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COMMERCE COMMISSION NEW ZEALAND
Te Komihana Tauhokohoko

Transpower's performance trends

2015-2024

24 September 2025

Contents

Glossary

Acronym/Abbreviation	Definition
AHI	Asset Health Index
AMMAT	Asset Management Maturity Assessment Tool
Capex	Capital expenditure
HVDC	High Voltage Direct Current
ID	Information disclosure
IPP	Individual price-quality path
Opex	Operating expenditure
PQ	Price-quality regulation
RAB	Regulated asset base
RCP	Regulatory Control Period
ROI	Return on investment
TPM	Transmission Pricing Methodology
WACC	Weighted-average cost of capital

Transpower's performance trends 2015-2024

1. This report provides an overview of Transpower's performance between 2015-2024. It summarises and analyses financial information (revenue and profit), asset conditions, demand levels, and reliability trends. The information summarised in this report is sourced from Transpower's public disclosures under Information Disclosure (ID) regulation.

2. This report is part of our ongoing summary and analysis work and is likely to be updated, refined and/or expanded in future.[1] The report is aimed at helping stakeholders track how Transpower is performing, as it invests to meet growing electricity demand due to electrification driven by decarbonisation. Electricity demand is expected to rise by 50% over the next 25 years.[2] Transmission charges make up about 8–10% of the average power bill.

Key findings

Declining revenue in real terms

3. Transpower's revenue declined in real terms between 2015-2024, with a more sizeable drop after 2020 due to lower financing costs, which reduced allowable revenue under regulatory settings.

Flat overall demand, rising peak demand

4. Total electricity transmission demand showed minimal growth, but peak demand has been rising since 2019—likely driven by electrification due to decarbonisation and changing usage patterns.

Slow asset base growth

5. Transpower's regulatory asset base (**RAB**) grew by only 10% between 2015-2024, reflecting only a few large investments by Transpower over the period. Most capital expenditure was directed toward refurbishment and replacement, rather than grid expansion.

Opex increasing since 2020

6. Operational expenditure (**opex**) was stable until 2020, but has been growing since—in all categories but particularly in insurance and IT costs.

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[1] The Commission, under section 53B(2)(b) of the Commerce Act 1986, has a legal obligation to publish a summary and analysis of disclosed information so that stakeholders can better understand the performance of Transpower.

[2] Ministry of Business Innovation and Employment: *Electricity Demand and Generation Scenarios (EDGS)* (2024).

Variable profitability

7. Transpower earned above-benchmark returns before 2020 due to lower-than-forecast costs. After 2020, returns fell below benchmark levels.

High reliability maintained

8. Transpower maintained high levels of reliability, with only a small number of supply interruptions lasting longer than one minute. Instances where assets were out of service for longer than expected did not result in customer interruptions.

Background

We regulate Transpower

9. Transpower owns and operates the national transmission network. Because Transpower faces no competition, we regulate its monopoly electricity transmission business, so consumers have access to a safe, reliable network at a cost that provides value for money.

10. We require Transpower to disclose publicly information so that interested stakeholders can assess its performance – this form of regulation is referred to as ID regulation. We also set the maximum revenue that Transpower can recover (revenue cap) and the minimum quality standards it has to meet every five years – this form of regulation is referred to as price-quality (**PQ**) regulation.

11. Transpower is subject to an Individual Price-Quality Path (**IPP**). The most recent IPP reset took effect from 1 April 2025.[3]

Transpower's role

12. Transpower owns and operates the national grid.[4] This is the high-voltage transmission network that moves electricity from power stations to cities, towns and some large industrial customers. Transpower owns and operates over 11,000 km of transmission lines, 174 substations and more than 25,000 towers across Aotearoa New Zealand.

13. As shown in the diagram below, electricity is generated from a variety of sources, before being transmitted across the national grid (highlighted in red box), then distributed locally and sold to consumers.

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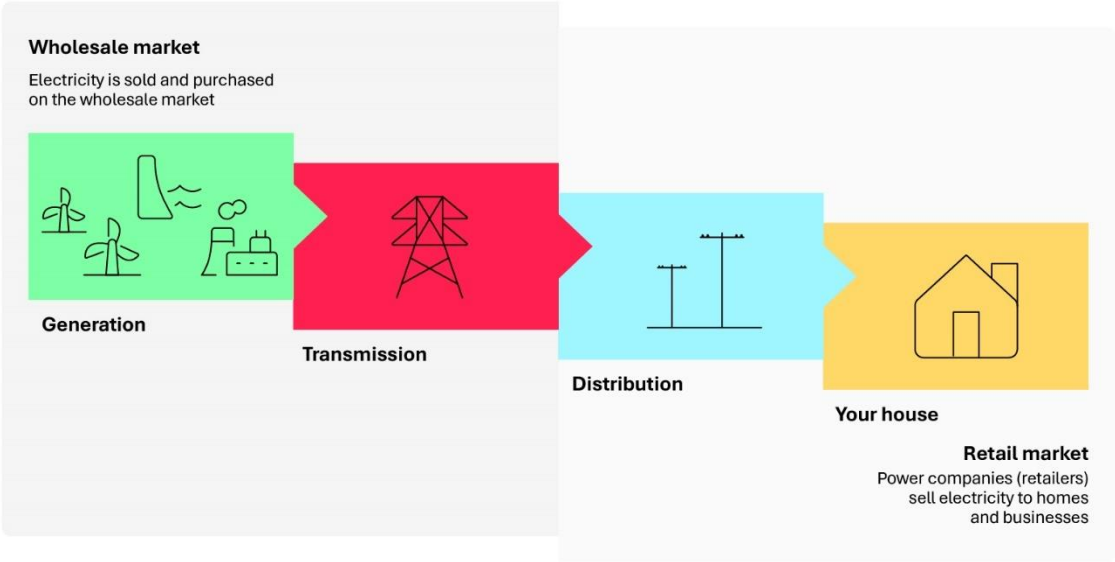
[3] More information on Transpower's individual price-quality path can be found on our *website*.

[4] In addition to its role as the national grid owner, Transpower also acts as the System Operator, managing the real-time operation of the electricity system to ensure supply meets demand. This report does not cover Transpower's system operator role. All references to Transpower in the report refer to Transpower in its role as owner and operator of the national grid.



Revenue and demand

Transpower's revenue has declined in real terms

14. Transpower earns its revenue through line charges paid by its customers - local lines companies, large industrial users directly connected to the transmission network, and electricity generators.

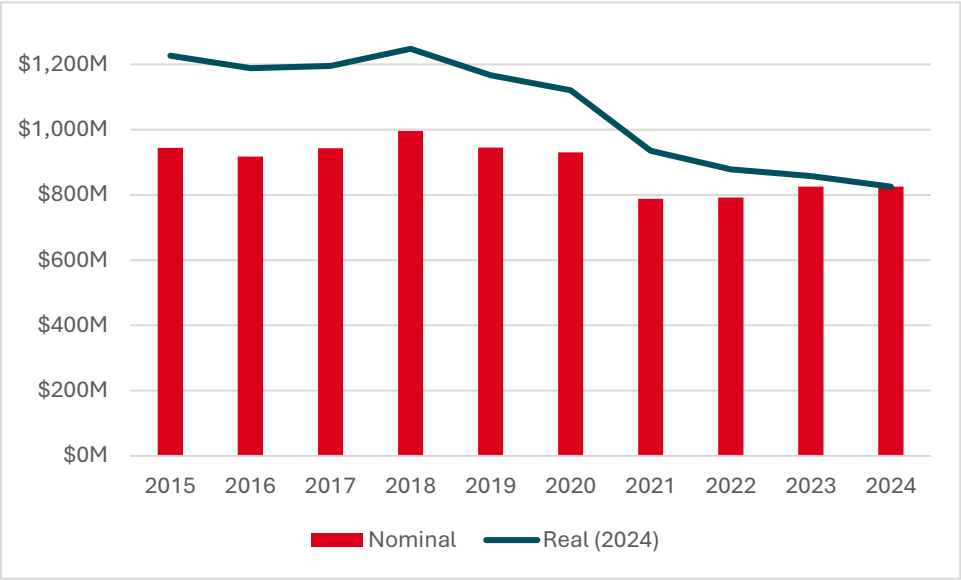
15. In the ten years to 2024, annual revenue has ranged between $800 million and $1 billion.[5] In real terms (adjusted for the effect of inflation) revenue has declined.

16. The sizeable drop in revenue after 2020 was primarily due to a reduction in Transpower's financing costs, known as its Weighted Average Cost of Capital (**WACC**). As a regulated entity, Transpower's allowable revenue is set to cover its operating costs plus a return of, and return on capital. When WACC decreases, its allowable revenue is adjusted downward at the next IPP reset.

17. In the 2020 IPP reset, WACC decreased from 7.19% to 4.57% mainly due to falling interest rates.

[5] All figures are in nominal terms (not adjusted for the effect of inflation) unless otherwise stated.

Figure 1 Total Revenue



Customer groups have paid relatively stable proportions of revenue

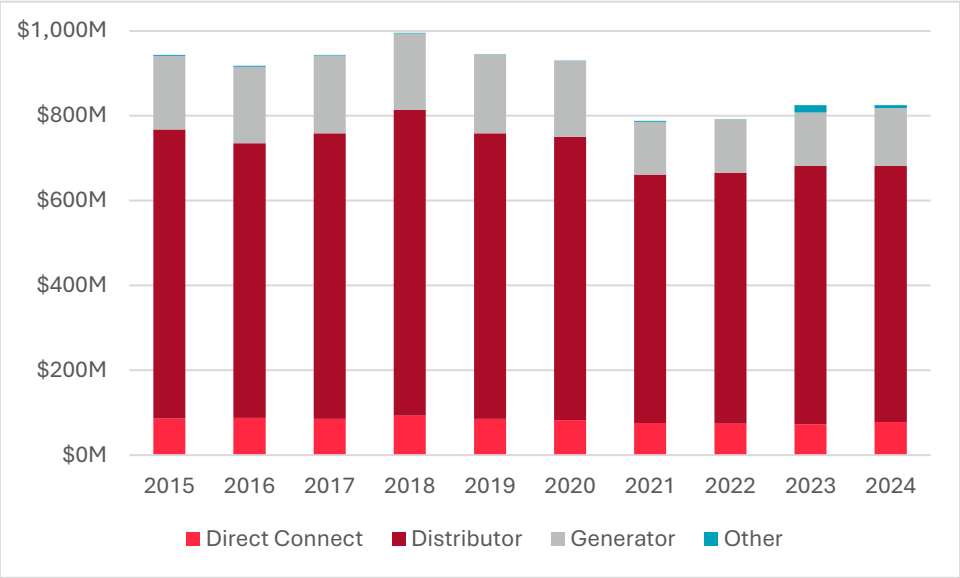
18. Transpower gets most of its revenue, about 80%, from local lines companies. This share has remained approximately the same over time.

19. In 2023, there was a major change in how Transpower collects revenue. The Electricity Authority changed the Transmission Pricing Methodology (**TPM**) used to set the charges for Transpower's customers. In particular, the new TPM specified that a charge should be based on the benefits Transpower's customers received from transmission assets, plus a supporting broad-based charge.[6]

20. These changes affected how much individual customers pay within the same group. For example, some individual lines companies pay more than they did before the change in methodology, while other lines companies pay less. However, the share of revenue recovered from each customer group has remained relatively stable.

[6] Electricity Authority: *Chair Letter to Transpower 31 March 2023 – Commencement of new TPM* (2023). See also, Transpower's webpage: *About the TPM*.

Figure 2 Revenue by customer groups



Overall demand for transmission services is not growing but peak demand appears to be growing

21. The electricity transmission injection and demand quantities fluctuated by less than 1000 GWh annually between 2015-2024, as seen in Figure 3. This represents only 3% variation, indicating minimal growth in the overall demand for transmission services.

22. From Transpower's reporting it appears that climate patterns were the main factor behind these fluctuations. Climate principally affected both demand for irrigation and heating.

23. The annual offtake of electricity which reflects electricity demand over the period was highest in 2024 (see Figure 3). The Electricity Authority linked this high-point to increased heating and cooling needs, persistent dry conditions driving irrigation, and the rising electrification of transport, industry and homes.[7]

24. Peak demand, on the other hand, has been generally rising since 2019, as evident in Figure 4.[8] While it is early to draw firm conclusions, this may reflect growing electrification and a shift away from fossil fuels especially for activities that demand electricity at peak times, such as charging electric vehicles and running heat pumps. Electricity forecasts and industry reports indicate this trend is likely to continue.[9]

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7 Electricity Authority: *Why was Electricity Demand High in 2024?* (4 July 2024).

8 Peak demand refers to the highest amount of electricity transmitted by Transpower during any single half-hour period within a year.

9 For example: Ministry of Business, Innovation and Employment: *Electricity Demand and Generation Scenarios* (2 July 2024); Boston Consulting: *The Future is Electric* (October 2022).

Figure 3 Total annual injection and offtake demand

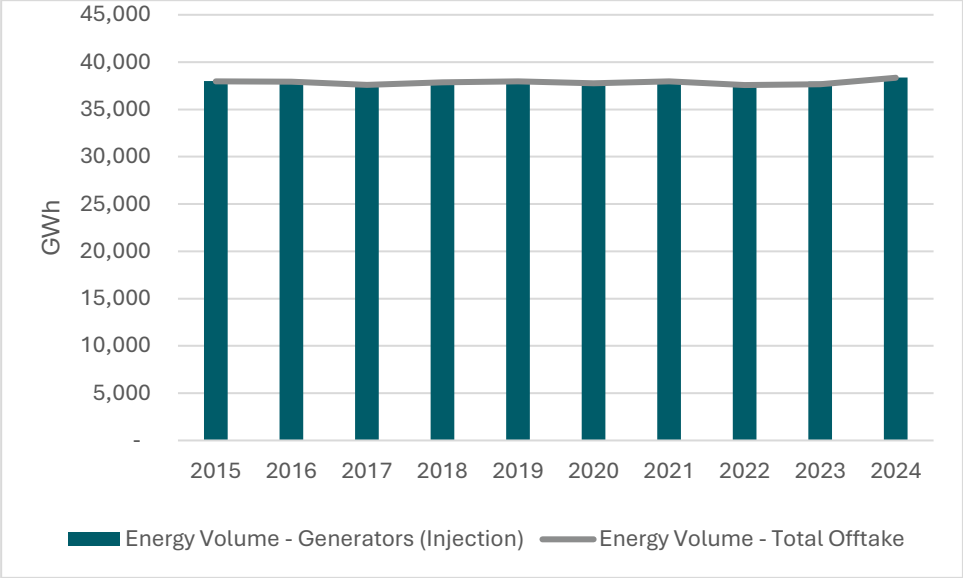
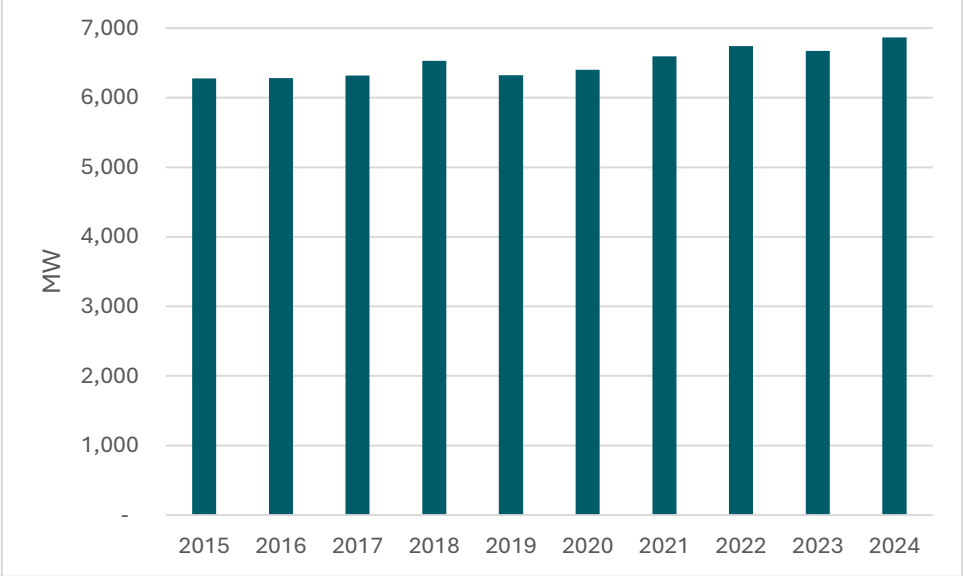


Figure 4 Maximum peak demand



Asset base and expenditure

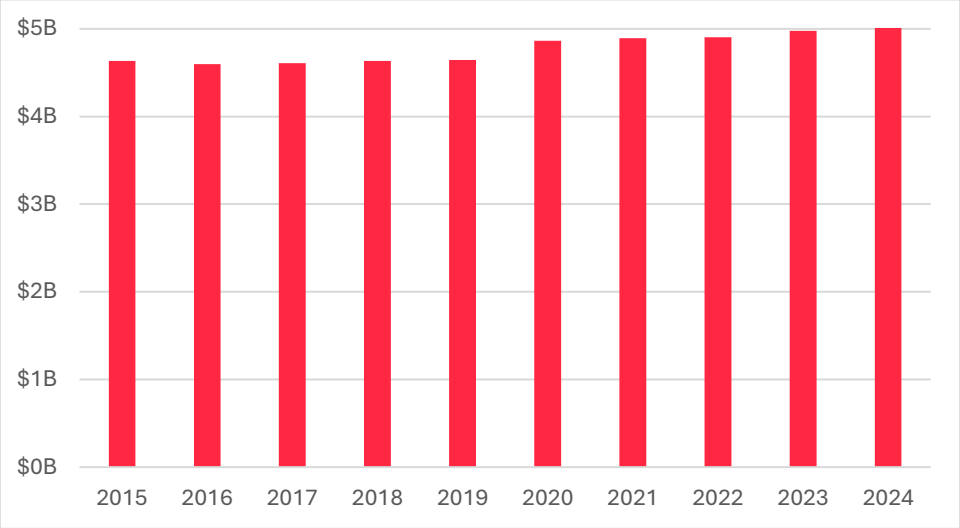
Transpower's asset base has grown slowly between 2015-2024 – significantly slower than local lines companies have grown

25. Transpower's regulatory asset base (**RAB**) is the total value of its regulated assets. The RAB is important because it helps determine how much revenue Transpower can earn and thus recover in lines charges.

26. Transpower's RAB was about $5 billion in 2024. The RAB grew by about $415 million or 9% between 2015-2024. On an average annual basis, this level of growth is very small, around 1%. What growth there has been was due to minor increases in capital spending and, more recently, asset price inflation.

27. In comparison, local lines companies had a combined asset base of approximately $17 billion in 2024. Between 2015-2024, this asset base grew by 70%, a significantly higher increase than for Transpower.

Figure 5 Regulated asset base (RAB)



Types of Transpower expenditure

28. Transpower's expenditure falls into two broad categories – capital expenditure (**capex**) and operational expenditure (**opex**).

29. Capex is money used to develop, enhance or maintain physical assets like power cables, towers or IT systems. Assets are depreciated and the cost is recovered over the assets' useful life.

30. Opex is ongoing expenses of running the business, like rent, utility bills, and staffing costs.

Transpower's capital expenditure has been mostly on grid replacement and refurbishment

31. Most of Transpower's capex has been on grid (network) refurbishment and replacement – not grid enhancements/growth. This explains why Transpower's asset base has been relatively stable between 2015-2024. A notable exception occurred in 2020, when there was a sharp increase in capex. This increase was not due to network investment, but rather a one-off accounting adjustment: the capitalisation of operating leases, relating to IT and Business support capex.[10]

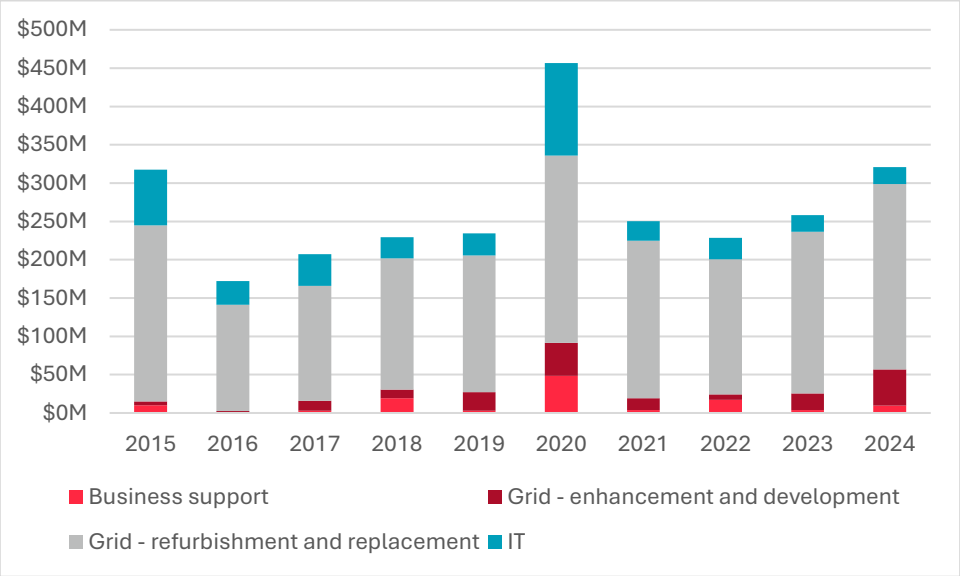
32. Transmission investment tends to be "lumpy" – large and infrequent. The last decade has been a period of relatively low investment activity for Transpower.

33. In contrast, between 2005-2014, prior to the timeframe covered in this report, Transpower made several large investments. These included the upgrade of the High Voltage Direct Current (**HVDC**) link between the South and North Islands and major upgrades in the upper North Island, such as the North Island Grid Upgrade. These projects increased Transpower's asset base significantly.

34. Looking ahead, Transpower has signalled that it plans to invest heavily over the next decade.[11] If approved, these new projects include upgrades in the upper South Island and central North Island, and further upgrades to the HVDC link.

35. These new projects will add to Transpower's asset base and will strengthen and expand the national transmission grid.

Figure 6 Capital expenditure by category



[10] Business support capex are corporate asset costs like office buildings and facilities, vehicles, office equipment etc.

[11] Transpower: *Te Kanapu May 2025 – Developing a Future grid blueprint for Aotearoa* (2025).

Transpower's opex remained relatively stable until 2020 and then started to increase

36. Opex has increased sharply since 2020, as shown in Figure 7, with significant proportionate increases in IT and insurance costs, reflecting the rising economy-wide costs of these services (see Table 1 below).

Figure 7 Operational expenditure (opex)

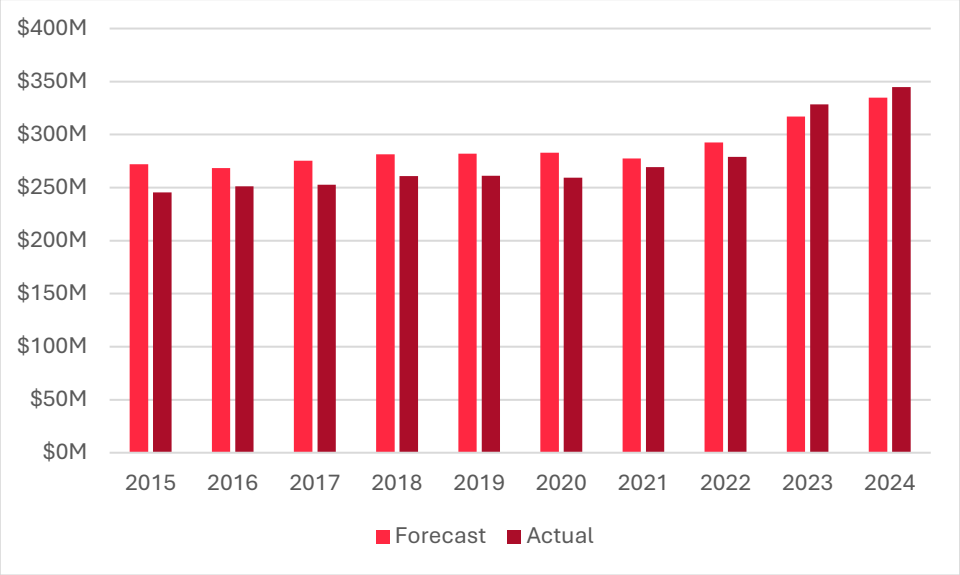


Figure 8 Opex by category

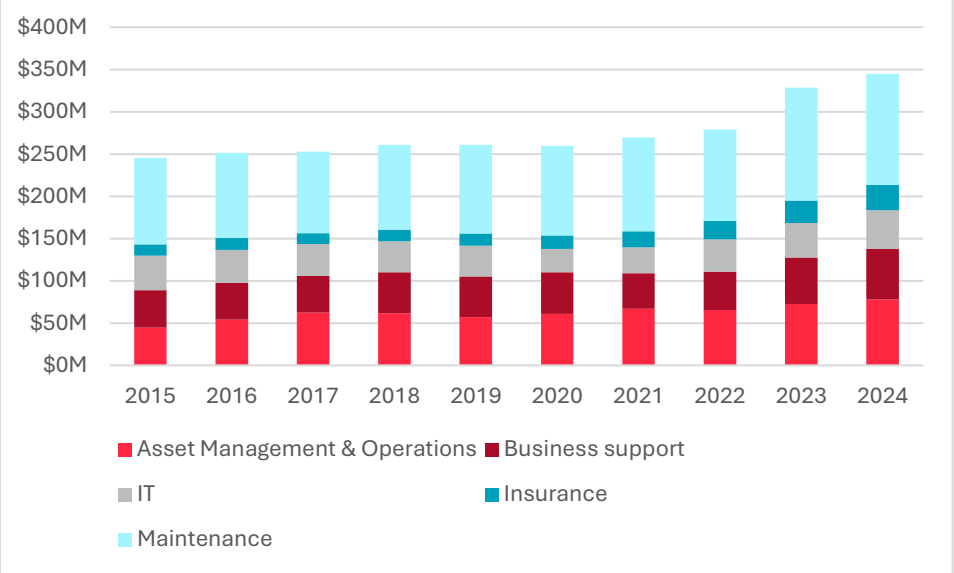


Table 1 Movement in opex categories 2020-2024

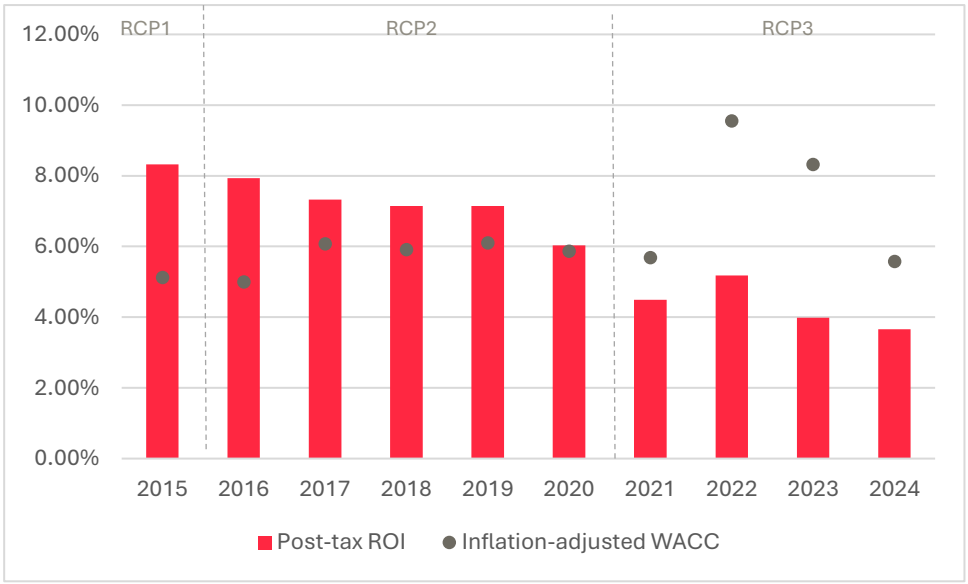
Opex category	Absolute increase since 2020	Percent increase since 2020
Asset management and operations	$17M	28%
Business support	$10M	21%
IT	$18M	66%
Insurance	$14M	92%
Maintenance	$25M	24%

Profitability

Transpower's return on investment (profitability) has been declining

37. We have estimated a reasonable return for Transpower for each year between 2015-2024, by adjusting the WACC specified in each Regulatory Control Period (**RCP**) for actual inflation and shown by the dots in Figure 9 below. On the same figure, for comparison purposes, we have plotted Transpower's actual post-tax return on investment (**ROI**) over the same period (bars).

Figure 9 Profitability



38. Until 2020 Transpower's ROI was higher than the estimated allowed rate of return (as represented by the regulatory WACC specified in the IPP, adjusted for inflation). After 2020, its returns fell below our benchmarks. Over the full period, the differences largely balance out.

Key Drivers of ROI Variance

Pre-2020 Elevated Returns

39. Transpower's elevated returns prior to 2020 were primarily driven by lower-than-forecast opex, as shown in Figure 7. An additional contributing factor was the adjustments made through revenue wash-ups which reconcile actual costs against forecasts.

40. In the IPP which we set for the 2016–2020 period, we based Transpower's revenue allowances on forecast opex. Because actual opex ended up being lower than forecast, Transpower's total costs were reduced, resulting in higher profits during that period.

41. For the subsequent 2021-2025 IPP period, we reduced the cost allowances to reflect lower forecast opex for that future period. Transpower is incentivised to operate efficiently by being allowed to retain a portion of its 2016-2020 opex savings in its annual incentive amount. The other portion of the incentive amounts was passed on to consumers when we set the revenue allowances for the 2021-2025 period. This approach ensures that opex savings are shared over time:

    41.1 Transpower benefits in the short term through higher returns; and

    41.2 consumers benefit in the long term through lower charges.

Post-2020 Decline in Returns

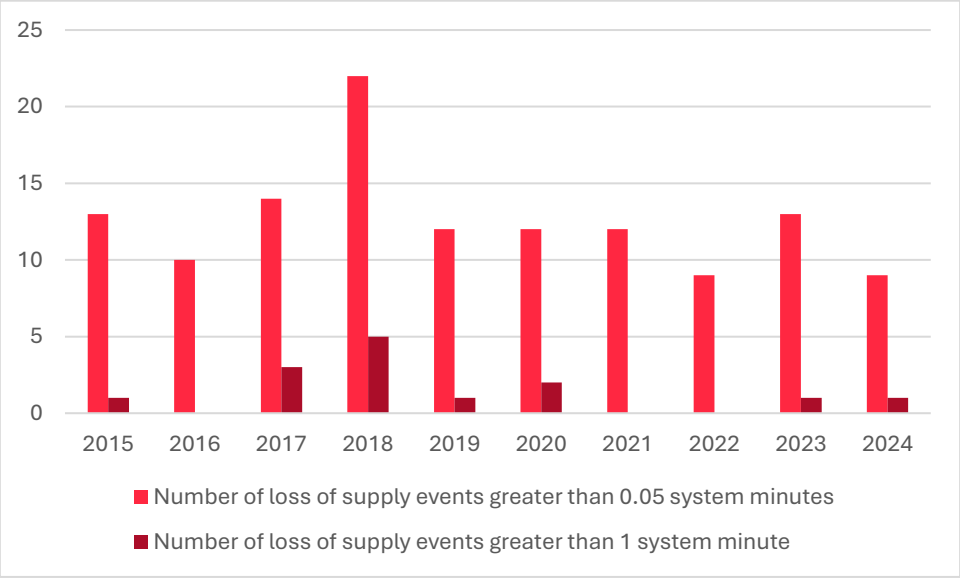
42. Following the IPP reset in 2020, Transpower's returns have been lower than our benchmarks. This is primarily due to Transpower not receiving an immediate adjustment for the unexpected higher inflation that occurred after 2020, whereas the benchmark WACC has been adjusted for the actual outturn of inflation. Up until March 2020 Transpower received adjustments for inflation within the IPP period. From 1 April 2020, Transpower no longer received inflation adjustments within an IPP period. Instead, an adjustment for inflation is made when we set its forecast revenue for the following IPP period.

Reliability

Transpower is generally reliable

43. Between 2015-2024, Transpower demonstrated high reliability, as reflected in various quality metrics. Notably, as shown in Figure 10 below, the number of supply interruptions lasting more than one minute were low, with the exception of 2018. In 2018 there were a number of weather-related incidents (including Cyclone Fehi and Cyclone Gita) and wildfires that affected towers and conductors, as well as some equipment failures.

Figure 10 Number of interruptions



44. Under the IPP framework, in addition to monitoring supply quality through interruption metrics, we also apply asset performance measures. Some of these measures assess the availability of transmission assets on the grid. Between 2015-2024, there were instances where Transpower had assets out of service, resulting in non-availability limits set under the IPP being exceeded. However, these exceedances did not lead to any customer interruptions.

Asset management

Transpower's assets are generally in good condition

45. Transpower owns a diverse portfolio of transmission assets, including lines, towers, transformers, and switchyards. Between 2015-2024, Transpower was required to report on the age and condition of these assets in four selected years.

46. This section focuses specifically on the age and health of Transpower's transmission line assets because this category of assets includes the majority and the most recognised of Transpower's assets – including transmission towers, poles and conductors.

47. As illustrated in Figure 11 below, the number of transmission line assets with an unknown age increased significantly in 2023 compared to 2016. This change was largely attributed to the inclusion within the data in 2021 of the asset sub-class termed 'attachment points' many of which have an unknown age.

48. Approximately 20% of Transpower's transmission line assets are over 50 years old. Among assets with a known age, this proportion is even higher, around 35%. In contrast, the share of assets less than 10 years old has remained relatively low, fluctuating between 8% and 15% over recent years.

49. Despite this age profile, most assets are still operating within their expected service lives. The overall condition of Transpower's transmission line assets remains strong, as indicated by the Asset Health Index (**AHI**). This index ranges from 0 to 10, where 0 represents minimal risk of failure and 10 indicates high risk. Assets scoring above 8 typically require intervention, such as refurbishment or replacement.

50. The pattern of older assets remaining in good condition is consistent across many other Transpower asset classes. It reflects Transpower's proactive approach to asset management, with regular maintenance and refurbishment helping to sustain asset health over time.

Figure 11 Transmission lines assets (age)

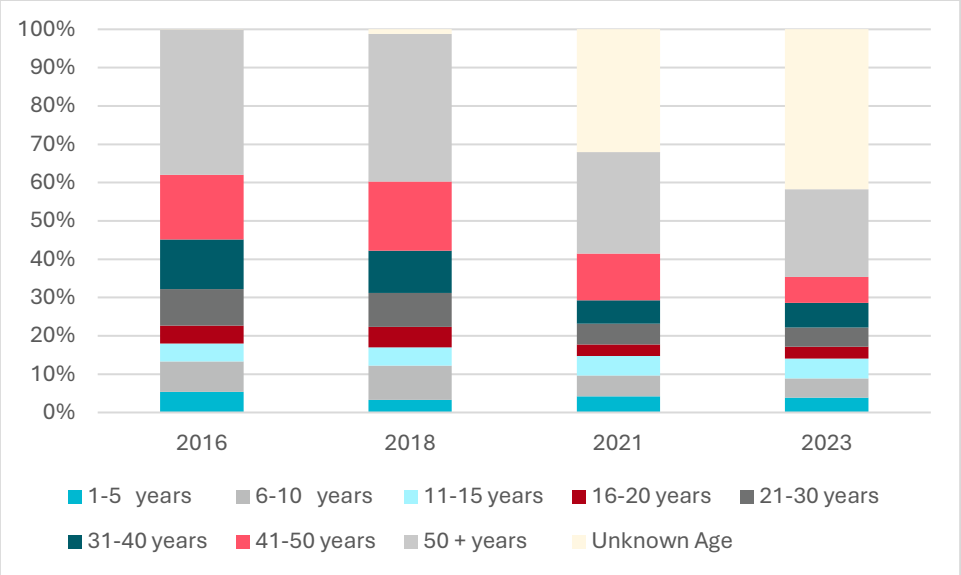
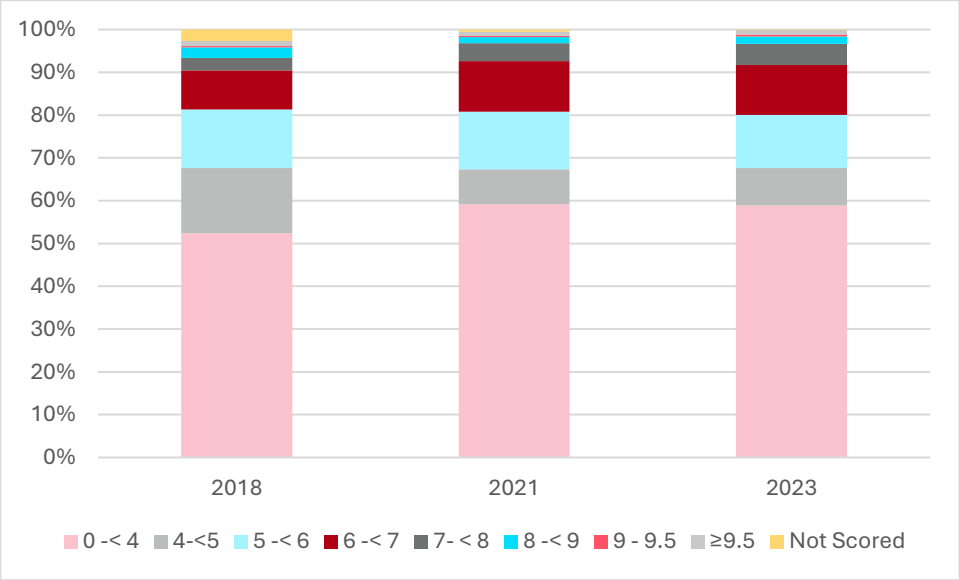


Figure 12 Transmission lines assets (health)



Transpower's asset management practices are maturing

51. The Asset Management Maturity Assessment Tool (**AMMAT**) is designed to provide an indication of Transpower's asset management maturity in six key capability areas.

52. Figure 13 below shows Transpower's AMMAT scores, with 0 being the lowest, least mature, and 4 being the highest, most mature.

53. As is evident Transpower has improved across all six asset management areas. In particular, its systems, integration and information management have improved markedly over the years.

54. Transpower has been continuously enhancing its asset health and risk modelling framework, which undergoes independent expert review every five years as part of its IPP reset.

Figure 13 Asset management maturity assessment (AMMAT)