



11 July 2022

Submissions

Commerce Commission

Wellington

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Process and Issues/Draft Framework submission – Part 4 Input Methodologies Review 2023

Thank you for the opportunity to provide a submission on the 2023 Input Methodologies Review Process and Issues paper. We raise three issues in this submission:

1. The discount rate for Transpower's grid investment test should be set consistent with international norms
2. Indexing should be added to Transpower's RAB to align with other Part 4 industries, and better spread the costs of grid investments over time for consumers.
3. The scope of the RAB should be clarified to not include assets in competitive markets.

Grid Investment Test Discount Rate

Contact Energy agrees with Transpower and the Commerce Commission (the Commission) that Transpower's Capital Expenditure Input Methodology Determination (**Capex IM**) should be reviewed at the same time as other energy IMs.

The review should reduce the standard discount rate of 7% used in the grid investment test.¹ Using a lower standard discount rate would:

- better achieve the purpose statement of the legislation;
- enable more grid investment, thereby promoting the country's decarbonization objectives; and
- be more consistent with international best practice and current Treasury guidance.

The standard discount rate of 7% is used in cost-benefit analysis to assess different investment options. Sensitivity analysis using discount rates of 4% and 10% are required to ensure the robustness of the analysis, with Transpower having the discretion to use a non-standard rate if it has consulted on this. In practice, Transpower is reluctant to use anything other than the standard rate stipulated by the Commerce Commission.

Except for investments proposed to meet the N-1 criterion of the grid reliability standards, only investments that deliver positive net expected electricity market benefits using the standard discount rate and that are robust to sensitivity analysis pass the grid investment test.

The standard discount rate has not been substantively reviewed in over a decade. The Electricity Commission initially adopted the 7% rate in 2004². This rate was retained by the Commerce Commission in 2012 and again in 2018. The 2018 review of the Capex IM dismissed Transpower's

¹ Section D7(3) of the Capex IM.

² Electricity Commission, *Explanatory Paper: Grid Investment Test*, 3 December 2004, available at: <https://www.ea.govt.nz/assets/dms-assets/627GITExplanatoryDocument.pdf>.



suggestion of linking the standard discount rate to the Treasury default rate but it did not look at the merits of 7% rate in any detail.³

A similar review has recently been undertaken in Australia, where it was observed that the standard discount rate of 7% was adopted in at a time of materially higher government bond rates and subsequently became entrenched⁴. This observation may equally apply to New Zealand.

A lower standard discount rate would better achieve the statutory purpose statement

A lower standard discount rate for grid investment tests would better promote the long-term benefit of consumers by ensuring that necessary investments can occur to meet anticipated future demand for electricity.

We agree with the key economic principle outlined in the Framework Paper of asymmetric consequences to consumers of under-investment in the grid. This risk typically relates to under-investment due to the WACC being set too low. However, under-investment can also occur by investments failing to pass the grid investment test in the first place because the standard discount rate is set too high.

The current 7% discount rate under-values the benefits that long-lived transmission assets have on future consumers. Specifically, substations, transformers, and transmissions lines have useful lives of 55 years⁵, and continue to provide benefits to consumers over that entire life. A 7% discount rate means that future benefits are heavily discounted, compared to the upfront costs of investment.

A lower standard discount rate would promote the country's decarbonisation objectives

There is a consensus that electricity will have an outsized role in helping New Zealand meet its decarbonization goals.⁶ Average electricity demand is projected to grow above recent historical trends with peak demand also expected to rise substantially. Meeting this electricity demand will require significant grid investment over time.

³ Commerce Commission, *Transpower Capex IM: Decisions and Reasons*, 29 March 2018, paras 213-217, available at: https://comcom.govt.nz/_data/assets/pdf_file/0033/79926/Transpower-capex-IM-review-Decisions-and-reasons-29-March-2018.PDF.

⁴ Synergies Economic Consulting, *Discount rates for use in cost benefit analysis of AEMO's 2022 Integrated System Plan*, p 7, available at: https://www.synergies.com.au/wp-content/uploads/2021/09/Synergies-Final-Discount-Rate-Report-for-2022-ISP_29-July-2021.pdf.

⁵ Transpower, *Part B – TPM Assumption Book*, section 30, available at: https://www.transpower.co.nz/sites/default/files/uncontrolled_docs/Part%20B%20-%20TPM%20Assumptions%20Book%20-%20Draft%20for%20consultation%20-%20April%202022.pdf.

⁶ Ministry of Business, Innovation & Employment, *Electricity demand and generation scenarios: Scenario and results summary*, July 2019, available at: <https://www.mbie.govt.nz/dmsdocument/5977-electricity-demand-and-generation-scenarios>, Transpower, *NZGP1 Scenarios Update: NZGP1 Scenarios and modelling result for an unconstrained transmission grid*, December 2021, available at: https://www.transpower.co.nz/sites/default/files/uncontrolled_docs/Transpower_NZGP_Scenarios%20Update_Dec2021.pdf. New Zealand Government: *New Zealand's First Emissions Reduction Plan*, June 2022, available at: <https://environment.govt.nz/assets/publications/Aotearoa-New-Zealands-first-emissions-reduction-plan.pdf>.

While there are many ways to discount for long-lived environmental investments⁷ (e.g. adopting a social opportunity cost of capital or a social rate of time preference), the general practice across the OECD has been to use significantly lower discount rates than in the Capex IM. This international practice places greater value on future benefits than what is applied in New Zealand.

A lower standard discount rate is more consistent with international best practice

An initial review of the hurdle rates that apply to transmission grid investments in other comparable jurisdictions (Table 1) indicates that New Zealand’s hurdle rate for transmission investments appears high – notwithstanding the different approaches taken across jurisdictions.

The Treasury has also progressively reduced its guidance on the appropriate discount rate to use for energy infrastructure projects from 8% to 6% to 5% from 2020. Separately, the Treasury endorsed in 2012 a 3% discount rate for assessing alternative petroleum or mining development options (assuming the project was commercially viable at 10%). This 3% discount rate is a proxy for the social rate of time preference.

While many of the individual input assumptions are now outdated, we draw your attention to a 2006 report by Castalia titled Discount Rate for the Grid Investment Test⁸,. Much of the discussion and analysis contained in this report remains, in our view, highly relevant.

Table 1: Discounting guidance in several OECD countries

Country	Discount rate (% short – medium term)
Australia	5.5% ⁹ (pre-tax, real)
United Kingdom	3.5% ¹⁰ (pre-tax, real)
United States	3.7% (depending on source of funding, projects and regulatory analysis)
Norway	3%
Netherlands	3%
New Zealand (Treasury Guidance)	5% ¹¹ (pre-tax, real)
New Zealand (Petroleum ¹² and Mineral Programmes)	3% (pre-tax, real)

⁷ OECD, *Cost-Benefit Analysis and the Environment*, 2018, available at: <https://www.oecd-ilibrary.org/sites/9789264085169-11-en/index.html?itemId=/content/component/9789264085169-11-en>.

⁸ Castalia, *Discount Rate for the Grid Investment Test: Report to Transpower*, August 2006, available at: <https://www.ea.govt.nz/assets/dms-assets/4/456116L-Transpower-Discount-Rate-for-GIT-Report.pdf>.

⁹ Australian Energy Market Operator, *2021 Inputs, Assumptions and Scenarios Report*, available at: <https://aemo.com.au/-/media/files/major-publications/isp/2021/2021-inputs-assumptions-and-scenarios-report.pdf?la=en>.

¹⁰ HM Treasury, *The Green Book: Central Government Guidance on Appraisal and Evaluation*, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063330/Green_Book_2022.pdf.

¹¹ <https://www.treasury.govt.nz/information-and-services/state-sector-leadership/guidance/financial-reporting-policies-and-guidance/discount-rates>.

¹² *Petroleum Programme*, section 8.3(3), available at: <https://www.nzpam.govt.nz/assets/Uploads/our-industry/rules-regulations/petroleum-programme-2013.pdf>.

Our preference would be to use a standard discount rate of 3%. This rate is a proxy for the social rate of time preference. There is precedent for using this rate in New Zealand and it is broadly consistent with the rate used in many OECD countries. We consider this approach would better promote the long-term benefit of consumers by more accurately reflecting the benefits of long-lived grid investments over the life of the assets. It would also be consistent with New Zealand's decarbonisation objectives.

Indexing of Transpower's RAB

Transpower is the only company subject to price-quality regulation by the Commission whose RAB is not indexed. It is past time that this anomaly is resolved.

The lack of indexation of Transpower's RAB has contributed to the large increase in lines costs since 2008. As noted by the Commission this trend is likely to accelerate as the WACC rate increases, and investment in lines services ramps up to meet the anticipated level of demand for electrification. Indexing the RAB would better spread the costs of the grid over the life of the assets, reducing the up-front burden on consumers as we transition into a more electrified economy.

We also note that the arguments for indexing the RAB of the electricity distribution business and Chorus to equally apply to Transpower. In those sectors the Commission has noted:

our current approach to RAB indexation, as provided for in the IMs, is consistent with our policy intent. It delivers real FCM for capital holders collectively, protecting consumers and suppliers from inflation risk.¹³

the approach we have adopted for indexing the RAB is consistent with the economic principle of allocating risks to those best placed to manage them.¹⁴

In the 2016 input methodologies review the Commission decided not to apply indexing to Transpower's RAB in part due to the potential revenue shock for Transpower.¹⁵ This rationale does not hold the same weight in 2022. As noted by the Commission, revenues for lines businesses are likely to sharply increase at the next reset, which will largely offset the revenue impact of indexing the RAB. This change will also help protect consumers from a potential price shock at a time when we need to encourage more electrification, not less.

¹³ Commerce Commission, 20 December 2016, 'Input methodologies review decisions: Topic Paper 1: Form of control and RAB indexation for EDBs, GPBs and Transpower', para 301.

¹⁴ Commerce Commission, 13 October 2020, 'Fibre input methodologies, 'Main final decisions – reasons paper, para 3.337.

¹⁵ *ibid*, para 310.

Clarifying the scope of the RAB

It will be critical that the IM Review carefully considers the role of distributed energy resources (DER) like distributed generation and batteries, and how they are impacting competitive markets. As noted in the commentary to the 2022 Electricity Industry Amendment Bill:

Some industry participants provide monopoly services (such as Transpower and regional distributors). However, these businesses may also be involved in contestable activities such as emerging markets related to distributed energy resources. (Emphasis added)¹⁶

The commentary goes on to note that there is potentially for harm if the monopoly and contestable services are conflated.

The business could potentially leverage its monopolistic market power in the distribution market, for example by offering favourable deals to its affiliate business in the retail market. These practices could limit competition, resulting in worse outcomes for consumers.¹⁷

We recommend that the Commission immediately revive the 'Spotlight' project with the Electricity Authority as a critical input into the IM review. In particular, the Commission must clarify whether DER assets are within the s54C definition of lines services, and can therefore be included in the RAB.

Lines businesses are permitted to adopt DERs under certain conditions set out in the Electricity Industry Act 2010 and the Electricity Industry Participation Code. However, we consider that these assets must sit outside the RAB and the internal transfer price for using these assets should be aligned with the competitive market.

Section 52 states that Part 4 regulation applies to 'markets where there is little or no competition and little or no likelihood of a substantial increase in competition'. As noted by the Economic Development Science and Innovation Select Committee in the quotes above, many DERs are part of 'contestable' markets, and therefore appear outside of the s52 criterion.

Separating DER assets from the monopoly RAB will provide greater transparency to whether the concerns of the Select Committee around 'leveraging market power' are occurring. It will also provide a clear distinction for what 'innovation' costs can be passed on to electricity lines customers. This must not be a backdoor to undercutting market rates for these services.

We also question whether DERs meet the definition of a 'electricity lines services' as defined in s54C. That section explicitly refers to the conveyance of electricity by line. It does not cover contestable ancillary services like distributed generation and batteries.

While we appreciate that DERs may facilitate the efficient operation of lines services, that does not make them lines services themselves. As an analogy tree cutting is also a necessary service to facilitate the efficient operation of lines services, but this is traditionally excluded from the RAB.

¹⁶ Electricity Industry Amendment Bill 2022, As reported from the Economic Development, Science and Innovation Committee.

¹⁷ Ibid.



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Yours sincerely,

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