


ENA submission on default price-quality paths for electricity distribution businesses - issues paper

Submission to Commerce Commission



āhuarangi.
kiritaki.
mahi ngātahi.

climate.
customers.
collaboration.

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1 Introduction

Electricity Networks Aotearoa (ENA) appreciates the opportunity to make a submission on the default price-quality paths (DPP) for electricity distribution businesses issues paper.

ENA represents the 27 electricity distribution businesses (EDBs) in New Zealand (see Appendix A) which provide local and regional electricity networks. EDBs employ 10,000 people and deliver energy to more than two million homes.

2 Executive Summary

Managing consumer price shocks will be the most pivotal component of the Commission's 2025-2030 default price-quality path determination (DPP4), as consumer bills are likely to materially increase between the 2020-2025 electricity default price-quality path (DPP3) and DPP4.

The vast majority of DPP4 revenue increases will be driven by exogenous components of the regulatory regime (risk-free rates and inflation). Any heavy-handed cuts to opex and capex will not significantly alter the price trajectory for DPP4.

This DPP4 rebound in revenue reverses the plunge that occurred between the 2015-2020 electricity default price-quality path and DPP3.

Cutting expenditure allowances to make small price savings today will come at a cost of significantly larger benefits to consumers over the longer term. The negative consequences of underinvesting in capital expenditure (capex) both economic and climatic, far outweigh the risks of investing too soon.

Smoothing within the DPP4 period should be applied to mitigate the upfront impact on consumer bill increases from the jump in allowable revenues between DPP3 and DPP4. However, given the scale of the increase, this will require the abolition of the 10% revenue smoothing limit (formerly known as the annual maximum percentage increase).

While smoothing will have an important part to play in managing the consumer impacts of the move from DPP3 to DPP4, to maintain Financial Capital Maintenance (FCM) and meet the objectives of Part 4, EDBs need to have the ability to recoup the full building block allowable revenue (BBAR) within the DPP4 period.

It will be critical for DPP4 to include a re-opener for policy changes either by the Government or Regulators that alter EDB's recovery of growth capex from connectors. Without this intervention, EDBs could be in the untenable position of cap or potentially rejecting new connection applications; neither of which are in the long-term interest of consumers.

The Commission's review of AMP and the robustness of EDB's capex forecast will provide the Commission with the confidence it needs to abolish the cap on aggregate capex previously set at 120% of historical levels.

EDBs across the board will face opex step changes which are quantifiable, evidenced, and meet the Commission's criteria. These include but are not limited to smart meter data access, cybersecurity, and insurance.

ENA has reviewed the Commission's econometric models for network and non-network opex. ENA has identified issues with the modelling including input data issues. Importantly, the Commission's model does not consider time trend variables which are statistically significant and would improve the model's accuracy for both network and non-network opex.

3 Context

New Zealand homes, businesses, and communities have a critical reliance on a safe, secure, resilient, and affordable supply of electricity for their health and well-being. In addition to directly powering communities, electricity is critical to the operation of many other essential services, such as telecommunications and water reticulation.

The distribution sector is about to face its biggest transformation in more than a century. The pace and scale at which this transformation will occur throughout DPP4 is uncertain. The upcoming DPP reset must incentivise EDBs to adapt and respond to the transition without fear that their necessary expenditure may not be deemed recoverable, therefore contradicting the principle of Financial Capital maintenance that underpins the Part 4 regime.

3.1 Price impact of exogenous inputs in a high inflation environment

In the period since the Commission’s DPP3 determination, the global financial context has turned 180 degrees. Over DPP3 the New Zealand cash rate jumped from just 0.25% to 5.5% while inflation has been at a level not seen in more than 30 years. The Commission's decision to reject the use of a trailing average cost of debt will ensure that consumers will face distribution prices that jump or crash on a 5-yearly basis at the whim of interest rates at two single points in time.

These exogenous changes will result in a direct and significant uplift in the value of EDBs regulated asset bases and the WACC used for DPP4. Even in the absence of the need for EDBs to invest to facilitate decarbonisation and fortify their networks to withstand the increase in extreme weather events driven by climate change, revenue allowances for DPP4 will greatly exceed those set in DPP3.

The DPP3 allowances were a material departure from the revenues that existed at the conclusion of the DPP2 regulatory period. The expected uplift in DPP4 revenues should be viewed in the context of these longer-term revenue movements as a return to historical levels, with DPP3 and its record low interest rates and inflation the abnormality, not DPP4.

Consultation questions & responses

Number	Request for comment or responses on initial views
Chapter 2 – Context and challenges	
1	<p>We are interested in your views on whether we have properly understood the changing industry context as it relates to the DPP4 reset.</p> <p>Have we properly understood and represented the changing industry context and are there other implications for the DPP4 you believe we should consider?</p>

1 Response:

The Commission has understood the changing industry context within which EDBs operate. ENA believes the core features of this industry context are:

- Facilitating decarbonisation requires increased investment and expenditure.
- The consequences of underinvestment outweigh the risks and impacts of EDB overinvestment.
- The timing differential between capex outlay and the recovery of it over the life of the asset has the potential to cause short-term finance and financeability challenges for EDBs.
- Innovative opex solutions are a good way to manage uncertainty but the practical barriers to getting innovation allowances approved are reinforcing the inherent capex bias in the framework.
- The compressed consultation timeframes on key opex and capex decisions contained in the DPP may result in imprudent decisions being made.

The Commission's DPP4 reset is occurring at a time of high-paced regulatory activity, including the Commission's Input Methodologies (IM) review and review of EDB's asset management plans (AMPs), the Electricity Authority's distribution sector reform and distribution pricing reform programmes and the Ministry of Business, Innovation & Employment (MBIE) energy strategy development programme. The pace, overlapping timeframes and scale of these initiatives have stretched industry stakeholders' ability to appropriately interact with and respond to each. There is a clear need for greater coordination both within and between regulators and government agencies.

The impact of this lack of planning and coordination has manifested itself with this submission being made less than a week after the Commission published its IM determination and two days before responses to the Commission's formal section 53ZD information requests are due. These timing conflicts will continue throughout the DPP4 reset process, with the findings of the Commission's AMP review being published too late to influence EDB's 2024 AMPs, while the Commission's critical review of EDB efficiency is yet to commence.

4 Consumer bill impact, supplier hardship

4.1 Price shocks to consumers should be mitigated by revenue smoothing

The exogenous uplift in WACC and inflation will mechanically result in a direct and material uplift in EDB revenue allowances in DPP4. The impact on revenues of the uplift in capital expenditure (capex) to facilitate decarbonisation and build resilience will, due to their recovery being achieved over the long life of the assets, be subdued during DPP4. Cutting capex allowances today will only result in small reductions in the p0 adjustment. It will come at a heavy cost to consumers over the long term and may put New Zealand's achievement of its decarbonisation goals and obligations at risk.

Nonetheless, the uplift in the building block allowable revenue (BBAR) for all non-exempt EDBs is expected to be more than 30% higher than the 2024 revenues set under DPP3. The Commission's historical approach of the use of a p0 adjustment to bridge the inter-period revenue gap would result in a material consumer price shock in 2025. This comes at a time when consumers are already under increased financial pressure stemming from economy-wide price rises.

To ease the upfront price shock from a significant p0 adjustment, ENA believes that it is to the long-term benefit of consumers that intra-period smoothing takes place.

4.2 Full BBAR must be recovered during the regulatory period

The Commission in its decision on the input methodologies (IM) framework identified ex-ante real financial capital maintenance (FCM) as a fundamental economic principle for the Part 4 regime. When considering smoothing to mitigate price shocks, the Commission must be mindful of this key economic principle and

ensure that the entire revenue allowance (excluding wash-ups) be recovered within the DPP4 regulatory period (i.e. no planned deferral of revenues between DPP4 and DPP5).

4.3 10% revenue smoothing limit is not viable in a high inflation environment

The Commission has historically applied a nominal 10% per annum cap to each EDB's annual revenue increase within the regulatory period. Given the current high inflationary environment and the need for intra-period smoothing to mitigate price shocks, the retention of the 10% revenue cap is untenable. ENA recommends that the cap be lifted.

The Commission's IM decision to exclude pass-through costs (primarily Transmission costs) from any revenue cap is a positive step and is welcomed by ENA.

Consultation questions & responses

Chapter 5 – Setting revenue allowances

26 We are proposing to retain our approach of setting a 'default' X-factor of 0% (before considering price shocks or supplier financial hardship).

We are interested in your views on whether this approach (where long-run changes in sector productivity are accounted for in our building blocks analysis) remains appropriate.

26 Response:

ENA's view is that the default X factor of 0 is appropriate. However, ENA is unable to comment on whether the building blocks (especially opex) appropriately account for productivity without first seeing the Commission's analysis of EDB efficiency.

27 Our emerging view is to assess price shocks for consumers using the real change in aggregate distribution revenue from year-to-year, with a particular focus on the change between regulatory periods.

Do you agree with this approach? If not, are there other alternatives we should consider?

When applying this (or any other) analysis, what factors should we consider in determining whether a price change amounts to a price shock?

27 Response:

Managing consumer price shocks will be the most pivotal component of the Commission's DPP Determination. Regardless of the Commission's decisions on opex and capex allowances, movements in the risk-free rate (amplified by the Commission's proposal to retain the on-the-day approach to cost of debt) and inflation, means there will be a material jump in EDB revenue requirements in DPP4.

It is likely that a combination of a p0 increase, and inter-period smoothing will be needed to manage price shocks for consumers.

It is also clear that the Commission's past practice of capping revenue increases at 10% per annum is not viable, or appropriate for DPP4.

To ensure FCM, all costs (as measured by BBAR) must be recovered within the regulatory period. The Commission must also be mindful of the impact of smoothing on the wash-up account to ensure that it does not create a bow wave of catch-up price increases into DPP5.

The revenue cap in its current form does not measure the true consumer impact. The revenue cap should be adjusted at the time of price-setting to reflect changes in inflation and kWhs delivered.

A volume-based adjustment is essential to ensure that EDBs with higher network growth are not disadvantaged. A volume adjustment will also take into account the impacts of the substitution of electricity for fossil fuels.

For context - Aurora is constrained by a 10% revenue cap but due to adjustments for CPI and the TPM its actual revenue cap applied has been closer to 15% - the compounding effect of the revenue cap increases has a cashflow impact in the tens of millions.

28 Our emerging view is that financial hardship will be ‘undue’ only where it is to such an extent that it is inconsistent with the long-term benefit of consumers.

Do you agree with this approach? If not, are there other alternatives we should consider?

When applying this (or any other) analysis, what factors should we consider in determining whether a supplier faces undue financial hardship?

28 Response:

ENA acknowledges that the Commission is working on a stand-alone issues paper on financeability. ENA has been consistent in its calls for the Commission to ensure that the outcomes of the DPP align with its assumption on the credit rating of EDBs in the IM for the calculation of the cost of capital.

The deferral of revenue recovery beyond the DPP4 regulatory period would have material impacts on the ability of EDBs to fund the investment and ongoing expenditure needed to ensure that their networks can deliver the services expected and demanded by consumers. A curtailment or deferral of this necessary spending would be contradictory to the Commission's obligation to work for the long-term benefit of consumers.

Chapter 5 – Consumer bill impacts

29 Previously we have forecasted indicative consumer bill impacts from information disclosed by EDBs. We are interested in understanding what other information may help refine our approach.

What models or data inputs could be provided by EDBs that would improve our approach to modelling consumer bill impact?

29 Response:

EDBs model customer impacts as part of their annual pricing processes. This often involves modelling the impact on a set of customers which are representative of their consumer base. The Commission should make use of the detailed consumer usage data published by the Authority via the EMI website to generate accurate and representative customer impacts.

5 Capital Expenditure

5.1 Limited short-term price impacts of capex

The nature of the building blocks approach to the establishment of revenue allowances and the principle of FCM means that the price impact of capex in any one year is a fraction of the spend in that year. This is important for the Commission to bear in mind when considering forward-looking capex allowances.

The risks and consequences of under-investment by EDBs resulting in slower decarbonisation and less resilience in their networks in the face of extreme weather events are far more than the risks and consequences of small price increases spread over the life of the infrastructure.

5.2 AMP usage is critical for determining capex allowances

ENA agrees that past capex is not a good starting point for the consideration of future capital spending. ENA welcomes moves by the Commission to give greater weight to EDBs AMPs in the determination of capex allowances. ENA believes that the Commission's independent consultant's review of the robustness of EDB forecasting approaches will deliver the comfort and confidence required for the Commission to adopt AMPs as the basis of DPP4 capex allowances.

The Commission's independent AMP review will be a valuable tool for both the Commission and EDBs. However, the review's unfortunate timing means that EDBs will not be able to incorporate identified improvements into their 2024 AMPs, or 53ZD notice information used for the draft DPP4 decision.

5.3 The 120% capex cap must be raised

In past DPP resets, the Commission has applied an arbitrary cap on capex in the absence of an assessment of the robustness of EDBs capex forecasts. For DPP4, the Commission will have on hand a detailed review of each EDB's AMP. This report should provide the Commission with the necessary comfort to relax or remove the capex cap.

This is particularly relevant given the need for EDBs to invest to enable decarbonisation. If the cap was to remain in place, many EDBs would be left with little choice but to apply for a CPP. ENA has concerns about the resources available for both EDBs and the Commission to develop and implement multiple CPP applications in parallel.

5.4 Uncertainty on decarbonising requires flexibility in capex allowances

The uncertainty over the timing and scale of expenditure needed to facilitate decarbonisation will demand that EDB capex programmes be nimbler and more responsive. This in turn will require that DPP uncertainty mechanisms be faster and more efficient than in the past, where re-opener applications have taken close to a year.

Transpower's RCP4 proposal has incorporated expenditure tied to a series of uncertainty mechanisms specifically a:

- Listed projects allowance (\$261.5 million)
- Resilience uncertainty mechanism (\$126.7 million)
- Enabling customer capacity allowance (\$100 million)

These expenditures account for approximately 18% of Transpower's capex over RCP4 and are tied to uncertainty over the timing and scale of the spending needed to facilitate customer electrification and deal with the impacts of climate change.

ENA's view is that the Transpower approach is appropriate and that the Commission should allow similar flexibility within the DPP to ensure that EDBs are not unfairly punished or rewarded via the IRIS for exogenous drivers of expenditure uncertainty.

ENA recommends the Commission introduce both a listed project contingent allowance and a resilience uncertainty allowance both of which would sit outside the IRIS.

5.5 Contributions policies change risk shifting burden onto existing customers.

EDB's forecast of growth capex is directly and inextricably tied to EDB's capital contributions policies. Capex only enters an EDB's capex allowance when it is funded by the EDB with any amount funded by the customer excluded from the allowance and RAB.

Policymakers and the Electricity Authority are currently scrutinizing EDBs' approaches to capital contributions. One of the options being considered is the capping of upfront contributions¹. Any cap would shift the cost from the beneficiary and causer of this expenditure onto existing customers who do not benefit from it. This would add to future price increases for existing consumers.

5.5.1 Mechanism needed for policy changes that fundamentally alter the capex funding mix

With the potential for the Government to intervene and fundamentally alter EDB-funded expenditure on connections, there needs to be a mechanism within DPP4 to allow EDBs the ability to ensure that their capex allowances can be adjusted to comply with this legislative or regulatory change. While there is an existing mechanism to allow for the DPP to be re-opened for changes to the Electricity Industry

¹ Electricity Authority, 2023, Targeted Reform of Distribution Pricing Issues Paper, p50

Participation Code made by the Electricity Authority, there is no such mechanism for changes to government-imposed policy and regulations.

A consequence of the Commission's decision to reject the inclusion of a policy change re-opener in the IMs means alternative arrangements within the DPP will be needed to allow EDB capex allowances to adapt to changes in legislation or regulation with respect to capital contributions. Otherwise, EDBs could be in the untenable position of cap or potentially rejecting new connection applications; neither of which are in the long-term interest of consumers.

Consultation questions & responses

Chapter 3 – Forecasting capital expenditure

We are proposing to adapt our approach to capex for DPP4 based on feedback from EDBs, that past expenditure is not a good starting point for considering future spend.

Do you have any particular concerns or issues with our proposed approach? If so, how could these concerns or issues be resolved?

What alternative data and external sources should we use to support our consideration of capex forecasts, beyond the information in 2023 Asset Management Plans (AMPs), responses to section 53ZD notices and 2024 AMPs, and why should these be used?

2 Response:

ENA supports the premise that historical expenditure is not a good starting point. The use of EDB capex forecasts from AMPs and 53ZD responses rather than historical spend is supported.

The timing of the Commission's AMP review is poor, and any findings would be unable to be reflected in EDBs AMPs until the DPP period commences in 2025.

We are proposing to apply the capital goods price index to forecast capex allocations.

Is there a more appropriate index which could be applied; and, if so, why?

3 Response:

The Capital Goods Index is a broadly appropriate measure. However, it may fail to capture the true price inflation that drives EDB capex. ENA is not aware of any measure that would provide greater accuracy.

We have concerns about the challenges in delivering increased programmes of work given current labour market, supply chain and economic challenges in New Zealand.

How should our capex forecast take into account potential sector-wide deliverability constraints?

4 Response:

EDBs are aware of the deliverability challenges facing all infrastructure providers in New Zealand. EDBs are working cooperatively and collaboratively to address short, medium and long-term deliverability constraints.

Further, deliverability constraints are already considered in EDB AMP forecasts. Many recent supply constraints were COVID-related, and these constraints will not necessarily continue into the DPP4 period.

We will be using the s 53ZD notice to collect information about how EDBs have reflected resilience in their expenditure forecasts.

What engagement have EDBs had with consumers about resilience expectations, especially as it relates to significant step changes in forecast expenditure?

What other considerations should we factor into our analysis of the resilience expenditure information collected from the s 53ZD notice and/or what is unlikely to be visible in the forecasts that we should consider?

5 Response:

EDBs engage with their customers via a range of means on a regular basis, through detailed customer surveys, focus groups and other means. This engagement can come at a high cost. EDBs also engage closely with local authorities and Government to understand their communities' expectations for resilience and the factors that impact resilience.

Resilience is not a stand-alone capex project/cost category, but it is embedded in the way EDBs design, build, operate and maintain their networks. Community resilience also depends on systems/network effects which include non-EDB infrastructure i.e. telecoms, roading and transport. Resilience also goes beyond capex, as highlighted by the recent review into the impact of Cyclone Gabrielle². External factors beyond EDB control particularly out-of-zone trees are likely to continue to be a key influence on the resilience of EDB services.

EDBs RMAT scores demonstrate that EDBs are mature in their consideration and planning for resilience.

We would like to understand how potential changes in capital contributions policies could be accommodated in DPP4.

How could changes to capital contributions policies, either in advance of or within the regulatory period, be accommodated within our capex forecasts for DPP4?

6 Response:

Capital contributions policies have to date been the responsibility of EDBs to develop and implement. These policies are a critical determinant of EDB capex forecasts and allowances. Maintaining a consistent capital contributions policy also helps EDBs to ensure intergenerational equity.

Intervention by policymakers has the potential to significantly shift the balance between EDB-funded and connector-funded capex. This intervention would have material consequences for EDB capex allowances and the IRIS. The DPP must include mechanisms for DPP capex allowances to adjust for policy changes either by the Government or regulators that alter EDB's recovery of growth capex from connectors.

Unfortunately, the Commission's rejection of the inclusion of a policy change re-opener in the IMs ensure that the most efficient method for dealing with this eventuality is unavailable to EDBs.

We are interested to understand if EDBs are assessing investments driven by expected pace of change which may not be consistent with choices otherwise made under a least cost lifecycle basis.

Are there specific investment decisions being considered due to concerns on delivering the increased scale of investment in limited time which are not consistent with a least cost lifecycle basis assessment; for example, areas where EDBs intend to build well in advance of forecast need or for demand or generation that are only speculative?

On what basis are these investments being assessed?

² <https://www.ena.org.nz/assets/ENA-EDB-Cyclone-Gabrielle-Review-Report-ISSUED-13-Jul-23-1197.pdf>

7 Response:

Yes, EDBs are utilising innovative approaches to enable decarbonisation which involve making smart and informed investment in advance of the demand. For example, PowerNet in conjunction with Transpower have collaborated on the Murihiku Southland Electrification Development Plan³. This has identified four potential grid and network upgrades and sees them investigating further projects to enable renewable generation and decarbonisation efforts in Southland.

6 Operational Expenditure

6.1 Base-step-trend

The Commission is conducting a detailed review of EDBs AMPs. These AMPs not only outline EDB's capex forecasts but also opex and the influences on it. ENA would like to see the Commission make greater use of EDBs AMP forecasts in setting opex allowances.

ENA understands the Commission's preference for the retention of the base-step-trend approach. If due and proper consideration is given to step changes and the drivers of growth in opex, it can be an acceptable alternative to the use of EDB AMP opex forecasts.

ENA notes that the Commission's historic approach to assessing opex step changes, coupled with the ambiguity of the reopener process, creates the inherent capex bias in the DPP framework.

6.2 Base

The proposed use of actual 2024 disclosure year data for base operating expenditure is appropriate.

6.3 Industry-wide step changes

The Commission's work to spell out the criteria for its assessment of industry-wide step changes is welcomed. ENA and its members are eager to work together with the Commission to document, quantify, and demonstrate that there are a small number of step changes that fulfil the criteria set out in the issues.

ENA encourages the Commission to establish and publicly communicate the threshold it intends to apply, and engage with EDBs on how best to coordinate information and evidence gathering on step changes, and the presentation of this to the Commission.

6.3.1 Data acquisition and management costs

The Commission's recently introduced information disclosure reporting requirements on LV visibility and network constraints, coupled with EDB's desire to manage their networks more efficiently as the economy decarbonises and electrifies, means that EDBs will be increasingly reliant on data from smart meters and other devices.

The Electricity Authority has recognised the benefits from "better access and use of data and information to understand what's happening on the low voltage networks and drivers of congestion"⁴, and included a series of smart meter data initiatives in its priority work programme for 2024.

Acquiring, managing, analysing, and protecting this data is not costless, and will require all EDBs to incur a step change in data-related opex.

The recent Orion-Vector AMS metering partnership to access detailed operational data from smart electricity meters demonstrates both the value and cost of this data.

³ <https://www.transpower.co.nz/projects/murihiku-southland-electrification-development-plan>

⁴ Electricity Authority, 2023, Delivering key distribution sector reform work programme

ENA believes that the cost of acquisition of network and consumption data meets the criteria for a step change because it is:

- Industry-wide
- Has a quantifiable cost (ENA estimates this step change to be approximately \$9 per ICP per year)
- Outside the control of EDBs as ID requirements necessitate it, and EDBs are price takers in a highly concentrated metering market

The Commission's final decision on Powerco's 2023-25 DPP included an opex step change for the acquisition half-hour meter data. This precedent should be applied to all non-exempt EDBs for the 2020-25 DPP.

6.3.2 Cybersecurity

The threat from cyber criminals and the associated risk of EDB business disruption including the unauthorised operation of network assets continues to grow and evolve rapidly. EDBs must continue to grow their multilayered protection systems and controls by utilising existing and emerging technology to help minimise this risk. All EDBs have a very low risk appetite for any business disruption, and therefore invest in their cyber protection systems accordingly.

Over the past 5 years, the cost of implementing and maintaining best practice cyber security controls has more than doubled for EDBs, and these costs are likely to double again over the next 5 years. These costs are largely outside of EDB control because the systems and the resources required to implement, maintain, and continuously improve our cyber security resilience are absolutely necessary. The vendors that provide the best possible advanced protection services continue to develop their systems to keep pace with emerging cyber threats and therefore costs increase accordingly.

All EDBs are duty-bound to ensure that their networks are defended from cybersecurity risks. The Commission now has data from the ID regime on each EDB's cybersecurity expenditure. ENA proposes that a step change be adopted into the Commission opex allowances equivalent to a 30% uplift in reported cybersecurity expenditure.

6.3.3 Insurance

EDB's expenditure on insurance has increased by 63% over the past five years. This trend is expected to continue and pick up pace as insurers factor the high risks and consequences of extreme weather events into their models.

EDBs find themselves faced with the dilemma of continuing to pay the ever-increasing premiums or cutting or abandoning coverage. Given that EDBs are price takers in the insurance marketplace, the evidence of a step change in cost is clear in EDBs ID disclosures and are they are all affected by the changing marketplace. Insurance cost should therefore be considered as an exogenous cost, treated as such, and be subject to a step change, pass-through or specific escalator.

6.4 Trend

6.4.1 LCI/PPI ratio is not inappropriate.

As in the case of the use of the Capital Goods Index discussed above, the Commission's use of a 60/40 mix of percent changes in Labour Cost Index (LCI) all-industries and Producers Price Index (PPI) input indices may not accurately reflect the movement in EDBs' opex costs.

However, to ENA's knowledge, there is no alternative approach that would deliver greater accuracy without introducing more complexity into an already complex opex trending process. Therefore, ENA's initial view is that the current approach is not inappropriate.

6.4.2 Scaling factor analysis

The use of econometric models to forecast the impact of network growth on opex is an appropriate, if highly technical approach. While an appropriate approach it is important that its limitations be kept in mind

by the Commission. The primary limitation is that econometric modelling can, by its nature, only consider historical trends and cannot capture forward looking trends. This is vital as the distribution sector works to enable electrification which will see growth in demand from existing customers becoming an ever more important cost driver.

ENA engaged a specialised consultant to help it review and understand the Commission's econometric model, its robustness and the conclusions drawn from it.

ENA's review found:

- that in constructing the peak demand variable, the Commission has summed the peak demand of the EDB along with the peak demand of smaller network components. As an example, for Vector the Commission has added the combined peak demand (1,807 MW) with the peak demand for the Northern network (727 MW) and the Southern network (1,138 MW) to obtain 3,673 MW, approximately double the correct peak demand.
- it does not include a time trend variable to control for time-related drivers of opex (e.g., technical progress, changes in regulatory obligations, etc). The time trend may also account for shortcomings in the price index applied to opex (and capex for specifications including capex). The omission of a time trend may mean that the sensitivity of opex to other cost drivers included in the Commission's model may be mis-estimated.
- it relies solely on the use of adjusted R-squared and significance in evaluating model goodness-of-fit. There are several other goodness-of-fit measures available, specifically the Akaike information criterion (AIC) and the Bayesian information criterion (BIC).
- the Commission does to compare models using the same data sample.⁵ In comparing alternative models using goodness of fit, it is crucial to evaluate the models on a consistent basis using the same observations. If models estimated using different specifications and different samples are compared, it will be unclear whether a particular model is favoured due to its particular specification or simply because it is estimated using a different sample.
- the Commission did not conduct an iterative process to model selection and only allows for a single additional variable to be considered. For example, when capex is selected in the non-network opex model the Commission should continue and evaluate whether demand or delivery further improve model fit.

ENA engaged Frontier Economics to provide a refined model that addresses the above concerns. This corrected model confirmed the Commission's findings that demand is not a statistically significant variable for either network or non-network opex.

Importantly, Frontier found that time trend was a statistically significant variable and should be included in the Commission's models for both network and non-network opex.

The outputs from Frontier's refined econometric network and non-network opex models are shown in Table 1 below. ENA is happy to provide an adjusted econometric model to the Commission on request.

Table 1: Refined econometric opex models

	COEFFICIENT	SIGNIFICANCE	SIGNIFICANCE (CLUSTERED SE)
Network opex			
Constant	-0.287	6.8%	38.2%
ICP	0.448	0.0%	0.0%

⁵ As set out in: Note on opex modelling in the DPP4 Issues paper, 30 November 2023.

Lines	0.499	0.0%	0.0%
Time	0.022	0.0%	0.0%
N	283		
R2	92.18%		
Adjusted R2	92.09%		
AIC	62.81		
BIC	81.04		
Non-network opex			
Constant	0.552	0.2%	14.3%
ICP	0.494	0.0%	0.0%
Lines	0.145	0.0%	18.0%
Capex	0.200	0.0%	1.4%
Time	0.021	0.0%	0.2%
N	286		
R2	90.99%		
Adjusted R2	90.86%		
AIC	105.26		
BIC	127.20		

Source: Frontier Economics analysis of Commerce Commission and EDB data

Note: Significance is measured by the p-value, with values less than 5% considered to be statistically significant.

6.4.3 Efficiency review

The Commission's issues paper does not provide any insight into its approach to the assessment of EDB efficiency and if a productivity factor is likely to be applied to EDB opex forecasts.

ENA notes that the past five years have witnessed a once-in-a-century pandemic that shut down economies and has had long-lasting and broad-ranging consequences. These consequences have increased EDB opex costs.

ENA looks forward to engaging with the Commission and its consultants to discuss the drivers of EDB productivity and efficiency, the lingering impacts of the COVID-19 pandemic, and other exogenous factors that have shaped cost and output movements over DPP3.

Consultation questions & responses

Chapter 3 – Forecasting operating expenditure

8 We are considering updating our approach to forecasting opex input price escalation to better reflect the mix of inputs EDBs face.

Do you have a view on another index, or a weighted mix of indices, that would improve the quality of opex forecasting compared to our current approach? (Using a 60/40 mix of percent changes in Labour Cost Index (LCI) all-industries and Producers Price Index (PPI) input indices.)

If so, what evidence supports this view?

8 Response:

ENA’s view is that the current LCI/PPI is broadly appropriate. While there are a myriad of potential options and weightings, there is no magic bullet. ENA therefore suggests that the current approach be retained.

ENA’s view is that the same escalation should also be applied to the IRIS.

9 We are considering revising our approach to scale growth trend factors, to better reflect EDBs increasing focus on investing to meet growth and renewal needs.

Do you support our emerging view that including forecast capex as a driver of non-network opex could improve opex forecasts, and that this conclusion makes sense in terms of the way EDBs run their businesses?

Are there alternative drivers that we should consider, and what evidence is there that they can meaningfully predict EDB scale growth?

9 Response:

ENA has reviewed the Commission’s econometric models for network and non-network opex. ENA has identified issues with the modelling including input data issues. Importantly, the Commission’s model does not consider time trend variables which are statistically significant and would improve the model’s accuracy for both network and non-network opex.

10 EDBs have identified that insurance costs have been increasing at a greater rate than other costs they face.

What evidence do you have about how these costs are likely to evolve over time?

Is the option of trending insurance opex forward using a separate cost escalator workable? How could incentives on EDBs to make risk management decisions be maintained?

10 Response:

Yes, ENA supports the use of a separate escalator for insurance.

Insurance providers frequently monitor and assess the risk profiles of the parties they insure. Insurers will be quick to incorporate climate change impacts and the increased frequency and impact of extreme weather events into their insurance prices and scope of coverage. The recent experience of EDBs suggests that this has begun to occur as they have seen their insurance premiums increase significantly over DDP3.

The primary risks insured by EDBs are those beyond their control, i.e., flooding, fire, and other natural disasters. The limited ability of EDBs to mitigate the frequency or impact of these events makes insurance a natural candidate for individual cost escalation or step change. SAIFI and SAIDI limits and incentives ensure that approximate risk management occurs.

11 Given the possibility of a greater need for step-changes in opex in a context of industry transition, we have clarified further how we are thinking of applying the step-change criteria and the supporting evidence we expect.

Do you consider the expanded descriptions of the step-change criteria provide sufficient clarity about the types of step-changes we consider meet the Part 4 purpose?

11 Response:

ENA is broadly comfortable with the proposed step change criteria. However, ENA would prefer to see the Commission set out quantitative thresholds for the assessment of step changes. ENA notes that step changes should be measured from the DPP3 and DD4 allowances rather than changes between the 2023 AMP and 2024 AMP.

It is unclear how the Commission intends to assess step changes at an industry level, noting that step changes were all rejected during DPP3 reset - yet costs such as cyber, and insurance have all impacted EDBs.

ENA's initial view is that step changes are needed for:

- Meter data acquisition costs
- Cyber Security
- Insurance (alternate to independent escalation)
- The pace of policy and regulatory change (noting the absence of a policy reopener).

7 Quality Standards

7.1 The existing approach to quality standards is supported

The existing DPP quality standards have delivered the level of quality sought by consumers. There is no evidence of a desire from consumers to alter the level of service delivered by EDBs. Therefore, ENA is of the view that the current regime comprising of planned and unplanned SAIDI and SAIFI metrics should be maintained.

ENA believes the principle of no material deterioration remains appropriate and the current approach to normalisation should be continued.

The issues paper notes that the Commission's statistical expectation is for 2.3 major events days per year. This expectation will be challenged by the increase in extreme weather events stemming from climate change. ENA encourages the Commission to engage with NIWA and other weather and climate scientific organisations to ensure that this expectation aligns with the most up-to-date scientific advice and data.

7.2 Dealing with the adoption of multicount SAIFI

For some EDBs, the adoption of the multicount approach to SAIFI occurred in 2023. As a result, some EDBs do not have data sufficient for the calculation of robust multicount SAIFI thresholds for the DPP4 period.

ENA encourages the Commission to establish a mechanism within the DPP to allow EDBs to apply to have their SAIFI thresholds, for DPP compliance testing, set using the non-multicount approach. A successful applicant would still have a multicount SAIFI threshold calculated and published in the DPP, but its compliance and quality incentives would be tested against the non-multicount thresholds.

Consultation questions & responses

Chapter 3 – Quality standards

12 Our initial view is to maintain the principle of no material deterioration and set quality standards on a basis consistent with that established in DPP3.

Do you agree with our proposed approach of maintaining the principle of no material deterioration and setting the quality standards on a basis consistent with DPP3? With regard to the quality standards, are the existing reporting obligations appropriate?

12 Response:

ENA supports the retention of the no material deterioration threshold and existing quality standards. ENA notes that as EDB's work programmes evolve to facilitate decarbonisation and electrification, planned outages may increase above historical levels.

13 Our initial view is to maintain the DPP3 settings of a 10-year reference period updated for the most relevant information and normalisation approach for major events.

Do you think that we should maintain a 10-year reference period updated for the most relevant information and normalise major events on the same basis as DPP3?

13 Response:

ENA supports the retention of the 10-year reference period and the DPP3 normalisation approach. Due to the increase in extreme weather events, the expectation of 2.3 major event days per annum may no longer hold. ENA encourages the Commission to engage with NIWA to ensure the MED expectation in the DPP aligns with the government's scientific advice.

14 Our initial view is step changes in reliability, if appropriate, may be accommodated through setting of values or revisions to definitions.

Are there identifiable step changes to reliability parameters for quality standards to manage operational or situational changes outside the control of the distributor compared to historical periods?

What value and challenges do you see with different approaches to addressing inconsistencies in the recording of interruptions, the 'multi-count' issue, using either a proxy allocation basis or requiring a recast dataset? Are there alternative approaches which may appropriately address the issue?

14 Response:

For some EDBs, the use of the multicount approach commenced in 2023-24. For these EDBs, ENA suggests they be able to apply to have historical non-multicount data used to set a non-multicount SAIFI threshold. To maintain comparability with EDBs who collect and report on a multicount basis, ENA recommends that the Commission also publish a target multicount SAIFI (for those businesses transitioning to the multicount approach) and require these EDBs to report against this target.

15 Our initial view is to not introduce new additional quality of service measures.

Are there any other quality of service measures beyond those currently required within DPP3 that we should consider introducing, and why?

15 Response:

ENA agrees with the Commission's approach. The current SAIDI and SAIFI measures are sufficient to monitor the quality of service provided by EDBs.

8 Quality incentives and innovation

8.1 Quality incentives

ENA believes the Commission's current framework for quality incentives is robust and should be continued. There is no evidence of the need to support the establishment of new energy efficiency, demand-side management, and reduction of energy losses incentive schemes.

8.2 Innovation

The DPP3 innovation allowance was well-intentioned. However, these good intentions did not translate into a workable mechanism that facilitated innovation. While recent changes to the innovation allowance are a step in the right direction in addressing the scheme's shortfall, more should be done.

ENA encourages the Commission to look abroad at the innovation allowance mechanisms contained in the UK Ofgem regime for electricity distribution. A mechanism such as the Ofgem Network Innovation Allowance (NIA) and Strategic Innovation Fund (SIF) have the potential to support innovation and deliver long-term benefits to New Zealand consumers.

Consultation questions & responses

Chapter 4 – Quality incentives

20 Our initial view for DPP4 is to retain revenue-linked quality incentives for both planned and unplanned SAIDI, with targets, caps, collars, incentive rate and revenue at risk set on a consistent basis with DPP3.

Are EDBs considering the quality incentive scheme (QIS) in their investment decisions?

Do you consider the proposed settings are appropriate for the QIS, including whether the incentive rate is driving appropriate outcomes with regards to consumer quality expectations?

20 Response:

EDBs take into account the QIS when planning works and their preparations for unplanned outages. ENA notes that the fall in the incentive rate between DPP2 and DPP3 lessened the prominence of the incentive in EDBs decision-making and planning, including a reduction in the use of portable generation to shorten planned outages.

ENA views the QIS as an appropriate mechanism for delivering outcomes that align with consumer expectations.

21 Caution around treatment of non-performance of less proven solutions may create a reticence by EDBs to implement these types of solutions and result in a focus on more proven established technologies, typically, capex investments. Our intention is that the compliance with the quality standards and penalties under the QIS do not act as a potential impediment to innovation.

How should we account for non-performance of non-network solutions (regulatory sandboxing)?

21 Response:

To ensure EDBs are not inappropriately punished for the non-performance of non-network solutions, a new outage reporting category should be established, and these outages should be excluded from the QIS and quality compliance assessments.

Chapter 4 Innovation

22 The regime’s baseline incentives may be insufficient to support innovation, such that we consider it is appropriate to have an innovation (and/or non-traditional solutions) incentive scheme.

Do you agree with our understanding of the regime’s baseline incentives to support innovation and the need for an innovation and/or non-traditional solutions scheme?

Would you be interested in participating in a targeted workshop, and if so, are there any topics you consider should be covered?

22 Response:

ENA agrees with the need for an innovation incentive scheme. However, the current scheme has proved of little value because of its limited size and burdensome application requirements.

ENA and its members would participate in a targeted workshop. Topics for this workshop should include:

- Application processes
- Data, audit, and certification
- Downside risks (SAIFI/ SAIDI exemptions)
- Reporting and knowledge sharing

23 We are interested in feedback on our initial thinking about how to design an incentive scheme to encourage innovation and/or non-traditional solutions in DPP4.

What are your views on the key principles (see **Attachment I**)? Are they effective as the basis of an innovation and/or non-traditional solutions scheme? Are there others you think may be suitable?

What are your views on the potential scheme design characteristics? Are they effective as the basis of an innovation and/or non-traditional solutions scheme? Are there others you think may be suitable?

How could these principles and characteristics be best applied in designing a potential scheme? We would also welcome submissions with examples of overseas schemes/characteristics that you consider appropriate for a DPP.

23 Response:

ENA's view is that the innovation incentive scheme should look to the Ofgem NIA and SIF for inspiration.

Energy efficiency, demand-side management and reduction of energy losses

24 Our initial view is that a specific demand-side management and energy efficiency scheme is not required for DPP4.

Is there a basis for strengthening the incentives for energy efficiency and demand-side management initiatives?

24 Response:

Alongside the emerging flexibility market, there are traditional and non-traditional methods of giving consumers control of their electricity use to lower their retail bill, reduce network peaks and subsequently reduce urgent and ongoing capex investment.

A well-designed demand-side management and energy efficiency incentive that allows for EDB involvement in energy initiatives that maximise energy use, minimising energy loss and reducing customer costs for the distribution service and would **be** beneficial to the system as a whole and to the long-term interest of consumers. Thereby supporting the achievement of Section 54Q.

In the absence of a demand-side management and energy efficiency scheme, the DPP should include alternative measures such as step change, use-it-or-lose it allowance or pass-through for the procurement of flexibility services.

25 We are not proposing to implement a QIS for line losses. We believe EDBs improved visibility of low voltage performance and improvements to the energy efficiency of distribution transformers should drive improvements in DPP4 without additional explicit incentives.

Do you agree with our approach to not introduce a specific QIS related to reducing energy losses?

25 Response:

ENA agrees that a line loss QIS is not needed.

9 Other issues

Despite being a “low cost” approach to regulation, the DPP process requires significant resources and effort from the Commission, EDBs and interested parties. Even within a 5-year DPP, it is extremely difficult to align the timing of important inputs to the process. The unfortunate timing of the Commission’s review of EDB AMPs and efficiency demonstrates these timing challenges. A move to a four-year DPP would likely make timing conflicts worse. As set out in ENA’s response to the Commission’s process paper, ENA’s view is that a 5-year DPP is most suitable.

ENA also views the Aurora transition, the CPP deadlines and the current accelerated depreciation arrangements as fit for purpose.

Chapter 3 – Other issues

16 Aurora Energy is scheduled to rejoin the DPP from 1 April 2026.

Do you agree with how we propose to transition Aurora Energy to the DPP in 2026?

16 Response:

ENA is broadly comfortable with the Commission’s proposal, however, further clarity on the specifics of the roll-off would be beneficial.

17 Section 53M(5) allows us to reduce the regulatory period if this would better meet the purposes of Part 4 of the Act. We are considering whether we should reduce the regulatory period from five to four years.

What particular challenges do you perceive may arise from shortening the regulatory period?

What are the potential benefits to consumers from maintaining or shortening the length of the regulatory period?

17 Response:

The DPP process is resource-intensive, and the shortening of the period is unlikely to provide additional certainty during the transition to a decarbonised economy. ENA’s initial view is that the current 5-year regulatory period is appropriate.

18 The DPP sets annual deadlines by which suppliers must make Customised Price-Quality Path (CPP) applications to enter into effect the following year.

Do you support retaining a similar approach to setting CPP application windows as was undertaken for DPP3?

18 Response:

The current application windows are appropriate for a 5-year regulatory period. These deadlines would need to be reviewed if a 4-year regulatory period is implemented.

19 The current IMs provide for a discretionary shortening of asset lives.

Do you have views on the framework for assessing accelerated depreciation applications?

19 Response:

The existing accelerated depreciation framework is appropriate.

Appendix A – ENA Members

Electricity Networks Aotearoa makes this submission along with the support of its members, listed below.

Alpine Energy
Aurora Energy
Buller Electricity
Centralines
Counties Energy
Firstlight Network
Electra
EA Networks
Horizon Energy Distribution
Mainpower NZ
Marlborough Lines
Nelson Electricity
Network Tasman
Network Waitaki
Northpower
Orion New Zealand
Powerco
PowerNet
Scanpower
Top Energy
The Lines Company
Unison Networks
Vector
Waipa Networks
WEL Networks
Wellington Electricity Lines
Westpower