

Transpower capex input methodology review

Decisions and reasons

Date of publication: 29 March 2018

Associated documents

Publication date	Reference	Title
31 January 2012	978-1-869451-80-6	Transpower Capital Expenditure Input Methodology: Reasons Paper
27 November 2014	978-1-869454-17-3	Amendments to input methodologies for Transpower to provide a listed project mechanism: Reasons paper
5 March 2015	978-1-869454-34-0	Transpower Capital Expenditure Input Methodology Determination 2012 [2012] NZCC 2 – Consolidated as of 5 February 2015
20 December 2016	978-1-869455-53-8	Input methodologies review decisions - Framework for the IM review
28 April 2017	Notice of intention	Notice of Intention – Input Methodology Review: Transpower Capital Expenditure Input Methodology
15 May 2017	978-1-869455-80-4	Proposed focus areas for the capex IM review
28 July 2017	978-1-869455-98-9	Process update paper
1 September 2017	978-1-869456-10-8	Emerging views on incentives mechanisms
15 November 2017	978-1-869456-17-7	Transpower capex input methodology review: Draft decisions
22 November 2017	978-1-869456-16-0	Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018
29 March 2018	978-1-869456-31-3	Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018

Commerce Commission
Wellington, New Zealand

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Executive summary

Purpose of this paper

- X1. This paper explains our decisions on our review of the Transpower capital expenditure (**capex**) input methodology (**IM**).¹

General overview of findings

- X2. We have decided to make a small number of substantive changes to the existing capex IM, along with a number of incremental improvements.
- X3. Our substantive changes relate primarily to:
- X3.1 the incentives regime that applies to Transpower;
 - X3.2 the approval processes for base capex and major capex; and
 - X3.3 information requirements.
- X4. An overview of the specific changes we have decided to make in these areas is provided below.

The capex IM 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.²
- X6. We promote the long-term benefit of these consumers by promoting outcomes that are consistent with outcomes produced in workably competitive markets – namely that suppliers of regulated services:³
- X6.1 have incentives to innovate and invest including in replacement, upgraded, and new assets;
 - X6.2 have incentives to improve efficiency and provide services at a quality that reflects consumer demands;
 - X6.3 share with consumers the benefits of efficiency gains in the supply of the regulated services, including through lower prices; and
 - X6.4 are limited in their ability to extract excessive profits.

¹ The review of the capex IM is being conducted under s 52Y of the Commerce Act 1986 (**Act**), which requires us to review the IMs within 7 years of setting them.

² Commerce Act 1986, Part 4.

³ Commerce Act 1986, s 52A(1)(a)-(d).

- X7. Under Part 4, Transpower is subject to two types of regulation:
- X7.1 Individual price-quality path (**IPP**) regulation:⁴ The IPP we set under this regulation determines the maximum revenues that Transpower can recover from its customers, as well as the quality standards it must meet, for each year of each five-year regulatory period.⁵ The IPP for the current 2015-2020 regulatory period (**RCP2**) is set out in the *Transpower Individual Price-Quality Path Determination 2015* [2014] NZCC 35 (the **Transpower IPP Determination**).
- X7.2 Information disclosure (**ID**) regulation:⁶ 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. The ID requirements for Transpower are set out in the *Transpower Information Disclosure Determination 2014* [2014] NZCC 5 (the **Transpower ID Determination**).
- 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. 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:
- X9.1 *Transpower Input Methodologies Determination 2012* [2012] NZCC 17 (the **Transpower IM Determination**). This determination was reviewed as part of the 2015-2016 IM review.⁷ 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.
- X9.2 *Transpower Capital Expenditure Input Methodology Determination 2012* [2012] NZCC 2 (**capex IM**). 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
- X10. It is the capex IM that is the subject of the current review.

⁴ The Commerce (Part 4 Regulation – Transpower) Order 2010.

⁵ Under s 53M(4) of the Act, a regulatory period must be five years, but under s 53M(5) the Commission may set a period of four years if it considers this would better meet the Part 4 purpose.

⁶ Section 54F of the Act.

⁷ We published the majority of our decisions on the 2015-2016 IM review in December 2016. Those decisions covered all aspects of the Transpower IM Determination except for decisions on the IRIS, which were published on 29 June 2017.

⁸ An overview of the regulation that applies to Transpower is set out in Attachment A.

Framework for the capex IM review

- X11. The capex IM was set in 2012.
- X12. The review of the capex IM is being conducted under s 52Y of the Act, which requires us to review the IMs within 7 years of setting them. We are publishing our decisions on the capex IM review by the end of March 2018 to allow Transpower time to incorporate changes into its preparations for the 2020-2025 regulatory period (**RCP3**) reset. We will then publish our final determination by the end of May 2018, following a period for technical consultation.
- X13. In reaching our decisions on the capex IM review, we have applied the same framework that we used for reaching decisions on the 2015-2016 IM review.⁹ That means we have decided to only change the capex IM where this is likely to:
- X13.1 promote the Part 4 purpose in s 52A more effectively;
 - X13.2 promote the IM purpose in s 52R more effectively (without detrimentally affecting the promotion of the s 52A purpose); or
 - X13.3 significantly reduce compliance costs, other regulatory costs or complexity (without detrimentally affecting the promotion of the s 52A purpose). This includes making a number of error corrections and drafting improvements to improve clarity and consistency of the drafting.

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

- X14. Under the regulatory regime applied to Transpower, we set specific 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 (there are exceptions to this general principle, eg, for listed projects and major capex) 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.
- X15. 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).

⁹ Commerce Commission “Input methodologies review decisions – Framework for the IM review” (20 December 2016). Available at: <http://www.comcom.govt.nz/dmsdocument/15114>.

- X16. We use specific adjustment mechanisms to ensure that the incentive to make cost efficiency savings is constant over time. Absence of these mechanisms would result in the efficiency incentive varying over time (the natural incentive¹⁰). 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.
- X17. 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 is able to earn additional profits without improving its efficiency.
- X18. As a result of the incentives to overstate costs, scrutiny of Transpower's proposed expenditure is likely to provide benefits to consumers on an ongoing basis. Direct scrutiny of Transpower's proposed expenditure is appropriate when we consider the benefits of such scrutiny to consumers outweigh any associated costs.¹¹
- X19. Our review of the capex IM focusses on the incentives and scrutiny applied to capex. There are currently different rules and incentives that apply to different types of capex. Most capex falls under the category of base capex (including sub-categories of base capex, like listed projects), but there are also specific rules that apply to major capex projects. Major capex projects are enhancement and development (**E&D**) projects that have a forecast cost above \$20 million.
- X20. In reviewing the capex IM, we have considered the interaction of the various incentives on expenditure and forecasting, including the existing opex incentives defined in the separate Transpower IM Determination, to develop the overall incentive package.
- X21. We consider that our decisions (including specific incentive and procedural mechanisms) result in a package that appropriately balances the various trade-offs, including: promoting Transpower's incentives to improve cost efficiency, innovate and invest, limiting Transpower's ability to earn excessive profits, and controlling the administrative and regulatory costs to us and Transpower to an appropriate level.

¹⁰ The natural incentive describes that the incentive to achieve efficiency gains declines over the regulatory period.

¹¹ These costs can be immediate costs on us or Transpower, or long-term costs (eg, prescriptive requirements that can lower the ability of Transpower to make efficient investment decisions).

Overview of our decisions

- X22. We have decided to amend the capex IM to make the following key changes to the incentives regime for Transpower:
- X22.1 change the major capex regime to an ex-ante framework by replacing three asymmetric ex-post incentive mechanisms (the major capex efficiency adjustment, the major capex overspend adjustment and the major capex project output adjustment) with a single ex-ante symmetric mechanism (the major capex expenditure and output adjustment);
 - X22.2 prescribe a 15% default incentive rate for major capex projects but retain the ability to tailor the incentive rate for major capex projects in specific circumstances;
 - X22.3 apply one of two incentive rates for base capex projects, which will be a standard rate of 33%, and a low rate of 15% for large base capex projects that meet specified criteria;
 - X22.4 change the basis of the base capex expenditure adjustment incentive from operating on the value of commissioned assets to operating on actual expenditure; and
 - X22.5 remove the base capex policies and processes adjustment.
- X23. We have decided to amend the capex IM to make the following key changes to the base capex allowance approval process:
- X23.1 introduce the option for an expenditure adjustment mechanism for base capex E&D projects;
 - X23.2 require Transpower to provide an estimate of the change in transmission charges and an explanation of the system and service benefits delivered by each base capex proposal (Transpower will provide this information as part of its base capex proposal and its listed project applications); and
 - X23.3 update the base capex qualitative information requirements in Schedule F of the capex IM determination.

- X24. We have decided to amend the capex IM to make the following key changes to the major capex approval process:
- X24.1 introduce the option of a staged approval process for major capex projects;
 - X24.2 provide the Commission with the ability to determine the major capex allowance, rather than deciding Transpower's proposal on an accept or reject basis;
 - X24.3 remove the ability to amend the major capex allowance after its initial determination; and
 - X24.4 require Transpower to provide an estimate of the change in transmission charges and an explanation of the system and service benefits delivered by each proposed major capex investment.
- X25. In addition, we have decided:
- X25.1 not to include a verification process in the capex IM, but to pilot a verification process for the RCP3 reset; and
 - X25.2 to consider whether Transpower should be required to report on its stakeholder engagement processes as part of our consideration of potential changes to the ID requirements, which we will do separately at a later date.
- X26. From having undertaken a full effectiveness review of the capex IM, we have also decided to make a number of changes to implement the policy decisions more effectively, clarify the existing rules, remove ambiguities and correct errors. These changes reduce uncertainty and unnecessary complexity and compliance costs, and these are set out in Attachment B.

Timing for when our changes to the capex IM will take effect

X27. Our capex IM amendments will take effect:

X27.1 for base capex and listed projects, from the start of the next regulatory period following the commencement date (ie, from 1 April 2020);¹²

X27.2 for major capex that is approved after the commencement date:

- i. for process changes that would not reopen the price path in the current regulatory period, immediately; and
- ii. for any changes that would reopen the price path, from the start of the next regulatory period following the commencement date (ie, from 1 April 2020); and

X27.3 for major capex that was approved prior to the commencement date, the relevant provisions of the existing capex IM will continue to apply into the next regulatory period.

Consequential changes to the Transpower ID Determination

X28. Some of the amendments we have decided to make to the capex IM will also require us to amend the Transpower ID Determination. This is because some of the capex IM calculations for the incentive adjustments rely on information disclosed under the ID requirements and elements of the ID requirements draw on the capex IM.

X29. As the changes to the incentive adjustments in the capex IM will apply from RCP3, we anticipate consulting on and making any amendments to the Transpower ID Determination before 1 April 2020.

Invitation to make submissions on the revised draft capex IM determination

X30. Implementing the decisions in this paper requires amending the capex IM. A revised draft determination setting out our proposed amendments to the capex IM determination is published alongside this final decisions paper.¹³ In respect of our revised draft determination, we invite submissions on the implementation of our decisions set out in this paper by **5pm on 24 April 2018**.¹⁴

¹² The commencement date is the date the capex IM amendments will come into force, which will be the day after notice is given in the *New Zealand Gazette*.

¹³ As we are still conducting technical consultation on the proposed implementation of our decisions in the determination there is a possibility that the detail of how the decisions are implemented could change.

¹⁴ We would also welcome views on the updates to the 'g' variable and 'g*' variable in the base capex expenditure adjustment in the revised draft determination, which would limit our ability to exclude expenditure from the base capex expenditure incentives (discussed in paragraphs B22 to B26).

- X31. Please address submissions, using 'Capex IM review – technical consultation' in the subject header, to:

Keston Ruxton
Manager, EAD Regulation Development
Regulation Branch
regulation.branch@comcom.govt.nz

Next steps

- X32. At this stage, we expect to publish our final determination by the end of May 2018.
- X33. We will notify stakeholders if this changes, following our review of submissions.

CHAPTER 1: Introduction

Purpose of this paper

1. The purpose of this paper is to:
 - 1.1 describe the problems we have identified with the Transpower capital expenditure (**capex**) input methodology (**IM**) during our review;¹⁵
 - 1.2 set out our decisions in relation to those problems;
 - 1.3 explain our reasons for our decisions;
 - 1.4 describe how we have taken stakeholders' submissions into account in considering the above; and
 - 1.5 seek interested parties' comments on how we have given effect to our decisions in the revised draft capex IM determination, published alongside this paper.¹⁶

Background to the capex IM and this review

Part 4 and the capex IM

2. Regulation under Part 4 (**Part 4**) of the Commerce Act 1986 (**Act**) seeks to promote the long-term benefit of consumers of regulated services.¹⁷ These are electricity line services (including transmission services provided by Transpower), gas pipelines services, and specified airport services at Auckland, Wellington and Christchurch international airports.
3. IMs are the upfront rules, processes and requirements of Part 4 regulation. Their purpose is to promote certainty for suppliers and consumers in relation to the rules, requirements and processes applying to regulated services under Part 4. IMs apply to all services regulated under Part 4.¹⁸
4. We determined the majority of IMs in December 2010. We reviewed those IMs, including subsequent amendments, in 2015-2016 (**2015-2016 IM review**).¹⁹

¹⁵ The review of the capex IM is being conducted under s 52Y of the Act.

¹⁶ Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018 (29 March 2018).

¹⁷ Section 52A of the Act.

¹⁸ Section 52R of the Act.

¹⁹ Although our final decisions on the majority of IMs within the scope of the IM review were published in December 2016, parts of the 2015-2016 IM review extended beyond December 2016. Our final decision on our review of Transpower Incremental Rolling Incentive Scheme (**IRIS**) provisions was published on 29 June 2017, our final decision on our review of provisions relating to customised price-quality path (**CPP**) information requirements for gas pipeline businesses was published on 13 December 2017, and our final decision on our review of related party transactions provisions was published on 21 December 2017.

5. The requirement for us to set a capital expenditure IM for Transpower arose from an amendment to the Act that transferred to us the role of approving Transpower's grid upgrade plan proposals from the Electricity Commission (now disestablished and replaced by the Electricity Authority).²⁰ We determined the capex IM on 31 January 2012 pursuant to s 54S of the Act.²¹
6. 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.²²
7. As required by s 54S(2) of the Act, the capex IM includes:
 - 7.1 requirements that must be met by Transpower, including the scope and specificity of information required, the extent of independent verification and audit, and the extent of consultation and agreement with consumers;
 - 7.2 the criteria the Commission will use to evaluate capital expenditure proposals; and
 - 7.3 time frames and processes for evaluating capital expenditure proposals, including what happens if the Commission does not comply with those time frames.

Our obligation to review the IMs

8. Section 52Y of the Act requires us to review each IM no later than seven years after its date of publication.
9. As the original capex IM was published in the *New Zealand Gazette* on 9 February 2012, the statutory deadline for completing the capex IM review is 11 February 2019. On 28 April 2017 we issued a notice of intention to commence our review of the capex IM.^{23, 24} We are publishing our final decisions on the capex IM review by the end of March 2018 to allow Transpower time to incorporate changes into its preparation for the 2020-2025 regulatory period (**RCP3**). As requested by Transpower,²⁵ we are also publishing a revised draft capex IM determination and undertaking a round of technical consultation, which will extend the capex IM review out to the end of May 2018.

²⁰ Electricity Industry Act 2010, s 155.

²¹ *Transpower Capital Expenditure Input Methodology 2012* [2012] NZCC 2. Notice of the IM was published in the *New Zealand Gazette* on 9 February 2012.

²² An overview of the regulation that applies to Transpower is set out in Attachment A.

²³ Commerce Commission "[Notice of Intention – Input Methodology Review: Transpower Capital Expenditure Input Methodology](#)" (28 April 2017).

²⁴ The IM under review is the *Transpower Capital Expenditure Input Methodology Determination 2012* [2012] NZCC 2 (31 January 2012) as amended by all subsequent amendments. The principal determination and a list of all subsequent determination amendments is provided in Table B1 of Attachment B in our focus areas paper. See: Commerce Commission "Transpower capex input methodology review – Proposed focus areas for the capex IM review" (15 May 2017).

²⁵ Transpower "Capex IM draft decisions cross-submission" (16 January 2018), p. 3.

Framework for the capex IM review

10. In reaching our decisions on the capex IM review, we have applied the same framework that we used for reaching decisions on the 2015-2016 IM review. As explained in more detail in our 2016 framework paper for that review, that means we have decided to only change the capex IM where this is likely to:
 - 10.1 promote the Part 4 purpose in s 52A more effectively;
 - 10.2 promote the IM purpose in s 52R more effectively (without detrimentally affecting the promotion of the s 52A purpose); or
 - 10.3 significantly reduce compliance costs, other regulatory costs or complexity (without detrimentally affecting the promotion of the s 52A purpose). This includes making a number of error corrections and drafting improvements to improve clarity and consistency of the drafting.
11. We have also considered, where relevant, whether there are alternative solutions to the identified problems with the capex IM that do not involve changing the capex IM.
12. Please see our 2016 framework paper for more detail on the IM review framework.²⁶

Our process for reviewing the capex IM

13. We have reviewed each of the existing capex IM decisions for effectiveness, while drilling down into a number of specific topics identified by us and stakeholders as potentially containing problems that could be addressed by amending the capex IM.

Our effectiveness review of the capex IM

14. In reviewing the capex IM for effectiveness we have considered:
 - 14.1 stakeholder submissions on our draft decision;
 - 14.2 relevant reference material, such as the capex IM determination and reasons paper;²⁷ and
 - 14.3 our experiences in regulating across Part 4, particularly our experiences with Transpower's IPPs, and CPPs for Orion and Powerco.

²⁶ Commerce Commission "Input methodologies review decisions – Framework for the IM review" (20 December 2016). Available at: <http://www.comcom.govt.nz/dmsdocument/15114>.

²⁷ *Transpower Capital Expenditure Input Methodology Determination 2012* [2012] NZCC 2 (31 January 2012); Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012).

15. In undertaking our effectiveness review, we considered whether the policy intent of each decision that underpins the capex IM is still appropriate and is being achieved. More detail on the types of questions we considered in undertaking our effectiveness review are set out in the IM review framework paper.²⁸
16. We acknowledge Transpower’s submission that, prior to our draft decision, it was unaware of our effectiveness review.²⁹ We note that our framework for reviewing the capex IM review was the same as for the 2015-2016 IM review, as set out in our 2016 framework paper.³⁰ That paper set out the steps we would follow, and the questions we would ask, in reviewing the IMs and in deciding whether to change each IM (ie, our effectiveness review). We advised stakeholders of our intention to apply that same framework in our May 2017 focus areas paper.³¹ Nevertheless, to ensure Transpower had an opportunity to respond effectively to our draft decision, we granted Transpower an extension for its submission on our draft decision. As a consequence, we also granted all stakeholders an extension for their cross submissions on our draft decision.³² Transpower subsequently did provide comments and suggestions for minor improvements, some of which we have incorporated.³³
17. As a result of our effectiveness review, we have decided to make a number of minor changes to the capex IM. These changes are generally outside the scope of the key topics for the review, and are aimed at clarifying the existing rules, removing ambiguities, or reducing unnecessary complexity and compliance costs, consistent with promoting the s 52R purpose. In addition to these minor changes we have also made drafting changes that provide for the transition to the amended capex IM, that update the capex IM by removing ‘historic’ clauses that have become redundant, and to promote internal drafting consistency across the capex IM in light of the new clauses implementing the major changes.
18. The findings of our effectiveness review are included in Attachment B, which summarises our decisions for the capex IM review, including major changes, minor changes and those areas where our decision is not to make a change.

²⁸ Commerce Commission “Input methodologies review decisions – Framework for the IM review” (20 December 2016), p. 25-29. Available at: <http://www.comcom.govt.nz/dmsdocument/15114>.

²⁹ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 1.

³⁰ Commerce Commission “Input methodologies review decisions – Framework for the IM review” (20 December 2016). Available at: <http://www.comcom.govt.nz/dmsdocument/15114>.

³¹ Commerce Commission “Transpower capex input methodology review – Proposed focus areas for the capex IM review” (15 May 2017), para 15-16.

³² Commerce Commission “Notification email – Extension for cross submissions on capex IM review draft decision paper” (8 December 2017). Available at: <http://www.comcom.govt.nz/dmsdocument/15994>.

³³ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017); and Transpower “Capital Expenditure Input Methodology draft determination” (21 December 2017).

Engagement on the key topics for the review

19. We engaged with stakeholders on what the key focus areas for the review should be. Our engagement process regarding the key focus areas for the capex IM review included:
 - 19.1 seeking submissions on our proposed focus areas for the review;³⁴
 - 19.2 holding a ‘knowledge sharing’ workshop to provide an opportunity for stakeholders without a close understanding of the capex IM to better understand what it is, how it works, and how it might be relevant for them;³⁵ and
 - 19.3 following receipt of submissions and cross-submissions on our proposed focus areas, undertaking targeted engagement with stakeholders to clarify points they had raised.
20. Following our assessment of submissions and cross-submissions on our proposed focus areas, we identified a number of key topics and issues to be considered as part of the capex IM review.³⁶ The key topics were incentive mechanisms, process matters, Transpower’s engagement with stakeholders and information requirements.
21. We also sought further information from Transpower on potential improvements to the information requirements in the capex IM.³⁷
22. We then sought feedback from stakeholders on our emerging views on certain aspects of the incentive mechanisms for Transpower. This allowed us to have regard to stakeholders’ views and helped us to develop our draft decisions on the capex IM review.³⁸
23. We sought submissions from stakeholders on our draft decisions and draft amendments to the capex IM determination.³⁹ We have had regard to stakeholders’ views in developing our decisions set out in this paper, and in revising the draft amendments to the capex IM determination (published alongside this paper).

³⁴ Commerce Commission “Transpower capex input methodology review – Proposed focus areas for the capex IM review” (15 May 2017).

³⁵ The agenda and presentations from the Knowledge sharing workshop are available on our website at: <http://www.comcom.govt.nz/regulated-industries/input-methodologies-2/transpower-input-methodologies/capex-input-methodology-review/>.

³⁶ Commerce Commission “Transpower capex input methodology review – Process update paper” (28 July 2017).

³⁷ Transpower “Transpower additional information Capex IM review” (15 August 2017).

³⁸ Commerce Commission “Transpower capex input methodology review – Emerging views on incentives” (1 September 2017).

³⁹ Commerce Commission “Transpower capex input methodology review: Draft decisions” (15 November 2017) and Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018 (22 November 2017).

24. We are also undertaking an additional consultation step by seeking technical submissions on whether the drafting in the revised draft determination accurately reflects our decisions as set out in this paper.

Keeping a record for the review

25. Any material provided to the Commission in the course of the capex IM review forms part of the record for the review. This includes any material provided during Commission workshops or other engagements with stakeholders in the course of the capex IM review.

Our decision package of papers

26. Our decision package comprises:
- 26.1 this decision paper, which explains the problems we have identified and our solutions for addressing those problems; and
 - 26.2 the revised draft amendments to the capex IM determination, which show how we propose to give effect to our decisions in this paper.^{40, 41}

The structure of this paper

27. Chapters 2 to 4 set out our findings for key topics within the capex IM review, as set out in paragraph 20 above. Each of the chapters broadly follows the following structure:
- 27.1 description of the problems identified in respect of those key topics;
 - 27.2 explanation of our solution and our reasons for deciding on that solution;⁴² and
 - 27.3 other issues raised by stakeholders on those topics where we have decided not to change the capex IM.
28. Attachment A sets out the context for the capex IM review by providing an overview of the regulation that applies to Transpower.
29. Attachment B provides a summary of our decisions for the capex IM review and explains our reasons for why we have, or have not, decided to make a change. It also describes when the changes to the capex IM will take effect.⁴³

⁴⁰ Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018 (29 March 2018).

⁴¹ The revised draft determination is not a 'decision' as this is still a draft subject to further consultation. We intend to publish our final capex IM determination by the end of May 2018, following consideration of technical submissions.

⁴² In describing the problems and assessing potential solutions, we explain how we have taken stakeholders' submissions into account and how they have helped to shape our views.

⁴³ As we are still conducting technical consultation on the proposed implementation of our decisions in the determination there is a possibility that the detail of how the decisions are implemented could change.

Invitation to make submissions

30. In respect of our revised draft capex IM determination, we invite submissions by **5pm on 24 April 2018**.
31. Our expectation is that submissions should be focused on whether the drafting in the revised draft determination accurately reflects and is effective in implementing our final decisions.
32. We would also welcome views on the updates to the 'g' variable and 'g*' variable in the base capex expenditure adjustment in the revised draft determination which would limit our ability to exclude expenditure from the base capex expenditure incentives (discussed in paragraphs B22 to B26 below).
33. Please address submissions, using 'Capex IM review – technical consultation' in the subject header, to:

Keston Ruxton
Manager, EAD Regulation Development
Regulation Branch
regulation.branch@comcom.govt.nz

Next steps

34. Once we have considered technical submissions on the revised draft determination, we expect to publish our final determination by the end of May 2018.
35. We will notify stakeholders if this changes, following our review of submissions.

CHAPTER 2: Incentive mechanisms

Purpose of this chapter

36. The purpose of this chapter is to provide:
 - 36.1 an outline of the identified problems related to Transpower's major capex and base capex incentive mechanisms;
 - 36.2 our decisions in relation to the identified problems; and
 - 36.3 our response to submissions on the incentive mechanisms.

Structure of this chapter

37. This chapter outlines:
 - 37.1 the incentive framework for capital expenditure by Transpower, the overarching intent of the regime and why we have now decided to change the incentive regime;
 - 37.2 identified problems concerning major capex and our decisions in response to such problems;
 - 37.3 identified problems concerning base capex and our decisions in response to such problems;
 - 37.4 stakeholders' concerns related to the major capex investment test, together with our reasoning why we have decided not to make a change; and
 - 37.5 other issues raised in submissions.

Overview of the incentive framework

38. The capex IM focusses on the incentive mechanisms that apply to capex, but those mechanisms should also be considered as part of an overall incentive framework together with:
- 38.1 the incentive mechanism on operating expenditure (**opex**) (ie, IRIS)⁴⁴ which is defined in the Transpower IM Determination⁴⁵ and which was reviewed as part of the 2015-2016 IM review;⁴⁶ and
 - 38.2 the application of the incentive mechanisms in setting and during Transpower's individual price-quality path (**IPP**).⁴⁷

Overarching intent of the incentives regime

39. Under the regulatory regime applied to Transpower, we set specific 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 (there are minor exceptions to this general principle, eg, for listed projects and major capex) 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.
40. 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 opex and capex needs of Transpower and consumers gain from the subsequent lower revenue allowances provided for Transpower (leading to lower prices for consumers).
41. We can adjust the strength of the incentives for cost efficiency by adjusting the share of the benefits retained by Transpower versus that passed on to consumers (the 'incentive rate').
42. There are separate incentive rates for capex and opex and the difference between these incentive rates can affect the relative incentive for Transpower to favour opex over capex or vice versa, when there is the potential for substitution. We can also ensure the incentives for efficiency are constant throughout the period using mechanisms such as IRIS.⁴⁸

⁴⁴ The current symmetric IRIS that applies to Transpower was introduced in November 2014. See: Commerce Commission "Amendments to input methodologies for electricity distribution services and Transpower New Zealand: Incremental Rolling Incentive Scheme" (27 November 2014).

⁴⁵ Transpower IM Determination, Part 3 Subpart 6.

⁴⁶ Commerce Commission "Input methodologies review final decision: Transpower Incremental Rolling Incentive Scheme" (29 June 2017).

⁴⁷ The IPP determines the amount of revenue Transpower is allowed to recover and the quality standards it must meet over the course of a regulatory control period (**RCP**). The current length of Transpower's RCP is 5 years.

⁴⁸ Without an IRIS the incentive for Transpower to make opex efficiency savings will vary over the control period.

43. 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 allowance it needs to recover at the time we set the IPP or a major capex allowance. If we approve overstated costs, then Transpower is able to earn additional profits without improving its efficiency.
44. Over time, if Transpower strives to achieve efficiency gains, then we will gain information on Transpower's efficient costs. We can then make more informed decisions about its ongoing opex and capex needs. However, given the many different influences on Transpower's performance, our information will always be imperfect which means Transpower is likely to continue to have some scope to propose overstated costs and potentially have these accepted.
45. An additional complication arises with incentive regulation when cost estimates are uncertain. When costs are uncertain, incentive arrangements can result in Transpower bearing additional costs (or receiving additional benefits) irrespective of its efficiency performance. Similarly, customers are exposed to risks of paying more (or less) for services as a result of variations in costs unrelated to cost efficiency, rather than as a result of Transpower's performance.
46. The more uncertain costs are, the greater the risks that incentive arrangements result in Transpower and its customers bearing costs (or receiving benefits) that arise from unforeseen variations in costs. Further, these risks can result in behaviour that is not consistent with efficiency (eg, it might encourage Transpower to be unduly cautious in its investments).
47. Our changes to the capex IM recognise these different trade-offs and in particular the trade-off described above between promoting incentives to improve efficiency, innovate and invest, and limiting Transpower's ability to earn excessive profits.
48. We broadly agree with Transpower's submission that:⁴⁹
- As regulatory arrangements mature, the Commission can increasingly rely on the operation of incentives to drive continuous efficiency gains and reduce the extent to which regulatory scrutiny is expected to be a driver. The incentives are both more effective and require less administrative effort from the Commission.
49. Major Electricity Users' Group (**MEUG**) broadly agreed, although questioned whether the regulatory regime applying to Transpower had matured sufficiently. According to MEUG, more progress is needed in areas such as asset criticality and more granular coupling of service quality measurement with the effect on charges at individual grid exit points (**GXP**s) and grid injection points (**GIP**s). In MEUG's view, ex-ante scrutiny remains more important in the near term.⁵⁰

⁴⁹ Transpower submission on focus areas consultation paper "Capex IM review: Issue identification via focus areas" (14 June 2017), p. 4.

⁵⁰ MEUG "MEUG submission on draft Transpower capex input methodology decision" (8 December 2017), p. 3.

50. The changes outlined in this paper demonstrate development of the regime (eg, movement to an ex-ante framework for major capex). However, given the incentives for Transpower to overstate costs, we also consider that consumers can continue to benefit from appropriate scrutiny of Transpower's operational practices, investment decisions and, in particular, expenditure forecasts when setting allowances under an IPP. Even as the regulatory regime continues to develop, the need for this scrutiny is likely to remain.
51. We will therefore continue to apply scrutiny where we consider the benefits of such scrutiny to consumers outweigh the associated costs.⁵¹ This is consistent with the 'proportionate scrutiny principle', which is a balance we have always tried to achieve with our regulation. We consider that it should guide our scrutiny of Transpower's investment proposals as well as the setting of IPPs more generally.⁵²
52. We consider the changes we have decided to make to the capex IM provide an appropriate balance across both an incentive framework and the ability to apply scrutiny. The changes are also consistent with a regime in which an ex-ante incentive framework plays an increasing role in encouraging Transpower to operate efficiently.

Current capex incentive categories and overall framework

53. Transpower's capital expenditure is currently⁵³ categorised in the capex IM as either base capex or major capex. Base capex includes asset replacement and refurbishment (**R&R**) (all project sizes) and asset enhancements (under a \$20 million threshold), while major capex is limited to asset enhancements (over the \$20 million threshold).
54. Base capex (including listed projects) is intended to cover all capital expenditure, except those large individual enhancement projects that, given their nature and magnitude (over the threshold), warrant individual scrutiny and public consultation.
55. The capex IM also outlines additional requirements for base capex projects over \$20 million. Projects over this threshold are subject to certain stakeholder consultation obligations and can also form part of the listed project mechanism if identified in an IPP determination.⁵⁴
56. Listed projects are identified prior to the commencement of an RCP where the project meets the conditions specified in the capex IM.⁵⁵ The mechanism allows Transpower more time to do technical studies around the investment need and to refine its expenditure forecasts before submitting its proposal for approval and inclusion in the base capex allowance.

⁵¹ These costs can be immediate costs on us or Transpower, or long-term costs (eg, prescriptive requirements that can lower the ability of Transpower to make efficient investment decisions).

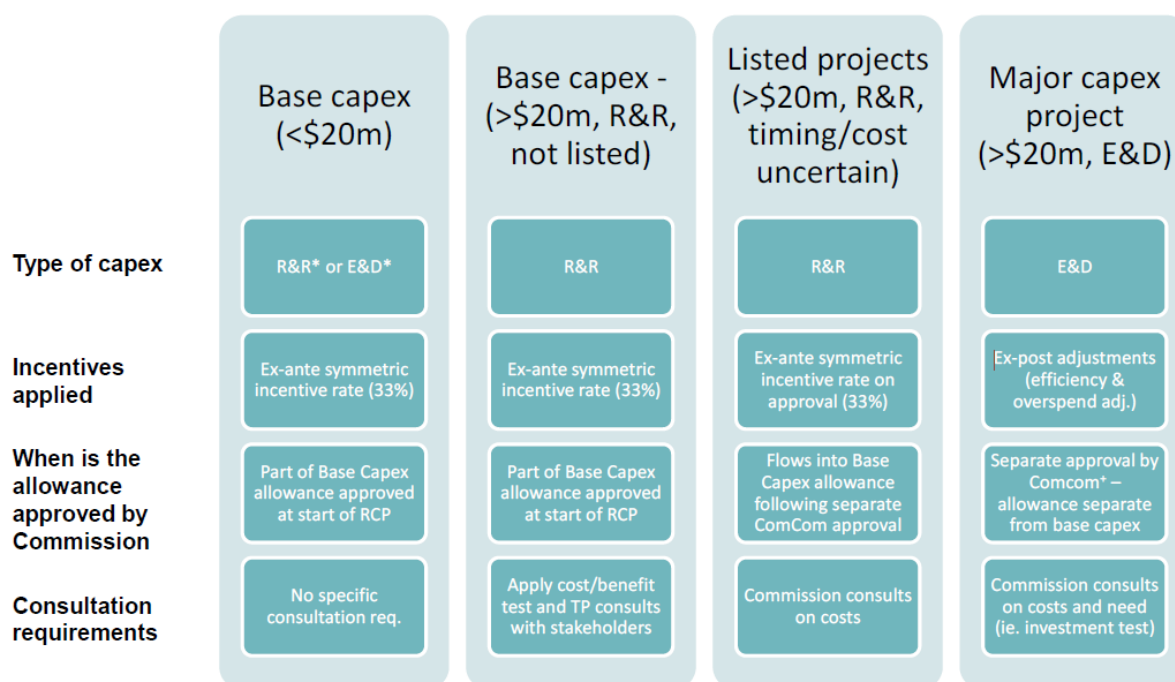
⁵² Commerce Commission "Transpower capex input methodology review – Proposed focus areas for the capex IM review" (15 May 2017), para 83-85.

⁵³ Where the terms 'current' or 'existing' are used, we are referring to determinations as at 29 March 2018.

⁵⁴ *Transpower Individual Price-Quality Path Determination 2015* [2014] NZCC 35, Schedule I.

⁵⁵ Capex IM, clause 2.2.3(2).

Figure 1: Overview of existing incentives and consultation requirements



*R&R = Replacement and refurbishment , *E&D = Enhancement and Development

*Generally approved at P90 (Although not specified in the Capex IM)

57. Figure 1 provides an overview of the existing core incentives and requirements on different capex types and magnitudes that apply during the current 2015-2020 regulatory period (**RCP2**).⁵⁶
58. Transpower submitted in response to this diagram in our emerging views paper that the category of non-listed base capex projects over \$20 million is not required in practice.⁵⁷
59. We disagree, as one of the requirements for a listed project is that the commissioning date cannot be forecast with certainty.⁵⁸ It is not clear that this characteristic would apply to all base capex projects over \$20 million and so we continue to consider that a separate category is required for larger base capex projects that are not listed.

⁵⁶ For new major capex projects following the publication of the updated capex IM, our new rules will apply for the remainder of RCP2.

⁵⁷ Transpower submission on emerging views “Capex IM review: Incentive mechanisms” (22 September 2017), p. 8.

⁵⁸ Capex IM, clause 2.2.3(2)(c).

60. For context around the relative scale of different categories of capex, Table 1 provides a breakdown of Transpower’s RCP2 forecast capex from the 2017 Integrated Transmission Plan (ITP).⁵⁹

Table 1: Overview of capex values for RCP2

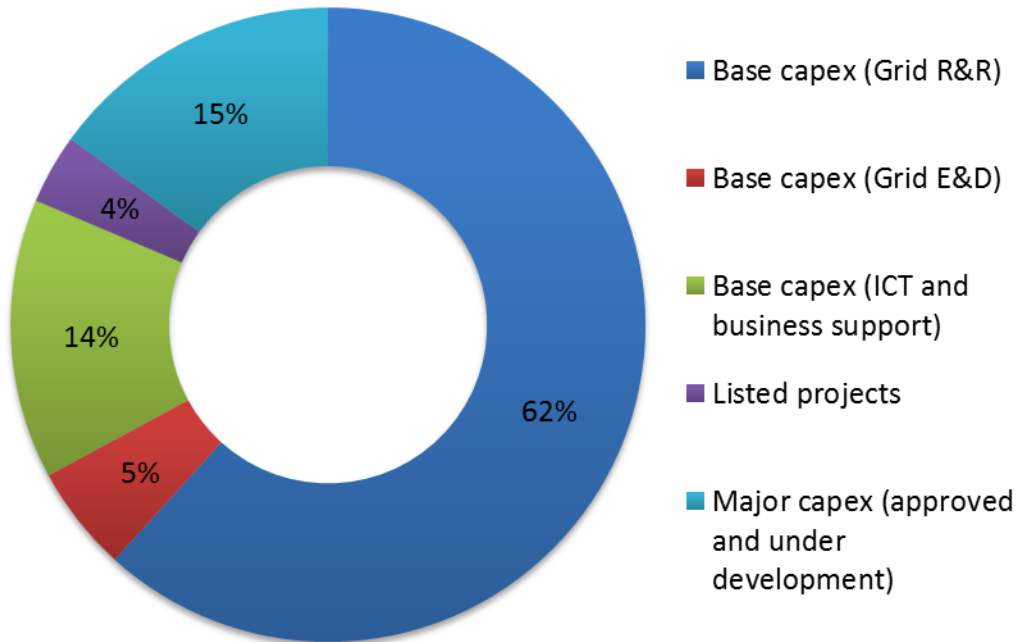
	Current forecast from 2017 ITP ⁶⁰ (commissioned value 2016/17 prices) (million)(\$)
Base capex allowance	1130
<ul style="list-style-type: none"> • Grid R&R • Grid E&D <\$20m • ICT and business support 	<p>858</p> <p>75</p> <p>198</p>
Listed projects	49
Major capex	184 (approved)
	25 (under development)

⁵⁹ In light of correspondence from Transpower on our draft decision (Letter from Catherine Jones (Regulatory Affairs and Pricing Manager, Transpower) to Keston Ruxton (Manager, Commerce Commission) requesting an erratum of our draft decision (24 November 2017)), we have amended Table 1 to better reflect the purpose of the table. As noted in our response (Letter from Keston Ruxton (Manager, Commerce Commission) to Catherine Jones (Regulatory Affairs and Pricing Manager, Transpower) responding to Transpower’s request for an erratum of our draft decision (28 November 2017)), the intention was to provide context around the relative scale of different capex categories rather than to be a comparison between values. We consider that the amended table better reflects this purpose.

⁶⁰ Transpower “Integrated Transmission Plan Schedules” (September 2017), p. 3-7.

61. Figure 2 displays the categories of capex as a proportion of total capex (based on the forecast 2017 ITP values in Table 1).

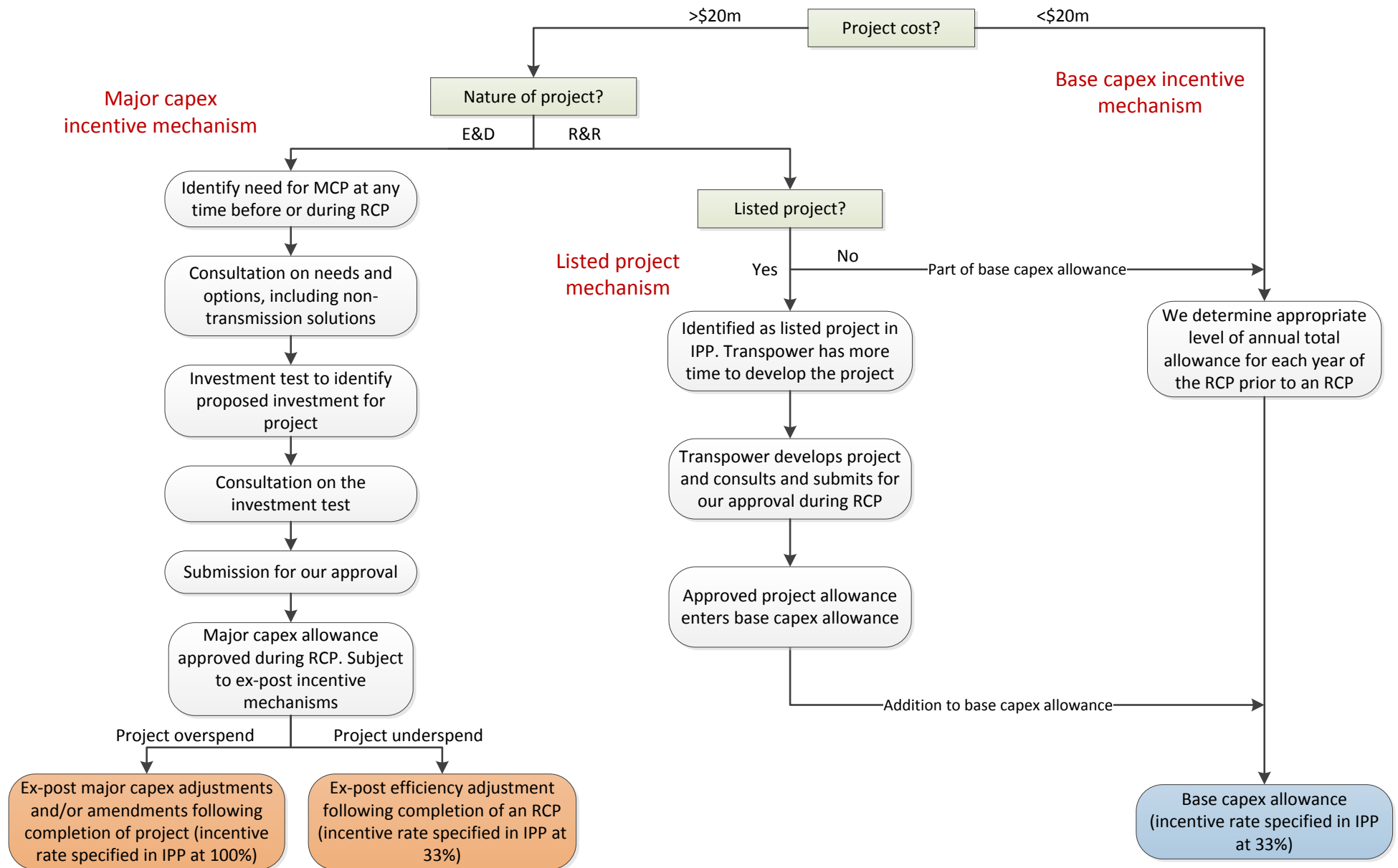
Figure 2: Proportion of total capex (based on 2017 ITP)



62. Figure 3 below provides an overview of the existing approach to determining different types of capex and the incentive mechanisms that apply.⁶¹

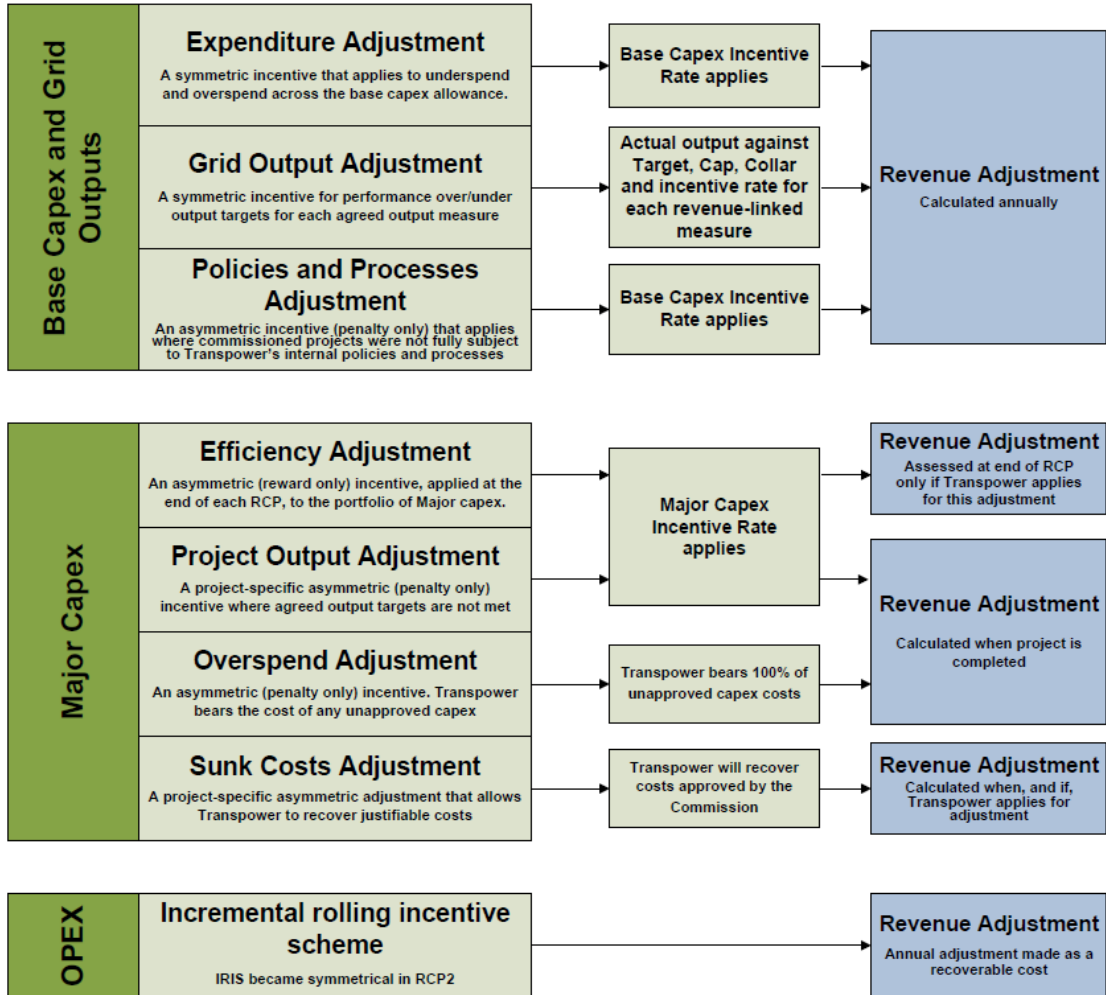
⁶¹ Figure 3 has been updated following publication in the draft decision paper. This is to provide greater clarity around the existing regime and allow for more effective comparison with the changes outlined in Figure 5.

Figure 3: Overview of existing capex incentives regime



63. As part of the overall incentive package there are a number of specific mechanisms that currently apply to major and base capex contained within the capex IM. The specific incentives applying to RCP2 are outlined in Figure 4. Further details on the current operation of these incentive mechanisms were also provided in the capex IM proposed focus areas paper.⁶²

Figure 4: Overview of Transpower capex and opex incentive mechanisms in RCP2



64. The suite of incentive mechanisms that apply to Transpower is intended to incentivise improvements in efficiency, delivery of outputs within approved expenditure, and improving the outputs themselves.⁶³ The incentives are also intended to be complementary, which means we consider the incentive mechanisms as a package, rather than as isolated mechanisms.

⁶² See Commerce Commission “Transpower capex input methodology review – Proposed focus areas for the capex IM review” (15 May 2017), Attachment D.

⁶³ Commerce Commission “Transpower capital expenditure input methodology reasons paper” (31 January 2012), para 2.2.6.

Why we have decided to change the incentive regime

65. When we set the capex IM in 2012, we adopted an overall approach which relied on a mixture of incentives and scrutiny of performance to encourage efficient expenditure from Transpower and limit excessive profits. For example, in 2012 we outlined how:⁶⁴

We have developed a regime whereby Transpower is offered incentives to deliver the outcomes valued by consumers. A suite of mechanisms will collectively provide incentives for Transpower to improve efficiency, to deliver outputs within approved expenditure, and to improve the outputs themselves. Exposing Transpower to incentives will put downward pressure on costs, as well as consideration of non-transmission solutions.

And⁶⁵

The Commission's role is to provide independent scrutiny, and where appropriate, approval of projects and programmes of capital expenditure.

66. We do not consider the overall intent of the regime has changed significantly since 2012, but following our experience in implementing the capex IM we consider that there are some refinements to the package of incentives that will improve its effectiveness.
67. In particular, many of these refinements are influenced by difficulties we have experienced in:
- 67.1 separating efficiencies from other cost variations when scrutinising projects on an ex-post basis, which limits the ability to effectively implement ex-post efficiency incentives; and
 - 67.2 setting appropriate cost forecasts given both the lack of information and certain incentives on Transpower, and in particular how these uncertain forecasts can have a significant impact on the monetary rewards for Transpower on large discrete projects.

⁶⁴ Commerce Commission "Transpower Capital Expenditure Input Methodology – Reasons Paper" (31 January 2012), para 2.2.6.

⁶⁵ Commerce Commission "Transpower Capital Expenditure Input Methodology – Reasons Paper" (31 January 2012), para 2.2.21.

68. Our decisions to change the capex IM incentive framework generally stem from these two issues and have resulted in changes to individual incentive mechanisms so that the package of incentive measures can operate more effectively. In particular, our key decisions include:
- 68.1 introducing an ex-ante incentive framework for major capex that will place less reliance on ex-post judgements and sharpen incentives for Transpower to reduce costs. This entails removing:
 - 68.1.1 the major capex efficiency adjustment;
 - 68.1.2 the major capex overspend adjustment; and
 - 68.1.3 the major capex project output adjustment;
 - 68.2 limiting the ability to amend the major capex allowance after it is initially determined to only when an amendment is made to the major capex project outputs and a consequential amendment to the major capex allowance is required;
 - 68.3 providing the ability to vary the incentive rate applied to specific projects in order to mitigate the potential costs to consumers from overforecasting cost allowances. Specifically this includes:
 - 68.3.1 setting a default incentive rate of 15% for major capex projects – but retaining the ability to tailor the incentive rate for individual projects in specific circumstances; and
 - 68.3.2 introducing two separate incentive rates for base capex: a standard rate of 33%; and a lower rate of 15%; and
 - 68.4 introducing the option of an expenditure adjustment mechanism to reduce the risk of overestimating uncertain enhancement and development (**E&D**) base capex.⁶⁶
69. We intend to continue to monitor the effectiveness of the regime and whether it is providing its intended benefits to consumers, both in terms of the incentive structure and the approval process for capex allowances over time. Ongoing monitoring will help inform decisions in future IM or capex IM reviews.

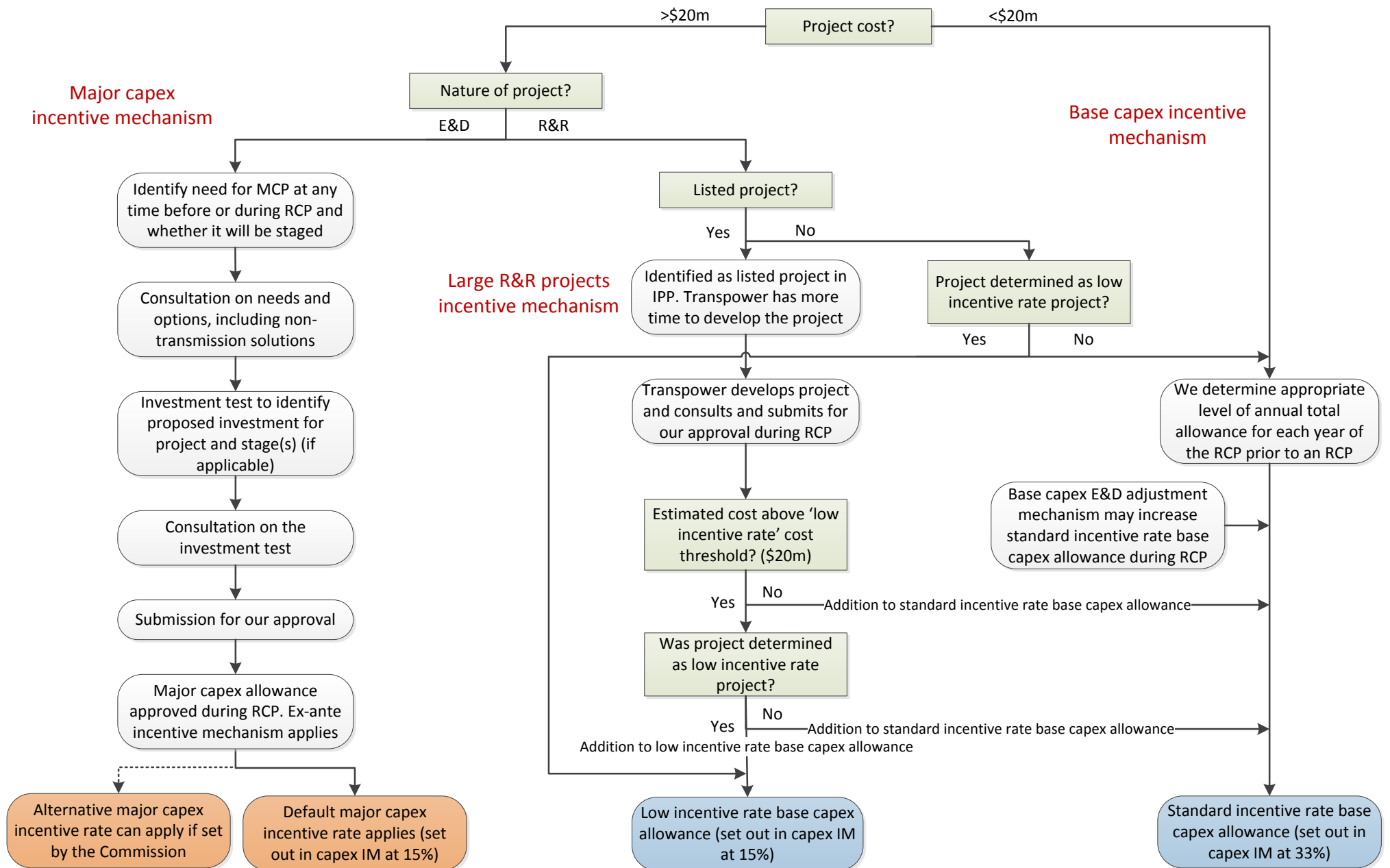
⁶⁶ In our draft decision, the mechanism was called a ‘demand trigger’ as it depended only on the level of demand. The mechanism has been updated to consider a wider range of drivers of base capex E&D expenditure.

70. We note MEUG's support of active monitoring and its view that it is not necessary to wait six years for the next IM review.⁶⁷ We note that it would be possible to undertake an IM review within a shorter timeframe, if we consider there are good reasons to do so.
71. The rest of this chapter explains our decisions in more detail.
72. Figure 5 outlines the changes to the capex incentives regime based on the decisions outlined in this chapter. This is intended to provide a comparison between the existing regime (outlined in Figure 3) and our changes to the incentive regime.⁶⁸

⁶⁷ MEUG "MEUG submission on draft Transpower capex input methodology decision" (8 December 2017), para 13.

⁶⁸ The dotted arrow in the major capex incentive mechanism indicates that the default major capex incentive rate will be applied unless Transpower is able to demonstrate that another incentive rate should apply.

Figure 5: Overview of new capex incentive regime



Major capex

73. In short, our core decisions related to major capex are:
- 73.1 to introduce an ex-ante incentive framework⁶⁹ for major capex, in place of the three separate ex-post elements of the current regime, namely:
 - 73.1.1 the major capex efficiency adjustment;
 - 73.1.2 the major capex overspend adjustment; and
 - 73.1.3 the major capex project output adjustment;⁷⁰
 - 73.2 limiting the ability to amend the major capex allowance after it is initially determined to only when an amendment is made to the major capex project outputs and a consequential amendment to the major capex allowance is required;
 - 73.3 to allow us to determine the final allowance for major capex projects (ie, projects will no longer be dealt with on an ‘approve or reject’ basis);
 - 73.4 to set major capex allowances at the P50 level consistent with providing an expectation of a normal return;⁷¹ and
 - 73.5 to set a default incentive rate at 15% for major capex projects – but retain the ability to tailor the incentive rate for individual projects in specific circumstances.

Major capex incentive framework – problem definition

74. We consider the current package of incentive mechanisms applying to Transpower for major capex is not operating as effectively as it could be. In particular, we have concerns with:⁷²
- 74.1 the ex-post efficiency adjustment; and
 - 74.2 the major capex overspend adjustment combined with the ability of Transpower to apply for an amendment to a major capex project expenditure allowance.

⁶⁹ By ex-ante, we mean that incentives are known upfront before the commencement of an RCP. Therefore, Transpower can anticipate the outcome of the incentive adjustments based on how it operates.

⁷⁰ We are retaining the major capex project output adjustment as part of the incentive framework for major capex.

⁷¹ A P50 cost estimate implies that there is 50% chance the project will come in under cost, and a 50% chance that it comes in above cost, ie, there is an equal chance of over/underspending. This is a change from determining the major capex allowance on a P90 basis. A P90 estimate for major capex projects means that we would expect only a 10% chance that the actual costs of the project would be above its allowed cost. As such, P90 cost estimates will be above the expected cost of the project.

⁷² As noted in our emerging views paper: Commerce Commission “Transpower capex input methodology review – Emerging views on incentive mechanisms” (1 September 2017), para 19-25.

75. The original intention of the ex-post efficiency adjustment was to provide Transpower with an incentive to maintain downward pressure on costs within the portfolio of approved major capex projects.⁷³ However, we have since identified a number of issues with its current operation:⁷⁴
- 75.1 It is difficult in practice to identify whether differences between the forecast and actual expenditure are due to efficiency gains or an initial high forecast of costs. This results in uncertainty about the final monetary reward that will be achieved from efficiency gains during the major capex project, which in turn is likely to reduce Transpower's incentive to achieve efficiency gains.
- 75.2 The incentive is not constant over time because the mechanism is asymmetric.⁷⁵ Also, because it operates over a portfolio of projects the efficiency will only be effective when Transpower is expecting to spend less than the cumulative allowance.⁷⁶
- 75.3 The ex-post nature of the mechanism means it is administratively burdensome to apply, relative to an ex-ante alternative.

⁷³ Commerce Commission "Transpower Capital Expenditure Input Methodology – Reasons Paper" (31 January 2012), para 4.2.13.

⁷⁴ Commerce Commission "Transpower capex input methodology review – Emerging views on incentive mechanisms" (1 September 2017), para 19-25.

⁷⁵ An asymmetric mechanism does not result in a constant incentive, because the incentive to be efficient is removed as soon as Transpower considers it will overspend its allowance.

⁷⁶ For example, if one particularly large project is expected to be delivered inefficiently, then the incentive to achieve efficiencies in other projects is reduced. This is because any efficiency gains will be offset by the larger inefficiency.

76. In addition, the issues we have identified with the current operation of the major capex overspend adjustment are:⁷⁷
- 76.1 The overspend adjustment can result in significant cost risk to Transpower when the project is large and costs are uncertain. To mitigate this cost risk, under the current regime our recent practice has been to approve Transpower’s allowances for major capex projects at a P90 level rather than a P50 cost (with P50 being the best estimate of costs). This allows some additional headroom in the revenue allowance compared to expected costs, however, it lowers the efficiency incentive for major capex projects to be delivered at an efficient cost.
- 76.2 Transpower has the ability to apply for an amendment to a major capex project expenditure allowance.⁷⁸ This reduces the incentive to deliver the outputs at the approved cost, as there is the opportunity to increase the allowance ex-post in the event that it has overspent the original allowance.
- 76.3 Although Transpower has the ability to apply for an amendment, it is not guaranteed and it is only approved ex-post. The ex-post nature of the amendment can result in uncertainty on whether an amendment will be approved. This can potentially affect Transpower’s incentive to invest when it expects to be above the initial allowance (because it may have to bear 100% of the additional costs), even if the investment is in the long-term interest of consumers.
77. The combination of these effects means that the current major capex framework might not always result in clear and appropriate incentives for the efficient delivery of major capex projects.

Major capex incentive framework – decision

78. We have decided to amend the capex IM to change the major capex regime to an ex-ante framework. We have decided to replace three asymmetric ex-post incentive mechanisms (the major capex efficiency adjustment, the major capex overspend adjustment and the major capex project output adjustment) with a single mechanism (the major capex expenditure and output adjustment).

⁷⁷ Commerce Commission “Transpower capex input methodology review – Emerging views on incentive mechanisms” (1 September 2017), para 24.

⁷⁸ Capex IM, clause 3.3.4(1).

79. Our changes from the 2012 capex IM include:
- 79.1 equalising the major capex incentive rate that applies to the major capex expenditure and output adjustment;
 - 79.2 setting the major capex incentive rate in the capex IM; and
 - 79.3 setting the major capex incentive rate at a different level to the standard base capex incentive rate.
80. We have also decided to amend the capex IM to include a requirement for Transpower to propose an allowance for major capex on a P50 basis together with an indication of cost uncertainty. The current capex IM does not require Transpower to propose a major capex allowance on a P50 basis. However, Transpower is currently required to provide a P50 estimate as an additional information requirement together with its reasons for moving away from a P50 in the proposal.⁷⁹
81. Additionally we will include a restriction in the capex IM that an amendment to the approved major capex allowance can only take place if there has been an approved change to the approved major capex project outputs.^{80, 81}
82. We consider the combination of these changes will better promote the Part 4 purpose by enhancing Transpower's incentives to improve efficiency in delivering major capex projects.⁸²
83. A continuous ex-ante symmetric incentive rate that is known before the commencement of a major project will be more effective in incentivising downward pressure on costs than the existing approach.⁸³ By including the output adjustment as part of the same adjustment, we can reduce complexity by reducing the number of separate major capex adjustments, while retaining the intent of the original adjustment.⁸⁴

⁷⁹ Capex IM, clauses C1(1) and C3(b).

⁸⁰ MEUG agreed with our draft decision to remove the ability to amend the major capex allowance after its initial determination. See: MEUG "MEUG submission on draft Transpower capex input methodology decision" (8 December 2017), p. 3. Transpower also agreed with our draft decision. See: Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 11.

⁸¹ Transpower would apply for an amendment to the outputs of a major capex project if it considers that a different kind of output would better serve the investment need. Where Transpower decides not to deliver all the approved major capex outputs (and does not apply for an amendment), then the major capex project expenditure and output adjustment mechanism would adjust for the under-delivery.

⁸² Commerce Act 1986, s 52A(1)(b).

⁸³ MEUG agreed with our draft decision to move to an ex-ante incentive regime with a single symmetric incentive rate. See: MEUG "MEUG submission on draft Transpower capex input methodology decision" (8 December 2017), p. 4. Transpower also agreed with our draft decision. See: Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 9.

⁸⁴ With the major capex incentive rate and output adjustment rate being equal, we are able to combine the output adjustment into the expenditure adjustment (ie, removing the separate output adjustment mechanism). This creates the new 'major capex expenditure and output adjustment' mechanism. The adjustment can be found in clause B3 of the revised draft determination. Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018 (29 March 2018), Schedule B.

84. The ex-ante regime will eliminate the need for us to undertake ex-post judgements on the level of net efficiency gains or the magnitude of any amendment to the expenditure allowance, and will provide significant benefits, such as:
- 84.1 making it a simpler regime to implement and eliminating the uncertainty of the ex-post assessment outlined above, which might reduce the incentives to pursue efficiency gains; and
 - 84.2 reducing the significant regulatory costs on us and Transpower during the application and approval process of the existing ex-post regime.
85. Under the ex-ante regime there will generally be no ex-post amendments to approved allowances. An exception is a scenario when there has been an amendment to the approved major capex project outputs. Instead, we consider the cost uncertainty for major capex projects could be dealt with through:
- 85.1 the option of an alternative ex-ante incentive rate (explained later in the chapter); and/or
 - 85.2 the potential use of a staging process for major capex (described in further detail in Chapter 3), which will reduce cost uncertainty prior to final approval of the major capex allowance.
86. Transpower agreed with our emerging view to move the major capex regime to an ex-ante basis.⁸⁵ However, Transpower only agreed with approving major capex projects at a P50 estimated cost under an ex-ante regime (rather than the existing practice of P90 level) if this was in parallel with the introduction of an alternative incentive rate:⁸⁶

Approving major capex projects at a P50 estimated cost rather than P90 would increase the likelihood that actual costs will be higher than the approved amount. On average, our costs would be higher than the approved amount 50% of the time. Therefore, we only agree with a move to P50 if there is a parallel introduction of a tailored incentive rate. For example, a symmetrical incentive rate of 10% would mean either Transpower funds 10% of costs that exceed P50 or retains 10% of any savings below P50.

87. MEUG also agreed with our emerging view to move to an ex-ante major capex regime consistent with the regime that already applies to base capex and that P50 estimates of costs should be used:⁸⁷

MEUG agrees with the proposal to move to a “pure” ex-ante regime for major capex consistent with the ex-ante regime that already applies for base capex. Adopting a pure ex-ante regime goes hand-in-hand with using a P50 cost estimate instead of P90 for major capex approved allowances.

⁸⁵ Transpower submission on emerging views “Capex IM review: Incentive mechanisms” (22 September 2017), p. 1.

⁸⁶ Transpower submission on emerging views “Capex IM review: Incentive mechanisms” (22 September 2017), p. 2.

⁸⁷ MEUG “MEUG submission on Transpower capex input methodology incentive mechanism” (22 September 2017), para 4.

88. We also agree with MEUG that a P50 estimate of costs is the most appropriate approach. The ex-ante mechanism will automatically reward or penalise Transpower using a symmetric incentive rate that is constant over the duration of the major capex project. For practical reasons, this minimises annual adjustments to the price path. Any penalty or reward incurred through the revised major capex incentive adjustments will be calculated annually for each approved major capex project completed in a disclosure year. This is consistent with the annual incentive calculation for base capex. The capex IM deals with how to calculate the major capex incentive mechanisms, but does not prescribe the timing of recognition or resetting of Transpower’s allowable revenues.
89. A P50 estimate is appropriate given that there should be an equal chance of over- or under-spending the allowance as the ex-ante incentive rate will apply to any deviation from the forecast allowance. If a P90 estimate was used Transpower would have the expectation of a monetary reward even in the absence of any efficiency gains.
90. We considered that a P90 estimate was appropriate with the existing major capex regime because of the asymmetry in incentives for over- and underspending on the project allowance.⁸⁸
91. MEUG also agreed with our draft decision to change the major capex regime to an ex-ante framework by replacing two asymmetric ex-post incentive mechanisms with a single ex-ante mechanism.⁸⁹
92. In its submission on our draft decision, Transpower noted that for non-transmission solutions (**NTSs**) funded by maximum recoverable costs, actual costs may be highly uncertain:⁹⁰

We consider a P50 cost would not be a reasonable maximum cost as it would expose Transpower to considerable risk and could act as a disincentive to the use of NTS. We should be able to recover the actual costs of NTS.

⁸⁸ The major capex overspend adjustment penalised any overspend with a 100% incentive rate, whereas underspends were subject to a 33% incentive rate through the major capex efficiency adjustment.

⁸⁹ MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), p. 4.

⁹⁰ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 10-11.

93. We agree that Transpower should generally be able to recover all costs of providing the NTS, as most of the costs will typically be outside its control.⁹¹ While we also agree that 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.⁹² This will allow Transpower to recover all costs necessary to efficiently deliver the NTS.
94. Our decision is to retain the intention of the major capex project output adjustment, but have amended the capex IM to make changes to the implementation of the adjustment. Our decision is to set the incentive rate (penalty only) that applies to non-delivery of outputs for the adjustment at the same level as the incentive rate that applies to the major capex expenditure adjustment.⁹³
95. This represents a change to what we proposed in our draft decision. Transpower submitted that the drafting that we proposed as part of our draft decision was too broad and did not give effect to the intent of our decision in 2012.⁹⁴
96. We agree with Transpower's view on this, and we have revised the draft amendments to the capex IM determination to better reflect the intent of our 2012 decision.⁹⁵
97. In light of the change in the determination drafting, we have decided to set the output adjustment rate at the same level as the major capex incentive rate. Aligning the two rates will make Transpower financially neutral to delivering a proposed output and not delivering an output. This means that Transpower will have incentives to operate prudently and will not be penalised for not delivering an approved output because of post-approval changes in the environment.
98. If we were to set the output adjustment higher than the major capex incentive rate, as was the case in the draft determination, this could incentivise Transpower to continue to deliver outputs that are no longer required (in order to avoid incurring the higher penalty rate).

⁹¹ In most cases, NTS costs have two components – availability and event. While the availability component of the costs and the cost per event per unit of quantity would be set before we approve an NTS, the number of events and the quantity will vary according to actual demand. For example, in a winter peaking part of the network, there is likely to be more events and higher quantity per event (calls to enable NTSs) during cold winters compared to milder winters.

⁹² Maximum recoverable costs are the limit we set for Transpower to provide NTSs. Transpower is able to apply for an amendment to the approved maximum recoverable costs, unlike the major capex allowance where incentives apply and Transpower is not able to apply for an amendment. We will treat the maximum recoverable cost as any other recoverable cost that will allow Transpower to recover its actual costs for procuring the non-transmission solution. The maximum recoverable cost will not adjust the opex allowance nor affect IRIS.

⁹³ The major capex incentive rate is now set in the capex IM.

⁹⁴ Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 9.

⁹⁵ Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018 (29 March 2018), clause B3.

99. On the other hand, if the output adjustment rate was set below the major capex incentive rate, there may be an incentive not to deliver outputs and make a greater level of savings by underspending the allowance. However, this may be somewhat mitigated by the grid reliability standards (**GRS**) that Transpower must meet.
100. Transpower also rejected the suggestion that a lower incentive rate would incentivise a deliberate mis-recording of base capex.⁹⁶ We consider that at the margin such an incentive could operate, but this would be largely mitigated through the audit process and Transpower's incentives to maintain credibility and integrity over the long term.
101. We consider that, on balance, the equal rates result in the best possible outcome for consumers because:
- 101.1 there is no incentive for Transpower to deliver outputs that are no longer required;
 - 101.2 there is no incentive for non-delivery of outputs to save a greater proportion on the allowance; and
 - 101.3 if underspending reflects poor delivery management, then Transpower will ultimately be responsible for the quality consequences.
102. Under the capex IM, the major capex expenditure and output incentive adjustment will be calculated annually for each approved major capex project completed in a disclosure year. The application of the incentive amount as an adjustment to Transpower's price-quality path is then specified in the Transpower price path reopener IM. The timing for this is currently set as being an annual adjustment to the approved forecast maximum allowable revenue (**MAR**) in the Transpower IPP Determination.
103. As we set out in our reasons paper for the RCP2 IPP, we envisage considering progressing to a more periodic application of the incentive adjustment to the price path with effect from the RCP3 IPP reset.⁹⁷ If that approach is applied from that next reset, the major capex incentive adjustments would be calculated during the RCP and the adjustment will enter the memorandum 'EV account' annually and would impact future revenues at the commencement of the next RCP.

⁹⁶ Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 9.

⁹⁷ *Setting Transpower's individual price-quality path for 2015–2020* [2014] NZCC 23 (29 August 2014), Attachment A.

Determination of the major capex allowance – problem definition

104. In the current regime, major capex proposals are determined on an ‘approve or reject’ basis that does not provide us with the direct ability to amend the allowance. One of our key drivers for this approach in the past was to reinforce that it is Transpower’s ‘responsibility to determine the needs, deliverables and grid outputs’.⁹⁸
105. We remain of the view that it is Transpower’s responsibility to determine the needs, deliverables and grid outputs. However, the ex-ante mechanism requires an unbiased forecast of costs on a P50 basis, and we do not consider the existing approach to determining the major capex allowance would be sufficient to provide this in all circumstances.⁹⁹ The ex-ante mechanism will increase the incentive on Transpower to forecast costs at a level higher than an unbiased P50 estimate and therefore we consider that we should have the ability to review those costs and amend if necessary.
106. We note that Transpower’s incentive to overforecast costs can depend on the circumstances of a particular project. For example, for an economic project,¹⁰⁰ if the costs and benefits of a specific major capex project are broadly similar, then Transpower may have an incentive to lower the forecast of costs to satisfy the investment test. However, other projects, for which the net benefits are much higher, may not result in Transpower having the same incentives to lower costs and so the incentives to overforecast remain high.

⁹⁸ Commerce Commission “Transpower Capital Expenditure Input Methodology – Reasons Paper” (31 January 2012), para 6.7.6.

⁹⁹ ‘Unbiased’ here is meant in the sense that the forecast is not systematically biased in one direction or the other, without considering the reasons for any potential bias.

¹⁰⁰ An economic project is a major capex project that provides a net electricity market benefit, but is not required to meet GRS.

107. In its submission on our draft decision, Transpower agreed with the Commission that there may be a theoretical risk for Transpower to overstate forecasts. However, Transpower noted that its wider incentive is not to deliberately overstate expected costs because:¹⁰¹
- 107.1 Transpower's stakeholders, including the Government, expect Transpower's services to be affordable;
 - 107.2 Transpower must stay relevant as its natural monopoly status may be eroded by the emergence of substitutes for its services;
 - 107.3 Transpower's revenue reset process repeats every five years, so integrity and credibility are important for the long term, as stability of regulatory arrangements affects investor confidence. Systematic overstatement of costs would become apparent over time; and
 - 107.4 the Commission has a wide range of reserve powers for information provision and control.
108. We consider that the incentives referred to by Transpower may mitigate its incentives to overstate forecasts, but our concern about information asymmetry and the potential to overstate costs remains.¹⁰²

Determination of the major capex allowance – decision

109. Our decision is to amend the capex IM to allow us to determine the major capex allowance, consistent with our approach for base capex and opex, as well as the approach applied to approving opex and capex allowances for electricity distribution businesses (EDBs) under a CPP.¹⁰³ We will evaluate the expenditure proposed by Transpower and determine the final allowance to be set.¹⁰⁴ Doing so will reduce the risk of Transpower earning excessive profits due to an overforecast, which will promote the outcome in s 52A(1)(d).

¹⁰¹ Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 3-4.

¹⁰² Regarding affordability to end consumers, Transpower's costs represent approximately ten percent of retail bills (according to the Electricity Authority (see: <https://www.ea.govt.nz/dmsdocument/20410>)). Therefore, Transpower could inflate forecasts with a relatively small impact on retail bills. Regarding repeated future resets, as noted in paragraph 44, we will gain more information on Transpower's efficient costs over time. However, there will remain an information asymmetry that could allow Transpower to overstate costs over time.

¹⁰³ Capex IM, clause 2.2.2(1)(a); Transpower IM Determination, clause 3.6.3(7); *Electricity Distribution Services Input Methodologies Amendments Determination 2016* [2016] NZCC 24, clause 5.3.2(6)(b).

¹⁰⁴ Where the Commission reduces the major capex allowance below the base capex threshold of \$20 million, the project remains a major capex project.

110. Our determination of the major capex allowance will use the existing criteria for approving or rejecting a major capex allowance.¹⁰⁵ We will amend Transpower’s proposed allowance when we consider it is likely to result in excessive profits for Transpower, consistent with our approach under the base capex regime. In its submission on our draft decision, MEUG agreed that the Commission should have the ability to determine the major capex allowance.¹⁰⁶
111. Transpower suggested that any proposed changes to the P50 level by the Commission after application would need robust justification and should be subject to consultation.¹⁰⁷ We expect that Transpower’s P50 cost estimates would be fully supported by evidence and justification. We agree with Transpower that if we were to change the P50 level from Transpower’s proposal, we would set out our reasons and consult with interested parties (including Transpower) before making our final decision.
112. We recognise that one of the downsides of us determining the P50 allowance is that Transpower could potentially choose not to proceed with a major capex project (or proceed conservatively), if it decides the approved allowance are not sufficient to deliver the project. However, we consider this risk is mitigated by other incentives on Transpower to invest in grid infrastructure, including the existence of **GRS** that it is required to meet in the Electricity Industry Participation Code 2010 (**Code**).¹⁰⁸
113. Furthermore, we consider that the risk to consumers from overforecasting could be significant in the absence of our ability to consider Transpower’s proposed allowance. Cost uncertainty can also be mitigated by varying the incentive rate, as we set out in the next section.
114. Moving away from ‘approve or reject’ approach is in no way intended to detract from Transpower’s responsibility to determine the needs, deliverables and grid outputs.

Incentive rate for major capex – problem definition

115. Under an ex-ante incentive regime, the level of the incentive rate affects how any differences between forecast and actual costs are shared between Transpower and consumers.¹⁰⁹ Therefore a higher incentive rate increases the efficiency incentive, but also increases the risk customers pay Transpower additional revenue that is due to overforecasting of the original allowance (rather than being due to any true efficiency gains).

¹⁰⁵ Capex IM, Schedule C.

¹⁰⁶ MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), p. 3.

¹⁰⁷ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 3.

¹⁰⁸ Electricity Authority “Electricity Industry Participation Code 2010” (Updated as at 6 November 2017), clauses 12.55-12.58.

¹⁰⁹ For an example of how different incentive rates operate, refer to Commerce Commission “Transpower capex input methodology review – Emerging views on incentive mechanisms” (1 September 2017), para 34.

116. We consider that the base capex incentive rate set out in the current IPP (33%) could be inappropriate for many major capex projects given their specific characteristics. These characteristics are that they:
- 116.1 are E&D projects – which means it is generally more difficult to estimate costs accurately (compared to base capex which mostly covers R&R projects); and
 - 116.2 are large – which means the impact of unwarranted gains or losses to Transpower associated with a specific project (as described below) can be significant.
117. Major capex projects with a high incentive rate can expose Transpower or consumers to the risk of significant gains or losses compared to the original estimate.¹¹⁰ This can be an issue for the following reasons:
- 117.1 Transpower can be exposed to significant revenue risk in the event that actual expenditure is higher than forecast expenditure. If Transpower considers the risk is too large, it may not proceed with the project (or propose it in the first place).¹¹¹ This would not be in the long-term interests of consumers, though the risk is likely to relate to only the very largest major capex projects which have forecast costs significantly above the current \$20 million major capex threshold.
 - 117.2 Consumers would be disadvantaged by a higher incentive rate because they would have to pay Transpower relatively more than its actual expenditure in the event that Transpower delivers the major capex project under the allowance, compared with a lower incentive rate:
 - 117.2.1 Payment of this ‘reward’ is beneficial to consumers if the lower cost of the project is due to greater efficiency by Transpower in delivering the project. Consumers gain from the lower overall costs of the project than would otherwise have been the case.
 - 117.2.2 However, if the payment of this ‘reward’ is due to the original forecast of costs being higher than a true P50 estimate (rather than due to greater efficiency) then it is not beneficial to consumers.¹¹²

¹¹⁰ For example, the delivery of one major capex project could have a major impact on the profits of Transpower (including aspects of delivery outside its control). This is generally less of a concern for base capex, where the portfolio effect means that projects that are delivered under or over the forecast of costs will have a tendency to cancel each other out. However, one-off large base capex projects could also have a similar impact.

¹¹¹ Subject to other requirements or incentives on Transpower to deliver the project (eg, GRS).

¹¹² There is also a potential feedback loop at work, because the higher the incentive, the greater the incentive for Transpower to increase its forecast costs.

118. This risk of providing significant additional revenue to Transpower, resulting in the potential for excessive profits, seems relatively high for major capex projects compared to most base capex projects due to:
- 118.1 the higher level of cost uncertainty for E&D projects, in which case it may be more likely that Transpower would provide an upwardly-biased cost estimate, particularly given the known monetary reward from a higher cost allowance under the ex-ante regime;
 - 118.2 the size of major capex projects which means that absolute magnitude of any additional payment could be significant;¹¹³ and
 - 118.3 the historical evidence that cost estimates for the majority of major capex projects have tended to have P50 cost estimates higher than out-turn costs, sometimes by a significant amount.¹¹⁴
119. Our decision to introduce a staged approval process for major capex projects (see Chapter 3) will help to mitigate the cost uncertainty by delaying the approval of the total cost, but we still consider significant uncertainties could remain due to the specific characteristics mentioned in paragraph 116 above.

Incentive rate for major capex – decision

120. Our decision is to amend the capex IM to prescribe a default incentive rate for major capex of 15% but to retain the ability to tailor the incentive rate for major capex projects in specific circumstances. We consider the issues identified above provide good reasons to set a default incentive rate for major capex projects at a level which is lower than the standard rate for base capex (33%).
121. Some submissions have raised concerns about the potential for bias towards Transpower spending capex over opex.¹¹⁵ A low incentive rate for capex may lead to further concerns that Transpower will have an increased incentive to spend on capex rather than opex. However, we consider it is less of an issue for major capex projects. Major capex projects are not fungible in the same way as base capex (ie, the allowance is associated with a specific project) and any potential for capex/opex substitution is already considered as part of the approval process prior to the major capex allowance being finalised.

¹¹³ For base capex this risk is generally mitigated by the inclusion of a larger number of smaller projects which will offset against each other and reduce the risk of one project having a significant impact on consumer cost. Therefore the risk of a significantly large windfall gain or loss is reduced. However, this does not apply to the larger base capex projects (eg, listed projects), which could have a significant impact on consumer cost.

¹¹⁴ See Table 2 in Chapter 3 outlining the outturn costs for major capex projects.

¹¹⁵ See MEUG “MEUG submission on Transpower capex input methodology incentive mechanism” (22 September 2017), para 5-6.

122. Our decision is therefore to set a default major capex incentive rate of 15%. Our reasons for setting the rate at this level are that a default 15% incentive rate strikes an appropriate balance by mitigating some of the concerns raised above but still provides a material incentive on Transpower to achieve efficiency gains. In its submission on our draft decision Transpower agreed with the default 15% incentive rate for major capex.¹¹⁶
123. We have also considered some of the disadvantages of setting a default incentive rate lower than the default 15% rate.¹¹⁷ The disadvantages associated with a lower incentive rate are that:
- 123.1 there would be a lower incentive on Transpower to undertake efficiency savings in delivering the major capex project; and
- 123.2 consumers would have a higher exposure to costs incurred by Transpower over and above their original forecast costs at the time of the major capex approval.
124. We have also decided to include an option to change the major capex incentive rate under specific circumstances. We will consider moving from the default incentive rate for projects where the forecast cost is high, the forecast cost is uncertain, or the potential for efficiency gains is high.
125. We envisage that the ability to change the incentive rate for specific projects will only be implemented when there is a substantial reason to change from the major capex default rate of 15%. We do not envisage that minor refinements to the incentive rate will be made for individual major capex projects.
126. In response to our emerging views paper, Transpower supported our view that the final incentive rate should be determined at the same time as a major capex approval.¹¹⁸
127. Although we still consider the final decision on the incentive rate applied to a particular project should be approved at the time of the major capex approval, the existence of a default rate of 15% in the capex IM provides greater clarity to Transpower and stakeholders when considering a major capex project. The default rate could then be adjusted in occasional specific circumstances when there are substantial reasons to increase or decrease the rate based on the characteristics of the individual project in meeting the criteria above.

¹¹⁶ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 9.

¹¹⁷ For example, Transpower’s submission on the emerging views paper gave an example of a 10% incentive rate. Transpower submission on emerging views “Capex IM review: Incentive mechanisms” (22 September 2017), p. 2 and 9.

¹¹⁸ Transpower submission on emerging views “Capex IM review: Incentive mechanisms” (22 September 2017), p. 2 and 9.

128. MEUG supported the policy intention in our draft decision to define a default incentive rate for major capex projects but retain the ability to tailor the incentive rate for major capex projects in certain circumstances.¹¹⁹
129. If the project proceeds under staged approval, the incentive rate would need to be finalised separately for each stage of the process (ie, we would not set a rate at the start of the project for all stages).

Base capex

130. A summary of our core decisions related to base capex are to:
- 130.1 introduce two separate incentive rates for base capex:
 - 130.1.1 a standard rate at 33%; and
 - 130.1.2 a lower rate at 15%;
 - 130.2 set the base capex incentive mechanism on an expenditure basis rather than a commissioned asset basis;
 - 130.3 remove the policies and processes incentive adjustment ; and
 - 130.4 introduce the option for an expenditure adjustment mechanism for base capex E&D projects.

Base capex incentive rate – problem definition

131. All base capex projects are currently subject to a symmetric ex-ante incentive mechanism (the base capex expenditure adjustment) that operates in a similar way to our new mechanism for major capex projects. The current incentive rate applied to base capex through this mechanism is 33%. This rate is not specified in the capex IM but is currently set in the IPP determination.
132. We consider that 33% is an appropriate incentive rate for the majority of base capex because it is approximately consistent with the opex incentive rate applied through the IRIS.¹²⁰ A consistent incentive rate between opex and capex means that Transpower has no incentive to favour capex over opex (or vice versa) in order to benefit from a higher incentive rate. Therefore Transpower will be incentivised to undertake the most efficient solution regardless of expenditure type.

¹¹⁹ MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), p. 4.

¹²⁰ The exact opex incentive rate is dependent on the WACC that applies during an IPP. The current IPP WACC rate results in an IRIS retention factor of 34%.

133. Currently all base capex projects (including listed projects) are subject to the same incentive rate; however, Transpower has suggested that the size and cost uncertainty associated with some future listed projects may justify a lower incentive rate.¹²¹

For listed projects, and potentially for major capex, a lower incentive rate is more appropriate. Large individual projects have a high degree of uncertainty and are very large compared with approved base capex quantum.

134. We agree that listed projects can also be subject to some of the same characteristics that we consider justify an alternative incentive rate for major capex projects (ie, potential for large gains and losses due to residual uncertainty over cost forecasts).
135. When a base capex project is large (whether listed or not) a high incentive rate can result in:
- 135.1 a higher revenue risk for Transpower – which may potentially result in poor outcomes for consumers because Transpower may focus on limiting risk exposure and therefore may undertake a conservative investment approach; and
- 135.2 consumers potentially paying significantly more than Transpower’s incurred costs when it delivers an individual project under its forecast cost.
136. As explained in the major capex section, payment by consumers in excess of actual costs *may* result in excessive profits to Transpower depending on whether the reason for actual costs being lower than the original allowance is due to overforecasting or efficiency gains.¹²² In particular, Transpower could have an incentive to provide an upwardly-biased cost estimate given the known monetary reward from a higher incentive rate.¹²³
137. Although the risks identified above can be similar for smaller base capex projects and larger base capex projects, we consider the potential for the higher materiality of these issues for individual large projects provides a reason to consider a lower incentive rate.
138. There are also advantages to a higher incentive rate which have to be weighed up against the disadvantages listed above. The main advantages are that:
- 138.1 Transpower has a higher incentive to invest and operate efficiently; and
- 138.2 consumers bear a lower proportion of any of cost overruns above the original allowance.

¹²¹ Transpower submission on focus areas consultation paper “Capex IM review: Issue identification via focus areas” (14 June 2017), p. 11.

¹²² See paragraph 117.2.

¹²³ See Table 2 in Chapter 3 outlining the outturn costs for major capex projects.

139. The issues identified above mean that we consider an incentive rate that is suitable for the majority of base capex projects may not be appropriate for larger base capex projects.

Base capex incentive rate – decision

140. Our decision is to amend the capex IM to provide for the application of two incentive rates to base capex projects:¹²⁴

140.1 a standard incentive rate; and

140.2 a low incentive rate applied to a large project which is identified during the setting of the IPP and passes a low incentive rate cost threshold.¹²⁵

141. We have decided to set the standard base capex incentive rate at 33%; as noted in paragraph 132 above, we consider that this remains an appropriate rate for the majority of base capex.
142. We have decided to set the low incentive rate at 15% which we consider strikes an appropriate balance by mitigating some of the concerns raised above while still providing a meaningful incentive on Transpower to achieve efficiency gains.¹²⁶ As such we consider that, consistent with s 52A of the Act, this approach limits the ability of Transpower to extract excessive profits, while also providing incentives to invest and operate efficiently.
143. We have also decided to specify the base capex incentive rates in the capex IM. Fixed values for the standard and low incentive rates will provide greater certainty to Transpower and other stakeholders consistent with s 52R of the Act.
144. A cost threshold is required for projects to qualify for the low incentive rate so that only projects which have the potential for a significant individual impact on Transpower's revenue are included. A large project cost does not necessarily increase the risk of a poor outcome for consumers, but it does increase the magnitude of any poor outcome.
145. In its submission on our draft decision, Transpower agreed with the 15% low incentive rate for listed projects. However, Transpower sought clarity on the operation of the criteria for low incentive rate projects, in particular how the Commission will determine 'no workable alternative capex or opex options'.¹²⁷

¹²⁴ This means that we will set two allowances that are not fungible with each other (but are fungible within the separate allowances).

¹²⁵ Note that listed projects must meet these criteria at the time of setting the IPP and when the listed project is approved.

¹²⁶ We note the 15% rate is consistent with the incentive rate set for the capex IRIS applied to EDBs (this was determined from the average of the natural incentive for capex efficiency savings under a 5-year price path).

¹²⁷ Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 8, 9.

146. Having reflected on Transpower's submission, we have removed the 'no workable alternative capex or opex options' as a mandatory criterion for Transpower to propose that a base capex project allowance should enter the low incentive rate base capex allowance.
147. We have retained the cost threshold criterion. We have set the cost threshold for applying the low incentive rate at \$20 million, consistent with the existing major capex and listed project thresholds.
148. If a base capex project meets the cost threshold criterion, Transpower may propose that a base capex project enter the low incentive rate allowance prior to the commencement of an RCP. The Commission will, with the exception of listed projects, determine the projects that the low incentive rate will apply to prior to the commencement of the RCP (whether proposed by Transpower or not) to, taking into consideration relevant factors, including:
- 148.1 whether there are viable alternatives that meet the same investment need;¹²⁸
and
- 148.2 the magnitude of cost uncertainty of the base capex project.
149. If a large base capex project or listed project is substitutable with alternative opex or capex (that is subject to a 33% incentive rate), the lower incentive rate could potentially distort the incentives for Transpower to choose investments that are in the long-term interests of consumers.
150. Transpower would have an incentive to minimise any costs in the base capex allowance subject to a 33% incentive rate, and to maximise those in the base capex allowance subject to a 15% incentive rate. This could potentially lead to Transpower proceeding with a project subject to the lower incentive rate, even if there are alternative opex or capex solutions that would result in a more efficient outcome.
151. The consideration of opex substitutability is consistent with concerns raised in some submissions that Transpower currently has an incentive to favour capex over opex.¹²⁹ Any potential bias could be accentuated by a lower incentive rate for certain capex projects.
152. We expect it likely that the application of a lower incentive rate will be an exception for base capex projects.

¹²⁸ In our draft decision we proposed 'no workable alternatives' as a mandatory criterion that had to be met before a project could enter the low incentive rate base capex allowance. Our final decision is to remove the 'no workable alternatives' requirement as a mandatory criterion for projects to qualify for the low incentive rate allowance, but to retain it as a relevant consideration when determining which of those projects can enter the low incentive rate base capex allowance.

¹²⁹ MEUG "MEUG submission on Transpower capex input methodology incentive mechanism" (22 September 2017), para 6.

153. Transpower will identify projects that are proposed to be subject to the low base capex incentive rate in its base capex proposal. With the exception of listed projects, we will determine the project allowances that enter the low incentive rate base capex allowance during the process of setting the IPP.
154. In its submissions on our draft decision, Transpower sought the ability to re-classify base capex projects to a low incentive rate during an RCP.¹³⁰ Our decision is that base capex project allowances will not be able to be re-classified into the low incentive rate allowance during an RCP. Transpower is still able to proceed with a given project during an RCP, although the standard base capex incentive rate would apply for that period. We consider that allowing Transpower to re-classify projects during an RCP would add additional complexity and reduces predictability of the regulatory regime for stakeholders.
155. For listed projects we will determine the incentive rate applying to the project when we make our decision on the additional allowance.
156. The two allowances (standard incentive rate base capex allowance and low incentive rate base capex allowance) are fungible within each separate allowance, but are not fungible with each other.

Base capex incentives on commissioning vs expenditure – problem definition

157. The base capex expenditure incentive mechanism adjusts for the difference between forecast commissioned assets and actual commissioned assets. This is consistent with the approach for recognition of capex that enters the Regulatory Asset Base (**RAB**).

¹³⁰ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 8-9.

158. In its submission on the capex IM focus areas paper, Transpower submitted about the difficulty of forecasting timing of commissioning. It noted that basing forecasts on commissioning resulted in cash-flow volatility. It also noted that the use of a commissioned expenditure-based incentive could deter commissioning of assets. Transpower submitted:¹³¹

The difficulties with a commissioned value incentive include:

- commissioning lags spending and is inherently more difficult to forecast because, rather than accumulating through a project, it is highly dependent on specific project events such as engineering acceptance testing and project close documentation
- we cannot accrue commissioned value (an asset is either commissioned, or not) so annual outturn can be disproportionately impacted by single events (e.g. excessive rain in June can delay commissioning of many millions of dollars' worth of assets)
- forecasting and reconciling commissioning is an extra task, because forecasting and reconciling spending is required for all financial processes. We would always forecast commissioning for RAB forecasting and price path purposes, but our processes could be less intensive and more fit for purpose if not also used for annual incentive calculations; and
- at the margin, a commissioning-based incentive deters commissioning (we effectively receive incentive credits for delaying project commissioning).

159. We agree with Transpower's view that there are greater difficulties and costs in forecasting the value of commissioned assets due to the impact of specific events that can affect when an asset is commissioned (or enters the RAB). However, we do not consider that this is a significant issue, because any fluctuation would even out over a large number of projects and over a longer period of time. We would expect Transpower to be able to manage risks of this type.
160. The potential for Transpower to have an incentive to delay project commissioning in the instance when Transpower forecasts assets to be commissioned in an RCP, but then defers the commissioning date to the following RCP period, is more significant.
161. Under this scenario it is difficult to exclude specific projects from the next RCP even if an allowance was provided in the previous RCP. The forward-looking nature of the regime and the fungibility of the base capex allowance, means that we do not evaluate whether specific base capex projects have been delivered or not when setting the future price path. This could potentially result in Transpower gaining a monetary reward for delaying the project in the first period (through the base capex incentive mechanism), but then also potentially receiving the full cost of the allowance in the next period.
162. For example, if a project's commissioning date was delayed by one year from Year 5 of RCP2 to Year 1 of RCP3, there is the potential for Transpower to obtain a reward equal to 33% of the total cost of the project if an allowance for the project was included in the base capex allowance of both RCP2 and RCP3.

¹³¹ Transpower submission on focus areas consultation paper "Capex IM review: Issue identification via focus areas" (14 June 2017), p. 15.

Base capex incentives on commissioning vs expenditure – decision

163. Our decision is to amend the capex IM to change the basis of the base capex incentive mechanism from the value of commissioned assets to expenditure. We consider that this will better promote the long-term interests of consumers by lowering the potential for excessive profits to Transpower that arise due to the disconnection between setting the base capex allowance in one regulatory period and the next.
164. In their submissions on the draft decision, both Transpower and MEUG supported changing the basis of the base capex incentive mechanism from the value of commissioned assets to expenditure.¹³²
165. The change means that the actual expenditure that flows through to the incentive will be spread over a number of years rather than based on a single commissioning date. The impact of any deferral (or delay) in commissioning of assets from one regulatory period to another will be less detrimental to consumers (as the increased profits to Transpower will be lower).
166. Even with this change there will continue to be an incentive to defer expenditure (which is an inherent characteristic of an incentive regime). Deferring expenditure can also be an efficient outcome that is in the interests of consumers, when assets are not required. This decision does not change that underlying characteristic of the regime, but instead limits the potential for excessive benefits to Transpower in the specific circumstances when the commissioning of certain assets are been deferred from one regulatory period to another.
167. Although the main rationale for a move to using expenditure-based incentive is to reduce the incentive to inappropriately defer commissioning, we note that it will also provide additional benefits as outlined by Transpower. For example, it will reduce the administrative burden on Transpower of forecasting and reconciling commissioned asset values.
168. For major capex projects we have decided that incentives will operate on commissioned assets at the end of the project. This is because (unlike in the base capex) major capex projects are kept separate for the purpose of incentives, ie, there is no fungibility between major capex projects.¹³³ At the conclusion of the project, the commissioned value will be equal to the amount of expenditure spent on the project, and therefore the amount that the incentives apply to will not be affected.

¹³² Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 8; and MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), p. 4.

¹³³ The issue with the base capex regime occurs when projects or programmes continue over multiple periods, as the allowance is reset every RCP but the commissioning date may be deferred.

169. The decision to move the basis for the base capex incentive from commissioned assets to expenditure does not change our view that the value of commissioned assets should be used when assets enter the RAB.¹³⁴

Base capex policies and processes incentive – problem definition

170. 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. The adjustment was intended to ensure that a rigorous process was applied when testing the economics and engineering solutions of any base capex project.¹³⁵
171. Both Transpower and MEUG have submitted that the current mechanism is ineffective.¹³⁶ Transpower also suggested that the current mechanism is:¹³⁷
- ...inconsistent with the broader settings for incentive regulation and is a disincentive to incorporating positive change.
172. We noted in our focus areas paper and our emerging views paper that we had doubts about the effectiveness of the adjustment.¹³⁸ The mechanism relies on disclosure by Transpower, and judgement by the Commission on whether the policies and processes have been applied in practice.
173. We consider there is no incentive on Transpower from this mechanism to disclose where it has not followed its policies and processes, as there is no potential reward for doing so (only a penalty). Therefore, we consider the adjustment is ineffective.
174. We additionally consider the complexity in calculating an adjustment (in the case that non-compliance with the policies and processes was disclosed) can lead to debate and issues around what this value should be.
175. These issues have become apparent since the capex IM was set in 2012, and no adjustment has been made during this time.

¹³⁴ For original reasoning on why commissioned assets should enter Transpower’s RAB, refer to: Commerce Commission “Transpower Input Methodologies Reasons Paper” (December 2010), para 4.4.39 & 4.4.73.

¹³⁵ Commerce Commission “Transpower Capital Expenditure Input Methodology – Reasons Paper” (31 January 2012), para 3.5.6.

¹³⁶ Refer to: Transpower submission on focus areas consultation paper “Capex IM review: Issue identification via focus areas” (14 June 2017), p. 11; and MEUG “MEUG submission on Transpower capex input methodology incentive mechanism” (22 September 2017), para 15.

¹³⁷ Transpower submission on emerging views “Capex IM review: Incentive mechanisms” (22 September 2017), p. 4.

¹³⁸ Refer to Commerce Commission “Transpower capex input methodology review – Emerging views on incentive mechanisms” (1 September 2017), para 83-85; and Commerce Commission “Transpower capex input methodology review – Proposed focus areas for the capex IM review” (15 May 2017), para 100.2.

Base capex policies and processes incentive – decision

176. Our decision is to amend the capex IM to remove the policies and processes incentive mechanism. We agree with the concerns about its effectiveness and so consider it should be removed from the capex IM. This is consistent with the rationale of reducing the complexity of the capex IM in line with the framework when the complexity does not provide any significant benefit.
177. In their submissions on the draft decision, MEUG and Transpower agreed with the removal of the base capex policies and processes adjustment.¹³⁹
178. We consider that greater information disclosure could provide some benefits by providing greater oversight on Transpower’s policies and processes. However, the costs of complying with any additional requirements would have to be considered. At this stage, we have decided not to introduce any additional information disclosure requirements relating to Transpower’s processes and policies, as we consider the benefits would be unlikely to outweigh the costs of implementation.

Base capex E&D expenditure adjustment mechanism – problem definition

179. Setting the base capex allowance for Transpower in an IPP requires us to determine an allowance for E&D projects. This allowance can be difficult to determine because E&D projects are often dependent on demand growth and other drivers which can be difficult to forecast with any certainty.¹⁴⁰

¹³⁹ MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), p. 4; and Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 8.

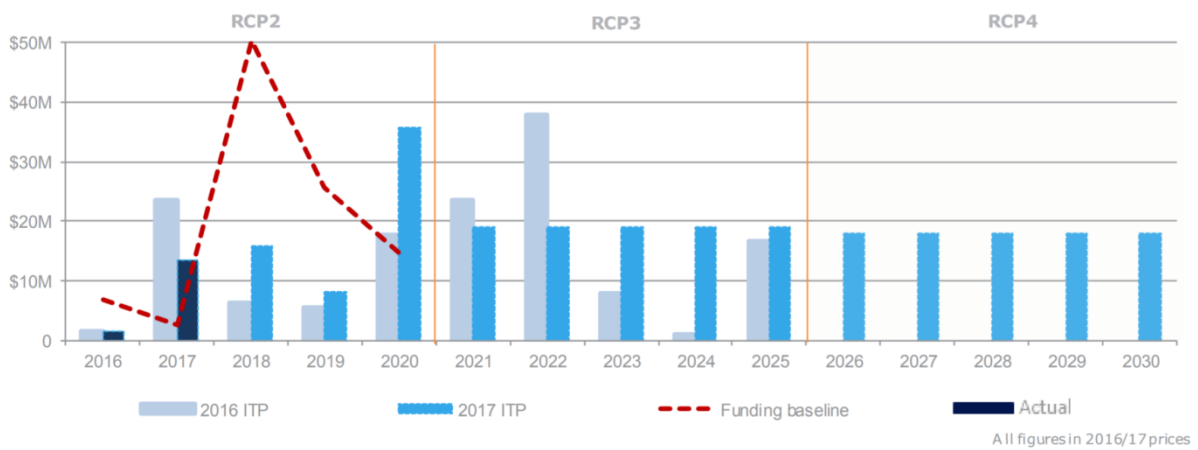
¹⁴⁰ Actual demand to date over RCP2 has been less than was forecast at the time of Transpower’s proposal.

180. This difficulty in forecasting can be illustrated by considering the allowance we set for E&D base capex for RCP2 and comparing it to Transpower’s current forecast of expenditure on these types of projects. Transpower’s current forecast for E&D base capex over the remainder of RCP2 is significantly lower than was originally proposed:

180.1 At the time of setting the RCP we removed 23% of Transpower’s proposed E&D project expenditure of \$136 million from the original proposal,¹⁴¹ giving a final allowance of \$104 million, because adequate justification was not provided for all of the projects.¹⁴²

180.2 Figure 6 illustrates that Transpower has a current forecast for E&D base capex in RCP2 of \$75 million (ie, 45% less than the original proposal) and has spent only \$15 million in the first 2 years of the RCP.¹⁴³

Figure 6: Grid enhancement and development base capex¹⁴⁴



Base capex E&D expenditure adjustment mechanism – decision

181. Consistent with our draft decision and emerging views paper, our decision is to amend the capex IM to introduce the option for an expenditure adjustment mechanism for base capex E&D projects.¹⁴⁵ The adjustment will be an automatic mechanism that updates the standard incentive rate base capex allowance.

¹⁴¹ Based on values in the decisions and reasons paper for setting Transpower’s RCP2 IPP: *Setting Transpower’s individual price-quality path for 2015 – 2020* [2014] NZCC 23 (29 August 2014), Table 5.5. The values in the IPP decision are stated in 2012/13 constant prices, but have been provided here in 2016/17 prices using an estimate of CPI inflation and real price effects consistent with the assumptions used at the time we set the IPP. We have multiplied the base capex in 2012/13 prices by 1.098 to obtain an estimate of 2016/17 prices so that it can be compared with Transpower’s current IPP.

¹⁴² *Setting Transpower’s individual price-quality path for 2015 – 2020* [2014] NZCC 23 (29 August 2014), para 5.71-5.75.

¹⁴³ Transpower “Integrated Transmission Plan Narrative 2017” (September 2017), p. 30.

¹⁴⁴ Transpower “Integrated Transmission Plan Narrative 2017” (September 2017), p. 31.

¹⁴⁵ Commerce Commission “Transpower capex input methodology review – Emerging views on incentive mechanisms” (1 September 2017), para 79.

182. A baseline level of E&D expenditure will be specified in the IPP (ie, an allowance which will not be subject to the expenditure adjustment mechanism). Any increase in the level of relevant drivers of base capex E&D that meets a pre-specified level during the RCP will result in an addition to the base capex allowance. The amount of additional revenue will also be specified prior to the commencement of an RCP.
183. Our change to the capex IM will allow any adjustment to be set on a project-by-project basis. There will be complete fungibility between the original allowance and any additional amount provided based on the trigger. Given the magnitude of E&D base capex relative to other types of capex, we also expect limited impact on the volatility of the price path.
184. We have decided to expand the range of factors considered in the adjustment mechanism in response to Transpower's submission that demand is only one of several drivers of uncertainty for E&D capex.¹⁴⁶
185. The exact details of any base capex E&D expenditure adjustment mechanism will be specified in the IPP and we will consult on this as part of the IPP reset process. The revised draft determination includes the following proposed criteria:
- 185.1 the cost and timing uncertainties of any individual project;
 - 185.2 the extent to which any timing uncertainties of a project are linked to a certain level of demand or connecting new generation; and
 - 185.3 any other relevant drivers of base capex E&D expenditure that may influence project need or uncertainty.
186. In our emerging views paper we proposed the introduction of a mechanism that could help mitigate concerns about the process in regard to Transpower's ability to invest in base capex enhancement projects.¹⁴⁷ Transpower's submission on our emerging views paper was strongly against the proposal of a mechanism to adjust the levels of enhancement base capex during a regulatory period:¹⁴⁸

We also strongly reject the surprising proposal to create another mechanism for Regulatory Asset Base (RAB) additions within-period, for base capex (enhancement) projects due to the uncertainty of demand growth. This proposal would reduce the fungibility of the base capex design, introduce more complexity into our business and potentially increase the volatility of our price path.

¹⁴⁶ Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 2.

¹⁴⁷ Commerce Commission "Transpower capex input methodology review – Emerging views on incentive mechanisms" (1 September 2017), para 79-80.

¹⁴⁸ Transpower submission on emerging views "Capex IM review: Incentive mechanisms" (22 September 2017), p. 7.

187. In our draft decision we proposed to introduce a trigger mechanism with a baseline level of expenditure and subsequent increases based on the level of demand. Transpower reiterated its view in its submission on our draft decision, arguing that the mechanism would be disproportionate and that peak demand is only one of several drivers of E&D uncertainty.¹⁴⁹
188. We disagree with Transpower that the introduction of such a mechanism will reduce the fungibility of the base capex allowance. Instead it will be a mechanism that increases the base capex allowance based on one or more defined ‘trigger’ points during the RCP period.
189. The introduction of an expenditure adjustment mechanism may slightly increase complexity, but we consider that this will be limited by setting out the pre-defined mechanism prior to the start of an RCP. Further, the additional complexity should be offset by a reduction in the time spent by us and submitters in scrutinising the demand forecasts underpinning Transpower’s proposed E&D projects.
190. We consider the use of this type of mechanism may help mitigate some of the concerns over project investment decisions without the need to lower the threshold for major capex projects with the associated administrative and regulatory costs.
191. MEUG supported the demand adjustment mechanism that we had proposed in our draft decision.¹⁵⁰ In its cross-submission on our draft decision, MEUG argued that Transpower had only focused on the additional complexity, without considering the benefits of such a mechanism.¹⁵¹
192. Contact questioned why the trigger we proposed in the draft decision only included a mechanism to increase the expenditure allowance in the event that demand increases, but not to reduce the expenditure allowance if demand were to be lower than forecast. Contact submitted that if an upwards trigger is to be applied, there should also be an allowance for a downward adjustment.¹⁵²
193. We have not included a downward adjustment as proposed by Contact, as we consider that the baseline expenditure allowance should be set at a relatively low level which can then be added to when needed.

¹⁴⁹ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 2.

¹⁵⁰ MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), p. 3.

¹⁵¹ MEUG “MEUG cross-submission on draft Transpower capex input methodology decision” (16 January 2018), p. 3.

¹⁵² Contact Energy “Re: Transpower capex input methodology review: draft decision” (21 December 2017), para 1.12.

Investment test applied to major capex

194. We have decided to retain the current investment test criteria and approach as set out in the capex IM. We received a number of submissions on our focus areas paper suggesting changes to the capex IM, which we discuss in this section.
195. We do not consider any of the submissions we received suggested a fundamental change to the investment test, ie, a net market benefits test to all electricity market participants.¹⁵³ We explain in this section our reasons *not* to make any changes to the implementation of the test that have been suggested by stakeholders, including why we have decided not to:
- 195.1 expand the criteria applied in the test – competition effects and option value;
 - 195.2 expand the criteria applied in the test – wider costs and benefits (including amenity value);
 - 195.3 adapt the investment test process to allow capital contributions to be returned at a later date;
 - 195.4 change the use of 7% as the default discount rate applied to the investment test; or
 - 195.5 introduce any requirements for consistency with the transmission pricing methodology (**TPM**) as set by the Electricity Authority.

Investment test – inclusion of competition effects and option value

196. We received a number of submissions regarding the investment test criteria concerning the application of competition effects and option values in the test:¹⁵⁴
- 196.1 Contact, Trustpower and Mercury submitted that competition (including price separation) effects should be taken into account;¹⁵⁵ and
 - 196.2 Mercury suggested the use of options value.¹⁵⁶

¹⁵³ We note Contact proposed that the investment test should only consider transmission benefits for any proposed Transpower investment that is ‘competitive’. However, we do not consider this is a question about the fundamental nature of the investment but instead about what is considered a transmission service. This issue was previously considered as part of the 2015-2016 IM review. Contact Energy submission on focus areas consultation paper “Transpower Capex IM review” (14 June 2017), p. 3.

¹⁵⁴ For a list of the existing costs and benefits applied to the investment test, see capex IM, clause D5(1). In the revised draft capex IM determination, for a list of costs and benefits see clause D4(1).

¹⁵⁵ Refer to Contact Energy submission on focus areas consultation paper “Transpower Capex IM review” (14 June 2017), p. 2-3; Trustpower “Trustpower Submission: Proposed Focus Areas for Capex IM Review” (14 June 2017), para 3.2.4; and Mercury submission on focus areas consultation paper “Consultation Paper – Transpower Capex IM review” (14 June 2017), p. 1.

¹⁵⁶ Mercury submission on focus areas consultation paper “Consultation Paper – Transpower Capex IM review” (14 June 2017), p. 2.

197. Our decision is that no change is required to the investment test because it already provides for the consideration of competition effects and option value.^{157, 158} Transpower in its cross-submission to the focus areas paper outlined how the investment test does take into account competition effects.¹⁵⁹

The existing Investment Test identifies proposals on the basis of changes in electricity costs. Some submissions expressed concern that the Investment Test did not consider wholesale market competition effects but this is incorrect.

198. We agree with Transpower that both competition effects and option value can already be incorporated within the test. Both can be difficult to quantify, but stakeholders have the opportunity to engage with Transpower on the investment test when it is applied to major capex proposals.
199. Competition effects could include both generation and demand effects (eg, the Electricity Authority’s proposal for real-time pricing),¹⁶⁰ however, we do not consider it is appropriate to prescribe in more detail in the capex IM how these effects are taken into account within the investment test. There could be a number of different methodologies and we consider that Transpower (with input from stakeholders) is best placed to consider an approach.
200. Transpower also noted how the investment test considers the overall impact on total welfare for electricity market participants.¹⁶¹ Pricing effects that result in transfers from one party to another (eg, from one generator to another, or from generators to consumers) are not taken into account.
201. As the investment test is designed to cover the net market benefits to all electricity market participants, we do not consider that transfers of this nature should be considered when applying the investment test.

¹⁵⁷ See capex IM, clauses D4(1)(h) and D4(1)(k).

¹⁵⁸ MEUG agreed with all of our draft decisions on the investment test (and noted our response regarding the use of the 7% discount rate). See: MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), p. 3. Transpower also agreed with our draft decision to retain the current form of the investment test. See: Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 12.

¹⁵⁹ Transpower cross-submission on focus areas consultation paper “Capex IM review: Issue identification via focus areas” (28 June 2017), p. 3.

¹⁶⁰ Electricity Authority “Real-time pricing proposal – Consultation paper” (1 August 2017).

¹⁶¹ Transpower cross-submission on focus areas consultation paper “Capex IM review: Issue identification via focus areas” (28 June 2017), p. 4.

Investment test – wider costs and benefits (including amenity value)

202. Transpower submitted in response to the focus areas paper that the investment test should be widened to incorporate a wider range of costs and benefits.¹⁶²

We consider the investment test should be a default setting and we recognise the value of certainty that prescription brings. However, in a future context of changing landscapes (our planning trajectory) our investment options analysis could allow for different decision rules.

To justify any departure from the default investment test, possible approaches are to allow judgement on a wider range of costs and benefits (for example, our decision-making in dense urban areas is complex), or considering economic analysis under staged approval.

203. Transpower provided the above example about decision-making in urban areas. One frequent example of urban area decision-making is the undergrounding of lines for amenity reasons.

204. Our decision is to not specifically include these types of amenity benefits within the scope of the investment test. This is because:

204.1 we consider that amenity benefits could be included within the investment test albeit only to the extent that those benefits would be taken into account by consumers in their capacity as an electricity consumer (rather than as a member of the general public); and

204.2 the capex IM already provides that wider costs and benefits can be included in the investment test if they are agreed with us prior to any consultation.¹⁶³ We consider this can cover any wider benefits as suggested by Transpower and does not require a change to the capex IM.

205. Amenity benefits can be valued by consumers, but are likely to be considered in a different capacity (eg, due to concerns about visual impact). Amenity benefits are also likely to accrue to a subset of consumers and be valued differently by different consumers.

206. We consider that these types of benefits are most appropriately and practically considered outside the investment test process (eg, a third party could pay directly for undergrounding) so that the costs are more directly funded by those consumers who benefit from undergrounding.

207. Transpower also needs to comply with any local planning requirements or safety laws and will be able to incorporate any related costs into project costs.

¹⁶² Transpower submission on focus areas consultation paper “Capex IM review: Issue identification via focus areas” (14 June 2017), p. 8.

¹⁶³ Capex IM, clause D4(1)(l).

Return of capital contributions

208. Contact submitted that we should consider introducing an option whereby capital contributions required to bring forward investments could be returned to contributors at a later date:¹⁶⁴

Contact would also welcome more flexibility in the capex IM to enable partial funding of major capex projects (if it can be broken down) by participants, so that projects can be brought forward. At present there is no way to recover that funding once the project does pass the GIT and is approved on an economic or reliability basis. Transpower can only recover the total cost less the partial funding amount, as this is the amount that goes into the RAB.

209. The capex IM permits a capital contribution to be paid by a party in order to bring forward a Transpower investment.¹⁶⁵ However, these capital contribution costs cannot be recovered at a later date if the investment subsequently passes the investment test without the need for capital contributions.¹⁶⁶
210. The interaction of capital contributions with the investment test is complex. Capital contributions are an appropriate way to take into account private benefits not included in the investment test. However, it is less appropriate when capital contributions are paid by one party to obtain private benefits that have already been considered in the investment test (eg, electricity market benefits).
211. The investment test considers the net benefits to all electricity market participants, which means any capital contribution of this type used to bring forward an investment may be offset by a negative impact on other market participants.
212. After considering Contact's proposal, we have decided not to introduce a mechanism to return money to private contributors in the event that the investment test is passed at a later date, given:
- 212.1 the additional complexity in introducing an 'investment test' to return money to transmission customers and the means by which any money would be returned; and
- 212.2 the limited scenarios in which this would apply.

Use of 7% discount rate

213. In the existing determination, the capex IM prescribes a pre-tax real discount rate of 7% to be used in the investment test when undertaking a cost-benefit analysis for different investment options.

¹⁶⁴ Contact Energy submission on focus areas consultation paper "Transpower Capex IM review" (14 June 2017), p. 2-3.

¹⁶⁵ Capex IM, clause D4(1)(i).

¹⁶⁶ Note that capital contributions are also used to pay for private benefits that are not included in the investment test. We consider this is appropriate.

214. In its submission on the capex IM focus areas paper,¹⁶⁷ MEUG suggested that the capex IM be revised to use a 6% mid-point rate consistent with the Treasury default rate used for cost-benefit analysis.¹⁶⁸ MEUG stated that:

Use of the 7% for Transpower capital investments when the public sector in general has a default rate of 6% would, over the long-term, lead to miss-investment between Transpower and all other public infrastructure unless there are good reasons that should be so.

215. We do not consider that linking Transpower’s discount rate to the Treasury rate is an appropriate reason to move from the default 7% rate. We note that at the time of the 2012 capex IM determination, the 7% rate was maintained while the Treasury’s pre-tax real discount rate was 8%.¹⁶⁹
216. We consider there are insufficient reasons to support a change from the existing pre-tax real discount rate of 7%, and note that:¹⁷⁰
- 216.1 the discount rate is only used when ranking different investment options, (ie, it does not affect major capex revenue);
- 216.2 given the long-term nature of the investment decisions we consider that there is some benefit keeping a consistent discount rate over time (7% is the current discount rate and was previously used under the Grid Investment Test);
- 216.3 an alternative discount rate may be applied by Transpower if it considers the default value is not appropriate;¹⁷¹ and
- 216.4 the current investment test requires sensitivity analysis using discount rates of 4% and 10% to ensure robustness of the analysis against alternative discount rates.
217. For the avoidance of doubt, this discount rate is only intended to be used in the context of the investment test when undertaking cost-benefit analysis for different investment options.

¹⁶⁷ Commerce Commission “Transpower capex input methodology review – Proposed focus areas for the capex IM review” (15 May 2017).

¹⁶⁸ MEUG “MEUG submission on Transpower capex input methodology review” (14 June 2017), para 9d.

¹⁶⁹ Commerce Commission “Transpower Capital Expenditure Input Methodology – Reasons Paper” (31 January 2012), para 7.4.29.

¹⁷⁰ As noted in paragraph 10, we have only proposed changes to the capex IM where the change is likely to promote the purposes in s 52A or s52R more effectively, or significantly reduce complexity or compliance costs.

¹⁷¹ For further reasoning on the discount rate for the 2012 capex IM decision, see: Commerce Commission “Transpower Capital Expenditure Input Methodology – Reasons Paper” (31 January 2012), para 7.4.25-7.4.32.

Consistency with the TPM

218. Some submissions raised the issue of consistency with the TPM.¹⁷²
219. We do not consider that any changes to the investment test are required to ensure consistency with the current or any future TPM. The investment test is a stand-alone test which considers the net benefits of individual investments to electricity market benefits as a whole and does not consider how those costs should be paid for by individual market participants. The TPM determines separately how those costs are allocated to transmission consumers.
220. However, we do encourage stakeholder participation in the investment test process through Transpower's consultation. We have also decided to introduce a requirement on Transpower to provide greater information on future pricing impacts to help stakeholder engagement (see paragraphs 329 to 338 below).
221. In its submission on our draft decision, Transpower considered that we should allow discretion to review the investment test to have regard to potential changes to the TPM by the Electricity Authority. As outlined in paragraph 70 above, we note that we could undertake an IM review within a shorter timeframe if there were good reasons to do so.

Other issues raised in submissions

222. A number of other issues related to the incentive framework were raised in submissions on our focus areas paper, and for which we have decided to make no changes to the capex IM. We explain below our decisions that there should be no change to:
- 222.1 requirements relating to contracting with third parties;
- 222.2 the threshold for major capex projects; and
- 222.3 incentives for Transpower to complete major projects on time.

¹⁷² Such as: Trustpower "Trustpower Submission: Proposed Focus Areas for Capex IM Review" (14 June 2017), para 3.2.1-3.2.7.

Contracting with third parties

223. In its submission on the capex IM focus areas paper,¹⁷³ Pioneer suggested that there may be a difficulty for third parties to successfully arrange contracts with Transpower for NTSs due to higher levels of risk.¹⁷⁴

Transpower is, obviously, going to value the option of investment in transmission infrastructure at its own weighted average cost of capital (WACC) – determined by the Commerce Commission. The level of this return takes into account Transpower is ‘guaranteed’ its revenue, is a monopoly and has some benefits from being state-owned. A third party trying to contract a transmission alternative solution to Transpower is very likely to have a higher WACC than Transpower. The third party is therefore at a disadvantage to Transpower’s own investment – unless the contract with Transpower can provide a level of assurance for the third party that lowers the risk associated with funding that investment.

224. Independent Electricity Generators Association (**IEGA**) and Contact also supported the suggestion that compensation and contract duration should be consistent with that provided to Transpower.¹⁷⁵ MEUG considered that uncertainty around third party contracts might dampen economically viable NTSs being developed.¹⁷⁶
225. Orion responded to submissions commenting on the differing cost of capital between a potential transmission and transmission alternative being an impediment to NTSs being implemented. Orion stated:¹⁷⁷

The submissions conflict on the proposition of lowering Transpower’s WACC, increasing Transpower’s WACC or Transpower providing contractual relief from risk for other parties. Contracting for risk sharing is appropriate on a commercial basis although making this a function of regulation may not be. Providing a level playing field should not extend to adjusting Transpower’s WACC to align with the differing risk profile of competing options.

226. Transpower also responded to submissions, stating that it does not have a bias towards owning assets over procurement of services.¹⁷⁸

¹⁷³ Commerce Commission “Transpower capex input methodology review – Proposed focus areas for the capex IM review” (15 May 2017).

¹⁷⁴ Pioneer Energy submission on focus areas consultation paper “RE: Transpower capex input methodology review – Proposed focus areas” (14 June 2017), p. 3.

¹⁷⁵ Refer to Contact Energy cross-submission on focus areas consultation paper “Transpower Capex IM Review: Cross-submission” (28 June 2017), p1; and IEGA submission on focus areas consultation paper “RE: Commerce Commission review of Transpower Capital Expenditure Input Methodology” (14 June 2017), p. 2-3.

¹⁷⁶ MEUG “MEUG submission on Transpower capex input methodology review” (14 June 2017), para 9b.

¹⁷⁷ Orion “Transpower Capex IM Review – Cross-submission” (27 June 2017), para 7.

¹⁷⁸ Transpower cross-submission on focus areas consultation paper “Capex IM review: Issue identification via focus areas” (28 June 2017), p. 2.

227. Our decision is to make no change in regard to the procurement of third party services, as we consider it is Transpower's responsibility to procure services that it considers most appropriate in order to deliver electricity transmission services. The incentive framework encourages Transpower to minimise the costs of delivering such services and we would expect Transpower, as it suggests in its submission, not to have a significant bias against using such services.¹⁷⁹
228. Further, we do not think there are any specific barriers preventing Transpower from contracting with a third party for a period longer than the regulatory period, if it were to result in lower overall costs.
229. Also, providing greater compensation to third parties that have a higher cost of capital would, all other things being equal, lead to higher prices for transmission services. This is not consistent with promoting the long-term interest of consumers, unless the increase is consistent with a corresponding increase in benefits.

Threshold for major projects

230. Submissions from Contact and Trustpower on the focus areas paper suggested that the threshold for major capex projects could be lowered because there is currently insufficient scrutiny on base capex projects under \$20 million.¹⁸⁰ Contact also suggested the investment test should be extended to R&R capex. Contact contrasted the investment test in the capex IM with Australia where the AEMC has extended its regulatory investment test to R&R capex¹⁸¹ and where the threshold for this test to apply is set at \$6 million.¹⁸²
231. Our emerging views paper outlined our view that extending the major capex process to a larger number of smaller projects would not be efficient or consistent with the proportionate scrutiny principle. Similarly, a significant proportion of R&R projects are expected to be unsuitable for transmission alternatives, meaning that a blanket rule to extend further scrutiny to all of these types of projects may not result in a cost-effective outcome.¹⁸³

¹⁷⁹ Transpower cross-submission on focus areas consultation paper "Capex IM review: Issue identification via focus areas" (28 June 2017), p. 2.

¹⁸⁰ Contact Energy submission on focus areas consultation paper "Transpower Capex IM review" (14 June 2017), p. 1, 2; Trustpower "Proposed focus areas for the capex IM review" (14 June 2017), section 2.2.

¹⁸¹ AEMC "Rule determination: National Electricity Amendment (Replacement expenditure planning arrangements) Rule 2017" (18 July 2017), p. 49-50.

¹⁸² AER "Cost threshold review for the regulatory investment test, Final determination" (November 2015), section 3.3.

¹⁸³ Commerce Commission "Transpower capex input methodology review – Emerging views on incentive mechanisms" (1 September 2017), para 77.

232. Subsequent submissions on the emerging views paper (including from Contact) appeared to agree with this approach and suggested that providing additional scrutiny on the existing base capex projects would not be best served by extending the major capex process.¹⁸⁴
233. Transpower and MEUG support the current threshold of \$20 million for major capex.¹⁸⁵ In its cross-submission on our draft decision, Contact noted that the major capex threshold is justifiably high given the very significant process requirements.¹⁸⁶
234. Given the support from submissions, our decision is to maintain the current threshold of \$20 million for major capex.

Incentives for Transpower to complete major projects on time

235. In its submission on the capex IM focus areas paper, Mercury suggested that there are insufficient incentives in the capex IM for Transpower to complete major capex projects on time.¹⁸⁷ Meridian suggested that is unclear whether Transpower has adequate incentives to deliver capex projects to time in a way that minimises costly periods of constraint for the industry.¹⁸⁸
236. Currently Transpower must incur all major capex prior to the project approval expiry date or a penalty is applied. However, the capex IM allows for this date to be extended on Transpower's application to the Commission. We consider this mechanism remains appropriate because Transpower should have the ability to defer projects where it is in the best interests of consumers. We would expect Transpower to give sufficient notice and justification if a project is expected to be deferred.

¹⁸⁴ Contact Energy submission "Re: Transpower capex input methodology review: Emerging views on incentive mechanisms" (22 September 2017), p. 2.

¹⁸⁵ MEUG "MEUG submission on draft Transpower capex input methodology decision" (8 December 2017), p. 3; and Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 11.

¹⁸⁶ Contact Energy cross-submission on draft decision paper "Re: Transpower capex input methodology review: draft decision" (21 December 2017), para 1.9.2.

¹⁸⁷ Mercury submission on focus areas consultation paper "Consultation Paper – Transpower Capex IM review" (14 June 2017), p. 2.

¹⁸⁸ Meridian "Areas of focus for the Transpower capex input methodology review – Meridian submission" (14 June 2017), p. 1.

CHAPTER 3: Process matters

Purpose of this chapter

237. The purpose of this chapter is to:
- 237.1 explain the problems we have identified in relation to process matters in the capex IM;
 - 237.2 set out our decisions in relation to those problems; and
 - 237.3 explain our reasons for those decisions.

Structure of this chapter

238. This chapter outlines:
- 238.1 our decision to introduce staged approvals for major capex proposals; and
 - 238.2 our decision not to introduce a verification process in the capex IM, but to pilot verification for Transpower's IPP proposal for RCP3.

Staged approval for major capex proposals

Current rules relating to major capex projects

239. Major capex projects are stand-alone projects. Each project is approved separately and substitution of costs between major capex projects or major capex and base capex projects is not permitted.¹⁸⁹ Treating major capex projects as stand-alone projects ensures that stakeholders can have an input into the project from an early stage of its lifecycle. In addition, all associated costs are taken into account when choosing between investment options.
240. Transpower must seek our approval to be able to recover the costs of a major capex investment.¹⁹⁰ Until we approve a major capex proposal, Transpower does not have any assurance that it can recover its costs of the project. For this reason, major capex projects are approved early in their lifecycles. Before seeking approval, Transpower limits its expenditure on the project to power system studies, consultation with interested parties, options development, and developing the proposal for our approval.¹⁹¹

¹⁸⁹ If a project included in the base capex proposal becomes a major capex project then the allowance allocated for that project is removed from the base capex allowance for the purposes of incentives and included in the major capex allowance.

¹⁹⁰ Capex IM Reasons paper 6.6.1 states that 'A major capex must be approved by the Commission before Transpower can recover that capital expenditure under the IPP'.

¹⁹¹ When it develops the proposal, we require Transpower to consult with external stakeholders on its assumptions and the need for the project, and invite submissions for potential solutions. We also require Transpower to consult on its proposed solution and the application of the investment test.

241. The cost estimates prepared at this stage of the project's lifecycle are generally based on desk-top studies and limited site visits. These estimates can have high levels of cost and scope uncertainties. The capex IM rules on major capex recognise this potential for large uncertainties and include and/or allow mechanisms to moderate their effects. As discussed in Chapter 2, we have identified some problems with the practical implementation of these mechanisms and we have decided to introduce an ex-ante incentive mechanism to address these problems.

Problem definition

242. While the new ex-ante incentive mechanism will remove the need for ex-post amendments of major capex allowances, it will not effectively address the potential for significant gains or losses due to large uncertainties in the estimated cost inherent in new E&D projects like transmission lines and cabling projects. If the approved cost is much higher than actual cost, then Transpower will benefit from the difference between the two costs. On the other hand if the approved cost is much lower than actual costs then consumers will benefit from the difference between approved and actual costs.
243. In a changing environment, there are additional risks with undertaking transmission projects:
- 243.1 The uncertainties in the timing of a project can lead to over-investment or under-investment.¹⁹² These uncertainties are due to the volatilities in the long-term forecasts that determine the timing and need of a project. Customers can be disadvantaged by there being insufficient capacity to meet demand, or by having to pay for investments commissioned before they deliver their intended benefits. Demand response can be used to manage demand when there is insufficient capacity, but customers can still be disadvantaged.
- 243.2 The need for a project that takes a long time to deliver could change during its delivery phase, generally due to low growth in actual demand compared to forecast. While the capex IM includes an option for Transpower to cancel a major capex project if it is no longer needed, there are no formal review processes that allow stakeholders to have an input, or for the Commission to require Transpower to cancel an approved major capex project.¹⁹³
- 243.3 The preferred investment could change over time, particularly in an environment of emerging technology. While the current rules allow Transpower to change the outputs of a project, the scope of allowable changes is limited.¹⁹⁴ Further, once Transpower starts the construction phase of a project, it is not always cost effective to change the preferred investment. Having the option of changing the preferred investment cost effectively would be an advantage.

¹⁹² Over-investment includes commissioning projects before they are needed.

¹⁹³ Capex IM, clause 3.3.5. Major Capex Sunk Cost Adjustment.

¹⁹⁴ Capex IM, clause 3.3.4(1)(d).

Decision

244. Our decision is to amend the capex IM to introduce the option of staged approvals for major capex projects to reduce the risks for projects with high levels of uncertainties. For the purpose of seeking approval and implementing the project, Transpower could split a major capex project into several stages if it considers that staging would allow Transpower and the Commission to:
- 244.1 set a more accurate level of funding for the project; and/or
 - 244.2 better manage uncertainties in need and timing of the project.
245. Examples of the types of projects that may be well suited to a staged approach include:
- 245.1 major capex projects with inherent high-level uncertainties in costs and scope such as transmission lines and cabling projects; and
 - 245.2 major capex projects that have a series of discrete projects delivered in sequence over a few years. For these projects, there may be scope to change the solutions for, or the timing of, subsequent stages. A formalised process to review the timing or investment option before delivery will be beneficial for all stakeholders.
246. In response to our focus areas paper, Transpower and Trustpower supported the option of staged approvals.¹⁹⁵
247. Submissions on our emerging views paper also supported our proposal to introduce the option of a staged approval process for major capex projects.^{196, 197}
248. Transpower and MEUG supported our draft decision to introduce the option of staged approval of major capex projects.^{198, 199}

¹⁹⁵ Transpower “Capex IM review: issue identification via focus area” (14 June 2017), p. 10; Trustpower “Trustpower submission: proposed focus areas for the capex IM review” (14 June 2017), para 2.3.

¹⁹⁶ Commerce Commission “Transpower capex input methodology review “Emerging views on incentive mechanisms” (1 September 2017), para 38-43.

¹⁹⁷ For example, Pioneer Energy “Transpower capex IM input methodology review – Emerging views on incentive mechanisms” (22 September 2017), p. 2; IEGA “Transpower Capital Expenditure Input Methodology - emerging views on incentive mechanisms” (22 September 2017), p. 2.

¹⁹⁸ MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), p. 3; and Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 8.

¹⁹⁹ Commerce Commission “Transpower capex input methodology review - Draft decision” (15 November 2017), par 209.

Reasons for our decision

249. Staged approvals will better promote s 52A(1)(b) by more effectively promoting efficiencies in delivering major capex projects. This will be achieved by:

249.1 the Commission being able to approve a major project allowance with greater confidence in scope and cost estimates;

249.2 reducing uncertainty in timing and need date of a project; and

249.3 retaining option value to be able to respond to a changing environment.

250. We provide further details on each of these benefits below.

Ability to approve a major project allowance with greater confidence in scope and cost estimates

251. Table 2 below shows the P50 estimate of cost, the approved allowance, the actual costs and the difference between the P50 estimate and the approved allowance for some recent major capex projects. This shows that historically there have been large differences between estimated and actual costs. The differences between the P50 estimate and actual cost range from -17% to 227%.²⁰⁰

Table 2 – Approved versus forecast or actual cost of recent major capex projects

Major capex project	P50 estimate of cost (\$m)	Approved allowance (\$m)	Forecast end or actual cost (\$m)	Difference between P50 and end cost (\$m) ²⁰¹	Difference between P50 and end cost (%)
Bunnythorpe Haywards	151	161	125	26	21
Clutha Upper Waitaki line	147	197	45	102	227
Upper North Island Dynamic Reactive support	90	98	51	39	76
Lower South Island Reliability	56	62	32	24	75
Upper South Island grid upgrade	7	8	7	0	0
Wanganui-Stratford Transmission	42	44	26	16	61
NIGU project	764	824	894	-130	-17
North Auckland and Northland grid upgrade	334	419	352	-18	-5
Otahuhu Diversity	94	99	106	-12	-11

²⁰⁰ The negative number means that the actual cost is higher than the P50 estimate.

²⁰¹ The costs are in nominal prices.

252. While some of the differences are due to changes in the scope of the projects, others are because of the phase of the project lifecycle at which the project was approved. At the time of approval the scope was not well defined and therefore there were large uncertainties in the estimated costs.
253. The causes of these uncertainties depend on the nature of the project. For transmission lines and power cable projects the main cause is not having definite information about the route the line or cable will traverse. For a transmission cable project, typical uncertainties include:
- 253.1 easement and other property rights because these depend on negotiations with property owners;
 - 253.2 the length and therefore cost of the cables;
 - 253.3 the ground conditions and consequential design and construction requirements of the cables; and
 - 253.4 access to construction sites and restoring them post installation.
254. Through staged approvals, it will be possible to reduce some of these uncertainties at reasonably low costs.
255. Stage one of a staged project would be approved at the same phase of the project lifecycle as per the current practice but would likely cost between 10% and 15% of the cost of the project. Subsequent stages would be approved after the definitive study phase and would include estimates of scope and costs with reduced uncertainty.

Reducing uncertainty in timing and need date of a project

256. An advantage of staged approvals is that it will help provide the ability to manage the uncertainty as to the timing of a project.
257. The need for enhancement projects is either to meet increasing peak demand or to connect new generation. Since the global financial crisis in 2008, forecasting peak demand has been very difficult. The uncertainty in expected demand is likely to continue as the future landscape changes due to increasing consumer choices and technology. While demand modelling forecasts increases in demand, we have been observing a sustained period of flat demand in most places.
258. Sustained flat demand can lead to over-investment particularly in large transmission projects. Such projects need to start up to seven years before their need date and are therefore based on long-term forecasts of prudent peak demand which is expected to be increasing, because of growth in the number of consumers and the gross domestic product (**GDP**). In an environment where actual demand is significantly different from forecast, the risks of over-investments are high.

259. Staged approvals can mitigate the risk of over-investing by reducing the reliance on long-term demand forecasts. Under a staged approval process, it will be possible to:
- 259.1 use the long-term prudent peak demand forecasts to start the first stage of a project which includes obtaining options for property rights and consents;²⁰² and
 - 259.2 use the short-term expected peak demand forecasts to start the construction phase and deliver the project.²⁰³ Transpower would still need to develop stage two 4 years in advance and start construction 3 years in advance of need date. But this should be better than committing to the project eight years in advance.
260. The scope for optimising delivery of such projects to meet expected demand has become possible because of the viability of demand response and expected future viability of new technologies. Demand response and new technologies could be used as interim short-term solutions if unexpected increases in demand require the assets earlier than previously forecasted.

²⁰² Typically, Transpower would still need to develop large projects 10 years in advance and start obtaining options for property 7-8 years in advance of the forecast need date.

²⁰³ Prudent peak demand forecast means that there is a 90% chance that actual peak demand will be below the forecast and expected peak demand means there is a 50% chance that actual peak demand will be below the forecast.

261. An example of a possible application of staged approvals would be a cabling project.

261.1 Under a non-staged approach, Transpower needs to seek approval for the whole project well before its forecast need date. The actual lead time will depend on the location and value of the project. At the time of seeking approval, project costs, delivery timeframes and forecast need dates are uncertain because of the long time period between starting the project and commissioning it. For these reasons there is potential for investment before a project is needed (ie, over-investment).

261.2 Under a staged scenario, Transpower would potentially acquire all the easements and consents, carry out site investigations, prepare detailed design and costing, and prepare procurement specifications in stage one of the project. Completion of stage one would enable a more accurate forecast of scope and costs for the next phase(s) of the project.²⁰⁴

261.3 Stage two of the project would consist of procuring and installing the cables and associated terminal equipment. The delivery timeframe for stage two would be reasonably well defined, which means Transpower could start stage two based on a P50 forecast of demand and therefore closer to when the project is needed.²⁰⁵

261.4 Staging such a project would therefore provide the following benefits:

261.4.1 a more accurate estimate of costs for the more costly phases of procurement and installation, which means the incentive mechanisms are more effective; and

261.4.2 reduced uncertainties in timing and optimised delivery so that the project is delivered closer to when it is needed (ie, lower risk of over-investment due to changes in the environment).

262. Transpower submitted that NTSs can also be used to optimise delivery times:²⁰⁶

We consider NTS can also be used to manage operational risk such as constraints or outages while an MCP is under development or being built.

²⁰⁴ Once easements and consents are gained in stage one, there is more certainty around the estimated costs for the remainder of the project.

²⁰⁵ The start date for both the non-staged and stage one of the staged approach would be based on the P90 demand forecast.

²⁰⁶ Transpower “Capex IM review: proposed improvements to major capex approval process” (8 September 2017), p. 3.

Retaining option value and being able to respond to changing environment

263. Staged approvals can be used as a mechanism to retain option value and be able to respond more effectively to the changing environment. Staging major capex projects that have a series of sequential projects will allow Transpower and stakeholders to re-phase large investments, reconsider the investment options, and cancel a project that has become uneconomic without having sunk too much into a project.²⁰⁷
264. While the capex IM has provisions for Transpower to respond to the changing environment by amending the outputs of an approved project, the extent of the amendment that Transpower can seek is limited.²⁰⁸ For example, Transpower cannot seek an amendment to the outputs of an approved major capex project to deliver another solution.
265. The ability to reconsider major capex project outputs for future stages of a project will be useful in being able to respond to need, timing, and scope, as the transmission grid transforms from peak delivery to energy delivery. Consumers will benefit because Transpower could provide the most appropriate solution available at the time of the investment.

Staged approval process

266. Table 3 shows the current process steps for major capex projects (these will continue to apply for non-staged major capex projects) and the new process steps for staged major capex projects.²⁰⁹

Table 3 – Process steps for current and staged major capex projects

Current process	New process	Comments
Transpower identifies need for investment – internal studies.	Transpower identifies need for investment – internal studies.	No change to this step of the process.
Transpower notifies the Commission of a major capex project that may become a proposed investment and we agree on or specify a consultation programme and approach to considering NTSs.	Transpower notifies the Commission of a major capex project that may become a proposed investment. The notification must state whether the major capex project will be staged or is related to a previously approved major capex project. We agree on or specify a consultation programme and approach to considering NTSs.	The only change is the obligation to indicate whether the major capex project will be staged or is related to a previously approved major capex project.

²⁰⁷ Staging means that Transpower will consult with stakeholders at every stage of a major capex project.

²⁰⁸ Capex IM, clause 3.3.4(1)(d)). The limitation is an issue of interpretation of when an amendment to the output becomes a 'change in the outputs'.

²⁰⁹ As we are still conducting technical consultation on the proposed implementation of these steps in the determination, there is a possibility that the detail of how they are implemented could still change.

Current process	New process	Comments
Transpower consults on investment need, market development scenario variations, key assumptions, long list of options and requests options for NTSSs.	No change to consultation requirements.	This process will be the same for staged and non-staged major capex projects because this is when we will determine the potential solutions to meet investment needs (ie, for the whole project including all stages).
Transpower considers NTSSs and includes these in long list of options.	No change.	
Transpower develops the proposal.	No change.	
Transpower consults on market development scenario variations, key assumptions, short list of options and investment tests.	No change.	Consultation on short list of options and investment test will be the same for both staged and non-staged major capex projects.
Transpower submits the major capex proposal seeking approval for the total cost of the major capex project.	Transpower submits the major capex proposal seeking approval for the major capex project, one or more stages of the major capex project and the cost of those stages of the major capex project.	
The Commission approves (or declines) the major capex project and, where it approves the major capex project, approves the major capex allowance, outputs and all other components for the project. As part of our approval we accept the major capex allowance and/or maximum recoverable costs proposed by Transpower.	The Commission approves (or declines) the major capex project. Where it approves the major capex project it also approves one or more stages of the major capex project. It then approves the major capex allowance, outputs and all other components for the approved stages of the project. Where we approve a major capex project, we can determine the major capex allowance and/or accept the maximum recoverable costs proposed by Transpower for the approved stages.	For a staged major capex project, we will approve the major capex allowance, outputs and all other components for one or more stages of the major capex project. Where the major capex project is not a staged major capex project the major capex allowance, outputs and all other components are set for the whole project. For staged major capex projects, it is possible that some of works will not be commissioned after stage 1 (eg, detailed design necessary for construction). The estimated amount for these works will be excluded from the major capex expenditure adjustment.
Transpower commissions the major capex project with any necessary amendment to commissioning date and expiry date.	Transpower commissions the approved stage(s) of the major capex project.	
Transpower may apply for any output amendment for the major capex project and there is a corresponding adjustment to the approved allowance.	Transpower may apply for any output amendment for the approved stage(s) of the major capex project and there is a corresponding adjustment to the approved allowance.	
Commissioned assets enter the RAB as per Transpower asset valuation IM.	Commissioned assets enter RAB as per Transpower asset valuation IM.	

Current process	New process	Comments
Transpower can apply for an amendment to its major capex allowance in the event of an overspend or an amendment to the major capex project outputs if it did not deliver an approved output.	Transpower can apply for an amendment to its major capex project output if it did not deliver any of the approved outputs. There will be a corresponding amendment to the major capex allowance.	Amendment to the major capex allowance is no longer applicable because of the new ex-ante major capex expenditure incentive mechanism.
The major capex overspend adjustment and major capex project output adjustment are applied to the major capex project.	The new major capex expenditure and output adjustments will be applied to the approved stage(s) of the approved major capex project.	Ex-post incentive adjustments will be a new step. The above steps will apply to both non-staged and the approved stages of staged major capex projects.
	Transpower identifies need date for further stages – internal process.	The following stages will apply to subsequent stage(s) of a staged major capex project.
	Transpower notifies the Commission that it wishes to undertake the next stage (or stages) of a staged major capex project. We agree on a consultation programme and approach to considering NTSSs.	This is necessary for our work programing and communications with affected parties.
	Transpower consults on investment need, updates to demand and generation scenarios and any variations of them, updates to key assumptions and its short list of options (including any new options), and invites proposals for NTSSs. Transpower consults on the methodology of its investment test if this is expected to be different from stage 1. Transpower may also be required to consult on a long list of options, where there is the potential for a significant number of new solutions.	To minimise costs, consultation on the later stages may be an update of the previous stages as much as possible. Consultation on investment need ensures that interested parties can have an informed input on the proposed investment. Transpower will consult on a long list of options only if it is necessary to prepare a long list. Transpower will be required to seek proposals on NTSSs before finalising the proposed investment for that stage.
	Transpower considers any NTSSs and includes these in the short list of options.	Transpower will need to consider any emerging NTSSs.
	Transpower submits a new major capex proposal seeking approval of the major capex project and the further stages. This may be an update of a previously submitted major capex proposal.	The list of options should include any viable NTSSs. Viable NTSSs should be assessed with other options in the investment test.

Current process	New process	Comments
	<p>The Commission approves (or declines) the major capex project and one or more of the remaining stages.</p> <p>Where we approve the major capex project, we can determine the major capex allowance and/or accept the maximum recoverable costs proposed by Transpower for the stages. We also approve the other components for the approved stages.</p>	
	<p>Transpower commissions the project with any necessary amendment to commissioning date and expiry date.</p>	
	<p>Transpower applies for any output amendment and there is a corresponding adjustment to the approved allowance.</p>	
	<p>Commissioned assets enter RAB as per Transpower asset valuation IM.</p>	
	<p>The new incentive adjustments will be applied to the approved stages.</p>	

Independent verification for IPP proposals

Existing verification provisions

267. Section 54S of the Act sets out the requirement for the Commission to prepare the capex IM for Transpower and lists the matters that the capex IM must cover, including the extent of independent verification and audit.²¹⁰
268. In our 2012 reasons paper we explained that we decided not to adopt an independent verifier for Transpower's IPP proposals because we considered that self-verification in the form of certification would be sufficient.²¹¹

Problem definition

269. With the benefit of our experience since 2012, our view is now that there may be an opportunity to deliver a better result for consumers through the introduction of independent verification.

²¹⁰ Commerce Act 1986, s 54S.

²¹¹ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 9.2.1-9.2.14.

270. Our experience with the RCP2 IPP reset was that a significant amount of work was required (by both us and Transpower) after we received the proposal that may have been able to be avoided if an independent verifier had been involved prior to Transpower submitting its proposal. Our experience with the CPP application process for electricity distributors is that a verifier can front load this work and could significantly 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.²¹²

Decision

271. Our decision is to not formally introduce an independent verification process for Transpower's IPP proposal via an amendment to the capex IM at this time. Rather, we have decided to pilot independent verification for RCP3 via agreement with Transpower.^{213, 214} We will then evaluate the success of the pilot and will consider setting verification requirements in the capex IM before the 2025-2030 regulatory period (**RCP4**). While we have decided not to include verification in the capex IM at this stage, we consider it useful to explain our reasons for piloting verification below.
272. We consider that piloting the use of independent verification, rather than amending the IMs to formally introduce independent verification requirements, is prudent at this stage because:
- 272.1 it allows an opportunity to evaluate the success of independent verification in the Transpower context before committing us and stakeholders to the considerable effort that would be required to formally prescribe a verification process in the IMs; and
- 272.2 if we do subsequently consult on formally introducing verification requirements to the IMs prior to RCP4, we will be better placed to develop the formal verification requirements as a result of having been through the verification process for RCP3.

Independent verification of IPP proposals presents an opportunity

273. Independent verification presents an opportunity to increase the effectiveness and efficiency of the IPP reset process.²¹⁵ This will create benefits for consumers, us, and Transpower.

²¹² Some of our reasons for introducing verification for IPP proposals are the same as our reasons for adopting verification for CPPs, while others are different.

²¹³ Our current view is that verification would apply to both capex and opex.

²¹⁴ Transpower and MEUG both supported our draft decision to implement a pilot programme for verification for RCP3. Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 4; and MEUG "MEUG submission on draft Transpower capex input methodology decision" (8 December 2017), p. 11.

²¹⁵ Individual price-quality regulation for Transpower took effect from 1 April 2011. The current IPP for Transpower started on 1 April 2015. Transpower's third IPP will be set for a five-year period from 1 April 2020 to 31 March 2025.

274. We consider the key benefits of independent verification are that it will:²¹⁶
- 274.1 improve our decision-making by testing, in advance of us receiving the proposal, the assumptions that underpin Transpower's forecast information on proposed capex projects, opex, and demand. This will help to ensure Transpower's regulated assets are efficiently planned, built, enhanced and maintained;²¹⁷
 - 274.2 provide useful insights to Transpower in terms of potential operational improvements it could make;²¹⁸
 - 274.3 help to mitigate the risk of any potential incentives on Transpower to provide overly generous estimates;²¹⁹ and
 - 274.4 result in better scrutiny of Transpower's investment proposals prior to them being submitted to the Commission, which may result in a more appropriate level of forecast expenditure. For example, as a result of the verification process, Powerco reduced its proposed capex forecast by \$51 million (a 5.6% reduction) and opex forecast by \$23 million (a 4.8% reduction).²²⁰

Intended approach to verification of Transpower's RCP3 proposal

275. As noted above, our decision is to pilot, by agreement with Transpower, the use of independent verification for Transpower's RCP3 proposal. Under this approach, an independent verifier (or verifiers) will be engaged to provide an independent verification report to accompany Transpower's RCP3 proposal.

²¹⁶ Although these benefits would also occur to some extent under our existing processes for assessing Transpower's IPP proposals, verification would provide an increased likelihood of finding potential reductions in forecast expenditure, and these would be found in advance of us receiving the IPP proposal.

²¹⁷ This will promote s 52A(b) by improving efficiency.

²¹⁸ This will promote s 52A(b) by improving efficiency.

²¹⁹ This will promote s 52A(d) by limiting Transpower's ability to extract excessive profits.

²²⁰ This will promote s 52A(b) by improving efficiency and s 52A(d) by limiting Transpower's ability to extract excessive profits.

276. Similar to the CPP verification process, we anticipate that the role of the verifier(s) will be to:²²¹
- 276.1 assess Transpower’s IPP proposal in accordance with an agreed terms of reference and pursuant to a tripartite deed (see paragraph 280 below);
 - 276.2 ascertain the extent to which Transpower’s relevant policies, strategies and procedures have been applied in practice;
 - 276.3 review the IPP proposal to ensure that it is sufficiently complete in content, prior to our review;
 - 276.4 assess the extent to which Transpower will be able to deliver its capex and opex forecasts during the regulatory period;
 - 276.5 report on the extent and effectiveness of Transpower’s engagement processes;
 - 276.6 indicate any areas where they were unable to reach a firm or confident conclusion; and
 - 276.7 be available to answer our questions on the report.
277. Ultimately, we anticipate that the verifier(s) will be tasked with providing an opinion on (amongst other things) whether Transpower’s proposed base capex allowance, proposed opex allowance, proposed grid output measures, and key assumptions are consistent with an expenditure outcome which represents the efficient costs of a prudent supplier, having regard to:
- 277.1 Good Electricity Industry Practice (**GEIP**)²²² as reflecting the appropriate planning and performance standards for a prudent supplier; and
 - 277.2 evaluation criteria modelled on those in Attachment A of the capex IM.

²²¹ The role of the verifier for CPP proposals is set out in Schedule G of the capex IM.

²²² ‘Good electricity industry practice’ is defined in Part 1 of the Electricity Industry Participation Code 2010 as: **good electricity industry practice** in relation to transmission, means the exercise of that degree of skill, diligence, prudence, foresight and economic management, as determined by reference to good international practice, which would reasonably be expected from a skilled and experienced **asset** owner engaged in the management of a transmission network under conditions comparable to those applicable to the **grid** consistent with applicable law, safety and environmental protection. The determination is to take into account factors such as the relative size, duty, age and technological status of the relevant transmission network and the applicable law [bold terms in original].

278. The verifier's (or verifiers') opinion(s) would then inform our assessment of Transpower's proposal, which must include consideration of the extent to which what Transpower has proposed will promote the Part 4 purpose,²²³ in light of the evaluation criteria in Attachment A of the capex IM.²²⁴
279. Transpower will have the opportunity to revise its IPP proposal in light of the verification report before it submits its proposal to us.
280. As in the CPP context, we expect that each verifier will be engaged by way of a tripartite deed between Transpower, us, and the verifier. The tripartite deed will set out the relative accountabilities between the parties.

Our role in relation to the verifier

281. As noted above, our assessment of Transpower's IPP proposals and our decision on the amount of revenue and level of quality that will apply to Transpower for each RCP will be informed, in part, by the verifier's (or verifiers') report(s).
282. However, we need to make an informed and independent decision on every occasion, based on the whole of the evidence at the time, as to what we look at and how much scrutiny we give to different aspects of an IPP proposal. The verifier's report is therefore only a piece of the probative evidence that we will take account of when exercising our decision-making discretion, including on how much scrutiny we give to different aspects of a proposal.
283. We anticipate that the quality of the verifier's report will be a factor determining how much weight we attach to it. For example, where we consider the report is of a high quality we are likely to have greater confidence in the report and attach more weight to it in our decisions. In contrast, if we consider the report to be of lower quality we might attach less weight to it.

How we intend to implement verification for Transpower's RCP3 proposal

284. For the RCP3 proposal we have decided to implement verification as a pilot, by agreement with Transpower. In the event that we are unable to agree the verification process and terms with Transpower ahead of RCP3, we will follow a process for assessing Transpower's IPP proposal for RCP3 similar to that we followed for RCP2 and would likely consult on possible verification requirements in the IMs before RCP4.
285. We consider that we will be able to implement the verification pilot through agreement with Transpower, without making changes to the processes and timeframes currently set in the capex IM.

²²³ As required by clause 6.1.1(2)(b) of the capex IM. We consider the expenditure outcome described at paragraph 277 to be a useful guide in considering the extent to which what is proposed by Transpower is consistent with the Part 4 purpose. As such, we were ourselves guided by this expenditure outcome in assessing Transpower's RCP2 proposal (see *Setting Transpower's individual price-quality path for 2015 – 2020* [2014] NZCC 23 (29 August 2014), para 5.29).

²²⁴ As required by clause 6.1.1(3) of the capex IM.

Next steps

286. As signalled in our draft decision, we have continued discussions with Transpower about developing a verification process for Transpower's RCP3 proposal so as to preserve verification as an option for RCP3.
287. Those discussions have progressed well. Now, following this decision to pursue verification as a pilot for RCP3 rather than by amending the IMs to formally require it, we should soon be in a position to agree with Transpower the arrangements for verification of its RCP3 proposal.
288. Transpower has already sought requests for proposals from potential verifiers. At this stage, we expect to enter a tripartite deed between the Commission, Transpower, and the selected verifier(s) in April 2018. Once Transpower has selected a verifier (or verifiers), obtained Commission's approval, and the verification deed is signed, we will notify stakeholders and make the deed publically available.

CHAPTER 4: Information and engagement

Purpose of this chapter

289. The purpose of this chapter is to:
- 289.1 explain the problems we have identified in relation to:
 - 289.1.1 the information requirements in the capex IM; and
 - 289.1.2 Transpower's engagement with stakeholders including its incentives to favour capex or opex solutions;
 - 289.2 set out our decisions in relation to those problems; and
 - 289.3 explain our reasons for those decisions.

Structure of this chapter

290. This chapter discusses the key problems within the information and engagement topics that we consider need addressing through changes to the capex IM. The key problems we have identified in these topics relate to:
- 290.1 Transpower's engagement with stakeholders;
 - 290.2 communication of the impact of a proposed investment on transmission prices; and
 - 290.3 base capex information requirements.
291. For the problems in each of these areas, we set out our decisions and explain our reasons for those decisions.
292. Last, we summarise issues raised by stakeholders about the ITP that we do not consider amount to problems to be addressed by the capex IM review.

Transpower's engagement with stakeholders

Engagement on transmission alternatives – problem definition

293. Many stakeholders are seeking more transparency on Transpower's investment decisions and clearer information about potential opportunities for transmission alternatives. For example:

293.1 MEUG submitted:²²⁵

Transpower's engagement with its contractual counterparties, other stakeholders and consumers in general has been continually improving. The following suggestions are therefore about continuing that good work. We think it is useful to remember Transpower is a monopoly and the Commerce Commission, consumers and other parties have and will continue to have an information asymmetry problem across a range of engagements including those relevant to the Capex IM. One part of the solution to the information asymmetry problem is to facilitate transparency of information.

293.2 Genesis submitted:²²⁶

...benefits would flow from greater third party engagement because greater engagement means greater transparency. In a number of recent submissions, Genesis has advocated for increased transparency around the investment decisions made by regulated monopolies, particularly electricity distribution businesses (EDBs).

294. Transpower's incentives for different types of investment was a key theme from some stakeholders in response to the focus areas paper. A number of submissions suggested that the capex IM should require Transpower to consider transmission alternatives for both base capex and major capex. For example:

294.1 Pioneer suggested Transpower should be required to consider transmission alternatives for both base capex and major capex;²²⁷ and

294.2 IEGA submitted that consideration of transmission alternatives should have equal weight in both base capex and major capex processes.²²⁸

295. In our view, the long-term benefits for consumers are best served when Transpower is investing efficiently, whether it is using traditional capex solutions or alternative options. The current level of innovation in the electricity industry and the increasing options for transmission alternatives mean the full benefits of such alternative options are both uncertain and potentially significant.

²²⁵ MEUG "MEUG submission on Transpower capex input methodology review" (14 June 2017), para 20.

²²⁶ Genesis Energy submission "Transpower capex input methodology review: Emerging views on incentive mechanisms" (22 September 2017), p. 2.

²²⁷ Pioneer Energy submission on focus areas consultation paper "RE: Transpower capex input methodology review – Proposed focus areas" (14 June 2017), p. 1.

²²⁸ IEGA submission on focus areas consultation paper "RE: Commerce Commission review of Transpower Capital Expenditure Input Methodology" (14 June 2017), p. 2.

296. We outlined in our emerging views paper that it is appropriate for us to consider both:
- 296.1 the incentive on Transpower to consider all available investment options (including any bias towards opex or capex solutions); and
 - 296.2 Transpower's engagement with external parties in both identifying and considering transmission and non-transmission investment options. We considered that third-party scrutiny and engagement in investment decisions would help to enhance investment choices for the long-term benefit of consumers.
297. We also outlined how we considered that the current incentive regime is designed to ensure that Transpower is generally indifferent to providing opex or capex solutions (ie, both opex and capex provide approximately a 33% incentive rate)²²⁹ and therefore that Transpower should be incentivised to deliver the least cost solution, whatever form it might take.²³⁰ We do not consider our decision relating to the base capex incentive rate (ie, providing for a standard incentive rate and a lower incentive rate) will affect Transpower's indifference between opex and capex solutions, because the lower incentive rate is only applied to specific identified projects.
298. However, we also noted there could be wider incentives that could potentially affect Transpower's incentives to invest in capex or opex (ie, the existence of 67th percentile WACC estimate, the ability for capex to enter the regulated asset base, and the scrutiny applied by EDBs to Transpower's investments).²³¹
299. We also considered the current investment process for the two types of capex categories:
- 299.1 For major capex projects, our emerging view was that Transpower's engagement processes appeared to be robust and we proposed no changes to the engagement requirements;²³² and
 - 299.2 For base capex projects, our emerging view was that improvements could be made to the current processes to better ensure the most appropriate investment options are identified on an ongoing basis.²³³

²²⁹ The exception is for major capex projects, which are subject to different incentives and which we have decided to change.

²³⁰ Commerce Commission "Transpower capex input methodology review – Emerging views on incentive mechanisms" (1 September 2017), para 52.

²³¹ Commerce Commission "Transpower capex input methodology review – Emerging views on incentive mechanisms" (1 September 2017), para 53.

²³² Commerce Commission "Transpower capex input methodology review – Emerging views on incentive mechanisms" (1 September 2017), para 63.

²³³ Commerce Commission "Transpower capex input methodology review – Emerging views on incentive mechanisms" (1 September 2017), para 67.

300. We agree with Transpower’s view that potential transmission alternative providers should consider joining its demand response program as an efficient way to engage with Transpower.²³⁴ We also agree that Transpower already provides a significant amount of information in its various reports (including in its Transmission Planning Report (**TPR**)) and adding mandatory consultation steps is unlikely to increase benefits commensurate with the increase in costs.
301. However, we want to ensure third parties have the opportunity to engage with Transpower about potential transmission investments so that the most appropriate investment options are identified on an ongoing basis. We also want to enable stakeholders (including the Commission) to assess whether Transpower’s level of engagement with stakeholders is appropriate.

Engagement on transmission alternatives – decision

302. For major capex we have decided to retain the current engagement process specified in the capex IM and rely on the existing process as well as the changes to the major capex incentive mechanism to incentivise Transpower to undertake appropriate major capex investment.
303. This approach is consistent with a number of submissions supporting our view that the major capex process is robust and does not require a change to the process. For example, Contact suggested that:²³⁵

The Commission has proposed retaining the current \$20m growth capex threshold for major capex projects. In our view Transpower is productively engaging with third parties and considering non-transmission solutions for these projects. We agree that no change to the process is required.

304. We have also decided to retain the existing engagement requirements for base capex investment. After considering submissions on our draft decision, we consider that:
- 304.1 there is no strong evidence that the investment settings (eg, incentive rates) are causing significant bias towards opex or capex investment by Transpower; and
- 304.2 formal requirements to increase engagement and scrutiny for base capex projects will not provide benefits that outweigh the administrative cost of implementing such requirements.

²³⁴ Transpower submission on emerging views “Capex IM review: Incentive mechanisms” (22 September 2017), p. 3.

²³⁵ Contact Energy submission “Re: Transpower capex input methodology review: Emerging views on incentive mechanisms” (22 September 2017), p. 2.

305. Although we have decided to make no change to formal consultation requirements for individual projects we do consider that Transpower's engagement with its stakeholders (both consumers and third party service providers) is an important part of the base capex investment decision-making process. Transpower needs sufficient information to ensure that it is making appropriate investment choices to deliver transmission services at an efficient cost. It is also important that stakeholders (including the Commission) are able to assess whether Transpower has undertaken appropriate engagement in relation to its base capex investment decisions.
306. Therefore, we have decided to consider changing Transpower's information disclosure requirements to require Transpower to report annually in relation to base capex on:
- 306.1 whether it has engaged with stakeholders and, if so, how it has engaged with stakeholders;
 - 306.2 how effective it considers that engagement has been; and
 - 306.3 how satisfied stakeholders were with the engagement process based on the views expressed by stakeholders.
307. Such an information disclosure reporting requirement would enable us and interested parties to monitor stakeholder engagement, including assessing whether it is at an appropriate level to promote the Part 4 purpose, but at the same time provide flexibility to Transpower to ensure any engagement is fit for purpose and communicated effectively.
308. We consider that requiring Transpower to report on its engagement processes in relation to base capex would, over time, promote the Part 4 purpose by leading to increased third-party scrutiny and engagement about potential investments because:
- 308.1 stakeholders would be more informed about the extent of consultations and whether the level of engagement was appropriate to promote the Part 4 purpose;
 - 308.2 stakeholders would gain a better understanding of Transpower's engagement processes and how they can best engage with Transpower; and
 - 308.3 an increased focus on Transpower's engagement processes would likely encourage Transpower to continue to make improvements in this area.
309. Rather than setting specific consultation requirements, this approach should encourage Transpower to seek feedback from its stakeholders on how its consultation can be improved, allowing flexibility about how Transpower then does that.

310. In our view, a greater focus on effective consultation would allow for a wider variety of investment options, enhance protection for consumers against inefficient investment, and ensure the full benefits of innovation in the electricity industry are realised.²³⁶
311. We appreciate the submissions on this issue, including submissions from Contact on how a more formalised process could be implemented for base capex projects including a public request for proposals to solve specific transmission requirements.²³⁷
312. We note that there is a trade-off between greater formalised processes for engagement to increase stakeholder involvement, but this comes at the expense of greater administrative costs for Transpower and, ultimately, for consumers.²³⁸ At this stage we have no significant evidence that more efficient alternative investments are being rejected by Transpower under the current processes and, therefore, there would be limited benefits from setting requirements for a more formalised engagement process in the capex IM.
313. In response to our draft decision, Contact submitted that we had not provided any details on any cost-benefit analysis undertaken to support our view.²³⁹ We do not consider a quantitative cost-benefit analysis is necessary because there are likely to be limited benefits from setting requirements for a more formalised engagement process in the capex IM.
314. We also acknowledge Contact's and MEUG's concerns about the availability of information about the potential for transmission alternatives for base capex projects, and Contact's request for new obligations requiring Transpower to consult across all base capex for transmission alternatives, including on its cost/benefit analysis of shortlisted options.²⁴⁰

²³⁶ This would promote s 52A(b) by improving the efficiency of Transpower's investment decisions.

²³⁷ Contact Energy submission "Re: Transpower capex input methodology review: Emerging views on incentive mechanisms" (22 September 2017), p. 3-4 and Contact Energy "Re: Transpower capex input methodology review: draft decision" (8 December 2017), para 15-19.

²³⁸ Transpower submission on emerging views "Capex IM review: Incentive mechanisms" (22 September 2017), p. 3.

²³⁹ Contact Energy "Re: Transpower capex input methodology review: draft decision" (8 December 2017), para 28-30.

²⁴⁰ Contact Energy "Re: Transpower capex input methodology review: draft decision" (8 December 2017), para 19-22; Contact Energy "Re: Transpower capex input methodology review: draft decision" (21 December 2017), para 1.2-1.9; and MEUG "MEUG cross-submission on draft Transpower capex input methodology decision" (16 January 2018), para 6-7.

315. After reviewing the material available, we consider that Transpower provides a significant amount of information about the ongoing needs of the network in its network planning report and ITP.²⁴¹ Transpower submitted it is also working on improving its communication and engagement with stakeholders, and uses multiple channels for this, such as existing information disclosure documents, annual reports, and stakeholder and industry events.²⁴²
316. We are open to exploring options for creating more transparency around the potential for transmission alternatives. We will consider this issue further when we consult on potential changes to Transpower’s information disclosure requirements, which we will do at a later date.
317. Contact also submitted that no stakeholders have requested an after-the-fact base capex reporting mechanism, and that it sees no value in this.²⁴³ We note that MEUG supported the requirement for Transpower to report on its stakeholder engagement processes via changes to the information disclosure requirements.²⁴⁴
318. We also note Contact’s view that the Commission’s approach to wait for evidence of a problem or a market failure before acting is at odds with our regulatory peers, and is a passive way for a regulator to go about regulating the industry in the way the Act requires. Contact submitted that with the electricity market being increasingly disrupted by technology, regulation must take a forward-looking approach and ensure market settings reflect the realities of the way markets evolve.²⁴⁵ Contact also submitted that effective regulation to achieve the requirements of the Act requires the Commission to mandate certain behaviour, information and conduct on the part of the monopoly.²⁴⁶
319. In response to these concerns from Contact, we note that we found, as part of our 2015-2016 IM review, that the IMs were able to deal appropriately with likely developments in the industry, and that we would continue to engage with stakeholders on how the sector is developing and on any changes that may be required to the IMs or other regulatory and policy settings in the future. We noted that we have the ability to revisit the IMs in response to emerging developments when they arise.²⁴⁷

²⁴¹ Relevant material for RCP2 is available at: <https://www.transpower.co.nz/industry/regulatory-control-periods/rcp2/updates>.

²⁴² Transpower “Capex IM draft decisions cross-submission” (16 January 2018), p. 2.

²⁴³ Contact Energy “Re: Transpower capex input methodology review: draft decision” (8 December 2017), para 32-36.

²⁴⁴ MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), p. 4.

²⁴⁵ Contact Energy “Re: Transpower capex input methodology review: draft decision” (8 December 2017), para 16.

²⁴⁶ Contact Energy “Re: Transpower capex input methodology review: draft decision” (8 December 2017), para 36.

²⁴⁷ Commerce Commission “Input methodologies review decisions – Topic paper 3: The future impact of emerging technologies in the energy sector” (20 December 2016), para X7.

320. We also consider that the capex IM may not be the best tool for responding to changing circumstances. We have a range of tools and processes (eg, other Transpower IMs, ID requirements, IPP determinations, and summary and analysis) we can use to create incentives, and influence the behaviour and ultimately the performance of businesses, rather than amending the capex IM to prescribe certain behaviour, or require the provision of specific information, by the monopoly.
321. In response to our consideration of Transpower’s potential bias towards capex or opex MEUG suggested that:²⁴⁸

The paper says “the cumulative impact of all the incentives on Transpower investment decisions is unclear” and cites the example where an opex solution may be preferred because a capex solution might have stranding risk. MEUG suggests an estimate of the direction and the cumulative effects is needed to ensure an appropriate offset is considered for the IM incentives mechanism. It is insufficient for the Commission to list the non-IM factors that influence incentives on Transpower and then assume because no party makes submissions on the materiality of those factors that they need not be considered. Absent quantitative estimates being made a qualitative estimate would be better than none. On that basis MEUG’s qualitative view is that overall the non-IM incentives are likely to be biased in favour of capex over opex and for Transpower to select safe rather than innovative options because of weak countervailing power. Hence, there is a case to consider asymmetric incentives.

322. Although we recognised in our emerging views paper the potential for there to be a potential bias towards capex over opex solutions, we do not consider there is currently evidence to suggest that this bias is strong for Transpower, if it exists at all.
323. Capex investments could remain an efficient option for a number of Transpower’s projects and there is a significant risk that changing the incentive settings (eg, raising the capex incentive rate such that it is higher than opex) and/or investment scrutiny could increase the costs of those projects or result in sub-optimal investment choices.

Engagement on demand forecasting scenarios – problem definition

324. The capex IM requires Transpower to include in the ITP overviews of assumptions, key uncertainties in assumptions, and scenarios used to determine expenditure forecasts and grid outputs.²⁴⁹ The capex IM also requires Transpower to include in its planning report demand and generation forecasts for the forthcoming 10 years.²⁵⁰

²⁴⁸ MEUG “MEUG submission on Transpower capex input methodology incentive mechanism” (22 September 2017), para 6.

²⁴⁹ Capex IM, clauses E2(1)(a)-E2(1)(c).

²⁵⁰ Capex IM, clause E5(2).

325. Some stakeholders have raised concerns relating to Transpower’s demand forecasts. For example:
- 325.1 Electricity Networks association (**ENA**) considered demand forecasting scenarios should be aligned across the whole sector, particularly given the role transmission alternatives will likely play;²⁵¹
 - 325.2 IEGA suggested the demand forecasts should take into account lower distributed generation (**DG**) volumes as a result of the Electricity Authority's Distributed Generation Pricing Principles (**DGPP**) changes;²⁵² and
 - 325.3 MEUG considered forecasts should have more quantification and cover an appropriate horizon, and provided detailed analysis on demand forecasting.²⁵³ MEUG also submitted that Transpower should be encouraged to make decisions that reflect consumer preferences for managing grid reliability impacts or a small number of peaks.²⁵⁴
326. We agree that better engagement between stakeholders and Transpower about demand forecasts is likely to lead to more robust forecasts and therefore better decisions on investment needs. However, we also consider that the benefits of adding mandatory consultation steps are unlikely to outweigh the costs.

Engagement on demand forecasting scenarios – decision

327. As part of our decision to consider requiring Transpower to disclose the extent of its engagement with stakeholders in relation to base capex, we will also consider requiring Transpower to explain whether it has engaged with stakeholders about demand forecasts and, if so, how it has engaged with stakeholders and how effective that engagement has been.²⁵⁵
328. For similar reasons as noted in paragraph 308 above, we consider that this would be a low-cost approach that would enable stakeholders to assess whether the level of engagement is appropriate to promote the Part 4 purpose, lead to improved engagement about Transpower’s demand forecasts, and ultimately to more robust forecasts and therefore improved investment decisions, which would better promote the Part 4 purpose.

²⁵¹ ENA “Re: Transpower capex IM review – ENA submission Re: Transpower capex IM review – ENA submission” (14 June 2017), p. 2.

²⁵² IEGA submission on focus areas consultation paper “RE: Commerce Commission review of Transpower Capital Expenditure Input Methodology” (14 June 2017), p. 2.

²⁵³ MEUG “MEUG submission on Transpower capex input methodology review” (14 June 2017), para 9(c); and Mike Hensen (on behalf on MEUG) submission on focus areas consultation paper “Advice on Transpower Capex Input Methodology” (14 June 2017).

²⁵⁴ MEUG “MEUG cross-submission on Transpower capex input methodology review” (29 June 2017), p. 2.

²⁵⁵ Paragraphs 302 to 307.

Impact of a proposed investment on transmission prices and explanation of the benefits delivered by the investment

Problem definition

329. The current information requirements do not require Transpower to provide an estimate of the impact of its capex on consumer charges or explain the benefits that consumers will receive from the investment. Consumers have submitted that this information is important to them; MEUG, in particular, has often asked for the information as part of past consultation processes:

MEUG suggests 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. The same commercial approach should apply to Transpower enforced either by a new term in the Transmission Agreement (pursuant to the Code) or a requirement in the Capex IM.²⁵⁶

330. Transpower has been providing the impact on charges on request for a number of years. When requested, the information Transpower provides is the increase in cost per kW of demand and per kWh of energy supplied. While the impact on prices in these formats is useful, some consumers find it difficult to engage with the information.²⁵⁷

Decision

331. Our decision is to require Transpower to provide an estimate of the future increase in prices and explain the additional service and system benefits consumers will receive due to the proposed RCP expenditure (contained in the base capex proposal) and expenditure on each listed and major capex project.²⁵⁸

332. The estimate of future increase in prices will include:

332.1 estimated increase in prices per kW of demand;

332.2 estimated increase in prices per kWh; and

332.3 estimated forecast transmission charges by GXP and GIP for each year of the RCP based on Transpower's expenditure proposal.

²⁵⁶ MEUG "Submission on reconductoring the Central Park Wilton B line" (4 May 2017) para 5. <http://www.comcom.govt.nz/regulated-industries/electricity/electricity-transmission/transpower-individual-price-quality-regulation/transpowers-price-quality-path-from-2015-to-2020/>.

²⁵⁷ NZIER Attachment to MEUG submission on CPK WIL draft decision – 4 May 2017, p. 1. <http://www.comcom.govt.nz/regulated-industries/electricity/electricity-transmission/transpower-individual-price-quality-regulation/transpowers-price-quality-path-from-2015-to-2020/>.

²⁵⁸ These metrics were suggested by NZIER. See NZIER "Attachment to MEUG submission on CPK WIL draft decision" (4 May 2017), p. 1-2.

333. In response to our draft decision, MEUG submitted that forecast charges be provided at GXP and GIP.²⁵⁹ We have now reflected this requirement in our decision.
334. Transpower submitted that a forecast of the change in charges due to capital expenditure would not provide meaningful information.²⁶⁰ Subsequently, we agreed that a forecast of the Transpower charges based on its forecast MAR would be more useful to stakeholders.
335. Our decision is that Transpower will be required to explain the system and service benefits in a manner that will allow consumers to engage with the benefits provided by the investments. Service benefits should include the regions that will benefit from investment. Some examples of service and system benefits include:
- 335.1 an increase in transmission capacity by x MVA into regions h, j, k . This increase is expected to be able to supply demand for the next α years;
- 335.2 a reduction in system losses by y MWh per annum (or other time period such as during peak). This is expected to reduce prices by $z\%$ at the relevant nodes; and
- 335.3 allowing the connection of g MW of additional generation. This is expected to increase competition in the h, j, k regions.
336. In response to our draft decision, Transpower stated that it cannot provide the benefits for base capex projects in the manner shown above.²⁶¹ In subsequent discussions, we noted that Transpower already provides this information in its Project Overview Document (PODs). The benefits set out in the PODs could be included in documents that are available to stakeholders.
337. MEUG also submitted that the time profile for charges needs to be sufficiently long to allow customers and generators to use that information in their own investment decision making and a feasible range of changes in charges should be estimated.²⁶² We have decided to not include the requirements for time profile and ranges in the capex IM. We consider that MEUG and other interested parties can reach agreement with Transpower on the specifics of these matters when Transpower provides this information.

²⁵⁹ MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), para 6-8.

²⁶⁰ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 5.

²⁶¹ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 5.

²⁶² MEUG “MEUG submission on draft Transpower capex input methodology decision” (8 December 2017), para 6-8.

338. The information on prices will allow interested parties to assess the impact on their costs by using the pricing structure of their EDBs. It will allow more meaningful participation by parties most affected by the proposed investments in the grid and may allow affected parties to influence the price-quality trade-offs. Ultimately, this should better incentivise Transpower to provide services at a quality that reflects consumer demands.²⁶³

Base capex information requirements

Problem definition

339. Schedule F of the capex IM determination sets out the information Transpower is required to provide with its base capex proposals. There are opportunities to refine some of the information requirements for base capex set out in Schedule F to make them clearer, less complex and less prescriptive.²⁶⁴ Many of these issues were raised by Transpower, who proposed a number of changes to the information requirements.²⁶⁵

Decision

340. Our decision is to amend Schedule F to:

- 340.1 require information that may be valuable to us in assessing the base capex proposal in an environment where we move towards having a greater focus on outputs and incentives, the integrity of data on asset condition and asset criticality, and the expected future role of the grid;
- 340.2 exclude requirements that we no longer consider to add value to our assessment of the proposal; and
- 340.3 refine requirements that are either unclear, or unnecessarily complex or prescriptive.

341. Further details on our changes to Schedule F, and the reasons for those changes, are provided in Attachment B. The changes themselves are shown in the revised draft determination.²⁶⁶

342. In summary, our changes to Schedule F are intended to remove ambiguities, correct errors, or reduce unnecessary complexity and compliance costs, consistent with promoting the s 52R purpose.

²⁶³ Commerce Act 1986, s 52A(1)(b).

²⁶⁴ Schedule F of the capex IM sets out the Qualitative information required to support the base capex proposal.

²⁶⁵ Transpower "Transpower additional information Capex IM review – Appendix" (15 August 2017). Available at: <http://www.comcom.govt.nz/regulated-industries/input-methodologies-2/transpower-input-methodologies/capex-input-methodology-review/>.

²⁶⁶ Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018 (29 March 2018).

- B1. In response to our draft decision, Contact and Transpower submitted on aspects of the changes to Schedule F.^{267, 268} A summary of the submissions on the specific subclauses in Schedule F and our responses to these are set out in

²⁶⁷ Contact Energy “Re: Transpower capex input methodology review: draft decision” (8 December 2017), para 37-40.

²⁶⁸ Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 13-17; and Transpower “Capital Expenditure Input Methodology draft determination” (21 December 2017).

343. Table 4 in Attachment B below.

Integrated transmission plan

344. The capex IM requires Transpower to publish an ITP in December 16 months before the start of a regulatory period. During the RCP, the capex IM requires Transpower to provide an update of the ITP narrative by the end of September for each disclosure year except the last year of the RCP.²⁶⁹
345. Stakeholders have submitted that Transpower should consider updating the ITP half-yearly or quarterly to reflect changes.²⁷⁰ This would bring Transpower's reporting into line with that of large listed companies.
346. We have reviewed the purpose of the ITP and consider that more frequent publication of the ITP would be of limited benefit, while the costs to Transpower (and ultimately consumers) could be significant. The purpose of the ITP is to provide an overview of the long-term development of, and activities on, the grid.²⁷¹ The pace of change in these areas is normally too slow to warrant more frequent updates.
347. Our decision, therefore, is to maintain the current requirement for Transpower to submit an ITP annually to the Commission.
348. However, we consider that Transpower should reflect and, as part of its yearly updates to the ITP narrative, explain in detail any changes in the future requirements of the grid due to changing circumstances. An example of this would be explaining how the conclusions of Transpower's Transmission Tomorrow are likely to affect future investment needs of the grid.

²⁶⁹ Capex IM, clauses 2.1.1 and 3.1.1.

²⁷⁰ MEUG "MEUG submission on Transpower capex input methodology review" (14 June 2017), para 12a.

²⁷¹ Commerce Commission "Transpower capital expenditure input methodology: Reasons paper" (31 January 2012), para 2.7.1.

Attachment A: Regulatory context

Purpose of this attachment

- A1. The purpose of this attachment is to provide context for the capex IM review by providing an overview of the regulation that applies to Transpower.

Transpower's role

- A2. Transpower is a state-owned enterprise that owns and operates New Zealand's high voltage electricity transmission system (ie, 'the national grid'). Transpower transmits electricity from generators to substations at GXPs where it is supplied to local EDBs or large industrial consumers.
- A3. Apart from the transmission of electricity throughout the national grid, Transpower also manages the real-time operation of the power system as the system operator. Transpower provides the system operator services under the system operator service provider agreement (**SOSPA**) between Transpower and the Electricity Authority.²⁷²

How Transpower is regulated

- A4. Both we, and the Electricity Authority, have a role in regulating the electricity lines services provided by Transpower.²⁷³

How we regulate Transpower

- A5. We regulate Transpower under Part 4 of the Act. Part 4 "provides for the regulation of the price and quality of goods or services in markets where there is little or no competition and little or no likelihood of a substantial increase in competition."²⁷⁴

²⁷² System operator service provider agreement between the Electricity Authority and Transpower New Zealand Limited, February 2016.

²⁷³ See our fact sheet about our role in the electricity sector: Commerce Commission "Electricity and the Commerce Commission's role" (November 2012), available at: <http://www.comcom.govt.nz/dmsdocument/9673>.

²⁷⁴ Section 52 of the Act.

A6. The purpose of Part 4 is:²⁷⁵

... to promote the long-term benefit of consumers in markets referred to in section 52 by promoting outcomes that are consistent with outcomes produced in competitive markets such that suppliers of regulated goods or services—

(a) have incentives to innovate and to invest, including in replacement, upgraded, and new assets; and

(b) have incentives to improve efficiency and provide services at a quality that reflects consumer demands; and

(c) share with consumers the benefits of efficiency gains in the supply of the regulated goods or services, including through lower prices; and

(d) are limited in their ability to extract excessive profits.

A7. 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:²⁷⁶

A7.1 loss reductions are included as a market benefit under our quantitative investment test for major capex.²⁷⁷ This is intended to promote investment options that result in lower transmission losses over those that do not (other factors being equal);

A7.2 we require close attention be given to the process for identification and consideration of transmission alternatives.²⁷⁸ 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-inter-trip schemes and operation of local generation.

²⁷⁵ Section 52A of the Act.

²⁷⁶ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 1.3.11-1.3.12.

²⁷⁷ 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).

²⁷⁸ 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).

- A8. Under Part 4, Transpower is subject to two types of regulation:
- A8.1 IPP regulation:²⁷⁹ The IPP we set under this regulation determines the maximum revenues that Transpower can recover from consumers, as well as the quality standards it must meet, for each year of each five-year regulatory period.²⁸⁰ The IPP for RCP2 is set out in the *Transpower Individual Price-Quality Path Determination 2015* [2014] NZCC 35 (the **Transpower IPP Determination**).
- A8.2 Information disclosure (**ID**) regulation:²⁸¹ 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. The ID requirements for Transpower are set out in the *Transpower Information Disclosure Determination 2014* [2014] NZCC 5 (the **Transpower ID Determination**).
- A9. These regulatory mechanisms are supported by IMs, which set out the underlying rules, requirements, and processes that must be applied to these forms of regulation. There are two IM determinations that apply to Transpower:
- A9.1 *Transpower Input Methodologies Determination 2012* [2012] NZCC 17 (the **Transpower IM Determination**). This determination was reviewed as part of the 2015-2016 IM review.²⁸² It sets out methodologies for:
- A9.1.1 Cost allocation;
 - A9.1.2 Asset valuation;
 - A9.1.3 Treatment of taxation;
 - A9.1.4 Cost of capital;
 - A9.1.5 Specification of price;
 - A9.1.6 IRIS; and
 - A9.1.7 Reconsideration of the price-quality path.

²⁷⁹ The Commerce (Part 4 Regulation – Transpower) Order 2010.

²⁸⁰ Under s 53M(4) of the Act, a regulatory period must be five years, but under s 53M(5) the Commission may set a period of four years if it considers this would better meet the Part 4 purpose.

²⁸¹ Section 54F of the Act.

²⁸² We published the majority of our decisions on the 2015-2016 IM review in December 2016. Those decisions covered all aspects of the Transpower IM Determination except for decisions on the IRIS, which were published on 29 June 2017.

A9.2 *Transpower Capital Expenditure Input Methodology Determination 2012* [2012] NZCC 2 (**capex IM**). This determination sets out the capex IM and is the subject of the current review. Broadly, the Transpower capex IM currently does five things:

- A9.2.1 Sets out the process for submitting, assessing, and approving Transpower's base capex proposals;
- A9.2.2 Sets out the process for submitting, assessing, and approving Transpower's major capex proposals;
- A9.2.3 Sets out a number of capex-related incentives, which are applied through the IPP;
- A9.2.4 Sets out the requirements for Transpower to propose grid output measures, which are then set as quality measures in the IPP; and
- A9.2.5 Sets out the requirements for Transpower to provide an ITP. The purpose of the ITP is to explain Transpower's view of the long-term operation and development of the grid.

A10. Part 4 applies to both the transmission services and system operator services supplied by Transpower.²⁸³ However, we have not included the revenues and costs associated with Transpower's system operator services in the IPP. This is because we consider the existence of a separate arm's-length contract (the SOSPA referred to above) between Transpower and the Electricity Authority for these services should result in outcomes consistent with the Part 4 purpose for those services. As such, the capex IM does not currently apply to capital expenditure relating to the SOSPA.²⁸⁴

The Electricity Authority's role in regulating Transpower

A11. The Electricity Authority's statutory objective is to promote competition in, reliable supply by, and the efficient operation of, the New Zealand electricity industry for the long-term benefit of consumers.²⁸⁵ The Authority develops, administers and enforces market rules, contracts with service providers to operate the electricity market and system, and analyses and monitors performance of the electricity market and industry.

²⁸³ Section 150(1) of the Electricity Industry Act 2010 clarifies that system operator services are included as part of the conveyance of electricity by line and hence are regulated services under Part 4.

²⁸⁴ For similar reasons, the capex IM will not usually apply to capital expenditure relating to contracts for transmission services between Transpower and another party where 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. These are referred to as 'new investment contracts'. See: Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), para 2.4.14.

²⁸⁵ See: <http://www.ea.govt.nz/>.

- A12. The Electricity Authority's functions with respect to Transpower include:
- A12.1 Setting GRS.²⁸⁶ The GRS are a set of standards against which the reliability performance of the existing grid (or future developments to it) can be assessed.
 - A12.2 Setting the guidelines that Transpower must follow when developing the TPM. The TPM sets out how Transpower's total transmission revenue (as approved by the Commission) is allocated between transmission customers that are required to pay the charges calculated under the TPM. The Electricity Authority is currently reviewing the TPM guidelines.
 - A12.3 Setting requirements regarding the use, and contents, of transmission agreements, including setting a default transmission agreement. Transmission agreements are the contracts Transpower has with distribution companies, major users that are directly connected to the grid, and generators that are directly connected to the grid.
 - A12.4 Establishing requirements regarding interconnection asset services – for example, providing information on capacity, reliability, and availability of those assets.²⁸⁷
 - A12.5 Contracting Transpower to provide system operator services. The system operator is responsible for the real-time operation of the power system, including scheduling and dispatching electricity, in a manner that avoids undue fluctuations in frequency and voltage on the transmission grid.
 - A12.6 Contracting Energy Market Services, a division of Transpower, to act as financial transmission rights (**FTR**) manager. The FTR manager is responsible for the creation and allocation of FTRs.

Linkages between our regulation of Transpower and that of the Electricity Authority

- A13. Section 54V of the Act sets a number of requirements for us and the Electricity Authority to interact on certain matters relating to our respective roles in regulating the electricity industry, including Transpower. We also have a memorandum of understanding with the Electricity Authority with respect to our respective roles in the electricity industry.²⁸⁸

²⁸⁶ The GRS are set out in Schedule 12.2 of the Code.

²⁸⁷ Subpart 6 of Part 12 of the Code.

²⁸⁸ Memorandum of Understanding between the Electricity Authority and the Commerce Commission, (December 2010), available at: <http://www.comcom.govt.nz/dmsdocument/9414>.

- A14. Some aspects of the Electricity Authority’s role with respect to Transpower are particularly relevant to the capex IM review:
- A14.1 The GRS that the Electricity Authority has set in the Code are incorporated by reference into our definition of major capex as well as the investment test we apply when assessing major capex proposals.²⁸⁹
- A14.2 The Electricity Authority’s concept of GEIP is incorporated by reference into the capex IM as follows:²⁹⁰
- A14.2.1 as a factor we may consider when evaluating a major capex proposal;²⁹¹
- A14.2.2 Transpower must demonstrate how a proposed major capex investment reflects GEIP;²⁹² and
- A14.2.3 under the investment test for major capex, Transpower must quantify its project costs using GEIP.²⁹³
- A15. GEIP also has relevance for our assessment of Transpower’s IPP proposals. As noted in our RCP2 decision paper, we consider that GEIP reflects the appropriate planning and performance standards for a prudent supplier.²⁹⁴ As such, we had regard to GEIP when considering whether Transpower’s RCP2 base capex proposal was consistent with an expenditure outcome which represents the efficient costs of a prudent supplier. We consider this concept to be consistent with the Part 4 purpose, which is a required consideration under the capex evaluation criteria.²⁹⁵

²⁸⁹ Capex IM, clause 1.1.5 & Schedule D.

²⁹⁰ ‘Good electricity industry practice’ is defined in Part 1 of the Code as: **good electricity industry practice** in relation to transmission, means the exercise of that degree of skill, diligence, prudence, foresight and economic management, as determined by reference to good international practice, which would reasonably be expected from a skilled and experienced **asset** owner engaged in the management of a transmission network under conditions comparable to those applicable to the **grid** consistent with applicable law, safety and environmental protection. The determination is to take into account factors such as the relative size, duty, age and technological status of the relevant transmission network and the applicable law [bold terms in original].

²⁹¹ Capex IM, clause C2(a)(i).

²⁹² Capex IM, clause G5(12).

²⁹³ Capex IM, clause D7(6).

²⁹⁴ *Setting Transpower’s individual price-quality path for 2015 – 2020* [2014] NZCC 23 (29 August 2014), para 5.29.

²⁹⁵ Capex IM, sub-clause 6.1.1(2)(b).

- A16. The Electricity Authority is currently reviewing the TPM guidelines and considering new TPM guidelines that would lead to a change in the way transmission charges are shared among transmission customers.²⁹⁶ Relevantly, the Electricity Authority's proposal would involve changes that are more service-based and cost-reflective. If the proposed changes are adopted, we expect this would heighten the interests of parties that would benefit from (and pay for) specific transmission investments in our processes for assessing Transpower's capex proposals.

²⁹⁶ See: <http://www.ea.govt.nz/development/work-programme/pricing-cost-allocation/transmission-pricing-review/>.

Attachment B: Summary of capex IM review decisions

Introduction

Purpose of this attachment

- B2. The purpose of this attachment is to provide a summary of our decisions for the capex IM review and explain our reasons for why we have, or have not, decided to make a change.
- B3. This attachment records our decisions on whether to change the capex IM as a result of the capex IM review. For those aspects of the capex IM we have decided to change, it explains how and why. It also explains our reasons for the aspects we have decided not to change as part of the capex IM review.
- B4. The main body of this paper explains our decisions in relation to the problems identified within each key topic. Most of those decisions involve changes to the capex IM, but some involve potential changes to other aspects of the Part 4 regime. For example, we have decided to consider amending the information disclosure requirements for Transpower to introduce requirements for Transpower to report on its engagement with stakeholders. As explained in paragraphs B157 to B159 below, we intend to consult on these potential changes at a later date, and we anticipate these would take effect from the start of RCP3.
- B5. This attachment records how we intend to give effect to the capex IM review decisions. For those decisions that are related to a problem discussed in the main body of this paper, we generally refer back to the reasoning in the relevant chapter rather than repeating the reasoning in this attachment.
- B6. This attachment also presents a number of changes to the capex IM that were driven from our effectiveness review, rather than those related to problems identified within the key topics. The bulk of these changes are aimed at clarifying the rules, removing ambiguities, correcting errors, or reducing unnecessary complexity and compliance costs. We consider that, collectively, these will better promote s 52R by increasing certainty about what the rules are, as well as reducing complexity and compliance costs.
- B7. This attachment is framed in terms of the existing capex IM decisions (as set out in the 2012 capex IM reasons paper²⁹⁷ and 2014 listed projects reasons paper²⁹⁸) and whether we have decided to change them.²⁹⁹
- B8. The way we intend to give effect to the decisions described in this attachment is presented in the revised draft capex IM determination, which we have published alongside this paper.

²⁹⁷ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012).

²⁹⁸ Commerce Commission “Amendments to input methodologies for Transpower to provide a listed project mechanism: Reasons paper (27 November 2014).

²⁹⁹ The existing capex IM decisions were also set out (along with the relevant determination clauses and chapter references) in Table B2 in our focus areas paper.

Structure of this attachment

- B9. Following this introductory section, this attachment is divided into three parts:
- B9.1 Part 1 lists those aspects of the capex IM where our decision is to make a change;
 - B9.2 Part 2 lists those aspects of the capex IM where our decision is to make no changes; and
 - B9.3 Part 3 summarises the timing and transition provisions in the draft capex IM Determination.

PART 1: Capex IM decisions resulting in a change

Introduction to Part 1

- B10. This Part lists those aspects of the capex IM where our decision is to make a change. In each section:
- B10.1 we state the relevant existing capex IM decision;
 - B10.2 we explain our decision to make a change; and
 - B10.3 we explain the reasons for our decision.

Capex IM framework

*Capex IM – Core framework*³⁰⁰

- B11. Our decision in 2012 was to classify capital expenditure either as base capex or major capex for the purpose of regulatory approval. Major capex projects are undertaken to enhance the service potential for the national grid and where the investment value is expected to exceed \$20 million. Transpower is required to seek approval of a major capex project on a project-by-project basis. In practice, approval had to be sought early in the project's lifecycle so Transpower can recover all its costs.
- B12. As discussed in paragraphs 239 to 241 above, approval at an early stage of some projects incurs large amounts of uncertainties that complicate the major capex mechanisms. The changes to the major capex incentive mechanisms, discussed in Chapter 2, will mitigate some of these complications but some projects could still have large cost uncertainties that could potentially undermine the new incentive regime.
- B13. Our decision is to introduce the option of staged approvals to allow us to approve agreed stages of a major capex project to reduce uncertainties in costs. In addition, staging will enable options to better manage uncertainties in need and timing of the project, as discussed in paragraphs 244 to 265 above.

³⁰⁰ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), section 2.4.

- B14. As part of our staged approval process, our decision is to make the following consequential changes to the capex IM:
- B14.1 introduce a new definition for ‘major capex project (staged)’ while retaining the existing definition of major capex project;
 - B14.2 amend other definitions to allow for the introduction of staged major capex projects;
 - B14.3 update the rules for submitting a major capex proposal;
 - B14.4 update the rules for approving or rejecting a major capex proposal;
 - B14.5 update the information requirements for major capex proposals in Schedule G; and
 - B14.6 update the major capex consultation requirements in Schedule I.
- B15. Our decision in 2012 was that base capex would be subject to ex-ante approval (prior to the regulatory period) of a base capex allowance for each year of the regulatory period.
- B16. As discussed in paragraphs 179 to 180 above, our experience to date has been that this allowance can be difficult to determine because a lot of the E&D projects are dependent on demand growth which can be difficult to forecast with certainty.
- B17. Our decision is to amend the capex IM to introduce the option of an expenditure adjustment mechanism for base capex E&D projects. The mechanism adjusts the standard base capex allowance based on consideration of a range of factors.
- B18. Details of our decision and our reasons are set out in paragraphs 181 to 193 above.

Base capex incentive and output framework

*Base capex expenditure adjustment*³⁰¹

- B19. Our decision in 2012 was to set a symmetric incentive for base capex to be given effect through a revenue adjustment calculated on an annual basis. We required the base capex expenditure incentive mechanism to be applied with reference to the difference between forecast commissioned assets and actual commissioned assets.
- B20. As explained in paragraphs 157 to 162 above, we now consider a commissioned-based incentive potentially deters the commissioning of assets, and may create forecasting issues and cash-flow volatility.
- B21. Our decision is to amend the capex IM to move to an expenditure-based incentive mechanism for base capex.

³⁰¹ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 3.3.

- B22. Details of our decision and our reasons are set out in paragraphs 163 to 169 above.
- B22. We have also considered whether a restriction should be placed on the ability to remove base capex expenditure from the base capex expenditure adjustment. The ability to remove base capex expenditure from the base capex expenditure adjustment is currently provided for in the calculation of the base capex expenditure adjustment specified in clause B1 of the capex IM.³⁰²
- B23. In its submission on the draft amendments determination, Transpower queried why a 'g' variable is not included in the low incentive rate base capex expenditure adjustment (clause B1(3)). In our draft decision we considered that a 'g' variable was not necessary for low incentive rate base capex projects as there were unlikely to be any projects in the low incentive rate allowance that would be re-classified as major capex. However, there could potentially be a case where an R&R project that is initially in the low incentive rate base capex allowance becomes an E&D project (and therefore a major capex project).³⁰³ We have therefore now included the 'g*' variable in clause B1(3) of the revised draft capex IM determination.
- B24. We have also provided for the 'g' variable to be able to apply to cost elements of a base capex project that can vary significantly due to factors beyond the control of Transpower.
- B25. We do not consider that the Commission should have any broader discretion to determine, on an ex-post basis, whether certain types of base capex should be excluded from the base capex expenditure adjustments. This is because broader discretion may distort the incentive effect of the ex-ante mechanism because:
- B25.1 it undermines the incentive for Transpower to undertake efficiency improvements because it may fear any gains achieved could be removed ex-post by excluding certain types of expenditure; and
- B25.2 if Transpower has overspent the base capex allowance it may assert that certain types of expenditure should be excluded from the adjustment mechanism to avoid any penalties under the ex-ante regime.
- B26. Our decision is to amend the capex IM to limit our ability to exclude expenditure from the base capex expenditure incentives to the following circumstances:
- B26.1 Where expenditure on a base capex project has expanded in scope and has become a major capex project; or
- B26.2 Where cost elements of base capex in the base capex allowance can vary significantly due to factors beyond the control of Transpower.

³⁰² In clause B1 of the capex IM, a 'g' variable is used to measure the amount of base capex to which the base capex incentive rate does not apply where a base capex project has become a major capex project. This variable is used in the case where a base capex project has become a major capex project and the base capex incentive rate should not apply for the purposes of incentives.

³⁰³ For example, if Transpower decided that an R&R project that was in the low incentive rate base capex allowance required upgrading of assets.

- B27. We have also considered whether we should retain the requirement for incentives to be calculated on an annual basis. Our experience with the annual MAR update process during RCP2 is that the annual update process can create administrative costs for both us and Transpower for minimal benefit and can cause year-to-year volatility in the price-quality path. As part of our planning for the RCP3 reset, we are considering options for reducing these costs and volatility, including the possibility of changing the timing and frequency with which the MAR update process is carried out. The MAR update process is described in the RCP2 IPP determination. As such, changing the approach to the MAR update is a matter for the RCP3 reset consultation. Depending on the nature of any changes to the approach to updating the MAR for RCP3, it is possible that annual calculation of incentive amounts, as currently required by the capex IM, may become unnecessary.
- B28. Our decision is not to amend the capex IM to remove the requirement for annual incentive calculations.³⁰⁴ We do not consider that changes to the capex IM should be made at this time, given the interaction of the adjustment process with the incentive mechanism calculations, and because we are yet to fully consider our approach to updating MAR for RCP3. We intend to explore alternative approaches to updating the MAR as part of the RCP3 reset consultation, and will more fully consider the interaction of the MAR update with the incentive calculations at that time. As indicated above, it is possible that amendments to the capex IM (including the requirement to calculate incentives annually) and Transpower IM Determination may be required or beneficial as part of that process.

*Grid output adjustment*³⁰⁵

- B29. Our decision in 2012 was for us to determine and for Transpower to propose a suite of grid output measures to apply to each RCP. Transpower could propose which output measures would be linked to revenue. The grid output adjustment is given effect through a revenue adjustment.
- B30. The output measures that we may include, but only at Transpower's request, are related to asset capability, asset health, or any other grid output measure.
- B31. We consider asset health to be a particularly important output measure for quantifying the output of replacement capex. Asset health measures establish a direct link between replacement capex and the change in the condition of the asset fleet. We understand that over the course of RCP2, Transpower has been increasingly using an asset health framework to inform its asset replacement decisions. As such, our draft decision proposed to change the IMs to give the Commission the ability to determine asset health output measures and link them to revenue. We note that, through the current IPP determination, we are piloting asset health reporting measures, which should help to inform better asset health measures for RCP3.

³⁰⁴ This was supported by Transpower, see Transpower "Submission on Capital Expenditure Input Methodology draft decision" (12 December 2017), p. 8, row B26.

³⁰⁵ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), section 3.4.

- B32. Transpower agreed with our draft decision on asset health measures but raised concerns with the use of the current grid output mechanism to determine the grid output adjustment. Transpower referred to the pilot reporting set out in the IPP to develop a non-mechanistic output framework for the asset health output measures over RCP3.³⁰⁶
- B33. We consider the mechanism for grid output adjustment currently set out in clause B2 of the capex IM applies satisfactorily to the grid performance and asset performance measures and we are mindful that it may not apply to adjustments in relation to asset health measures.
- B34. If the pilot health measures trial shows that the mechanism set out in clause B2 of the capex IM is not suitable for asset health measures, then an appropriate mechanism will need to be developed for asset health measures when we set the IPP for RCP3. At this stage of the pilot reporting trial, it is premature to define an adjustment mechanism for the asset health grid output measures.
- B35. Our decision is to amend the capex IM to:
- B35.1 require Transpower to propose performance-based measures and asset health measures; and
 - B35.2 allow us to determine asset health grid output measures and link them to revenue.
- B36. As explained in paragraph B27 above, we have also considered whether we should retain the requirement for the incentives to be calculated on an annual basis. Our decision is not to amend the capex IM to remove the requirement for annual incentive calculations. Our reasons for our decision are set out in paragraphs B27 to B28 above.

*Base capex policies and processes adjustment*³⁰⁷

- B37. Our decision in 2012 was to set an asymmetric incentive (penalty only) that required Transpower to 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, met the requirement to undertake a cost-benefit analysis and consultation consistent with the major capex consultation requirements.
- B38. As explained in paragraphs 170 to 175 above we now consider this mechanism is ineffective.
- B39. Our decision is to amend the capex IM to remove the base capex policies and processes adjustment.

³⁰⁶ Transpower "Submission on Capital Expenditure Input Methodology draft decision" (12 December 2017), p. 8, row B30.

³⁰⁷ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), section 3.5.

B40. Details of our decision and our reasons are set out in paragraphs 176 to 178 above.

*Base capex incentive rates*³⁰⁸

B41. Our decision in 2012 was to set the base capex incentive rates in the IPP determination prior to the start of each RCP, which would apply for the length of the RCP.

B42. As explained in paragraphs 131 to 139 above, we now consider an incentive rate that is suitable for the majority of base capex projects may not necessarily be appropriate for larger base capex projects.

B43. Our decision is to amend the capex IM to apply one of two incentive rates to base capex projects, which will be a standard rate of 33% and a low rate of 15% for large base capex projects that the Commission will determine during the setting of the IPP. Our decision is that these rates will be set in the capex IM, and will require consequential changes to the definition of ‘Identified programmes’ in Schedule F.

B44. Details of our decision and our reasons are set out in paragraphs 140 to 154 above.

Major capex incentive and output framework

*Major capex efficiency adjustment*³⁰⁹

B45. Our decision in 2012 was to make a capital expenditure revenue adjustment available to Transpower if it could demonstrate to the Commission’s satisfaction that it has achieved positive net efficiencies across the portfolio of major capex projects during a given RCP.

B46. As explained in paragraphs 74 to 77 above, we now consider the current major capex incentive mechanisms are not operating effectively as a package to provide appropriate incentives on Transpower to act efficiently.

B47. Our decision is to amend the capex IM to change the major capex incentive regime to an ex-ante framework. We have decided to replace three asymmetric ex-post incentive mechanisms (the major capex efficiency adjustment, the major capex overspend adjustment and the major capex project output adjustment) with a single ex-ante symmetric mechanism (the major capex expenditure and output adjustment).

B48. Details of our decision and our reasons are set out in paragraphs 78 to 93 above.

³⁰⁸ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 3.6.

³⁰⁹ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 4.2.

*Major capex project output adjustment*³¹⁰

- B49. Our decision in 2012 was to set an asymmetric incentive (penalty only) to incentivise Transpower to deliver outputs for each major capex project that were specified by Transpower (at the time of proposing the major capex project) and that were approved by us. The major capex project output adjustment was given effect through an adjustment to the economic value (**EV**) account calculated on an annual basis.
- B50. Our decision is to combine the major capex project output adjustment with the major capex expenditure adjustment to form the ‘major capex expenditure and output adjustment’ mechanism (thereby removing the separate major capex project output adjustment).
- B51. Details of our decisions and our reasons are set out in paragraphs 94 to 102 above.
- B52. As explained in paragraph B27 above, we have also considered whether we should retain the requirement for the incentives to be calculated on an annual basis. Our decision is not to amend the capex IM to remove the requirement for annual incentive calculations. Our reasons for our decision are set out in paragraphs B27 to B28 above.

*Major capex overspend adjustment*³¹¹

- B53. Our decision in 2012 was to set a project specific adjustment as a potential penalty where costs on a given project exceed the level appropriate for that project. The major capex overspend adjustment is given effect through an adjustment to the EV account, calculated on an annual basis.
- B54. As explained in paragraphs 74 to 77 above, we now consider the current major capex incentive mechanisms are not operating effectively as a package to provide appropriate incentives on Transpower to act efficiently.
- B55. Our decision is to amend the capex IM to change the major capex incentive regime to an ex-ante framework. We have decided to replace three asymmetric ex-post incentive mechanisms (the major capex efficiency adjustment, the major capex overspend adjustment and the major capex project output adjustment) with a single ex-ante mechanism (the major capex expenditure and output adjustment).
- B56. Details of our decision and our reasons are set out in paragraphs 78 to 93 above.

³¹⁰ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 4.3.

³¹¹ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 4.4.

- B57. We also considered whether we should change how CPI and FX adjustments impact the major capex overspend adjustment. CPI and FX adjustments are made to the base capex allowance and major capex allowance for any difference between the forecast values for CPI and FX assumed by Transpower and the actual CPI and FX rates.³¹²
- B58. Currently the major capex adjustment is made through the major capex overspend adjustment. It is an asymmetric approach which means that adjustments are only made if Transpower overspends its allowance. This can expose Transpower to potential gains if favourable inflationary or foreign exchange conditions lead to Transpower underspending its allowance, as there is no adjustment to correct for the actual values.
- B59. Our decision to move to an ex-ante incentive regime will resolve the asymmetry issue because CPI and FX adjustments will be applied regardless of an over- or under-spend (ie, symmetric), consistent with the approach taken in the base capex regime.

*Major capex incentive rate*³¹³

- B60. Our decision in 2012 was to set the incentive rates for major capex projects at the start of each RCP, which would apply for the length of the RCP.
- B61. As explained in paragraphs 115 to 118 above, we have considered whether allowing for an alternative incentive rate for major capex would be appropriate.
- B62. Our decision is to amend the capex IM to prescribe a 15% default incentive rate for major capex but also to allow the ability to vary the incentive rate for major capex projects under specific circumstances.
- B63. Details of our decision and our reasons are set out in paragraphs 120 to 129 above.

Base capex allowance – approval process

*Timing and content requirements for each base capex proposal*³¹⁴

- B64. Our decision in 2012 specified the information to be included in each base capex proposal. This was set out in Part 7 of the capex IM determination.
- B65. As discussed in paragraphs 329 to 330 above, stakeholders have been seeking additional information on the impacts of potential investments.

³¹² The forecast FX rates for each foreign currency are the forward rates assumed by Transpower, and the forecast CPI rates are the Reserve Bank of New Zealand forecasts of CPI.

³¹³ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 4.6.

³¹⁴ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 5.3.

- B66. Our decision is to amend the capex IM to require Transpower to provide an estimate of the future increase in prices and explain the additional service and system benefits consumers will receive due to the proposed RCP expenditure (contained in base capex proposal) and expenditure on each listed project. Details of our decision and our reasons are set out in paragraphs 331 to 338 above.
- B67. Our decision in 2012 also specified the qualitative information for Transpower to provide when submitting a base capex proposal. This was set out in Schedule F of the capex IM determination.
- B68. As discussed in paragraph 339 above, Transpower submitted changes to Schedule F to reduce the cost and complexity of the requirements.³¹⁵
- B69. We agree with Transpower that some of the information requirements for base capex set out in Schedule F are either unclear or can be simplified.
- B70. Our decision is to amend the capex IM to make changes to Schedule F to remove ambiguities, correct errors, or reduce unnecessary complexity and compliance costs, consistent with promoting the s 52R purpose.
- B71. In response to our draft decision, Transpower submitted on a number of proposed changes to the subclauses in Schedule F that are set out in

³¹⁵ Transpower “Transpower additional information Capex IM review Transpower additional information Capex IM review” (19 September 2017); and Transpower “Transpower additional information Capex IM review Transpower additional information Capex IM review – Appendix” (19 September 2017).

- B72. Table 4 below.
- B73. Transpower's submission was based on its view that the type of evaluation the Commission conducts has implications for the information Transpower provides. Transpower considered that our RCP3 evaluation should be an exercise to approve a funding baseline for the incentive based regime to operate, instead of scrutinising a set of projects and engineering practices and procedures.³¹⁶
- B74. We consider that the funding baseline is inevitably informed by a set of projects and programmes supported by good engineering practices and procedures, which enables incentives to operate in a way consistent with s52A purpose. In preparing a base capex proposal we expect Transpower to demonstrate it used this approach, and also followed thorough and robust governance processes to arrive at its funding baseline. If we have confidence that robust governance was followed, we can undertake an appropriate level of scrutiny for projects, programmes and engineering practices.³¹⁷
- B75. We have also considered whether Schedule F should be updated to incorporate our changes to the incentives regime. Our decision is to amend clause F2 to require Transpower to provide a list of listed projects and projects to which the lower incentive rate will apply, and explain how these projects meet the criteria in the capex IM. Our reason for this change is set out in paragraph B43 above.
- B76.

³¹⁶ Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 13.

³¹⁷ Note that we are not committing to how we will assess the RCP3 proposal.

- B77. Table 4 below summarises our decision and reasons in response to Transpower's proposed changes to Schedule F, and our decision to amend clause F2 as a consequence of our changes to the incentives regime.
- B78. Our drafting changes are set out in Schedule F in the revised draft capex IM determination.³¹⁸

³¹⁸ Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018 (29 March 2018).

Table 4 – Decisions and reasons relating to Schedule F of the capex IM

Clause	Transpower's proposed changes	Decisions and reasons
F2 – List of identified programmes, listed projects and projects subject to low incentive rates	Remove 'base capex projects' and reduce the level of prescription.	<p>Our decision is to retain base capex projects in this clause. We expect there will still be base capex projects that need to be identified, such as E&D projects and outdoor to indoor conversions. When assessing listed projects, we will treat them as identified projects rather than programmes.</p> <p>We have decided to reduce the level of prescription in some of the subclauses to increase flexibility and reduce complexity, and to clarify that this clause requires a list.</p> <p>Our decision is also to require Transpower to provide a list of listed projects, and projects to which the lower incentive rate will apply, and explain how these projects meet the criteria in the capex IM. Our reason for this change is set out in paragraph B43 above.</p>
F3 – Overview	Amend wording so it is clear we require an overview rather than details.	Our decision is to amend some subclauses to better reflect that the intent of this clause is to provide an overview rather than detailed commentaries (better promotes s 52R).
F4 – Governance, policies, process and consultant reports	Change policies and processes to governance and remove the requirement to describe material changes to policies and processes since the last IPP determination.	<p>Our decision is to change 'policies and processes' to 'governance' and define governance as including policies, processes, strategies and risk assessment. The reason for this change is to clarify the meaning of governance as used in this clause.³¹⁹</p> <p>Our decision is to change clause F4(2) to require description of changes that have had a material impact on the expenditure levels. For example, in RCP2, Transpower has changed its policies, lifecycle strategies and risk appetite for power transformers and this has reduced the value of power transformer replacement capex and could potentially influence opex/capex trade-offs (reduces cost and complexity).</p>

³¹⁹ We note Transpower's submission that the changes have materially increased requirements and the scope of information provision, and its opposition to the Commission increasing the information requirements in F4(1) (Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 14). We consider that a description of key internal processes that discussed how expenditure is governed is not likely to provide the assurance the Commission requires to satisfy its proportionate scrutiny principle, and we retain our view that Transpower should consider governance in the wider sense of policies, processes, strategies and risks.

F5 – Cost and efficiency	Remove this requirement.	Our decision is to retain clause F5 because this requirement is included so that the Commission can assess the extent that the efficiency gains made in the current regulatory period are reflected in the proposal for the next regulatory period (better promotes s 52A). ³²⁰
F6 – Information and programmes and identified programmes	<p>Remove the requirements to describe:</p> <ul style="list-style-type: none"> • delivery; • changes from historical costs and contingencies; • the link of the programme with long-term grid development; • departures from policies; and • approach to prioritising system growth projects. 	The requirements set out in this clause are necessary to assess identified programmes. Our decision is to retain the current requirements and, where necessary, amend or move subclauses that need to be clarified. For example, since the current subclause F7(2) relates to identified programmes, our decision is to move this subclause to clause F6(5) for clarity.

³²⁰ We note Transpower’s submission that we should remove this requirement because Transpower should be relying on the expenditure incentives to encourage it to search for and reveal efficiencies. Transpower considered the expenditure efficiency arrangements should reinforce an approach where its proposal for the next regulatory period allows for the revealed efficiency ie take Transpower’s efficiency as achieved up to the forecasting base year (Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 14-15). We consider that this subclause allows Transpower to ‘reveal efficiencies’ to its stakeholders and demonstrate how it intends to share the gains with consumers.

F7 - Procurement	Lift up level of detail to provide an overview of the procurement process including an explanation of the extent to which the process was competitive. ³²¹	<p>Our decision is to include a description of the procurement process for the base capex in this clause and move the details on procurement of identified programmes to clause F6.</p> <p>We have also amended F7(2) to make the assessment of risk specific to procurement.</p> <p>These details are useful in identifying any deliverability issues, potential areas of high cost, and the appropriateness of Transpower's outsourcing. These changes will promote s 52A.</p>
F8 – Resourcing and delivery	Remove the details on resourcing and delivery. Transpower suggested removing most of these requirements because they are covered in F3.	<p>Our decision is to make no change.</p> <p>F3 provides an overview while F8 provides the details necessary to evaluate delivery of the planned expenditure.</p>

³²¹ In response to our draft decision which stated Transpower had submitted that this requirement be removed, Transpower submitted that it had requested '*lift up level of detail to provide an overview of the procurement process including an explanation of the extent to which the process was competitive*' (Transpower "Capital Expenditure Input Methodology draft decisions" (12 December 2017), p. 15-16). We have now corrected the table as requested by Transpower. In response to Transpower's submission, we consider that understanding any risks with procurement is an important input for determining the IPP. We do not consider that an overview will provide sufficient details to identify any issues with procurement and hence delivery. For example, in RCP2 Transpower was not able to procure services to investigate more than one listed project at a time. It is important for us to understand such constraints and any consequential risks. Considering key risks is important as it may highlight sources of increased costs.

F9 – Other capex	Increase the threshold for categorising minor capex to \$5 million from \$1 million.	<p>Our draft decision was to lift the need for Transpower to provide the rationale for any forecast base capex from \$1 million to \$5 million on the basis that it would reduce cost and complexity. In response to our draft decision, Contact Energy submitted that this was a major change and we had not provided sufficient rationale for the change.³²²</p> <p>In its cross submission Transpower stated that ‘the increase of the threshold from \$1m to \$5m, as requested by Transpower, is intended to reduce the administrative burden of describing reasons for low value expenditure not attached to any other investment programme’ (ie, those not covered under F6).³²³</p> <p>We have reconsidered our draft decision and have now decided to retain the \$1 million threshold. Based on our analysis of previous RCP proposals, the number of these projects is small and, for RCP3, Transpower intends to include only projects that do not have the potential for NTSs under clause F9. We therefore consider that any reduction in administrative burden by raising the threshold is likely to be low. We further note that Transpower can provide a high level explanation for the expenditure and this requirement would not be unduly onerous.</p>
F10 – Escalation factors and foreign exchange	No change.	Our decision is to make no change.

³²² Contact Energy “Re: Transpower capex input methodology review: draft decision” (8 December 2017), para 37-40.

³²³ Transpower, ‘Capex IM draft decision cross-submission’ 16 January 2018, p. 3.

F11 – Information on proposed grid output measures	Remove the level of details on categories of grid output measures and remove the need to describe the relationship between the grid output measures with the risks associated with the grid, the performance of the grid and the key purposes of investments. Transpower queried the need to specify grid output measures by types defined in the capex IM.	Our decision is to change clause F11 to clarify the requirements. We consider that defining the measures by types assures stakeholders that the range of grid output measures applying to Transpower covers both its network performance and expenditure objectives. ^{324, 325}
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³²⁴ We note Transpower’s submission that this change increases the regulatory burden of providing information, by requiring Transpower to provide all models and supporting data relating to all output measures (both revenue and non-revenue linked). Transpower raised concerns that no Part 4 rationale is provided for why the models are needed, and urged the Commission to evaluate its need for information by clarifying how it intends to use all the models (Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 16-17). In response to Transpower, we do not consider that supplying data and models relating to output measures is burdensome. We are not asking for anything more than what Transpower used to set the parameters of the output measures. If no data or model is used, then we would not expect any supporting documentation, but would like to know how any values were determined. We would use Transpower’s models and data to help us determine the target, collar, cap and incentive rate for the grid output measures.

³²⁵ Transpower submitted that the phrase ‘expenditure objective’ should be deleted because grid output measures are for performance, as described in the capex IM reasons paper of January 2012 (Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 17). Transpower’s previous expenditure proposals show that expenditure is inherently linked with performance of the grid (Transpower “Expenditure forecasts and Quality Performance 1 July 2012 to 30 June 2015” (February 2011), p. 2; and Transpower “Expenditure Proposal Regulatory control period 2” (December 2013), para 2.2.1(b)). Therefore grid output measures should be linked with the expenditure objectives. We appreciate that it is not possible to quantify a precise relationship between grid expenditure and quality. We are therefore looking for a level of quantification to the extent possible.

F12 – Revenue linked grid output measures	Remove description to policies and key assumptions.	Our decision is to make no change. ³²⁶
F13 – Grid output measures not linked to revenue	Remove the requirements in this clause since they are included in F11.	Our decision is to remove clause F13 and include any necessary requirements under clause F11. The change will reduce cost and complexity.

³²⁶ Transpower submitted ‘Under F12 (c) (ii) we agree that the grid output targets should reflect consumer preferences and thus any consultation responses. We consider the terms ‘relevant policies’ and ‘key assumptions’ have little value, as other information provided in F12 and F11 should be sufficient to evaluate the appropriateness of the output measure targets and degree of consultation undertaken’ (Transpower “Capital Expenditure Input Methodology draft decisions” (12 December 2017), p. 17). We consider that if there are no policies, Transpower does not need to provide them. In our view, policies and key assumptions provide context to the parameters of output measures. We will use them to evaluate Transpower’s proposal and make our determinations. For example, in RCP2 Transpower is breaching its HVAC availability targets because of outages needed for tower painting. The breach indicates that Transpower may not have considered the impact of the tower painting programme on the availability of the HVAC circuits when it set its target for the RCP. In this example, if Transpower had policies that required it to consider the impact of planned work on circuit availability targets, then more realistic targets could have been set.

Major capex – approval process

*Approach to considering non-transmission solutions*³²⁷

- B79. Our decision in 2012 was to require Transpower to consider NTSs prior to submitting a major capex proposal for approval.
- B80. Our draft decision was to amend the definition of NTS to provide the ability for Transpower to use NTSs to manage operation risks and optimise the timing of major capex projects during construction, and to include grid-scale storage in the definition. Contact opposed including grid storage within the definition of NTS on the basis that demand-side management was already contained in the definition. Contact considered that there is no need for batteries to be funded as regulated monopoly assets, and there is nothing preventing Transpower from obtaining the benefits that batteries can provide through utilising regulated opex and contracting services from a third party.³²⁸
- B81. Contact’s interpretation that this definition will allow Transpower to invest in grid-scale storage is incorrect. The IMs already allow Transpower to invest in new technologies, including grid storage, if the solutions provide the highest expected net electricity market benefits. Such technological solutions provided by Transpower are classified as transmission solutions rather than as NTSs. Nevertheless, as discussed below we have removed the list of alternatives from the NTS definition.
- B82. Transpower submitted that defining NTSs as a type of cost is inaccurate and that limiting NTSs to specific things could stifle emerging NTSs.³²⁹ We agree with Transpower and have amended the NTS definition to address these concerns. The amended definition now sets out what alternatives to investment in the grid will qualify as NTSs without restricting those alternatives to specific solutions. While we expect that NTSs will usually relate to at least one of the things previously listed in the definition this is no longer a mandatory requirement for an alternative to investment in the grid to qualify as NTS.³³⁰
- B83. Our decision is to amend the definition of NTS in the capex IM to set out what alternatives to investment in the grid will qualify as NTSs without restricting those alternatives to specific solutions.

³²⁷ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 6.3.

³²⁸ Contact Energy “Re: Transpower capex input methodology review: draft decision” (21 December 2017), para 1.10-1.11.

³²⁹ Transpower “Capital Expenditure Input Methodology draft determination: Appendix A” (21 December 2017).

³³⁰ The things previously listed in the definition were: energy efficiency, demand-side management, local network augmentation, improvement to systems and processes, and the provision of ancillary services.

*Transpower's consultation requirements*³³¹

- B84. Our decision in 2012 was to require Transpower to consult with interested parties on proposed transmission investments and NTSs prior to submitting a major capex proposal for approval.
- B85. We consider that the current wording of the capex IM could be clearer about the timing of Transpower's consultations on the investment need and a long list of options, and invitations to interested parties to provide information on potential NTSs. These need not be sequential processes. The better practice would be to consult on investment needs, demand and generation scenario variations, key assumptions, and a long list of assumptions, and invite proposals on NTSs at the same time. This approach would reduce the number of consultations and costs. We have decided to amend the capex IM to reflect more clearly that these processes need not be sequential.
- B86. Our decision is to amend the capex IM to clarify that Transpower can invite interested parties to provide information on potential NTSs when it consults on the investment need and on a long list of options to meet the investment need.
- B87. As discussed in paragraphs B11 to B14 above, our decision is also to amend the capex IM to update the major capex consultation requirements, as part of our staged approval process. We consider that the consultation requirements for subsequent stages of a staged major capex proposal do not need to be as comprehensive as those for the first stage.
- B88. Our decision is to amend the scope of consultation requirements for subsequent stages of a staged major capex project. The consultation requirements for stage one of a staged major capex project remain the same as those for an un-staged major capex project. For subsequent stages of a staged major capex project Transpower will be required to consult on the updates to investment need, demand and generation scenarios, key assumptions and investment test. The extent of such consultations will be commensurate with the materiality of the changes in these matters compared with the most recent consultation.
- B89. Further details of our decision to introduce a staged approval process for major capex projects and our reasons are set out in paragraphs 244 to 266 above.

*Rules for submitting a major capex proposal*³³²

- B90. Our decision in 2012 set out requirements for Transpower to submit a major capex proposal to the Commission for approval. The rules allow Transpower to submit a major capex proposal at any time during a regulatory period.

³³¹ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), section 6.4.

³³² Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), section 6.6.

- B91. In practice, Transpower often changes its date of submission many times often at short notice. This makes medium-term planning difficult and we have considered options for improving certainty around the date of application of major capex proposals for our approval.
- B92. Our decision is to amend the capex IM to include the application date in the list of items we and Transpower must regularly review. This will ensure we and stakeholders are kept informed of any potential changes in the application date for major capex proposals.
- B93. As discussed in paragraphs B11 to B14 above, our decision is also to amend the capex IM as part of our staged approval process to update the rules for submitting a major capex proposal.
- B94. Further details of our decision to introduce a staged approval process for major capex projects and our reasons are set out in paragraphs 244 to 265 above.

*Rules for approving or rejecting a major capex proposal*³³³

- B95. Our decision in 2012 was that the Commission would either approve or reject a major capex proposal as a whole.
- B96. As explained in paragraphs 104 to 108 above, the requirement under our new ex-ante incentive mechanism for an unbiased forecast of costs on a P50 basis means that we no longer consider the existing approach to determining the major capex allowance is appropriate.
- B97. Our decision is to amend the capex IM to allow us to determine the major capex allowance, consistent with our approach for base capex.
- B98. Details of our decision and our reasons are set out in paragraphs 109 to 114 above.
- B99. As discussed in paragraphs B11 to B14 above, in order to implement the new process for staged approvals, we have decided to amend the capex IM to update the rules for approving or rejecting a major capex proposal.
- B100. Further details of our decision to introduce a staged approval process for major capex projects and our reasons are set out in paragraphs 244 to 265 above.

*Content requirements for a major capex proposal*³³⁴

- B101. Our decision in 2012 set out information requirements for major capex proposals. These were specified in Schedule G of the capex IM determination.
- B102. As discussed in paragraphs 329 to 330 above, some stakeholders have been seeking additional information on the impacts of potential investments.

³³³ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 6.7.

³³⁴ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 6.8.

- B103. Our decision is to amend the capex IM to require Transpower to provide an estimate of the future increase in prices and to explain the additional service and system benefits consumers will receive due to the proposed expenditure on each major capex project.
- B104. Details of our decision and our reasons are set out in paragraphs 331 to 338 above.
- B105. As discussed in paragraphs B11 to B14 above, our decision is also to amend the capex IM as part of our staged approval process to update the information requirements for major capex proposals in Schedule G.
- B106. Transpower submitted that Schedule G should be reviewed to reduce complexity and compliance costs, and provided a number of specific suggestions in its submission on the draft determination.³³⁵
- B107. In response to Transpower's suggestions, we have also made a number of amendments to Schedule G to improve clarity. Our drafting changes are set out in Schedule G in the revised draft capex IM determination.³³⁶

Amendments to major capex approvals

*Process requirements for amendment applications*³³⁷

- B108. Our decision in 2012 was to allow Transpower to apply for a range of amendments to previously approved major capex projects.
- B109. As discussed in paragraphs 74 to 77 above, we consider it is no longer appropriate to maintain the ability for Transpower to apply for an amendment to a major capex allowance, given the change to an ex-ante incentive mechanism. An exception is following an amendment to the approved major capex project outputs where the Commission may amend the major capex allowance.
- B110. Our decision is to amend the capex IM to remove the current ability to amend the major capex allowance after its initial determination, but to continue to allow Transpower to apply to amend some of the other components of the major capex projects.³³⁸
- B111. Details of our decision and our reasons are set out in paragraphs 81 to 82 above.

³³⁵ Transpower submission on focus areas consultation paper "Capex IM review: Issue identification via focus areas" (14 June 2017), p. 9; and Transpower "Capital Expenditure Input Methodology draft determination: Appendix A" (21 December 2017), Schedule G.

³³⁶ Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018 (29 March 2018).

³³⁷ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), section 8.2.

³³⁸ Transpower is also not able to amend the major capex incentive rate for an approved project, the level of exempt major capex, or the commissioning date.

Listed projects

*Criteria we will use to evaluate applications for approval of base capex in respect of listed projects*³³⁹

- B112. Our decision in 2014 was that our assessment of a listed project application would be based on the evaluation criteria in the capex IM that apply to base capex. These criteria are set out in Part 6 and Schedule A of the capex IM determination.
- B113. When we evaluated the Central Park Wilton project (listed project), we recognised that the capex IM could imply that a listed project should be assessed as a base capex proposal. This was not the intent of the IM because a listed project is akin to an identified project of the base capex proposal rather than the base capex proposal itself. We therefore assessed this application as if the listed project was an identified project and used the criteria set out in clauses 6.1.1(1) and 6.1.1(2), and in clause A2.³⁴⁰
- B114. Our decision is to amend the capex IM to clarify that the requirements for assessing listed projects are those set out in clauses 6.1.1(1) and 6.1.1(2), and in clause A2.
- B115. Our reasons for our decision are to improve clarity for suppliers and consumers about how we will evaluate listed projects.

PART 2: Capex IM decisions resulting in no change

Introduction to Part 2

- B116. This Part lists those aspects of the capex IM where our decision is to make no changes. For the majority of the sections:
- B116.1 we state the relevant existing capex IM decision; and
 - B116.2 we explain why we have decided not to change it as part of the capex IM review.

³³⁹ Commerce Commission “Amendments to input methodologies for Transpower to provide a listed projects mechanism – Reasons paper” (27 November 2014), para 130. Available on our website at: <http://www.comcom.govt.nz/dmsdocument/12721>.

³⁴⁰ Commerce Commission “Final decision on Transpower’s Central Park Wilton B line listed project [2017] NZCC 16” (28 June 2017), para B10-B11. Available on our website at: <http://www.comcom.govt.nz/dmsdocument/15557>.

B117. In the last section we list those aspects of the capex IM that:

B117.1 in light of our framework, submissions on the capex IM review, and all other relevant information before us, we consider there are insufficient reasons for changing at this stage,³⁴¹ and

B117.2 we have therefore decided not to change (either at a policy level, or in terms of the implementation of the policy decision), except to the extent necessary to accommodate the introduction of staged approvals.

Capex IM framework

*Categories and definitions for capital expenditure*³⁴²

B118. Our decision in 2012 set out the criteria for categorising capital expenditure as either major capex or base capex. These criteria classified base capex as R&R projects (and E&D projects below \$20 million) and major capex as E&D projects above \$20 million.

B119. Our decision is to retain the current criteria for categorising capital expenditure as either major capex or base capex.

B120. Details of our decision and our reasons are set out in paragraphs 230 to 234 above.

*Integrated transmission plan*³⁴³

B121. Our decision in 2012 was to require Transpower to submit an ITP with its RCP proposal and then annual updates of the plan in the first four disclosure years of the RCP.

B122. We explored whether Transpower should submit updates more regularly.

B123. Our decision is to maintain the current requirement for Transpower to submit an ITP annually to the Commission.

B124. Details of our decision and our reasons are set out in paragraphs 344 to 348 above.

³⁴¹ That is not to say there have never been any issues raised in respect of the aspects of the capex IM listed in this section. Minor issues have been raised in the past that are relevant to some of these aspects of the capex IM; but none that we considered were sufficiently material to lead us to consider changing the capex IM.

³⁴² Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 2.5.

³⁴³ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 2.7.

*Transmission alternatives*³⁴⁴

- B125. Our decision in 2012 was to require Transpower to consider transmission alternatives as part of the investment test, which applies only to major capex projects.³⁴⁵
- B126. Our decision is to maintain the current requirements for consideration of transmission alternatives.
- B127. Details of our decision and our reasons are set out in paragraphs 302 to 304 above.

Major capex incentive and output framework*Incentives that apply to major capex*³⁴⁶

- B128. Our decision in 2012 was to set four incentive mechanisms applying to all major capex commissioned after the date of the capex IM determination. These were the major capex efficiency adjustment, the major capex project output adjustment, the major capex overspend adjustment and the major capex sunk costs adjustment.
- B129. As discussed in paragraphs 235 to 236 above, some submitters suggested that there are insufficient incentives in the capex IM for Transpower to complete major capex projects on time.
- B130. Our decision is to make no changes to the capex IM to place further incentives on Transpower to complete major capex projects on time.
- B131. Details of our decision and our reasons are set out in paragraphs 235 to 236 above.

Major capex – investment test*Form and scope of the investment test*³⁴⁷

- B132. Our decision in 2012 was to require Transpower to apply the investment test to identify a preferred investment option from a number of investment options for major capex. We required that the costs and benefits to be included in the investment test were to be those accruing to participants in the electricity market.
- B133. As discussed in paragraphs 196 to 203 above, we received a number of submissions on the investment test criteria wishing to expand the costs and benefits that should be taken into account within the investment test.
- B134. Our decision is to retain the current form and scope of the investment test.
- B135. Details of our decision and our reasons are set out in paragraphs 204 to 207 above.

³⁴⁴ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 2.8.

³⁴⁵ We also require transmission alternatives to be considered as part of any listed project application.

³⁴⁶ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 4.1.

³⁴⁷ Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012), section 7.2.

*Implementation of the investment test*³⁴⁸

- B136. Our decision in 2012 set out the key inputs and calculations that are used in the investment test.
- B137. As discussed in paragraphs 208 to 220 above, we considered whether we should make changes to the inputs and calculations used in the investment test.
- B138. Our decision is to retain our current approach to the key inputs and calculations that are used in the investment test.
- B139. Details of our decision and our reasons are set out in paragraphs 208 to 220 above.

Certification requirements*Certification requirements for proposals and amendment applications*³⁴⁹

- B140. Our decision in 2012 was to require self-verification in the form of certification in respect of Transpower's directors and Chief Executive Officer.
- B141. As discussed in paragraphs 269 to 270 above, we now consider there will be benefits in introducing a verification process for IPP proposals.
- B142. Our decision is to not formally introduce an independent verification process for Transpower's IPP proposals via an amendment to the capex IM at this time. Rather, we are piloting independent verification for RCP3 via agreement with Transpower. We will then evaluate the success of the pilot and consider setting verification requirements in the capex IM before RCP4.
- B143. Details of our decision and our reasons are set out in paragraphs 271 to 288 above.

Reporting requirements*Base capex annual reporting requirements*³⁵⁰

- B144. Our decision in 2012 was to require Transpower to report on an annual basis its actual performance and delivery of outputs, against forecasts used when the Commission set the base capex allowance.
- B145. As discussed in paragraphs 293 to 294 above, stakeholders are seeking more transparency on Transpower's investment decisions, clearer information about potential opportunities for transmission alternatives, and additional engagement requirements for base capex projects.

³⁴⁸ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), section 7.4.

³⁴⁹ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), section 9.2.

³⁵⁰ Commerce Commission "Transpower Capital Expenditure Input Methodology: Reasons paper" (31 January 2012), section 10.2.

B146. Our decision is to not amend the capex IM to introduce additional reporting requirements at this time. Instead, we intend to consider changing Transpower’s information disclosure requirements to require Transpower to report annually in relation to base capex on:

B146.1 whether it has engaged with stakeholders and, if so, how it has engaged with stakeholders;

B146.2 how effective it considers that engagement has been; and

B146.3 how satisfied stakeholders were with the engagement process based on the views expressed by stakeholders.

B147. We will consult on this potential change to the information disclosure requirements for Transpower separately at a later date.

B148. Details of our decision and our reasons are set out in paragraphs 295 to 328 above.

Other aspects of the capex IM where our decision is to make no changes

B149. Table 5 lists those aspects of the capex IM that:

B149.1 in light of our framework, submissions on the capex IM review so far, and all other relevant information before us, we consider there are insufficient reasons for changing at this stage;³⁵¹ and

B149.2 we have therefore decided not to change (either at a policy level, or in terms of the implementation of the policy decision), except to the extent necessary to accommodate the introduction of staged approvals.

Table 5 – Other aspects of the capex IM where our decision is to make no changes

		Reference in capex IM reasons paper³⁵² and in listed projects (LP) reasons paper³⁵³
Capex IM framework		
	Interaction with the IPP determination	Chapter 2 Section 2.3
	Situations in which capital expenditure may be recategorised	Chapter 2 Section 2.6

³⁵¹ That is not to say there have never been any issues raised in respect of the aspects of the capex IM listed in this section. Minor issues have been raised in the past that are relevant to some of these aspects of the capex IM; but none that we considered were sufficiently material to lead us to consider changing the capex IM.

³⁵² Commerce Commission “Transpower Capital Expenditure Input Methodology: Reasons paper” (31 January 2012).

³⁵³ Commerce Commission “Amendments to input methodologies for Transpower to provide a listed projects mechanism – Reasons paper” (27 November 2014).

		Reference in capex IM reasons paper³⁵² and in listed projects (LP) reasons paper³⁵³
Major capex incentive and output framework		
	Sunk costs adjustment	Chapter 4 Section 4.5
Base capex allowance – approval process		
	Process for agreeing the quantitative information requirements	Chapter 5 Section 5.2
	Base capex – Qualitative information requirements	Chapter 5 Section 5.4
	Commission’s base capex determination and process requirements	Chapter 5 Section 5.5
	Commission’s consultation obligations	Chapter 5 Section 5.6
	Criteria for evaluating and approving base capex	Chapter 5 Section 5.7
Major capex – approval process		
	Major capex pre-proposal process requirements	Chapter 6 Section 6.2
	Commission’s consultation obligations	Chapter 6 Section 6.5
	Project approval expiry date	Chapter 6 Section 6.9
	Criteria for evaluating major capex proposals	Chapter 6 Section 6.10
Major capex – investment test		
	Application of the investment test	Chapter 7 Section 7.3
Amendments to major capex approvals		
	Information requirements for amendment applications	Chapter 8 Section 8.3
	Criteria for evaluating major capex amendment applications	Chapter 8 Section 8.4
	Consultation requirements for amendments application	Chapter 8 Section 8.5
Certification requirements		
	Certification of annual information	Chapter 9 Section 9.3
Annual reporting requirements		
	Major capex annual reporting requirements	Chapter 10 Section 10.3
	Formatting for reporting, proposal and applications	Chapter 10 Section 10.4

		Reference in capex IM reasons paper ³⁵² and in listed projects (LP) reasons paper ³⁵³
Processes, requirements and evaluation criteria for listed projects		
	Base capex projects or programmes that can be listed	Chapter 3 Paragraphs 109 to 111
	Timeframes and processes for evaluating applications for approval of base capex in respect of listed projects	Chapter 3 Paragraphs 112 to 118
	Requirements that must be met by Transpower	Chapter 3 Paragraphs 119 to 129
	How base capex in respect of listed projects will feed into the base capex incentive framework	Chapter 3 Paragraphs 131 to 140

PART 3: Timing and transition provisions in the draft capex IM determination

Introduction to Part 3

B150. This Part explains the timing and transition provisions we have included in the revised draft capex IM amendment determination. The timing and transition provisions relate to when and how determination amendments made as a result of the capex IM review come into effect. The decisions described in this paper are our final decisions, and are reflected in the revised draft capex IM determination.³⁵⁴

B151. In this Part we explain:

- B151.1 our approach and what we have tried to achieve with our timing and transition provisions; and
- B151.2 our timing and transitions provisions set out in the revised draft capex IM determination.

³⁵⁴ Draft Transpower Capital Expenditure Input Methodology Amendments Determination 2018 (29 March 2018).

Our approach to timing and transition provisions

B152. As a result of the capex IM review, we will publish:

B152.1 a capex IM amendments determination (**amendments determination**), where we have marked our amendments to the capex IM determination (**principal determination**) as tracked changes, so that users of the capex IM determination can identify all amendments to the principal determination; and

B152.2 a consolidated capex IM determination for reference convenience that consolidates the principal determination and all amendments as at the date of publication.

B153. The amendments determination will come into force on the day after notice is given in the *New Zealand Gazette*, which will be the 'commencement date'.

B154. However, s 53ZB does not allow price-quality paths to be reopened during a regulatory period on the grounds of an IM amendment. Therefore, although the amendments determination will come into force immediately, not all amendments will apply immediately to Transpower.

B155. Key areas where the amendments will not apply are in relation to major capex projects approved prior to the commencement date and the base capex processes during the regulatory period that will continue to apply in relation to RCP2.

Our timing and transition provisions

B156. Our timing and transition provisions have therefore been drafted to allow our capex IM amendments to take effect:

B156.1 for base capex and listed projects, from the next regulatory period following the commencement date (ie, from 1 April 2020);³⁵⁵

B156.2 for major capex that is approved after the commencement date:

B156.2.1 for process changes that would not reopen the price path in the current regulatory period, immediately; and

B156.2.2 for any changes that would reopen the price path, from the next regulatory period following the commencement date (ie, from 1 April 2020); and

B156.3 for major capex that was approved prior to the commencement date, the relevant provisions of the existing capex IM will continue to apply into the next regulatory period.

³⁵⁵ This aligns with Transpower's pricing year which will commence on 1 April 2020.

Consequential changes to the Transpower Information Disclosure Determination

- B157. Some of the amendments we have decided to make to the capex IM will also require us to amend the Transpower information disclosure determination. This is because some of the capex IM calculations rely on information disclosed under the ID requirements and elements of the ID requirements draw on the capex IM.
- B158. We also anticipate requiring Transpower to disclose its calculations for the new adjustments in its information disclosures. We will therefore consider amending Transpower's current information disclosure requirements to incorporate disclosures for the new adjustments.
- B159. As the changes to the incentive adjustments in the capex IM will apply from RCP3, we anticipate consulting on amending Transpower's information disclosure determination before 1 April 2020.