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Transpower's Upper South Island (USI) major capex project proposal

Draft decision - Reasons paper

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Contents

Executive summary

X1 This paper sets out our review of, and draft decision on, Transpower New Zealand Limited's (**Transpower**) Upper South Island Stage 1 major capital project (**USI Stage 1 MCP**) proposal.[1]

Transpower is seeking approval to enhance the Upper South Island regional grid to ensure that a secure and reliable supply of electricity is maintained

X2 Transpower is seeking approval to invest $193.0 million ($ nominal)[2] and a $7.0 million ($ 2025) fund for a development non-transmission solution (**NTS**) to address demand growth in the USI region.[3]

X3 The USI Stage 1 MCP proposes to enhance existing transmission assets as well as adding new assets; specifically, to thermally uprate selected existing 220kV (**kilovolt**) circuits, build new switching stations at Rangitata and Orari, and to install shunt capacitors.

X4 The proposed expenditure stems from population driven demand growth in the Upper South Island region, exacerbated by a number of forecast step load increases in the region, leading to transmission capacity issues.[4]

X5 Transpower consulted on and updated the Ministry for Business, Innovation & Employment (**MBIE**) demand scenarios it used in the Net Zero Grid Pathways (**NZGP**) Stage 1 project, to derive peak and energy USI regional demand forecasts. Transpower did this after working closely with local distribution network companies, and companies that were likely to electrify their process load (such as Fonterra) to include known factors that were specific to the regional demand growth.

Our decision is to approve Transpower's USI Stage 1 MCP

X6 Following our review, our draft decision is to approve the USI Stage 1 MCP proposal. Transpower has demonstrated that the proposed investment provides the highest electricity net market benefit when compared to the investment options considered and is consistent with the requirements of the Transpower Capital Expenditure Input Methodology (**Capex IM**).

X7 We are satisfied that Transpower delivering the USI Stage 1 MCP project will promote the purpose of Part 4 of the Commerce Act 1986 (the **Act**). Our draft decision to approve the USI Stage 1 MCP proposal will:

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1 The USI Stage 1 MCP process, proposal and decision documents are available here.

2 All dollar values in this paper are expressed in 2025 $ values, unless expressed in $ nominal values, in which case this will be indicated with "($ nominal)".

3 *Transpower NZ Ltd*, USI Stage 2 MCP Overview document, Table 1 and 2, pp.5-6, available here.

4 *Transpower NZ Ltd*, USI Stage 2 MCP Overview document, Section 2.2, p.9, available here.

X7.1 provide Transpower with incentives to invest in enhancing the grid into the Upper South Island region; and

X7.2 ensure there is sufficient transmission capacity for secure supply of power to meet the forecast demand, as a result of organic growth and step-load changes until Stage 2 is required "depending on how demand and system needs evolve over time".[5]

Our major capex allowance, exempt major capex and incentive rate draft decision

X8 In reaching our draft decision to approve Transpower's proposal, the Capex IM requires us to determine the:[6]

X8.1 major capex allowance;[7]

X8.2 exempt major capex;[8] and

X8.3 major capex incentive rate.[9]

X9 Our USI Stage 1 MCP draft decision is to:

X9.1 set a major capex allowance (**MCA**) of $200.0 million ($ nominal), comprised of $193.0 million ($ nominal) for transmission asset investments and $7.0 million ($ 2025) for a development non-transmission solution (**NTS**) which will allow a minimum one-year transmission investment deferral;

X9.2 treat the capital cost contingency risk component of the MCA, and the development NTS recoverable cost component, as exempt major capex, equal to $13.7 million ($ nominal); and

X9.3 set a reduced major capex incentive rate of 7.5% that will apply to all major capex that is not exempt major capex, because we are not satisfied that Transpower's project scoping and cost estimation processes are sufficiently reliable to set a default incentive rate of 15%.

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5 *Transpower NZ Ltd*, USI Stage 2 MCP Overview document, Section 5, p.16, available here.

6 Transpower Capital Expenditure Input Methodologies [2012] NZCC 2 (**Capex IM**), clause 3.3.5(7) and Schedule C.

7 Under Capex IM, clause 1.1.5(2), 'major capex allowance' means the amount of major capex we approve in relation to an approved MCP.

8 Under Capex IM, clause 1.1.5(2), 'exempt major capex' means the amount of the MCA to which the major capex incentive rate does not apply which may be expressed by reference to a category of expenditure within the MCP, as we determine under clause 3.3.5(7) of Capex IM.

9 Under Capex IM, clause 1.1.5(2), 'major capex incentive rate' means 15% or an alternative rate we specify in respect of an approved MCP.

Development NTS funding

X10 Transpower has sought funding for a development NTS that would enable a single year of transmission deferral as a minimum. It is the second time Transpower will engage with NTS providers to develop an NTS, rather than previous MCPs where NTSs have only been considered if they were able to provide the NTS service immediately.

X11 The USI Stage 1 MCP NTS funding will be for a maximum recoverable cost of $7.0 million ($ 2025) for deferral of proposed transmission investments for one year.[10]

X12 Once the USI Stage 1 MCP is approved, Transpower will implement a two-stage Request for Proposal (**RFP**) process. The first stage will be "aimed at enabling NTS providers to build capacity" and in the second stage "support contract/s would be offered closer to the commissioning date and aimed to deliver real-time operational responses."[11]

X13 We agree with Transpower's development NTS proposal, and that the proposed funding envelope of $7.0 million for a single year of transmission investment deferral is reasonable. We note that additional deferral may be possible if this proves to be economic. In this case Transpower would need to seek an MCP outputs amendment for additional NTS funding.

Next steps

X14 We invite you to provide your written views on our draft decision within the time frames set out below;

X14.1 submissions are due by 5pm, 17 February 2026; and

X14.2 cross-submission on matters raised in the submissions by other parties are due by 5pm, 3 March 2026.

[10] The $7.0 million ($ 2025) will be recoverable by Transpower as a maximum recoverable cost.

[11] *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 8 – Approach to non-transmission solutions, Section 2, p.4, available here.

Chapter 1 Introduction

1.1 The purpose of this paper is to:

1.1.1 explain our draft decision to approve Transpower's Upper South Island Stage 1 major capital project (**USI Stage 1 MCP**) proposal; and

1.1.2 seek submissions from interested parties on our draft decision, which will inform our final decision on whether to approve or decline the application.

Structure of the remainder of this paper

1.2 The body of this paper sets out:

1.2.1 the background to Transpower's USI Stage 1 MCP proposal; and

1.2.2 our draft decision to approve Transpower's USI Stage 1 MCP proposal.

1.3 Attachments A-D set out the decision-making framework, analysis, reasons, and Capex IM criteria underpinning our decision. Specifically:

1.3.1 Attachment A sets out our decision-making framework under the Capex IM, and the evaluation criteria under the Capex IM, comprising general criteria,[12] specific criteria,[13] and the investment test;[14]

1.3.2 Attachment B provides our evaluation of the USI Stage 1 MCP proposal against the Capex IM general criteria;

1.3.3 Attachment C provides our evaluation of the USI Stage 1 MCP proposal against the Capex IM specific criteria; and

1.3.4 Attachment D provides our evaluation of Transpower's application of the Capex IM investment test.

Regulatory approval process to date

1.4 A summary of our regulatory approval process for the USI Stage 1 MCP proposal prior to this decision is as follows:

12 Capex IM, Part 6.
13 Capex IM, Schedule C.
14 Capex IM, Schedule D.

1.4.1 On 5 April 2023, Transpower notified us of its plan to develop a MCP proposal and updated this NOI stating on 23 March 2025 that the USI Stage 1 MCP would be a staged MCP.[15]

1.4.2 From 24 August to 6 October 2023, Transpower consulted with stakeholders on its long-list of options to meet the investment need (**long-list consultation**) and invited information on NTS from interested parties.[16,17]

1.4.3 From 14 February 2025 to 5 May 2025, Transpower consulted on its short-list of investment options (**short-list consultation**).[18]

1.4.4 Transpower then carried out a revised short-list consultation from April - May 2025 following a revision of project costs and estimated cost allocations.[19]

1.4.5 On 20 August 2025, Transpower submitted its proposal to us for our approval.[20]

We seek submissions on our draft decision

1.5 Before making our final decision, we must consult with interested parties and consider their views on our draft decision.[21]

1.6 We seek your written views on:

1.6.1 our draft decision to approve the USI Stage 1 MCP proposal, including our evaluation of the MCP, exempt major capex, and the major capex incentive rate that we propose; and

1.6.2 whether there is any further information we should consider before making our final decision on the USI Stage 1 MCP proposal.

1.7 In reaching our final decision, we will consider submissions and cross-submissions.

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15 *Transpower New Zealand Ltd*, Notice of Intention – Upper South Island Stage 1 MCP – 23 March 2025, as per clause 3.3.1(1) of Capex IM, available here.

16 Under Capex IM, clause 1.1.5(2), 'investment option' means a technically feasible solution, including a NTS, designed to facilitate or meet a specific investment need, other than an option fully funded under a new investment contract.

17 *Transpower New Zealand Ltd*, Upper South Island: Major Capex Proposal long-list consultation, as required by Schedule I of Capex IM, available here.

18 *Transpower New Zealand Ltd*, Upper South Island: Major Capex Proposal short-list consultation, as required by Schedule I3 of Capex IM, available here.

19 *Transpower New Zealand Ltd*, Upper South Island: Major Capex Proposal revised short-list consultation, as required by Schedule I3 of Capex IM, available here.

20 *Transpower New Zealand Ltd*, Application to the Commerce Commission for the Upper South Island Stage 1 MCP, available here.

21 Capex IM, clause 3.3.5(5)(a).

1.8 Submissions should be sent by email to: regulation.branch@comcom.govt.nz, for the attention of Matthew Clark. Please write "Draft decision on Upper South Island Stage 1 major capex project" in the subject line. We prefer responses are provided in a file format suitable for word processing, in addition to PDF file format.

1.9 Except as outlined below, we will publish all submissions and cross-submissions on our website.

Request for confidentiality

1.10 While we discourage requests for non-disclosure of submissions so that all information can be tested in an open and transparent manner, we recognise that there may be cases where parties that make submissions wish to provide information in confidence. We offer the following guidance:

1.10.1 if it is necessary to include confidential material in a submission, the information should be clearly marked, with reasons why that information is confidential;

1.10.2 where commercial sensitivity is asserted, submitters must explain why publication of the information would be likely to unreasonably prejudice their commercial position or that of another person who is the subject of the information;

1.10.3 both confidential and public versions of the submission should be provided; and

1.10.4 the responsibility for ensuring that confidential information is not included in a public version of a submission rests entirely with the party making the submission.

1.11 We request that you provide multiple versions of your submission if it contains confidential information or if you wish for the published electronic copies to be 'locked'. This is because we intend to publish all submissions on our website. Where relevant, please provide both an 'unlocked' electronic copy of your submission, and a clearly labelled 'public version'.

Chapter 2 Overview and background

2.1 In this chapter we provide background on Transpower's USI Stage 1 major capex project proposal (**the Proposal**), and outline:

2.1.1 what major capex projects are under the Capex IM; and

2.1.2 the content of and background to the Proposal.

Major capex projects under the Capex IM - Major capex projects

2.2 A 'major capex project' is defined in the Capex IM to mean a project of major capex undertaken to address or enable a specific investment need to be met, which may be either, or both, a transmission investment or NTS.[22]

2.3 Major capex covers capital expenditure for large individual transmission grid enhancement projects that, given their nature and magnitude, warrant our individual scrutiny and public consultation.[23] Specifically, 'major capex' means expenditure that is:[24]

2.3.1 incurred to meet the grid reliability standards (**GRS**) or provide a 'net electricity market benefit';[25]

2.3.2 forecast to have an aggregate capital cost exceeding the base capex threshold of $20 million;[26]

2.3.3 not incurred in relation to asset replacement, asset refurbishment, business support or information system, and technology assets; and

2.3.4 not funded under a new investment contract.

2.4 Transpower is required to submit a major capex project proposal to us when it seeks approval for a major capex project.[27]

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22 Capex IM, clause 1.1.5(2).

23 *Commerce Commission*, Transpower Capex Input Methodology Review – Decisions and reasons (29 March 2018) para 54, available here.

24 Capex IM, clause 1.1.5(2).

25 Capex IM, clause 1.1.5(2), the GRS are as defined under Schedule 12.2 under the Electricity Industry Participation Code 2010 (**Code**).

26 From 1 April 2025, the revised base capex threshold is $30 million. Since the MCP was first notified (5 April 2023), prior to the revised capex threshold coming into effect, the forecast capex must exceed $20 million to be classified as major capex.

27 Capex IM, clause 3.3.3(2), and the definitions of 'major capex' and 'base capex threshold' under clause 1.1.5(2). Note that in the 2023 IM Review we amended the base capex threshold to $30 million which took effect on 1 April 2025.

2.5 The Capex IM also sets out the information that Transpower needs to provide in the MCP, and the associated certification of the information it provides.[28] The Chief Executive Officer (**CEO**) of Transpower must certify that the information provided accurately represents Transpower's operations. The CEO certification must also state the proposed investment was approved according to Transpower's director and management approval policies.[29]

2.6 Transpower may submit an MCP to us at any time during a regulatory period.[30]

What happens if we approve a project

2.7 If we approve a project, Transpower may, after commissioning the relevant assets, include the actual costs of the assets in its regulatory asset base.[31] Transpower may then recover those costs under its individual price-quality path (**IPP**), as transmission charges allocated to its customers, according to the transmission pricing methodology (**TPM**).[32,33]

2.8 Transpower provided a table of estimated increases in transmission charges for each customer, from the expenditure relating to the Proposal.[34,35]

Background to the USI Stage 1 MCP proposal

2.9 The USI Stage 1 MCP proposes to enhance existing transmission assets as well as adding new assets; specifically, to thermally uprate selected existing 220kV (kilovolt) circuits, build new switching stations at Rangitata and Orari, and to install shunt capacitors.[36]

2.10 The proposed expenditure stems from population driven demand growth in the Upper South Island region, exacerbated by a number of forecast step load increases in the region, leading to transmission capacity issues.

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28 Capex IM, clause 7.4.1 and Schedule G.

29 Capex IM, clause 9.2.1.

30 Capex IM, clause 9.2.1.

31 *Commerce Commission*, Transpower Input Methodologies Determination 2010 [2012] NZCC 17, clause 2.2.3(2)(f)**.**

32 *Commerce Commission*, 2020-2025 Transpower individual price-quality path (RCP3) [2019] NZCC 19, IPP Determination (**IPP**) clause 8 available here.

33 The TPM is the methodology by which Transpower prices its transmission services developed in accordance with subpart 4 of Part 12 of the Code and specified in Schedule 12.4 of the Code.

34 Capex IM, clause 7.5.1(1)(c).

35 *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 9 – Indicative Pricing Impacts, available here.

36 *Transpower NZ Ltd*, USI Stage 2 MCP Overview document, Section 2.2, p.9, available here.

2.11 Transpower estimates that with "insufficient local generation in the USI region, increasing demand will result in greater reliance on the 220 kV transmission lines from the south, leading to binding capacity constraints" and that based on its "Environmental (prudent) demand forecasts, the Ashburton–Timaru–Twizel circuits' thermal capacity will maintain N-1 security through winter 2028."[37]

2.12 Transpower notes that voltage stability is also an ongoing challenge in the region because "power must be transmitted over long distances from the Waitaki Valley to Christchurch and further north to the top of the South Island" and that voltage must be maintained within an acceptable range.

2.13 Transpower further note that "investigations indicate that based on our prudent demand forecast, voltage stability constraints will begin to limit growth by winter 2028. Beyond 2028, as demand continues to increase, additional constraints are expected to emerge."[38]

2.14 Transpower is seeking an MCA of $200 million ($ nominal) for a range of transmission investments, such as transmission line thermal upgrades, new switching stations and shunt capacitors. Work will commence as soon as funding is approved, with a forecast commissioning date of 31 December 2030 for the final investment in the proposal.[39]

2.15 As part of that MCA, Transpower is also seeking maximum recoverable cost funding of $7.0 million ($ 2025), for a development NTS to enable a single year of transmission investment deferral.[40]

2.16 Figure 2.1 shows the map of the transmission infrastructure supplying the Upper South Island region and the highlighted area represents the USI Stage 1 MCP proposal.[41]

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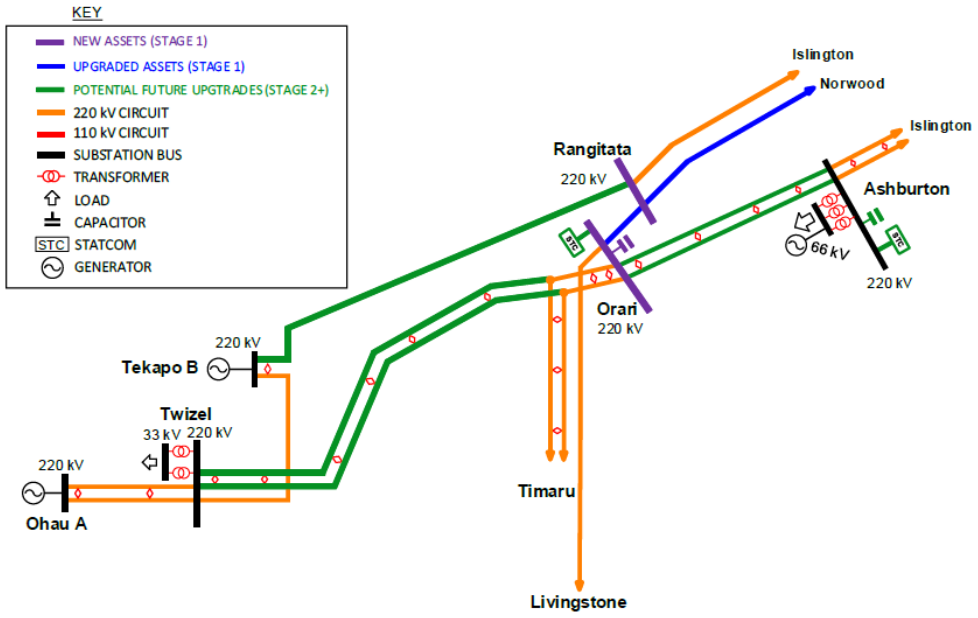
37 *Transpower NZ Ltd*, USI Stage 2 MCP Overview document, Section 2.3, p.12, available here.
38 *Transpower NZ Ltd*, USI Stage 2 MCP Overview document, Section 1, p.3, available here.
39 *Transpower NZ Ltd*, USI Stage 2 MCP Overview document, Table 2, p.5, available here.
40 *Transpower NZ Ltd*, USI Stage 2 MCP Overview document, Table 1 and 2, pp.5-6, available here.
41 *Transpower NZ Ltd*, USI Stage 1 MCP Overview document, p.8, available here.

Figure 2.1 Proposed investments in USI Stage 1 MCP and modelled Stage 2 projects[42]



2.17 Table 2.1 sets out the investment options Transpower considered when it applied the Capex IM investment test. The proposed investment in the USI Stage 1 MCP is Option 2, highlighted in Table 2.1.

2.18 The Option 2 Stage 1 investments only include the switching stations at Orari and Rangitata and associated line turn-ins, the thermal upgrades of the Norwood–Rangitata and Orari–Rangitata circuits, the Orari capacitor banks, the automatic over-voltage and shunt reactor switching scheme and investigation costs. The capital cost of the Stage 1 investments is $167.0 million (real $ 2025)

42 *Transpower NZ Ltd*, USI Stage 2 MCP Overview document, Figure 4, p.17, available here.

Table 2.1 Present value of net benefits, total project capital costs and description of the investment options considered

Option	Project cost ($ million in 2025 prices)[43]	Net benefit ($ million in 2025 prices)[44]	Investment description[45]
Option 1	748.6	-273.9	• Switching station at Orari. • Lines turn ins to switching stations. • Thermal upgrades of the NWD-ORI-1 circuit to 90°C. • 100 Mvar shunt capacitor banks at Orari 220 kV. • AOVCS. • 150 Mvar STATCOM (STC) at Ashburton 220 kV. • Thermal upgrades of the OPI-TWZ circuit to 90°C. • New ISL-TWZ line. • Investigation cost.
Option 2	269.5	7.8	• Switching station at Orari. • Switching station at Rangitata. • Lines turn ins to switching stations. • Thermal upgrades of the Norwood–Rangitata circuit to 90°C and Orari–Rangitata circuit to 100°C. • 2 x 75 Mvar shunt capacitor banks at Orari 220 kV. • AOVCS. • Thermal upgrades of the OPI-TWZ circuit to 90°C. • 150 Mvar STC at Ashburton 220 kV. • Thermal upgrades of the RTA-TKB-1 circuit to 90°C. • 100 Mvar shunt capacitor banks at Ashburton 220 kV. • Thermal upgrades of the ASB-ORI circuit to 90°C. • 150 Mvar STC at Orari 220 kV. • Investigation cost.
Option 3	838.8	-350.1	• 150 Mvar STC at Ashburton 220 kV. • Thermal upgrades of the OPI-TWZ circuit to 90°C. • Thermal upgrades of the LIV-NWD circuit to 90°C. • New ISL-TWZ line. • 150 Mvar STC at Ashburton 220 kV. • Investigation cost.

[43] *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 4 – Application of the investment test, Table 5, p.10, available here.

[44] *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 4 – Application of the investment test, Table 7, p.11, available here.

[45] *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 4 – Application of the investment test, Tables 2-4, pp.7-9, available here.

Chapter 3 Our draft decision is to approve Transpower's proposal

3.1 This chapter sets out our draft decision to approve Transpower's USI Stage 1 MCP proposal.

3.2 In approving Transpower's proposal, we evaluated and determined the:[46]

3.2.1 major capex allowance (**MCA**);

3.2.2 exempt major capex; and

3.2.3 major capex incentive rate.

3.3 We also evaluated the following components proposed by Transpower:[47]

3.3.1 the major capex project outputs;

3.3.2 the approval expiry date;

3.3.3 the commissioning date assumption; and

3.3.4 maximum recoverable costs for Transpower's proposed development NTS.

3.4 This section summarises our evaluation and determination of these components. The Capex IM criteria applicable to, and the reasons behind our draft decision are set out in more detail in Attachments B to D.

We are satisfied that the project meets the evaluation criteria

3.5 Having completed our evaluation, our draft decision is to approve Transpower's USI Stage 1 MCP proposal. We are satisfied that the proposal meets the:

3.5.1 general Capex IM evaluation criteria as described in Attachment B;

3.5.2 specific Capex IM criteria as described in Attachment C; and

3.5.3 Capex IM investment test as described in Attachment D.

3.6 We are satisfied the information, assumptions, and supporting analysis provided by Transpower has satisfied the Capex IM general and specific evaluation criteria, and that the proposal meets the requirements of the investment test.

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46 Capex IM, clause 3.3.5(7) and Schedule C.

47 Capex IM, clause 3.3.5(6) and Schedule C.

3.7 We agree that Transpower needs to invest in the region to meet the forecast demand increase.

3.8 Transpower has investigated a wide range of potential investment options to meet the investment need, consulted with customers and identified the option that delivers the highest expected electricity net market benefit (noting that this is an investment in the core grid to meet the grid reliability standards so can be the proposed investment with the least net market cost when compared to the investment options considered).

3.9 Transpower has also sought funding that will enable it to seek out potential NTS options that will allow it to defer investment and manage delivery risk of its proposed transmission investments. We agree with the NTS approach Transpower has taken.

3.10 We consider the proposed investment will meet the Part 4 purpose as it will enable secure electricity supply into the USI region to be maintained and provide a long-term benefit to consumers.

3.11 In reaching this conclusion, and to support our draft decision, we carried out investigations in a number of key areas which we expand on in Attachments B to D. We summarise these investigations and our conclusions below.

The investment need date

3.12 As we reviewed the proposal we were concerned that Transpower had proposed investments that were ahead of a reasonable need date. While some submitters to Transpower's short-list consultation agreed with the USI MCP proposal demand forecast modelling, others noted demand and generation developments in the region may affect the investment need date and need.[48]

3.13 We also identified that the most recent actual demand in the USI region was not reflective of Transpower's proposal forecast. We tested Transpower on its demand assumptions because 2023 and 2024 actual demand was significantly less than the forecast demand Transpower had assumed.

3.14 Transpower argued that, while it is true that the 2024 demand was less than it had forecast, this was largely due to forecast step load decisions being delayed rather than cancelled, and that these step load changes are still very likely in the near term.

[48] *Transpower NZ Ltd*, USI Stage 1 MCP Summary of Submissions, available here.

3.15 In its proposal, Transpower modified its investment need date to 2029 due a softening of non-step load change growth (mainly due to the 2024 EDGS) but has maintained that forecast step load changes in the region are still likely. We agree with Transpower's view about the likelihood of these step load changes.

Transpower's generation development scenarios

3.16 In its short-list consultation submission Orion noted that there were significant generation developments in the USI region that could defer the need for the investment. Orion noted that a number of solar and battery storage systems were likely in the near future.[49]

3.17 We tested how Transpower had accounted for the most recent generation development information in its proposal, and whether it had taken account of the Orion submission information.

3.18 In the proposal Transpower assessed the impact of the known and likely battery and solar generation on the investment need date by modelling energy contributions during the summer and winter peak demand periods.[50]

3.19 Transpower concluded that while the Canterbury region benefits from strong solar irradiance, making it suited for solar generation, this did not change the winter peak investment need date. Following our review, we agree that Transpower's generation scenario analysis and assumptions are reasonable.

The use of the 2019 EDGS

3.20 We wanted to understand why Transpower was updating the 2019 EDGS forecast produced by MBIE and had not used the most recent 2024 EDGS. We tested how the 2024 EDGS compared as this was the most up to date energy forecast.

3.21 Transpower carried out further analysis demonstrating that using the most recent EDGS shifted the first investment need date by at least a year (from 2028 to 2029 depending on the driver of the constraint).[51]

3.22 We expect that, in general, Transpower should be able to judge that new demand information has come to light that shifts investment need dates and leverage off its existing analysis to support its proposals.

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49 *Orion*, USI Stage 1 MCP short-list consultation submission, available here.

50 *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 10 – Power systems analysis, Section 7, p.25, available here.

51 Transpower response to RFI005 – 2024 EDGS forecast comparison and commissioning date confirmation.

3.23 If the 2024 EDGS had predicted higher demand, we would expect Transpower to revise its need date and bring forward investment. In this case Transpower has revised its first investment need date to 2029 when compared to the short-list material need date of 2028. We agree with Transpower's revised need date and the assumptions it has made in this case.

The transmission line under-clearance issue and USI MCP project costs

3.24 During the development of this MCP, Transpower carried out two short-list consultations. Transpower explain that the second short-list consultation was necessary because "we further refined our cost estimates, incorporating a more detailed understanding of the activities, resources and scope of work required" resulting in "cost increases across all short list options".[52]

3.25 There are two key aspects to this cost refinement. The first is that Transpower did not factor in transmission line turn-in costs in its original short-list consultation material. Line turn-in costs are costs associated with the existing transmission lines having to be reconfigured to connect into the new switching stations. Factoring these costs has increased total project cost by $31.9 million ($2025).[53]

3.26 Orion was critical of Transpower's internal planning processes noting that "the additional $30.2m project cost for the Orari and Rangitata line turn-ins represents a concerning oversight that should have been identified by Transpower staff in previous consultations".[54]

3.27 The second cost refinement was due to Transpower identifying that, following the first short-list consultation, there were "reduced ground to conductor clearances (under clearance) that will need to be remediated or mitigated".[55]

3.28 In its revised short-list consultation submission Orion sought additional information on how Transpower was planning to deal with transmission line under-clearance violations, noting that a significant portion of the revised short-list consultation cost increase was due to costs related to addressing these.[56]

3.29 Following the original short-list consultation Transpower engineering carried out a LIDAR survey of the lines it planned to thermally uprate and identified a range of under-clearance violations. Some of these are existing violations and some will be attributable to the plans to thermally uprate the two transmission circuits in the proposal.

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52 *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 7 – Stakeholder consultation, p.6, available here.
53 *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 5 – Costing, Table 6, p.11, available here.
54 *Orion*, USI Stage 1 MCP revised short-list consultation submission, p.5, available here.
55 *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 5 – Costing, Section 3.1, p.7, available here.
56 *Orion*, USI Stage 1 MCP revised short-list consultation submission, p.4, available here.

3.30 Since its revised short-list consultation, Transpower has developed internal policies to address how it approaches existing and new transmission line under-clearance violations and who should fund these violations. This policy forms part of the proposal and is set out in Section 3.1 of the USI Stage 1 MCP Costing report.[57]

3.31 Following the revised short-list consultation, and prior to the proposal being submitted, Commission staff met numerous times with Transpower staff to test how its proposed transmission line under-clearance violation policy would operate. We were concerned that existing and new violations, caused by third parties, would be subsidised by other consumers, a concern raised by Orion.

3.32 Following our review, we consider that Transpower's under-clearance cost allocation approach is reasonable, namely that:

3.32.1 new and existing clearance violations not driven by landowner action, and due to transmission upgrades, are MCP proposal costs;

3.32.2 existing violations not driven by landowner actions are an opex cost that Transpower bears; and

3.32.3 existing violations where it is unclear whether landowner actions are the cause may be an opex cost or landowner cost depending on the situation.

3.33 While Transpower concedes that there is still some uncertainty about the precise number of clearance violations, and that these will only be fully known following site visits, remediation cost estimates based on LIDAR survey information is a reasonable approach at this stage of the project.

How Transpower addressed the short-list consultation submissions

3.34 We have reviewed all the submissions to Transpower's short-list and revised short-list consultation process and how Transpower has addressed the key points raised. Following our review and after posing additional questions using the RFI process we are satisfied that Transpower has addressed all the key points raised.

Major capex allowance

3.35 The MCA is the allowance for the USI Stage 1 MCP proposal and is based on the base cost estimate, plus the 50th percentile of uncertainties.

[57] *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 5 – Costing, Table 6, p.11, available here.

3.36 Transpower used its Transpower Enterprise Estimating System (**TEES**) cost estimation framework, to estimate the USI Stage 1 MCP and modelled project capital costs. TEES includes an up-to-date database of assembly costs which is the source of the unit costs Transpower uses in its costing methodology.

3.37 We tested Transpower's costs and cost estimation processes and are satisfied these are reasonable.

3.38 While Transpower has sought maximum recoverable cost funding of $7.0 million ($ 2025) for the development NTS, this amount should be included in the MCA Transpower has sought approval for. This is consistent with the definition of major capex in the Capex IM and Transpower IM.[58]

3.39 Our draft decision is to set the MCA for the USI Stage 1 MCP which is set out in Table 3.1.

Table 3.1 Major Capex Allowance for the USI Stage 1 MCP proposal ($m)

P50 estimate ($ 2025)	Inflation factors ($ nominal)	Financing costs ($ nominal)	NTS costs ($ 2025)	Major capex allowance ($ nominal)
167.0	12.2	13.9	7.0	200.0

Major capex incentive rate

3.40 Our draft decision is to set the major capex incentive rate for the USI Stage 1 MCP at 7.5%.

3.41 The major capex incentive rate we set determines the reward (or penalty) that Transpower receives (or bears), depending on how the actual cost of delivering a major capex project compares to the project's MCA.[59]

3.42 The Capex IM defines the major capex incentive rate at 15% – the default rate – or an alternative rate we specify after considering a request from Transpower. In its proposal, Transpower proposed that the default MCP incentive rate of 15% apply to the USI Stage 1 MCP.[60]

3.43 Transpower has noted that aspects of the project may still be uncertain, particularly the transmission line under-clearances. This may result in revised designs and cost changes.

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58 Capex IM, clause 1.1.5(2) and Transpower Input Methodologies [2012] NZCC 17, clause 3.1.3.
59 Capex IM, clause 3.3.5(7)(b).
60 *Transpower NZ Ltd*, USI Stage 1 MCP Overview document, Table 2, p.5, available here.

3.44 We are not convinced that the USI proposal project costs are sufficiently certain to provide confidence that the incentive scheme will operate as intended - to drive project cost efficiencies, particularly if these costs may change as signalled by Transpower.

3.45 Additionally, during our review, we also presented Transpower with our summary of recent major project forecast costs through to delivery (see Attachment C Table C3).

3.46 This summary analysis shows that the total project cost underspend of $114.8 million resulted in Transpower receiving significant incentive reward payments after the projects were delivered. If the forecast costs for these projects were P50 amounts, we would have expected incentive rewards and penalties to balance out over time.

3.47 While Transpower responded that it had made recent improvements in its cost estimation approach, since the Table C3 information was disclosed, it did not adequately address the question about the historical major project cost variances.

3.48 For this reason, our draft decision is to set an alternate incentive rate of 7.5% in this proposal to minimise the consumer impact of an incentive reward, should the USI Stage 1 MCP follow the trend of recent major project delivered costs set out in Table C3.

Exempt major capex

3.49 Exempt major capex is the part of the MCA to which the major capex incentive rate does not apply. It is typically set for portions of the MCA that reflect uncertainties that are outside the control of Transpower. Transpower has proposed there not be any exempt major capex.

3.50 Transpower has characterised the project cost estimate contingency as a risk adjustment to "account for cost uncertainty not represented in our lower and upper bound estimates."[61]

3.51 In the proposal Transpower has not proposed any exempt major capex. In previous MCP decisions we have set exempt major capex amounts that are linked to the project cost contingency amounts. Our reasoning is that Transpower should not be rewarded through incentives for saving cost contingency amounts or penalised for spending them.

3.52 In this MCP the project cost contingent amounts are:[62]

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61 *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 5 – Costing, p.3, available here.

62 *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 5 – Costing, Tables 2-4, pp.5-7, available here.

3.52.1 $5.2 million ($ nominal) for the Orari and Rangitata switching stations;

3.52.2 $7.2 million ($ nominal) for line turn-ins to the switching stations and thermal upgrades; and

3.52.3 $1.3 million ($ nominal) for shunt capacitors.

3.53 The total project cost contingent amount is $13.7 million ($ nominal) which is 7.1% of the total project cost estimate of $193.0 million ($ nominal). In line with previous MCPs we consider that the USI Stage 1 MCP proposal cost contingent amount should be exempt major capex.

3.54 Additionally, we have also included the proposed $7.0 million ($ 2025) recoverable cost component of the MCA for development NTS funding as exempt major capex. This is because there is uncertainty about whether Transpower is able to procure a viable NTS to defer the transmission investment.

3.55 We consider project cost risks have a reasonable possibility of materialising and have therefore included them in the MCA. This allows Transpower to recover these costs should the risks materialise.

3.56 This approach is consistent with how we treat uncertainties relating to foreign exchange, and inflation forecast error as mentioned under 'Exchange rate and inflation assumptions' in paragraphs C115 and C116 in Attachment C.

3.57 Our draft decision, under clause 3.3.5(7)(c) of the Capex IM, is to treat:

3.57.1 the project cost risk component of the MCA as exempt major capex, equal to $13.7 million in $ nominal prices; and

3.57.2 the recoverable cost component of the MCA as exempt major capex, equal to $7.0 million in $ nominal prices.

3.58 This means the capital cost uncertainties up to $13.7 million, and $7.0 million recoverable costs for the development NTS, will not be subject to the incentive mechanism.

3.59 This approach is also consistent with how we treat uncertainties relating to foreign exchange and inflation forecast error.

Incentive rate application

3.60 In setting the major capex incentive rate (and any exempt major capex), the incentive scheme will work as follows.[63]

[63] Capex IM, Schedule B.

3.61 If the actual cost of delivering the USI Stage 1 MCP is:

3.61.1 less than the MCA, minus exempt major capex, then applying the major capex incentive rate, Transpower will be entitled to a reward;

3.61.2 between the MCA and the MCA minus exempt major capex, then there is no reward or penalty;

3.61.3 more than the MCA, then applying the major capex incentive rate, Transpower will be penalised; and

3.61.4 exempt major capex is the portion of the MCA amount where the major capex incentive rate does not apply, and is typically set for portions of the MCA that reflect uncertainties beyond the control of Transpower.

3.62 In summary, the scheme allows for that portion of the MCA excluding the uncertainties. This removes both the reward and penalty on uncertainties since these are beyond Transpower's reasonable control.

Major capex project outputs for the USI Stage 1 MCP

3.63 The major capex project outputs are the enhancement of the USI transmission grid, namely to:[64]

3.63.1 construct two switching stations near Orari and Rangitata on existing Transpower-owned land to connect the four Christchurch–Waitaki Valley circuits halfway between the Waitaki Valley and Christchurch

3.63.2 thermally upgrading the Orari–Rangitata circuit to 100°C and the Norwood–Rangitata circuit to 90°C;

3.63.3 install 2 x 75 MVAr shunt capacitor banks at the Orari switching station;

3.63.4 install automatic over-voltage shunt capacitor and shunt reactor switching schemes;

3.63.5 install transmission line turn ins to the switching stations; and

3.63.6 fund a development NTS that has yet to be fully scoped.

Commissioning date assumption for the USI Stage 1 MCP

3.64 The commissioning date assumption is the date by which Transpower assumes the last asset of the USI Stage 1 MCP (if approved) will be commissioned.[65]

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64 *Transpower NZ Ltd*, USI Stage 1 MCP Overview document, Table 2, p.5, available here.

65 Capex IM, clause 3.3.5(6)(e) and C1(3)(h). Definition of 'commissioning date assumption' under clause 1.1.5(2) of the Capex IM.

3.65 Transpower plans to deliver the USI Stage 1 MCP as several work packages with different forecast commissioning dates.

3.66 Transpower has proposed a commissioning date for all assets by 31 December 2030.[66] We have evaluated Transpower's proposal and accept the proposed commissioning date assumption.

Approval expiry date for the USI Stage 1 MCP

3.67 The approval expiry date is the date beyond which Transpower cannot recover the costs of any major capex project assets, and any MCP outputs it has not yet commissioned by that date.[67]

3.68 We have evaluated the approval expiry date proposed by Transpower.[68] Following our review of the proposed investments, we consider Transpower can deliver the projects in the proposal by the approval expiry date.

3.69 Our draft decision is to accept that the proposed approval expiry date of 31 December 2040, is reasonable.

Maximum recoverable costs for Transpower's Development NTS

3.70 Transpower has sought funding for a development NTS that would enable a single year of transmission investment deferral as a minimum. This development NTS package is yet to advance to a Grid Support Contract (**GSC**) RFP stage.

3.71 In calculating the value of transmission investment deferral for one year, Transpower has broken down the transmission investment deferral values into 6 investment work streams.[69]

3.72 To calculate the transmission investment deferral values, Transpower has assumed a discount rate of 5%, and presented these values in real terms in 2025 dollars. Transpower has then taken its forecast peak demand and calculated a $/kW value for each transmission investment work stream, based on the capital cost of the work stream and the expected peak load reduction.

3.73 We have reviewed Transpower's approach and the deferral value calculation methodology it applied. We consider these are reasonable and the use of a 5% discount rate is appropriate.

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66 *Transpower NZ Ltd*, USI Stage 1 MCP Overview document, Table 2, p.5, available here.

67 Capex IM, clauses 3.3.5(6), C1(3) and C4. Under clause 3.3.6(1)(d) of the Capex IM, Transpower may apply to us to amend the approved approval expiry date.

68 *Transpower NZ Ltd*, USI Stage 1 MCP Overview document, Table 2, p.5, available here.

69 *Transpower NZ Ltd*, USI Stage 1 MCP Attachment 8 – Approach to non-transmission solutions, p.5, available here.

3.74 We have concluded that a maximum recoverable cost of $7.0 million ($ 2025) for a development NTS to enable a one-year transmission investment deferral, is reasonable. Our draft decision is to approve the maximum recoverable cost of $7.0 million ($ 2025) for this purpose.

3.75 While the development NTS framework Transpower proposed is to fund a single year of transmission investment deferral, this deferral is a minimum. The potential for NTS in the USI region appears significant, according to submitters during the development of Transpower's proposal, so additional transmission investment deferral may be possible. We consider the development NTS arrangement as proposed, and approved in this draft decision, allows this.

3.76 If it transpires that additional transmission investment deferral beyond a single year is likely, then Transpower can seek to amend the USI Stage 1 MCP proposal outputs and the MCA.

3.77 We encourage Transpower to work with local distribution lines companies such as Orion to assist NTS providers. It is likely that NTS providers will seek close cooperation with lines companies to effect investment deferral in their distribution networks.