Capex IM.

6.7 We anticipate consulting on amending Transpower's Information Disclosure determination when the next Information Disclosure project commences following our final decisions on the IM Review.

Problem definition

6.8 The new Transmission Pricing Methodology (**the TPM**) took effect on 1 April 2023 and introduces the possibility of Transpower building and recovering costs for an anticipatory connection asset (**ACA**) to alleviate the Type 2 First Mover Disadvantage (**Type 2 FMD**).

6.9 While Transpower can cost-recover ACA capacity investment costs from 1 April 2023 from regional beneficiaries and consumers, there are presently no mechanisms in the current IMs for ACA capacity investments to be justified economically, consulted on, and financially treated with respect to the regulated asset base (RAB).

Background

6.10 Presently, when a party wants to connect to the grid (**first mover**) and requires a new connection asset, Transpower and the connecting party enter into a new investment contract (**NIC**). An NIC is a private contract between Transpower and the connecting party for the provision of new electricity transmission services, with the costs recovered by Transpower from the connecting party.

6.11 The new TPM recognises that additional connection asset capacity (called anticipatory connection asset capacity) may be cost allocated and priced in addition to the initial connection asset capacity initiated by the first mover under an NIC.

6.12 Transpower will be able to cost allocate the ACA capacity costs from existing transmission customers, by allocating:

6.12.1 50% of the capital cost of the ACA capacity to identified regional beneficiaries under a benefit-based approach (using the simple method regional allocation tables); and

6.12.2 allocating the remaining 50% of the capital cost of the ACA capacity to all transmission customers under a "pool-and-share" approach, through an addition to the asset component of the connection charge.[111]

6.13 The new TPM took effect on 1 April 2023 and to alleviate what is termed the Type 2 FMD issue. The Electricity Authority (**the Authority**) describes the Type 2 FMD issue as:[112]

> The Type 2 FMD occurs when a connection asset is built with more capacity than the first mover requires (i.e., anticipatory capacity for anticipated future connections) and the first mover bears the cost of the anticipatory capacity until the second and subsequent movers connect, as well as the risk that no future customers connect. This may deter the first mover from connecting in the first place or deter the building of the anticipatory capacity even if that were efficient.

6.14 The driver for anticipatory connection asset capacity is that it may be more economic to build a larger connection asset, in anticipation of additional capacity being taken up later, than it is to build multiple connection assets. The TPM allows that more economical solution and cost recovery of the costs.

6.15 In accordance with s 54V(4) of the Commerce Act, we have considered the effect of changes made to the Code on the IMs applying to Transpower.

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[111] Electricity Authority "Transmission Pricing Methodology 2022 Decision Paper" (12 April 2022), para 4.22.

[112] Electricity Authority "Transmission Pricing Methodology 2022 Decision Paper" (12 April 2022), para 4.22.

6.16 In this chapter we discuss our analysis of how ACA capacity should be considered under the Capex IM to ensure ACA capacity investment is economic, promotes the long-term interest of consumers, and consistent with the s 52A purpose.

6.17 While Transpower is able to cost allocate ACA capacity investment costs, there are presently no current IM mechanisms to ensure that:

6.17.1 ACA capacity investments are scrutinised and justified economically (**ACA capacity regulatory scrutiny**);

6.17.2 ACA capacity investments are consulted on, disclosed, and how confidentiality is managed (**ACA capacity consultation, disclosure, and confidentiality**);

6.17.3 incentives will apply to ACA capacity investments (**ACA capacity investment incentives**); and

6.17.4 when ACA capacity investments are subject to a subsequent NIC, how they are accounted for and removed from the RAB (**ACA capacity RAB transition**).

Stakeholder views

6.18 In its Process and issues paper submission Transpower stated it was considering a range of uncertainty mechanisms for Regulatory Control Period 4 (RCP4), one of which was to account for "providing for connection asset[s] with anticipatory capacity to manage the issue known as First Mover Disadvantage Type 2 and as provided for in the TPM".[113]

How capex related to a transmission capacity increase is treated in the Capex IM

6.19 The Capex IM splits capex into two categories – base capex and major capex.

6.20 Base capex is predominantly capex related to the replacement and refurbishment of assets in the grid. Base capex also contains a category of expenditure called enhancement and development (**E&D**) capex, which is for projects related to enhancing grid capability and increasing grid capacity, and where the cost of each E&D project is less than the base capex threshold.[114]

[113] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), p. 33.

[114] Note that in this draft decision the base capex threshold will be raised to $30 million.

6.21 Transpower is required to submit a base capex proposal every regulatory period for our assessment and approval in an Individual Price-Quality Path (**IPP**). Each IPP proposal, and our evaluation of that proposal, is widely consulted on by Transpower, and when we make a draft decision. The next IPP proposal is planned to be lodged in November 2023.

6.22 Under the current Capex IM, major capex is for grid projects that cost more than the base capex threshold. MCPs are for expenditure to increase or enhance grid capacity while listed projects are for replacement and refurbishment of existing assets. Transpower can lodge MCPs with us at any time and listed project proposals within the first three disclosure years of an RCP.

6.23 We set the base capex E&D allowance when we set the IPP every regulatory period and have introduced a base capex E&D reopener mechanism to allow Transpower to seek an additional base capex E&D allowance once during that period. This is to acknowledge the uncertainty that exists in forecasting base capex E&D projects in advance as many can be driven by third-party decision making that is outside of Transpower's control.

6.24 That means that there are two opportunities for the public to provide feedback on Transpower's proposed base capex E&D portfolio if Transpower lodges a reopener application which we discuss next.

Issue #1 - ACA capacity regulatory scrutiny

Problem definition

6.25 It is unknown how many potential ACA capacity investments there may be, although it could be significant given Transpower's signalling of the quantum of new generation enquiries it is processing.[115] In any event, any consideration of ACA capacity capex scrutiny would logically fall under the Capex IM.

6.26 We consider that for Transpower to deliver efficient solutions for Type 2 FMD investments, those paying for it under the TPM should be able to scrutinise investments, evaluate the merits of anticipatory capacity, and provide information that will inform Transpower's consideration of the investment options.

[115] Transpower's generation connection enquiries dashboard available at https://experience.arcgis.com/experience/97d4604079b545448280423f9269b9ea/page/Dashboard/

Proposed solution

6.27 In line with the high-level principles set out in our 12 April 2022 letter to the Electricity Authority acknowledging the TPM change,[116] if we consider that the assessment of ACA capacity capex should be treated the same as other capex Transpower proposes, then the following principles should apply:

6.27.1 the investment in ACA capacity should be prudent and efficient and consistent with the Part 4 purpose (s 52A);

6.27.2 the consultation and analysis should be proportionate to the investment quantum e.g., we should require explicit consultation of ACA capacity investments that exceed the major capex proposal threshold;

6.27.3 the methodology used to calculate the benefits should reflect the electricity demand and generation scenarios (EDGS) produced by Ministry of Business, Innovation and Employment (MBIE), or a variation of those scenarios;

6.27.4 the approvals process should not be an undue impediment to the investment process and should be consistent with our principle of proportionate scrutiny;

6.27.5 we should permit the possibility of staged approvals - the ACA capacity investments should also be able to be staged investments if Transpower considers that a staged approach in the near term can be economically justified rather than a full build. This will allow Transpower the flexibility to retain options to reduce transmission asset build lead-times to upgrade ACA capacity fully to accommodate the new connecting party or parties;

6.27.6 the benefits calculated to justify ACA capacity investments should not be double counted, and used to justify other ACA capacity investments at other locations in the grid; and

6.27.7 additions to the Capex IM to demonstrate that ACA capacity capex investments are economic, should allow Transpower the ability to apply commensurate analysis. Transpower's analysis needs to explain the assumptions it has made and why it has taken a certain modelling and analysis approach. This is no different from the Capex IM at present where Transpower has discretion for a range of analysis requirements e.g., sensitivity analysis, demand, and generation scenarios, VoLL etc

[116] Electricity Authority "Letter from Commerce Commission to Electricity Authority - A new Transmission Pricing Methodology" (15 June 2022).

Draft decision

6.28 Our draft decision is that ACA capacity investments are scrutinised and economically tested to the same extent as any other grid capacity capex that Transpower proposes, under the Capex IM, using:

6.28.1 the investment test for ACA which is an MCP; or

6.28.2 as E&D base capex where ACA is included in a base capex proposal, as appropriate.

6.29 We consider that requiring ACA capacity capex to be subject to the Capex IM will promote the Part 4 purpose in s 52A by ensuring ACA capacity investments are made with the long-term benefit of consumers in mind.

Implementation

6.30 To implement this change, we have introduced ACA into the Capex IM and Transpower IMs so that there are asset valuation provisions, and these assets can be treated in accordance with the MCP & E&D mechanisms.

6.31 Introducing these IM changes will ensure that;

6.31.1 ACA capacity capex is aligned with the new TPM, which sets out how anticipatory connection assets will be cost recovered from consumers; and

6.31.2 Transpower would be required to consult on and propose ACA capacity capex, which excludes the NIC component of the connection asset cost, which the Commission would evaluate and approve in the same manner as any other capex:

6.31.2.1 using the Capex IM investment test economic limb (Schedule D1(1)(b)) and evaluation criteria for MCPs (for proposed investments greater than the base capex threshold; and

6.31.2.2 as base capex E&D, where the ACA capacity capex meets the evaluation criteria for base capex proposals in the Capex IM Schedule A (e.g., whether the policies and planning standards upon which the proposed base capex allowances rely are directed towards achieving cost-effective and efficient solutions).

Issue #2 - ACA capacity consultation, disclosure, and confidentiality

Problem definition

6.32 By requiring ACA investments to be considered under the Capex IM we need to ensure that consultation requirements are adequately addressed, and that consultation is commensurate.

6.33 These consultation requirements will be different if an ACA investment is base capex or an MCP. Additionally, Transpower may need the flexibility to apply discretion during consultation to address concerns about commercially sensitive information.

6.34 Finally, we discuss the extent of the information that Transpower needs to disclose about the ACA capacity investments it has made and what is available across the grid to enable investors to take up that capacity.

Proposed solution – MCP ACA capacity investment consultation

6.35 Under the MCP path, we consider that Transpower should consult each time it proposes an ACA capacity investment that exceeds the base capex threshold. Note that the base capex threshold will only apply to the ACA component of the connection asset and not the NIC component.

6.36 We considered the benefit that a full MCP consultation process might provide when Transpower proposes an ACA capacity investment. MCP consultation is largely a process to consult on the investment need and identify transmission alternative solutions as Transpower is preparing its short-list options to apply the investment test.

6.37 Presently, for MCP proposals, Transpower must perform both a long-list and short-list consultation. It is highly likely that, for ACA capacity investments, there is only a small number of economically feasible transmission options, as they will largely be about varying levels of transmission capacity to connect generation.

6.38 It is unlikely there will be transmission alternatives that the long-list consultation process attempts to capture. On this basis, we consider that a short-list consultation process will be sufficient for ACA capacity investments that are MCPs.

Reason for change – MCP ACA capacity investment consultation

6.39 If we require that ACA capacity is subject to the MCP investment test, we need to ensure that Transpower adequately consults on the proposed investment. This will ensure that affected parties that might access the ACA capacity can provide Transpower with feedback about proposed ACA capacity investments.

6.40 Additionally, consumers that are paying for the ACA capacity, capacity which is installed ahead of need, should be given the opportunity to provide input into Transpower's analysis. This analysis needs to demonstrate that the ACA capacity available, in addition to the NIC connection asset capacity, is more economic to build than building multiple connection assets.

6.41 We have proposed that only the short-list consultation be required. The long-list consultation process is unlikely to provide useful additional information and will add unnecessary time and complexity to the preparation process for ACA capacity investment proposals.

6.42 We consider that this Capex IM change meets the overarching IM Review objectives in promoting the Part 4 purpose in s 52A more effectively by requiring adequate consultation with interested stakeholders.

6.43 Additionally, as part of the short-list consultation process, Transpower should explicitly demonstrate how it has assessed the division of costs between the NIC component of the connection asset and the ACA capacity investment, as set out in clause 26(4) of Schedule 12.4 of the Code.[117]

6.44 Finally, when we next consult on changes to Transpower's Information Disclosure requirements, we will likely raise for consultation, amongst other things, that Transpower discloses:

6.44.1 the ACA capacity investments it has made in an MCP; and

6.44.2 how it has assessed the division of costs between the NIC component of the connection asset and the ACA capacity investment.

Proposed solution - Base capex ACA capacity investment consultation

6.45 For proposed ACA capacity investments that are E&D base capex, under the present Capex IM arrangements, stakeholders will only get one opportunity to provide feedback when Transpower develops and consults on IPP proposals at each regulatory reset (unless Transpower lodges an E&D reopener application, then there are two opportunities).

6.46 We considered whether consumers and affected parties should have more frequent input into E&D ACA capacity investments given that they may have at most, two opportunities to provide comment. We considered two options.

[117] Electricity Authority "Electricity Industry Participation Code Amendment (Transmission Pricing Methodology) 2022, Amendment 2022" (21 November 2022), Sch. 12.4, cl. 26(4).

6.47 The first option (**annual consultation on E&D ACA capacity investments**) would require Transpower to consult annually, if necessary, on any proposed ACA capacity investments that are E&D base capex.

6.48 We would then be able to assess how Transpower had incorporated feedback on ACA capacity investments when we evaluate Individual Price-Path (**IPP**) base capex proposals at each regulatory reset, and if it seeks an E&D base capex reopener for this purpose. The extent of the consultation and incorporation of feedback could then be reviewed and considered as a factor in our assessment of the next IPP E&D capex allowance.

6.49 The second option (**annual disclosure of E&D ACA capacity investments**) is to implement specific requirements in Transpower's Information Disclosure to annually disclose ACA capacity investments that are E&D base capex.

6.50 For both options, we consider that it is reasonable that Transpower explicitly demonstrate how it has assessed the division of costs between the NIC component of the connection asset and the ACA capacity investment.

6.51 Our preference is Option 2 because it balances the economic impact of E&D base capex investments, our proportionate scrutiny of these in an IPP and E&D reopener, and the likely consumer and affected party interest in ACA capacity investments.

6.52 Finally, when we next consult on changes to Transpower's Information Disclosure requirements, we will likely raise for consultation, amongst other things, that Transpower discloses:

6.52.1 the ACA capacity investments it has made as E&D base capex; and

6.52.2 how it has assessed the division of costs between the NIC component of the connection asset and the ACA capacity investment.

Proposed solution - Protecting commercial confidentiality during consultation

6.53 There is also a potential issue of commercial sensitivity of parties engaging with Transpower under an NIC as the first mover and potential second mover.

6.54 In proposing ACA capacity investments, there will be a first mover that is subject to an NIC. The NIC party will likely be a generator company, and may not want to be identified for reasons of commercial sensitivity e.g., the capacity of the investment, the cost and timing of the NIC.

6.55 It is highly that, in the course of the NIC negotiations, the NIC party imposes some commercial information restrictions on Transpower that it will have to manage. We should allow Transpower flexibility in this regard rather than setting up prescriptive requirements. We follow a similar permissive arrangement with consultation rather than setting up prescriptive bottom-up consultation IMs.

6.56 On this basis, our draft decision is that Transpower be given this discretion and flexibility when it consults on ACA capacity investments, that are either MCPs or E&D base capex in a base capex proposal.

6.57 We consider that this meets our framework objectives by promoting the Part 4 purpose in s 52A more effectively by ensuring sufficient information is made available within the confines of confidentiality.

Implementation - Protecting commercial confidentiality during consultation

6.58 We consider that a solution to address ACA investment consultation commercial sensitivity is to amend the Capex IM Schedule I requirements, to specify that Transpower has the flexibility to appropriately manage commercially sensitive information when it consults on ACA investments, such as the identity of any subsequent mover or commercially sensitive details about the NIC investment.

Issue #3 - ACA capacity investment incentives

Proposed solution

Capex IM incentives and ACA capacity investments

6.59 We set incentives that are intended to encourage Transpower to invest and operate efficiently. We set an allowance that is fixed at the beginning of a regulatory period with the intention of allowing Transpower to cover its costs. Transpower can earn increased profits by delivering services more efficiently than assumed when the allowance was set.

6.60 Incentives were introduced in the Capex IM to incentivise capital expenditure project cost efficiencies. The higher the incentive rate then the higher the incentive to achieve these efficiencies. The Capex IM has incentive mechanisms for base capex and major capex.

6.61 The Capex IM does not apply to capital expenditure relating to NICs if the party that is contracting with Transpower, agrees in writing, that the terms and conditions are reasonable or reflect workable or effective competition for the provision of the goods and services. As such we cannot apply incentives to the NIC component of a connection asset that contains ACA capacity.

6.62 Our draft decision is that the base capex and major capex incentive rate mechanisms should apply to the ACA capacity component of the total build cost of the connection asset only. This would result in a simple implementation in the Capex IM and avoids us having to scrutinise the NIC connection cost negotiations, a negotiation that sits outside the part 4 regulatory framework.

6.63 We consider this is consistent with the IM Review framework objectives by promoting the Part 4 purpose in s 52A more effectively by ensuring Transpower has incentives to improve efficiency in delivering the ACA capacity asset. It also maintains consistency with other asset investment incentives under the Capex IM.

What incentives should apply

6.64 The Capex IM applies different incentive rates to base capex and major capex, specifically:

6.64.1 a default major capex project (**MCP**) incentive rate of 15%;

6.64.2 a low incentive rate for base capex of 15% (for listed projects with cost uncertainty); and

6.64.3 a standard incentive rate for base capex based on the formula set out in Schedule B1(2) of the Capex IM.

6.65 Base capex in a base capex proposal contains a category of expenditure that is for the enhancement and development (**E&D**) of the grid. These are projects that are similar in purpose to MCPs but are estimated to cost less than the present base capex threshold.

6.66 The Capex IM incentives are structured to reflect the cost uncertainty of projects. Projects that involve new capacity on existing or new transmission assets, and for large scale transmission asset renewals as listed projects, are subject to a 15% incentive rate, while the incentive rate applied to project costs related to refurbishment and replacement are subject to a higher incentive rate. This is largely because Transpower has more certainty about refurbishment and replacement costs which are either associated with substation site assets or for smaller volumetric transmission asset renewals.

6.67 While some ACA capacity investments will occur within Transpower substation sites, we consider that the majority of ACA capacity will involve new connection asset capacity as new transmission assets. As such we consider that the lower incentive rate of 15% should apply as these investments will likely face the same cost uncertainties as MCPs and listed projects.

6.68 We consider that for ACA capacity investments that are MCPs or E&D capex in a base capex proposal, the 15% incentive rate should apply.

6.69 As an implementation we do not have to make any specific change. Our Capex IM implementation has defined ACA capacity as either an MCP or E&D capex in a base capex proposal, which should automatically trigger the existing incentive framework.

Issue #4 – ACA capacity RAB transition

Proposed solution

6.70 We also considered how we will treat ACAs when they enter and transition from the RAB, once subject to an NIC. We considered a cost allocation approach and 'nil valuation' approach as options.

6.71 Cost allocation is typically associated with the allocation of costs to unregulated third parties. While it was considered as a mechanism to transition ACA capacity from the RAB, we decided against it, due to the complexity of the solution.

6.72 The present cost allocation IMs for Transpower only deal with System Operator costs. While our draft decision introduces Transpower cost allocation between regulated and unregulated services (subject to an implementation threshold) in the Accessibility, Consistency and Effectiveness chapter of this topic paper (Chapter 10, Issue #2), services provided by ACA and NIC assets, both also constitute regulated services.

6.73 We consider we would have to introduce an additional unnecessary level of complexity to expand the cost allocation IM further to deal with ACA investments. On the other hand, the asset valuation IMs already provide for a 'nil valuation' approach to be applied to NIC assets.

6.74 Our preferred approach is to use 'nil valuation', an approach taken in the existing IMs for assets that are subject to an NIC.

6.75 The proportion of the connection asset recognised in the RAB is based on a 'nil valuation' approach which will apply to the proportion of the connection asset, based on its total capacity, that is subject to the initial NIC. The same approach will apply to capacity subsequently included in a NIC if some or all of an ACA is taken up.

6.76 The commissioned asset value will otherwise be as provided for in the asset valuation IMs, based on the asset type. The reduction in anticipatory capacity recognised in the RAB will be reflected as a disposed asset. For information disclosure purposes the reduction in the RAB value will be offset by an equivalent notional value of disposed asset proceeds.

6.77 The notional disposed asset proceeds adjustment will ensure that the disposed asset entry does not impact the Return on Investment (**ROI**) calculation (as it would otherwise be reflected as a cash outflow).

6.78 To illustrate the accounting for changes in ACA capacity, we have provided an example calculation worksheet of how the 'nil valuation' approach will work in practice, as defined in the draft determination.[118]

6.79 For example, a connection asset with an assumed capacity of 100 MW, is built for $100 million with half of that cost and capacity subject to an NIC upon commissioning. The RAB component related to the ACA capacity is $50 million at this point.

6.80 A second mover then decides to take up 20 MW of the total connection asset capacity in the first year following commissioning.

6.81 The RAB then decreases to $29.5 million, with the current year's depreciation being proportionally removed, so that the disposal value of the 20 MW capacity, taken up by the second mover, is $19.6 million, to be treated as a notional disposed asset proceeds adjustment. This capacity will be valued as an NIC asset at 'nil' in the Transpower accounts.

6.82 In conclusion, our draft decision is that, to account for ACA capacity investment assets in the RAB, a 'nil valuation' approach will apply. We consider that this meets our framework objectives by promoting the Part 4 purpose in s 52A more effectively than the alternative cost allocation approach and promotes consistency within the Capex IM regime.

[118] See the ACA Capacity accounting guidance spreadsheet published alongside this paper as part of our pack of decisions.

Chapter 7 Base Capex Threshold

Purpose and structure of this chapter

7.1 This chapter sets out our analysis and reasons for amending the Capex IM Base Capex Threshold. The base capex threshold affects the extent of analysis and scrutiny of both base capex and major capex proposals.

Problem definition

7.2 The base capex threshold has remained at $20 million since we set the Capex IM in 2012. Since then, inflation has decreased the threshold in real terms, which has incrementally increased the regulatory burden on Transpower when it prepares base capex and major capex proposals, and in turn the scrutiny we must apply.

Draft decision

7.3 Our draft decision is to:

7.3.1 increase the base capex threshold from $20 million to $30 million;

7.3.2 increase the following thresholds to $30 million by amending the defined value of $20 million and replace this with the term 'base capex threshold' (which will be set at $30 million):

7.3.2.1 listed project threshold - clause 2.2.2(7)(a)(i);

7.3.2.2 base capex cost benefit analysis and consultation threshold - clause 3.2.1; and

7.3.2.3 base capex low incentive rate threshold – clause 3.2.3(2)(g),

7.3.3 not change the Enhancement and Development (**E&D**) reopener threshold of $20 million in clause 3.7.4(7) of the Transpower IM.

Stakeholder views

7.4 Transpower suggests that the base capex threshold should be increased to $30 million to account for inflation and to future-proof it to 2030 (when we are scheduled to complete the next IM Review). Transpower considers that keeping the threshold at $20 million has resulted in the base capex threshold reducing in real terms over the last 10 years .[119]

7.5 It also notes that the base capex threshold value of $20 million has been embedded as a hard-coded value in the Capex IM, namely in the "listed projects, application of

[119] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 15.

the low incentive rate, cost-benefit analysis consultation requirements, and provision of governance arrangements", and that these need to be linked to the base capex threshold definition. [120]

Background

7.6 Base capex is capital expenditure on asset replacement, asset refurbishment, business support, information systems and technology, and any other capital expenditure that does not exceed the Base capex threshold. Base capex is intended to cover all capital expenditure, save those individual, large projects that, given their nature (such as enhancement projects) and magnitude (over the threshold), warrant individual scrutiny and public consultation in an MCP.

7.7 The base capex threshold delineates capex in a base capex proposal and major capex proposal. The base capex threshold was set in 2012 at $20 million "to provide the right balance between protecting the interests of stakeholders who want MCPs to be subject to individual scrutiny, provide scope for other parties to provide alternative solutions, and allow the benefits of the *ex-ante* approach applied to base capex to be applied to projects below the threshold."[121]

7.8 One of the guiding principles we have used in achieving this balance was the idea that the level of analysis undertaken by Transpower should be commensurate with the size of the project. By requiring Transpower to report on larger projects, this will achieve the desired level of analytical rigour.[122]

7.9 In our 2016 IM Review of Customised Price Path (**CPPs**) regulations we introduced our proportionate scrutiny principle. This was discussed on a policy level to promote scrutiny that "is commensurate with the materiality of the changes to prices or quality experienced by consumers, within the constraints of the DPP/CPP regime." [123] when we review electricity distribution business (**EDB**) investment proposals.

[120] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 15.

[121] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 2.5.11.

[122] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 2.5.10-2.5.13.

[123] Commerce Commission "Input methodologies review decisions Topic paper 2: CPP requirements" (20 December 2016), para 56.

7.10 The proportionate scrutiny principle is intended to be consistent with promoting the long-term benefit of consumers in a cost-effective manner, and also be consistent with Treasury's regulatory good practice principle of proportionality, that "burden of rules and their enforcement should be proportional to the benefits that are expected to result". [124] It is equally applicable to Transpower and the extent to which we scrutinise Transpower capex proposals.

7.11 The base capex threshold was reconsidered in the 2018 Capex IM Review. We received submissions from Contact and Trustpower suggesting that the base capex threshold could be lowered because there was insufficient scrutiny on base capex projects under $20 million.[125]

7.12 We decided that extending the MCP process to a larger number of smaller projects (under the base capex threshold) would not be efficient nor consistent with our proportionate scrutiny principle. Our view was that extending a blanket rule for further scrutiny to smaller projects would not result in a cost-effective outcome.[126]

7.13 In 2018, the Commission was also guided by the idea that, as Transpower's regulatory arrangements matured, a lesser level of scrutiny might be justified. We decided to keep the base capex threshold unchanged at that time.[127]

Issue #1 – Base Capex Threshold

Proposed solution

Draft decision to increase the base capex threshold to $30 million

7.14 Our draft decision is to increase the base capex threshold from $20 million to $30 million.

7.15 We consider that maintaining the real value of the base capex threshold at a similar level to the 2012 $20 million (nominal) value, will allow the level of scrutiny to remain proportionate to the size of the projects envisioned when the Capex IM was set. This also avoids increasing the regulatory burden on Transpower.

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[124] New Zealand Treasury "The Best Practice Regulation Model: Principles and Assessments" (July 2012), at p. 9.

[125] Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), para 230.

[126] Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), para 231.

[127] Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), paras 233 and 234.

7.16 We estimated the 2030 nominal value for the base capex threshold equivalent to a $20 million value in 2012 using historical and forecast CPI data. The rationale for this is that the next Capex IM Review will be in 2030. This inflation adjustment results in a 2030 base capex threshold value of approximately $28 million. We have rounded this value to $30 million in the draft decision.

7.17 This decision will meet the overarching IM Review objectives by reducing regulatory cost and complexity (without detrimentally affecting the promotion of the s 52A purpose) by ensuring we are not incrementally increasing our scrutiny of projects, due to the effect of inflation.

Issue #2 – Base capex threshold consistency in Capex IM

Listed project threshold – clause 2.2.2(7)(a)(i)

7.18 Clause 2.2.2(7)(a)(i) of the Capex IM states that a base capex project or programme may be a listed project if it will require capital expenditure of greater than $20 million. A listed project is a subset of base capex and if we amend the base capex threshold, a threshold change to the listed project threshold should also apply.

7.19 The original policy intent was that the listed project threshold was that it was intended to align with the base capex threshold. In our 2014 listed project mechanism reasons paper, we considered that the scope for the listed project mechanism should be that its availability should be for large asset replacement and asset refurbishment projects, or programmes with uncertain commencement dates, which are not already accommodated within the base capex allowance.[128]

7.20 Our draft decision is that the $20 million listed project threshold should be replaced with a reference to "base capex threshold". This reflects the original policy intent that the listed project threshold should be the base capex threshold. We consider this change will meet the overarching IM Review objectives by reducing regulatory cost and complexity (without detrimentally affecting the s 52A purpose) by not increasing scrutiny due to inflation, promotes certainty under s 52R by maintaining consistency in related thresholds.

Base capex cost benefit analysis and consultation threshold - clause 3.2.1

7.21 We consider that the threshold requiring cost-benefit analysis and consultation for base capex projects or programmes in Clause 3.2.1 should be aligned with the base capex threshold.

[128] Commerce Commission "Amendments to input methodologies for Transpower to provide a listed project mechanism – reasons paper" (27 November 2014), para 74.

7.22 The original policy intent was to subject base capex projects that, in all material respects, meet the requirement to undertake a cost-benefit analysis and consultation consistent with major capex.[129]

7.23 One of key aspects that distinguishes base capex and major capex is the size of the project (or in other words, the forecast cost).[130] It was implied that a base capex project that is commensurate in size to an MCP would be subject to similar levels of scrutiny. Furthermore, the existing wording in the 2012 Capex IM reasons paper is that the base capex consultation thresholds should be consistent.

7.24 Our draft decision is to replace the "$20 million" threshold in the base capex cost benefit analysis and consultation clause in 3.2.1 with "base capex threshold". This reflects the policy intent. We consider this change will meet the overarching IM Review objectives by reducing regulatory cost and complexity (without detrimentally affecting the s 52A purpose) by not increasing scrutiny of base capex projects or programmes due to inflation, promotes certainty under s 52R by maintaining consistency in related thresholds in the regime.

Base capex low incentive rate threshold – clause 3.2.3(2)(g)

7.25 In the 2018 Capex IM Review, we considered the cost threshold for applying the base capex low incentive rate and concluded that it should be "consistent with the existing major capex and listed project thresholds".[131]

7.26 Based on the policy intent, our draft decision is to increase the base capex low incentive threshold to reflect the increase in the base capex threshold. We also propose to amend the definition of the base capex low incentive threshold to remove reference to $20 million and replace this with the reference to "base capex threshold". We consider this change will meet the overarching IM Review objectives by reducing regulatory cost and complexity (without detrimentally affecting the s 52A purpose) by not increasing scrutiny due to inflation, and promotes certainty under s 52R by maintaining consistency in related thresholds.

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[129] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 3.5.5.

[130] For example, the definition of base capex is that base capex is for projects that are for asset replacement or refurbishment, **OR** is not forecast to be major capex (the definition of major capex in respect of forecast of costs is that it is forecast to be capex exceeding the base capex threshold). Therefore, a base capex project can still be considered a base capex project if it exceeds the base capex threshold. This implies that the material respects considered in the original policy intent was the forecast project cost (in other words, exceeding the base capex threshold).

[131] Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), para 147.

*No change to Enhancement & Development (**E&D**) reopener threshold in Transpower IM*

7.27 Clause 3.7.4(7) makes reference to a $20 million nominal threshold for the E&D capex reopener. The E&D capex reopener was introduced as part of the Transpower RCP3 IPP decision to address E&D capex portfolio uncertainty when Transpower submits IPP proposals.[132]

7.28 The E&D base capex reopener is a mid-period reopener allowing reconsideration of Transpower's IPP if Transpower considers that two or more E&D base capex projects not included in the IPP have become reasonably likely to commence in the RCP. The reconsideration mechanism is available until the end of the second disclosure year of the relevant RCP.[133]

7.29 In our 2019 RCP3 decision we decided to not approve $17.4 million of E&D capex because we considered it was too speculative and unsupported. We set the E&D capex reopener threshold at $20 million at the time despite Transpower submitting that it should be $5 million.

7.30 In setting the E&D capex reopener threshold at $20 million we reflected on a number of considerations, such as consistency with:[134]

7.30.1 the Capex IM framework where more focussed and detailed reviews would be carried out for major capex proposals and listed projects; and

7.30.2 our principle of proportionate scrutiny which should guide our evaluation of Transpower's expenditure.

7.31 We also recognised at the time, the level of expenditure that we did not approve in the RCP3 E&D capex portfolio.

7.32 We have considered whether the E&D capex reopener threshold should increase to $30 million in line with the proposed change to the base capex threshold. Our draft decision is that it should remain at $20 million.

[132] Commerce Commission "Transpower's Individual Price-Quality Path from 1 April 2020: Decisions and Reasons Paper" (29 August 2019), para 3.4.7.

[133] Transpower has used the E&D reopener during RCP3, seeking $41.1 million additional E&D capex and we approved $40.6 million - https://comcom.govt.nz/__data/assets/pdf_file/0024/301983/Transpower-IPP-reconsideration-Final-decision-on-enhancement-and-development-projects-16-December-2022.pdf

[134] Commerce Commission "Amendments to input methodologies for Transpower: Reasons Paper" (28 August 2019), paras 2.78-2.87.

7.33 While it was originally set with a view to it being consistent with the base capex threshold, we need to consider a threshold that promotes balance between the risk of Transpower having sufficient funds to carry out E&D capex projects, while reducing the incentives on it to over-forecast when it proposes E&D capex in its base capex proposals at every regulatory period reset. We consider that increasing the threshold, which was set in 2019, to $30 million, would not be consistent with these objectives.

7.34 Our draft decision is to retain the E&D capex reopener threshold at $20 million. We are not convinced that increasing the E&D reopener threshold will meet the objectives of the IM Review framework in promoting the Part 4 purpose in s 52A more effectively.

Chapter 8 Major Capex proposal and approval processes

Purpose and structure of this chapter

8.1 This chapter sets out our problem definition, analysis and decisions in relation to the major capex proposal and approval processes. We have considered these issues against the background of significant change in the electricity sector as a result of the move towards decarbonisation.

8.2 We have considered whether the IMs remain fit for purpose or whether amendments are necessary to meet our IM Review decision-making framework objectives. In particular, we have considered options for increased flexibility around the MCP proposal and approval processes.

Problem definition

8.3 When we set the Capex IM in 2012, we stated that the primary responsibility for delivering major capex project outputs rests with Transpower,[135] and we remain of that view now. However, the rapidly changing electricity market environment has prompted us to consider whether introducing some additional flexibility to the processes relating to major capex proposals could better achieve our decision-making framework objectives. We consider uncertain demand growth, new renewables generation connections, and the inability to change outputs while an MCP is being assessed could give rise to inefficiency in the MCP process.

8.4 Given the changes occurring in the electricity industry, we anticipate that Transpower may identify reasons to change an MCP proposal following submission. This may be because more appropriate outputs have become available or the assumptions that underpin the MCP are no longer valid, requiring amendment of its proposed outputs. In these circumstances, under the current Capex IM, Transpower would likely be required to withdraw the proposal and submit a new proposal.

8.5 Presently, MCP outputs cannot be amended until after the final decision is made on that MCP.[136] Following approval of an MCP, Transpower may apply for an amendment to the approved outputs, if it identifies that a change to an output(s) will lead to better outcomes.[137]

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[135] Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), para 6.7.6.

[136] *Capex IM*, cl 3.3.6.

[137] *Capex IM*, Schedule H.

8.6 Further, there may be situations where Transpower has aggregated projects with different investment drivers into a single MCP and where, during our MCP evaluation process we consider that some, but not all outputs, satisfy the evaluation criteria and investment test.

8.7 We have assessed whether changes to allow further flexibility in the process for submitting and approving major capex proposals could reduce compliance costs and better promote the Part 4 purpose by facilitating grid investment on a more adaptable basis, while maintaining proportionate scrutiny of investments for the long-term benefit of consumers.

Stakeholder views

8.8 There were no submissions on this specific issue. However, more generally, we note Transpower submissions indicating that regulatory processes can affect Transpower's ability to respond to changes in the need for grid investment,[138] and agreeing with the proposition that "the IMs may need to enable more flexibility to help keep up with the pace of change".[139]

Draft decision

8.9 We have made draft decisions amending the MCP proposal and approval processes to address the problem identified above. These decisions are intended to introduce further flexibility into the MCP process without compromising on the regulatory scrutiny and evaluation the Commission undertakes when considering Transpower's proposals for major capex investment.

8.10 We have made two draft decisions:

8.10.1 to introduce a mechanism allowing Transpower to amend the grid outputs in a major capex proposal, after it has been submitted, but before the Commission has issued its draft decision on the proposal. The Commission may recommend Transpower reconsiders its proposal or Transpower may give notice of its intention to amend; and

8.10.2 to clarify that the Commission may approve some, but not all, of the outputs proposed by Transpower in an MCP – if we consider that, with the inclusion of one or more of the proposed outputs, the proposed investment does not satisfy the investment test. That is, in the event the Commission is satisfied that the removal of one or more outputs would increase the net electricity market benefit of the proposed investment.

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[138] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022).

[139] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 1

Background

8.11 In the 2012 Capex IM Final Reasons paper we discussed our criteria for evaluating major capex proposals. We outlined that we may not approve an MCP if we are not satisfied with "the proposed investment in whole or in part".[140]

8.12 The Capex IM defines a MCP project output as a grid output which is a grid output measure (where the benefit may include reduction in risk) delivered by the grid, investment in the grid, or expenditure facilitating or enabling future investment in the grid.

8.13 For example, two outputs from the recently approved Bombay Otahuhu regional MCP, included approval to:[141]

8.13.1 procure, install, and commission two 150/175 MVA 220/110kV transformers at Transpower's Bombay substation; and

8.13.2 procure, install, and commission a connection for these transformers to the 220kV Huntly-Otahuhu A line.

8.14 MCP outputs are typically asset related and usually specify the capacity and specifications of the asset that is being upgraded or installed, and the location of that asset.

Proposed solution

8.15 Our draft decisions are to:

8.15.1 allow Transpower to amend its MCP proposal, prior to our draft decision on the major capex proposal; and

8.15.2 clarify that the Commission may approve some, but not all, of the outputs proposed by Transpower for a major capex project.

8.16 We consider these decisions will achieve our overarching IM Review objectives by better promoting the s 52A purpose. Further, it will better promote the long-term interests of consumers while reducing compliance costs and complexity by improving MCP process efficiency.

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[140] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 6.10.4.

[141] Commerce Commission "Bombay-Otahuhu Regional Major Capital proposal" <https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-transmission/transpower-capital-investment-proposals/transpower-major-capital-proposal/bombay-otahuhu-regional-major-capital-proposal>

8.17 These changes will also give us the ability to partially approve MCP outputs, in the event that we are not satisfied that the investment test has been met for all outputs in a proposal. This additional flexibility could allow Transpower to advance certain aspects of a project while resolving issues with the case for investment of other aspects of the overall project.

Major Capex Proposal output amendment

8.18 In a rapidly changing decarbonisation and electrification environment, with uncertain demand growth and new renewables generation connections, the inability to change outputs while an MCP is being assessed may lead to MCP process inefficiency.

8.19 Under this new mechanism, Transpower may amend its major capex proposal by withdrawing or changing one or more grid outputs. The amendment process may be initiated by upon recommendation by the Commission or by Transpower notifying the Commission of its intention to amend the proposal before the Commission has made its draft decision.

8.20 In terms of process, this decision would require:

8.20.1 Transpower to identify the likely materiality of its proposal amendment and the extent to which it needs to re-evaluate its application of the investment test and consultation;

8.20.2 before the Commission publishes its draft decision, Transpower to notify the Commission of its intention to amend a major capex proposal;[142]

8.20.3 Transpower and the Commission to agree a revised MCP timeline;[143] and

8.20.4 Transpower to re-consult on the output amendment. This additional consultation must be commensurate with the materiality of the changes and should contain sufficient information to enable interested and affected parties to engage on the removal of outputs or their amendment.

[142] The decision to amend a major capex proposal rests with Transpower. Therefore, Transpower must notify the Commission in both circumstance where (1) it identifies a need to amend a proposal or (2) the Commission recommends it considers amending a proposal.

[143] As part of the timeline reset process, we will discuss with Transpower our expectation that consultation will consider the materiality of proposed output changes.

Partial approval of a Major Capex Proposal

8.21 Our draft decision clarifies the Capex IM to make it clear that the Commission can consider and approve or decline individual grid outputs within a Major Capex Proposal, on the basis that the investment proposed, with the inclusion of these individual grid outputs, does or does not satisfy the evaluation criteria and the investment test.

8.22 If the proposed investment, with the inclusion of one or more individual outputs, does not satisfy the investment test, the Commission may decide to approve the proposed investment with only those outputs that allow the proposed investment to satisfy the investment test, resulting in an investment option with a higher net market benefit than the investment option proposed by Transpower. This approval may include outputs substituted by Transpower for those originally proposed, in accordance with our draft decision allowing Transpower to amend its major capex proposals, set out above.[144]

8.23 We consider that the circumstances applying to Transpower have changed sufficiently to require a different approach, which enables greater flexibility in the approval of major capex proposals.

8.24 We consider that this decision better promotes the Part 4 purpose, and increases regulatory efficiency, because it allows the Commission to:

8.24.1 promote investment in grid assets providing a net electricity market benefit and reflect consumer demands;

8.24.2 prevent investment in aspects of an investment proposal that would result in the proposed investment not satisfying the investment test and, therefore, do not represent efficient grid investment reflecting consumer demands; and

8.24.3 avoid unnecessary duplication of regulatory processes.

Implementation

Major Capex Proposal output amendment

8.25 Our draft decision is to introduce a mechanism allowing Transpower to amend the grid outputs in a major capex proposal after it has been submitted, but before the Commission has issued its draft decision on the proposal. The Commission may recommend Transpower reconsiders its proposal or Transpower may give notice of its intention to do so. At present Transpower may only amend a Major Capex Project after the final decision is made.

[144] Set out at paragraphs 8.9 to 8.10, above.

8.26 In a formal notification to the Commission, either self-initiated or following a recommendation from the Commission, Transpower must identify how material the change in the output is likely to be and the extent to which it needs to re-evaluate its application of the investment test and consultation required. Transpower and the Commission would use this information to agree to a revised MCP timeline consistent with 3.3.1(3)(c) and 3.3.1(3)(d) of the Capex IM.

8.27 This decision is limited to amendments within a certain scope. This amendment mechanism is not available for proposed output amendments that would require Transpower to develop and investigate different investment options, in terms of its long-list consultation, to meet the originally proposed investment need.

8.28 Where the proposed change is so material that it would require a change to the options consulted upon at the long-list stage, it will be better suited to the standard MCP process, rather than an amendment. We have achieved this by restricting amendments to only those investment options that Transpower has previously consulted on in its long-list consultation before submitting the major capex proposal.

8.29 Whether withdrawing or amending an MCP output, it is effectively a change to the MCP proposal, and interested and affected parties should have the opportunity to provide feedback on that change through consultation.

8.30 We consider that if Transpower withdraws or proposes to amend an output, that it follows a similar consultation process to that required for the proposal of a subsequent stage in an MCP (staged). This is set out in Schedule I6 of the Capex IM.

8.31 In this limited consultation we consider that Transpower needs to consult on the following matters:

8.31.1 updates on the investment need;

8.31.2 updated relevant demand and generation scenarios;

8.31.3 updates of key assumptions;

8.31.4 update of options to meet each investment need;

8.31.5 invitation for proposals on non-transmission solutions; and

8.31.6 update of the investment test, if there is a material difference between the method or parameters in the updated MCP analysis with the withdrawn or amended outputs.

8.32 Transpower will be able to apply judgement about the extent of its consultation regarding the matters set out in paragraphs 8.23.1 to 8.23.6. The extent of the consultation should be commensurate with the materiality of the changes but should contain sufficient information to enable interested and affected parties to engage on the removal of outputs or their amendment.

Partial approval of Major Capex Outputs

8.33 Our draft decision is to allow the Commission to approve some, but not all, of the outputs proposed by Transpower in an MCP – in the event we consider that some of the outputs do not satisfy the investment test. The Commission would use this option in the event the Commission is satisfied that the removal of one or more outputs would increase the net electricity market benefit of the proposed investment.

8.34 This decision does not extend to allow the Commission to amend any outputs or promote alternative outputs. That remains Transpower's role. We would only be deciding that, during our evaluation of the MCP proposal, a proposed output does not meet the investment test and therefore approving that investment does not promote the long-term benefits of consumers.

8.35 Our decision to allow a partial approval of the proposed outputs, will give Transpower and interested and affected parties the opportunity to submit on our reasons for that partial approval, in the same way as our draft decisions to decline or approve an MCP in whole.

Chapter 9 Independent Verification

Purpose of this chapter

9.1 This chapter sets out our decision to introduce independent verification of Transpower base capex proposals in preparation for an Individual Price-Quality Path (**IPP**) reset.

Problem definition

9.2 Transpower voluntarily used a verifier for RCP3 (and is again using one for the next regulatory period). The specialist expertise and scrutiny brought by the verifier resulted in Transpower providing a better proposal and reduced the time and cost for us to evaluate the expenditure proposal. The process not being codified reduces regulatory certainty and may increase regulatory time and cost required to negotiate the verification process each time.

Draft decision

9.3 Our draft decision is to introduce an independent verification process in the Capex IM to assist preparation, and our review, of Transpower base capex proposals, that support Individual Price-Quality Path (**IPP**) resets.

9.4 We consider this decision will better promote the s 52A purpose as base capex proposals will undergo increased scrutiny by an independent expert.

9.5 This decision also will promote the overarching IM Review objectives to reduce cost and complexity by:

9.5.1 removing the need to initiate the independent verification process through a s 53ZD notice;[145]

9.5.2 reduce the scope of negotiation required for terms of reference and tripartite deed at every IPP reset; and

9.5.3 and allow us to apply a more focused scrutiny to Transpower's IPP proposal due to greater confidence from the independent verification.

9.6 Additionally, the decision will better promote the s 52R purpose by promoting more certainty in the process and scope of independent verification for IPP proposals.

[145] Although this decision would not prevent the Commission from considering whether to require additional information using the power in s 53ZD, should this become necessary.

Stakeholder views

9.7 There were no stakeholder submissions on this topic.

Background

9.8 Independent verification was introduced in the Electricity Distribution Services IMs, the Gas Distribution Services IMs, and the Gas Transmission Services IMs, to ensure that Customised Price Path (**CPP**) proposals were reviewed pre-submission. This review gives assurance to suppliers about how their expenditure is likely to be assessed by us and also assists the Commission to manage its decision timeframes.

9.9 The verifier provides the Commission with a 'front-loaded' expert opinion about the assessment of information relating to forecasts of opex, capex and quality and assists us in making our decisions to set customised price-paths.

9.10 Although independent verification has not been mandated in the IMs, Transpower undertook voluntary independent verification for its Regulatory Control Period 3 (**RCP3**) Individual Price-Quality Path (**IPP**) reset proposal.

9.11 In the 2018 Capex IM Review we decided not to introduce independent verification in the IMs, but rather to pilot the verification process on a voluntary basis for RCP3 and decide whether to introduce this at the next Capex IM Review.

9.12 In the 2018 Capex IM Review, we noted that independent verification could front-load the IPP application process, improve the efficiency and effectiveness of the reset process, result in a more appropriate level of forecast expenditure, and ultimately deliver a better outcome for consumers.[146]

Proposed solution

9.13 Our draft decision is to implement independent verification in this Capex IM Review.

9.14 We consider that the RCP3 verification process demonstrated that verification of Transpower's IPP proposal was justified. We used a full verification process for the first time to help us with our IPP evaluation and concluded it was effective in aligning Transpower's proposal to the expenditure outcome and in helping to inform our assessment process. [147]

[146] Commerce Commission "Transpower Capex Input Methodology Review: Decision and Reasons" (29 March 2018), para 270.

[147] Commerce Commission "Transpower individual price-quality path from 1 April 2020 - Decisions and reasons paper" (29 August 2019), para X30.

9.15 Introducing a Capex IM verification requirement will allow Transpower to initiate future independent verification processes, which are presently voluntary, as a more integrated part of its IPP project planning without the need for us to initiate it through a s 53ZD notice before each reset. The s 53ZD notice process is costly and time consuming for both Transpower and the Commission.

9.16 We believe that this decision will better promote the s 52R purpose by promoting more certainty in the process and scope of independent verification for IPP proposals.

Implementation

9.17 The requirement to conduct independent verification will be set out in the Capex IM. We will create a new subpart in Part 7 of the Capex IM. This includes two additional clauses which will:

9.17.1 add an obligation on Transpower to submit, alongside the IPP proposal, a verification report, information provided to the verifier for the purposes of independent verification, and a certificate from the independent verifier stating which parts of the proposal have been verified; and

9.17.2 add an obligation on Transpower to provide the any information required for the verifier to carry out its assessment of the IPP proposal.

9.18 This will be supported by Schedules J and K, which set out the terms to be included in the Tripartite Deed and Terms of Reference. These are designed to be a standard form deed and terms of reference, setting out obligations, processes, and evaluation criteria which can be used by the Commission, Transpower and Independent Verifier.

9.19 Our draft decision is that the verification requirement will commence from RCP4, so that the verification process will apply in time for the RCP5 IPP proposal. For completeness, we note that the RCP4 proposal verification is already underway and will not be subject to the introduced verification process.

Schedule J – Engagement of a Verifier

9.20 Schedule J relates to verifier engagement and includes the following engagement principles:

9.20.1 processes for selecting and engaging a verifier;

9.20.2 selection criteria for approving a verifier; and

9.20.3 minimum requirements that must be included in the tripartite deed dictating the relationships and obligations between the parties (which Transpower and the Verifier may further negotiate and agree).

Schedule K - Terms of Reference

9.21 We have drafted the Capex IM independent verifier requirements to be similar to the EDB CPP verification requirements and have codified a terms of reference.

9.22 The terms of reference will set out the following high-level provisions:

9.22.1 a description of the verifier's role;

9.22.2 verification report contents;

9.22.3 key process matters;

9.22.4 the verifier's scope of work;

9.22.5 principles about how the verifier will review proposal information and what it must have regard to; and

9.22.6 the evaluation criteria and evaluation techniques for components of the proposal.

9.23 We will include the ability for Transpower to propose new clauses in the terms of reference with agreement from the Commission. There will also be the flexibility for the Commission to include clauses if this is needed. The flexibility to amend the Terms of Reference will allow it to be adapted for new situations if required.

Chapter 10 Accessibility, Consistency, and Effectiveness issues

Purpose of this chapter

10.1 This chapter details our consideration of whether provisions in the Transpower IM should be amended to improve the accessibility to stakeholders, consistency with other IMs under the Part 4 regime and the effectiveness of the provisions in the Transpower IM.

10.2 Our review for accessibility, consistency and effectiveness resulted in a number of changes relevant to the Transpower IM. These changes largely aim to align the Transpower IM to other IMs within the Part 4 regime and promote effectiveness of the IM regime relevant to Transpower with respect to cost allocation and related party asset valuation rules.

Summary of our decisions

10.3 There are four issues relating to the accessibility, consistency and effectiveness of the IMs which have been raised through the Process and issues paper submission process or identified in our own experience.[148] These are:

10.3.1 whether we should incorporate cost allocation rules to address the potential that Transpower's unregulated services may materially increase;

10.3.2 whether we should incorporate related party asset valuation (**AV**) rules applying to electricity distribution businesses (**EDBs**) and gas pipeline businesses (**GPBs**) in the Transpower IM;

10.3.3 whether we should clarify the accounting treatment of capital contributions that Transpower receives from third parties; and

10.3.4 whether insurance payments should be a pass-through cost under the Transpower IM due to increasing insurance costs affecting Transpower.

10.4 Our draft decisions on the four issues are as follows:

10.4.1 **Issue #1: Transpower cost allocation**. Amending the cost allocation IMs to require Transpower to apply the accounting-based allocation approach (**ABAA**) to common costs if a cost-based trigger is met;

[148] This chapter covers the four ACE issues as outlined above. This chapter does not comprehensively cover all the ACE issues in relation to Transpower. For further detail on other ACE issues relevant to the Transpower IM, refer to the Report on the IM Review (2023) (draft decisions).

10.4.2 **Issue #2: Related party asset valuation (AV) rules for Transpower**. Adding related party AV rules applying to EDBs and GPBs to the Transpower IMs (subject to any required modifications);

10.4.3 **Issue #3: Treatment of public capital contributions.** Not amending the IMs in response to a potential problem with the accounting treatment of capital contributions Transpower receives; and

10.4.4 **Issue #4: Transpower's proposal of making insurance payments a pass-through cost**. Not including insurance payments as a pass-through cost.

Issue #1: Transpower cost allocation

Problem definition

10.5 In an increasingly decarbonised economy with increased electricity demand (and the corresponding generation needed), Transpower's unregulated costs and revenues may also increase. This could create challenges for the current IM settings.

10.6 Transpower supplies transmission lines services (in terms of transmitting electricity using the national grid), is the system operator (managing the operations of the national grid, also defined as 'electricity lines services' under the Commerce Act) and provides other services.[149]

10.7 While system operator services are regulated under Part 4 of the Commerce Act 1986,[150] these services are treated separately from Transpower's transmission lines services. For example, costs relating to the supply of electricity transmission services are to be net of amounts recoverable by Transpower in respect of its system operator services.[151]

10.8 In the 2022 financial year, revenue received by Transpower for its system operator services accounted for 4.7% of its total revenue.[152]

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[149] These other services include flexibility services (demand response) or trading platforms (emsTrade) which are not regulated under Part 4 of the Commerce Act 1986. Flexibility management in this context means that flexibility can be used for energy, ancillary services, transmission investment deferral, distribution investment deferral, outage restoration and construction risk management. Where flexibility services are used to defer transmission investment, they may be an input to transmissions lines services.

[150] In respect of Transpower's system operator services, they are defined as electricity lines services under s 54C(1)(b) of the Commerce Act 1986.

[151] *Transpower IM*, cl 2.1.1.

[152] Transpower "Tauākī pūtea – Financial statements for the year ended 30 June 2022", p 8.

10.9 Unlike EDBs and GPBs, Transpower is not required to adjust the total costs associated with its supply of regulated services to take into account common costs between regulated and unregulated services.

10.9.1 Where regulated and unregulated services have only a small portion of their costs in common, using cost allocation mechanisms may not move outcomes materially closer to those in competitive markets.[153]

10.9.2 In our 2010 reasons paper, we considered that allocating common costs between regulated and unregulated services was not required because:[154]

> although Transpower does supply some unregulated services, the revenue associated with these services, in the context of allocating shared costs, is not material. (This would be revisited if Transpower was to materially expand its unregulated activities.)

10.10 In the 2022 financial year, Transpower's unregulated services accounted for 1.5% of its total revenue.[155]

10.11 Transpower's demand response (**DR**) programme was funded for the 2015-2020 regulatory period and is no longer in operation. However, there is a possibility that Transpower could restart the DR programme or undertake other unregulated initiatives, potentially giving rise to competition issues from the risk of cross-subsidisation in terms of the regulated/unregulated costs.

10.11.1 Any costs shared between unregulated activities and regulated activities may be allocated solely to the regulated activities (which is currently permitted).

10.11.2 The competition issues arise from Transpower's advantageous position because the incremental cost of using the DR platform to support additional users would be very low.

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[153] Commerce Commission "Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper" (22 December 2010), chapter 3.

[154] Commerce Commission "Input Methodologies (Transpower) Reasons Paper" (22 December 2010), at p.18.

[155] Transpower "Tauākī pūtea – Financial statements for the year ended 30 June 2022", p 8. Total revenues were $885 million, composed of: $830 million of transmission revenue, $41.6 million of system operator revenue, and $13.5 million of other revenue.

Draft decision

10.12 Our draft decision is to amend the cost allocation IM to require Transpower to apply ABAA to adjust the total costs associated with supplying regulated services to take into account costs that are common to regulated and unregulated services.[156]

10.13 We have proposed using a cost-based trigger, such that the cost-allocation requirement only applies if Transpower's common costs (costs not directly attributable) are at least 2% of its costs associated with regulated services.

Analysis

10.14 Our draft decision better promotes the Part 4 purpose by:

10.14.1 maintaining incentives for Transpower to improve efficiency (better promoting the outcome in s 52A (1)(b));

10.14.2 ensuring the benefit of efficiency gains from the supply of regulated and unregulated services are shared with consumers of regulated services (better promoting the outcome in s 52A(1)(c)); and

10.14.3 limiting Transpower's ability to extract excessive profits (better promoting the outcomes in s 52A(1)(d)).

Incentives to improve efficiency and the impact on competition from Transpower's distributed energy resources management system services

10.15 If Transpower undertakes an initiative, such as its previous DR programme, then this may create competition issues because of Transpower's advantageous position. Transpower may be able to offer Distributed Energy Resources Management System (**DERMS**) services at short-run marginal cost, which risks crowding out third-party service providers who would otherwise need to recover their capital investment cost and price their services at long-run marginal cost.

10.16 As DERMS can be an input service to transmission (and distribution) lines services, this risks less efficient delivery of lines services than would otherwise be the case.

Limits on excessive profits

10.17 Under the current IMs, Transpower is not required to allocate common costs between the regulated transmission lines services and other services. This means that costs associated with unregulated services can be allocated to the regulated services.

[156] ABAA is one approach currently applied by EDBs and GPBs. EDBs and GPBs may also apply the optional variation to ABAA (OVABAA) where the application of ABAA might unduly deter investments in unregulated services.

10.18 As forecasts of these costs (operating and capital) are used to build Transpower's maximum allowable revenue, the absence of rules to allocate common costs means allowable revenue may be higher (in reality) than is prudent and efficient for providing the transmission lines services.

Regulatory certainty

10.19 We consider that this draft decision will be neutral in terms of the certainty for Transpower with respect to cost allocation (the s 52R purpose). Both the existing IMs and our draft decision are clear on how Transpower is to allocate common costs.

Materiality and regulatory costs and complexity

10.20 Imposing additional cost allocation obligations on Transpower will impose additional compliance costs. As experience with EDBs and Chorus shows, establishing a cost allocation regime can be resource intensive, and there are on-going costs to the provider and the Commission to monitor such a regime once it has been implemented.

10.21 We have investigated whether Transpower's unregulated business lines are likely to increase in materiality. We have not found any current evidence of a likely increase in materiality.

10.22 We do not consider the materiality of Transpower's current unregulated activities would justify this regulatory cost. However, we consider there is a need to be proactive regarding future unregulated activities.

10.23 If we only look to impose cost allocation obligations once Transpower commences unregulated initiatives (such as restarting the DR programme), this would:

10.23.1 allow the risks to efficiency, profitability, and competition mentioned above to manifest; or

10.23.2 undermine the predictability of the regime by requiring us to act in a reactive way to prevent the full inclusion of shared costs in the regulated asset base.

Alternatives considered

10.24 In addition to our proposed approach (and maintaining the status quo), we have considered:

10.24.1 amending the Transpower cost allocation IMs to apply Transpower's current internal activity-based costing methodology; and

10.24.2 working with the Electricity Authority (**the Authority**) to monitor Transpower's DR programme or similar activities for any competition issues, without changing the IMs.

Applying Transpower's current internal activity-based costing methodology

10.25 Internally, Transpower already applies activity-based cost allocation for flexibility management services (**FMS**) and DERMS activities.

10.26 While this option is less costly for Transpower, we do not consider that applying Transpower's internal activity-based cost allocation would address the risks to competition and profitability discussed above.

10.27 Transpower is currently reviewing this method to ensure consistency with the cost allocation methods required of other network businesses. This may reduce the incremental regulatory cost of requiring Transpower to apply cost allocation to these activities.

Working with the Authority to monitor Transpower's unregulated activities

10.28 While there is potential that Transpower's DR programme may be restarted, Transpower has committed (as part of its engagement with the Authority and the Innovation and Participation Advisory Group (**IPAG**)[157]) to not offer flexibility services in a manner which creates competition issues and to not price FMS and DERMS services in a way that prohibits competition or inhibits the development of a marketplace for such services.

10.29 The IPAG has recommended the Authority to:[158]

10.29.1 Monitor what progress Transpower makes on its commitment to:

10.29.1.1 not price FMS and DERMS services in a way that impedes competition for these services or inhibits the development of a marketplace; and

10.29.1.2 ensure that costs are allocated in ways that do not create competition issues.

[157] IPAG is an independent expert group who advise the Authority on issues specifically related to new technologies and business models, and consumer participation.

[158] Innovation and Participation Advisory Group (IPAG) "IPAG Review of the Transpower Demand Response Programme" (12 July 2021) available at https://www.ea.govt.nz/documents/527/IPAG_review_of_the_Transpower_demand_response_programme.pdf

10.29.2 If the Authority believes that Transpower's DR programme is distorting markets for flexibility and flexibility management, then the Authority with the Commission could consider imposing on Transpower the same related party transaction rules and/or cost allocation rules that are already imposed on EDBs.

10.30 While IPAG's recommendation was to monitor the situation, we consider that acting now is preferable because:

10.30.1 as noted above, imposing new cost allocation rules only after Transpower has undertaken an unregulated investment will not influence its behaviour ex ante, and may require reactive action to prevent the full inclusion of shared costs in the regulated asset base which undermines the predictability of the Part 4 regime;

10.30.2 allow the risks to efficiency, profitability, and competition mentioned above to manifest; and

10.30.3 the timing of the IM Review means we can put in place ID rules to monitor the allocation of shared costs in advance of future resets, whereas a delay may mean that changes cannot be in place until the next IM Review (likely to be in 2030, with the following RCP not applying these rules until 2035).

Implementation

Deciding on a cost allocation methodology

10.31 We have considered applying one of three cost allocation methodologies (which are not currently required of Transpower). These methodologies are:[159]

10.31.1 Avoidable cost allocation methodology (**ACAM**);

10.31.2 Accounting based allocation approach (**ABAA**); and

10.31.3 Optional variation to accounting based allocation approach (**OVABAA**).

10.32 We have analysed each of the three methodologies against the three criteria in the table below:

[159] For more information on these cost allocation methodologies, refer to Chapter 3 and Appendix B of the "Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper" (22 December 2010).

Figure 10.1: Comparison of cost allocation methodologies

	ACAM	ABAA	OVABAA
Mitigate excessive profit risk	Using ACAM in general can allow suppliers to allocate costs associated with unregulated services to regulated services. Overall, ACAM is poor at mitigating excessive profit risk.	ABAA requires shared costs to be allocated across all types of services, compared with ACAM which allocates all shared costs to the regulated services. Using ABAA is effective at mitigating excessive profit risk.	OVABAA allows suppliers to allocate a greater proportion of common costs to regulated services than under ABAA. Overall, OVABAA is not as effective as ABAA in terms of mitigating excessive profit risk, but OVABAA is more effective than ACAM.
Mitigate competition risk	Where shared costs are low, using ACAM vs ABAA would not produce materially different outcomes in terms of producing workably competitive markets. However, where shared costs are not low, then ACAM is inferior to ABAA in mitigating competition risk because ACAM would incentivise suppliers to allocate costs to the regulated service to enhance profitability.	Where shared costs are not low, ABAA is expected to move the allocation of shared costs closer to those in workably competitive markets.	Indirectly, using OVABAA will create greater incentives for suppliers to invest in new unregulated services than ABAA. This is because the way that ABAA allocates costs may unduly deter new investments in unregulated services. OVABAA allows for a greater recovery of shared costs from regulated services (than ABAA) in the short-term (and possibly long-term). Using OVABAA has an indirect benefit on maintaining competition in the marketplace by incentivising investment in new unregulated services.

	ACAM	ABAA	OVABAA
Minimise compliance cost/complexity	Applying a cost allocation methodology is likely to increase the compliance cost/complexity. Specifically, ACAM is straight-forward to implement using information disclosure (ID) data which is readily available, and suppliers have to report this information anyway. Based on the usage of available ID data, ACAM has the lowest cost to implement.	Applying a cost allocation methodology is likely to increase the compliance cost/complexity.	There is a moderate amount of compliance burden/complexity associated with using OVABAA. Suppliers will need to provide the Commission with director's certification, comply with ID and monitoring requirements. This provides flexibility rather than having overly prescriptive requirements for using OVABAA. In terms of the compliance cost of using OVABAA, there is generally a greater cost than other cost allocation methodologies.
Overall	Overall, ACAM has a low compliance cost in terms of implementation because it uses available ID data. ACAM is largely neutral in terms of mitigating excessive competition risk, compared to using ABAA. However, ACAM is poor at mitigating excessive profitability risk. Since ACAM is a poor way of mitigating excessive profitability risk, ACAM is not the preferred option.	Overall, ABAA is a good way to allocate costs which mitigates excessive profit and competition risk – in a more effective manner than using ACAM. ABAA is also the most commonly used method of cost allocation. In general, there is some compliance burden when imposing a cost allocation approach. ABAA is our preferred cost allocation methodology.	OVABAA is not as effective in mitigating excessive profitability risk as ABAA but more effective than ACAM. The positive of using OVABAA is an indirect benefit on maintaining competition in the marketplace by incentivising investment in new unregulated services. There is a moderate amount of compliance burden/complexity associated with OVABAA. Overall, OVABAA is not preferred because it is not as effective at mitigating excessive profit risk as ABAA and has a moderate amount of compliance burden/cost.

Use of a trigger

10.33 We have considered using a trigger before the cost allocation rules come into effect. This is because, as noted above, Transpower's unregulated costs should be sufficiently material before the cost allocation rules are applied to warrant the additional compliance costs.

10.34 We considered the following trigger options:

10.34.1 No trigger – which requires ABAA as a cost allocation methodology (having already assessed ABAA as the most appropriate allocation methodology);

10.34.2 Revenue-based trigger – using unregulated revenue as a percentage of total revenue; and

10.34.3 Cost-based trigger – using common costs (costs not directly attributable) as a percentage of regulated costs.

10.35 We have analysed these options against the three criteria in the table below:

Figure 10.2: Comparison of options for triggers of cost allocation

	No trigger	Revenue trigger	Cost trigger
Mitigate excessive profit risk	ABAA is best for mitigating excessive profit risk as it requires costs to be allocated across regulated/unregulated services. In the counterfactual, regulated suppliers have the incentive to increase profitability by allocating costs to regulated services.	Less effective at mitigating excess profit risk than a cost trigger, as revenue is only indirectly related to the scale of shared costs (and potential cross-subsidisation risk).	Better than a revenue trigger, as the driver of cost allocating being brough in is directly tied to the scale of potential cross-subsidisation or misallocation.
Mitigate competition risk	ABAA can move cost allocation closer to that of workably competitive markets than ACAM. The exception is when shared costs are low, ACAM does not produce materially different competition outcomes than ABAA.	Where proportion of unregulated services is small, there is no material difference between ACAM and ABAA in terms of moving outcomes closer to that of workably competitive markets. However, if the proportion of unregulated services is growing compared to regulated services, ACAM is not as effective as ABAA at moving cost allocation outcomes closer to that of workably competitive markets. Overall, ACAM is not as effective as ABAA for mitigating competition risk.	ABAA is expected to move allocation of shared costs closer to that of workably competitive markets than ACAM. The exception is when shared costs are low, using ABAA or ACAM does not produce materially different outcomes in terms of workably competitive markets.

	No trigger	Revenue trigger	Cost trigger
Minimise compliance cost/ complexity	Having no trigger reduces the compliance cost/complexity, although Transpower will need to apply ABAA (which in itself creates a degree of compliance cost/complexity).	Straight-forward to implement using information disclosure data which is readily available and suppliers must report this information anyway. Overall, positive.	Would have a higher compliance cost, but we do not consider it significantly more costly than the status quo. Transpower already discloses transmission line costs under ID (Transpower ID determination 2014). Currently, Transpower is not required to disclose common costs. To find out what Transpower's common costs are, the Commission will need to require Transpower to disclose these costs which increases the compliance cost and complexity.
Overall	The no trigger option defaults to using ABAA as the cost allocation approach which can mitigate excessive profit and competition risk. However, there will be some compliance burden when the common costs are not sufficiently material to warrant applying cost allocation.	Overall, using a revenue-based trigger is neutral, there is minimal compliance cost/complexity as the information is available already.	Using a cost-based trigger once common costs become sufficiently material is the preferred option as it will mitigate excessive profit risk, and better mitigate competition risk than using a revenue-based trigger. This option does require Transpower to disclose its common costs which increases the compliance cost/complexity to a small extent.

10.36 Our preferred option is to use a cost-based trigger (common costs as a percentage of regulated costs) to best mitigate the risk of competition issues and excessive profitability, as it is more closely linked to the source of the risk (common costs) while at the same time not immediately imposing regulatory cost where the risk is small.

10.37 Our draft decision is that if Transpower's common costs exceed 2% of its regulated costs, then ABAA is the relevant cost allocation approach.

10.38 The choice of any specific numerical threshold is an exercise of judgment: we do not consider there is a precise basis for deriving an exact figure. This decision must balance not being so low as to impose significant regulatory costs on the regulated supplier for limited benefit, while at the same time not being so high that it could result in a misallocation of costs.

10.39 The proposed 2% threshold for the trigger before Transpower is required to apply cost allocation equates to approximately $5 million on an opex basis or $98 million on a RAB basis based on 2022 figures.[160]

Issue #2: Adding related party asset valuation (AV) rules for Transpower

Draft decision

10.40 Our draft decision is to add the related party AV rules from the EDB and GPB IMs into the Transpower IMs, subject to any required modifications.[161]

10.41 A description of this issue, the proposed change and our rationale is set out in Attachment A of our draft Report on the IM Review.

Issue #3: Treatment of capital contributions

Problem definition

10.42 Unlike the IMs for other sectors, the Transpower IM is silent on the accounting treatment of capital contributions from third parties. While the Capex IM includes provision for how contributions are treated as part of the major capex investment test,[162] no explicit provision is made for how they are accounted for outside of this assessment.

10.43 Where capital contributions are not explicitly provided for, they are treated in line with Transpower's general accounts. This may mean their entire value is acknowledged (counted as revenue) in a single year.

10.44 Given the long-lived nature of many transmission assets, we consider that reductions to the cost of the asset – like the cost of the asset itself – should in principle be spread over time.

10.45 The problem relates specifically to contributions towards assets not covered by new investment contracts. Where the contribution is towards an asset covered by a new investment contract, we consider the current provisions are robust.[163] However, this is not the case with other assets that are included in Transpower's RAB.

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[160] Commerce Commission "Transpower information disclosure data 2015–2022", Schedule F1(i) closing RAB value and Schedule F2(i) Total operating expenditure.

[161] Such modifications include the changes we are proposing to make to the EDB/GPB IMs to make it clearer that GAAP applies to the valuation of commissioned assets acquired from related parties.

[162] Commerce Commission *Transpower Capital Expenditure Input Methodology Determination 2012* [2012] NZCC 2 (consolidated as of January 2020), Schedule D, paragraph D4(1)(i).

[163] The entire value of new investment contract assets is already excluded from the RAB, regardless of whether Transpower received capital contributions in respect of them. Commerce Commission *Transpower*

Draft decision

10.46 Our draft decision is to make no change to the Transpower IM.

10.47 We are satisfied that, under Transpower's current accounting practices, the issue is presently restricted to a narrow range of capital contributions. As such, we have insufficient evidence that it would better promote the s 52A purpose and the benefits to changing the IMs would be unlikely to justify the transitional compliance costs at this point.

Analysis

10.48 When originally introducing the 'net approach' to capital contributions for EDBs and GPBs, we said:[164]

> The Commission considers that adopting the 'net approach' avoids the year on year volatility in disclosed ROIs that occurs with treating capital contributions as income, which would affect assessing profitability for the purposes of information disclosure and resetting starting prices for DPPs. For CPPs, the net approach should reduce the effect of differences between forecast and actual capital contributions. Under the 'net approach' the effect of capital contributions are spread over the remaining life of the asset and should be NPV-equivalent to the 'income approach' over the life of the asset.

10.49 According to Transpower's most recent financial statements:[165]

> The money received from customer investment contracts can be received over different contract periods varying between all up-front to up to 50 years. The assets built for the customers are owned by Transpower, however, Transpower is providing a service to the customers over the life of the asset. The service is the monthly transmission of electricity and the customers' consumption of that benefit. Therefore, the revenue is grossed up for an imputed interest expense and recognised over the estimated life of the related assets.
>
> Agreements between Transpower and third parties to underground and/or realign certain transmission line assets are recognised based on the revenue source. If the revenue is received from central or local government, or their agencies, then the revenue is recognised according to the government grants standard (NZ IAS 20) with revenue grossed up for an imputed interest expense and recognised over the life of the related transmission assets. If revenue is received from non-government parties, then it is recognised at a point in time, once the transmission assets are commissioned. The decommissioned transmission assets are then immediately written off for the same value. In contracts with non-government customers, the performance obligation is the shifting of the transmission line.

Input Methodologies Determination 2010 [2012] NZCC 17 (consolidated as of 29 January 2020), clause 2.2.7(1)(d).

[164] Commerce Commission "Input Methodologies (Electricity Distribution and Gas Pipeline Services) – Reasons Paper" (December 2010), para E7.4.

[165] Transpower "Tauākī pūtea: Financial statements for the year ended 30 June 2022" (30 September 2022), p. 9.

10.50 Based on this and the provisions of the current IMs, capital contributions towards:

10.50.1 new investment contract assets are spread over the life of the asset;

10.50.2 relocations or undergrounding from a public entity are spread over the life of the asset; and

10.50.3 relocations or undergrounding from a private entity are recognised as revenue in the year of commissioning.

10.51 As such, the timing problem discussed at 10.43 only applies to contributions from private entities. Based on a review of Transpower's financial statements, this amount averages about 1.7% of annual revenue.[166]

10.52 We also note that Transpower only has an explicit accounting policy for contributions towards undergrounding or relocations. The treatment of contributions (outside of a new investment contract) towards other categories of capex is unclear. For example, the treatment of possible contributions from government to deal with general asset reinstatement after a climate related disaster could be treated as deferred income or as a reduction in the cost of assets under NZ IAS 20, with different outcomes in terms of expenditure incentive penalties/rewards and pricing. Different outcomes could also arise in respect of government contributions towards development of Renewable Energy Zones.[167] It is also unclear how frequent other capital contributions not related to asset realignment or undergrounding are in practice, or whether they are more likely in future. If this issue becomes more significant, we may need to revisit this decision at a future point.

Issue #4: Transpower's proposal of making insurance payments a pass-through cost

Background

10.53 Transpower proposed making insurance costs a pass-through cost (which is to fall onto consumers). Transpower has cited increasing insurance costs and its perception of itself as a price-taker for making this proposal.[168]

Draft decision

[166] Transpower "Integrated Report FY22" (30 September 2022), page 112; Transpower "Integrated Report 2020/21" (30 September 2021), page 125; Transpower "Annual Report 2019/20" (21 August 2020), page 41; Transpower "Annual Report 2018/19" (23 August 2019), page 34.

[167] For further information on the Renewable Energy Zones, please see https://www.transpower.co.nz/projects/renewable-energy-zones.

[168] Transpower "Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 33.

10.54 In draft, we are making no change to the IMs because we consider that Transpower's proposal would undermine incentives for efficiency under s 52A(1)(b) of the Commerce Act.

10.55 While insurance costs may be increasing, and these costs may not be entirely within Transpower's control, we do not consider that passing these costs onto consumers would lead to better outcomes under s 52A of the Commerce Act.

10.56 Treating insurance as a pass-through cost would be detrimental to Transpower's incentives to efficiently manage the risks it chooses to insure against and the way it chooses to insure against these risks, contrary to s 52A(1)(b) of the Act. For example, when considering whether self/captive insurance would be a more efficient way of managing risk than insurance provided by a third party.

10.57 This is also consistent with our approach to treatment of insurance costs for EDBs.

Chapter 11 Other price path reopener provisions

Purpose and structure of this chapter

11.1 The purpose of this chapter is to set out:

11.1.1 our draft decisions on opex solutions as an alternative to capex when Transpower proposes its Major Capex Proposal, listed project and Enhancement and Development (**E&D**) reopeners;

11.1.2 our consideration of consequential opex incurred to deliver MCPs; and

11.1.3 our consideration of automatic price-quality path adjustments.

Issue #1 – Opex as an alternative to listed project and E&D capex

Problem definition

11.2 There is no ability for Transpower to propose and cost recover opex solutions as alternatives to listed project capex or Enhancement and Development (E&D) reopener capex.

Draft decision

11.3 Our draft decision is:

11.3.1 to amend the E&D capex reopener mechanism in the Transpower IM to allow non-transmission opex solutions as an alternative to capex; and

11.3.2 not to amend the listed project mechanism in the Capex IM to allow opex solutions as an alternative to capex.

Stakeholder views

11.4 Transpower submitted that neither the listed project nor the E&D re-opener mechanisms provide for recovery of opex solutions such as transmission alternative services.[169]

Analysis

11.5 Presently the listed project and E&D reopener mechanisms are restricted to capex solutions. We have considered whether opex solutions are reasonable as alternatives to capex for these mechanisms.

[169] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), at p. 37.

11.6 Listed projects are major asset renewals projects – e.g., projects to replace conductors due to deteriorating condition. An opex reopener for listed projects is unlikely to be appropriate unless it is for removal of a transmission line from service and replacement with a demand-side or generation alternative. Transpower did not provide examples of what opex solutions were applicable for a mechanism that is focussed on existing asset renewals.

11.7 In the RCP3 decision, we introduced an opportunity to apply for a single mid-period reopener for the Enhancement and Development (E&D) capex programme. E&D projects are small projects for the purpose of increasing grid capacity.

11.8 This reopener was introduced because it is difficult for Transpower to reasonably forecast E&D capex so far in advance when the price path proposal is being prepared, proposed, and decided on.

11.9 The mid-period E&D capex reopener provisions are set out in clause 3.7.3B of the Transpower IMs and do not presently allow for opex solutions.

11.10 The Capex IM allows that opex non-transmission solutions are available as alternatives to transmission in an MCP. Our view is that there could be demand-side and generation alternatives (non-transmission opex solutions) that may reasonably defer transmission capacity enhancement and that this option should be available to Transpower.

11.11 This is consistent with:

11.11.1 changes to other IMs in the CPPs and In-Period Adjustments topic paper decisions for EDB and GPB large project reopeners, published as part of the current IM Review decisions package; and

11.11.2 the existing Capex IMs that permit MCP non-transmission opex for alternatives to transmission.

Proposed solution

11.12 Our draft decision is to allow opex as part of the E&D mid-period reopener and to make no change for listed projects.

Implementation

11.13 Following a review of the IMs, we have decided in draft to amend the Transpower IMs clause 3.7.3B to allow opex solutions when Transpower seeks an E&D reopener. We will define a new term ‘non-transmission solution opex’ in the Transpower IM which is an extension of the Capex IM ‘non-transmission solution’ definition in the Capex IM. We will incorporate the option of non-transmission solution opex into clause 3.7.3B of the Transpower IM.

11.14 This proposed change will meet the overarching objectives of our decision-making in the IM Review by promoting the Part 4 purpose in s 52A more effectively. This is because it will facilitate the most economic solutions to be considered and implemented when base capex enhancements in the grid are required.

Issue #2 – Consequential opex following an MCP

Problem definition

11.15 There is no cost-recovery mechanism for opex that is incurred as a direct consequence of delivering an MCP.

Draft decision

11.16 Our draft decision is to allow, in an MCP application, Transpower to seek approval for opex that is incurred as a consequence of delivering the MCP.

Stakeholder views

11.17 Transpower submitted that there is no provision for it to cost recover opex incurred to deliver new MCPs such as ICT, asset management and operations, and business support costs, that has not been capitalised.[170] This is considered consequential opex.

Analysis and proposed solution

11.18 We have reviewed the full range of reopener provisions in the IMs. We decided to allow the possibility that EDBs and GPBs may include costs, incurred during and following implementation of a capex solution, that cannot be capitalised. We have termed this consequential opex.

11.19 Transpower in its submission noted that it was unable to cost recover opex increases that result following MCP commissioning. While Transpower did not provide further evidence about the quantum of the opex, it likely faces similar consequential opex cost issues faced in the EDB and GPB sectors.

11.20 Transpower's opex is tailored to its circumstances at each reset where it is able to forecast and justify opex need for the forecast 5-year period using the base-step and trend modelling approach. The consequential opex risk at present is uncapitalised MCP opex costs incurred prior to its next price path reset that have not been included as base opex in the base, step and trend modelling.

11.21 Our proposed solution is to include consequential MCP opex in the Capex IM that can be included in an MCP or MCP (staged).

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[170] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 9.

11.22 In making an application for consequential MCP opex in the MCP we would expect Transpower to be able to sufficiently demonstrate why the opex increase is required; specifically, it should provide evidence supporting that increase and explain what aspect of consequential MCP opex costs are one-off costs and what is ongoing.

Implementation

11.23 Our draft decision is to include consequential MCP opex as one of the costs and benefits in the investment test in Schedule D4. This allows us the ability to scrutinise the proposed opex. It also recognises that different MCP investment options may have different consequential MCP costs, and that there may be different one-off and ongoing costs over time.

11.24 As part of our draft decision, we also propose to modify the MCP information provisions in Schedule G4 and G5 to ensure that the information relating to each investment option and the proposed investment extends to consequential MCP opex.

11.25 Schedules G4 and G5 set out supporting information requirements about the quantum, and methodology used to determine that quantum, for each cost and benefit in the investment test. This promotes an outcome where Transpower provides adequate supporting information for proposed consequential MCP opex.

11.26 Based on the information we currently have before us we consider that allowing consequential MCP opex is supported. It meets the objectives of the IM Review framework in promoting the Part 4 purpose in s 52A more effectively by allowing Transpower to recover reasonable opex costs associated with an MCP, which it cannot do at present.

Issue #3 Automatic price path adjustments

11.27 Transpower submitted that the IMs should allow for more automatic adjustments to the price-quality path to avoid "unnecessary administrative costs for both Transpower and the Commission". Transpower suggested that one example was that after an MCP is approved it needs to go through a separate process to have the price path adjusted for the revenue changes linked to the MCP.[171]

[171] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 33.

11.28 Transpower also proposed an automatic price path adjustment mechanism, for circumstances where it needs to bring forward an asset renewal due to a customer driving a connection asset capacity increase.[172]

11.29 While we scrutinise an MCP against the investment test requirements for example before approving that MCP expenditure, we still need to ensure that the revenue impact of the MCP, has been implemented correctly. This underpins the necessity for Transpower to provide revenue impact information when the price path has been reconsidered.

11.30 Additionally, when Transpower submits an MCP or listed project proposal for example, it can also submit the revenue impact information consistent with the requirements from clause 3.7.4(4) of the Transpower IM. No separate process is necessary.

11.31 Our draft decision is that allowing the price path to be automatically adjusted following approval of price path reconsiderations such as an MCP or listed project, is not supported and does not meet the objectives of the IM Review framework in promoting the Part 4 purpose in s 52A more effectively as it would not provide the necessary scrutiny.

[172] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 33.

Chapter 12 Miscellaneous Transpower IM and Capex IM clause issues

Purpose of this chapter

12.1 The purpose of this chapter is to summarise our decisions on a number of discrete Transpower Capex IM and Transpower IM clause issues that have been identified internally or externally in submissions to the Process and issues paper.

Structure of this chapter

12.2 This chapter sets out a summary of our decisions on the following issues:

12.2.1 amendments to information requirements for transmission charges in the Capex IM – for consistency with the Transmission Pricing Methodology (**TPM**);

12.2.2 making no change to the reference to the net market benefit test for base capex projects over the base capex threshold in clause 3.2.1 of the Capex IM;

12.2.3 clarifying (but not amending) clause 3.2.1 of the Capex IM to avoid capturing ongoing programmes of work; and

12.2.4 insufficient support for drafting changes to the reopener provisions in clauses 3.7.4 and 3.7.5 of the Transpower IM.

Minor clause issues resulting in change – information on transmission charges

12.3 Our draft decision is to amend clause 7.5.1 of the Capex IM, which requires an explanation of project impacts on transmission charges and delete references to estimating increases in transmission charges based on "per kilowatt of demand", for consistency with the new TPM.

Minor clause issues resulting in no change

12.4 Based on our review of submission material and analysis of that material, against our decision-making framework, we decided that changes resulting from the minor Capex IM clause issues raised in submissions were not supported. Accordingly, we have:

12.4.1 retained the current clause 3.2.1 requirement that a cost-benefit analysis must be undertaken on a base capex project or programme involving forecast capital expenditure of greater than the base capex threshold;

12.4.2 retained the current clause 3.2.1 requirement that consultation must be undertaken on a base capex project or programme involving forecast capital expenditure of greater than the base capex threshold; but clarify that Transpower is not required to undertake consultation for ongoing programmes of work that have already been consulted on; and

12.4.3 made no amendments to clauses 3.7.4 and 3.7.5 of the Transpower IM.

Issue #1 - Amendments to information requirements on transmission charges

12.5 This draft change addresses an issue of consistency between transmission charge calculation under the new TPM and the Capex IM.

Problem definition

12.6 In April 2022, the Electricity Authority decided to incorporate the new TPM into the Electricity Industry Participation Code (the **Code**).[173]

12.7 Under the new TPM transmission charges are no longer based on demand supplied by the grid. This means that one of the information requirements set out in the Capex IM (to provide estimated transmission charges per kilowatt of demand) is no longer relevant under the TPM.[174]

Draft decision

12.8 Our draft decision is to amend the Capex IM to delete the references to estimating increases in transmission charges based on "per kilowatt of demand". These references are found in clause 7.5.1 of the Capex IM, which relates to the information requirements for Transpower on the benefits and estimated increase in prices to consumers of proposed investments when Transpower submits an RCP proposal, or an MCP, or a listed project for our assessment.

Stakeholder views

12.9 Submitters did not address this topic in the submissions to the Process and issues paper.

[173] Electricity Authority "Transmission Pricing Methodology 2022 Decision Paper" (12 April 2022).

[174] *Capex IM*, cl 7.5.1.

Background

12.10 Until the 2017/18 Capex IM Review, Transpower had been providing the impact on charges due to major capex investments on request. We codified this requirement in the Capex IM in 2018, in response to a submission from Major Electricity Users' Group (**MEUG**):[175]

> …a supplier in a competitive market setting would advise customers of such expected future increases in charges and explain the additional benefits that customer will receive.

12.11 Based on the transmission pricing methodology of that time, we specified that Transpower provide a description of benefits, costs to consumers per kilowatt and cost to consumers per kilowatt hour.

12.12 Since the new TPM no longer bases transmission charges on kilowatt (peak demand), this information no longer has any explanatory value. We have decided in draft to amend the IMs to reflect this change.

Proposed solution

12.13 Under the current Capex IM clause 7.5.1 requirements, Transpower must provide an estimate of the future increase in prices and an explanation of the additional service and system benefits consumers will receive for the following project types:

12.13.1 proposed base capex included in an RCP proposal; and

12.13.2 expenditure in a listed project or major capex project application when it seeks our approval.

As part of the clause 7.5.1 requirement to provide estimated price increases above, Transpower is required to estimate the increase in transmission charges per kilowatt of demand and per kilowatt-hour of energy delivered.

12.14 The new TPM does not base transmission charges on demand (measured in kilowatts or megawatts) supplied by the grid. Therefore, the requirement to estimate the expected impact in transmission charges per kilowatt of demand in clause 7.5.1(1)(c) and (2)(d) of the Capex IM no longer provides any meaningful information and is not needed.

[175] Commerce Commission "Transpower capex input methodology review Decisions and reasons" (29 March 2018), paras 329-342.

12.15 This draft decision promotes the overarching objectives for the IM Review by reducing compliance costs, other regulatory costs, or complexity (without detrimentally affecting the promotion of the s 52A purpose). [176]

12.16 Our draft decision will reduce compliance costs and complexity by:

12.16.1 removing the requirement for Transpower to provide information that is no longer required for setting transmission charges under other regimes; and

12.16.2 providing for consistency with other regulatory regimes.[177]

Issue #2 - Clause 3.2.1 of the Capex IM - Net Market Benefit Test for Base Capex Projects that exceed the Base Capex Threshold

12.17 This section considers the requirement for Transpower to undertake cost-benefit analysis consistent with the net market benefit test for base capex projects that are greater than the base capex threshold.

Problem definition

12.18 The issue is whether expected net electricity market benefit remains, a reasonable evaluation criterion for projects where reliability is the primary driver. In particular, the perceived problem is that the Net Electricity Benefit Test is unsuitable for replacement investments driven by condition and asset management strategies as these investments do not usually create new or additional benefits but are a continuation of existing benefits.

Draft decision

12.19 Our draft decision is to maintain the requirement in clause 3.2.1 of the Capex IM requiring Transpower to undertake a cost-benefit analysis consistent with determining expected net electricity market benefit.

Stakeholder views

12.20 Transpower submitted that determining net market benefits for programmes or projects related to reliability may not be a reasonable evaluation criterion under the clause 3.2.1 of the Capex IM.[178]

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[176] Commerce Commission "Part 4 Input Methodologies Review 2023: Framework Paper" (13 October 2022), at para 3.12.

[177] In accordance with our obligation to consider the impact of any provisions of the Code, under section 54V of the Commerce Act.

[178] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 37.

12.21 In its submission, following the Capex IM workshop, Transpower said that:[179]

> We now propose to remove "consistency with nbt"… The NBT test is designed for mcp > $20m driven by demand and generation scenarios. The origin for the base capex clause was for reconductoring projects and their options analysis does fit with a CBA that maximised net benefits. However many replacement investments are driven by condition (and asset management strategies) and these are a continuation of existing benefits rather than creating new/additional benefits (unless incidentally).

Background

12.22 Clause 3.2.1 of the Capex IM requires Transpower to undertake a cost-benefit analysis, consistent with determining expected net electricity market benefit, prior to undertaking a project or programme with a forecast cost greater than $20 million.[180] The intent of the clause is to subject those large base capex projects, that are similar in size and economic impact to major capex projects, to similar levels of scrutiny. This imposes a requirement to undertake cost-benefit analysis and consultation for large base capex projects, in line with major capex projects.

Proposed solution

12.23 Our proposed solution is to keep the expected net electricity market benefit evaluation requirement in clause 3.2.1. We consider that the net market benefit test is still appropriate for replacement investments as benefits can be quantified by reference to asset criticality.

Reasons for our proposed solution

12.24 In our 2012 Capex IM Reasons Paper we explained that a cost-benefit analysis was necessary to "ensure that a thorough and rigorous process is applied when testing the economics and engineering solutions of any base capital expenditure."[181]

12.25 Base capex proposals are predominantly proposals for expenditure to refurbish and renew existing assets (and for E&D base capex projects that are forecast to cost less than the base capex threshold). A cost-benefit analysis approach should underpin all project and programmatic asset replacement and renewals investment decisions, including for volumetric replacement work underpinned by asset survivor curves.

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[179] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), p. 11.

[180] Note that we have made a draft decision is to amend this amount to the defined **base capex threshold**: see our draft decision at Chapter 7 above.

[181] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 3.5.6.

12.26 As part of our RCP3 IPP decision we set information requirements for Transpower to demonstrate progress on its asset health and risk modelling.[182]

12.27 The RCP3 IPP verifier identified that, in some asset classes, Transpower's asset health modelling, and its understanding of asset and network risk, could improve. There are a number of benefits in doing so that align with our clause 3.2.1 (a) cost-benefit analysis requirement, such as:[183]

12.27.1 providing timely, risk-based signals for refurbishment/replacement investment decisions; and

12.27.2 allowing asset refurbishment and replacement strategies to be compared across the asset fleet, and expenditure prioritisation decisions to be made, if a common criticality measure is employed (eg, a monetised approach to risk).

12.28 Since the RCP3 decision was made in 2019, Transpower has been maturing its asset health and risk modelling, in preparation for its forthcoming RCP4 submission. We consider that Transpower is in a much better position than it was in 2019 to analytically demonstrate that base capex is underpinned by cost-benefit analysis,

12.29 Having a mature understanding of asset health, and asset and network risk, makes it much more likely that asset replacement and renewals strategies (and expenditure forecasts) can be analytically underpinned by cost-benefit analysis, rather than being based on historical expenditure levels.

12.30 In conclusion, we consider that Transpower should have the necessary analytical tools and information to allow it to carry out analyses consistent with the net electricity market benefit test. The mature understanding of asset health, and asset and network risks and the quantification of asset criticality means that Transpower should be able to estimate the benefit of investment compared to the counterfactual that renewal investment is not made. This benefit is likely to include avoided asset failures and consequences.

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[182] RCP3 IPP Determination Asset Health and Risk Modelling 53ZD available at https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-transmission/transpowers-price-quality-path/setting-transpowers-price-quality-path-from-2020?target=documents&root=102837

[183] Commerce Commission "Transpower's Individual Price-Quality Path from 1 April 2020: Decisions and Reasons Paper" (29 August 2019), para L16.

12.31 This analysis would give effect to the original policy intent that "thorough and rigorous process is applied when testing the economics and engineering solutions of any base capital expenditure," to justify renewal investment. Transpower has not made the case that the clause 3.2.1(a) costs-benefit analysis requirements are not a reasonable evaluation criterion, and that our reasons for this requirement are still valid.

12.32 This draft decision will promote the overarching objectives for the IM Review. The existing IM effectively promotes the s 52A Part 4 purpose as the current clauses protect the interest of consumers by ensuring projects and programmes are assessed using a criterion that provides sufficient economic scrutiny ensuring Transpower makes the right investment at the right time.

Stakeholder views

12.33 Transpower proposed removing reference to the net electricity market benefit in clause 3.2.1 of the Capex IM.

12.34 We consider the removal of the clause 3.2.1 requirement would not meet the overarching objectives for the following reasons:

12.34.1 It would not provide greater regulatory certainty for the purposes of s 52R; and

12.34.2 While it might reduce regulatory cost and complexity, it would do so at the detriment of the Part 4 purpose through the reduction of scrutiny of base capex projects and programmes – which is core to promoting the long-term interests of consumers.

Issue #3 - Clause 3.2.1 of the Capex IM – Consultation for ongoing programmes of work

12.35 The current drafting of clause 3.2.1 of the Capex IM requires Transpower to undertake consultation for all base capex projects and programmes over the base capex threshold.

Problem definition

12.36 The perceived issue with the current drafting of clause 3.2.1 is that it is unclear whether the consultation requirement is only required for base capex projects and programmes that have already been consulted on. Submitters consider programmes that are underway should not be subject to further consultation obligations.

Draft decision

12.37 Our draft decision is to clarify that the current drafting of clause 3.2.1 of the Capex IM only requires Transpower to conduct consultation when the programme is first proposed and that there are no ongoing consultation obligations once the programme has commenced. We have not amended the Capex IM to achieve this clarification as the current wording reflects this intent.

Stakeholder views

12.38 Transpower submitted:[184]

> The definition should be clarified to avoid capturing ongoing programmes of work which are already consulted on via the base capex proposal. We are happy to discuss how the definition of programme can be clarified as this also relates to listed projects.

12.39 Transpower further submitted in a post workshop submission that:[185]

> A "to avoid doubt" clarification that the consultation under 3.2.1 is only for discrete projects that are R&R > $20m (not programmes, as programmes are consulted and approved under the RCP proposal process).

Proposed solution

12.40 Our proposed solution is to clarify via the reasons paper that clause 3.2.1 consultation requirement is not intended to impose further consultation for ongoing base capex programmes after the initial consultation has been undertaken for a base capex programme (which has been undertaken in line with clause 3.2.1).

Reason for proposed solution

12.41 We consider that the original intention of clause 3.2.1 was to impose consultation requirements on programmes, of a scope commensurate with the nature and significance of the programme, when those programmes are first proposed but not any further consultation once the work has started.

12.42 The intent of clause 3.2.1 of the Capex IM was originally described as follows:[186]

> The Base capex policies and processes adjustment is an asymmetric penalty that makes Transpower bear a portion of the costs, determined by the Base capex incentive rate, for those Base capex assets that were not fully subjected to Transpower's policies and processes, or in all material respects meet the requirement to undertake a cost-benefit analysis and consultation consistent with Major capex. The reason for this is to ensure that a

[184] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 37.

[185] Transpower "Submission on IM Review Transpower capital expenditure workshop" (25 November 2022), p. 11.

[186] Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 3.5.6.

thorough and rigorous process is applied when testing the economics and engineering solutions of any base capital expenditure.

Although the base capex policies and processes adjustment mechanism was removed during the 2018 Capex IM Review, the policy intent of applying a consistent approach to consultation and cost benefit analysis for major capex remains.

12.43 The policy intent was that base capex projects and programmes that are similar in economic impact should be subject to the same thorough and rigorous process given they are proportionate in economic impact and should receive proportionate scrutiny.

12.44 MCP consultation requirements do not require Transpower to undertake any further consultation once an MCP has been approved and work commences on the project even if it spans multiple RCPs. We consider that a base capex project or programme does not need to be subject to consultation requirements that are more onerous than those for an MCP.

12.45 We also consider that the policy intent is reflected in the drafting of the clause which states that consultation is required "prior to undertaking the **project** or **programme**". This is interpreted to mean that Transpower is not required to conduct further consultation for an ongoing base capex project or programme.

12.46 Our proposed solution will provide greater regulatory certainty (consistent with the IM purpose in s 52R) as to the consultation requirements for a base capex project or programme.

Issue #4 – Insufficient support for drafting changes to the reopener provisions in clauses 3.7.4 and 3.7.5 of the Transpower IM

12.47 Clauses 3.7.4 and 3.7.5 in the Transpower IM set out the processes for reconsidering Transpower's Individual Price-Quality Path and how the Individual Price-Quality Path will be amended following reconsideration.

Problem definition

12.48 The issue is whether the current drafting of clauses 3.7.4 and 3.7.5, in particular the qualifier "any more than is reasonably necessary", creates a barrier to applying the policy intent of these clauses. The policy intent is that, following reconsideration of the price-path, we may amend grid output targets, caps, collars and grid output incentive rates associated with revenue-linked grid output measures *only to the extent required to take into account the change in costs arising from the 'event'* for MCPs, E&D and Listed projects.

Draft decision

12.49 Our draft decision is to keep clause 3.7.4 and 3.7.5 in the current form. We consider the clauses remain fit for purpose and achieve the policy intent.

Stakeholder views

12.50 Transpower submitted that:[187]

> Despite the policy intent that the Commission may amend the grid output targets, caps, collars and grid output incentive rates associated with revenue-linked grid output measures for Major Capex, Listed and E&D re-opener projects, we consider the drafting creates a barrier to applying the policy (e.g. the drafting "any more than is reasonably necessary to take account of the change in costs".) Seek drafting to support effective policy application.
>
> Note, in May 2022 we consulted on allowing MCPs, customer related work and listed project work to be excluded from our service measures.

Proposed solution

12.51 After considering the submission provided, we conclude that Transpower has not provided sufficient reasoning nor evidence in its submissions on this point to allow us to make any changes. We do not see how the qualifier "any more than is reasonably necessary" prevents the policy application.

12.52 Our draft decision is to not amend clauses 3.7.4 and 3.7.5. We have not received compelling support from submissions on the issue. The clause achieves the original policy intent and does not require change. We consider further amendments to these clauses in line with Transpower's submission are unlikely to better achieve the policy intent.

12.53 The original policy intent was that:[188, 189]

> Amendments will be limited to the extent required to take into account the change in costs arising from the 'event', therefore will not allow for amendments beyond those required to rectify or compensate for the event. […]

12.54 Allowing the price-path to be reconsidered, beyond those changes reasonably necessary to take account of the changes arising from the qualifying event, is undesirable as it creates uncertainty for suppliers and consumers as to the allocation of risk and detracts from the *ex-ante* incentives applying upon Transpower in accordance with the Part 4 purpose.

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[187] Transpower "Submission on Input Methodologies Review 2023: Draft Framework Paper and Process and Issues Paper" (11 July 2022), p. 38.

[188] Commerce Commission "Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper" (22 December 2010) (**EDB and GPS Reasons Paper**), at para 8.4.31.

[189] The Transpower Capex IM directly refers to the reasoning of the EDB and GPS Reasons Paper.

12.55 The current drafting gives effect to the originally intended policy application by limiting the extent to which we may amend the measures to no more than would be required to take account of any additional costs. Even with the qualifier, there is considerable flexibility regarding the amount these measures may be amended. The current drafting means that the amendments to the IPP must be reasonably justified and must only be changed enough to rectify and compensate for the change in costs. For this reason, we consider the drafting achieves the policy intent.

12.56 Our decision promotes the Part 4 purpose in s 52A. The solution protects consumer's interests by limiting the uncertainty for suppliers and consumers as to the allocation of risk.

Attachment A Comparison of actual project costs and approved MCA for completed projects

Table A.1: MCA and actual project costs of completed major capex projects ($ million)

Project	Year of approval	P50 MCA cost estimate ($m)	P90 MCA cost estimate ($m)	Approved MCA ($m)	Actual Cost ($m)
MCPs approved by the Commerce Commission					
Bombay Otahuhu Regional	2020	50	-	50	33
Bunnythorpe Haywards	2014	151	161	161	79
Upper South Island grid upgrade	2013	7	8	8	7
GUPs approved by the Electricity Commission					
CUWLP[190]	2010	147	197	197	127
Upper North Island Dynamic Reactive Support[191]	2010	90	98	98	51
Lower South Island Reliability	2010	56	62	62	32
Wanganui-Stratford Transmission	2010	42	44	44	26
NIGU project	2007	764	824	824	894
North Auckland and Northland Grid Upgrade	2007	334	419	419	352
Otahuhu Diversity project	2007	94	99	99	106

[190] This was approved as the South Island Renewables Project and later referred to as Clutha Upper Waitaki Lines Project (CUWLP) with an approved MCA of $196.9m. The CUWLP project had five sub-projects. Transpower delivered the first two in RCP1 for $44.6 million. The $152.3 million was the allowance the remaining three projects. Source: Transpower compliance report 2015.

[191] One major capex project output was not delivered, another was amended.