

Attachment B Capital expenditure

Purpose of this attachment

- B1 This attachment sets out the capital expenditure (capex) allowance for non-exempt EDBs and explains our approach for setting those allowances.
- B2 Under the EDB IMs we must set a “*forecast aggregate value of commissioned assets*” for each EDB so that we can set starting prices and apply the capex IRIS incentive during the DPP4 period.¹ In practice, as explained in this attachment, we set a capex allowance which incorporates the forecast expenditure on assets alongside other cost components.^{2, 3} The capex allowance is provided in nominal dollars, consistent with the overall approach to setting revenue paths in nominal terms.
- B3 The capex allowance is an input to determining the revenues EDBs may earn; affecting their profitability, incentives to invest, and ability to deliver electricity lines services. Although the capex allowance is not at the outset the biggest contributor to the regulated revenue path, it is important because of the long-term implications for consumers. Once an asset is built, the cost recovery for these assets is spread over many years (both the return of assets - depreciation and the return on assets) and requirements for ongoing maintenance.
- B4 The information in this attachment is organised into five sections:
- B4.1 **Capex allowance for DPP4** – This section sets out the capex allowance for individual EDBs and as a total across all non-exempt EDBs.
- B4.2 **How our decisions align with the decision-making framework** - This section explains how our capex decisions align with the decision-making framework and promote the long-term interest of consumers.

¹ [Commerce Commission "Input methodologies review 2023 - \[Final\] Electricity Distribution Services Input Methodologies \(IM Review 2023\) Amendment Determination 2023 \[2023\] NZCC 35" \(13 December 2023\)](#), clause 1.1.4(2) defines “forecast aggregate value of commissioned assets”.

² These cost components are cost of financing, value of vested assets and value of capital contributions. Cost of financing and value of vested assets are added, and value of capital contributions is deducted from the forecast expenditure on assets. We do not account for timing differences between forecast expenditure on assets and assets being commissioned.

³ EDBs can choose to spend more or less than this allowance using the flexibility under the DPP to substitute opex and capex freely and to spend higher whilst incurring IRIS penalties.

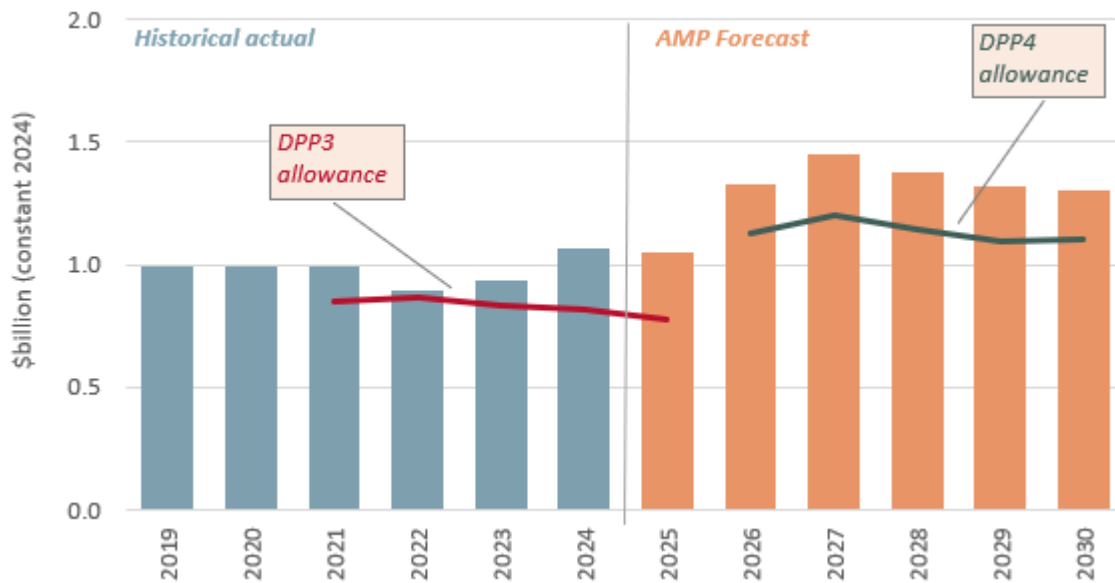
- B4.3 **Context for DPP4** – This section provides a summary of key external factors and how EDBs have responded to these drivers in their 2024 AMP forecasts.
- B4.4 **Capex decisions** – This section explains our capex decisions, including the analysis that supports those decisions and our consideration of stakeholder feedback in forming those decisions.
- B4.5 **Other regulatory tools** – This section describes the flexibility mechanisms that are available to EDBs to access during the regulatory period if their investment need is greater than provided for in capex allowances and where appropriate.

Capex allowance for DPP4

Total capex allowance (in nominal dollars) for non-exempt EDBs for DPP4 is \$6.4 billion, 17% less than forecast in EDBs' 2024 AMPs

- B5 Our capex decisions result in a total capex allowance, across all non-exempt EDBs, of \$6.4 billion (nominal, net of capital contributions) for DPP4. The allowance is \$1.2 billion (nominal) or 17% less than EDBs' 2024 asset management plan (AMP) forecast of \$7.6 billion for the DPP4 period.
- B6 The allowance for DPP4 recognises that an uplift in capex is appropriate to address various needs (including to manage ageing assets, improve resilience, and support electrification) as well as to accommodate cost increases.
- B7 Whilst we have set a higher allowance, we have not set it as high as forecasted in EDBs' 2024 AMPs. This is in part due to our reservations about the uncertainty in growth projections and the deliverability of the large increases signalled in AMPs for DPP4, including the feasibility of such large increases ramping up over a relatively short time frame.

Figure B1 Capex profile with DPP4 and DPP3 capex allowances(constant 2024\$)⁴



- B8 Comparing between regulatory periods in 2024 constant prices, the DPP4 capex allowance of \$5.7 billion is \$1.5 billion or 37% higher than the DPP3 allowance of \$4.1 billion. See Figure B1 for the total capex allowances across DPP3 and DPP4.
- B9 The DPP4 capex allowance is \$0.1 billion (nominal) or 1.0% higher than the draft DPP4 capex allowance. The change was primarily driven by the reference period update from 2019-2023 at draft decision stage to 2020-2024 for the final decision, and cost inflation updates associated with the updated reference period.
- B10 The capex allowance is an initial step increase, with opportunities for EDBs to apply for higher allowances during the regulatory period as forecasts become clearer. It reflects the relatively low-cost DPP approach that we were able to be apply, the information available to us, and the need for consumers to have confidence that step changes in investment are assessed via the appropriate regulatory tool.

⁴ Capex allowances are based on forecast capex, established net of capital contributions. DPP3 allowance figures are taken from the 2019 DPP3 determination and inflated to 2024 dollars using CPI. The exceptions are Aurora, Powerco and Wellington Electricity whose allowance figures are taken from CPP and CPP-to-DPP determinations.

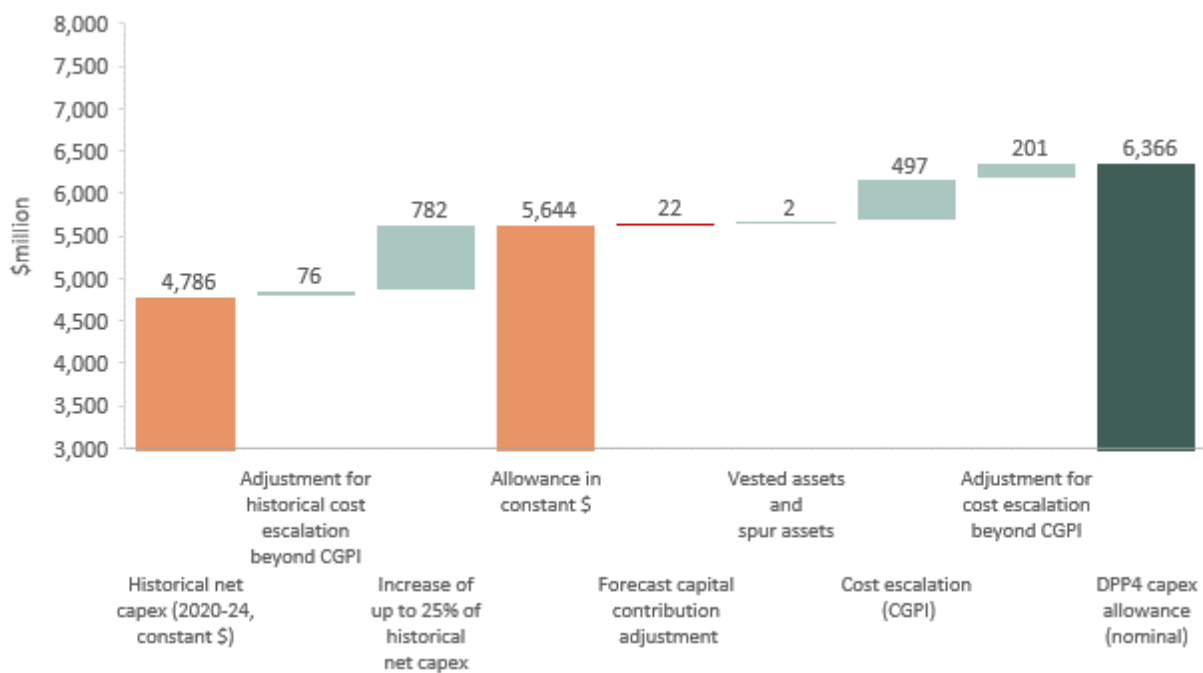
- B11 In DPP3 we set a cap of 120% increase relative to historical capex, which provided for most EDBs' expenditure needs relative to what was set out in their 2019 AMPs. In DPP4, despite raising the cap to 125% of recent historical capex, on average EDBs are receiving a lower proportion of their 2024 AMP forecasts. We consider the application of a cap is appropriate due to our concerns about deliverability of capital expenditure programmes and need.
- B12 Part 4 price-quality regulation provides a suite of flexibility mechanisms (such as reopeners, large connection contracts (LCCs) and customised price-quality paths (CPPs)) to meet a range of industry wide and supplier specific circumstances. We consider it appropriate to use flexibility mechanisms to enable higher expenditure during the period where it can be justified. The additional scrutiny for increased capex beyond this 125% cap is useful to check that investments are in the long-term benefit of consumers.

The capex allowance is set in constant dollars, based on the lower of an EDB's total forecast capex or 125% of its historical reference period (net of forecast capital contributions)

- B13 Figure B2 illustrates how the DPP4 combined capex allowance across all EDBs is built up. This is explained further in the *Capex decisions* section.
- B13.1 The starting point for the capex assessment is actual expenditure on assets less capital contributions, plus the cost of financing during the reference period (2020-24) in constant dollars. The historical nominal expenditure on assets, capital contributions and cost of financing are converted to constant dollars using the All-Groups capital goods price index (All-Groups CGPI).
- B13.2 This amount is adjusted for input price growth beyond All-Groups CGPI by adding a 0.8% per annum increase to historical All-Groups CGPI for each year of the reference period.
- B13.3 The allowance in constant dollars is set as the lower of the EDBs' 2024 AMP forecast and the upper limit, where the upper limit is set at 125% of the adjusted historical net capex (B13.1 and B13.2), ie, an increase of 25% compared with the adjusted historical net capex.

- B13.4 The resulting amount is adjusted to reflect EDBs’ forecast capital contributions (only for EDBs that are set an allowance limited by the 125% upper limit).⁵
 - B13.5 EDBs value of considerations for vested assets and specifically identified spur assets are added.
 - B13.6 Cost escalation is applied to provide for input price growth. The escalator is the All-Groups CGPI.
 - B13.7 An adjustment for cost escalation beyond All-Groups CGPI is applied by adding a 0.8% per annum additional increase to forecast All-Groups CGPI for each year of the forecast period.
 - B13.8 The resulting amount is the capex allowance, \$6.4 billion (nominal) for all EDBs combined.
- B14 Our final decisions for capex are in substance unchanged from the draft decisions. We discuss stakeholder views and reasons for our decisions in the Capex decisions section.

Figure B2 Components of the DPP4 capex allowance (nominal \$ million)



⁵ The adjustment is only required for capped EDBs, as for non-capped EDBs the forecasted change in reliance on capital contributions in the DPP4 period is already reflected in their allowances. For capped EDBs, we apply an adjustment to their expenditure allowances to reflect the forecasted change in reliance on capital contributions as a proportion of capex, compared to the reference period.

B15 Key differences in our approach to setting DPP4 capex allowances compared to the approach used for DPP3 are:⁶

B15.1 The final decision provides for a maximum increase of 25% relative to the 2020 to 2024 reference period for DPP4 (in constant dollars, net of capital contributions). The result of applying the 25% limit, whereby EDBs either get their 2024 AMP forecast or a 25% uplift (whichever is lower), is a 16% or \$782m (constant 2024\$) increase above the reference period capex. For DPP3 we limited increases to 20% of the reference period capex.

B15.2 Based on evidence of higher capital goods price inflation for EDBs than in the general economy, we applied adjustments for input price growth beyond the All-Groups CGPI, which as for previous resets, continues to be our preferred cost index. The adjustment of 0.8% per annum on top of the All-Groups CGPI, to historical net capex and to forecast cost escalation results in an additional allowance amount in nominal terms of \$277m (\$76m adjustment to historical net capex and \$201m to forecast escalation) as shown in Figure B2. For DPP3 cost escalation was a less material issue and we did not provide for adjustments.

The capex allowance for more than half of EDBs will be equivalent to at least 90% of their AMP forecasts

B16 The DPP4 allowance for each EDB is set out in Table B1.

⁶ For all EDBs combined the DPP4 allowance is 37% higher than the DPP3 allowance (in constant 2024 price terms). We note that this percentage difference is not directly comparable to the explanation of the percentages in this paragraph, which focuses on key differences in input assumptions between DPP4 and DPP3. Capex in the DPP4 reference period (2020 to 2024) is generally higher than the DPP3 reference period, when compared in constant dollars. Accordingly, some of the increase in DPP4 allowances compared to DPP3 is attributable to applying the input adjustments to a higher base value.

Table B1 Final decision capex allowances for DPP4 (nominal \$ million)⁷

EDB	2026	2027	2028	2029	2030	DPP4 Total
Alpine Energy	33.8	31.6	28.6	25.6	30.2	149.9
Aurora Energy⁸	66.6	97.6	110.4	111.7	111.7	497.9
EA Networks	18.6	16.0	16.1	16.0	16.2	82.8
Electricity Invercargill	6.9	9.3	9.9	8.2	9.8	44.1
Firstlight Network	18.6	18.9	14.9	17.2	16.7	86.3
Horizon Energy	11.8	13.8	13.4	12.3	12.2	63.5
Nelson Electricity	2.3	2.7	2.9	2.5	2.5	12.8
Network Tasman	25.3	21.6	19.2	16.9	17.0	100.1
Orion NZ	120.4	147.7	140.5	147.4	151.5	707.4
OtagoNet	23.5	32.5	33.3	36.0	37.7	163.1
Powerco	309.8	332.5	361.3	369.7	387.9	1,761.1
The Lines Company	29.4	27.2	23.5	24.9	24.0	129.0
Top Energy	26.2	24.2	24.6	25.3	24.4	124.7
Unison Networks	82.7	93.8	91.1	93.8	114.6	475.9
Vector Lines	356.2	347.8	303.6	263.1	271.3	1,542.0
Wellington Electricity	63.8	98.9	93.1	94.1	75.8	425.7
Total	1,195.7	1,316.1	1,286.5	1,264.5	1,303.6	6,366.4

⁷ Net of capital contributions, but inclusive of cost of financing, value of consideration for vested assets, and specifically identified spur asset purchases. Note that the values in this table differ from Table 2.2.2 in the determination, which provides the forecast value of commissioned assets for the capex IRIS. As provided in the IMs, the values in Table 2.2.2 exclude operating leases because for IRIS purposes, operating leases are treated as opex. Table 2.2.2 in the determination also excludes Aurora Energy as its allowances are indicative only and subject to finalisation if Aurora Energy transitions from its CPP to the DPP in 2026.

⁸ The values included for Aurora Energy are indicative only. They will be finalised if Aurora Energy transitions from its CPP to the DPP in 2026.

B17 Table B2 shows the final capex allowances for EDBs compared to their draft capex allowances.

Table B2 Changes in capex allowances (nominal \$ million)

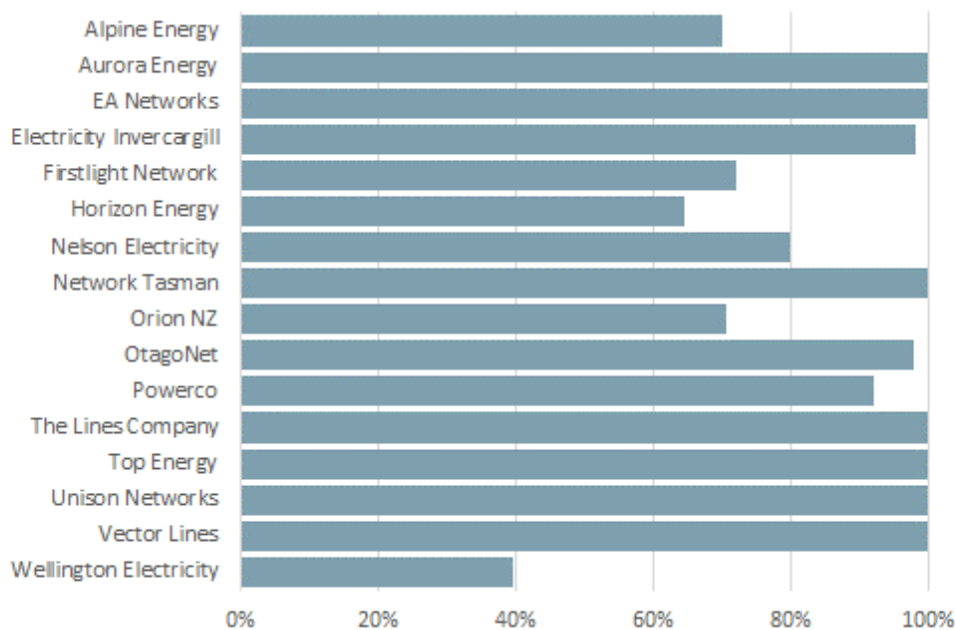
EDB	Capex allowance (\$m)	Draft Capex allowance (\$m)	Change (\$m)	Change (%)
Alpine Energy	149.9	145.9	4.0	2.8%
Aurora Energy	497.9	498.6	-0.7	-0.1%
EA Networks	82.8	83.0	-0.1	-0.2%
Electricity Invercargill	44.1	43.6	0.5	1.2%
Firstlight Network	86.3	87.2	-0.8	-0.9%
Horizon Energy	63.5	77.9	-14.4	-18.4%
Nelson Electricity	12.8	14.0	-1.2	-8.5%
Network Tasman	100.1	100.3	-0.2	-0.2%
Orion NZ	707.4	667.8	39.6	5.9%
OtagoNet	163.1	164.2	-1.1	-0.7%
Powerco	1761.1	1790.2	-29.0	-1.6%
The Lines Company	129.0	129.3	-0.2	-0.2%
Top Energy	124.7	134.4	-9.7%	-7.2%
Unison Networks	475.9	420.4	55.5	13.2%
Vector Lines	1542.0	1521.1 ⁹	20.9	1.4%
Wellington Electricity	425.7	422.8	2.8	0.7%
Total	6366.4	6300.5	65.9	1.0%

⁹ Vector's draft capex allowance is as published in Table B1 of Attachment B of our DPP4 Draft decision reasons paper. This draft capex allowance is as published but incorrect, as it reflects the adjustment for forecast

B18 More significant changes to capex allowances between the draft and final decision are driven by updating the reference period to 2020- 2024 (for the final decision) from 2019-2023 (used for the draft decision). Other more minor changes to allowances arise because of updates to All-Groups CGPI and in some instances, changes to the levels of capital contribution adjustments.

B19 Figure B3 expresses the DPP4 allowance as a proportion of each EDB's 2024 AMP forecast. Our final decision means that most EDBs will have allowances that are 70% or more of their capex forecasts, which includes over half having allowances of at least 90% of their forecasts. Two EDBs will have allowances of less than 70% of their forecasts.

Figure B3 Capex allowance as a proportion of EDBs' AMP forecasts (assessed on a constant 2024\$ basis)



capital contributions that was inadvertently applied in the modelling at draft decision. We have retained the as-published draft capex allowance in this table purely for the purposes of comparison with final allowances. This means that the change(\$m) and change(%) numbers for Vector in this table are overstated.

How our decisions align with the decision-making framework

- B20 In this section we explain how our decisions for the capex allowance align with the decision-making framework.¹⁰ We also explain how our final decisions promote the long-term interest of consumers, in line with s 52A of the Act.
- B21 Our DPP4 decision-making framework that guides and supports our decisions for DPP4 is outlined in the DPP4 Issues paper within Attachment A.

Our decisions are in line with the requirements of the Act and the IMs

- B22 Our decisions for setting the capex allowances are taken with the overall objective of promoting the purpose of Part 4, in fulfilment of our statutory requirements, under s 52A of the Act.
- B23 The decision-making framework requires that we apply any relevant IMs when we set price-quality paths. As noted under the *Purpose of this attachment* section, the EDB IMs require us to set a capex allowance for each EDB.

We have applied the low-cost principles developed in previous DPP resets

- B24 Consistent with the purpose of DPP/CPD regulation, our approach for determining capex allowances for DPP4 has incorporated a number of low-cost principles including:
- B24.1 applying the same or substantially similar treatment to all suppliers on a DPP;
 - B24.2 setting starting prices and quality standards or incentives with reference to historical levels of expenditure and performance, where appropriate;
 - B24.3 where possible, using existing information disclosed under information disclosure(ID) regulation, including suppliers' own AMP forecasts; and
 - B24.4 limiting the circumstances in which we will reopen or amend a DPP during the regulatory period.

¹⁰ [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 – Issues paper" \(2 November 2023\), Attachment A.](#)

- B25 We have retained approaches from DPP3 where they remain relevant. This is the case for the use of the most recent AMPs as the source for EDB forecast expenditure information (**decision C1**), treatment of forecast cost of finance (**decision C4**) and value of consideration for vested assets and specifically identified spur assets (**decision C5**).
- B26 However, we have made changes to our DPP3 approaches for setting the capex allowance (**decision C2**), the reference period (**decision C3**) and the cost escalator (**decision C6**) as a result of applying our DPP4 decision-making framework.¹¹ These changes better achieve the desired outcomes of the decision-making framework and the purpose of Part 4.
- B27 Our decision to set the capex allowance (in constant dollars) as the lower of an EDB's total net forecast capex or 125% of its historical reference period net capex, with a subsequent adjustment for changes in forecasted levels of capital contributions for capped EDBs (**decision C2**) was determined after considering s 53K (purpose of default/customised price-quality regulation), and s 52A (purpose of Part 4) and how to best give effect to these. This meant considering:
- B27.1 the level of assessment that we can apply to forecast capex that is consistent with a relatively low-cost approach for setting allowances for DPP4 (see *Set the capex allowance(net of capital contributions) by capping total net forecast capex at an aggregate level* section); and
 - B27.2 the availability of other mechanisms to assess expenditure that is unable to be accommodated within the DPP (see *Other regulatory tools* section).
- B28 For **decision C3**, our decisions to set the length of the historical reference period at five years (instead of seven years for DPP3) and to adjust the historical reference period capex beyond applying a price index (DPP3 applied an index only without adjustment), took into account the low-cost principles of a DPP and the purpose of Part 4. The adjustment to the pricing index approach is also applied to **decision C6** which escalates forecast capex allowances in constant dollars to a nominal equivalent.

¹¹ [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 – Issues paper" \(2 November 2023\)](#), paragraphs A17-A20.

- B29 Adjusting the length of the reference period and providing for an additional adjustment that reflects cost pressures beyond that provided by the All-Groups CGPI means that capex allowances are set at an appropriate level, which provide EDBs appropriate incentives to invest.
- B30 One of the low-cost principles in the decision-making framework is limiting the circumstances in which we will reopen or amend a DPP during the regulatory period.
- B31 We noted in the DPP4 Issues paper that to meet the relatively low-cost purpose of DPP regulation, we will also take into account the efficiency, complexity, and costs of the DPP regime as a whole when resetting the DPP.
- B32 We anticipate that the DPP4 regulatory period will see a greater number of reopeners, as they are a relatively low-cost way to achieve an efficient outcome for areas of significant forecast uncertainty.
- B33 We consider that given the high level of uncertainty the long-term benefit of consumers may be better served through an increased use of reopeners and CPPs, for expenditure which cannot be appropriately scrutinised when initially setting expenditure allowances for DPP4.

Our decisions take into account key economic principles

- B34 We also have three key economic principles that we have had regard to in setting the DPP.¹² These are useful analytical tools when determining how we might best promote the purpose of Part 4.
- B35 The regulatory regime provides for reopeners and CPPs to provide for increased assessment of investments which cannot be appropriately scrutinised when initially setting expenditure allowances for DPP4. This protects consumers against the risk of paying for investments that do not materialise and allows consumers to engage further in the appropriateness of expenditure allowances.

¹² [Commerce Commission “Default price-quality paths for electricity distribution businesses from 1 April 2025 – Issues paper” \(2 November 2023\)](#), paragraph A21.

- B36 Our approach to setting capex allowances provides for a material uplift in capex, which reflects the asymmetric consequences of over- and under-investment. However, it limits the extent of increase to reflect our allocation of risk principle that EDBs have opportunities to apply for higher allowances, through reopeners or a CPP, during the regulatory period as the need for investments becomes clearer.
- B37 We consider our allowances are appropriate given the evolving context for DPP4, the level of assessment consistent with a relatively low-cost regime and the availability of mechanisms to provide greater scrutiny for circumstances that are unique to individual EDBs.

Context for DPP4

The energy sector is in a period of change and uncertainty

- B38 We have set capex allowances within the context of an energy sector that is undergoing change and continues to be fluid. Where, when and the scale of investment required by EDBs will depend on a number of factors that are continuing to evolve, including:
- B38.1 how consumer demand evolves;
 - B38.2 how EDBs' strategies for meeting demand for electricity lines services adapt with increasing availability of non-network solutions including demand response and distributed energy resources (DER);
 - B38.3 expected improvements to investment information (eg, network risk modelling and demand forecasts); in particular, by incorporating better information on low voltage networks into investment planning, and how this information is reflected in renewal and growth/enhancement investment decisions; and
 - B38.4 what investments are needed to enhance network resilience, including evolving government policy guidance around climate change adaptation.
13, 14
- B39 The scale and timing of actions required to respond to these factors will not be uniform across EDBs or within an EDB's own network.

¹³ [Ministry for the Environment "Aotearoa New Zealand's first national adaptation plan" \(August 2022\).](#)

¹⁴ [Ministry for the Environment "Adaptation framework" \(October 2024\).](#)

Growing role of non-network and distributed energy solutions and the impact of gas transition on electrification

- B40 Electricity lines services provided by EDBs will play a key role in enabling the electrification of New Zealand. The extent of electrification and consequently, the quantum of investment needed in EDBs' networks will depend on the growing role of non-network solutions and the gas transition.
- B41 Meeting demand for electricity lines services with non-network solutions including demand response and distributed energy resources better utilises existing capacity in EDB networks instead of building networks to increase network capacity. Stakeholders provided views on managing and using the existing capacity of networks to potentially avoid unnecessary investment.^{15, 16}
- B42 Deferred network upgrades can benefit EDBs as this may mean smaller, more manageable work programmes for them. However, we note that the flexibility market is still developing and may not have sufficient certainty or size to meaningfully defer EDB capex programmes. EDB investment programmes also take time to deliver and cannot be ramped up or delivered immediately. Accordingly, investment planning has to be undertaken based on an assessed likelihood of the viability of alternative approaches, and the risk which arises if non-network solutions are either not available or cannot fully deliver to address network constraints.

¹⁵ [SolarZero "DPP4 Issues paper submission" \(15 December 2023\)](#), pp. 2-3,6; [Consumer Advocacy Council \(CAC\) "DPP4 Issues paper submission" \(19 December 2023\)](#), pp. 11-16; [Rewiring Aotearoa "Cross-submission on DPP4 Issues paper" \(26 January 2024\)](#), pp. 5-7; [SolarZero "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 1,7,9; [Rewiring Aotearoa "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 1-2; [Consumer Advocacy Council "Submission on EDB DPP4 draft decisions" \(26 June 2024\)](#), paragraphs 16-21.

¹⁶ [MEUG Submission to the Electricity Authority on "The future operation of New Zealand's power system" \(12 April 2024\)](#), paragraphs 14-19.

B43 Future investment decisions on networks will also depend on the extent of electrification required to support the gas transition. In line with the commitment to reduce greenhouse gases to net zero by 2050, the demand for natural gas is expected to decline given the transition to renewable energy. However, the rate at which gas use will decrease is uncertain and there is no clarity as to when gas use may be phased out entirely. The pace of transition away from gas is currently unclear which means the speed and extent of electrification required to support the gas transition is also unclear. For example, the IAEngg report noted that process heat conversion and residential gas to electricity conversion are two of several underlying key drivers that have put upward pressure on EDB capex forecasts.

The way that EDBs are investing continues to evolve

B44 EDBs who are investing and operating efficiently will be planning to meet expected current and future consumer demands for service quantity and quality on a least-cost lifecycle basis. This will look different depending on the operating context and external factors that inform investment decisions such as policy settings, evolving technology and changes in consumer preferences.

B45 EDBs typically have visibility over their high and medium-voltage networks, but not necessarily the same level of visibility into their low voltage (LV) networks. We understand that EDBs are starting to monitor and gain visibility into their LV networks to better assist with identifying load profiles and constraints, help with network planning and provide data to inform the timing and nature of future investment decisions (eg timing of network capacity upgrades, deferring network upgrades, and implementing non-network solutions).

B46 We also understand from submissions that EDBs are needing to start capital projects earlier due to both network and resource capacity constraints, making investment ahead of demand a more significant driver for forecast spend than in past AMPs:^{17, 18}

Electricity distributors need to invest in upgrading infrastructure ahead of the increases in demand. It is our view that the consequences of under investment, or investing too late, far outweigh the impacts of investing in network infrastructure too early.

...need to start the investment and building process earlier than historical approaches. This reflects aspects of longer delivery times, staying ahead of the

¹⁷ [Aurora Energy "DPP4 Issues paper submission" \(19 December 2023\)](#), p.3

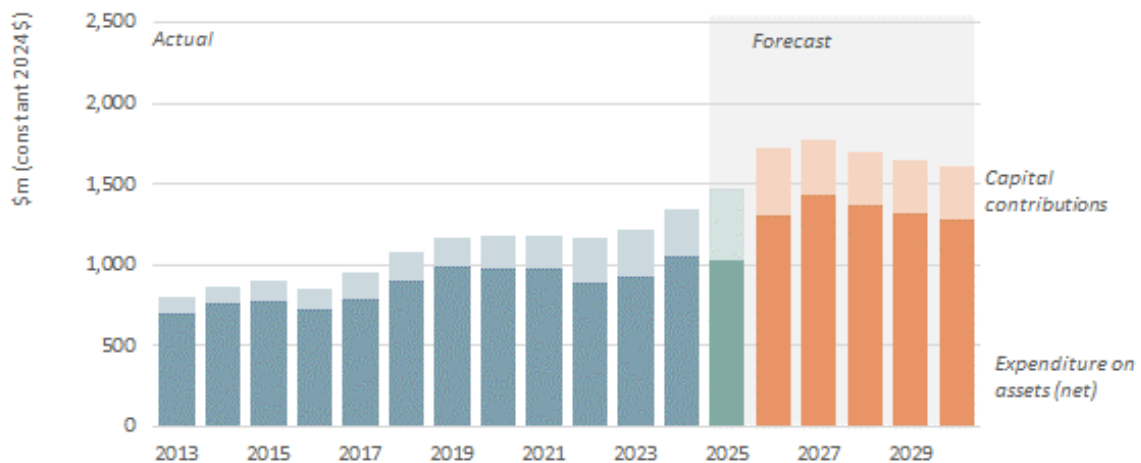
¹⁸ [PowerNet "DPP4 Issues paper submission" \(19 December 2023\)](#), p.14

delivery peak (potentially 3 times the current rate), and managing the speed of uptake and intrinsic uncertainty associated with it.

Large capex uplifts, particularly in system growth, are signalled in AMPs

B47 In constant 2024 dollars, EDBs have forecast to spend a total of \$8.5 billion in DPP4 on assets (before deduction of capital contributions). This compares with actual expenditure on assets from 2020 to 2024 of \$6.1 billion (converted to constant \$2024 using the same inflators as the capex projections model). The forecasts show that EDBs have forecast an uplift in capex for the last year of DPP3 and a further increase for DPP4, as shown in Figure B4.

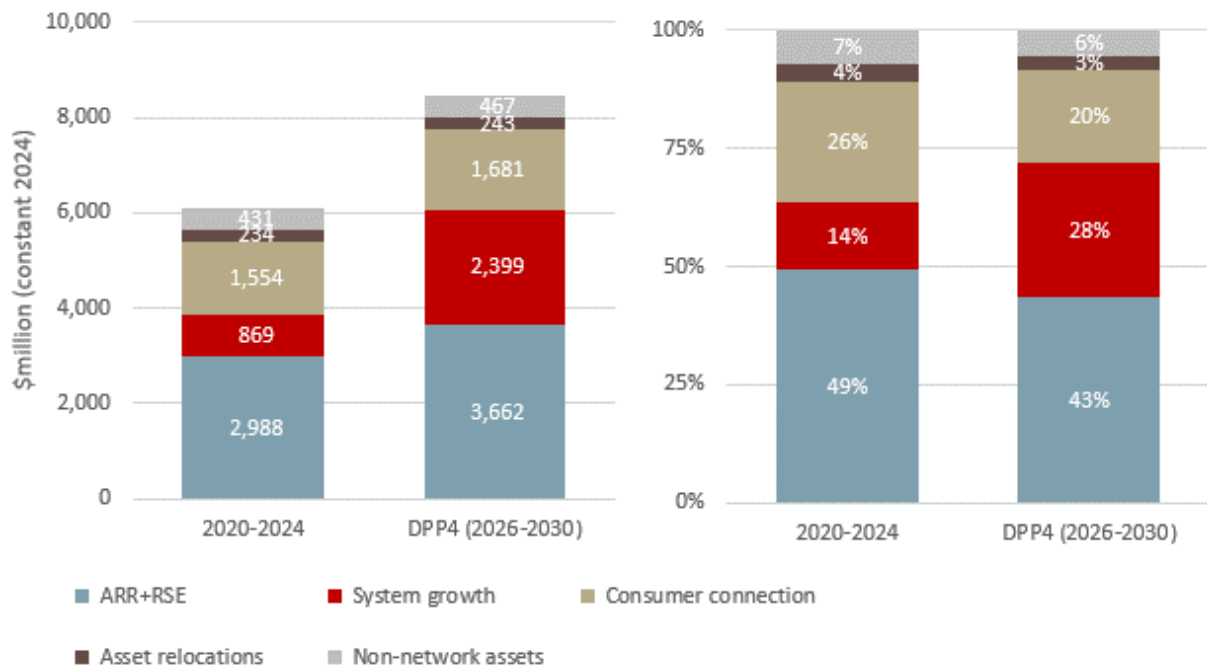
Figure B4 Forecast and actual capex (constant 2024\$)



B48 Figure B5 shows total capex (forecast and actual) on assets by category in constant 2024 dollars and spend as a proportion of total capex (before deduction of capital contributions). The forecast shows that both lifecycle renewal and system growth capex are expected to significantly increase in DPP4, with system growth forecast to have the largest increase across EDBs combined.

B49 On a proportionate basis, expenditure by asset category is forecast to remain broadly similar to historical levels for all of the categories except system growth. In constant dollar terms system growth is forecast to make up 28% of total expenditure during DPP4 compared to 14% from 2020 to 2024.

Figure B5 Composition of capex for forecast (DPP4 period) and actual (2020-2024), in constant 2024\$, and as a percentage of total capex^{19, 20}



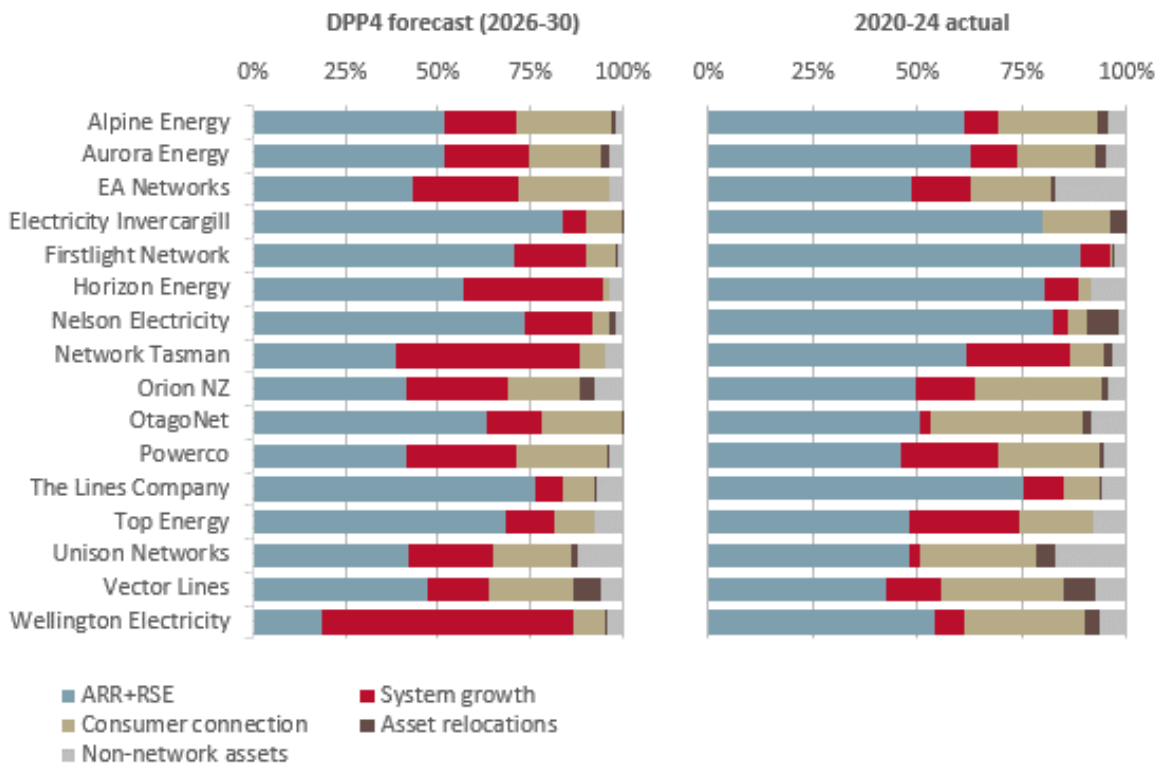
Wide range of need across AMPs

B50 At an individual EDB level, there is wide diversity in expenditure needs as shown in Figure B6. System growth capex is forecast to be a key area of investment for many EDBs, while renewal related capex, ie, asset replacement and renewal plus reliability, safety and environment (ARR + RSE) continues to be the focus for other EDBs.

¹⁹ ARR is short for Asset replacement and renewal and RSE is short for Reliability, safety and environment.

²⁰ Total forecast capex (inclusive of capex funded from capital contributions), calculated in constant dollars.

Figure B6 Composition of forecast and actual capex by EDB ²¹



B51 EDBs with material uplifts in capex categories were asked to provide a breakdown of their draft 2024 AMP network capex forecasts by primary investment driver.²²

²¹ Total forecast capex (inclusive of capex funded from capital contributions), calculated in constant dollars

²² Provided in response to a s 53ZD notice: [Commerce Commission “Notice to supply information for 2024 DPP Reset under s53ZD” \(10 November 2023\)](#) and [Commerce Commission “Notice to supply information for 2024 DPP Reset under s53ZD - Attachment B and other supporting schedules” \(10 November 2023\)](#).

Figure B7 Investment drivers for different capex types

Asset replacement and renewal, plus reliability safety and environment



System growth



Consumer connection



Overall



Traditional drivers means organic growth, resilience, asset health and reliability

Emerging drivers means process heat, distributed energy resources, commercial electric vehicle charging, small gas conversions, electric vehicles – light transport

B52 Traditional drivers continue to account for the majority of forecast in spend in aggregate, and across all categories of capex as shown in Figure B7.²³ The key area of change for DPP4 is system growth where emerging drivers account for 46% of forecast spend compared with the other categories where emerging drivers overall account for no more than 22% of forecast spend.

B53 Our view is that emerging drivers are likely to be more uncertain than traditional drivers, eg, planning assumptions for electric vehicle (EV) charging stations (which is classified as emerging) are subject to greater uncertainty than planning assumptions for new residential connections (which is classified as traditional). This view is supported by IAEngg:

Apart from business-as-usual underlying demand growth, the new growth driver arising from decarbonisation, such as process heat conversion, transport electrification and domestic gas conversion are contributing to significant demand growth forecast. The growth projections, however, are subject to a high degree of

²³ Figures reflect draft 2024 AMP figures provided in response to s 53ZD notices. Figures are approximate as they exclude forecasts from EDBs whose capex does not materially increase from historical levels. In addition, some EDBs 2024 AMP forecasts differed from their draft forecasts. As our capex allowance setting approach does not rely on investment driver information, we have not asked EDBs to provide us updated information that is consistent with their 2024 AMP forecasts.

uncertainty particularly in this initial period where government and industry as a whole are still coming to terms with the concrete policies and plans to achieve net zero by 2050.²⁴

- B54 As we explain in the *Set the capex allowance (net of capital contributions) by capping total net forecast capex at an aggregate level* section, our approach to setting capex allowances does not rely on the distinction between emerging and traditional drivers.
- B55 Given the evolving context for DPP4 and the challenges of setting capex allowances in a relatively low-cost way, we considered whether there may be some merit in moving to a shorter four-year regulatory period. Our decision to retain a five-year regulatory period is discussed further in **Chapter 2** and **Attachment H**.

Capex decisions

- B56 Our approach for setting DPP4 capex allowances, the rationale for that approach and resulting decisions are explained in this section. Of the six final decisions that determine the capex allowance for DPP4:
- B56.1 five are unchanged from draft decision:
- B56.1.1 **Decision C1:** Use EDB AMPs as the source for EDB forecast expenditure information.
 - B56.1.2 **Decision C2:** Set the capex allowance (net of capital contributions) in constant dollars based on the lower of an EDB’s total net forecast capex or 125% of its historical reference period net capex, with a subsequent adjustment for changes in forecasted levels of capital contributions for capped EDBs.²⁵
 - B56.1.3 **Decision C3:** Set the capex allowance relative to an adjusted five-year (2020 to 2024) historical reference period.
 - B56.1.4 **Decision C4:** Include an allowance for the cost of finance, scaled in proportion to the capex allowance.

²⁴ [IAEngg “NZ EDB 2023 AMP Review Forecasting and planning assessment report” \(report prepared for the Commerce Commission, 29 January 2024\)](#), p. 70

²⁵ Note that this final decision is framed differently than our draft decision, it has been reworded for better clarity but does not reflect any changes in policy.

B56.1.5 **Decision C6:** Use the All-Groups CGPI forecast with an additional adjustment to escalate the constant price capex allowance to nominal terms.

B56.2 one is a minor change from draft decision to more accurately reflect the process we have applied:

B56.2.1 **Decision C5:** Include an allowance for the value of considerations for vested assets and specifically identified spur assets.²⁶

B57 Our decisions are cognisant that a DPP functions as part of a wider suite of regulatory tools and plays a specific role in that suite of tools (see **Chapter 1** for more information). This means that for a DPP reset, we may decide to not provide for some or all uplifts signalled in AMPs, on the basis that consumers should not face the costs of step changes in investment that have not been appropriately assessed via the appropriate regulatory tool.²⁷ In these circumstances, the availability of other regulatory tools (such as reopeners and CPPs) play an important role in promoting suppliers' incentives to invest.

B58 In this reset, for some EDBs we have set allowances that are lower than their AMP forecasts, we discuss this further in the *Capex allowance for DPP4* and *Component 2 of Decision C2: Cap the increase in total net forecast capex to 125% of historical reference period net capex* sections.

Decision C1: Use EDB AMPs as the source for EDB forecast expenditure information

Final decision

B59 Our final decision is to use EDB AMPs as the source for EDB forecast expenditure information.

²⁶ The draft decision included an allowance for spur assets equal to 2024 AMP forecasts, but this was applied at zero value as we were not aware of any upcoming spur asset purchases forecast to occur during DPP4. See *Spur assets* and *Accounting for forecasted spur asset purchases within capex allowances* sections.

²⁷ See **Chapter 1** for more about the price-quality regulatory toolkit.

Problem definition

B60 We need to establish the most appropriate EDB forecast expenditure information source in the context of a relatively low-cost regime. The secondary consideration of how much reliance can be placed upon this information to set capex allowances is introduced here, but discussed in more detail within the *Extent to which information in AMPs can be relied on to set DPP allowances* section under **Decision C2**.

What we heard from stakeholders

- B61 Stakeholders generally agreed that using AMP disclosures as the most appropriate source for EDB forecast information, as opposed to a separate document or process, was appropriate and consistent with a relatively low-cost regime. Stakeholders had different views on the appropriateness or accuracy of the forecasts contained within the AMP with concerns raised by some non-EDBs on the assumptions that underpinned AMP forecasts. Submitters also had different views on the level of assurance that could be taken from the IAEngg independent review of AMPs.
- B62 The ENA, Alpine and Aurora supported the use of AMP forecasts as a starting point for setting capex allowances.²⁸ Horizon also agreed that AMPs provide realistic forecasts of future network expenditure needs and are a suitable basis for setting capex.²⁹ Powerco stated that AMPs provide the best available forecasts of EDB investment needs.³⁰
- B63 Unison submitted that the AMPs could be relied on by the Commission as a starting point to set capex allowances, since EDB forecasting practices broadly align with good industry practice.³¹
- B64 Wellington Electricity supported the use of AMPs to set capex allowances because EDBs are in a good position to understand the needs of their consumers and the investment needed to maintain a secure electricity supply.³²

²⁸ [Electricity Networks Aotearoa \(ENA\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p 4; [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p.13; [Aurora Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p.8

²⁹ [Horizon Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 1.

³⁰ [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 25.

³¹ [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 13.

³² [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 7-8

- B65 Non-EDBs on the other hand raised concerns regarding the use of AMPs for purposes of setting capex allowances. The MEUG, relying on work done on its behalf by NZIER, indicated that the AMP forecasts were not robust enough and differed from Transpower's forecasts.³³ However, in cross subs, Unison pointed out that connection and system growth forecasts are largely customer driven.³⁴ Vector stated that differences in approach between Transpower and EDB forecasting are due to different regions and forecasting timing used.³⁵
- B66 SolarZero raised a concern that AMPs do not reflect the uptake of new technologies such as solar systems and batteries. This means that the power system might not evolve. It argues that this approach is circular and likely to produce poor outcomes.³⁶
- B67 The Consumer Advocacy Council pointed to the shortcomings raised by IAEngg's and our targeted review of AMPs. It shared views on the appropriateness of relying on AMPs to set capex allowances. It stated that:³⁷

The findings of IAEngg's review and the commission's targeted review raise questions about whether consumers can have confidence in EDBs' projected expenditure and whether the "relatively low-cost regime" administered by the commission may be resulting in higher costs for households and small businesses.

Analysis

- B68 EDBs are in a good position to understand the needs of their consumers and communities, and they ought to understand the health of their assets, the risks to delivering safe and reliable electricity, and what is required to manage those risks. EDBs should have access to information on factors like:
- B68.1 current and future demand drivers for distribution services (both the quantities of demand, and the level of quality expected);
 - B68.2 how to efficiently respond to this demand through conventional investment or through innovative or non-traditional approaches;
 - B68.3 the current and future condition of their assets and the quality and safety risks these pose; and

³³ [Major Electricity Users Group \(MEUG\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 3-4

³⁴ [Unison Networks - Cross-submission on EDB DPP4 draft decisions \(2 August 2024\)](#), p. 5

³⁵ [Vector - Cross-submission on EDB DPP4 draft decisions \(2 August 2024\)](#), pp. 4-5

³⁶ [SolarZero "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 9

³⁷ [Consumer Advocacy Council "Submission on EDB DPP4 draft decisions" \(26 June 2024\)](#), pp. 2-3

B68.4 the costs incurred in providing these services.

B69 To the extent that capex allowances are informed by EDBs' expenditure forecasts, we are mindful that there are risks that forecasts could be set too high or too low relative to need, timing, cost or deliverability, particularly given the evolving nature of underlying drivers for investment.

B70 We note that the 2023 and 2024 AMPs have been produced at a point in time and therefore reflect a range of assumptions and future scenarios. As with any forecasts that are a snapshot in time in an evolving environment, the AMPs run the risk of becoming outdated.

B71 Our view is that the AMP forecasts are the most complete information available and are a suitable source for EDB forecast expenditure information. However, we did not consider it appropriate to fully adopt all EDBs' AMP forecasts as capex allowances for DPP4 (see **decision C2** below).

Decision C2: Set the capex allowance (net of capital contributions) in constant dollars based on the lower of an EDB's total net forecast capex or 125% of its historical reference period net capex, with a subsequent adjustment for changes in forecasted levels of capital contributions for capped EDBs

Final decision

B72 Our final decision is to set the capex allowance net of capital contributions in constant dollars based on the lower of an EDB's total net forecast capex or 125% of its historical reference period net capex, with a subsequent adjustment for changes in forecasted levels of capital contributions for capped EDBs.³⁸

B73 The decision to set an upper limit of 125% of historical reference period net capex at an aggregate level has been made in the context of a materially larger total forecast capex value and a higher degree of uncertainty in the forecast assumptions compared with the capex forecast for DPP3.

³⁸ Our approach for DPP4 differs from DPP3 where we applied caps at category level before applying an overall cap of 120%. This meant that ten EDBs were capped on individual categories before the 120% overall cap was applied. The 120% cap reflected the point at which we considered the cost impact on consumers justified further assessment of expenditure and was likely to be more appropriate to assess as a CPP application.

B74 Our decision comprises three components, which we discuss in the following sections:

B74.1 Component 1 of Decision C2: Set the capex allowance (net of capital contributions) by capping total net forecast capex at an aggregate level.

B74.2 Component 2 of Decision C2: Cap the increase in total net forecast capex to 125% of historical reference period net capex.

B74.3 Component 3 of Decision C2: Adjust the net capex allowance for changes in forecasted levels of capital contributions for capped EDBs.

Component 1 of Decision C2: Set the capex allowance (net of capital contributions) by capping total net forecast capex at an aggregate level

B75 Given the context for DPP4 and the information that was available to us, we have decided to apply a single cap to total capex assessed on a net basis. Our view is that this approach is consistent with the relatively low-cost nature of a DPP and the high degree of uncertainty affecting expenditure forecasts at a category level.

Problem definition

B76 We considered a range of options which included relying fully or partly, on the capex forecasts in AMPs, setting a limit on total capex and applying different limits to different categories of spend. We also considered applying those options at an aggregate and category level and defining these in dollars and percentage terms.

B77 When considering which option to apply for determining DPP4 allowances, we considered the following issues:

B77.1 **Large uplift with ranging need.** There is a need for additional investment in distribution networks, with diverse drivers for this need and variation across EDBs (including ageing assets, demand growth to accommodate process heat electrification and expected EV uptake and improving resilience).

B77.2 **Evolving environment.** Through submissions, we heard that the solutions included in EDB AMPs, particularly those with large forecast uplifts may not reflect an appropriate range of solutions, including innovative and non-traditional solutions. Some of these solutions are emerging and developing fast. The Innovation and Non-Traditional Solution Allowance (INTSA) is intended to encourage EDBs to try new things that are likely to benefit their consumers, either on their own or collaboratively. See

Chapter 3 and Attachment D for more about how the regime is incentivising innovation and non-traditional solutions.^{39, 40}

Given the substantial technological changes that are already beginning to impact the electricity industry (e.g. EV, energy efficient appliances, demand response, price responsiveness) the pattern of growth may be quite different than in the past.

.. the Electricity Authority has reported that there “appears to be little progress [amongst EDBs] in establishing price signals that reward flexibility and some regression with respect to controlled hot water” , let alone the fact that large numbers of households and businesses are – today – investing in new, advanced electricity-hungry devices (such as Evs and heating/cooling equipment) that have the potential to be smartly controlled, should the price signal exist. Further, to the best of our knowledge, very few EDBs offer export tariffs that reward injections from distributed batteries at times of peak network demand, despite there being at least 4,000 distributed solar/battery installations in the country.

B77.3 Key demand drivers are subject to significant uncertainty. We note that the policy and economic environment continues to be fluid and may mean that key demand drivers for forecast capex in the 2024 AMPs have changed or require updating. Our view is that there are other flexibility mechanisms (such as reopeners and CPPs) which are more suited for assessing these changes.

B77.4 Limited information to understand drivers for the uplift. Under a DPP, we apply a relatively low-cost assessment of readily available information to form a view of the reasonableness of capex forecasts for allowance setting purposes. Given the context and pace of change for DPP4 and the low-cost approach to assessing AMP information, we have been unable to form a view of the reasonableness of the drivers for the uplift.

What we heard from stakeholders

B78 We received limited submissions focused on our decision to apply a single overall aggregate cap. No submitter opposed the aggregate cap approach.

B79 Wellington Electricity supported applying an overall cap on forecast capex allowances.⁴¹

³⁹ [Solar Zero "DPP4 Issues paper submission" \(15 December 2023\)](#), p.6

⁴⁰ [Rewiring Aotearoa "Cross-submission on DPP4 Issues paper" \(26 January 2024\)](#), p. 6

⁴¹ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 8

B80 Submissions on the appropriateness of the 125% cap are discussed in the next section *Component 2 of Decision C2: Cap the increase in total net forecast capex to 125% of historical reference period net capex*

Analysis

B81 Our view is that the approach of applying a single cap at aggregate level is:

B81.1 consistent with the relatively low-cost nature of a DPP; and

B81.2 appropriate given the high degree of uncertainty affecting expenditure forecasts at a category level.

B82 The factors that informed our final decision on the aggregate cap are as set out below:

B82.1 We were unable to get assurance on reasonableness of all EDB capex forecasts in a relatively low-cost way.

B82.2 We were unable to identify metrics and thresholds that can assess forecast capex, in a relatively low-cost way, given the context of step changes and wide-ranging needs.

B82.3 Resilience is best considered in aggregate rather than at category level.

B82.4 Like resilience, deliverability is best considered at an aggregate level rather than at category level.

B82.5 Accounting for forecasted spur asset purchases within capex allowances

B82.6 Practical implementation issues with applying category caps compared with aggregate caps.

We were unable to get assurance on reasonableness of all EDB capex forecasts in a relatively low-cost way

B83 EDBs told us that the past is not a good reference for assessing future spend and that we should place a greater reliance on future focussed forecasts.⁴²

⁴² [Submissions](#) on the Commerce Commission "Request for feedback - Expenditure forecasting by electricity distribution businesses and areas of focus for the 2025 default price-quality path reset"(15 November 2023); [Submissions](#) on the Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025:Proposed process" (25 May 2023); [Submissions](#) and [cross-submissions](#) on the Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 - Issues paper" (2 November 2023).

- B84 The DPP4 Issues paper identified that for a number of EDBs the 2023 AMPs represented a large step change in forecast expenditure. Having confidence in the AMPs is critical for enabling the forecasts in these plans to be relied on, particularly where there are material step-changes in forecast expenditure and historical expenditure provides less guidance on what is appropriate.
- B85 As part of the independent review of 2023 AMPs, we asked engineering consultancy Innovative Assets Engineering (IAEngg), to provide a view of the elements of EDBs' forecasts that are certain and areas that have less certainty, and variations across the industry on common elements. IAEngg were tasked to identify and analyse key drivers of change, uncertainties, and variables in financial and demand forecasts and provide an opinion on the reasonableness of the variations. The review findings would inform our understanding of the basis on which EDB forecasts may be used to set the DPP.
- B86 The final AMP review report and our view on its use in DPP4 are located on our website.⁴³ The review findings have been a useful input into our process for determining the approach for setting capex allowances.
- B87 The independent review of the 2023 AMPs was not intended to verify expenditure forecasts and therefore did not provide an opinion on whether expenditure forecasts are reasonable.
- B88 The independent review of the 2023 AMPs provided some comfort that EDBs' capex forecasting approaches, as explained in their AMPs, broadly align with good industry practice but was unable to provide the assurance we needed for allowance setting purposes:⁴⁴

While IAEngg can provide an opinion on the reasonableness of the forecasting approach based on assessing the quality of the forecasting model, we cannot provide an assurance of the forecasting output (volume of assets to be replaced) without examining the model inputs. In the same way, IAEngg cannot provide an opinion on the reasonableness of the expenditure forecast without access to the unit rates used to convert volumes of work into expenditure.

⁴³ [IAEngg "NZ EDB 2023 AMP Review Forecasting and planning assessment report" \(report prepared for the Commerce Commission, 29 January 2024\); Commerce Commission "Using the 'NZ EDB 2023 AMP Review' report within the DPP4 Reset" \(14 February 2024\)](#)

⁴⁴ [IAEngg "NZ EDB 2023 AMP Review Forecasting and planning assessment report" \(report prepared for the Commerce Commission, 29 January 2024\), p. 73](#)

- B89 We note that the requirements for an AMP differ from a CPP proposal and are created for different purposes.^{45, 46} The focus of an AMP is primarily on providing information to interested persons on asset management practices. The content and process requirements for a CPP proposal are aimed at supporting our evaluation of a supplier’s expenditure proposal, including whether the expenditure sought meets the expenditure objective.⁴⁷
- B90 While the AMP includes requirements related to demand and related expenditure forecasts these are comparatively limited compared to what would be contained within a CPP proposal. For example, a subset of the information requirements for a CPP proposal may be met by submitting an AMP as part of a CPP proposal.⁴⁸
- B91 We undertook a targeted review of EDB AMPs and reached similar conclusions as IAEngg. We found that forming a view on the reasonableness of expenditure forecasts for the purposes of setting allowances was not practical or possible to achieve in a relatively low-cost way. This also meant that we were unable to conclude whether EDB forecasts had appropriately considered the use of non-traditional or non-network solutions to help manage demand on their networks, or whether EDB forecasts were justified and in the long-term interest of consumers.
- B92 Instead, we found it more practical and useful to use AMP information to identify whether flexibility mechanisms could be used appropriately and effectively to increase allowances for investment needs that become clearer later in DPP4.
- B93 We note that references to AMP analysis or reviews in this section and in this attachment generally, relate to 2023 full AMPs rather than the 2024 AMP updates. The 2023 AMPs were the best information available to us at draft decision stage to base targeted reviews on.

⁴⁵ The requirements of an AMP are detailed within Attachment A of the [Commerce Commission “Electricity Distribution Information Disclosure Determination 2012” \(6 July 2023\)](#)

⁴⁶ The requirements of a CPP proposal are in Part 5 of the [Commerce Commission “Electricity Distribution Services Input Methodologies \(IM Review 2023\) Amendment Determination 2023” \(13 December 2023\)](#)

⁴⁷ Expenditure objective means the objective that capex and opex reflect the efficient costs that a prudent non-exempt EDB would require to a) meet or manage the expected demand for electricity distribution services, at appropriate service standards, during the DPP regulatory period or CPP regulatory period and over the longer term; and (b) comply with applicable regulatory obligations associated with those electricity distribution services

⁴⁸ [Commerce Commission “Electricity Distribution Services Input Methodologies \(IM Review 2023\) Amendment Determination 2023” \(13 December 2023\)](#), Schedule D.

We were unable to identify metrics and thresholds that could help assess forecast capex, in a relatively low-cost way, given the context of step changes and wide-ranging needs

B94 In past resets we have used metrics and tests to help assess forecast capex and set capex allowances. Given the context of change and the scale of forecast uplift in investment signalled for DPP4, we do not consider it appropriate to use metrics in the same mechanistic way as past resets.

B95 We identified a range of potential metrics for DPP4 (see Table B3) and sought feedback on these metrics and alternative approaches at our capex workshop in February 2024.⁴⁹

Table B3 Metrics considered in capex workshop

Capex category	Metrics identified
Total capex	<ul style="list-style-type: none"> Capex intensity trends (capex as a proportion of total capex forecast vs historical levels)
Asset replacement and renewal and Reliability, safety and environment	<ul style="list-style-type: none"> Forecast vs historical spend Forecast capex vs implied (forecast) depreciation Depreciation vs depreciated asset value
Consumer Connections	<ul style="list-style-type: none"> Forecast vs historical spend Forecast capex per new connection Investment driver (traditional vs emerging drivers)
System Growth	<ul style="list-style-type: none"> Forecast vs historical spend Investment driver (traditional vs emerging drivers) Growth in maximum coincident peak demand Forecast capex per forecast incremental maximum coincident peak demand
Non-network assets and asset relocations	<ul style="list-style-type: none"> Forecast vs historical spend

⁴⁹ [Commerce Commission “Capital expenditure framework design – workshop slide deck” \(19 February 2024\)](#), Slides 29-52.

B96 While we found the metrics useful for screening purposes, we were unable to identify metrics (including based on workshop feedback) that would allow us to gain comfort about the reasonableness of capex forecasts. Given the challenges outlined earlier on AMP scrutiny, our view was that the metrics identified were not able to effectively distinguish between forecast capex that is reasonable and forecast capex that is not reasonable. We were also unable to identify any alternative analytical approaches which would allow us to draw stronger conclusions on whether the forecast expenditure was reasonable.

B97 Wellington Electricity agreed with our approach stating:⁵⁰

...The alternative methods considered during the Issues Paper were either complex and didn't align with the low-cost DPP approach to setting allowances, or the data wasn't available to support the proposed methodology...

B98 Similar to submissions received following the capex workshop, we had limited engagement from stakeholders on potential new metrics, additional information on the metrics and thresholds or alternative analytical approaches that changed our view about the application of these in our approach.

B99 We do not consider that using a wider range of metrics would be a better approach for setting DPP4 allowances than our decision to use a simple assessment of forecast capex against historical reference period capex.

Resilience is best considered in aggregate rather than at category level

B100 Resilience expenditure or the portion of expenditure specifically associated with resilience is not separately itemised in EDB AMP forecasts or AMP information. Therefore, assessing the quantum and prudence of such expenditure is difficult.

B101 The feedback on the DPP4 Issues paper revealed differences in approach to resilience planning across EDBs but did not provide a clear conclusion about whether a separate assessment was needed for resilience when setting capex allowances or what type of adjustment was needed if any.

B102 Resilience expenditure was specifically included in our DPP4 Issues paper for feedback because of the uncertainty regarding the scale of spend needed to prepare for an increasing number of severe weather and cyber security events. Our view was that recent events may have changed the risks and parameters which EDBs use to assess resilience.

⁵⁰ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p.8.

B103 Several submitters indicated that resilience is not a stand-alone capex project or cost category, but is instead embedded in the way EDBs design, build, operate and maintain their networks.⁵¹

B104 For instance, Unison indicated that its resilience work is predominantly built-in as a component of carrying out other individual work projects.⁵² Similarly, Aurora indicated that investment in resilience is often integrated into its network strategies, standards, and guidelines as part of routine work.⁵³

B105 PowerNet stated that:⁵⁴

PowerNet is confident that as best as it can be, resilience planning has been, and will continue to be, reflected in our expenditure forecasts. We support the ENA submission in that resilience is not a stand-alone project or cost category, rather embedded in the design, build, and operations of our networks ... PowerNet, as a servicer of critical infrastructure is acutely aware of the need for resilient networks in an environment where the rate and scale of change is unprecedented.

B106 In addition to submissions on the DPP4 Issues paper on this topic, we used the s 53ZD notice to collect information about how EDBs have reflected resilience in their draft 2024 AMP expenditure forecasts.⁵⁵

B107 In response to the s 53ZD notice, two EDBs indicated that they expected to spend approximately 14% of their forecast expenditure on resilience related expenditure. Of the remaining EDBs approximately half forecasted zero expenditure where resilience was the primary driver, and the other half expected to spend between 3% and 6% of forecast capex on resilience.

B108 Our assessment of the information provided in response to the s 53ZD information and targeted review of the 2023 AMPs informed our view that there is no source for resilience expenditure information that could be assessed using a relatively low-cost approach that is consistent with the DPP. We also note the differences in categorisation of resilience between EDBs.

⁵¹ [Electricity Networks Aotearoa \(ENA\) "DPP4 Issues paper submission" \(19 December 2023\), p.10](#); [PowerNet "DPP4 Issues paper submission" \(19 December 2023\), p. 3](#); [Aurora Energy "DPP4 Issues paper submission" \(19 December 2023\), p. 14](#)

⁵² [Unison Networks "DPP4 Issues paper submission" \(19 December 2023\), p. 13](#).

⁵³ [Aurora Energy "DPP4 Issues paper submission" \(19 December 2023\), p. 14](#).

⁵⁴ [PowerNet "DPP4 Issues paper submission" \(19 December 2023\), p. 3](#).

⁵⁵ Expenditure provided in response to the notice is grouped in terms of "primary driver" and does not necessarily represent forecast expenditure which may make an EDB's network more resilient.

- B109 This conclusion was supported by the IAEngg report which attempted to assess resilience expenditure on the information available in EDBs' 2023 AMPs. IAEngg concluded that, while it appears that all EDBs have considered planning for high-impact-low-probability events, the majority of EDBs do not itemise the expenditure they define as resilience-related. Instead, resilience expenditure has been grouped into various capex and opex regulatory categories. As such, IAEngg could not determine the reasonableness of proactive resilience expenditure given the lack of detailed information in the AMPs.⁵⁶
- B110 While resilience as an investment driver is expected to gain in importance, the form and quantum of investment for DPP4 is subject to ongoing development by EDBs. For DPP4, we have decided to not assess resilience separately and to instead consider it as part of the setting of the overall capex allowance. An aggregate cap approach to setting capex allowances lends itself better to resilience expenditure that is currently integrated and embedded, rather than more granular approaches such as category caps.
- B111 We note that EDBs have access to the new resilience reopener, added in the recently concluded 2023 IM Review, for proactive and pre-emptive resilience expenditure that meet certain criteria.

Like resilience, deliverability is best considered at an aggregate level rather than at category level

- B112 Deliverability represents a risk that investment is needed but cannot be delivered due to resource constraints. The risk to consumers is that if EDBs receive allowances for projects that are not delivered, this may translate into elevated profits, not through improved efficiency but non-delivery.
- B113 Deliverability is a particular concern for DPP4 given various independent reports and Transpower's independent verifier report, see the *Deliverability of a significantly larger capex work programme* section for more detail.

⁵⁶ [IAEngg "NZ EDB 2023 AMP Review Resilience Assessment Report" \(report prepared for the Commerce Commission, 17 April 2024\)](#), pp. 3-25.

- B114 We expressed our concern regarding EDBs' ability to deliver their expanded work programmes while facing supply chain and labour market constraints in the DPP4 Issues paper, at our capex workshop in February 2024 and in our draft reasons paper.^{57, 58, 59}
- B115 Our view is that, under a relatively low-cost DPP, it is difficult to be definitive on the scale of deliverability risk, noting that this will be different for individual EDBs and also within individual projects and programmes of work. This view was also supported by Vector who stated that while an assessment of deliverability is consistent with the s52A purpose statement, it was unlikely that a highly individualised assessment of each EDB's capacity to deliver would be consistent with the low-cost objective of DPP regulation.⁶⁰
- B116 The IAEngg report noted that only a small number of EDBs appeared to have clearly considered the deliverability challenge that will result from an enlarged capital programme. The report further stated that:⁶¹

There is insufficient information in the AMPs for us to determine the proportion of the increased forecast expenditure that is driven by cost and the proportion driven by increased volumes of work. However, given the size of the total increase in forecast expenditure, it is likely that material increases in the volume of activities is forecasted.

⁵⁷ [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 – Issues paper" \(2 November 2023\), paragraphs E65-E78.](#)

⁵⁸ [Commerce Commission "Capital expenditure framework design – workshop slide deck" \(19 February 2024\), slides 67-77.](#)

⁵⁹ [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 – Draft Reasons paper" \(29 May 2024\), B122-B129.](#)

⁶⁰ [Vector "Cross-submission on DPP4 Issues paper" \(26 January 2024\), pp. 20-21.](#)

⁶¹ [IAEngg "NZ EDB 2023 AMP Review Forecasting and planning assessment report" \(report prepared for the Commerce Commission, 29 January 2024\), p. 91.](#)

B117 AMPs do not set out the resourcing requirements (line mechanics, technicians, electrical engineers etc) to deliver the forecast plan, nor do they provide information on levels of recruitment to meet any gap between current resources and requirements over the planning period. Accordingly, in the context of industry-wide ramp-up in expenditures, we do not have visibility of industry plans to address total resource requirements. This differs from Transpower which is in the process of executing a developed plan to increase its workforce. The level of assessment required to assess these complexities to inform a view of the deliverability of an EDB's forecast capex programme would be inconsistent with a relatively low-cost DPP.

B118 Under a DPP, EDBs do not receive allowances for individual or category level projects. Unison, while not supporting a deliverability assessment, pointed out that:
62

DPPs do not involve approval of a work programme, rather expenditure envelopes for opex and capex are included in forecast building blocks, based on a top-down approach, common to all non-exempt EDBs. Within that envelope, EDBs are free to allocate funds as required, and to respond to events that emerge during the regulatory period.

B119 Consistent with our treatment of other components of uncertainty, ie, need, timing and cost, we have not separately identified or quantified adjustments for deliverability in our framework. Deliverability has been considered at an aggregate rather than at a specific programme, project or category level. This approach to considering deliverability is aligned with and supports an aggregate cap approach of setting allowances.

Accounting for forecasted spur asset purchases within capex allowances

B120 Our final decision is that spur asset acquisitions which may be forecast to occur, but were not specifically identified in our process undertaken to set capex allowances, are considered as part of our general approach to capex allowances whereby the allowance is determined by assessing forecast capex in the AMP at an aggregate level.

B121 On occasion, Transpower has sold 'non-core' transmission grid assets (referred to as spur assets) to the EDB that connects to these assets. Asset purchases from Transpower can affect the return on and of capital that an EDB can expect to earn during the regulatory period.

⁶² [Unison Networks "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 11.

B122 In previous resets, spur assets were considered separately for the purposes of providing explicit allowances as there were known spur asset purchases forecasted by EDBs:

B122.1 In DPP2, Eastland and Network Tasman forecasted the purchase of spur assets in the first year of the regulatory period. An allowance for forecasted additional capex associated with these spur assets was provided based on forecast information provided by EDBs through an information request.⁶³

B122.2 In DPP3, stakeholders were asked to provide information on historical purchases of transmission assets so that these could be taken into account in setting capex allowances (ie, excluded from the historical reference period for scrutiny and capping purposes due to their distortionary impact and then added back into final allowances).⁶⁴

B123 Our capex model, including the model published in support of the draft decision, provides flexibility to include specifically identified spur asset purchases to be listed separately from other components of the capex allowance as the revenue wash-up allows for removal of these from allowances if the purchase does not proceed.⁶⁵ See *Decision C5: Including an allowance for the value of considerations for vested assets and specifically identified spur assets* section.

B124 Whilst spur assets are separately listed, the value for inclusion is nil for all EDBs. We were not advised of any spur asset purchases being considered by EDBs as part of our reset process nor did the targeted review we undertook on a selection of EDB AMPs identify any spur asset purchases forecast to occur during DPP4. We did not undertake a detailed AMP review to separately identify planned spur asset purchases.

⁶³ [Commerce Commission "Default price-quality paths for electricity distributors from 1 April 2015 to 31 March 2020 - Main policy paper"\(28 November 2014\)](#), paragraphs D50-D56.

⁶⁴ [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2020 – Final decision Reasons paper" \(27 November 2019\)](#), paragraphs B182-B189.

⁶⁵ The 2023 IM review removed the specific "Transmission asset wash-up adjustment" incorporating this previous recoverable cost into the overall wash-up mechanism. See [Commerce Commission "Input methodologies review 2023 - Final decision - Report on the Input methodologies review 2023 paper" \(13 December 2023\)](#), paragraphs 7.46-7.47.

- B125 This approach is consistent with a relatively low-cost DPP and how we have treated other one-off capex expenditure. We also note that spur assets are not required to be separately disclosed under ID. Accordingly, AMP forecasts may include potential spur asset purchases that we have not specifically identified in our process undertaken to set capex allowances, in which case these would be treated the same as other forecast capex.
- B126 For DPP3, EDBs forecasted value of spur asset purchases were zero for the DPP3 regulatory period.
- B127 Alpine, Wellington Electricity and Aurora supported our draft decision on spur assets.⁶⁶
- B128 Powerco highlighted that a potential issue with spur assets arises when a purchase occurs within the regulatory period but was not included in the 2024 AMP. Powerco suggested that a reopener should be available for spur asset acquisitions and sought clarification on whether reopeners are available for these.⁶⁷
- B129 We did not receive any cross submissions on this topic.
- B130 We intend to engage with EDBs on the application of reopeners, including the issuance of guidance. Potential coverage of reopener provisions will be considered within that work.

Practical implementation issues with applying category caps compared with aggregate caps

- B131 We considered setting multiple caps applied to expenditure categories or alternatively a single cap applied at an aggregate level, but have decided not to set category caps because of:

B131.1 **Inconsistencies in classification.** Our disclosure requirements for expenditure categories require interpretation and application by EDBs about how they classify spend, particularly where there is more than one driver of expenditure. This may result in differences in how EDBs classify expenditure across different capex categories which means that setting allowances using category caps may not have sufficient rigour to place reliance on.

⁶⁶ [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 13; [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 13; [Aurora Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 8.

⁶⁷ [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p.25.

B131.2 Unintended consequences of constraining EDBs that run cyclical programmes for different types of works. We are aware that some EDBs run cyclical programmes for different types of works. Setting caps at category level may constrain EDBs with how they plan their programmes of work.

B132 Wellington Electricity agreed with our approach stating:⁶⁸

We also agree that there is no sensible method of applying gates to specific types of capex expenditure ... our experience from the capex gates developed for DPP3 is they create arbitrary cuts to capex forecasts rather than prudent capex profiles which reflect the investment needs of the network and do not over-forecast expenditure.

Component 2 of Decision C2: Cap the increase in total net forecast capex to 125% of historical reference period net capex

Structure of this section

B133 There were four factors that informed our final decision to set the cap at 125% of historical reference period net capex. In this section, we first provide an overview of our decision and of submissions on the 125% cap. We then discuss the four factors, the more detailed submissions relevant to those four factors and our analysis of those. The four factors are:

B133.1 Extent to which information in AMPs can be relied on to set DPP allowances

B133.2 Deliverability of a significantly larger capex work programme

B133.3 Potential increased use of flexibility mechanisms

B133.4 Materiality of changes in capex allowances on DPP4 revenue allowances

⁶⁸ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 8.

Overview

- B134 For DPP4, we have determined that a cap of 125% is appropriate given the need for higher capex to support electrification and respond to climate change, the wide diversity in expenditure needs across EDBs, the evolving environment, key drivers that are subject to significant uncertainty, relatively low-cost approach to assessment consistent with a DPP and deliverability challenges facing the sector. Our view is that the cap of 125% will promote incentives to invest while limiting EDBs ability to extract excessive profits, given the availability of flexibility mechanisms such as reopeners and CPPs that can be used where appropriate.
- B135 We considered whether the cap could be set lower than 125% but consider that doing so would likely result in a higher reliance and burden on flexibility mechanisms during the period to justify expenditure which is likely in the long-term benefit of consumers. We consider that this would be inconsistent with a relatively low-cost regime.
- B136 In determining an appropriate cap, we have considered the risk to consumers of capex forecasts being too low or too high, including because they are too ambitious to deliver. We have been mindful that the DPP is intended to be 'generic' and 'sector-wide' rather than tailored to business-specific circumstances. There is therefore an element of judgement that needs to be applied when setting the cap within that context.
- B137 We note that the DPP4 expenditure allowance represents a base allowance. We do not set expenditure limits or restrict EDBs in their extent of spending. If EDBs forecast a need to incur additional expenditure that they may not be able to accommodate within the settings of their current price-quality path through reprioritisation or substitution of expenditure, there are other mechanisms (reopeners and CPPs) available to them where appropriate, that enable that expenditure to be assessed separately. We consider it is in the long-term benefit of consumers that planned investment, that cannot be met from the base allowance, is subject to additional assessment under these other mechanisms.

What we heard from stakeholders overall relating to the level of the 125% cap

- B138 In summary, most submissions supported either a higher capex allowance (implemented via a higher cap or by applying no cap to AMP forecasts) or alternatively a lower capex allowance (implemented via a lower cap).
- B139 Most submissions from EDBs argued that the cap at 125% is too low.

B140 EDBs raised that the cap should be increased as resulting allowances may be insufficient to accommodate required investment for network growth to support the needs of their customers, network reliability, resilience, may not promote lowest lifecycle costs for assets and result in higher volumes of reopeners which may be burdensome for both EDBs and us.⁶⁹ For example:

B140.1 Orion said:⁷⁰

With insufficient allowances, EDBs will need to make difficult trade-offs between maintaining their existing networks, improving the network's resilience and providing for new connections. While customer do not want unnecessary cost increase, they also want a network that provides reliable and resilience electricity and provides for new connections in a timely manner.

B140.2 Alpine stated:⁷¹

The urgency of improving network resilience and enabling the energy transition has been diluted by the technicalities of the DPP framework, and current economic conditions. Customers need to have confidence in EDBs to deliver the capacity and quality they expect as our sector responds to the urgent challenges of climate change and the energy transition. DPP4 settings for capex and opex and reopeners need to support this outcome.

B140.3 Unison commented:⁷²

The stark change in context between DPP3 and DPP4 sits uncomfortably with permitting only 5 percentage points more capex expenditure over the 2026-2030 period...

B141 EDBs submitted in favour of:

B141.1 providing for their AMP 2024 capex forecasts in full;⁷³ or

B141.2 a higher cap:

⁶⁹ [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 5; [Horizon Networks "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), pp. 1,3; [Orion "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), pp. 1, 5; [Alpine Energy - Cross-submission on EDB DPP4 draft decisions \(2 August 2024\)](#), pp. 3-4; [Firstlight Network "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#). p. 3; [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 5.

⁷⁰ [Orion "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), p. 4.

⁷¹ [Alpine Energy "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), pp. 1-2.

⁷² [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 3.

⁷³ [PowerNet "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 5-6.

B141.2.1 ENA, Unison, Alpine and Powerco suggested a 130% cap.⁷⁴

B141.2.2 Wellington Electricity suggested a 135% cap.⁷⁵

B141.2.3 Horizon suggested a 150% cap.⁷⁶

B142 Overall EDBs' primary views in favour of increased allowances were as follows:

B142.1 the DPP should provide for most or all of the capex allowances required, including because a materially higher cap has only modest price impacts during DPP4;

B142.2 they acknowledge the availability of reopeners but that these should not be relied on too heavily as they are concerned about our ability to process these; and

B142.3 EDBs needing a step change in expenditure will have to consider CPPs which are likely challenging for smaller EDBs, may not be in the long-term interest of consumers and at earliest start midway through the DPP4 regulatory period.⁷⁷

B143 Non-EDB submitters thought differently. MEUG supported our decision to set an allowance below the AMP forecast but considered that it should be lower than 125%.⁷⁸ Fonterra was of the view that EDB capex allowances should be held at historical levels.⁷⁹ SolarZero considered reliance on the AMP is circular and could result in poor outcomes.⁸⁰ All three submitters were primarily concerned about AMP forecasts not being robust and sufficiently reflecting non-network solutions.

B144 While most submitters disagreed with our draft decisions, we received support from four submitters:

⁷⁴ [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp.9-10 & 25; [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 5; [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 13; [Electricity Networks Aotearoa \(ENA\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 19.

⁷⁵ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 12.

⁷⁶ [Horizon Networks "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), p. 4.

⁷⁷ [Electricity Networks Aotearoa \(ENA\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 7 and 19; [Orion "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), p. 6.

⁷⁸ [Major Electricity Users Group \(MEUG\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 2-4.

⁷⁹ [Fonterra "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p.1.

⁸⁰ [SolarZero "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 9.

- B144.1 Aurora said “Overall, we feel the Commission have struck a fair balance in their setting of the initial capex allowances.”
- B144.2 Powernet stated "In setting allowances for DPP4, we acknowledge the Commission has made a thorough effort to balance significant issues facing the sector, and we also acknowledge the challenge of doing so in a time of such heightened rate of change."⁸¹
- B144.3 Flick submitted it “agrees with the Commission’s approach to approve less than EDBs’ forecast opex and capex in aggregate due to uncertainty and deliverability risks.”⁸²
- B144.4 Rewiring Aotearoa submitted “...we welcome the approach the Commerce Commission has taken of not approving over \$1 billion in unnecessary increases and support the Commission holding firm on these decisions.”⁸³
- B145 EDB cross-submissions reiterated their requests for a higher cap and supported similar views expressed by their counterparts on the need for a higher cap.⁸⁴ Several EDB cross-submissions disagreed with the views expressed by non-EDB submitters on a lower cap.⁸⁵ MEUG, in its cross-submission, held its view on whether increases to caps were required.⁸⁶

Extent to which information in AMPs can be relied on to set DPP allowances

- B146 The discussion in this section relates to what extent we have used information in EDB AMPs to set DPP allowances given the DPP is a relatively low-cost tool. This topic was introduced earlier in *Decision C1: Use EDB AMPs as the source for EDB forecast expenditure information* section but discussed in more detail here.

⁸¹ [PowerNet “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#), pp. 5-6.

⁸² [Flick Electric “Submission on EDB DPP4 draft decisions” \(9 July 2024\)](#), p. 1.

⁸³ [Rewiring Aotearoa “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#), p 2.

⁸⁴ [Orion "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), pp. 3-4; [Unison Networks "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), p. 1; [Alpine Energy "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), pp. 5, 7.

⁸⁵ [Wellington Electricity "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), p. 4; [Alpine Energy "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), pp. 5-6.

⁸⁶ [Major Electricity Users Group \(MEUG\) "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), pp. 2,4.

Problem definition

B147 AMP forecasts are subject to greater uncertainty than past resets (see *Context for DPP4 and Set the capex allowance (net of capital contributions) by capping total net forecast capex at an aggregate level* sections). This includes responding to electrification, the need to improve network resilience in response to climate change, input price pressures due to labour market and supply chain challenges and asset life cycle costs.

What we heard from stakeholders

B148 We received a range of submissions on the weight to give to AMP forecasts.

B149 Some EDBs submitted (including based on their view of the level of assurance that can be derived from the IAEngg report) that AMPs are sufficiently robust that we should adopt a higher cap or adopt AMP forecasts in their entirety as the capex allowances.

B150 Non-EDBs were concerned that the AMP forecasts are not appropriately justified and supported and do not reflect non-network solutions. Their view was that AMP forecasts should be relied on less or should not be relied on.

B151 Horizon stated that it has used a risk-based approach to identify investment needs in its AMP and that this approach is backed up by ISO55001 certification and an external review. Given this, it submitted that its AMP is a realistic forecast of future network expenditure needs and is a suitable basis for setting capex allowances instead of a cap. It suggested that if a cap is considered necessary, that a 150% cap should be applied.⁸⁷

B152 Wellington Electricity advocated for a higher cap with a view that more robust AMPs can be relied on, pointing out that the risk of EDBs extracting excessive profits from over-forecasting is mitigated by the greater scrutiny of the 2024 AMPs, including the review by IAEngg and the Commission's request for additional information.⁸⁸

⁸⁷ [Horizon Networks "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), pp. 2,6.

⁸⁸ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 9-10.

B153 ENA noted that AMP scrutiny has been greater than for any previous DPP reset and this is more than sufficient to give us the confidence that a higher cap of 130% is proportional to the level of scrutiny and in the long-term interest of consumers.⁸⁹

B154 Unison stated that:⁹⁰

...The Commission are approaching DPP4 well informed about the impacts of climate change and consumer expectations of improved resilience, global and national progress to electrify, and with verified methodologies relating to forecasting increasing growth in connection capex and system growth work as provided by the IAENgg AMP Review.

B155 In response to the draft reasons paper, MEUG submitted it was not convinced that sufficient justification had been given to move away from the 120% limit applied for DPP3. It said there may be higher forecast expenditure, but there is also greater uncertainty. It was unconvinced that demand may grow at the rate predicted by many of the EDBs, noting that there had been a dampening in electricity demand following the change in government energy policy and a slowing economy, signalling that the EDBs estimates may be too optimistic. It also said that from its work with NZIER, there also seemed to be inconsistencies between demand forecasts outlined by Transpower and those provided by some EDBs in their AMPs.⁹¹

B156 MEUG supported a conservative approach and said a reduction in capex allowances is justified given the level of scrutiny able to be applied in a DPP. It also raised that the findings of the IAEngg review raises questions about whether consumers can have confidence in EDBs' projected expenditure.⁹²

B157 Fonterra was of the view that EDB capex forecasts in AMPs should be held at historical levels and only inflated by the All-Groups CGPI. It did not support the 25% uplift compared to historical spend and said that most of the proposed increase was being made on the presumption of increased electrical demand due to decarbonisation electrification which may not eventuate.⁹³

⁸⁹ [Electricity Networks Aotearoa \(ENA\) "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), pp. 1-2.

⁹⁰ [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 3.

⁹¹ [Major Electricity Users Group \(MEUG\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraphs 11-12.

⁹² [Major Electricity Users Group \(MEUG\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraph 13.

⁹³ [Fonterra "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 1.

- B158 The Consumer Advocacy Council raised that EDBs' forecast expenditure relied heavily on the approaches and assumptions in their AMPs and the limitations of AMPs as highlighted by the IAEngg review.⁹⁴ SolarZero commented that AMPs are not yet reflecting the uptake of new technology and approaches such as flex and efficiency.⁹⁵
- B159 We also received feedback from both EDBs and non EDBs on the challenges of reflecting potentially increasing resilience expectations in forecasts.
- B160 Vector in its 2024 AMP stated that resilience investment of around \$300 million has not been included in forecasts as they continue to consult with stakeholders to determine the best value for money approach against resilience goals.⁹⁶
- B161 Vector also noted that there is value in holding more spares and inventory of key assets to respond to key weather events and global supply chain challenges.⁹⁷ We note that the current IMs enables EDBs to hold network spares as long as they are held in appropriate quantities with consideration of the reliability of the equipment and the number of items installed on the network.⁹⁸
- B162 Horizon pointed to the fact that resilience investment is challenging because there are multiple natural hazards that could threaten the network and there are interdependencies between infrastructure providers.⁹⁹
- B163 Powerco stated that there is increasing importance in enhancing network resilience, especially because of recent events such as cyclone Dovi and Gabrielle and the energy transition leading to increased consumer reliance on electricity.¹⁰⁰
- B164 Non-EDB resilience related submissions were focused on AMP forecasts not sufficiently reflecting non-network solutions to address resilience.

⁹⁴ [Consumer Advocacy Council "Submission on EDB DPP4 draft decisions" \(26 June 2024\)](#), paragraphs 10-11.

⁹⁵ [SolarZero "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 9-10.

⁹⁶ [Vector 2024 AMP](#), p. 7.

⁹⁷ [Vector "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 26.

⁹⁸ [Commerce Commission "Input methodologies review 2023 - Final decision - Report on the Input methodologies review 2023 paper" \(13 December 2023\)](#), p. 227, decision AV07.

⁹⁹ [Horizon Networks "additional information DPP4 Issues paper submission" \(19 December 2023\)](#), p. 8.

¹⁰⁰ [Powerco "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 4

- B165 SolarZero submitted that weather events are going to become more extreme due to climate change.¹⁰¹ Therefore, new approaches are needed, and the Commission should encourage lines companies to adopt a distributed approach to resilience. It reiterated in his draft reasons paper submission that distributed energy resources such as solar and batteries provide a new approach to resilience.¹⁰²
- B166 Similarly, Rewiring Aotearoa submitted that in future, customer energy resources will play a similar role as traditional networks, providing reliable network and market services.¹⁰³
- B167 There were some targeted comments on resilience in cross submissions to our draft reasons paper.

Analysis

- B168 The IAEngg independent review of AMPs and our own targeted reviews of a selection of AMPs at draft decision stage confirmed that we are unable to use AMPs in a relatively low-cost way to set individual allowances based on our view of that information, or adopt full AMP forecasts as our capex allowance. See also *We were unable to get assurance on reasonableness of all EDB capex forecasts in a relatively low-cost way* section.
- B169 EDBs' AMP forecasts are prepared using a variety of assumptions and approaches. There is significant uncertainty about the timing, scale, and location of forecast demand increases. The primary purpose of the AMP is as an asset management tool, they are not necessarily an appropriate forecast for investment for revenue setting purposes. Nonetheless they represent the most comprehensive information available for understanding likely capex needs. While capex allowances are based on AMP forecasts, we do not consider it appropriate to set allowances based on full acceptance of EDBs' forecasts.
- B170 This also means we are unable to conclude whether EDB forecasts are justified and in the long-term interest of consumers and have appropriately considered the use of non-traditional or non-network solutions.

¹⁰¹ [Solar Zero "DPP4 Issues paper submission" \(15 December 2023\)](#), p. 8.

¹⁰² [SolarZero "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 11.

¹⁰³ [Rewiring Aotearoa "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 1.

Deliverability of a significantly larger capex work programme

Problem definition

- B171 Non-exempt EDBs are forecasting to spend \$8.5 billion, compared with actual spend of \$6.1 billion from 2020 to 2024 (in constant dollars) as discussed in the section *Large capex uplifts, particularly in system growth, are signalled in AMPs*.
- B172 We are concerned that sector-wide resource constraints mean that the capex uplifts of the magnitude put forward by EDBs in their AMP forecasts may not be deliverable.
- B173 Total capex in constant dollars is our best available measure of the volume of work forecast by EDBs for DPP4. While DPP4 only provides funding for capex net of capital contributions, the challenge for the DPP4 period is not just about assessing need, timing and cost of investments, but also assessing how much work can be undertaken with the resources (labour and material inputs) available. It is unclear if a capex uplift of this size would be deliverable.
- B174 We considered past expenditure trends to understand the scale of delivery achieved by EDBs and particularly observed step changes. Looking at historical trends, EDBs that had sustained increases in capex delivery were largely CPPs. Those EDBs would have had to plan for and implement step changes in organisational capacity and capability to be able to deliver. We were unable to infer from historical trends how EDBs as a sector would be able to deliver elevated capex work programmes when all or most EDBs individually have large programmes of work and would be competing for resources from a common pool.
- B175 Our analysis of cost indices (see *Recent input price pressures* section) show significant increases in input prices over a relatively short period of time, which may indicate shortages in the market for resources, further adding to our concerns regarding deliverability. In addition, the CGPI-Electricity distribution lines (EDB-specific CGPI) has tracked on average 0.8% per year higher than the All-Groups CGPI over the 2019-2023 period.

What we heard from stakeholders

Submissions supporting our approach

- B176 We received submissions from a number of non-EDB stakeholders who shared our concern on deliverability risks. Non-EDBs agreed with us that deliverability should be a consideration when setting allowances and for these allowances to be capped below forecasts sought by EDBs in their AMPs due to delivery risks.

- B177 MEUG in its issues paper submission expressed concerns about EDBs' deliverability of the forecast investment.¹⁰⁴ Flick and MEUG agreed with our approach of setting capex allowances that take into account the deliverability risk.¹⁰⁵
- B178 The Consumer Advocacy Council commented about uncertainties about staffing capacity in the sector.¹⁰⁶ Fonterra stated that there is a high probability that EDBs will not be able to secure the equipment and/or labour to align to their capital spend requests.¹⁰⁷

Submissions stating confidence in ability to deliver

- B179 EDBs were largely opposed to the view that the sector faces deliverability challenges. EDBs continue to be confident of their abilities to deliver the work programmes reflected in their AMPs.
- B180 EDBs told us, in their submissions on the DPP4 Issues paper and capex workshop, that they have appropriate mitigations in place to manage deliverability risk or alternatively there is no risk because the increase in forecast spend is due to cost rather than quantity of work. For instance, Unison indicated that it is confident that it will deliver its work programme.¹⁰⁸
- B181 PowerNet acknowledged the challenges of industry resources and noted the concerns regarding deliverability but expressed confidence to deliver its work programmes. It stated that:¹⁰⁹

At an aggregate level, PowerNet is supportive of the draft decisions put forward in the DPP4 draft decision paper. We have noted specifically our confidence in the deliverability of our managed networks approved asset management plans (AMP), and note our preference for the full revenue allowance to be available to ensure we have the appropriate level of incentive to invest and maintain the networks to an appropriate standard for the long-term future of both consumers and investors.

- B182 Powerco said:¹¹⁰

¹⁰⁴ [Major Electricity Users' Group \(MEUG\) "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 3-4.

¹⁰⁵ [Flick Electric "Submission on EDB DPP4 draft decisions" \(9 July 2024\)](#), p. 1; [Major Electricity Users Group \(MEUG\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraph 11.

¹⁰⁶ [Consumer Advocacy Council "Submission on EDB DPP4 draft decisions" \(26 June 2024\)](#), paragraph 7.

¹⁰⁷ [Fonterra "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 1.

¹⁰⁸ [Unison Networks "DPP4 Issues paper submission" \(19 December 2023\)](#), p.11.

¹⁰⁹ [PowerNet "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraphs 10, 38.

¹¹⁰ [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraphs 32-33.

The Commission's starting point needs to be that DPP4 allowances must be assumed to be deliverable to avoid quality and reputational penalties for EDBs... We are well rehearsed at delivering on large capex programmes and just like we did in our CPP, EDBs will plan for and implement step changes in organisational capacity and capability to be able to deliver on their commitments.

- B183 Powerco also submitted that workforce planning across EDBs is in progress through the ENA.¹¹¹
- B184 The ENA submitted that the sector would need about 100 new workers per year to both grow the sector and replace workers who leave, over the DPP4 period, and points to a number of initiatives that industry is implementing to overcome the resource challenges.¹¹² The ENA indicated that there are various industry initiatives that give EDBs confidence that they can deliver the work programmes set out in their AMPs.¹¹³

Submissions questioning our role to assess deliverability

- B185 Unison, in its issues paper submission stated that the Commission should not make judgements about the ability of individual EDBs to deliver its forecast AMPs in a DPP setting.¹¹⁴
- B186 Vector, in its draft decision submission, reiterated its position in previous submissions, that while an assessment of deliverability is consistent with the s 52A purpose statement:¹¹⁵

...deliverability requires a highly individualised assessment of each EDB's capacity to deliver capex, it is unlikely that an assessment of deliverability as part of capex forecasting would be compatible with the low-cost objective of DPP regulation.

- B187 Powerco stated, in line with Vector's views, that it is not the Commission's role to have an opinion of EDBs ability to deliver their work programmes.¹¹⁶

¹¹¹ [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 7-8.

¹¹² [Electricity Networks Aotearoa \(ENA\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 7.

¹¹³ The ENA identified the following initiatives that industry is participating in: 'Champions of Change'; a national recruitment campaign development of a STEM programme and a leadership programme; and Waihanga Ara Rau Electricity Supply Industry Strategic Reference group which is implementing the Re-energise Report4.

¹¹⁴ [Unison Networks "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 11.

¹¹⁵ [Vector "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraph 182.

¹¹⁶ [Powerco "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), p. 4

Submissions suggesting that reduced capex allowances increase deliverability risks

- B188 Some EDBs submit that the level at which we set the cap discourages resource planning and may worsen deliverability by reducing certainty on the size of the work pipeline such that service providers may be unwilling to commit to increases in resources.
- B189 The ENA submitted that uncertainty regarding reopeners and CPPs creates deliverability risks as it hampers EDBs' ability to appropriately plan, ensure resources and deliver infrastructure in a timely manner.¹¹⁷ This view is supported by Horizon, who indicated that reliance on, what it terms 'just-in-time' reopeners, increases costs, creates uncertainty and fosters a delivery risk.¹¹⁸
- B190 Powerco commented that achieving deliverability lies not only in EDBs' management of capex delivery programmes but in the amount of capex and opex funding approved.¹¹⁹
- B191 According to Alpine, deliverability depends on the portfolio of work rather than the total project cost, and that the relationship between capex growth and labour capacity is non-linear.¹²⁰ Alpine's view was supported by Vector and Orion in their cross-submissions.¹²¹
- B192 Unison submitted on the level of the cap and its implications on deliverability:¹²²
- At an industry level, we consider that certainty of funding will dictate deliverability. The 125% capex cap reduces certainty and will dampen growth in contractors to deliver both the DPP4 work programmes and DPP5... Constraining DPP4 deliverability risks a more adverse longer-term impact for consumers as seen in examples from around the world where networks have struggled to keep up with demand growth and new connections.
- B193 BEC commented that restricting funding could inadvertently reinforce workforce constraints.¹²³

¹¹⁷ [Electricity Networks Aotearoa \(ENA\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 9

¹¹⁸ [Horizon Networks "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), paragraph 22.

¹¹⁹ [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraph 34.

¹²⁰ [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraphs 21-25.

¹²¹ [Vector "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), p.10; [Orion "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), pp. 4-5.

¹²² [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 4.

¹²³ [Business Energy Council \(BEC\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraph 21.

Submissions suggesting the use of other mechanisms to manage deliverability risk

- B194 Suggestions were also made by submitters that we should use other mechanisms like use-it-or-lose-it and contingent allowances to manage deliverability risk instead.
- B195 Fonterra submitted that deliverability should be managed through a use-it-or-lose-it mechanism.¹²⁴

Analysis

- B196 A number of external reports informed our view about deliverability:
- B196.1 The Infrastructure Commission points to a constrained labour market affecting all aspects of infrastructure planning, construction and delivery, which is expected to worsen.¹²⁵
- B196.2 The New Zealand Infrastructure Strategy indicates a pipeline of infrastructure projects to the tune of about \$64 billion. However, there is an estimated construction skills shortage of 118 500 workers in 2024, with shortages predicted to worsen.¹²⁶
- B196.3 The Employers and Manufacturers Association survey found that 71% of employers could not find highly skilled people, up from 40% of employers in 2022.¹²⁷ A similar survey undertaken by Kantar Public, on behalf of MBIE, found that over half of businesses (55%) struggled to find people with the right skills to fill vacancies.¹²⁸
- B196.4 At a regional level, the Australian infrastructure market capacity report indicates a deficit of 229 000 public infrastructure workers in October 2023.¹²⁹
- B196.5 Globally, the OECD indicates that labour shortages predate the COVID-19 pandemic. For instance, in 2019, about 55% of employers in a survey of more than 40 000 employers in 40 countries reported labour shortages. In

¹²⁴ [Fonterra "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p.1.

¹²⁵ [New Zealand Infrastructure Commission. Who's working in infrastructure? A baseline report \(December 2023\)](#)

¹²⁶ [New Zealand Infrastructure Commission. 2022. New Zealand Infrastructure Strategy 2022-2052. NZ 30-Year Infrastructure Strategy](#), pp. 12, 152.

¹²⁷ [Employers and Manufacturers Association. Skills shortage survey. 2023. Skills-Shortage-Survey-Results-2023.pdf](#), p. 3.

¹²⁸ [Kantar Public. 2023 NZ Future of Work Survey. The future of jobs survey](#), p. 30.

¹²⁹ [Infrastructure Australia. 2023. Infrastructure Market Capacity Report. Infrastructure Capacity Report](#), p. 64.

2022, this figure had risen to 75%.¹³⁰ The New Zealand labour market constraints appear more pronounced than in other OECD countries, with an estimated shortfall of about 250 000 workers by 2048 across the economy.¹³¹

- B196.6 The Transpower Independent Verifier Report and IAEngg's AMP review suggest that large sector wide and economy wide expected investment increases will likely face capacity and capability constraints.¹³²
- B197 Contrary to what some EDBs have said regarding the labour market constraints easing, external reports point to on-going challenges that are likely to persist into the DPP4 period. We have concerns that the implications of resource shortages have not been fully considered from a wider sectoral perspective.
- B198 Submissions indicated that EDBs are still approaching deliverability from an individual EDB perspective and expressing confidence levels in being able to deliver their specific programmes of work. We remain concerned about deliverability constraints which would arise with significantly elevated capex programmes across all EDBs and that implications of this have not been fully addressed from a wider sectoral perspective.
- B199 We disagree with the view that we should not assess deliverability and consider, as stated in the draft decision, that deliverability is part of uncertainty, alongside need, timing and cost, and is an appropriate consideration when adjusting capex allowances especially given the scale of investment forecast for DPP4 and the context for that investment.

¹³⁰ [OECD. 2023. Retaining talent at all ages. Aging and employment policies. OECD Publishing. Paris. Aging and employment policies, pp. 13-14.](#)

¹³¹ [BusinessNZ "The future of workforce supply" \(Feb 2023\), p. 43.](#)

¹³² [GHD Advisory Transpower RCP4 Independent Verification Report \(12 September 2023\); IAEngg "NZ EDB 2023 AMP Review Forecasting and planning assessment report" \(report prepared for the Commerce Commission, 29 January 2024\).](#)

- B200 Some submitters raised that a bigger pipeline of work, supported by a larger capex allowance than we had provided would likely be helpful for securing an increased future workforce. We consider the capex allowances which provide for up to a 25% increase in real expenditure for DPP4 will support workforce growth along with a stable and predictable regulatory environment. Given the long-term decarbonisation imperative, the sector is likely to be attractive to potential workforce applicants looking for a long-term career. We also note that it takes time to attract and train significant numbers of people and as such this deliverability risk means that we consider 125% an appropriate cap.
- B201 We agree with Alpine that the relationship between capex growth and labour capacity is not necessarily linear. There is nonetheless a direct relationship that is dependent on the nature of the investment programme being undertaken. We have not undertaken an assessment of individual EDB capex work programmes consistent with a relatively low-cost DPP.
- B202 We discuss the suggestion made by submitters on the use of other mechanisms like use-it-or-lose-it and contingent allowances to manage deliverability risk in the *Role of flexibility mechanisms* section. As discussed in that section we have decided not to implement these other mechanisms as no new evidence was received in submissions that engaged with the implementation challenges related to these mechanisms that we requested engagement on.
- B203 We remain concerned about the sector's overall capacity to deliver the elevated programme of work signalled in EDBs 2024 AMPs. As a result, deliverability has been considered, alongside need, timing and cost when adjusting capex allowances for uncertainty.

Potential increased use of flexibility mechanisms

Problem definition

- B204 Setting a 125% cap on capex allowances means that EDBs who have expenditure needs that are greater than their allowances would need to consider other options available to them which include:
- B204.1 operating within their revenue limits by reprioritising and substituting spend, noting that the price-quality path setting provides a revenue allowance, but not a cap on what can be spent ie, EDBs can substitute between opex and capex;

- B204.2 utilising flexibility mechanisms ie, LCCs, reopeners where these are available or CPPs (see the *Role of flexibility mechanisms* section for more information);
 - B204.3 choosing to incur additional expenditure implicitly beyond that provided for in the price-path; and
 - B204.4 increasing the share of cost recovery directly from consumers rather than through regulatory allowances by changing capital contribution policies.
- B205 We anticipate that the DPP4 regulatory period will see a greater number of reopeners than were processed under DPP3, although accurately forecasting the likely volume of reopeners accurately is difficult. Our decision to set the cap at 125% considered the implications on us and on EDBs of the potential increased use of reopeners.

What we heard from stakeholders

- B206 EDBs submitted that caps should be increased to accommodate required investment and reduce reliance on reopeners. A few submitters outlined the implications of the 125% cap on the future volume of reopeners.
- B207 Two submitters, Wellington Electricity and Alpine put forward arguments for increasing the cap to better balance the risk of excessive profits against the benefits of a more manageable volume of reopeners and maintaining incentives to invest.^{133, 134}
- B208 Wellington Electricity estimated the numbers of likely reopeners for the shortfall between draft allowances and forecasts across all EDBs for different percentage caps and different levels of capex deferred to DPP5.
- B209 It concluded that reopeners could reduce by 22% (or approximately 5-8 reopeners per year) from its estimate of 109-181 reopeners during the DPP4 regulatory period if the cap was increased to 135%. It said that this would result in a programme which will be more manageable and less likely to degrade a network's incentive to invest.¹³⁵

¹³³ [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 5.

¹³⁴ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 10-12.

¹³⁵ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 10-11.

B210 Alpine submitted for a 130% increase stating that:¹³⁶

On the margin, a 130% increase can reduce or defer reopener applications.

B211 Vector agreed that an increase in the level of the cap could reduce reopeners.¹³⁷

B212 Alpine reemphasised its view in cross-submissions stating that:¹³⁸

Increasing the capex allowance to 130% will reduce the number of reopeners, making the workload more manageable and efficient for EDBs and the Commission, without risking EDBs extracting excessive profits.

B213 MEUG, in its cross-submission, did not support the views on increasing the level of the cap to reduce the number of reopeners:¹³⁹

Unsurprisingly most EDBs are calling for an increase to the cap on Capex, looking for an increase up to 130-135% of historical Capex. EDBs state that this would ensure the necessary investment to meet future demand ...while also reducing the number of reopeners that could be sort... We remain unconvinced that an increase is required and hold our primary view that the Commission should stick to the approach used in prior resets (120%).

B214 We also received other submitter views on flexibility mechanisms which are discussed in the *Role of flexibility mechanisms* section.

Analysis

B215 In line with our decision-making framework, we considered the implications of increased use of flexibility mechanisms by EDBs in setting the cap. We accept that there will likely be higher than previous reliance on flexibility mechanisms during DPP4, especially reopeners.

B216 We consider that further analysis to try to be definitive on the potential increased volume of reopeners would provide limited value. Estimating the likely volume of reopeners is subject to significant uncertainty, including what future scenarios may occur, the extent that existing forecasts represent actual need or could be over or understated and the options that EDBs may take for managing within and outside their revenue limits other than using reopeners, including CPPs as discussed earlier.

¹³⁶ [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 13.

¹³⁷ [Vector "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), paragraph 23.

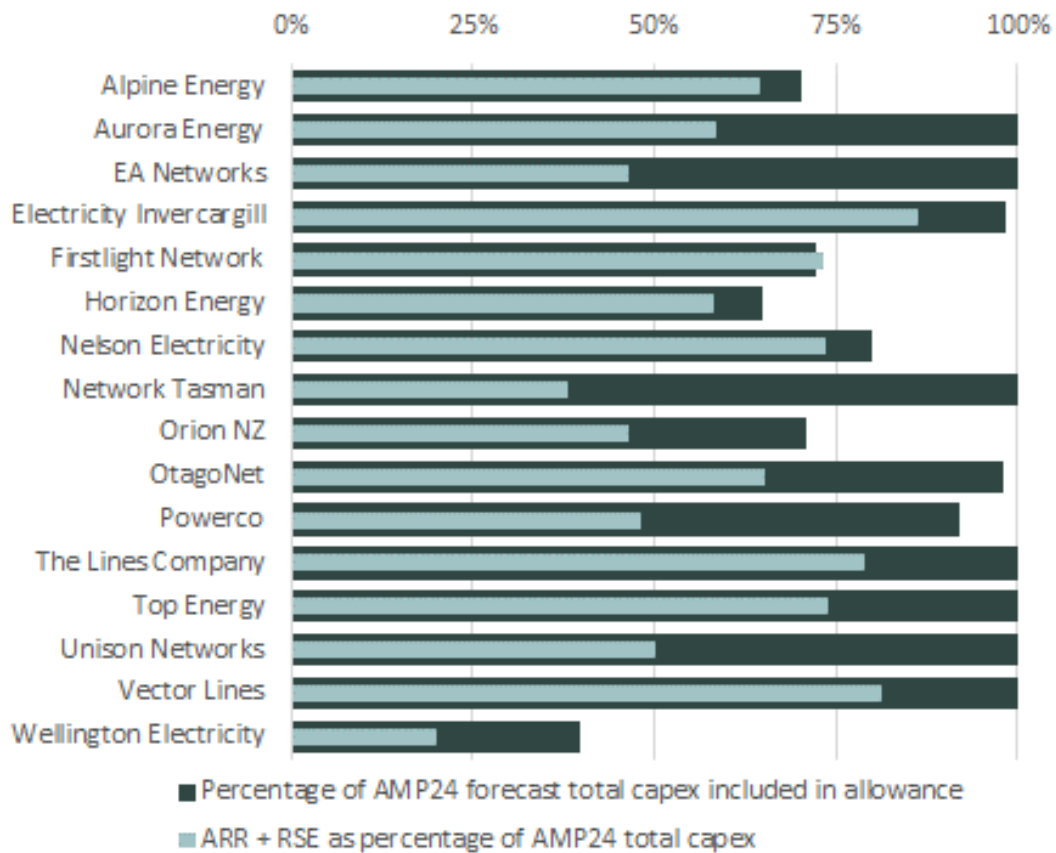
¹³⁸ [Alpine Energy "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), p. 7.

¹³⁹ [Major Electricity Users Group \(MEUG\) "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), paragraphs 11-12.

- B217 We do not have clear information to suggest that increasing the cap by an additional 5% for example would materially reduce the volume of reopeners, whilst it would materially increase the risk that consumers pay for investments that are not efficient or that are potentially not delivered.
- B218 We explored the coverage of EDB renewal forecasts provided by allowances resulting from a 125% cap. This analysis was undertaken to better understand the proportion of renewal forecasts against capped allowances, given there is more limited availability of reopeners for asset replacement and renewal and reliability, safety and environment expenditure for either foreseeable or unforeseeable large projects.
- B219 The reopeners available for renewal expenditure are for proactive and pre-emptive resilience informed by resilience risk analysis (resilience reopener) and for asset deterioration risks that materially impact quality or safety (risk reopener).¹⁴⁰
- B220 We recognise that renewal forecasts are a snapshot in time and could be over or understated and subject to change both up and down during the period as asset health and risk models are updated. An EDB faced with a step change in renewal expenditure that they are unable to accommodate through reprioritisation or substitution of expenditure within their allowance and that is outside the scope of available reopeners, may need to consider a CPP. CPPs are part of the wider price-quality toolkit, intended for these types of more significant, specific investment scenarios.
- B221 The analysis outlined within Figure B8 indicates which EDBs have a proportionately higher level of Asset replacement and renewal (ARR) and Reliability, safety and environment (RSE) capex forecast as a proportion of total capex. This is then overlaid with the impact of capping allowances compared to total capex forecasted. Our analysis indicates that most EDBs should be able to accommodate even increased levels of ARR programmes as indicated in their forecasts, within their allowance. However Alpine and Firstlight will need to consider their programmes of renewal work; this is appropriate given the significant uplift in this type of expenditure they forecast.

¹⁴⁰ [Commerce Commission "Input methodologies review 2023 - \[Final\] Electricity Distribution Services Input Methodologies \(IM Review 2023\) Amendment Determination 2023 \[2023\] NZCC 35" \(13 December 2023\)](#), clauses 4.5.9(1)(e) and 4.5.11.

Figure B8 Asset replacement and renewal (ARR) and Reliability, safety and environment (RSE) capex, as a proportion of capped expenditure



B222 In setting the cap, we have considered, at a high level, the implications for EDBs of having capped expenditure. We conclude that a 125% cap is appropriate based on the premise that the long-term benefit of consumers would be better served through flexibility mechanisms such as reopeners and CPPs for expenditure requirements beyond DPP4 allowances.

B223 We accept that there will likely be an increased reliance on flexibility mechanisms, especially reopeners, during DPP4 and note that EDBs have other options for managing expenditure needs outside of using flexibility mechanisms.

Materiality of changes in capex allowances on DPP4 revenue allowances

Problem definition

B224 Several submitters argued for the cap to be increased because of the small impact in DPP4 of capex on revenue and consumer bills and the ability of EDBs to manage consumer bill impacts.

What we heard from stakeholders

- B225 Submissions suggested that the 125% cap can be increased because the impact of capex allowances on allowable revenue and consumer price is small. They argued that this is a small price to pay to reduce the risks of under-investment, such as slower decarbonisation and less resilience.
- B226 ENA stated that “the price impact of capex in any one year is a fraction of that year’s spend...The risks and consequences of under-investment by EDBs manifesting in slower decarbonisation and less resilience in distribution networks in the face of extreme weather events are far higher than the risk and consequence of small price increases spread over the life of the infrastructure funded by EDBs to meet these needs.” It indicated that raising the cap from 125% to 150% will increase total allowable revenue for all non-exempt EDBs by less than 1%.¹⁴¹
- B227 Horizon stated that increasing the capex allowance cap to more than 125% of reference period will have a limited impact on consumer bills, relative to additional spend.¹⁴² It further suggested a cap of 150% of the reference period and said that at 150%, maximum allowable revenue would increase by 0.85% across all EDBs from the DPP4 draft decision.
- B228 Powerco quantified the impact of increasing the cap slightly from 125% to 130% at \$0.57 per month per ICP.¹⁴³
- B229 Alpine Energy recommended a cap of 130%, asserting that price impacts can be managed by EDBs “both within period (who pays what) and also across periods (using revenue smoothing).”¹⁴⁴
- B230 Unison pointed out that raising the cap to 130% would only raise consumer prices by 20 cents per month in the first year of DPP4.¹⁴⁵
- B231 Aurora noted that increases in capital expenditure have a relatively minor consumer impact in the short-term, because costs are recovered over the life of the assets.¹⁴⁶

¹⁴¹ [Electricity Networks Aotearoa \(ENA\) “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#), p. 7.

¹⁴² [Horizon Networks “Submission on EDB DPP4 draft decisions” \(11 July 2024\)](#), p. 3.

¹⁴³ [Powerco “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#), pp. 9-10.

¹⁴⁴ [Alpine Energy “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#), p. 1.

¹⁴⁵ [Unison Networks “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#), pp. 3-4.

¹⁴⁶ [Aurora Energy “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#), p. 8.

B232 Views expressed in draft decision submissions on the need for an uplift in capex allowances given the small increase in consumer bills was endorsed by some cross-submitters.¹⁴⁷

Analysis

B233 Our own modelling shows that the impact of increasing the cap from 125% to 150% varies by EDB and can be up to a 2.2% increase in the starting MAR for DPP4.

B234 We consider it is not appropriate to weigh only the short-term impact of capex on revenue and consumer bills. The impact of additional capex allowances on allowable revenue and consumer prices may be relatively small in DPP4. However, this is not a reason to set capex allowances higher than is appropriately supported because consumers will still end up paying for the assets over the life of the assets.

B235 Higher capex investment needs should be subject to assessment through the appropriate regulatory tools such as flexibility mechanisms, given the materiality of uplifts and long-term impacts on revenue and consumer prices.

B236 In the short-term, capex impact on revenue and consumer bills may be more limited, but if higher capex allowances were set to reflect elevated work programmes which are not delivered, EDBs would receive IRIS benefits which may be significant.

Component 3 of Decision C2: Adjust the net capex allowance for changes in forecasted levels of capital contributions for capped EDBs

B237 When we set ex ante revenue allowances under a DPP or a CPP, we set revenue relating to capex allowances net of capital contributions.

B238 We have decided to set the 125% cap net of forecast capital contributions. Accordingly, for EDBs that have forecast net capex increases greater than 125% an adjustment is applied to the capex forecast to reflect each capped EDB's forecast change in level of capital contributions relative to the reference period, appropriately scaled. Adjustments are not applied for uncapped EDBs ie, EDBs who have a forecast net capex increase of less than 125%.

¹⁴⁷ [Vector "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), pp. 3-4](#); [Electricity Networks Aotearoa \(ENA\) "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), p. 2](#); [Alpine Energy "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), p.1](#)

Problem definition

B239 Capital contributions are a substantial funding source used by many EDBs to meet part of the requirement for expenditure on assets. Changes in the forecasted level of capital contributions could have a material effect on the overall funding available for capex.

EA work programme on connection pricing

B240 Connection pricing (including capital contributions) was one of five key issues addressed in the Targeted Reform of Distribution Pricing: Issues Paper published by the Electricity Authority (EA) in July 2023.¹⁴⁸

B241 In October 2024 the EA released its consultation paper "Distribution connection pricing proposed Code amendment".¹⁴⁹ The paper discusses elements which would impact the DPP4 price-path under both the proposed fast-track elements and the anticipated full reform were these to be implemented.

B242 Following completion of its process, if the EA does introduce rules that affect connection pricing methodologies in the Code, this could lead to, or require, some EDBs to change their capital contribution policies. Final decisions on proposed Code amendments are likely to be in the first half of 2025.

B243 The EA has engaged with us under s 54V(1) of the Commerce Act 1986 and we will continue to engage with the EA on its connection pricing work programme.

B244 Section 54V(5) enables us to accommodate Code changes, or decisions made under the Code that relate to, or affect, pricing methodologies if asked to by the EA.¹⁵⁰

¹⁴⁸ [Electricity Authority "Targeted Reform of Distribution Pricing : Issues Paper"\(5 July 2023\)](#)

¹⁴⁹ [Electricity Authority "Distribution connection pricing proposed Code amendment: Consultation paper" \(25 October 2024\)](#)

¹⁵⁰ Commerce Act 1986, s 54V.

What we heard from stakeholders on impact of EA's distribution pricing reform on price-paths

- B245 Vector expressed concern over the impact on price-paths as a result of potential changes arising from the EA's regulation of capital contributions and commented on the timing of the EA's review relative to DPP4 timing, which in its view does not promote certainty. It also cautioned about the workability of reopener applications from multiple EDBs that would be needed to reflect EA mandated changes on EDB price paths.
- B246 The ENA raised concerns about uncertainty from the EA's ongoing work on distribution pricing reform on capital contributions and that the Commission should engage with the Authority to ensure it is aware of its obligations under s54V.

Analysis

- B247 We are aware that it may be necessary to amend the DPP4 Determination depending on the outcome of the EA work programme, potentially more than once during the regulatory period. Accordingly, we will continue to engage with the EA and wider stakeholders, as appropriate, on implications of this work on our regulation under Part 4 of the Commerce Act.

Approach to capital contributions in the draft decision

- B248 In our draft decision:
- B248.1 EDBs who had forecast an increase in net capex of less than 125% of the reference period did not receive any adjustment for capital contributions for forecasted change in levels of capital contributions compared to the reference period.
- B248.2 EDBs who had forecasted an increase in net capex of greater than 125% received a proportionate adjustment for forecasted change in levels of capital contributions compared to the reference period.
- B249 Where a capped EDB is forecasting higher levels of capital contributions in the DPP4 forecast period compared to the reference period, it gets a decreased allowance (compared to a no change in capital contributions scenario). The decreased allowance is determined by comparing the relative weighting of forecasted contributions compared to actual contributions during the reference period. Because the EDB is capped, the adjustment applied for the change in capital contributions is also capped, by an amount proportional to the declined level of capex. The opposite applies for those EDBs forecasting greater levels of capital contributions.

B250 This approach means we are neutral to capital contributions settings and is consistent with the outcome achieved with the approach taken in DPP3. If we were not to make this adjustment, EDBs who had forecast lower levels of capital contributions in the DPP4 forecast period compared to the reference period would not receive a comparable level of funding.

What we heard from stakeholders on our approach to capital contributions

B251 We received limited submissions on our approach to capital contributions.

B252 Wellington Electricity and MEUG supported our approach.¹⁵¹

B253 Orion submitted that EDBs should have the opportunity to revise their capex and capital contribution estimates due to significant uncertainty regarding the likely volume of new connections.¹⁵² Its view was that our approach to capital contributions penalises EDBs who have forecast significant growth in capital contributions and may incentivise businesses to forecast low capital contributions in future periods. It reiterated this view in its cross-submission.

Analysis

B254 We note that the capex forecasts capture EDBs assumptions regarding the level of capital contributions over the DPP4 period and that this may differ from historical levels. We analysed forecast capital contributions and found that while capital contributions levels vary widely across EDBs, most EDBs are forecasting capital contributions in line with historical contributions.

B255 EDBs' overall capital contributions could change over time for one or both of two reasons:

B255.1 a change in policy adopted by EDBs (including due to potential changes in requirements by the Electricity Authority); or

B255.2 a change in capex composition ie, the nature of capital works delivered changes so the portion of costs recoverable through capital contributions changes.

¹⁵¹ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 12; [Major Electricity Users Group \(MEUG\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), paragraph 15.

¹⁵² [Orion "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), pp. 5-6.

- B256 EDBs may receive windfall gains or losses if capital contribution amounts change during DPP4. An increase in monies received through contributions (that were in the allowance setting assumed to be recovered through line charges) provides for a windfall gain. A decrease on monies received through contributions represents a loss.
- B257 We have relied on forecast capital contribution information as provided in EDB AMP forecasts as these provide the only available information on expected levels of capital contributions during DPP4. The use of forecasts reduces the risk of EDBs receiving windfall gains or losses.
- B258 In our DPP4 Issues paper, we noted the significant increase in forecast funding of system growth from capital contributions by Vector, who ramped up its recovery of system growth capex from capital contributions from nil in 2021, to 3% in 2022 and 45% in 2023 and is forecasting within its 2024 AMP for future periods to recover nearly all system growth costs from capital contributions in aggregate.
- B259 Vector is forecasting an increased proportional reliance on capital contributions compared to historical periods, but as its net capex is less than a 125% increase there is no adjustment applied to Vector's forecast.
- B260 We disagree with Orion's suggestion that forecasts be resubmitted. We acknowledge that, as is the case with any forecasts, forecast capital contributions can change from what was forecasted in the latest AMPs. Our approach to capital contributions has been applied on the basis that AMP forecasts are the best information available to us. We consider it inappropriate for forecast information to be resubmitted after allowances have been determined and the approach to determining those allowances is known. We also note that there may be a change in EDB future capital contribution policies in the context of the regulatory reform of connection pricing underway by the EA. As noted earlier we will continue our engagement with the EA.
- B261 To Orion's point on the impact of our approach incentivising EDBs to forecast lower capital contributions in future periods, it is up to EDBs how they choose to forecast capital contributions in future periods. The EA's work programme on efficient connection pricing will be relevant for how EDBs forecast capital contributions.

B262 There was no new evidence that suggested we should change our draft decision approach of setting the cap net of capital contributions and providing an adjustment to capex allowances to reflect each capped EDBs' forecast level of capital contributions appropriately scaled.¹⁵³

Decision C3: Set the capex allowance relative to an adjusted five-year (2020-2024) historical reference period

Final decision

B263 To set capex allowances we have used a cap relative to a historical reference period in 2024 constant dollars, adjusting the reference period capex to appropriately reflect changes to input prices, so that capex allowances are not set unintentionally low.

B264 Our final decision is to set the capex allowance relative to an adjusted five-year (2020-2024) historical reference period. There are three components to this decision:

B264.1 Component 1 of Decision C3: Use a five-year historical reference period (2020 to 2024).

B264.2 Component 2 of Decision C3: Use the All-Groups CGPI as the price index to convert actual capex to constant price terms.

B264.3 Component 3 of Decision C3: Apply an additional adjustment of 0.8% per annum when converting the reference period capex to set the constant dollar capex allowance.

B265 Components 1 and 3 are discussed in this section. Component 2 is discussed in the *Decision C6: Use the All-Groups CGPI forecast with additional adjustment to escalate the constant price capex allowance to nominal terms* section.

Problem definition

B266 Using past expenditure for comparison against future expenditure requirements provides an understanding of relative scale of change and accounts for network characteristics in a relatively low-cost way.

¹⁵³ [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 – Draft Reasons paper" \(29 May 2024\)](#), paragraph B145.

B267 We need to establish what length of historic reference period is appropriate for this purpose (Component 1) and any adjustments which may be required to increase comparability (Components 2 and 3).

Component 1 of Decision C3: Use a five-year historical reference period (2020 to 2024).

Historical reference period approach - Issues paper stage

B268 In response to the Issues paper, EDBs told us that unlike past resets, past expenditure is unlikely to be as relevant an indicator for future capex for DPP4.

Our changing energy system reinforces the need for DPP4 to be forward looking and flexible, with historical information not being the appropriate reference for the nature and scale of future capex and opex.¹⁵⁴

Relying on historical spending as a foundation is suboptimal when forecasting future expenditure and establishing expenditure allowances for EDBs. Increasing electrification demand, ageing asset bases, and the impacts of major weather events such as Cyclone Gabrielle are driving a level of unprecedented investment need.¹⁵⁵

At the current pace of electrification and decarbonisation changes PowerNet is managing, our view is capex and opex allowances for DPP4 and future DPP's should be based on EDB 2024 AMP's and not wedded to a previous period where decarbonisation was barely on the horizon.¹⁵⁶

B269 Other stakeholders also agreed that the past is not a good starting point for considering future spend because of the context of change and acknowledged the challenge of low-cost regulation in that environment.

Past expenditure is not a good starting point for considering future spend, just as past philosophy and settings is not a good starting point. The electricity industry ought to be going through a major technological step change. We would hope that future spend would be quite different because the industry will start to adopt new and better technologies and new and better ways of doing things.¹⁵⁷

Low-cost regulation is difficult to achieve when there is wide disparity in the scale and density of electricity distribution business (EDB) operations or where they face

¹⁵⁴ [Energy Sector Transitions Framework \(via PowerCo\) "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 3.

¹⁵⁵ [Firstlight Network "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 2.

¹⁵⁶ [PowerNet "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 4.

¹⁵⁷ [Solar Zero "DPP4 Issues paper submission" \(15 December 2023\)](#), p. 4.

different step changes in market conditions and are adopting different investment responses to those changes.¹⁵⁸

B270 We consider that historical capex continues to be useful in the context of a relatively low-cost DPP. Without reference to a historical reference period, it would be difficult to understand the relative scale of change. Use of absolute or set dollar values do not work well for EDBs who have wide variability (size and nature of network, consumer base, and how they respond to drivers). Past expenditure enables us to reflect these characteristics in a relatively low-cost way and is also reflective of each EDB's baseline capacity to deliver.

B271 Feedback on this view, from the capex workshop, indicated that stakeholders understood the need for this approach given the relatively low-cost nature of the DPP. There were no submissions that objected to the use of a historical reference period for assessment purposes.¹⁵⁹

What we heard from stakeholders on choice of reference period

B272 At the capex workshop, we presented three potential options for a historical reference period, for feedback from interested stakeholders and outlined our view that:

B272.1 three years captures recent market challenges, emerging trends and global events like the COVID-19 pandemic and global conflicts;

B272.2 five years reflects a regulatory period and appears to minimise the extremes for individual EDBs; and

B272.3 more than five years captures more than one regulatory cycle and may provide a more normalised view of spend given the long life of assets and the lumpiness of capex profiles. Note a reference period of seven years was used in DPP3.

B273 There were mixed views on the choice of reference period:

¹⁵⁸ [NZIER "EDB Default Price-Quality Path - Comment on Issues paper" \(prepared for MEUG, 19 December 2023\)](#), p.4.

¹⁵⁹ [Submissions](#) on the Commerce Commission "Capital expenditure framework design workshop" (11 March 2024).

B273.1 Most respondents (six out of eight) supported a three-year reference period, which includes the ENA who suggested using a weighted rather than a simple average.¹⁶⁰

The historical reference period used should primarily focus on the current and future cost and operating environment faced by EDBs. In practice, this means that the historical reference period should be the weighted average actual capital expenditure over the current regulatory control period (2020-2025) with a greater weighting on more recent years.

B273.2 Alpine Energy submitted a preference for a longer reference period than five years because of the lumpy profile experienced by smaller EDBs.¹⁶¹

The short timeframe for comparison (2019-2023) used with these metrics disproportionately impacts smaller networks, like Alpine with lumpy expenditure forecasts driven by large upgrades to increase network capacity. We propose that longer reference periods are considered to as an alternative to have a “catch-all” for historic lumpy expenditure.

B273.3 Horizon Energy told us that they did not have a strong preference for the reference period.¹⁶²

B273.4 Submitters who supported a shorter reference period tended to think that it would better represent current cost conditions.

We believe that using data from the three most recent years offers a suitable basis for evaluating the scale of change in the DPP4 period. Data going further back may not accurately capture the evolving trends in the operating environment of EDBs.¹⁶³

A more recent period will also pick up exposure to supply chain constraints which have increased material costs for EDBs across Aotearoa which are unlikely to subside over the DPP4 period. In addition, a more historical profile will not pick up emerging expenditure related to large and small connection growth, energy transition (growing cities, data centres, process heat conversion, EV uptake etc.).¹⁶⁴

B274 Overall submitters who preferred a shorter period were concerned about input price pressures not being reflected adequately with a longer period.

¹⁶⁰ [Electricity Networks Aotearoa “Submission on Capex framework design workshop” \(11 March 2024\)](#), pp. 2-3.

¹⁶¹ [Alpine Energy “Submission on Capex framework design workshop” \(11 March 2024\)](#), paragraph 17.

¹⁶² [Horizon Networks “Submission on Capex framework design workshop” \(11 March 2024\)](#), p. 15.

¹⁶³ [Powerco “Submission on Capex framework design workshop” \(11 March 2024\)](#), p. 4.

¹⁶⁴ [Vector “Submission on Capex framework design workshop” \(11 March 2024\)](#), paragraphs 26-27.

- B275 In response to the draft reasons paper, submitters were generally supportive of the five-year reference period, apart from Horizon.
- B276 Orion supported the five-year reference period for setting capex allowances instead of the seven-year reference period used in DPP3 because this reflects the changing nature of expenditure as the sector evolves and addresses the need for increased resilience and supports customers future energy choices.¹⁶⁵
- B277 Wellington Electricity stated that the five-year period provides a balance between a large enough sample to average out investment timing differences and is recent enough to be reflective of current investment conditions.¹⁶⁶
- B278 The ENA, Powerco, Alpine, Aurora and Unison supported the five-year reference period.¹⁶⁷
- B279 However, Horizon disagreed with the use of a different reference period for the draft and final decision, raising concerns with changing from 2019 - 2023 to 2020/2024. It said:¹⁶⁸

Horizon Networks does not support the use of a different historical reference period for the draft and final decision. This approach creates a less predictable final decision. The use of a stable reference period, using AMP forecasts where final data is not yet available could address this issue and support a more informed draft decision.

- B280 We did not receive any cross submissions on this decision.

Analysis - Choice of reference period

- B281 We considered three options for the reference period:

B281.1 three years to capture recent market challenges;

B281.2 five years to be consistent with the regulatory period and to minimise the extremes for individual EDBs; and

¹⁶⁵ [Orion "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), p. 7.

¹⁶⁶ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 12.

¹⁶⁷ [Electricity Networks Aotearoa \(ENA\) "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), p. 19; [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 25; [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 13; [Aurora Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 8; [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 8.

¹⁶⁸ [Horizon Networks "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), p. 4.

B281.3 more than five years to provide a long-term, normalised view of capex.

B282 We analysed the trends in historical capex by individual EDB. The analysis served as a broad check on the reasonableness of the length of the reference period. We found that they were either: (a) steadily increasing, (b) sideways, or (c) generally declining. This analysis is set out in detail in the *Our analysis of historical trends in capital expenditure by individual EDB* section in our DPP4 Draft reasons paper at paragraphs B156-B160.¹⁶⁹

B283 Based on our analysis of historical trends and consideration of feedback from interested stakeholders, we concluded that five years was the most appropriate term because it reflected the recent ramp up in capex for those EDBs in the “increasing” category and it approximated a longer term (10-year) average for those in the “sideways” and “generally declining” categories.

B284 We disagree with a weighted average approach as suggested by ENA as the suggested approach that weights more recent years more heavily could inappropriately benefit some EDBs and disadvantage other EDBs.

B285 Our draft decision used 2019-2023 data as actual 2024 capex data was not available at the time. We signalled in our draft decision that we would update the reference period to 2020-2024 when actual 2024 capex data became available. We consider the use of more recent data is of greater value than consistency with draft (as represented by Horizon), particularly as we signalled this approach in the draft decision. This is consistent with other decisions where we use updated values from the draft where these are available and the latest information that can be practicably reflected in the DPP decision.

Adjustments required to increase comparability of the reference period

B286 We have considered input price pressures separately from the choice of reference period. This section focuses on:

B286.1 Component 2 of Decision C3: Use the All-Groups CGPI as the price index to convert actual capex to constant price terms.

B286.2 Component 3 of Decision C3: Apply an additional adjustment of 0.8% per annum when translating the reference period capex to set the constant dollar capex allowance.

¹⁶⁹ [Commerce Commission “Default price-quality paths for electricity distribution businesses from 1 April 2025 – Draft Reasons paper” \(29 May 2024\)](#)

Component 2 of Decision C3: Use the All-Groups CGPI as the price index to convert actual capex to constant price terms.

B287 An appropriate cost escalation index is needed to:

B287.1 convert reference period actual capex to constant 2024 dollars for setting capex allowances (Component 2 of **decision C3**); and

B287.2 escalate the capex allowances in constant 2024 dollars to nominal dollars (this decision ie, Component 1 of **decision C6**).

B288 There are several price indices that can be used for both these purposes. As the submissions and analysis are consistent across both we have only discussed this once in the *Choice of cost escalation index* section within **decision C6**.

B289 Our view is that the All-Groups CGPI remains an appropriate basis to convert reference period actual capex to constant 2024 dollars for setting capex allowances given the complexities and volatility of narrowly defined indices and based on support from submissions.

Component 3 of Decision C3: Apply an additional adjustment of 0.8% per annum when translating the reference period capex to set the constant dollar capex allowance.

Problem definition

B290 For DPP4, we have decided to set capex allowances using a cap relative to a historical reference period in 2024 constant dollars. If the reference period capex does not appropriately reflect changes in EDBs' input costs during the reference period, then capex allowances may be set unintentionally low. We identified that the All-Groups CGPI likely did not fully reflect actual changes in EDBs' input costs during the reference period.

Analysis at draft decision

B291 The *Recent input price pressures* section below sets out the analysis undertaken at draft decision on the 0.8% per annum additional adjustment to the All-Groups CGPI.

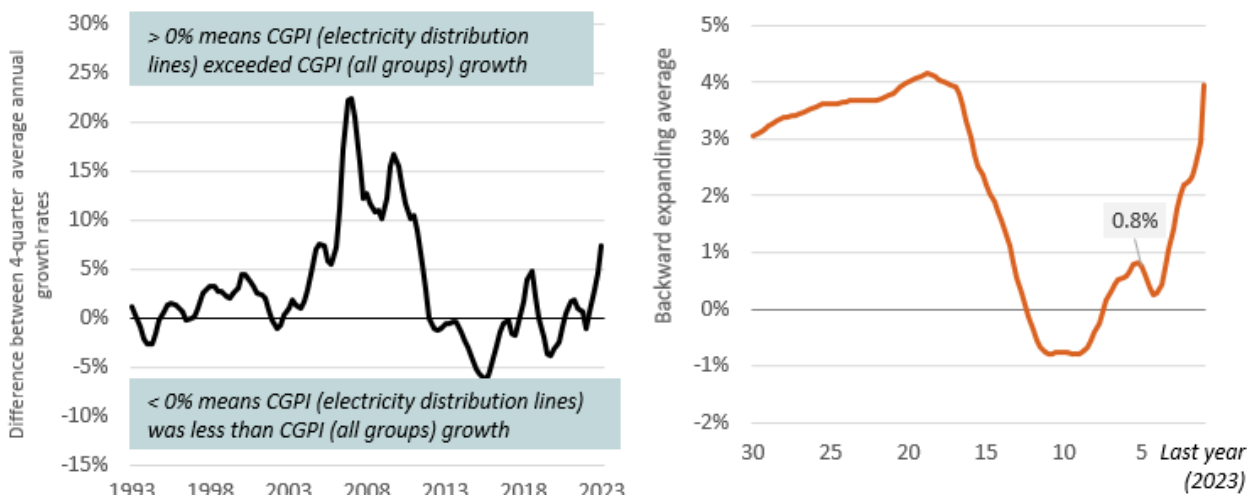
B292 Based on this analysis, we considered it appropriate to apply the annual adjustment of 0.8% to the All-Groups CGPI for the reference period capex.¹⁷⁰

Recent input price pressures

B293 EDBs told us that they have experienced higher input prices in recent years and that this increase has been reflected in their capex forecasts. Our analysis of price indices and other alternative sources of evidence confirmed that some form of adjustment to the reference period is warranted.

B294 Figure B9 shows the historical average growth rate between the CGPI-Electricity distribution lines (EDB-specific CGPI) and the All-Groups CGPI. Our analysis showed that over the past five years the EDB-specific CGPI has been tracking on average 0.8% per annum higher than the All-Groups CGPI.

Figure B9 Difference in average growth rates between the All-Groups CGPI and the EDB-specific CGPI, and effect of duration on average difference



B295 We also considered alternative sources of evidence for our adjustment. The ENA provided combined data from a sample (eight of 16) of non-exempt EDBs for the period from 2019 to 2023 on:

B295.1 total installed cost of five asset groupings replaced during renewal works;

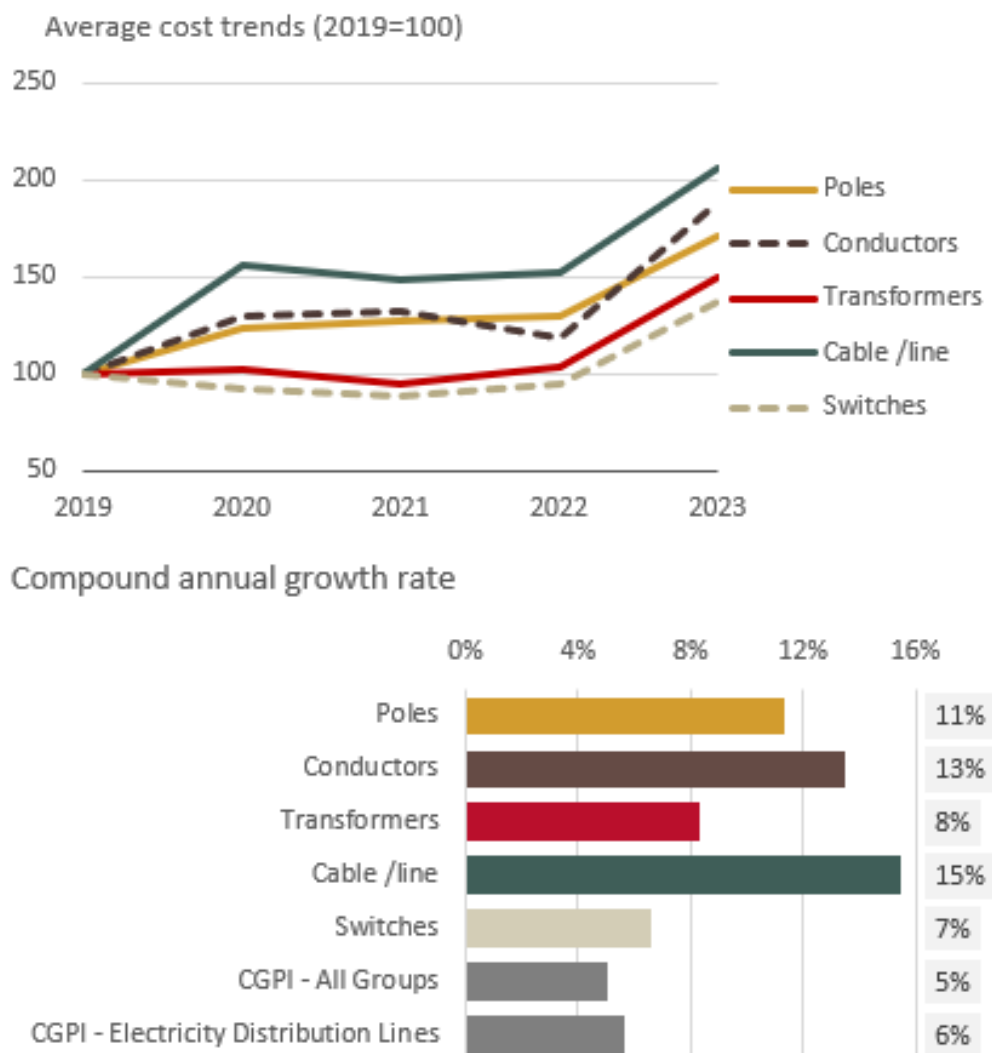
¹⁷⁰ The *Recent input price pressures* analysis is also applicable to the annual adjustment to the All-Groups CGPI for the purposes of restating the capex allowances from constant to nominal terms (Component 2 of **Decision C6**) which is discussed later in the *Quantum of additional adjustment to the cost escalation index* section under **Decision C6**.

B295.2 asset replacement quantities for those five groupings; and

B295.3 average cost trends.

B296 Figure B10 plots the average cost trends and average annual growth rates over the period 2019 to 2023. The cost and quantity information provided by the ENA suggested average costs increased at a faster annual rate (between 7% and 15% per year) than the CGPI measures (5% and 6% per year).

Figure B10 Average cost trends in ENA sample¹⁷¹



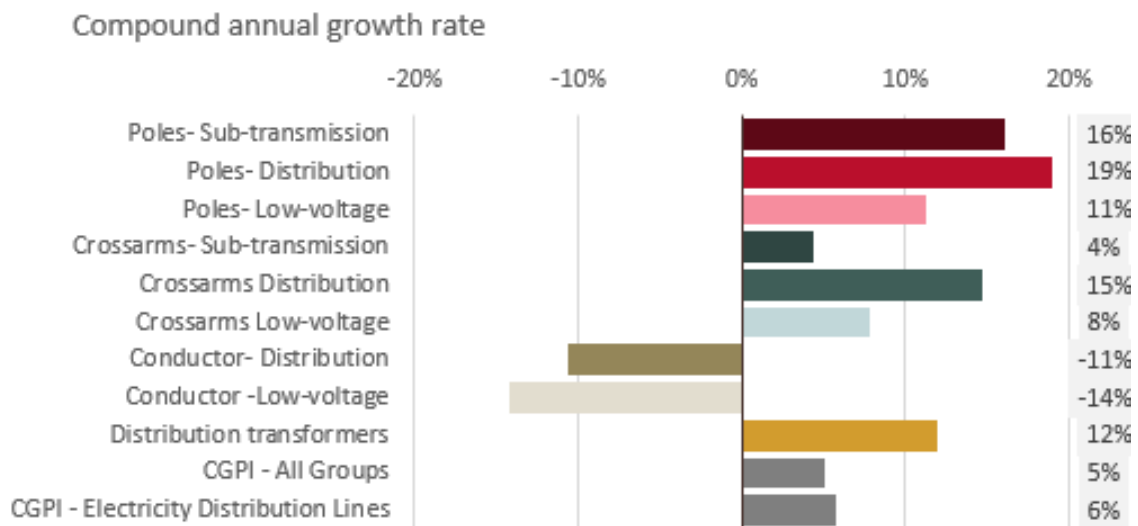
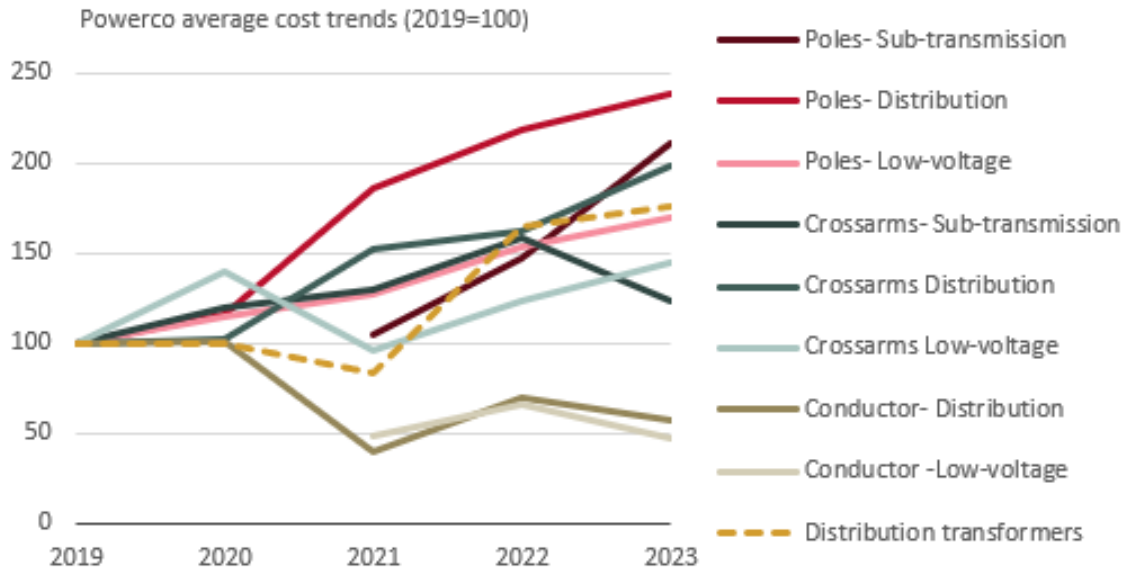
¹⁷¹ We were not provided updated information for 2024.

- B297 Overall, given the aggregated nature of the data provided, we were unable to conclude the extent to which these changes were driven by cost changes, or changes in scope of works, and the extent to which the change was consistent across EDBs or particular to certain EDBs.
- B298 We were not able to identify, based on information provided by the ENA, whether there were particular regulatory or legislative change driven factors behind the increase in input costs, such as potential increases in costs associated with traffic management requirements.
- B299 To get further information we considered more granular information provided by Powerco in its annual delivery reports of its CPP, and Energy Networks Consulting's Aurora CPP mid-period review report.^{172, 173}
- B300 Figure B11 plots the average cost trends and average annual growth rates in Powerco's asset groupings over the period 2019 to 2023. In addition, the second chart plots the average growth rates in the All-Groups CGPI and in the EDB-specific CGPI. Powerco's average costs ranged widely between a 14% decrease and a 19% increase. Pole costs increased at a similar or higher rate than in the ENA sample. The extent to which these increases reflect cost changes or changes in the scope of work was similarly unclear from the data we considered.

¹⁷² Powerco Annual Delivery Reports: [2023](#), [2022](#), [2021](#), [2020](#), [2019](#)

¹⁷³ [Aurora Energy "CPP Mid-Period Review: Independent Expert Report" \(February 2024\)](#)

Figure B11 Average costs trends from Powerco’s annual delivery report



B301 Our review of the Aurora mid-period review report showed that while input cost inflation is a contributory factor to cost increases, there are other contributory factors such as scope, complexity and nature of work. We were unable to infer from the report by how much input cost inflation contributed to cost increases. However, the report highlighted that several factors can contribute to cost changes and that it is not appropriate to assume changes in average cost are necessarily predominantly driven by changes in input costs.¹⁷⁴

¹⁷⁴ [Aurora Energy "CPP Mid-Period Review: Independent Expert Report" \(February 2024\)](#)

What we heard from stakeholders

- B302 We received two submissions on the additional adjustment for reference period capex. Wellington Electricity supported the inclusion of an adjustment but disagreed with the adjustment of 0.8% per year and submitted that it should be 3.1% per year based on the long-term (1993-2023) difference between the EDB-specific CGPI and All-Groups CGPI.¹⁷⁵
- B303 Orion, Vector and Wellington Electricity indirectly supported the adjustment in the context of providing feedback on the adjustment for capex allowances (for **decision C6**). They stated that “while we note that the decision to utilise a five-year period aligns with the Commission’s capex allowance C3 decision, this is not a necessity. Setting allowances and setting cost escalators could/should use different reference periods.”¹⁷⁶

Analysis

- B304 We disagree with Wellington Electricity's proposal to use the 30-year difference between the EDB-specific CGPI and All-Groups CGPI. In this context, we are converting actual historical capex from nominal to constant dollars, therefore we need to adjust the actual nominal dollar capex to better represent the inflation experienced by EDBs in the 2020-2024 period.

Conclusion

- B305 We have no evidence that an alternative to our draft decision adjustment of 0.8% per year would result in a more accurate index for reference period capex.

Decision C4: Include an allowance for the cost of finance, scaled in proportion to the capex allowance

Final decision

- B306 Our final decision is to include an allowance for the cost of finance, scaled in proportion to the capex allowance.

¹⁷⁵ [Wellington Electricity “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#), p. 13.

¹⁷⁶ [Orion, Vector, Wellington Electricity “Cost escalators - Submission on EDB DPP4 draft decisions” \(8 July 2024\)](#), p. 2.

Problem definition

B307 We need to determine an allowance for the cost of finance including how it is adjusted where capex allowances are capped. AMP forecasts include the cost of financing expected to be accumulated during the construction of the planned work programme, ie, 'works under construction' or 'work in progress'(WIP).

What we heard from stakeholders

B308 Aurora, Powerco, Wellington, Alpine and Unison, were generally supportive of our draft decision.¹⁷⁷

B309 However, Unison submitted that we should consider its suggestion to implement a wash-up for the cost of financing for work-in-progress (WIP).¹⁷⁸

To be more consistent with financial capital maintenance, a wash-up accrual to adjust for WIP at the end of each regulatory period is required. Otherwise, that capex is not recovered for five more years. These amounts are becoming more material now that capex is increasing and increasing the adverse impacts on an EDB of having to fund that debt over a longer term.

B310 We did not receive any cross submissions on this matter.

Analysis

B311 We have decided to retain the approach taken in past resets of including forecast cost of financing. We do this by including the cost of financing in assessing AMP forecasts against the reference period, which means the cost of financing is scaled as part of the setting of the capex allowance. We are not aware of any reason to change our treatment of the cost of financing for DPP4 and our approach was supported by stakeholders at the draft decision.

B312 In regard to Unison's submission on a wash-up for the cost of financing for work-in-progress, this is outside the scope of the DPP reset and may be considered as part of future IM reviews.

¹⁷⁷ [Aurora Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 8; [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 25; [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 13; [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 13; [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 8-9

¹⁷⁸ [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 8.

Decision C5: Include an allowance for the value of considerations for vested assets and specifically identified spur assets

Vested assets

Final decision

B313 Our final decision is to include an allowance for the value of consideration for vested assets equal to 2024 AMP forecasts. This is consistent with our approach at draft decision and the approach we used in DPP3 for dealing with these transactions.

Problem definition

B314 Vested assets are assets that are associated with the supply of electricity distribution services received by an EDB without provision of consideration, or with provision of nominal consideration.¹⁷⁹

B315 In past resets, we have provided capex allowances for vested assets with no adjustments to the extent these were included in EDB AMP forecasts.

B316 Vested assets enter the regulatory asset base at a nil value.¹⁸⁰ To the extent nominal considerations are expected to be provided for vested assets it is reasonable that these (low value) amounts are provided for in the capex allowance as per EDBs AMP forecasts with no adjustment, given that the values are immaterial based on how the asset class is defined in the IMs.

What we heard from stakeholders

B317 All submissions received (Aurora, Powerco, Wellington, Alpine) supported our draft decision on the treatment of the value of considerations for vested assets.¹⁸¹

B318 We did not receive any cross submissions on this topic.

¹⁷⁹ [Commerce Commission “Electricity Distribution Services Input Methodologies Determination 2012 \(Consolidated as at 23 April 2024\)”](#).

¹⁸⁰ Vested asset means an asset associated with the supply of electricity distribution services received by an EDB-without provision of consideration, or with provision of nominal consideration.

¹⁸¹ [Aurora Energy “Submission on EDB DPP4 draft decisions” \(12 July 2024\), p. 8](#); [Powerco “Submission on EDB DPP4 draft decisions” \(12 July 2024\), p. 25](#) [Wellington Electricity “Submission on EDB DPP4 draft decisions” \(12 July 2024\), p. 13](#); [Alpine Energy “Submission on EDB DPP4 draft decisions” \(12 July 2024\), p. 13](#).

Analysis

B319 Submissions were in full support. We conclude that including an explicit allowance for the value of considerations for vested assets equal to 2024 AMP forecasts is consistent with past resets and consistent with a relatively low cost DPP.¹⁸²

Spur assets

B320 In previous DPP resets there were potentially material spur asset purchases being considered by EDBs which were separately identified in the capex models. We were not advised of any as part of our reset process, nor did the targeted review we undertook on a selection of EDB AMPs identify any spur asset purchases forecast to occur during DPP4.¹⁸³ Our final decision includes an allowance for specifically identified spur assets equal to 2024 AMP forecasts, however, specifically identified spur assets are applied at zero value for all EDBs as none were identified in our review of AMPs.

B321 Our final decision means we align the approach to setting allowances for spur asset acquisitions which may be forecast to occur but were not specifically identified in our process undertaken to set capex allowances, with our general approach to capex allowances whereby the allowance is determined by assessing forecast capex in the AMP at an aggregate level. This decision is discussed in the *Accounting for forecasted spur asset purchases within capex allowances* section located under *Component 1 of Decision C2: Set the capex allowance (net of capital contributions) by capping total net forecast capex at an aggregate level.*

Decision C6: Use the All-Groups CGPI forecast with an additional adjustment to escalate the constant price capex allowance to nominal terms

Overview

B322 The capex allowance needs to be escalated from constant to nominal dollars using an appropriate cost escalation index. Our decision is to use the All-Groups CGPI forecast with an additional adjustment to escalate the constant price capex allowance to a nominal allowance.

¹⁸² We note that only one EDB forecast a non-zero amount for the value of considerations for vested assets.

¹⁸³ We note that no EDB has forecast capex on spur assets in their 2024 AMPs and as such the capex allowance includes no additional allowance for spur assets acquisitions.

B323 **Decision C6:** cost escalation has two component decisions:

B323.1 Component 1 of Decision C6: Use the All-Groups CGPI forecast as the price index to escalate the constant price capex allowance to nominal terms (*Choice of cost escalation index* as discussed below); and

B323.2 Component 2 of Decision C6: Apply an additional adjustment of 0.8% per annum to the All-Groups CGPI forecast when escalating the constant price capex allowance to nominal terms (*Quantum of additional adjustment to the cost escalation index* as discussed below).

Choice of cost escalation index

Final decision

B324 Our final decision is to use the All-Groups CGPI forecast as the price index to escalate the capex allowance in constant dollars to nominal terms.

Problem definition

B325 An appropriate cost escalation index is needed to:

B325.1 convert reference period actual capex to constant 2024 dollars for setting capex allowances (Component 2 of **decision C3**); and

B325.2 escalate the capex allowances in constant 2024 dollars to nominal dollars (this decision ie, Component 1 of **decision C6**).

B326 There are several price indices that can be used for this purpose, for example a capital goods price index (CGPI) or the producers price index (PPI). The PPI measures movements in goods and services purchased and used by business at 'user cost' while the CGPI measures movements in the purchase and construction of capital assets (buildings, machinery, infrastructure).¹⁸⁴

B327 In our draft decision, similar to DPP3, we used the All-Groups CGPI index used in previous DPPs, as our preferred index.

¹⁸⁴ [Statistics New Zealand "Alternative frameworks for price indexes"](#)

What we heard from stakeholders

- B328 In our issues paper and February 2024 capex workshop we proposed using the All-Groups CGPI as the price index.¹⁸⁵ We invited interested stakeholders to provide views on this proposal.
- B329 Most submitters supported the use of the All- Groups CGPI, because, while it may not capture the sector specific circumstances that drive EDB capex, they were not aware of any other index that would provide greater accuracy.¹⁸⁶
- B330 Others suggested that more work was required to develop a customised index for the sector:
- B330.1 Unison supported a more targeted, sector-specific index, that should reflect the particular pressures which the electricity transmission and distribution market in New Zealand is facing, because "an economy-wide CGPI forecast is unlikely to capture [...] sector specific circumstances".¹⁸⁷
- B330.2 Alpine also stated that the Commission should consider a customised index, while Transpower suggested that a more detailed analysis of the differences between CGPI and PPI and their application to the capex forecasts should be undertaken.¹⁸⁸
- B331 The choice of escalator was generally supported by all draft decision submissions.¹⁸⁹

¹⁸⁵ [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 – Issues paper" \(2 November 2023\)](#), paragraphs E61-E64; [Commerce Commission "Capital expenditure framework design – workshop slide deck" \(19 February 2024\)](#), Slide 79.

¹⁸⁶ [Submissions](#) on the Commerce Commission "Capital expenditure framework design workshop" (11 March 2024); [Submissions](#) on the Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 - Issues paper"(2 November 2023).

¹⁸⁷ [Unison Networks "DPP4 Issues paper submission" \(19 December 2023\)](#)., p. 10.

¹⁸⁸ [Alpine Energy "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 3; [Transpower "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 2.

¹⁸⁹ [Submissions](#) on the Commerce Commission " Default price-quality paths for electricity distribution businesses from 1 April 2025- Draft Reasons paper"(29 May 2024).

B332 Orion, Vector and Wellington Electricity commissioned a cost escalation report from Oxford Economics Australia (OEA), submitted a joint summary and made individual submissions.¹⁹⁰ Orion, Vector and Wellington Electricity (based on the OEA expert report) considered that while they disagreed with one of our reasons for dismissing the EDB-specific CGPI due to historical volatility, they recognised that forecasting of an EDB-specific CGPI is more complex and less widely undertaken.¹⁹¹ For this reason, they considered the use of an All-Groups CGPI forecast an appropriate price index to apply for DPP4 as compared to an EDB-specific CGPI.

B333 Orion, Vector and Wellington Electricity noted that:¹⁹²

The EDB CGPI would provide the most accurate measure of cost escalation for NZ EDB capital expenditure – it is a narrowly defined index specific to electricity distribution assets. However, usage of the EDB CGPI would increase the complexity of the approach, requiring forecasts of a historically more volatile cost index (relative to broader inflationary measures). The usage of a weighted price index has similar complexities.... the reasoning provided by the Commission for the usage of the index [All-Groups CGPI] is reasonable – it is supported by the majority of stakeholders, it demonstrates relatively lower levels of volatility compared to alternatives and is defined broadly enough to not disincentivise effective cost management

Analysis

B334 As suggested by some issues paper submitters, we considered using sector-specific indices to escalate capex. These indices have been used previously by some EDBs under a CPP and by Transpower. However, when we compared the metals indices and the sub-indices of PPI and LCI, with the All-Groups CGPI, we found the All-Groups CGPI to be more stable over time.

B335 The use of a combination of sub-indices such as LCI-construction, PPI-heavy engineering, Copper and others requires the allocation of weights, an exercise that can be prone to subjectivity and errors, rendering the indices less accurate. Also, despite being narrowly defined, it is not possible for any such index to cover all known cost areas of EDBs.

¹⁹⁰ [OEA “EDB Escalation Report” \(prepared for Orion, Vector, Wellington Electricity - June 2024\)](#); [Orion, Vector, Wellington Electricity “Cost escalators - Submission on EDB DPP4 draft decisions” \(8 July 2024\)](#); [Orion “Submission on EDB DPP4 draft decisions” \(11 July 2024\)](#); [Vector “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#); [Wellington Electricity “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#).

¹⁹¹ [OEA “EDB Escalation Report” \(prepared for Orion, Vector, Wellington Electricity, June 2024\)](#); [Orion, Vector, Wellington Electricity “Cost escalators - Submission on EDB DPP4 draft decisions” \(8 July 2024\)](#), p. 2.

¹⁹² [OEA “EDB Escalation Report” \(prepared for Orion, Vector, Wellington Electricity, June 2024\)](#), p. 10.

- B336 We also compared the All-Groups CGPI with the EDB-specific index. Again, we found the All-Groups CGPI to be more stable over time.
- B337 This detailed analysis on indices we undertook as summarised above for our draft decision is in the *Our analysis supported the use of CGPI* section of our DPP4 Draft reasons paper in paragraphs B189-B193.¹⁹³
- B338 Our view is that the All-Groups CGPI remains an appropriate basis for cost escalation for DPP4 given the complexities and volatility of narrowly defined indices and based on support from submissions.

Quantum of additional adjustment to the cost escalation index

Final decision

- B339 Our final decision is to apply an additional adjustment of 0.8% per annum when escalating the capex allowance in constant dollars to nominal terms.

Problem definition

- B340 An appropriate cost inflator is needed to escalate the allowances in constant dollars to nominal terms. We considered that in the current environment, using the All-Groups CGPI without an adjustment may understate and not fully reflect future input cost pressures.

Analysis at draft decision

- B341 The *Recent input price pressures* section within **decision C3** sets out the analysis undertaken at draft decision on the 0.8% per annum additional adjustment to the All-Groups CGPI.
- B342 Based on that analysis, we considered it appropriate to apply the annual adjustment of 0.8% to the All-Groups CGPI for both the reference period capex and when converting the capex allowances from constant to nominal terms:
- B342.1 Component 3 of **decision C3** (Apply an additional adjustment of 0.8% per annum when applying reference period capex in constant dollars to set the constant dollar capex allowance).

¹⁹³ [Commerce Commission “Default price-quality paths for electricity distribution businesses from 1 April 2025 – Draft Reasons paper” \(29 May 2024\)](#)

B342.2 Component 2 of **decision C6** (Apply an additional adjustment of 0.8% per annum to the All-Groups CGPI forecast when escalating the constant price capex allowance to nominal terms).

B343 Our draft decision was to use the same time period for the calculation of the adjustment as for **decision C3**, hence the adjustment was 0.8% as it was for **decision C3**.

What we heard from stakeholders at draft decision

B344 Although submissions supported our decision to use the All-Groups CGPI with an additional adjustment, we received detailed feedback on the quantum of that additional adjustment.

B345 Orion, Vector and Wellington Electricity disagreed with the quantum of the 0.8% per year adjustment for escalating capex allowances.

B346 They jointly stated that the reference period for the additional adjustment for capex allowances should be different from the 2019–2023 period selected for the historical reference period as the escalator for capex allowances serves a different purpose from the deflator for historical capex. They submitted we use a longer-term average for the escalator for capex allowances to smooth out volatility and achieve regulatory certainty.¹⁹⁴

Use of longer-term averages are generally recognised as the best averaging method to employ when the objective is to remove the issue of volatility...

B347 Orion, Vector and Wellington Electricity also suggested that the adjustment should be 3.1%, the long-term (1994-2023) difference between the EDB-specific CGPI and the All-Groups CGPI.¹⁹⁵

¹⁹⁴ [Orion, Vector, Wellington Electricity “Cost escalators - Submission on EDB DPP4 draft decisions” \(8 July 2024\)](#), p. 3.

¹⁹⁵ Orion, Vector and Wellington Electricity submitted that an uplift figure of 3.1% would better: reflect long term averages, thereby removing volatility impacts; support the objective of regulatory certainty; reduce the risk of over or under investment by EDBs over the long run; reduce reliance on figures during the ‘covid supply years’ as years where inflationary pressures uniquely impacted domestic and global economies; help mitigate that there is more upside risk to inflation compared to downside risk; and ensure the Commission’s decision meets its objective to incentivise EDBs to invest and innovate during the decarbonisation transition.

- B348 The OEA report argued for a higher adjustment than 0.8% p.a. because the long-term disparity between the EDB-specific CGPI and the All-Groups CGPI is 3.1% p.a., or at least 1.8% if the highly volatile FY2007-2009 period is removed.
- B349 OEA then pointed out that the disparity between the EDB-specific CGPI and All-Groups CGPI is likely to continue through the DPP4 period, driven by the increasing global demand for electricity construction, geopolitical risks and constrained supply chains, and strong commodity markets.¹⁹⁶
- B350 Wellington Electricity disagreed with the 0.8% adjustment as it was “based on a small reference period that reflects unusual post-Covid economic conditions”, where the difference between the EDB-specific CGPI and the All-Groups CGPI was the smallest. It then noted that a reference period that excludes the impact of Covid is consistent with the Commission’s selection of other reference periods.¹⁹⁷
- B351 Orion, Vector and Wellington Electricity submitted that “while we note that the decision to utilise a five-year period aligns with the Commission’s capex allowance C3 decision, this is not a necessity. Setting allowances and setting cost escalators could/should use different reference periods.”¹⁹⁸
- B352 In cross submissions, citing the OEA report, ENA recommended that the additional adjustment applied in the escalation of the capex allowance (from constant dollars to nominal dollars), be increased from the proposed 0.8% per year to 1.5% per year. The ENA did not explain explicitly its reason for preferring 1.5% compared to the OEA’s 1.8% or 3.1%.¹⁹⁹
- B353 Aurora Energy supported the findings from OEA in its cross-submission, stated that the report's findings of high input cost inflation are in line with its experience in the current DPP3 period, and noted that the drivers for EDB cost inflation are likely to persist in the DPP4 period.²⁰⁰

¹⁹⁶ [OEA “EDB Escalation Report” \(prepared for Orion, Vector, Wellington Electricity - June 2024\)](#), p. 39.

¹⁹⁷ In the Cost of Capital IM final decision “the COVID affected period was excluded due to the large outliers and abnormal observations” [Wellington Electricity “Submission on EDB DPP4 draft decisions” \(12 July 2024\)](#), p. 13.

¹⁹⁸ [Orion, Vector, Wellington Electricity “Cost escalators - Submission on EDB DPP4 draft decisions” \(8 July 2024\)](#), pp. 2-3.

¹⁹⁹ [Electricity Networks Aotearoa \(ENA\) “Cross-submission on EDB DPP4 draft decisions” \(2 August 2024\)](#), p. 2.

²⁰⁰ [Aurora Energy “Cross-submission on EDB DPP4 draft decisions” \(2 August 2024\)](#), pp. 1-2.

Analysis

B354 The discussion in this section is structured in line with the two main issues raised in draft decision submissions in relation to the 0.8% additional adjustment.

B354.1 the choice of the time period for calculating the adjustment; (*Issue 1: Choice of time period for calculating the adjustment* section); and

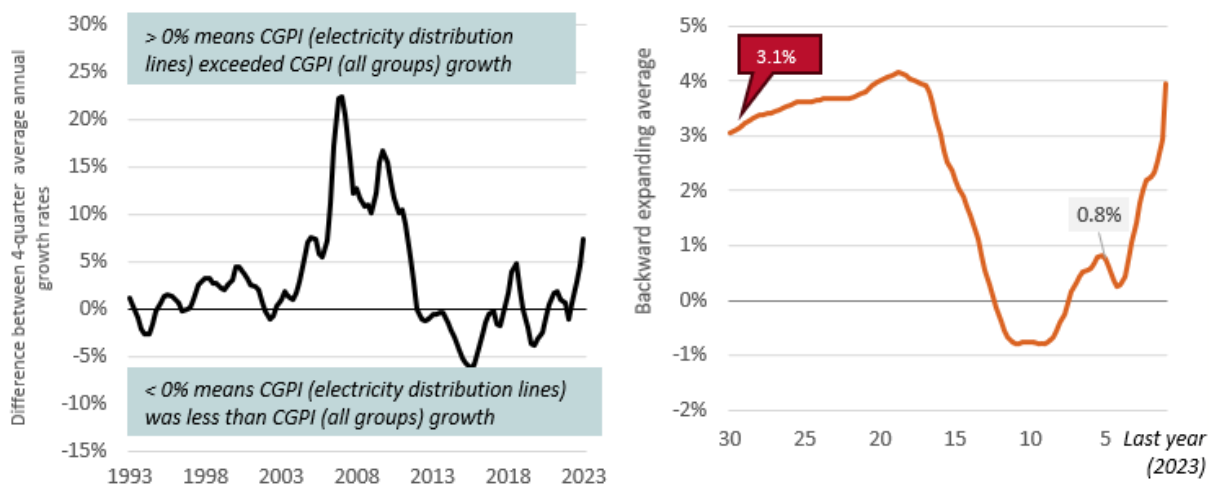
B354.2 the qualitative analysis of inflationary pressures for EDBs over the medium term (*Issue 2: Qualitative analysis of inflationary pressures for EDBs*).

Issue 1: Choice of time period for calculating the adjustment

B355 We agree with the Orion, Vector and Wellington Electricity submission that the “use of longer-term averages are generally recognised as the best averaging method to employ when the objective is to remove the issue of volatility.”²⁰¹ However, we note that in such an averaging process, we would also normally remove outliers where appropriate. In OEA’s view, the data from 2007-2009 are particularly volatile and are removed in one of their scenarios.

B356 We considered the options presented in the OEA report. In particular, the report presented the 30-year difference of 3.1% as a starting point. Figure B12 illustrates how the OEA estimate of 3.1% is attributable to the very large difference in growth between the All-Groups CGPI and the EDB-specific CGPI around 2010.

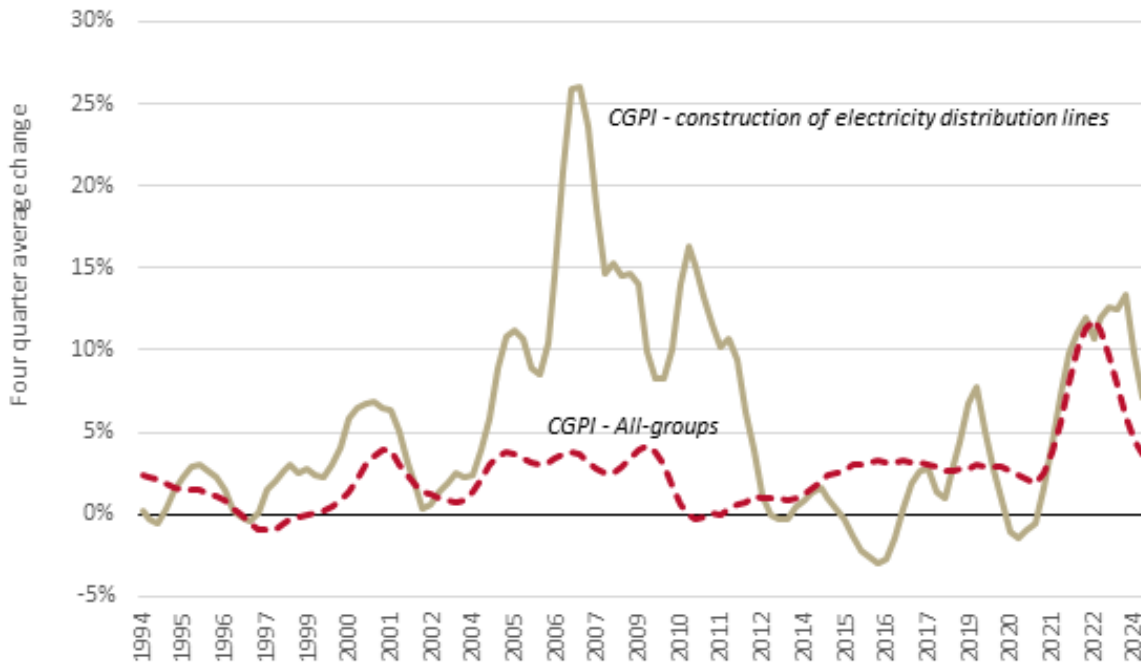
Figure B12 Difference in average growth rates between the All-Groups CGPI and the EDB-specific CGPI, and effect of duration on average difference



²⁰¹ [Orion, Vector, Wellington Electricity “Cost escalators - Submission on EDB DPP4 draft decisions” \(8 July 2024\)](#), p. 3.

B357 OEA also presented 1.8% as an option if the volatile period around the Global Financial Crisis 2007-2009 is removed from the 30-year average.²⁰² This volatile period was when the EDB-specific CGPI started to increase by more than 20% in Q4 of 2006 and reverted to around 10% in 2009 (see Figure B13 below).

Figure B13 All-Groups CGPI vs CGPI construction of electricity distribution lines



B358 If a 10% volatility threshold is used (instead of OEA’s 20%) for normalcy, then the volatile period should be extended by two years in both directions, ie, 2005 – 2011. This is the period when the growth in the EDB-specific CGPI index breached 10%. This threshold appears to be reasonable because: (1) the index has historically stayed well below 10% outside of 2005 – 2011; and (2) the highly inflationary COVID-19 period is consistent with this definition. Removing the period 2005 – 2011 from the long-term average results in a difference between the EDB-specific CGPI and All-Groups CGPI of 0.5% per annum.

B359 In response to Wellington Electricity’s submission that the unusual post-COVID-19 period should be excluded as the difference between the EDB-specific CGPI and the All-Groups CGPI was the smallest in this period, we ran a scenario to remove the period from 2022Q1-2023Q4 together with the volatile period of 2005-2011. The differential for this scenario is 0.3% per annum.

²⁰² The volatile period of 2007 – 2009 was mainly attributed to volatility in the commodity markets. The construction of electricity distribution lines relies on certain commodities such as copper and aluminium. Therefore, the EDB sector is exposed to commodity price shocks.

B360 In Table B4 below we summarise the alternative estimates given in submissions of the historical differentials between the EDB-specific CGPI and the All-Groups CGPI, and our draft decision and previous DPP decisions.²⁰³

Table B4 Summary of estimates

Cost escalation adjustment	Source and rationale
3.1%	OEA (commissioned by Orion, Vector and Wellington Electricity. It is the 30-year (CY 1994-2023) difference between the growth in the EDB-specific CGPI and All-Groups CGPI. It includes the high growth in the EDB-specific CGPI in the late 2000/ early 2010s (2007-2009).
1.8%	OEA: As per above but excludes certain high growth years in the late 2000/early 2010s (2007-2009).
1.5%	ENA cross-submission, "based on the evidence provided by OEA" ²⁰⁴
0.8%	Commission: This is the draft decision based on the difference between the EDB-specific CGPI and All-Groups CGPI for the 2019-2023 period.
0.5%	Commission: Long-term disparity between the EDB-specific CGPI and All-Groups CGPI removing the volatile 2005 to 2011 period.
0.3%	Commission: Long-term disparity between the EDB-specific CGPI and All-Groups CGPI removing the volatile 2005-2011 period, as well as the post-COVID years of 2022-2023.
0%	Commission : In DPP1, DPP2 and DPP3 we applied the All-Groups CGPI without additional adjustment.

B361 Table B4 shows that the calculation of the escalation adjustment is sensitive to the time period selected and the exclusion or inclusion of time periods considered to be volatile, both of which can be highly subjective. There are pros and cons of different approaches to measuring the variance between the EDB-specific CGPI and All-Groups CGPI, with no ready way to discern what is most likely to occur over the next five years.

²⁰³ Note that the OEA report also calculates the difference for other time periods (3.6% for 2000-2023; and 1.5% for 2010 to 2023).

²⁰⁴ [Electricity Networks Aotearoa \(ENA\) "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), p. 2.

B362 We have applied judgement that some allowance should be given for a higher rate of sector-specific increase in capital goods inflation, but we are not persuaded that estimates that are heavily affected by periods of more extreme variability are likely to be representative of variances over the next five years. Accordingly, we remain satisfied that a 0.8% allowance is reasonable given the uncertainties involved and invite the industry to develop data series and forecasting approaches that may provide a robust basis for inflation forecasting for use in future resets.

Implicit cost escalation in 2024 AMPs vs draft decision capex allowance

B363 As a check for reasonableness, we compared our cost escalators against EDBs' own implied inflation ie, those used by EDBs in their 2024 AMPs. We calculated the percentage difference between the EDB AMP24 forecast capex in constant prices and in nominal terms and found that the cost escalator implicit in the 2024 AMPs ranged from 6% to 28% for the DPP4 period.²⁰⁵

B364 Meanwhile, using the All Groups-CGPI plus the 0.8% adjustment to escalate the constant dollar allowances to nominal terms results in a 12.5% increase above the constant price allowance. The weighted average for the implicit cost escalation for EDBs is also 12.5%. Therefore, we conclude that the 0.8% adjustment is well within the range of forecasts used by EDBs. Other than Orion and Powerco, EDBs use lower cost escalators compared to the 12.5% average applied in the capex allowances.

Issue 2: Qualitative analysis of inflationary pressures for EDBs

B365 The OEA report shared its fundamental analysis of drivers of inflationary pressures affecting EDBs over the medium term. These include the increasing global demand for electricity construction, geopolitical risks, constrained supply chains, and strong commodity markets. They concluded that the 0.8% adjustment may understate the impact of these inflationary pressures on EDBs.

²⁰⁵ [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 – Draft Reasons paper" \(29 May 2024\)](#), para. B192.

B366 We note that these inflationary pressures were taken into account in our draft decision, through the 0.8% additional adjustment to All-Groups CGPI. The challenge is translating this qualitative analysis of inflationary drivers into a forecast of the differential between the EDB-specific CGPI and the All-Groups CGPI. Submissions have not provided us such a forecast. We have used historical averages for guidance, as have submitters. As discussed in Issue 1, that averaging process can be subjective and has provided us no evidence of a more appropriate adjustment.

Conclusion

B367 Based on our analysis discussed in the sections outlined above, we conclude that:

B367.1 we have no evidence that an alternative to our draft decision adjustment of 0.8% pa would result in a more appropriate cost escalator (in combination with the All-Groups CGPI) to set capex allowances.

B367.2 our cost escalators are well within the range of EDB forecast escalators.

B368 The 0.8% adjustment represents the additional inflation beyond the All-Groups CGPI over 2019-2023 which we consider to be a reasonable proxy of future EDB input price pressures above the average for capital goods.

Other regulatory tools

Role of flexibility mechanisms

B369 We use the term "flexibility mechanisms" to refer to changes which can be applied during a DPP regulatory period which includes DPP related in-period adjustment mechanisms (such as pass-through costs, recoverable costs, reopeners and LCCs) and CPPs.

B370 If an EDB needs to incur additional expenditure that it may not be able to accommodate within the settings of its current price-quality path through reprioritisation or substitution of expenditure, or exceeding the total spend allowance used to set the revenue limit is not an option for it, it can apply for a flexibility mechanism.

B371 Flexibility mechanisms help ensure that consumers can be confident that, where an EDB's revenue limits increase to provide for additional investment, the associated expenditure receives the appropriate level of scrutiny via the right tool. The nature and circumstances of the investment(s) will determine which flexibility mechanism is appropriate.

- B372 Reopeners are intended to be used on a justified basis in accordance with their relevant criteria. The outcome of a reopener application is not guaranteed and is subject to a three-stage decision-making process. We consider whether the reopener trigger criteria have been met and then decide, guided by a set of consideration factors, whether the price-quality path should be amended and how (and to what extent) the path should be amended.²⁰⁶
- B373 Where an EDB considers substantial changes to the level of expenditure and potentially the level of quality it delivers are necessary, it has the option of applying for a CPP. A CPP involves proportionately greater levels of assurance, consumer consultation and regulatory scrutiny.

Flexibility mechanisms were a key focus of the IM Review

B374 In recognition of the changing operating environment and emerging uncertainty facing EDBs, we made changes to the suite of flexibility mechanisms in the 2023 IM Review where there was justification to do so.

B375 We:²⁰⁷

B375.1 reviewed and made changes to reopeners, targeting situations where the forecasting uncertainty risk is highest and for which CPPs may not be a proportionate nor appropriate regulatory tool.

B375.2 introduced new mechanisms, ie, a large connection contract (LCC) mechanism and a new connection wash-up mechanism for EDBs on a CPP.

B375.3 considered the viability of a range of other potential in-period mechanisms (including contingent expenditure allowances, use-it-or-lose-it allowances and DPP quantity wash-ups) that would allow for recovery of costs but are not reopeners and concluded these could not be implemented in a low-cost way.

B375.4 concluded that the CPP regime is fit for purpose and remains appropriate where the scope and scale of individual EDB needs are more complex than DPP reopeners allow.

²⁰⁶ [Commerce Commission "Input methodologies review 2023 - \[Final\] Electricity Distribution Services Input Methodologies \(IM Review 2023\) Amendment Determination 2023 \[2023\] NZCC 35" \(13 December 2023\)](#), clauses 4.5.13(1)(a)-(d) and 4.5.15 (1)-(8)

²⁰⁷ [Commerce Commission "Input methodologies review 2023 - Final decision - CPPs and in-period adjustments topic paper" \(13 December 2023\)](#)

What we heard from stakeholders

- B376 Submitters on our DPP4 draft reasons paper aired views on the reliance on reopeners in the context of the 125% cap and resulting capex allowances. These are located and discussed in the *Potential increased use of flexibility mechanisms* section of **decision C2**.
- B377 The remaining submissions received on flexibility mechanisms do not directly relate to DPP4 capex decisions. We broadly summarise these submissions in this section but note that these points are generally outside the scope of the DPP4 reset.

No changes to the scope of reopeners

- B378 Similar to issues paper and capex workshop submissions raising the potential need for the scope of reopeners to be expanded, there were several draft decision submissions suggesting that the scope of reopeners should be extended.^{208, 209} The request for reopener extensions was particularly for coverage of opex.
- B379 ENA raised that it was unclear if significant asset replacement and renewal capex would be eligible for DPP reopeners, commenting that this poses issues for smaller EDBs.²¹⁰
- B380 We consider the scope of reopeners was well canvassed during the 2023 IM Review where we introduced a new reopener, extended the scope of some existing reopeners and made changes to the reopener materiality thresholds.
- B381 Accordingly, as part of this DPP reset, we have not initiated a process to amend the IMs to make any further changes to the scope of availability of reopeners, given the recent completion of the 2023 IM Review and the extent of changes made to reopeners in that review.

²⁰⁸ [Electricity Networks Aotearoa \(ENA\) "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 3; [Unison Networks "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 3; [Vector "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 44; [Vector "Submission on Capex framework design workshop" \(11 March 2024\)](#), p. 2; [Electricity Networks Aotearoa \(ENA\) "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 3.

²⁰⁹ [Vector "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 16-17; [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 5; [Electricity Networks Aotearoa \(ENA\) "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), p. 3.

²¹⁰ [Electricity Networks Aotearoa \(ENA\) "Cross-submission on DPP4 Issues paper" \(26 January 2024\)](#), p. 3.

B382 We are implementing targeted IM amendments aimed at ensuring that IMs reflect our policy intent and can be applied effectively during the DPP4 regulatory period.²¹¹ We intend to publish final decisions on these IM amendments by 1 April 2025.

No addition of other uncertainty mechanisms

B383 In the DPP4 Draft reasons paper we outlined that we considered other mechanisms, including contingent expenditure allowances, use-it-or-lose-it allowances and quantity wash-ups in the 2023 IM Review.²¹² Broadly, we did not introduce those mechanisms because the cost and complexity to design and implement these outweighed the potential benefit and would be inconsistent with a relatively low-cost DPP.

B384 However, we did recognise that given the evolving context and resulting uncertainty in DPP4, other mechanisms may be of value if these could be implemented in a manner that is consistent with a relatively low-cost DPP. We noted we were open to hearing from stakeholders if they had suggestions on overcoming the workability challenges of these other mechanisms as previously outlined, or if they have ideas for new mechanisms. We advised stakeholders to engage with the challenges and limitations identified for these mechanisms in their submissions.

B385 Three issues paper and capex workshop submitters raised the need for other non-reopener mechanisms.²¹³ Three draft decision submissions suggested we consider other non-reopener mechanisms such as use-it-or-lose-it and contingent allowances and expanding passthrough costs.²¹⁴

²¹¹ [Commerce Commission "Amended Notice of Intention - Potential amendments to Input Methodologies for Electricity Distribution and Transmission Services" \(2 July 2024\)](#)

²¹² [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 – Draft Reasons paper" \(29 May 2024\), paragraphs B208-B209.](#)

²¹³ [Vector "DPP4 Issues paper submission" \(19 December 2023\), p. 3; Unison Networks "DPP4 Issues paper submission" \(19 December 2023\), pp. 3-4; PowerNet "DPP4 Issues paper submission" \(19 December 2023\), paragraph 9; Vector "Submission on Capex framework design workshop" \(11 March 2024\).](#)

²¹⁴ [Vector "Submission on EDB DPP4 draft decisions" \(12 July 2024\), pp. 5, 16-17, 37; Unison Networks "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), p. 1; Fonterra "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p. 1.](#)

B386 Submissions did not provide further information on how the challenges and limitations related to these mechanisms that were outlined in the 2023 IM Review could be accommodated within a relatively low-cost DPP.²¹⁵ Accordingly, we have not initiated a process to amend the IMs to implement any additional mechanisms.

Reopener workability, process, practical application and need for guidance

B387 We received a number of issues paper submissions indicating concerns about how reopeners will operate with the expected pace and volume of change.²¹⁶

B388 Similar feedback was received in draft decision submissions. Sentiments were expressed about the workability of reopeners, both from an application perspective for EDBs and an assessment perspective for us. Submitters were concerned about impacts on timeliness and resources, suggesting that this might impact EDBs ability to plan ahead, delay investments and make managing consumer expectations challenging. There were calls for the reopener process to be practical, streamlined and fit for purpose.²¹⁷

B389 Unison commented that it is encouraged by the efficient processing of its second Te Huka 3 reopener application and that this reopener and Wellington Electricity's reopener applications provide beneficial precedents for future applications.²¹⁸

B390 MEUG emphasised the importance of EDBs consulting with impacted stakeholders as part of the reopener application process.²¹⁹

²¹⁵ [Vector "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 5,16-17, 35-37; [Fonterra "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 1; [Unison Networks "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), p. 1.

²¹⁶ [PowerNet "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 2; [Powerco "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 4; [Vector "DPP4 Issues paper submission" \(19 December 2023\)](#), pp. 14, 44; [Alpine Energy "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 3; [Horizon Networks "DPP4 Issues paper submission" \(19 December 2023\)](#), p. 3.

²¹⁷ [Vector "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 16-17; [Energy Trusts of New Zealand \(ETNZ\) "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), p. 3; [Electricity Networks Aotearoa \(ENA\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 9; [Aurora Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 8; [Firstlight Network "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p.9; [PowerNet "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 5; [Business Energy Council \(BEC\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 4; [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p.8; [Horizon Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 4-7; [Orion "Submission on EDB DPP4 draft decisions" \(11 July 2024\)](#), p. 6; [Orion "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), pp. 7,12.

²¹⁸ [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 7-8

²¹⁹ [Major Electricity Users Group \(MEUG\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), pp. 2-5.

- B391 There were many requests for us to issue reopener guidance and to adopt the PwC reopener guidelines put forward by the Big Six EDBs to be adopted.^{220, 221}
- B392 There were questions raised and requests for clarity on practical implementation aspects of reopeners.²²²
- B393 We are aware that there may likely be a higher number of reopeners during DPP4 and acknowledge the importance of efficient processing of these. Through processes separate to the DPP4 reset, we are aiming to ensure that reopener IMs operate as intended and to provide clarity for EDBs on our expectations for reopener applications.
- B394 We agree with submitters that reopener guidance would be beneficial and appreciate submitters' engagement on the details of possible guidance. We do not intend to adopt the guidance submitted by PwC in full but may take into account aspects of it when developing our own guidance.

Engagement on CPPs

- B395 CPP-related issues paper submissions were focused on CPPs being resource-intensive, our ability to process, appropriateness for smaller EDBs and the role of more flexible reopeners in lieu of CPPs.

²²⁰ [PWC "Proposed reopener guidelines - Submission on EDB DPP4 draft decisions" \(prepared for Big 6 EDBs - 12 July 2024\)](#)

²²¹ [Orion "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), p.7](#); [Vector "Submission on EDB DPP4 draft decisions" \(12 July 2024\), pp. 3-4,8,15-17](#); [Major Electricity Users Group \(MEUG\) "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), p. 1 and 3](#); [Electricity Networks Aotearoa \(ENA\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p. 7-8](#); [Electricity Networks Aotearoa \(ENA\) "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), p. 3](#); [Aurora Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\) p.4-5](#), [Powerco "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p.7,16](#); [EECA "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p.6](#); [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p. 7, 14-15](#); [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p. 1, 9-11](#); [Alpine Energy "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), p. 2,7](#); [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p.7-8](#), [Unison Networks "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), p.1](#); [Big Six EDBs "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\), p. 4](#); [Horizon Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p.4](#); [Orion "Submission on EDB DPP4 draft decisions" \(11 July 2024\), p.7](#).

²²² [Vector "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p.17](#); [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\), pp. 7, 8-9,15-16](#), [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p. 9-10](#), [Unison Networks "Submission on EDB DPP4 draft decisions" \(12 July 2024\), p. 5,8](#); [Orion "Submission on EDB DPP4 draft decisions" \(11 July 2024\), p. 7](#).

- B396 Wellington Electricity commented that early engagement with us would be beneficial to explore whether a CPP application can be provided in modified or reduced formats.²²³ Alpine commented that CPP guidance could be useful.²²⁴
- B397 Wellington Electricity commented that an IPP for networks with large, sustained investment profiles would be more appropriate than multiple back-to-back CPPs.²²⁵ MEUG supported this view stating that IPPs for the six largest EDBs would allow greater scrutiny of expenditure and provide the level of assurance that consumers need.²²⁶ In contrast, Orion stated its preference for a well-functioning DPP regime supported by flexibility mechanisms, commenting that the current system has sufficient opportunity for scrutiny.²²⁷
- B398 We continue to encourage EDBs considering CPPs to engage with us early to explore if it is appropriate for them to apply for CPP IMs to be modified, exempted from or varied, keeping in mind that information provided in a CPP proposal must be able to support the required scrutiny.²²⁸
- B399 We are not intending to consider or issue CPP guidance as it is challenging to write guidance that would apply universally to all EDBs given circumstances are likely to be specific for individual EDBs.
- B400 IPPs for large EDBs considering multiple CPPs would require legislative change and is a matter outside the scope of DPP4.

The new large connection contracts mechanism is available to be used during DPP4

- B401 The 2023 IM Review introduced the large connection contracts mechanism as an alternative optional mechanism to a reopener for large new customer-initiated and funded connections that meet certain criteria.²²⁹

²²³ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 17.

²²⁴ [Alpine Energy "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 10-11.

²²⁵ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 16.

²²⁶ [Major Electricity Users Group \(MEUG\) "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 8.

²²⁷ [Orion "Cross-submission on EDB DPP4 draft decisions" \(2 August 2024\)](#), p. 12.

²²⁸ [Commerce Commission "Input methodologies review 2023 - Final decision - CPPs and in-period adjustments topic paper" \(13 December 2023\)](#), paragraphs 4.16-4.21

²²⁹ [Commerce Commission "Input methodologies review 2023 - Final decision - CPPs and in-period adjustments topic paper" \(13 December 2023\)](#), Chapter 8.

- B402 The LCC is available to address large connection forecast uncertainty in situations where:
- B402.1 the connection expenditure has not been provided for in DPP allowances;
 - B402.2 the size of the connection is at least 5 megawatt (MW) and exceeds either 1% of the EDBs forecast net allowable revenue (FNAR) for the regulatory period or \$5 million for Vector and Powerco, and \$2.5 million for all other EDBs; and
 - B402.3 the connecting party seeking a connection to the EDB's network enters into a contract directly with the EDB, is prepared to fund the costs of the connection under that contract and agrees that the terms and conditions of the contract (including pricing) are reasonable.
- B403 We discuss in the following paragraphs how:
- B403.1 EDBs can implement LCCs during DPP4; and
 - B403.2 we will monitor the use of LCCs during DPP4.
- B404 We also summarise at the end of this section why we have not taken into account potential LCCs when setting capex allowances.

How EDBs can implement LCCs during DPP4

- B405 EDBs intending to use LCCs for connection expenditure which arise during DPP4 will need to self-assess against the LCC criterion of "expenditure is not implicitly or explicitly provided for in DPP allowances". This means that for connection expenditure to be eligible for future LCCs during DPP4, it must not already have been provided for in DPP4 allowances. For future LCC candidates to be excluded from DPP4 allowances, these would need to be clearly identifiable by EDBs. With the timing of the 2023 IM Review final decisions, the requirement of identifying LCC-eligible connection expenditure was not known in time for AMP 2023 nor the response to the November 2023 s 53ZD notice.
- B406 Given the challenge outlined above in identifying and verifying potential LCCs and recognising that EDBs would need to self-assess against the criterion given they do not submit applications to us for LCCs, we set out guidance below.
- B407 A principled approach is applied to determine the LCC criterion of "expenditure is not implicitly or explicitly provided for in DPP allowances".
- B408 The approach is different dependent on whether the EDB has capped or uncapped forecasts:

- B408.1 for EDBs with capped forecasts, we will assume that LCC-eligible connection expenditure has not been implicitly or explicitly provided for in DPP allowances; and
- B408.2 for EDBs with uncapped forecasts, the LCC criterion will apply, ie, they will be required to provide evidence to prove that DPP allowances did not implicitly or explicitly provide LCC-eligible connection expenditure.
- B409 The overall cap is not applied for EDBs with uncapped forecasts, which means their allowances will be in line with their forecasts and are more likely to include LCC-eligible connection expenditure. Those EDBs will be required to prove as per the LCC criterion that their LCC-eligible connection expenditure has not been explicitly or implicitly provided for in the DPP. Our view is that most EDBs with uncapped forecasts should be able to produce this evidence using information they used to develop their AMP forecast for consumer connections. EDBs with uncapped forecasts whose connections are fully funded upfront by connecting parties should also be able to provide evidence to fulfil this LCC criterion relatively easily.
- B410 Vector submitted on this topic, expressing concern about the different approaches for EDBs with capped and uncapped forecasts to determine LCC eligibility for LCCs which arise during DPP4. It suggested that guidelines are produced for LCCs and that those guidelines could include guidance on how EDBs can demonstrate that their LCC projects are eligible.²³⁰ Wellington Electricity noted the different approaches to determining LCC eligibility.²³¹
- B411 Whilst we have provided a principled approach to assist EDBs in applying the LCC criterion without needing to engage with us on whether LCC-eligible connection expenditure was implicitly or explicitly provided for in DPP4 allowances, we consider there is a potential risk that EDBs with capped allowances may use LCCs to such an extent that it may mean LCC-eligible connection expenditure was at least in part provided for in DPP4 allowances. We intend to monitor the volume of LCCs to identify whether high usage trends indicate a potential risk of double-recovery of LCC-eligible connection expenditure. We will engage with EDBs where we consider this may represent a concern, for evidence as to why they consider these were not provided under DPP4 allowances.

²³⁰ [Vector "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 18.

²³¹ [Wellington Electricity "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 17.

How we will monitor the use of LCCs during DPP4

B412 The *Other technical matters for the calculation of the washup* section of **Attachment F** summarises our final decision to adjust the wash-up accrual formula to enable the monitoring of LCCs during DPP4.

B413 The background and rationale for that decision is discussed in detail here.

Problem description

B414 The amended IMs from the 2023 IM Review reflected how the wash-up formula should be amended to reflect the changes required for the monitoring and future return of LCC-ineligible revenue. In the 2023 IM Review, we said we would, as part of our DPP4 consultation process, consult on and implement the wash-up formula and compliance statement requirements that apply to LCCs.²³²

What we heard from stakeholders

B415 We did not receive any submissions opposing our draft decision on the wash-up formula.

B416 Vector submitted on the compliance statement requirements stating that it is concerned by our proposal for EDBs to provide information for the Annual Compliance Statement in respect of the wash-up. It did not provide specifics on its concerns but suggested that scope of its broader request for general LCC guidance could include “how EDBs can demonstrate that their LCC projects are eligible in their annual compliance statements.”²³³ Unison submitted more broadly on how guidance could be useful in several areas including LCCs.²³⁴

Analysis

B417 We have amended the wash-up formula in the DPP4 determination in line with the IMs.²³⁵ We discuss our implementation of IM amendments to the wash-up in **Attachment F**.

²³² [Commerce Commission "Input methodologies review 2023 - Final decision - CPPs and in-period adjustments topic paper" \(13 December 2023\)](#), Chapter 8, paragraph 8.71.

²³³ [Vector "Submission on EDB DPP4 draft decisions" \(12 July 2024\)](#), p. 18.

²³⁴ [Unison Networks – “Cross-submission on EDB DPP4 draft decisions” \(2 August 2024\)](#), p. 1.

²³⁵ Commerce Commission [Final] Electricity Distribution Services Default Price-Quality Path Determination 2025 [2024] (20 November 2024), Schedule 1.6

- B418 The mechanism to monitor that LCCs are being used as they should is via the wash-up provisions. We may check whether revenue reported as LCC revenue by the EDB is "valid" LCC revenue (revenue received from qualifying LCCs -projects that meet the LCC criteria as defined in the IMs) or revenue that should have been recorded as revenue recovered under the DPP.
- B419 Where an EDB reports LCC revenue that turns out not to be from a qualifying LCC, the wash-up provision enables the over recovery of revenue to enter the wash up balance to be returned to consumers. EDBs may receive LCC revenue that is less than what they expected to have received, for example due to some default in payment by the connecting party. The amount of under-recovered LCC revenue is not allowed to be recovered through the wash-up. The EDB will need to pursue its available revenue recovery steps under the LCC contract.

We require EDBs to provide information for the Annual Compliance Statement in respect of the wash-up so we can verify the validity of LCCs.

- B420 During a DPP, an EDB is required to provide a written annual compliance statement that states that it has complied with the requirements to calculate wash up amounts using the methodology specified in in the DPP determination. It is also required to include supporting information for all components of the wash-up amount calculation, including the LCC revenue adjustment component.²³⁶
- B421 Given the potential commercially sensitive nature of this information, we have provided the option for EDBs to disclose this information confidentially to us.
- B422 We will consider how and when it might be best to provide LCC guidance.

Excluding potential LCCs from capex allowances

- B423 We have not explicitly factored potential LCCs into DPP4 capex allowances given these are challenging to identify.
- B424 For expenditure to be eligible for future LCCs during DPP4, it must not already have been provided for in DPP allowances. This means potential LCCs would need to be clearly identifiable and then excluded from capex allowances.

²³⁶ Commerce Commission [Final] Electricity Distribution Services Default Price-Quality Path Determination 2025 [2024] (20 November 2024), clause 11.6(b).

- B425 EDBs, through submissions on the February 2023 capex workshop had mixed responses as to whether they had included potential LCC-eligible connection expenditure in forecasts and if not, whether they could provide this information to us.²³⁷ In our draft reasons paper, we encouraged EDBs who have identified potential LCC-eligible connection expenditure to voluntarily share that information with us on a confidential basis. We received no information.
- B426 We have not excluded forecast LCCs from DPP4 capex allowances given these have not been separately identifiable. Since the LCC is an optional mechanism, EDBs whose connection expenditure forecasts include certain potential LCC-eligible connection expenditure can treat these as they would any other connection expenditure.

Additional reporting to improve visibility and operation of the regulatory regime

- B427 We set out our preliminary thinking on future additional reporting in the draft reasons paper to capture any initial feedback that stakeholders had, but as these mechanisms are not implemented by the DPP4 Determination they are not further discussed here.²³⁸ We thank submitters for their feedback and will take this into account when considering future additional reporting.

²³⁷ Wellington Electricity provided a list in its 2024 AMP. Unison and Horizon stated that no potential LCCs have been identified. Alpine noted one potential LCC. Orion confirmed that it has not included potential LCCs in forecasts due to commercial sensitivity but are able to share this directly with us. Powerco noted that its forecasts incorporate implicit LCC connection expenditure and it would not be practical to produce a list of potential LCCs. Vector commented on the impracticality of producing a list.

²³⁸ [Commerce Commission "Default price-quality paths for electricity distribution businesses from 1 April 2025 – Draft Reasons paper" \(29 May 2024\)](#), paragraphs B240-B261.