



**VECTOR SUBMISSION TO
COMMERCE COMMISSION
DEFAULT PRICE QUALITY PATH
DRAFT DECISION**

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EXECUTIVE SUMMARY

1. This submission outlines Vector's recommendations to the Commission for making changes to the draft DPP3.
2. Our summary positions are in the following table. Attachment F lists our recommended changes.

<i>Topic</i>	<i>Vector view</i>
<i>Context</i>	<ul style="list-style-type: none"> • Electricity supply is evolving rapidly. New technology such as distributed energy and electric vehicles (EVs) are beginning to shape the network of the future. Auckland growth is unprecedented, with infrastructure across the board struggling to keep up. Local and central government initiatives (e.g. recent EV support and commitment to de-carbonisation targets) will influence this evolution further. • Although we may be experiencing some of these challenges earlier than other New Zealand electricity distribution businesses (EDBs), we are not alone. All EDBs will need to evolve to deal with this 'new energy future' in some way. • The default price path (DPP) legislative framework is intended to be a low-cost way to set required price / revenue and quality outcomes for New Zealand consumers – it should be capable of dealing with such challenges dynamically. There is an urgency to doing so. • At the same time, data analytics has the potential to improve our understanding of consumer preferences by combining insights from multiple sources. We are using this now and have incorporated it into our plans for the DPP3 period. There is scope for consumer-relevant service outcomes to be incorporated into the regulatory settings for that period too.
<i>Overall view</i>	<ul style="list-style-type: none"> • Regulation of electricity networks needs to evolve to deal with unprecedented change to the way that electricity is supplied to consumers, both here in New Zealand and internationally. • The draft DPP3 decision does not do enough to deal with this change – and risks undermining consumers' long-term interests as a result. The Commission's incremental changes to the DPP setting process and preference for 'one-size-fits-all' approaches unnecessarily restrict much needed regulatory innovation, ignoring the fact that EDBs with different contexts will evolve at different speeds.

Topic

Vector view

- We want to work constructively with the Commission to ensure that the regulatory settings for the DPP3 period deliver the right outcomes for consumers. Other regulators – faced with similar challenges – are looking at innovative solutions. The Commission has an opportunity to do the same; sensibly evolving the regulatory settings in a way that is fit-for-purpose in New Zealand.
- As a start, the Commission should re-introduce workshops with both staff and Commissioners as an effective way to bring EDB and stakeholder views together on important issues that will affect all New Zealand consumers over the next 5-6 years. A meaningful conversation is needed.
- But time is running out. The Commission must decide now how it wants to engage with the new energy future in its DPP3 decision. It cannot afford to leave the heavy lifting to potential future customised price paths (CPPs) and subsequent DPPs.
- Our specific issues with the draft DPP3 are summarised below.

Our key issues with the draft DPP3

Cash flow to support investment

- Cash flow is essential to funding efficient investment. We – like many other infrastructure businesses – are facing significant demands to invest in our network to support consumer and other stakeholder outcomes.
- Auckland growth, changing consumer use of the network, pressures on resilience, technology trends, and local and central government initiatives (e.g. on housing) are driving that investment need and placing demands on cash. Such demands are not unique to us; other EDBs will increasingly face similar pressures as electricity supply transitions.
- The regulatory settings should be flexible enough to deal with these circumstances. Consumers’ long-term interests are served by ensuring that EDBs have sufficient cash flow to fund such investment.
- The current input methodologies (IMs) are not flexible enough and the draft DDP3 decision does not use the flexibility already there. The IMs should be amended to allow EDBs to choose whether to roll-forward the regulated asset base (RAB) with or without indexation as a mechanism for adjusting cashflows to better support investment without increasing profitability – which is something the Commission has done previously for Transpower and New Zealand airports. The final DDP3 decision should adopt a RAB roll-forward without indexation for Vector. This would not affect our profitability over the

Topic

Vector view

<p><i>Expenditure allowances and incentives that deliver for consumers</i></p>	<p>long term, but will help us deliver the outcomes that our consumers and other stakeholders want.</p> <ul style="list-style-type: none">• We are also disappointed that the Commission did not apply accelerated depreciation to us. We did listen to issues raised by consumers and reflected these into our application. We also undertook extensive analysis of the potential risk to economic recovery posed by technological change. We would welcome further clarity from the Commission on the analysis it would like to see.• Cash flow is already challenged by the Commission’s proposed approaches to setting the regulatory weighted average cost of capital (WACC) and forecasting inflation – which in low or negative real interest rate and inflation environments, significantly reduce the cash available for EDBs to invest in their networks. This is a concern we raised in our submission on the Commission’s proposed IM changes; where we highlighted that significant under-recovery of our investment over the DPP2 period is compounded by likely further under-recovery expected over the DPP3 period unless issues with the approaches are addressed. An unindexed RAB or accelerated depreciation are tools that can be used to help mitigate such challenges.• ‘Meeting cash flow needs’ would be a prime candidate for a workshop. <ul style="list-style-type: none">• Our 2019 asset management plan (AMP) sets out our capital and operating plans for the next 10 years – a plan driven largely by quality, consumer growth, technological, and network resilience needs. We spend a lot of effort each year ensuring that our AMP reflects what we consider is prudent and efficient spend, with a focus on consumer outcomes.• As it stands, the draft DPP3 expenditure allowances do not fund our 2019 AMP; we would need to compromise in order to spend within those allowances. Our key concern is that those allowances were largely set by the Commission without regard to consumer interests nor the wider benefits that our proposed spend would deliver. There was no obvious consideration of our 2018 AMP in the draft decision, nor the basis for our expenditure forecasts.• Rather, the Commission’s approach to setting those allowances relies primarily on historical expenditure. Although a useful starting point, that history should not unfairly constrain EDBs from revising expenditure levels where there is a genuine need, especially where
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electricity supply is undergoing a significant transformation quite different from the past.

- Equating the low-cost principle underpinning the DPP framework with applying a 'one-size-fits-all' approach to setting allowances – as the draft DPP3 decision appears to do – unfairly penalises EDBs that are facing circumstances like we are and have put significant effort into preparing their AMPs.
- The capital expenditure (capex) allowance for all EDBs, for instance, is capped at 120% of the historical average and further limited by various gates. Such tests may help reduce Commission effort in setting such allowances. However, given that their values are largely arbitrary they should not act as caps. Rather, if failed, they should trigger further investigation or at least allow an EDB to justify their expenditure as part of a second pass assessment. Otherwise the somewhat arbitrary gates and caps can lead to arbitrary allowances – which is not good regulatory practice and can undermine consumer interests.
- Similarly, the operating expenditure (opex) allowance starts with expenditure in a given base year from which the Commission is proposing to only allow inflation, labour and network scale growth. That approach misses the fact that there are significant changes expected over the DPP3 period that will affect all EDBs' opex. These include changes to tree regulations, the need to enhance cyber security, capex to opex trade-offs (e.g. in-house to cloud-based software), and increased traffic congestion in Auckland. Such step changes should be allowed for where they are justified.
- In the past, the Commission has noted that EDBs always have the option of seeking a CPP if not happy with their expenditure allowances. In our view, such a solution does not necessarily promote consumer interests. CPPs are costly, time-consuming to all involved, and have uncertain outcomes. Consumer benefits can be delayed for years. We already invest significant effort in preparing our AMPs each year – the Commission should first make better use of these and the analysis sitting behind them in its DPP decision-making process.
- We also question whether a CPP is the appropriate way forward when small and simple tweaks to the DPP process can avoid those costs and concerns. There is surely room for compromise.

Topic**Vector view**

Quality standards, incentives and enforcement that work together

- Quality standards, quality incentives and quality enforcement must work in harmony and focus clearly on what quality measures matter to consumers today. In our view, they currently do not.
- All three focus on system average interruption frequency index (SAIFI) and system average interruption duration index (SAIDI) as blunt measures of reliability, that reflect average outcomes across all consumers. In most cases, they do not reflect individual consumer experience.
- Yet, regulatory innovation is both possible and – we argue – necessary. We want to work with the Commission to develop a guaranteed service level (GSL) scheme and put this in place by 1 April 2020. Such a scheme will both broaden the range of measures that we must target and ensure that consumers affected by poor service outcomes benefit from payments (rather than the average consumer). Our vision is that a GSL scheme should replace the quality standards and work in harmony with a quality incentive scheme.
- We also strongly encourage the Commission to get the other quality regulatory settings right. We support some of the changes proposed in the draft decision, including the split between planned and unplanned outages and allowing for planned outages to be assessed over the five-year DPP period, rather than annually.
- However, we are concerned that the proposed unplanned standards do not adequately factor in changes to Vector’s operating environment including prudent health and safety practices. Removing the 5% limit on changes to targets between periods would help, as would adjusting for recent operating environment changes (including isolation for safety). The standards should also recognise the risk of false positives. Retaining the existing ‘2 out of 3’ enforcement rule (rather than moving to an annual assessment) would be a good start.
- Similarly, the Commission’s approach to enforcement should be crystal clear to EDBs and stakeholders. Absent clarity, EDB behaviour may struggle to meet expectations and lead to inefficient regulatory burden. We want to work with the Commission to develop and consult on an enforcement guideline in parallel with finalising DPP3. A guideline can clarify both process and expectations, including what informal thresholds such as ‘good industry practice’ actually mean or how they should be determined. It can also clarify how other considerations are factored in, such as whether payments have already been made to affected consumers.

Topic	Vector view
	<ul style="list-style-type: none"> In the main body of the submission we detail other recommended changes to the DPP3 quality standards, incentive and enforcement.
Other important matters	
<i>Price smoothing is important for consumers</i>	<ul style="list-style-type: none"> The Commission’s default approach to smoothing revenue is to incorporate any real revenue changes over the DPP3 period into first year prices. This misses an important opportunity to look at alternative revenue profiles that that better support consumer outcomes – such as the Commission has proposed for Aurora. When used effectively, smoothing can help minimise price shocks to consumers and better encourage retailers to pass savings through to consumers in full.
<i>Setting the right connection re-opener threshold</i>	<ul style="list-style-type: none"> Allowing a re-opener for large unforeseen connections is a good idea. However, it should be extended to also cover large unforeseen relocations, which are similar by their nature. The threshold for triggering the re-opener should be set as the minimum of 5% of revenue or \$5 million (whichever is the smaller). Doing so will better recognise that large expenditure is material even for a large EDB like us.
<i>Reducing true-ups for other regulated income</i>	<ul style="list-style-type: none"> The Commission’s proposed true-up for other regulated income unnecessarily introduces volatility because it compares actual other regulated income to a zero-dollar forecast included in the revenue allowance. A better approach is to include a forecast of that income in the allowance and true-up against that.

CONTEXT FOR THE DPP3 DECISION

3. The world of electricity supply is changing, both in Auckland and across the country. This is relevant both to the way that we operate and invest in our network, and – importantly – to the regulatory settings that influence our and other EDB behaviour.
4. There is an urgent need to address these through the DPP3 setting process. Consumers and other stakeholders will likely be harmed if we are forced to wait for a CPP decision.
5. Below we summarise key context for this submission and our proposed plans for the DPP3 period.

Auckland has unique challenges

6. Auckland's unique circumstances were highlighted in a recent draft report from the New Zealand Productivity Commission:¹

The unique case of Auckland

About 35% of New Zealanders live in Auckland. Over the past two decades, Auckland has grown rapidly and its population is projected to increase by over 500,000 people during the next 20 years. That increase is more than three times Hamilton's total population. The size of Auckland, combined with its rapid growth, brings about unique challenges.

- *The Council needs financing and funding to deliver significant additional infrastructure to service new developments associated with population growth.*
- *Population growth has put substantial pressure on the transport network, resulting in increased traffic congestion, particularly at peak periods. It has also demanded large investment in roading infrastructure and public transport (eg, the CityRail link).*

Given Auckland's size, failing to effectively tackle these challenges has indirect (and material) effects on the prosperity of the wider New Zealand economy. So, central government is working with Auckland Council to address some growth-related issues; for example, through the Auckland

¹ See: New Zealand Productivity Commission, July 2019, *Local government funding and financing, Draft report*, p. 26.

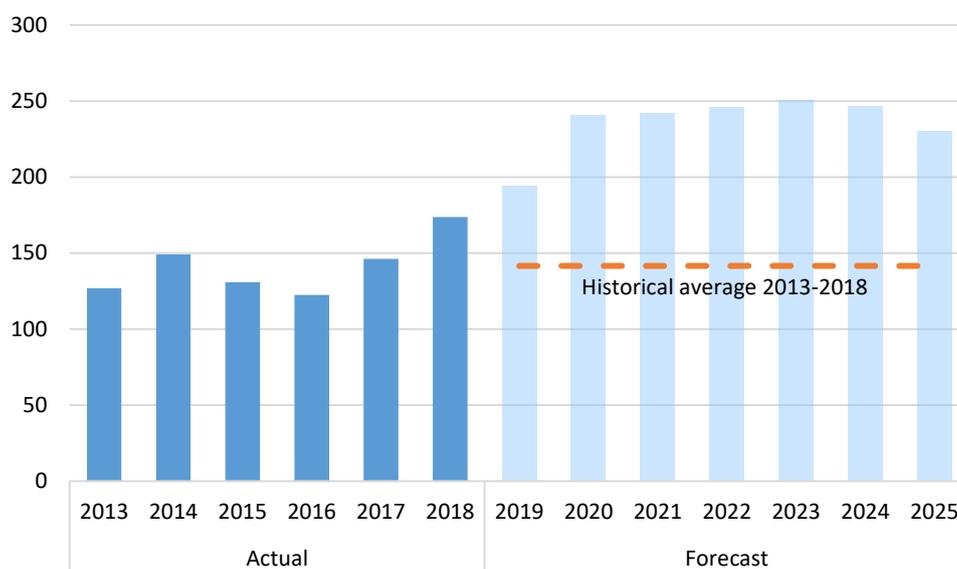
Alignment Project and the Congestion Question project. Also, a recent legislative change enables Auckland Council to implement a regional fuel tax as a new tool to fund transport projects.

7. For Auckland this means:

- 1) An unprecedented pipeline of commercial and residential construction projects within a compressed timeframe – requiring significant infrastructure investment;
- 2) Significant transportation projects such as Auckland Light Rail Transit triggering additional asset relocations and network reconfigurations;
- 3) A growing “wedge” of unaffordability between Auckland and the rest of the country;
- 4) Increasing congestion growth in Auckland creating a cost for business not reflected in other parts of the country;
- 5) Competition for inputs and skilled resources from the active construction sector; and
- 6) The asset recovery profile for our investment supporting the Auckland build program is causing concern given long-term investment risks are increasing.

8. For us, these circumstances have contributed to significant investment, changes to work practices, and quality performance changes over the DPP2 period. As set out in our 2019 asset management plan (AMP), we are proposing a significant step up in our capital investment programme over the DPP3 and subsequent periods – roughly 40%, as shown in Figure 1.

Figure 1: Our capital expenditure step change (\$M, \$nominal)



Source: Vector, Information Disclosures and Electricity Asset Management Plan 2020 – 2030.

Consumer expectations are changing

9. The way that consumers use and intend to use our network is changing – and we think for the better:
 - 1) Digitalisation and new energy technologies are creating new customer expectations for EDBs to deliver on their existing functions and adopt new roles which need to be supported by flexible regulatory tools;
 - 2) Technology is driving uncertainty for load growth, such as EV uptake, and new mechanisms are needed to address this additional uncertainty – especially given the expected heightened discipline for capex efficiency through proposed changes to the IRIS;
 - 3) Understanding the customer through effective engagement and insights and adopting data driven decision-making; and
 - 4) Recognising the different ways of achieving resilience and the roles and opportunities for collaboration and sharing responsibility by harnessing the capability of new technologies

10. Our symphony strategy – reflected in our 2019 AMP and discussed further below – seeks to build on and respond to these changes.

Cash flow is important

11. At the same time, we have under-recovered our efficient costs over the DPP2 period – caused largely by mismatches between actual and forecast demand and inflation. The result is that our profitability is below the benchmark efficient WACC allowance determined by the Commission.
12. We have similar concerns when looking forward to the DPP3 period. The IM approaches for estimating forecast inflation, the cost of debt and the cost of equity significantly underfund investment, especially when there are low risk-free rates resulting in negative real risk-free rates – as is the case currently.²
13. Such past and potential future cash and profit shortfalls have undermined investor confidence in the regulatory settings and make it harder to support Auckland growth. We are mindful of this when looking to the DPP3 period and our proposed plans to increase spending for the benefit of our consumers, our network and the wider Auckland community.
14. We are also not alone when needing pragmatic solutions to dealing with cash flow (or funding challenges). New funding and financing tools are being looked at to support local government investment in essential infrastructure needed to deal with rapid urban growth.³

Expenditures and incentives

15. The Commission should use our 2019 AMP when setting expenditure allowances and designing incentives for the DPP3 period.
16. As that plan makes clear:
 - 1) Replacement and renewal of assets is expected to grow over DPP3 as major asset fleets reach end of life;
 - 2) New capability needs to be developed to ensure system and connections growth can leverage the digitalisation of energy;
 - 3) New obligations are expected to occur within DPP3 that will change historic responsibilities, such as the impending reform of the Electricity (Hazard from Trees) Regulations 2003 and reforms needed for improving the safety of customer service lines – especially for Right of Way (ROW) assets in urban environments; and

² See: Vector, 5 July 2019, *Submission to Commerce Commission on changes to the input methodologies for electricity distributors and Transpower*.

³ See: New Zealand Productivity Commission, July 2019, *Local government funding and financing, Draft report*.

- 4) Non-wire alternatives (NWA) are being actively fostered to provide an effective alternative to poles and wires as has been successfully demonstrated in other regions – such as New York.
17. A cornerstone of our 2019 AMP is our symphony strategy – which seeks to align our operating and investing activities with consumer expectations and technological change. We can ill-afford to continue with traditional investment in poles and wires without being mindful of those changes.
18. Key elements of that strategy include (among others):
 - 1) Actively facilitating consumer engagement and technology uptake leading to LV network-consumer integration;
 - 2) Making the LV network ready for the variable resources connected to the distribution network to create an LV network suitable for consumers to produce, consume, store and sell electricity;
 - 3) Increasing capacity of existing assets or adding new assets (e.g. zone substations) where necessary to meet increased demand from solar and battery installations and EVs, as well as using alternative technology and load control to help manage that demand (e.g. on EV charging installations);
 - 4) Upgrading the network to deal with voltage and capacity constraints linked to the increased demand; and
 - 5) Enabling non-network digital systems, processes and information management to help manage uncertainty over future demand and avoid – where appropriate – traditional investment in network assets.
19. The need to invest upfront in that strategy to support long-term cost savings – in a dynamically efficient way – underpins a strong focus on cash flow and ensuring that the regulatory settings do not discourage such asset management innovation. We want this to work.
20. Our planned expenditure will also support our path to complying with the expected quality standard for the DPP3 period.

Service quality

21. We acknowledge that service quality targets have been a challenge for us over the DPP2 period. Reliability is affected by a complicated mix of factors.
22. Reliability indices need to reflect changing operating environments such as heightened community expectations for worker, contractor and public safety to be prioritised when controlling the hazards from electricity.
23. Other dimensions of the customer experience need to be recognised given the range of activities undertaken by EDBs and the changing expectations from customers which will require capability to meet new roles.

Why now

24. Auckland is already playing 'catch up' on infrastructure and housing investment – and deferring expenditure will only exacerbate these issues. New energy technologies are developing at an accelerating rate. It is essential that we innovate and invest wisely now, to ensure the future of Auckland and 'NZ Inc'.
25. Failure to address these issues now will adversely affect Auckland consumers, citizens and visitors.

CASH FLOW THAT SUPPORTS INVESTMENT

26. Cash-flow is an essential consideration for businesses and other organisations. Cash flow shortages limit business activity, and in extreme cases can lead to insolvency. Neither are good outcomes where they undermine the objectives that those organisations are set up to promote.
27. As we explained in our submission on the IM changes,⁴ we are concerned that the current IMs and draft DPP3 do not provide enough upfront cash to fund the significant capital investment that we need to make to deliver the outcomes that our consumers and other stakeholders expect of us – and which we have built into our 2019 asset management plan (AMP).⁵
28. To address this in part, we previously proposed using accelerated depreciation.⁶ The Commission rejected this in the draft DPP3 decision, in part because it was not clear that economic recovery risk had increased. Our submission on the IM changes makes clearer our cash flow concerns and how an unindexed RAB can address these for us and other EDBs when the need arises.
29. Below we explain:
- 1) Why the Commission should consider adopting an unindexed RAB to help fund our significant capital programme; and
 - 2) Why we consider that we have made out the case for using accelerated depreciation, including to address our cash flow concerns.
30. We look forward to engaging further the Commission and other stakeholders.

Unindexed RAB

31. We also consider that there is scope to introduce a further option for an EDB to apply for non-indexation of the RAB – similar to what the Commission has previously allowed for Transpower and New Zealand airports – without unnecessarily over-complicating the regime or increasing costs.

⁴ Vector, 5 July 2019, *Submission to Commerce Commission on changes to the input methodologies for electricity distributors and Transpower*.

⁵ Vector, March 2019, *Electricity Asset Management Plan 2019 – 2029*.

⁶ Vector, 12 March 2019, *Notice to Commerce Commission for accelerated depreciation adjustment factor*.

32. Given that the Commission is already considering changes to the IMs, we consider that it should also consider providing the option for EDBs to apply for an unindexed RAB in much the same way as it allows for accelerated depreciation. Our submission on the IM changes provides an example of how such an option could be specified and how it would apply to us.⁷

Why allow the option

33. As per our submission on the IM changes,⁸ allowing such optionality will allow the Commission to set a capital recovery profile that best promotes consumer interests, including by setting a profile that supports funding of significant and sustained capital programmes like what we are proposing in our 2019 AMP. This will benefit consumers if the benefits of doing so outweigh the costs.
34. The Commission has previously allowed an unindexed RAB for Transpower and allows it for airports.⁹ In Transpower's case, the Commission removed indexation – and therefore brought forward cash flow – to help fund a significant increase in capital investment on the transmission network.
35. Our circumstances are not so different. Auckland is growing at a rate of knots and requires our network to keep up. Changes to the way our network is being used and to the technology available (as our symphony strategy seeks to do) requires us to make investment now to manage the impact of those changes. Such investment requires cash flow.
36. Similar circumstances will likely play out for other EDBs in the future. Investment needs change over time, as network conditions, age, and demands evolve. There is no obvious reason why the regulatory settings should not at least allow the option for cash flow profiles to be adjusted to support long-term consumer interests. There is Commission precedent for doing so. We just want the opportunity to make the case.

⁷ Vector, 5 July 2019, *Submission to Commerce Commission on changes to the input methodologies for electricity distributors and Transpower*, Attachment B.

⁸ Vector, 5 July 2019, *Submission to Commerce Commission on changes to the input methodologies for electricity distributors and Transpower*.

⁹ See for instance: Commerce Commission, 20 December 2016, *Input methodologies review decisions: Topic paper 1: Form of control and RAB indexation for EDBs, GDBs and Transpower*, Chapter 6; and Commerce Commission, 20 December 2016, *Input methodologies review decisions: Topic paper 5: Airports profitability assessment*, Chapter 5.

Where to from here

37. In making our case, we note:

- 1) Our capital investment programme – as set out in our 2019 AMP – is both significant and designed around rectifying past service quality issues, responding to significant connection growth, and building network resilience and cost efficiency in response to changing consumer behaviour and technology – which we argue will benefit consumers’ long-term interests;
- 2) Delivering that investment and those benefits requires significant up-front cash flow, which is coming at a time when the current regulatory settings are already expected to undercompensate our investment – as explained in our submission on the IM changes,¹⁰ the Commission’s proposed approach to setting the allowed WACC is expected to undercompensate efficient financing costs in the current low risk-free rate environment due to how inflation is forecast, the market risk premium is set, and the cost of debt is estimated;
- 3) Asking investors to help fund that investment requires some balancing of risk within the regulatory settings, especially given that EDB profitability has been below that allowed by the Commission for the DPP2 period (see our submission on the IMs);
- 4) There is a neat opportunity for the Commission to achieve this balance by building flexibility into the IMs and DPP3 decision-making to use an unindexed RAB to re-profile cost recovery over the investment horizon; and
- 5) Such flexibility is entirely consistent with past Commission practice (e.g. Transpower and airports) and recognises that ‘return of capital’ build block – as the lever used to provide capital cost recovery – can be used dynamically to deliver the long-term interests of consumers when there are changing circumstances.

38. We look forward to engaging with the Commission further on our proposal.

Proposal 1: Allow for an unindexed RAB where significant investment is needed to promote consumers’ long-term interests

¹⁰ Vector, 5 July 2019, *Submission to Commerce Commission on changes to the input methodologies for electricity distributors and Transpower*.

Accelerated depreciation

Why our application should be accepted

39. The Commission previously amended the IMs to allow for accelerated depreciation – up to a point – on a case by case basis as part of a DPP. We support such optionality being introduced to the DPP process as it enables the regime to flexibly deal with changing consumer and wider societal requirements for networks.
40. However, we are concerned with the Commission’s application to us. In particular, the Commission rejected our accelerated depreciation application because:
- 1) It was unclear whether we properly consulted with our consumers and incorporated any issues into our application; and
 - 2) There was insufficient evidence that economic recovery was at risk.
41. We did listen to the issues raised by our consumers through the consultation and reflected these into our application. Our application was also supported by analysis that highlights the economic recovery risk we are facing.
42. Moreover, we are concerned with the lack of clarity about what is required to support an accelerated depreciation application. Given that that option is intended to operate under the low cost DPP framework, preparing such an application should also be low cost and the Commission’s consideration of it should reflect that.
43. We modelled multiple scenarios which in some circumstances showed an increasing risk to capital recovery. In addition, accelerated depreciation can and should be used to address other outcomes consistent with section 52A.

Using accelerated depreciation to support efficient investment

44. Cash flow is important for any business, including EDBs. Where significant investment is needed, cash is needed to make it. Where future risks increase, cash is used to help manage it. The accelerated depreciation optionality could – and should – be used to deal with both circumstances.
45. However, the Commission’s draft DPP3 decision appears to narrow that applicability of that option to the latter – and specifically to circumstances where an EDB can show that there is a real risk to the economic recovery of its capital investment (i.e. where the expected economic life has reduced).

46. We consider that this 'narrowing' is short-sighted for two key reasons:
- 1) First, the RAB as a concept is in effect a funding mechanism designed to ensure financial capital maintenance for EDBs that must invest in long-lived assets. There is no in-principle requirement for that mechanism to only allow recovery over an assumed economic life.
 - 2) Second, even if there were such a principle, there is inherent uncertainty over what that recovery should look like. In practice, real straight-line depreciation is often used to determine the recovery profile over an assumed life; which in effect ensures that a constant amount is recovered in real terms over that life. However, that profile is simply a regulatory construct. It would be equally appropriate to have a profile that recognised that more recovery should happen earlier in the life of an asset, rather than later, or even for full recovery to happen before the end of that life.
47. These points may appear academic. But to us they are important because they go to the heart of what regulatory depreciation should and can reasonably do. In its decision, the Commission has focused on economic principles and their traditional application. This is understandable; but it misses the bigger picture – and that is, that consumer interest could be better served by allowing EDBs to use the cash locked up in their RABs to reinvest in network assets where there is a clear need, especially when that value could effectively be lost if stranding occurs.
48. Different regulators have used different mechanisms to achieve this. Some networks allow for targeted accelerated depreciation (e.g. the Australian Energy Regulator (AER) accelerated depreciation of Multinet's gas mains and services that were being replaced).¹¹ Other regulators allow for financeability adjustments (e.g. Ofwat in the UK allows water businesses to balance recovery of costs between different generations of consumers using various tools).¹² All are done in an NPV neutral way.
49. And that is what we are proposing. Accelerating depreciation would allow us to bring cash flow forward so that we can invest it in capital projects and operating activities set out in our 2019 AMP and balance the risk that such investment is not recovered if asset stranding occurs. As set out in our submission on the IM changes, our current projections are that without bringing forward cash flow our EDB the draft DPP3

¹¹ See, for instance, AER, November 2017, *Final Decision: Multinet Gas Access Arrangement 2018 to 2022, Attachment 5 – Regulatory depreciation*.

¹² See, for instance, Ofwat, December 2017, *Delivering Water 2020: Our final methodology for the 2019 price review*, pp. 187-203.

decision could undermine the financeability of the capital investment programme, which could force us to cut back that programme. This puts at risk the consumer outcomes that our 2019 AMP seeks to achieve.

Proposal 2: Accept our proposal to apply accelerated depreciation, either because it would help mitigate economic recovery risk or because it would help promote efficient investment on the network by bring forward cost recovery

A way forward

50. For DPP3, therefore, the Commission should:
- 1) Consider amending the IMs to allow EDBs to apply for to remove indexation from the RAB in a similar way to accelerated depreciation;
 - 2) If amended, consider whether Vector's application – effectively set out in our submission on the draft IM changes – meets the requirements for removing indexation – and adopt an unindexed RAB if so; and
 - 3) Reconsider our accelerated depreciation application in light of our response.
51. The Commission should also clarify what consultation it expects should be undertaken to support an accelerated depreciation (and unindexed RAB) application. There is currently no guidance on what is expected prior to lodging an application.
52. It is also not clear how the consultation requirement here compares to what is required for a CPP application and how such consultation can influence Commission decision making (e.g. Powerco experience).
53. When clarifying expectations, the Commission should be mindful that the DPP framework is intended to be low cost to apply. Accelerated depreciation applications should, therefore, also be low cost to prepare. The Commission should recognise this when considering them. If not, then there is a real risk that the option introduced to the IMs becomes redundant.

EXPENDITURE ALLOWANCES AND INCENTIVES THAT DELIVER FOR CONSUMERS

54. The Commission has largely retained the approaches for setting capex and opex allowances that were used for the DPP2 period. We are concerned about some of the changes and more generally about the adequacy of the allowances set.
55. There was some logic in using past actual expenditure as a starting point for setting those allowances – as the Commission has done – similar to what is done when setting the quality standards. However, we are concerned that the approaches do not adequately allow for changes in circumstances nor align with the quality standards. There is a real risk that the allowances will not promote the long-term benefit of consumers because they do not provide enough resources to meet regulatory, consumer and other stakeholder expectations.
56. In our case, we are concerned that the allowances will be insufficient for us to both achieve the quality standard set out in the draft DPP3 and the other outcomes that our consumers and other stakeholders want, including supporting Auckland growth and development.

Capital expenditure

57. As set out in our 2019 AMP, we are proposing a significant step up in capital expenditure (capex) to deliver benefits to the network and our consumers and other stakeholders over the DPP3 and subsequent periods.
58. The draft DPP3 decision rejects a large portion of that proposed expenditure by applying a range of somewhat arbitrary caps without further investigating whether that expenditure is prudent and efficient or otherwise satisfies the Section 52A purpose.¹³
59. That is a flawed approach as it does not consider whether consumers would benefit from it. The Commission's logic in applying these caps is that an EDB should apply for a customised price path (CPP) if it considers that expenditure above the caps is justified against the expenditure objective set out in the IMs.
60. Our concern is that applying for a CPP is both time-consuming and costly – delaying the benefits accruing to consumers and other stakeholders, and ultimately adding cost to consumer bills. In our view, the DPP setting process can and should include some

¹³ Commerce Act 1986, s. 52A(1).

flexibility to deal with expenditure above the caps where there is a clear case for doing so.

61. Below we explain how and why this could and should be done for DPP3.

Overall cap

62. The Commission has capped any increase from past expenditure at 20%. That 'bright line' test is somewhat arbitrary – and it does not appear to be supported by any particular analysis of why it shouldn't be higher or lower than 20%. Moreover, it is hard to see how such a limit can possibly ensure consistency with the quality standard and / or deliver outcomes that consumers value because it was set without regard to those outcomes.

63. The Commission has also adopted several caps or tests for specific expenditure categories (discussed below), which could mean that even though a category passes its tests there is nevertheless an overall cap on the expenditure forecast.

64. Of course, it is good regulatory practice to include tests in the assessment process as the Commission has done. However, those tests should be used as a first pass assessment only. *If failed*, then the Commission should investigate further under a second pass assessment rather than simply cap expenditure either at the category level or in aggregate (at 120% of the historical average).

65. Other regulators use such tests as a first pass. The AER, for instance, uses high level techniques such as benchmarking and category analysis to assess expenditure forecasts.¹⁴ If failed, it then will typically use more detailed techniques such as cost benefit analysis and governance or methodology reviews.

66. Such a 'first pass, second pass' approach does not need to be onerous. For instance, the Commission's own analysis in the draft DPP3 decision shows that only 5 EDBs are forecasting capex increases above 20%.¹⁵ The Commission could even place the onus on those EDBs to justify that expenditure where there is an obvious case.

¹⁴ AER, November 2013, *Better Regulation – Expenditure Forecast Assessment Guideline for Electricity Distribution*, pp. 11-12.

¹⁵ Looking at the Commission's 'Capex-projections-model-EDB-DPP3-draft.xlsx' spreadsheet, it appears that Aurora Energy (221%), Network Tasman (167%), OtagoNet (128%), The Lines Company (126%) and Wellington Electricity (122%) all had forecast capex above the 120% threshold or cap. Based on our 2019 AMP, Vector would also be added to this list with forecast (2021-25) capex at 125% of historical (2013-18).

67. In our case, we would fail both the overall (20%) increase test and the ‘asset relocation’ tests with our 2019 AMP. This is despite our proposed capex only increasing by 16% (in real terms) from the DPP2 period to the DPP3 period.¹⁶
68. There are good reasons for this increase, including:
- 1) Auckland growth is having a much greater impact on our network than it has in the past – which is raising customer connection, asset relocation (e.g. to support light rail), and system growth capex requirements beyond our historical investment costs;
 - 2) Investment is needed to prepare our network for changing technology and consumer preferences, including to manage two-flows of energy and EVs (which is being encouraged by Government initiatives such as the Clean Vehicle Action Plan)¹⁷ – our symphony strategy is designed to facilitate these changes in a way that will help our network become ‘asset-lite’, including by using smart technology to better manage the use of the LV network and avoid costly network upgrades;
 - 3) Quality stabilisation initiatives are a key focus for us right now – we are now and need to over the DPP3 period invest in solutions – such as our consolidated area fault reduction programme¹⁸ – that will help us meet the expected quality standards applying to that period;
 - 4) Investment is needed to ensure our network is resilient to both traditional challenges (e.g. asset age and condition, and climate and weather) and new ones (e.g. changing consumer behaviour and technology) – this involves a mix of traditional investment (e.g. asset renewals) and technology-led initiatives (e.g. also included in our symphony strategy); and
 - 5) Real input cost escalation has been and is expected to remain positive (e.g. unit costs increasing by more than inflation) – which means that capex in real terms is increasing ignoring all other factors.

¹⁶ The reason we would fail the overall (20%) increase test is because it uses a different historical period than the DPP2 period. For instance, in the draft DPP3 decision it used the 2013-2018 period, which is therefore affected by expenditure in the DPP1 period.

¹⁷ See Vector’s recent press release: <https://www.vector.co.nz/news/vector-welcomes-clean-vehicle-action-plan>.

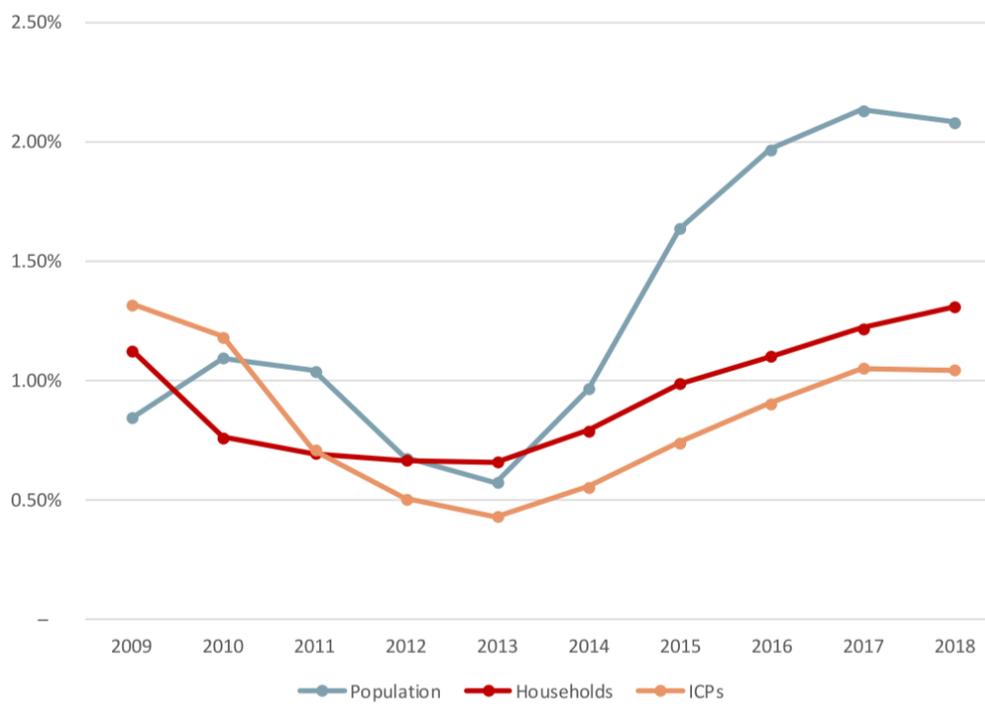
¹⁸ This programme targets areas of poor service as part of a consolidated and coordinated repair effort to help improve service levels.

69. However, those reasons do not clearly make their way into the Commission's draft DPP3 analysis. We consider that this expenditure increase is needed to deliver the outcomes that our consumers want, including to accommodate the growth that Auckland is going through. Our 2019 AMP explains the reasons for this increase further.
70. There are also difficulties with some of the Commission's category-level tests, including that:
- 1) The consumer connections test focuses on population growth rather than household growth (which is a much better predictor of new connections); and
 - 2) The system growth test focuses only on zone substation capacity and assumes a linear relationship between cost and MVA capacity.
71. As discussed below, we do not consider that these are fit-for-purpose.

Category-level test for consumer connection

72. The Commission proposes testing whether the projected connection growth rate is lower than either the historical connection growth rate or the forecast population growth rate.
73. In the draft DPP3 decision, we failed this test because our forecast connection growth rate (2.0% per year) was marginally higher than Statistics New Zealand's projected population growth rate (1.8% per year).
74. By using two reference points – historical connection growth and forecast population growth – the test builds in some flexibility. This helps accommodate demand changes over time.
75. However, we also think it misses the point that connection growth is much more closely linked to the number of households, businesses and other organisations – that actually get connections – than it is to the number of people. Connection numbers are heavily influenced by changes in consumer behaviour and housing developments. For instance, some consumers may want to get additional connections to support new technology (e.g. solar or EVs). Housing initiatives – especially those targeted at addressing shortages (e.g. KiwiBuild) – tend to deliver more houses with connections than people.
76. The Commission's analysis shows that connection growth aligns more closely than household growth, especially over the period since 2014. Even over earlier years, the profile has aligned more closely with increases and decreases in the growth rate following a similar profile.

Figure 2: Comparison of national household, population and ICP 2009-2018 [Reproduction of Figure A3 in the DPP3 draft decision]



Source: Commerce Commission analysis, Statistics New Zealand data.

77. In our case, Statistics New Zealand is forecasting household number growth of between 1.8% and 2.5% per year over the 2018 to 2023 period with a point estimate of 2.1%,¹⁹ which is consistent with our connection growth rate (2.0%).
78. The Commission has understandably raised the concern that the household data available does not align exactly with EDB network areas – and so there is a risk that this reduces the accuracy of any household projections. This is a little short-sighted for two key reasons:
 - 1) The mismatch between the household data and EDB network areas is small in most cases – in our case, the two can be aligned almost entirely, with the only exception being about 6,000 households in the Papakura ward – and so any inaccuracy that results is likely to be small; and

¹⁹ Statistics New Zealand, 8 December 2017, *Subnational Family and Household Projections: 2013(base)–2038 update*. The rates were calculated using the projections for Auckland less Franklin local board. The range reflects low and high projections covering the 2018 to 2023 period.

- 2) Population growth itself is an imperfect predictor of connection growth – although the Commission has acknowledged this, it implicitly decides without robust analysis that that risk is palatable while the risk of a slight mismatch in EDB boundaries is not – which does not appear well-reasoned.
79. Given this, we see no reason why *both* population and household growth should not be considered in the high-level test used by the Commission to assess forecast connection expenditure. The test should as a minimum be expanded to also include forecast household growth. Moreover, the Commission should treat the test as first pass, which – if failed – prompts further investigation rather than a cap on forecast expenditure.

Category-level test for system growth

80. System growth is important to both supporting new connections, but also to managing quality in the future. New connections place pressure on network assets. At an extreme, too many connections without system growth spend can lead to outages that impact consumers as system capacity is put under pressure.
81. The Commission proposes comparing historical average system growth expenditure for zone substations per MVA of capacity added and compares that cost per MVA at the zone substation to an EDBs' system growth forecast to determine whether the latter is efficient – a simplistic approach that focuses on only one driver of MVA capacity and only then at the zone substation level.
82. In the draft DPP3 decision, we failed this test because our forecast expenditure per MVA appeared higher than it was historically (based on the method and data used by the Commission).
83. Our concerns are that the test:
- 1) Does not recognise that system growth expenditure is not linearly related to MVA capacity added – there is a lot more complexity involved;
 - 2) Does not include sub-transmission expenditure within system growth – such expenditure is essential to maintaining or increasing capacity; and
 - 3) Uses one method to calculate the historical average expenditure per MVA capacity added – other methods result in noticeably different thresholds on expenditure changes.
84. On the **first** concern, the Commission's proposed approach effectively assumes that expenditure per MVA should remain constant over time (in real terms). The real world is more complex than that. Newer projects that tend to have more complicated

characteristics such as new sub-transmission capacity or new zone substation builds are not appropriately considered under this test. Our Takapuna zone substation upgrade is an example of a complex urban environment adding cost to activities such as trenching and civil works.

85. This is a concern because system growth capex is needed so that networks can reasonably address load growth – which is essential for places like Auckland. It should not be assessed using simple rules with very little explanatory value.
86. The proposed test focuses on whether the additional capacity added (e.g. when zone substations are built) is done efficiently. There is logic in doing so for new capacity; however, that does not work for all system growth spend.
87. In our case, a large proportion of the system growth spend in our 2019 AMP is not intended to expand our zone substation MVA. For instance, proposed 11kV feeder upgrade and zone substation land purchases – to enable future capacity increases – will not add MVA, but will cost us. The proposed test will not deal with examples like these.
88. On the **second** concern, the test does not appear to include sub-transmission in the MVA analysis because it uses average cost per MVA only at the zone-substation level, rather than more broadly across the network. Growth expenditure will be broader than the zone-substation transformer costs that will drive that analysis.
89. In fact, system growth covers investment on *total* system capacity, not just zone-substation capacity. A test that focuses on only one component of that capacity risks missing the key drivers of system capacity.
90. On the **third** concern, the test adopts one method to calculate the average historical per-MVA expenditure on zone substation capacity. Alternative methods give different results – highlighting the sensitivity of the test to the method used and reinforcing our contention that it should be used as a first pass that leads to further investigation, rather than a ‘bright line’.
91. Specifically, the test calculates average historical per-MVA expenditure on zone substation capacity as:

$$\frac{\textit{Average historical system growth expenditure on zone substations}}{\textit{Average historical zone substation capacity additions}}$$

92. An alternative method would calculate the average of the annual expenditure per MVA as:

$$\frac{1}{T} \times \sum_t^T \frac{\text{Expenditure on zone substations}_t}{\text{Zone substation capacity added}_t}$$

where 't' is the year in the period 1...T years.

93. In our case, using the first formula gives the \$103 / MVA shown in the draft DPP3 decision. Using the latter, gives a noticeably higher value of \$160 / MVA.
94. Clearly other methods could also be used and give different values. Each will have their own pros and cons. Our intent in highlighting this is to show how important the choice of method is on the threshold used in the test.
95. The methods would also give different results if the expenditure and capacity measures were adjusted to cover *all* system growth and total system capacity rather than the zone-substation subset used by the Commission.
96. As a minimum, therefore, failing the test should prompt more investigation by the Commission – or an opportunity for an EDB to justify – the causes of the test being failed. This would involve looking at the 2019 AMP in our case. The Commission should also include sub-transmission expenditure in the test and consider whether other methods for calculating the average expenditure per MVA added are more appropriate.

Category-level test for asset relocations

97. The draft DPP3 decision applies a sliding-scale to limit asset relocation capex increases to between 20% and 100% depending on what share that capex makes up of the total capital program. If the share is 25% or more, then the cap is 20%. If the share is less than 5%, then the cap is 100%.
98. In our case, the draft DPP3 decision applied a 200% cap (i.e. a 100% increase limit) to our asset relocation capex forecast because it only made up a relatively minor share of our total capex forecast in our 2018 AMP. We estimate that the same sliding scale would limit our forecast in the 2019 AMP to 165%, largely because of expected relocations needed to support Auckland light rail and road infrastructure projects.
99. Much like the overall cap, our primary concern is that cap on asset relocations – if applied strictly – do not allow the Commission to assess the reasonableness of forecasts. Consumers and other Auckland stakeholders would benefit from the projects that form part of the forecast.

100. Rather than ignore such reasons and benefits, the Commission should use the cap as a first pass that, if reached, prompts further investigation. As noted below, the Commission should also consider extending the proposed connections re-opener to relocations. This could then be used to cover the types of infrastructure projects noted above to the extent that they were unfunded by the capex allowance.

Potential consumer implications

101. If these tests are retained without the flexibility that we propose above, then there is a real risk that capex that is essential for our network is not funded by the regulatory regime – leading to difficult trade-offs being made that are unlikely to be in the long-term interests of our consumers.

102. For instance, key components of our capital programme (set out in the 2019 AMP) that could be compromised and the potential consumer or stakeholder outcomes are set out in Table 1. Undermining those components compromises our ability to apply good industry practice, particularly in relation to replacement and reliability projects. Consumer interests are better served by assessing whether these outcomes are worth the expenditure savings, rather than sticking to the somewhat arbitrary caps included in the proposed tests.

Table 1: Capital expenditure at risk if tests retained

Expenditure category	Project description	Potential consumer / stakeholder outcomes if not done or compromised
Consumer connection and relocations	<ul style="list-style-type: none"> Auckland light rail SH16 safe road project Undergrounding of overhead lines 	<ul style="list-style-type: none"> Less support for Auckland growth-related initiatives
System growth	<ul style="list-style-type: none"> New zone substations to deal with areas with capacity constraints and new housing developments in the Auckland region Additional zone substation and transmission projection upgrades 	<ul style="list-style-type: none"> Greater risk of outages due to capacity constraints Limits on new connections due to capacity constraints

Expenditure category	Project description	Potential stakeholder outcomes if not done or compromised
		<ul style="list-style-type: none"> Potential for voltage issues
Asset replacement and renewal Reliability, safety and environment	<ul style="list-style-type: none"> Proactive replacement of distribution transformers and 11kV cable replacement Consolidated at-fault reduction programme New 11kV feeder link to provide back stop capability Large replacement projects, including Hobson, Warkworth, White Swan and New Lynn 11 KV replacement and Chevalier and Westfile sub-transmission replacement 	<ul style="list-style-type: none"> Greater risk of outages due to aging or deteriorating assets Greater risk of health and safety issues for employees, consumers and the wider community

What next

103. For its final DPP3 decision, the Commission should:

- 1) Adopt a first pass, second pass approach to assessing the 2019 AMPs rather than use arbitrary 'bright-line' caps to limit capex increases; and
- 2) Revise its category level tests to:
 - a. Incorporate forecast regional household growth when testing connection and relocation expenditure; and
 - b. Include sub-transmission expenditure into the system growth test.

104. *If* those recommendations are adopted, then the capex forecasts in our 2019 AMP should be accepted by the Commission and incorporated into its DPP3 decision.

Proposal 3: Use the 20% cap on capex increases as a first pass assessment, to be followed by further investigation if required

Proposal 4: Incorporate forecast regional household growth when testing connection expenditure

Proposal 5: Include sub-transmission expenditure and capacity in the system growth test

Proposal 6: Use the 20% to 100% sliding scale cap on minor capex increases, including for asset relocations, as a first pass assessment, to be followed by further investigation if required

Capex IRIS

105. There is an important relationship between the capex allowance and the capex IRIS. *If* the allowance is set at the wrong level, then when combined with the IRIS it can set the wrong incentives.
106. As well as getting the allowance right, it is important for the Commission to also set up the capex IRIS appropriately.
107. The difficulty, however, is that increasing the capex IRIS retention factor risks undermining consumer outcomes if the capex allowance is set too low. As explained above, the arbitrary 20% cap when setting the capex allowance already forces an EDB to trade-off different expenditure.
108. As a minimum, the Commission should consider the interdependency between the retention factor and capex allowance when setting the retention factor. If the capex allowance is capped to a level below what is needed to deliver the outcomes that consumers and other stakeholders want, then raising the retention factor can further compromise an EDB's ability to achieve those outcomes – it would create unnecessarily more pressure for such an EDB to economise on capex. Conversely, if the draft retention factor is retained, then the Commission should provide a more realistic capex forecast.
109. We also support the Commission updating the new capex IRIS model to ensure it aligns with the IMs as soon as possible. This will allow EDBs to better understand the impact on future cash flows and convey this to stakeholders (which is particularly important for listed EDBs like Vector that need to provide market guidance).

110. The current model does not align with clause 3.3.11 of the IMs which requires the present value of expenditure to be calculated as at the end of the preceding regulatory period, rather than at the end of the first year of the new DPP.²⁰

Proposal 7: Update the capex IRIS model to align with clause 3.3.11 of the IMs

Operating expenditure

111. The Commission has retained a base step and trend approach to setting opex allowances. That is understandable as it is a well-used and relatively simple approach to apply.
112. However, it also has well recognised shortcomings that those that apply it inevitably need to be mindful of. For instance,
- 1) It is well known that regulatory obligations tend to increase costs over time beyond the growth and real cost escalation reflected in the rate of change (or trend). Unless there is some recognition of this in the setting of either step changes or the productivity factor there will be implicit under-compensation for those costs of doing business.
 - 2) The base step and trend method should be applied in a way that aligns with other aspects of a regulatory decision, including any capex allowance or quality standards (e.g. the Commission's proposal to focus only on SAIDI in the quality incentive). Unless these are aligned, the resulting inconsistency can force an EDB to make investment and operational decisions that are not aligned to long-term customer interests.
113. For us, the draft DPP3 opex allowance is insufficient to fund the expenditure that we consider is needed to deliver the outcomes that our consumers want. In particular, that allowance does not:
- 1) Align with the proposed quality standards – there is no explicit allowance for the costs required to meet those standards given the changing operating

²⁰ We made this point in our submission on the proposed IM changes: Vector, 5 July 2019, *Submission to Commerce Commission on changes to the input methodologies for electricity distributors and Transpower*, p. 33.

environment and other factors that have affected our SAIDI and SAIFI performance;

- 2) Recognise that the cost of regulatory obligations is expected to increase over time²¹ – there are no step changes for expected changes in those obligations or obvious allowance in the rate of change (e.g. via a negative productivity factor); and
 - 3) Link to the capex allowance – there is also no obvious allowance for any capex-opex trade-offs (e.g. those related to non-network solutions or cloud-based software subscriptions) or operating costs related to capital projects already included in the capex allowance.
114. The impact of this is that we will need to make decisions about what aspects of our current operations were cut-back in order to fund activities needed to improve our quality performance and meet new regulatory obligations.
115. Our 2019 AMP forecasts opex for the DPP3 period that is \$47 million (nominal) higher than that allowed in the draft DPP3 decision *for various reasons*. For instance, over the 10-year planning period our AMP forecasts higher spend on:
- 1) **Vegetation management** – to utilise data analytics to proactively identify trees that are high risk and increase investment to control vegetation;
 - 2) **Maintenance** – to increase corrective maintenance to target the root causes of the identified service level gaps and to undertake additional and alternative maintenance initiatives to address the increasing number of open, high risk actions;
 - 3) **Data analytics** – to acquire consumer meter data to assist with outage management through LV visibility and assist in network planning.
116. If the Commission uses the base step and trend approach to set our opex allowances in the DPP as part of its low-cost approach, then it should:
- 1) Allow a step change for the costs of anticipated tree regulation changes – MBIE’s review of the tree regulations is now underway with a consultation document signalled for the latter half of this year. It is expected the review

²¹ Recent regulatory changes such the *Employment Relations Amendment Act 2018* and the *Health and Safety Asbestos Regulations 2016* which came into full effect 2018 and the *Building (Earthquake Prone Buildings) Amendment Act 2016* highlight the increases in regulation over time. Although specific future changes are not always known now, we see no reason why this trend will not continue over the DPP3 period.

will transfer additional responsibility for the cost of tree trimming to EDBs. Vegetation has been a factor in every instance of breach since 2012 so it is critical the Commission provides EDBs sufficient allowance for vegetation management. We also note the Commission did allow Powerco a 70% increase in vegetation management opex compared with the previous five years as part of its CPP to meet good industry practice within the current regulations.

- 2) Allow a step change for LV monitoring costs – such expenditure is necessary to realise the benefits from our proposed capex on LV monitoring equipment and to acquire meter data from third parties;
- 3) Allow a step change for cloud computing SaaS – which is needed because, as our 2019 AMP capex and opex forecasts show, software providers are increasingly offering their products via subscription (which is opex) rather than licence (which is capex);
- 4) Allow a step change to cover the costs of dealing with the growing cyber-security threat – which is growing much faster than it has in the past and is an area that needs collective (industry-wide) thought on how to address;²² we don't want to have to wait for inherent vulnerabilities to be exposed or mandated action before we can prove there is a case for increased cyber security expenditure; we also think there is significant NZ-wide benefit (including economies of scale and scope) in having a shared resilience strategy across all 29 EDBs, rather than leaving it up to individual EDBs to adopt separate and differing approaches;
- 5) Consider whether a step change is needed to meet the quality standard – as a minimum, this should consider whether the resourcing implicit in the opex

²²

Ofgem has recently recognised that networks need to address evolving cyber security risks as part of its RIIIO-2 Sector Specific Methodology Decision; by requiring networks to develop and submit cyber resilience plans and providing a separate 'use it or lose it' allowance for spend on cyber resilience of operational technology.

Similarly, in assessing Transpower's proposed cyber security capex, ECMA found that although Transpower is likely to comply with New Zealand's National Cyber Security Standards, the proposed investment falls short of the more up-to-date Australian and International standards for utilities and other critical infrastructure. Globally most critical infrastructure companies are assessing themselves against the US model where government directives were found to fall well short of the current cyber-attack risks.

See: Energy Market Consulting Associates (ECMA), May 2019, *Transpower Regulatory Control Period 3: Review of Aspects of the Proposed ICT Expenditure*, pp. 34-38.

allowance is sufficient to limit any material deterioration in quality or to implement the 'good industry practice' considered appropriate by the Commission when assessing compliance with the quality standard; and

- 6) If adopted, a step change to help fund the cost of implementing a GSL scheme (which we discuss further below).
117. In some cases, the Commission has noted that step changes *could* be covered by a re-opener (e.g. for tree regulations). That is obviously one option. If, however, no such re-opener is included in the final DPP3 decision, then the corresponding step change *should* be. Moreover, such re-openers are subject to materiality thresholds that can mean that prudent and efficient costs remain un-funded by the regulatory settings, which undermines the Section 52A purpose.
118. The Commission should also reconsider its approach to determining the trend:
- 1) The Commission has used forecast population growth as the proxy for ICP growth – in our view this is less accurate than forecast household growth because it ignores the fact that it is households, businesses and other organisations that have connections, not every person (as discussed in paragraph 75 above);
 - 2) The Commission has not allowed for region-specific real input cost growth – this is inconsistent with our experience and expectations, which has seen Auckland labour costs increase significantly faster than on average across NZ and is something we expect to continue;²³ and
 - 3) The Commission has replaced the historically-derived productivity factor with an assumed 0% – this is problematic because in doing so the Commission has implicitly removed compensation for changes in regulatory obligations and other cost drivers that are reflected in the historical opex trend, but not included in the output measures included in the scale factor; as NERA notes, an historically-derived productivity factor captures more than just productivity improvements and so assuming a 0% assuming productivity unfairly

²³ See, for instance: Infometrics, March 2019, *Investigation of cost pressures in Auckland compared to those in the rest of New Zealand, for Vector*. Infometrics concludes (at page 1) that:

Looking five years ahead it seems likely that rising wages and worsening congestion will continue to put more pressure on costs in Auckland than elsewhere in New Zealand. Irrespective of what forecasts of the LCI and PPI are used in future DPPs, our analysis suggests that a further 1.1% pa for additional relative cost increases in Auckland is justified.

assumes away the impact of those other cost drivers (e.g. regulatory burden increasing).^{24,25}

119. The alternative to using a base step and trend approach would be to use our 2019 AMP, similar to what is done when setting capex allowances. Significant effort and consideration go into preparing those plans and so it would be reasonable for the Commission to use those as either a starting point for setting its opex allowances or – as a minimum – a cross-check.
120. Doing so would help overcome the inherent inconsistency between how the capex and opex allowances are set. If, for example, the Commission were to allow in its capex forecast expenditure a project that included both a capex and opex component, then it would allow the capex component but not the opex component. This is not particularly logical – as it means that the outcomes from such a project cannot be fully realised (as it is only partially funded). The capex and opex forecasts in our 2019 AMP are consistent with each other.
121. Similar to our points on capex, the Commission should also consider the interdependency between the opex IRIS retention factor and the opex allowance when setting both. If the opex allowance is capped to a level below what is needed to deliver the outcomes that consumers and other stakeholders want, then raising the retention factor can further compromise an EDB's ability to achieve those outcomes. If, instead, the draft retention factor is retained, then the Commission should provide a more realistic opex forecast.

Proposal 8: Allow step changes for material and likely expenditure increases caused by factors outside of our – and other EDBs' – control

Proposal 9: Use forecast household growth in the opex rate of change as it is a better proxy for connection growth than population growth

Proposal 10: Allow a negative 'productivity factor' as this captures costs and other factors not otherwise allowed for in the base, step and trend approach

²⁴ See: NERA, 18 July 2019, *Opex Partial Factor Productivity for DPP3, Electricity Network Association*.

²⁵ Our expectation that regulatory costs will continue increasing over time is informed by expectations that the Commission itself will spend more to administer regulation more generally. For instance, the Commission's operating expenditure on regulating electricity lines services has increased from \$5.5 million in 2017 to \$6.8 million in 2018, a 24% increase.

See: Commerce Commission, 4 December 2018, *Annual Report 2018*, p. 40; and Commerce Commission, 30 November 2017, *Annual Report 2017*, p. 29.

QUALITY STANDARDS AND ENFORCEMENT THAT WORK TOGETHER

122. Service outputs are understandably important to our consumers. Select quality measures are used within the DPP-CPP framework as a proxy for what matters to consumers. Although far from perfect, these measures are used (by the Commission) to drive EDB behaviour – and therefore it is important that this is done in a way that promotes consumer interests by incentivising the right behaviours.
123. As summarised in Figure 3, within the DPP-CPP framework there are three key inter-related quality components.

Figure 3: Quality in a DPP-CPP framework



124. Each component affects EDB behaviour differently. The draft DPP3 looks to refine the way these influences play out, drawing from experience over the current DDP2 period and stakeholder feedback.
125. We welcome key components of these changes. However, we also consider that more should be done to:
- 1) Reflect changes in operating environment and good industry practice;

- 2) Clarify how enforcement will operate in concert with decisions around trade-offs;
- 3) Recognise the limitations with the proposed quality measures; and
- 4) Allow for innovation in how consumer harm is addressed (i.e. through a GSL scheme).

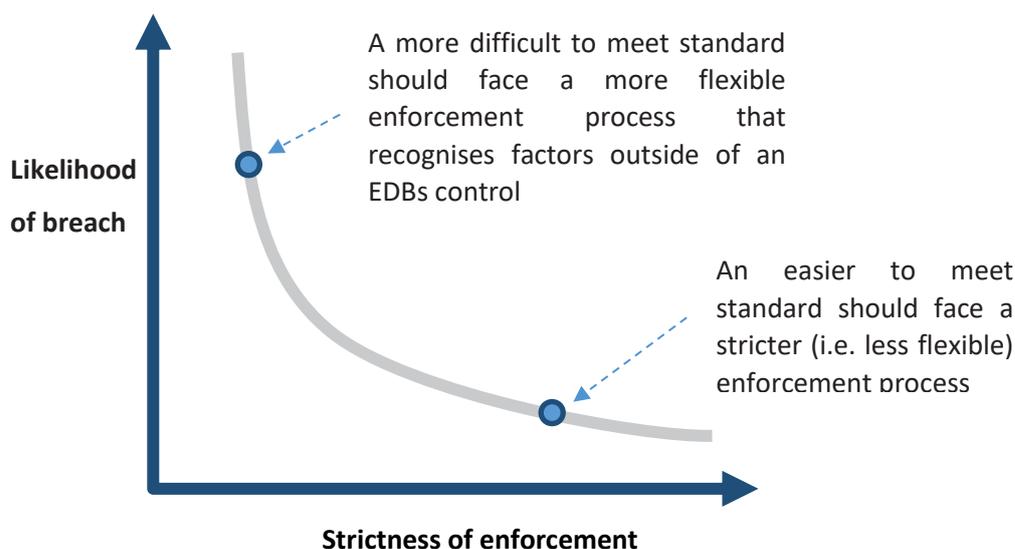
126. We explain how and why below.

Balancing enforcement and standards

127. There *should be* a direct link between the likelihood of breaching – or risk of false positives from applying – the quality standards and how flexible the enforcement approach is. A standard with a higher likelihood of breaching should not be enforced as strictly, otherwise those compelled to comply may inefficiently allocate resources in order to comply with it or deal with the consequences of not complying with it. Conversely, an easier to achieve standard should not be paired with an overly lenient enforcement process that provides little incentive for compliance.

128. This ‘balance’ is conceptualised in Figure 4 below – and underpins our core contention that the enforcement process should be both designed and applied in a way that recognises how the standard is set and what it is intended to achieve (in terms of consumer outcomes).

Figure 4: Balance between quality standard and enforcement



129. A quality standard limit set as an average of past performance and assessed annually, for instance, would have a higher likelihood of breach than would one set at 1 or 1.5 standard deviations or one assessed over multiple years. Enforcement should be less strict as a result.
130. Similarly, if imperfect standards are set, then enforcement of them needs to recognise their limitations and focus clearly on whether the EDB behaviour was reasonable in the circumstances.

Dealing with false positives

131. Crucially, the 'balance' between breach likelihood and enforcement strictness needs to effectively deal with false positives – circumstances beyond an EDBs control (e.g. weather events) that can trigger breaches even if there is no material deterioration in network performance.
132. The DPP2 sought to address this by setting the targets at one standard deviation above the historical average and then requiring two annual breaches out of every three years before enforcement action was taken. The draft DPP3 decision adopts a different balance – instead setting the target at 1.5 standard deviations and removing the '2 out of 3' year rule before enforcement action is taken. A subtle shift that affects the administrative and regulatory burden for both EDBs and the Commission. Even with automatic reporting, more frequent compliance assessments will tie up more management and engineering staff time to prepare information and engage with investigations of historical performance rather than focus on forward-looking network and consumer priorities.
133. *If* the shift to annual year compliance is to minimise that burden, then the targets and the enforcement approach must effectively deal with the range of factors that can cause false positives. Constraining the targets – as we discuss further below – undermines that objective by making it more likely that false positives will trigger breaches, even if a 1.5 standard deviation is adopted. Unless addressed in the final DPP3 decision, we will be required to do a lot more work to monitor and mitigate the impact of circumstances outside of our control, which – we argue – is an inefficient use of resources.

Recognising limitations with quality measures

134. As with the DPP2 period, the draft DPP3 quality standards use SAIFI and SAIDI as measures of quality. These are imperfect measures because (among other reasons):
- 1) There are many other performance outputs that consumers care about, such as connection times, amenity value, and timely information on outages;
 - 2) They only measure average performance across *all* consumers, not the experience of individual consumers (which is a lot more meaningful for those that are affected);
 - 3) They can be affected by repeat outages affecting specific assets (e.g. feeders not economic to replace), which may not reflect a uniform decline in reliability; and
 - 4) They are affected by environmental factors (such as weather or third-party damage) that are outside of an EDBs control.
135. One option to overcome these imperfections is to use different measures. However, there are challenges with that too. If, however – as the draft DPP3 decision proposes – the same SAIDI and SAIFI measures are retained, then enforcing any observed breach of quality standard limits *must* recognise these imperfections.
136. In particular, the DPP-CPP framework should avoid incentivising inefficient investment or behaviour. Design and enforcement of quality standards need to be unambiguous about whether the right behaviours are being undertaken by an EDB or not. Proof of inefficient or imprudent over or under investment is an example, if substantiated against a clearly defined behaviour standard (e.g. if ‘good industry practice’ were clearly defined in an enforcement guideline).
137. The key is avoiding the types of overinvestment experienced in NSW and Queensland that led to significant price increases to consumers with only marginal improvement in reliability.²⁶ Such an outcome – we contend – is not in our consumers’ long-term interests.

²⁶ For instance, the Grattan Institute – an Australian think tank – observed that despite the significant – some would argue – over investment in the networks, there was only a marginal improvement to reliability. In hindsight, the cost to consumers did not outweigh that improvement. See: <https://grattan.edu.au/keep-calm-about-electricity-reliability/>.

Setting the right standard

138. The Commission is required to adopt a quality standard. In doing so, it must promote the purpose set out in section 52A.²⁷
139. We are concerned that the Commission's proposed standard does not promote that purpose because it does not:
- 1) Allow for changes in the operating environment or alignment of health and safety practices with changes in legislative requirements or what is considered 'good industry practice';
 - 2) Deal effectively with false positives; and
 - 3) Link effectively with changes in planned works (reflected in the capital investment programme).
140. If these concerns are not addressed, then the quality standard risks encouraging inefficient investment. EDBs must manage a range of competing priorities. Increasing the focus on reliability by setting the quality standard too low, for instance, will encourage EDBs to reduce expenditure in other areas that are not subject to such a standard. Reliability is unlikely to improve linearly with more spend, as the NSW and Queensland examples show, and so may require increasing amounts of expenditure to address. The Commission should be mindful of this when setting the quality standard.
141. At the outset, we understand why the Commission has started with the 'no material deterioration' principle for determining quality standard limits. However, we are concerned that the proposed application of it does not allow for changes in the operating environment (e.g. increased frequency of third party damage) or customer expectations over time, nor changes in work practices that improve employee and community health and safety.
142. The draft DPP3 makes some important changes to the way that the quality standard is set:
- 1) Splitting planned and unplanned outages – this helps ensure that there is no throttling or corner cutting on executing planned works;

²⁷ Commerce Act 1986, s. 52A.

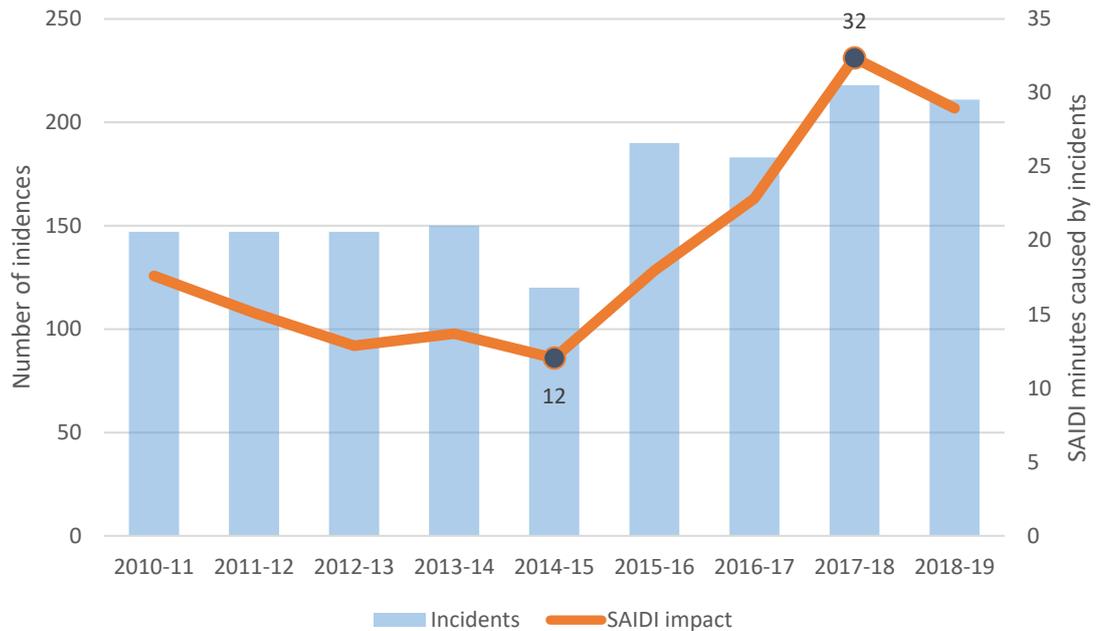
- 2) Increasing the unplanned outage standard to 1.5 standard deviations of the historical average; and
 - 3) Setting the planned outage standard at 3 times the historical average and allowing for planned outages to be assessed over the five-year DPP period (rather than annually).
143. We support these changes and appreciate the Commission's consideration of our positions put in response to the DPP3 issues paper. However, we do not consider that these changes go far enough to recognising the significant environmental and consumer expectation changes that we are experiencing, nor allow us to proactively improve health and safety outcomes for our employees and communities. We are also concerned with the unintended consequences of both the unplanned and planned SAIFI and SAIDI targets.
144. We discuss our concerns further below.

Unplanned SAIDI and SAIFI targets

145. The draft DPP3 includes both a 5% cap on changes in the unplanned SAIDI / SAIFI limit between DPP periods. The effect of this limit is that such changes to the operating environment and practices – if significant enough – cannot be reflected in the quality standard targets. This undermines the Part 4 objective.
146. We can see why the Commission would – as an initial step – start with historical SAIDI and SAIFI outcomes when setting future limits. There is some link to the 'no material deterioration' principle that it has adopted. The challenge with that step, however, is that it has no direct link to the price / revenue path allowances that form part of the same DPP – those allowances are set independent of the quality standards. Without such a link there is an inherent risk that the implicit trade-off between price and quality that is reflected in the draft DPP3 will not be calibrated to what consumers want or what activities are funded via the expenditure allowances, leading to incentives that are not aligned to the long-term benefit of those consumers.
147. For Vector, this is the case – there is an inherent mismatch between the price / revenue path and quality standard in the draft DPP3 for us. For example, over the DPP2 period, we have experienced:
- 1) **Sustained increases in the number of cars and other third-party incidents damaging our power poles.** Vehicle damage has grown significantly over the 2016-2020 DPP period, which has led to more unplanned interruptions that increase both unplanned SAIFI and SAIDI. By way of example, the number of third party damage incidences has increased

by over 40% from the last year of DPP1 (2013-14) to the most recent year in DPP2 (2018-19) – which as shown in Figure 5 – has led to a corresponding increase in SAIDI.

Figure 5: Impact on SAIDI from third party damage



Source: Vector analysis.

- 2) **Competition for scarce skilled labour and contractor resources.** This makes it harder to employ those resources to respond to unplanned outages or complete planned works faster. This is particularly relevant for Auckland which has to compete with other more affordable regions for skilled field resources.

- 3) **Significant increases in traffic congestion in Auckland.** This delays our crews from reaching and fixing faults, increasing the duration of outages. For instance, Auckland Transport Alignment Project reports that the average weekday motorway trip in 2017 took almost 10% longer than it did in 2013 and is expected to get worse in the future given the significant population growth expected in the Auckland region.²⁸ Increasing unreliability requires motorists to allow significantly more time for their trips across Auckland, just

²⁸ Auckland Transport Alignment Project, November 2017, *Phase One Report: The Congestion Question – Could road pricing improve Auckland’s traffic?*, pp. 10-15.

in case. Such travel time increases and risk delay the speed with which our crews can respond to unplanned outages.

148. Critically, our performance against the quality standards was also affected (and will continue to be affected) by more stringent work practices adopted during the DPP2 period in response to new health and safety legislation and incidents faced by other EDBs. In particular:

- 1) **Following on from the Pike River Commission of Enquiry, the Health and Safety in Employment Act 1992 (HSE Act) was repealed, and replaced by the Health and Safety at Work Act 2015 (HSW Act).** This represented the most significant reform of New Zealand's health and safety system in 20 years and, among other things, a shift in focus from monitoring and recording health and safety incidents to proactively identifying and managing risks. The guiding principle under the HSW Act is that workers and others need to be given the highest level of protection from workplace health and safety risks as is reasonable.²⁹ The new HSW Act caused the electricity supply industry to revisit risk management around live line work and other work more generally.
- 2) **Incidents faced by other electricity networks prompted a rethink to what levels of public safety are expected.** For instance, a jogger in Newport, UK was electrocuted after coming into contact with a low-hanging cable on a public footpath. UK Power Networks – the owner of the cable – has adopted a strict 'isolation for safety' policy after it failed to isolate the low hanging line despite it being reported before the incident.³⁰

Other similar incidents, including one where a Sydney man died after stepping on a fallen power line in his driveway,³¹ have prompted us to adopt a strict policy for the benefit of our consumers and the wider community. We want to avoid such incidents on our network where we can – which we consider is both prudent and promotes consumers long-term interests.

²⁹ <https://worksafe.govt.nz/laws-and-regulations/acts/hswa/>

149. Practice changes adopted during the DPP2 period in response to these factors included (among others):

- 1) A new “live-line” works policy – limiting work on energised lines (the 2015 Live Line Decision); and
- 2) A remote isolation policy – requiring lines to be de-energised remotely upon receiving a report of low or downed lines from members of the public.

150. We raised these practice changes in our 2018 quality standard re-opener request – and although we were disappointed with the Commission’s rejection of that re-opener, we were encouraged by statements made in response.

151. For instance, Sue Begg noted that:³²

The Commission supports electricity distribution businesses (EDBs) taking steps that are necessary for the safety of their workers and the public. Accordingly, prior to 1 April 2020, if Vector or another EDB were to exceed its quality standards under the DPP and the Commission were satisfied that this was solely because the EDB had legitimately and efficiently de-energised lines for safety reasons, then it is very unlikely enforcement action would be warranted. In that regard, we encourage Vector and other EDBs to ensure appropriate records are kept so that the impact of health and safety practices on quality standard metrics can be robustly demonstrated.

152. She also reiterated that:³³

We [the Commission] intend to consider further the issue of practices such as Vector’s policies that formed the basis of its re-opener request as part of the process for deciding the default price-quality path to apply from 1 April 2020. The information provided by Vector and other parties will inform our approach to these issues in the DPP reset process.

153. Indeed, the draft DPP3 decision does consider the impact of these practices to some degree. However, the Commission ultimately decided both not to explicitly account for such practice changes and to apply a limit that means that those changes cannot

³² Commerce Commission, 13 December 2018, *Letter from Sue Begg to Richard Sharpe: Vector’s request that the DPP be re-opened*, para. 8.1.

³³ Commerce Commission, 13 December 2018, *Letter from Sue Begg to Richard Sharpe: Vector’s request that the DPP be re-opened*, para. 8.2.

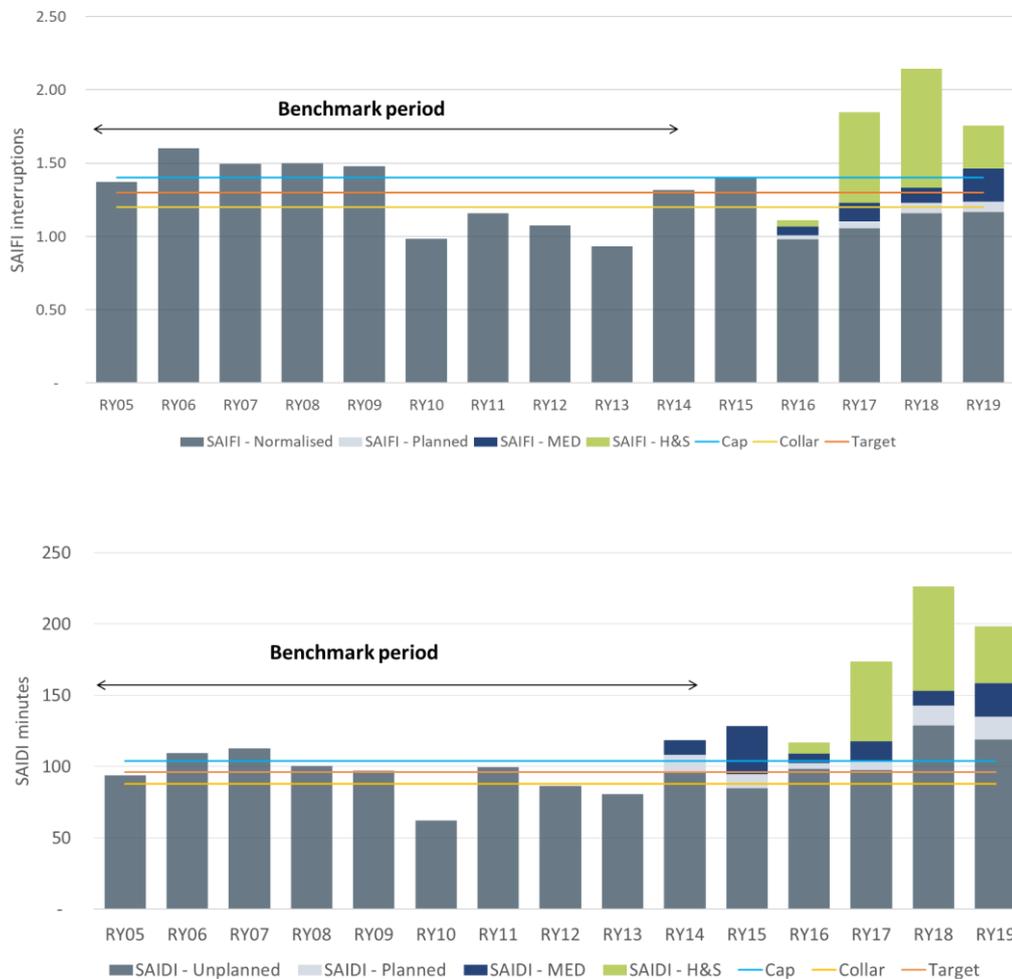
be fully reflected in the quality standard targets. We are troubled by this, as these practice changes are important to us, our employees, and our wider community.

154. **Line work**, for instance, is inherently risky and requires adequate controls to be in place. The 2015 Live Line Decision required lines to be de-energised before work on them is undertaken, with live line work undertaken by exception provided there was sufficient justification and safety precautions taken. Almost all work is currently undertaken on de-energised lines – a notable contrast to our previous policy, which allowed for live line work to be conducted much more regularly.
155. However, our operating environment is dynamic and this requires us to review and evolve our field methodologies. Vector is in the process of reviewing the risk profile of operational activities associated with building, operating and maintaining the network. This includes the carrying out of a risk assessment of live line tasks, with the assistance of external risk management specialists. The outcome is that FSPs may now be permitted to undertake selected live line tasks. Live tasks will (obviously) only be permitted where it is assessed that worker safety can be ensured so far as is reasonably practicable when they are used. Moreover, because the relevant Electricity Operating Standards will still require each job to be individually risk assessed, it may be that job specific conditions will require a task to be carried out using a de-energised equivalent task even though the live-line task is available.
156. In addition, **isolating lines remotely** where they have been reported as down or hanging low by a member of the public is, in our view, clearly the right thing for us to do. Although reporting is inaccurate in many cases, there is always a risk that a down or low hanging cable is a live power line. This policy is intended to promote consumer and public safety by ensuring that lines are de-energised remotely until they can be investigated on-site and made safe.
157. Other health and safety practice changes made over the DPP2 period – and not reflected in the DPP2 quality standard – include:
 - 1) Ensuring that visible earths are applied when carrying out works – following changes made to the Electrical Engineers Handbook in 2015; and
 - 2) Managing changed traffic management conditions – more congestion and a greater focus on traffic safety means that it takes longer to prepare work sites and complete work;

among others.

158. Together, these health and safety practice changes mean that it takes us longer to respond to outages and restore power, as well as require us to turn off power in some cases to protect public and employee safety. For instance, our crews must now step through more thorough site setup processes, including installing visible earths.
159. The changes have led to noticeable increases in our actual SAIFI and SAIDI outcomes over the DPP2 period, as shown in Figure 6.

Figure 6: SAIFI and SAIDI trend



Note: To quantify the impact of H&S changes, we reviewed the historical outages to identify those likely to be impacted. We then individually reviewed and assessed the additional SAIDI and SAIFI incurred as a result. Our quantification approach was peer reviewed by WSP – a well-regarded international professional engineering firm.

160. Our concern is that the proposed quality standard limits for the DPP3 period will not fully reflect these changes because the limit (adopted by the Commission) restricts their impact on the targets and there is no explicit adjustment for such changes (e.g. for isolation for safety). The Commission has proposed this limit and denied making such adjustments without obviously considering the incentive effects on us, or the standards expected by customers.
161. We have paid out over \$12.4 million so far over the DPP2 period through the quality incentive and quality standard enforcement, with \$8.9 million of this going directly to our consumers through lower prices. By imposing the limit and not adjusting for changes, the Commission is effectively setting us up to pay out even more to our consumers over the DPP3 period.
162. Such double jeopardy is unfair and risks undermining confidence in the regulatory settings. It also undermines the trade-offs implicit in the price-quality framework. If it is cheaper to pay out under the quality incentive than it is to spend on initiatives that reduce SAIDI and SAIFI, then it makes economic sense to do that. There is no reason why such trade-offs should not also be incorporated into the DPP3 targets, especially where quality has changed due safety considerations and external factors.
163. By setting those targets too low – or below what can reasonably be expected from the expenditure allowances – we will need to re-prioritise our allowed expenditure away from Auckland growth and other consumer-demanded investment and into projects that could improve SAIDI and SAIFI performance.

164. This is not in our consumer or wider stakeholder interests. Our consumer research indicates that most consumers are already satisfied with current network reliability. For instance, in a recent survey:³⁴
- 1) Two-thirds of our residential consumer rated our performance on ‘number of power cuts’ and ‘duration of power cuts’ to be either extremely good or very good; and
 - 2) Only one in five consumers indicated that they would ‘probably’ or ‘definitely’ be willing to pay more to improve reliability of the network, whereas over half stated that they ‘probably’ or ‘definitely’ would not be willing to pay more.
165. As noted in Table 1 above, there are consequences if our proposed capital investment is compromised because it is underfunded. Similar consequences could arise if we need to also re-prioritise expenditure away from other areas.
166. In our view, it is appropriate to start with historical performance when setting quality standards. Bottom up forecasts of quality are notoriously difficult to prepare. However, that should not be the end of it. If there is clear evidence that there is a mismatch between the DPP price and quality standards or that the quality standard is inappropriate, then the Commission should consider whether adjustments to its approach are warranted.
167. In our case, adjustments *are* warranted – the Commission should:
- 1) Remove the limit that it has imposed on the setting of quality standard targets for unplanned SAIFI and SAIDI; and
 - 2) Explicitly adjust the targets to include the impact of the health and safety changes and other external factors (e.g. isolations for safety);
- making sure that there is no duplication.³⁵
168. The adjustments will ensure that recent changes to the operating environment – that *are* reflected in current consumer experience – are fairly reflected in the revised targets.

³⁴ These results are taken from qualitative and quantitative consumer research undertaken by Colmar Brunton, KANTAR TNS and Vector’s Community Engagement Team in 2018.

³⁵ Duplication can be avoided, for instance, by adjusting the historical SAIDI and SAIFI observations to exclude the impact of the health and safety changes and other external factors over recent years, before adding them back explicitly.

169. Making the **first** adjustment will involve updating the 10 year historical period to include 2018-19 and removing the impact of the health and safety changes and other external factors covered by the second adjustment – to avoid duplication.
170. Applying this adjustment (but not yet the second) and updating to include the 2018-19 year, gives the revised targets values below.

Table 2: Revised unplanned SAIFI and SAIDI targets without applying a 5% cap, but excluding any specific adjustment for health and safety changes or other external factors

Measure	Draft DPP3	Revised targets	Difference
Unplanned SAIFI (interruptions)	1.3591	1.3591	-
Unplanned SAIDI (minutes)	102.13	127.31	25.18

Note: The revised targets were calculated by taking total unplanned SAIFI and SAIDI over the 10 years from 2009-10 to 2018-19, without capping the increase. The revised targets do not yet adjust for health and safety changes or other external factors.

171. Under the **second** adjustment, the Commission should adjust the average from the first adjustment to explicitly account for changes in operating environment, including for, instance, our isolation for safety practice.
172. For instance, we estimate the effect of our health and safety practice changes over the 2017-2019 regulatory years as:
- 1) 0.57 interruptions for SAIFI; and
 - 2) 25 minutes for SAIDI;
- both calculated as the average estimated impact over 2017 to 2019 regulatory years.
173. If such adjustments are not made, then the DPP3 will be forcing us to trade-off investment that our consumers and other stakeholders want (e.g. to support Auckland

growth) against investment targeted at improving quality from current levels – which is something that consumers have said that they do not want. It will also be:

- 1) penalising us for our proactive health and safety practices, which could put at risk our employees, consumers and wider community – which is something that we certainly do not want; and
 - 2) forcing us to rethink whether we charge connecting consumers for things like deep augmentation costs (i.e. to cover investment in network needed to deal with more connections) – which will reduce the affordability of Auckland housing at a time when the opposite is needed.³⁶
174. The Commission cannot simply ignore the incentive effects that its DPP decision will have on us. The current regime is an incentive based regulatory framework that the Commission is tasked with applying. It is the Commission’s job to ensure that the incentives set in that regime are appropriate in the circumstances.
175. For the reasons above, this is not the case in the draft DPP3. The Commission now has the opportunity to make it so for the final DPP3. We look forward to engaging with the Commission on this further.

Planned SAIDI and SAIFI targets

176. The draft DPP3 sets the planned SAIDI and SAIFI targets at 3 times the historical average, estimated over a 10-year period. We are concerned that this does not allow for changing work programmes along the lines of what we are proposing in our 2019 AMP or as otherwise reflected in the DPP3 capital and operating expenditure allowances.
177. As with all EDBs, planned works change over time in response to investment and operational needs. We are no different. Over the DPP2 period we have stepped up such works, impacting our planned SAIDI and SAIFI outcomes.
178. A 10-year historical average to determine the baseline SAIDI and SAIFI will only pick up some of these changes. It would also be inconsistent with how the capital and operating expenditure allowances are set, which either use a shorter historical period

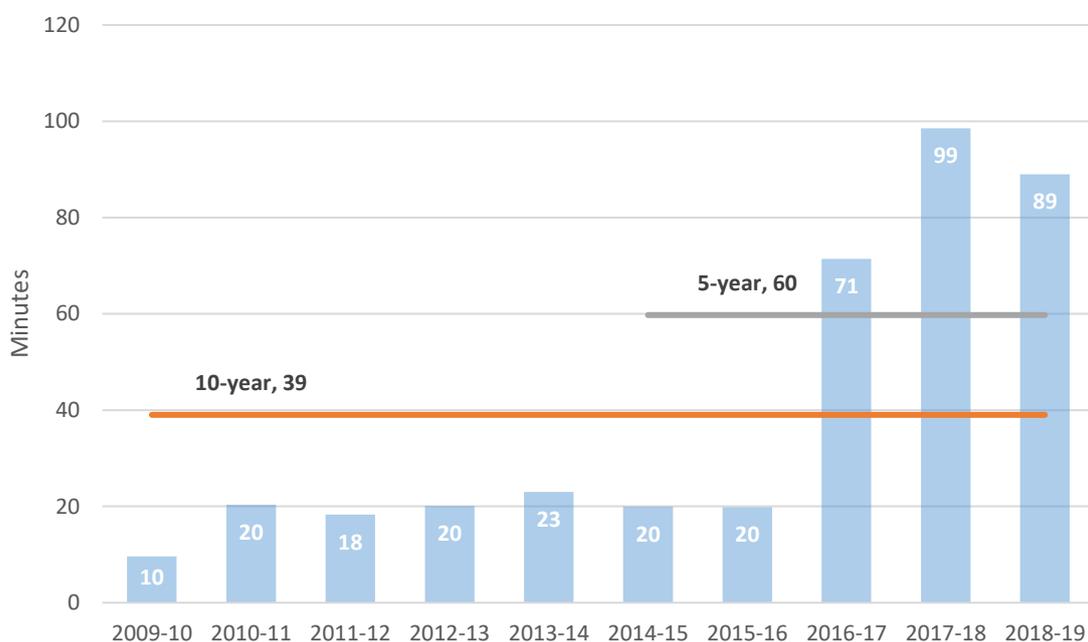
³⁶ For instance, an Auckland Council report noted that “Auckland has a severe housing affordability problem” and that the “economic and social consequences for Auckland and New Zealand are significant and long lasting”.

See: Auckland Council, November 2018, *Affordable housing in Auckland: A snapshot report about the need and initiatives to increase low cost housing, assisted rent and assisted home ownership*.

as the reference point – in the case of capex – or the most recent year of actual – in the case of opex.

179. Such a mismatch between the allowances and the planned quality targets could undermine the price-quality trade-offs that EDBs are required to make. For instance, if the DPP3 decision allows expenditure that would increase planned outages, but the planned SAIDI and SAIFI targets do not, then an EDB may need to reconsider that expenditure despite it being allowed for. This does not seem right to us.
180. The Commission has said that this is dealt with by allowing the planned targets to be assessed over the DPP3 period (rather than annually) and setting them at the three times the 10-year historical average. Those adjustments – which we support – are sensible.
181. They allow for:
- 1) Work to be grouped into sensible packages over the DPP3 period rather than focusing on the potential annual impact; and
 - 2) Some changes in planned work over time.
182. However, the key failing is using a longer (10-year) average rather than a more relevant shorter (say a 5-year) average. In our view, the latter is a much better option because it:
- 1) Aligns with our proposed works programme (as a continuation of work undertaken over the DPP2 period);
 - 2) Aligns with how capex and opex allowances are set in the draft DPP3; and
 - 3) Allows for changing work practices over time (e.g. the health safety practices that we discussed above) to be incorporated into future planned works.
183. For instance, looking at planned SAIDI over the last few periods below highlights how our planned SAIDI has changed over the DPP2 period.

Figure 7: Planned SAIDI over the last few periods



Source: Vector analysis.

184. Perhaps, more importantly, a 5-year average also better aligns with consumers' 'current' reliability experiences. There seems little sense in looking back to the DPP1 period for this.

New quality standard for major events

185. The Commission is proposing a new quality standard for major events caused by unknown factors, human error or equipment failure. This is unnecessary and risks undermining existing incentives or encouraging networks to 'gold-plate' components of the network.
186. The existing SAIFI and SAIDI quality standard and quality incentive seek to encourage networks to address the risk of outages. Failure to do so could lead to penalties for breaching the standard or through the incentive scheme.
187. The proposed new quality standard would add to these existing incentives, encouraging networks to spend more on deal with the specific events specified in the standard rather than prudently trade-off consumer experiences with cost.
188. Adopting a new standard that targets specific causes can lead to sub-optimal outcomes where EDBs are encouraged to spend more to address those causes rather than the outcomes that consumers face. Some EDBs, for instance, may prefer to gold-

plate components of its network to avoid equipment failures, despite a more cost-effective solution being to address response times or sectionalise the network so less consumers are affected if outages occur. That appears perverse to us given that the focus should be on consumers long-term interests as articulated in Section 52A – an outcomes-based objective.

189. The new standard is more akin to deterministic planning-based standard that may encourage less sensible approaches to managing equipment such as latent manufacturer defects.
190. The Commission should reconsider introducing the new standard for major events. A more sensible approach is to include more comprehensive reporting of such events in the information disclosures so that more targeted and well-considered incentives

Proposal 11: Remove the 5% cap when setting the unplanned SAIDI and SAIFI targets

Proposal 12: Adjust the historical average unplanned SAIDI and SAIFI for isolation for safety (and perhaps other health and safety changes and external factors)

Proposal 13: Use a 5-year historical average when setting the planned SAIDI and SAIFI targets

Proposal 14: Do not introduce a new major event quality standard

A principled approach to enforcement

191. The Commission has committed – in its draft DPP3 decision – to preparing guidance on how it will approach enforcement of the quality standards. We welcome and strongly support this. As highlighted in Figure 4, there should be a relationship between that approach and the quality standards set.
192. Over the DPP2 period the Commission has used various enforcement tools, from no action letters and warning letters to court-imposed penalties. The criteria used by the Commission to determine what action it takes has some logic to it (as they consider both culpability and consequences of quality standard breaches); however, they do not go far enough and do not appear – at least to us – to have been applied consistently by the Commission.
193. A well-designed enforcement guideline will help industry participants, consumers and other stakeholders understand the Commission’s intent. The development of

the guideline will allow for a public discussion of what that intent should be. Consistent application of such a guideline will help ensure that EDBs and stakeholders are clear on the consequences of quality standard breaches and respond appropriately.

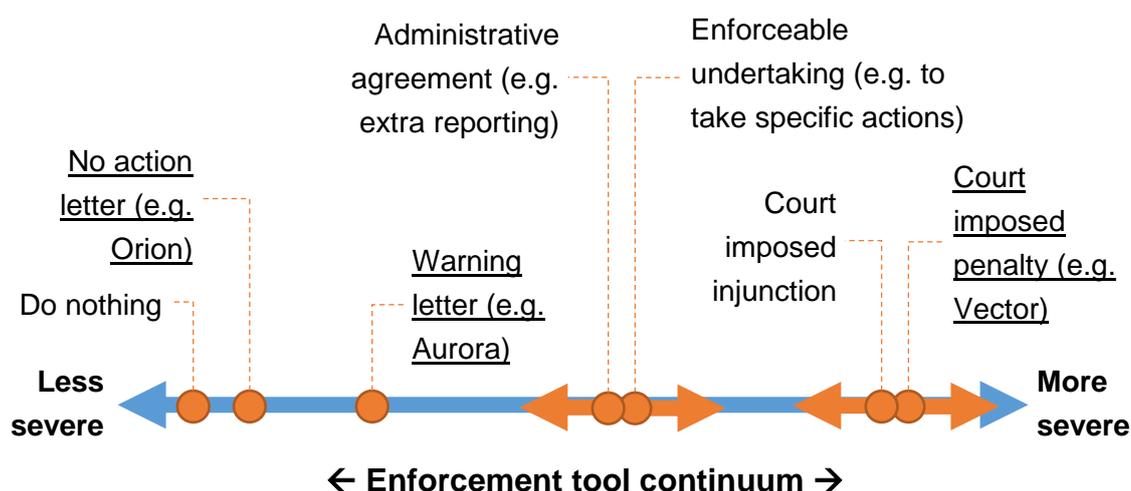
Enforcement approach

194. The Commission's enforcement approach is not well documented. To date, it has appeared to apply a four-step approach:
- 1) Confirm whether the quality standard has been breached
 - 2) Assess the cause or causes of any breach
 - 3) Apply criteria to determine what if any enforcement response is warranted
 - 4) Implement the selected enforcement response.
195. As a process, this appears logical. It involves assessment of the causes and suitability of any enforcement response. However, by being undocumented it can – and in our view has – led to both a mismatch in expectations between the Commission and EDBs and inconsistency in application over time.
196. Under **step 2**, the Commission has typically first investigated the causes of quality standard breaches before using criteria to assess what enforcement response or responses it takes. Investigations have involved input from select engineering experts. As described further below, we are concerned that this has introduced subjectivity into the process and the Commission's decisions are heavily influenced by the observations of just a single expert with his or her own views. Different experts can have different views.
197. Under **step 3**, the Commission has assessed breaches against three criteria:³⁷
- 1) Seriousness of conduct;
 - 2) Extent of detriment; and
 - 3) Public interest;
- with the first the most important.

³⁷ For instance, see: Commerce Commission, 31 August 2016, *Letter from Sue Begg to Greg Skelton: Wellington Electricity Lines Limited – warning for non-compliance with the DPP quality standards for the 2013 and 2014 assessment periods*.

198. As headings, these criteria make sense. However, there is little in the way of description by the Commission about how these are to be assessed and how it will use its discretion when deciding what if any enforcement response to take. We must instead look to the Commission’s practice to date to get a better understanding.
199. Under **step 4**, the Commission has a range of enforcement tools (or responses) available to it, as summarised in Figure 8. Some, but not all, of these were used (by the Commission) during the DPP1 and DPP2 periods – namely, those that are underlined.

Figure 8: Enforcement tools³⁸



200. It is good that there are a range of tools available to the Commission. This allows for flexibility in the enforcement response or responses taken when there are breaches, ensuring that these fit the circumstances. However, as it currently stands it is hard for EDBs and other stakeholders to determine what tool should apply in what circumstances.
201. We highlight the above not because we have all the answers to what the Commission’s process should look like or be applied, but because there are challenges with it as it currently stands. This underpins our key proposal that the Commission should develop and consult on an enforcement guideline that

³⁸ By ‘progress reporting’ we mean the type of reporting of progress with actions that Powerco has committed to through the CPP (i.e. by providing a ‘delivery report’ annually).

clearly promotes the section 52A purpose as soon as possible. Without it, EDBs risk responding to the quality standards set through DPP3 in a way that is not in consumers' long-term interests.

Guiding principles

202. For us, any enforcement approach should be underpinned by key guiding principles that clearly link to the section 52A purpose.
203. In this regard, our biggest concern is with the Commission's current well-intentioned use of 'good industry practice' to test the reasonableness of actions by EDBs that breach their quality standards. Good industry practice can mean different things to different people. Experts disagree. There is often a range of practices that could reasonably be considered good industry practices, not just one. And these practices evolve over time, across jurisdictions and may be path dependent on the regulatory regime under which they are playing out.
204. The test would be fine if the Commission's use of it recognised that a range of practices could meet the definition or there was forward-looking guidance of what those practices were. However, we are concerned that it does not because the Commission tends to rely on the views of just one expert when undertaking its investigation after practices have already been applied. Different experts can have different work experience, training and skills and so can – and often do – have different views about what practices are good or not. Their views may also change over time or when looking at similar conduct by different EDBs.
205. For instance, the contribution of planned outages, major event days, vegetation debris and third-party damage have all had a range of views from engineering experts.
206. Of course, we are not expecting the Commission to engage multiple experts for each investigation. That would be inconsistent with the low-cost regime that is intended. However, the Commission should both:
 - 1) Require that experts recognise that there could be a range of practices that meet the definition; and
 - 2) Allow for any EDBs that are under investigation to commission their own expert and have this considered as part of the investigation, perhaps by requiring experts to coalesce on key conclusions such as what is considered good industry practice.

207. The Commission should also outline as best it can – in the enforcement guideline – what practices it considers to be good industry practice. EDBs should, for instance, know in real time what actions are expected by it when experiencing severe weather events. This will help ensure that EDBs can appropriately plan for and implement those practices, which – if effective – could well help avoid or limit the impact of interruptions. This could be done by drawing from the body of knowledge that it is collecting through its more recent investigations as well as by considering stakeholder input.
208. The key is ensuring that there is some alignment between the practices reflected in the DPP3 expenditure allowances and the Commission’s enforcement of the quality standard. If those allowances are only sufficient to fund one set of practices, but the Commission’s enforcement assumes a more costly set of practices, then the mismatch can lead to unintended outcomes where EDBs will need to reallocate resources away from other activities otherwise reflected in the expenditure allowances. The risk is that this reallocation is done without regard to consumers’ long-term interests.

What next

209. We look forward to engaging with the Commission and other stakeholders on the development of the enforcement guidelines.
210. We encourage the Commission to start its consultation on that guideline by asking interested parties to set out what they think should be included. We also encourage the Commission to start developing this guideline in parallel with finalising the DPP3 – waiting will only create unnecessary uncertainty for stakeholders.
211. To facilitate the conversation, Attachment A sets out our initial views on what the enforcement guideline should cover.

Proposal 15: Consult with EDBs, consumers and other stakeholders on a draft enforcement guideline before finalising it

Proposal 16: Build into the enforcement guideline a clear link between the expenditure allowances in the DPP3 and the enforcement approach

Assessing breaches

212. The Commission has proposed annual assessment of quality standard breaches and automatic reporting if there is such a breach. We understand the Commission's intent; but have significant concerns about what these changes will mean in practice.
213. The rationale for the current '2 out of 3 rule' was to deal with false positives – that is, circumstances where a breach was reported due to circumstances outside of an EDBs control (e.g. major weather events such as the 2018 storm experienced in Auckland). Removing that rule re-introduces the risk that false positives trigger the proposed administrative processes. For instance, over the DPP1 and DPP2 periods at least 11 EDBs have exceeded the targets in any one year without triggering a breach of the standard (i.e. because of the '2 out of 3 rule').
214. Based on our experience, breach investigations are a material burden given the volume of information requested by investigations. The volume of material is significant ranging from structure design standards, control room processes, interruption statistics, asset condition data and security planning. Such information requests touch on all aspects of the network business and divert key resources away from running the network. Fair enough if there is a material issue to be worked through, but not so if a breach was triggered by a false positive or if that breach is a continuation of circumstances that already have been investigated by the Commission and are actively being addressed through agreed remedial action (as is the case for us).
215. Automatic reporting in the event of a breach has the potential to lead to a greater compliance burden unless there is some recognition of this during any subsequent investigation by the Commission. Understandably the Commission requests information from EDBs that breach the quality standard to help it better understand the cause or causes of those breaches. However, they can often involve significant effort to respond to and genuinely distract senior management away from forward-looking priorities.
216. Our concern is that the compliance burden of a breach will unnecessarily increase with automatic reporting unless the scope and frequency of those ad-hoc requests is adjusted to recognise what is reported automatically.
217. We support automatic reporting if it means that investigations are more efficient in terms of both the timeframes and the effort required to comply – ensuring that this is proportionate to the harm or potential harm to consumers. If, however, such reporting is simply added as an additional obligation without any recognition through the Commission's enforcement process, then we do not – it should be scrapped if that is the case.

218. Moreover, any automatic reporting should clearly be linked to the principles and process set out in the enforcement guidelines. This will ensure that there is a line of sight between the information collected by the Commission and how the Commission intends to use it in any enforcement.
219. The Commission has suggested that adopting higher thresholds when setting the quality standard targets will help avoid false positives. However, there does not appear to have been any analysis undertaken showing that this is the case. Moreover, the higher thresholds will be ineffective at avoiding false positives if they are constrained by the limits discussed above.
220. For these reasons, the Commission should:
- 1) Ensure that any automatic reporting requirement is clearly linked to the principles and process set out in the enforcement guideline and – most importantly – should avoid ad-hoc requests asking for the same information;
 - 2) Test whether the adjusted quality standard is sufficient to deal with false positives, especially in circumstances where the standard is constrained from reflecting changes in operating environment, customer expectations, or health and safety practices; and
 - 3) If needed, consider retaining the ‘2 out of 3 rule’ or adopting some other measure to mitigate the risk of false positives.
221. Doing so will better align monitoring with the desired enforcement outcomes.

Proposal 17: Clarify how automatic reporting will reduce the need for ad hoc information requests following quality standard breaches

Proposal 18: Ensure that the potential for false positives is considered when assessing quality standard breaches, either directly in the standard itself (e.g. by retaining the ‘2 out of 3’ rule) or through the enforcement approach

Overlaying quality incentives

222. The quality standard when paired with potential enforcement responses by the Commission incentivises EDBs to avoid breaches. Given this existing incentive, any other quality-related incentives need to be designed in a way that complement it.

223. It is not enough just to say ‘well, consumers like quality so let’s introduce another quality incentive’. More thorough analysis should be undertaken.
224. In the draft DPP3 decision, the Commission has proposed limiting the quality incentive to just SAIDI to avoid the potential overlap with SAIFI – given that SAIDI is a function of SAIFI and CAIDI (as $SAIDI = SAIFI \times CAIDI$). The Commission has also adjusted the incentives applying to reflect an estimate of the value of lost load (VoLL).
225. There is obvious benefit in recognising this overlap. However, this is insufficient to justify the proposed material changes to the quality incentive. We do not agree with how the Commission has approached the task, nor the narrowing of measures included within the quality incentive.
226. There is also benefit in linking incentive rewards and penalties to consumer value, provided that such value is properly specified. However, we are concerned by the potential adverse consequences created by some of the criteria proposed by the Commission for unplanned SAIDI.
227. In our view, the quality incentive should as a minimum include both SAIFI and SAIDI measures as it does currently. Ideally, the incentive should be expanded to cover other measures that are meaningful to consumers, such as speed to respond and time to arrival.³⁹
228. We also strongly encourage the Commission to consider adopting a GSL scheme for us over the DPP3 period. Even if this is just as a trial, worst served consumers will benefit from having their experiences recognised explicitly through the mandated payments that such a scheme will provide for.
229. Below we explain:
- 1) Our concerns with the quality incentive focusing only on SAIDI;
 - 2) Our concerns with the proposed incentive rates; and
 - 3) Our proposal to implement a GSL scheme, at least on the Vector network.

Focusing only on SAIDI

230. By limiting the range of measures considered in the incentive design, the Commission is implicitly encouraging us to focus on a narrow range of consumer-relevant output measures – and response time, in particular, given the focus on SAIDI. This would

³⁹ The speed to respond after an interruption is reported and the time it takes for a service representative to arrive on site to an interruption after it is reported.

make sense if other consumer-relevant output measures are picked up elsewhere in the DPP incentive design. However, they are not.

231. Moreover, the Commission has suggested that short-term mitigating investments – such as automation, which is now common practice across EDBs – hides true network deterioration and so SAIFI is a less relevant measure. We disagree. In fact, the frequency of interruptions – as reflected in SAIFI – is a more direct measure of asset performance and material deterioration than SAIDI, which focuses on duration and is conflated by response times and outage frequency. Failing assets lead to interruptions. Slower responses lead to greater duration. Both are relevant to consumer outcomes.
232. Network automation and sectionalisation help EDBs create intelligent networks that better respond to changing network use. Such innovations help promote long-term consumer interests by better supporting technological and consumer behavioural changes and should not be used as an excuse to avoid recognising SAIFI as an important measure of quality that is worth incentivising.
233. Many overseas regulators successfully incorporate both SAIFI and SAIDI – along with other measures – into their incentive schemes. For instance:
 - 1) **The AER** – has a service target performance incentive scheme (STPIS) that incorporates those two measures along with others that are considered relevant to Australian consumers.⁴⁰

In its most recent decision, the AER opted to place twice as much weight on SAIDI (60%) than on SAIFI (40%) in an effort to encourage EDBs to focus more on expenditure that reduces duration of outages. The AER had observed that giving equal weight to both measures appeared to have led some EDBs to reduce interruptions of shorter duration by more than those of longer duration.⁴¹
 - 2) **The Office of Gas and Electricity Markets (Ofgem) in the UK** – also incorporates both frequency and duration of interruptions into its interruptions incentive scheme, with the two measures referred to as customer

⁴⁰ AER, November 2018, *Electricity distribution network service providers: Service target performance incentive scheme, Version 2.0*.

⁴¹ AER, November 2018, *Final decision: Amendment to the Service Target Performance Incentive Scheme (STPIS): Establishing a new Distribution Reliability Measures Guideline (DRMG)*, pp. 12-15.

interruptions (CI) and customer minutes lost (CML).⁴² In its RIIO-1 decision, Ofgem used VoLL to set incentive rates for both CI and CML measures using average duration per customer in a way that – Ofgem claimed – reduced any double counting of VoLL.⁴³

Ofgem is currently consulting on RIIO-2, which may look at aspects of its interruptions incentive scheme.⁴⁴ However, there are no obvious signs that it intends to remove either CI or CML from the scheme.

234. Our concern is that by narrowing the scope of the quality incentive the Commission – in the unique way proposed – is implicitly signalling that other service outcomes do not matter, or at least should not be a focus for EDBs. We do not consider this promotes the long-term interests of our consumers.
235. In our view, that benefit would be better promoted by:
- 1) Widening – not narrowing – the measures that are captured by the quality incentive; and
 - 2) Introducing a GSL scheme for Vector, funded through the opex allowance, that requires us to compensate those consumers adversely affected by certain events with prescribed payments (e.g. duration or frequency of outages, missed or delay site visits etc).
236. For instance, the quality incentive could be expanded to also include:
- 1) SAIFI (as well as SAIDI) – just as the current quality incentive does;
 - 2) Consumer satisfaction;
 - 3) Connection times; and
 - 4) Response speed.
237. These measures are discussed further in our previously submitted FTI Consulting expert report.⁴⁵ Our proposed GSL scheme is discussed below.

⁴² Ofgem, 4 March 2013, *Strategy decision for the RIIO-ED1 electricity distribution price control – Reliability and safety*.

⁴³ Ofgem, 4 March 2013, *Strategy decision for the RIIO-ED1 electricity distribution price control – Reliability and safety*, p. 31.

⁴⁴ For instance, see: Ofgem, 30 July 2018, *RIIO-2 Framework Decision, Our approach to setting price controls for GB gas and electricity networks*, p. 84.

⁴⁵ See: FTI Consulting, 9 November 2018, *Regulatory Blueprint to meet today's customer expectations*. Submitted in response to the Commission's DPP issues paper.

Discounts for notified planned outages

238. The Commission proposes to give a 50% discount to the planned SAIDI incentive rate if certain criteria are met – criteria that are largely designed to encourage EDBs to communicate clearly with their consumers about planned outages and to follow through with those plans.
239. We welcome the proposal in principle. Consumers will benefit if they are informed about planned outages. We are, however, concerned that some of the criteria will have unintended consequences for consumers and employees by encouraging inappropriate behaviours.
240. Specifically, we are concerned about requiring:
- 1) Notification windows for planned interruptions to be no longer than four hours;
 - 2) Planned interruptions to occur during the notified window; and
 - 3) Planned interruptions to be counted in the incentive even if they do not occur.
241. The **first two** criteria, for instance, will create incentives for EDBs to:
- 1) Rush safety procedures per task such as site hazard assessments, feeder patrolling and setting up earths for each job site – which puts employee and community safety at risk;
 - 2) Avoid more complicated works from being carried out (e.g. undergrounding cable replacements, ground-mounted switch gear inspections, reconductoring or pole replacements) – which may compromise long-term network performance; and
 - 3) Initiate multiple shutdowns to deal with planned works, given the limited opportunity to package up works (e.g. pole and cross-arm replacements being executed at the same time) – which can lead to inefficient outcomes and worse consumer experiences as packaging works promotes economies of scale and scope, and helps reduce the frequency and total duration of planned outages.
242. The **third** criteria will penalise networks for being pro-active with notifications who then need to revise their outage plans for whatever reason. We are incentivised to minimise consumer impact from outages. We are also incentivised to focus on unplanned outages where we can, which can require us to revise our planned works.

243. For instance, if a storm is coming, then it is in our consumers' interests for us to re-purpose our crews away from planned works to prepare for the potential impact and hopefully minimise the impact of unplanned outages. Similarly, if after notifying consumers of planned outage we find a better way to deal with the issue, a health and safety risk that needs to be addressed, or a greater priority for our crews, then it will often be in consumers' interests to re-prioritise and not carry through with the planned outage.
244. The criteria should not encourage us to stick with the original planned outages in these cases as they could be unsafe, inefficient, or avoid us dealing with issues that consumers would prefer that we do.
245. As it stands, all the criteria are novel and so the Commission should be mindful of unintended consequences that are not in consumers interests. Rather than the three criteria noted above, the DPP3 should:
- 1) Allow for longer notified windows aligned to good industry practice, recognising that it is often efficient to have outages longer than 4 hours – we are happy working with the Commission on this;
 - 2) Exclude from the assessment interruptions that exceed the notified windows due to factors outside of an EDB's control (e.g. weather events, third party influences, consumer caused delays)
 - 3) Allow for notifications to include alternative days so that EDBs can shift planned outages – without being penalised – to deal with changes in operational requirements (e.g. more efficient packaging of works, or to address safety concerns) or factors outside of an EDB's control (e.g. consumer needs);
 - 4) Allow for notifications to be revised prior to an outage (up to say 24 hours before the original planned outage) to deal with changes in operational requirements or factors outside of an EDB's control; and
 - 5) Do not include planned outages in the incentive assessment if they do not occur, or at least if there is sufficient cancellation notice given (up to say 24 hours before the planned outage).
246. These adjustments will retain the incentive properties intended by the Commission's proposed discount, but without introducing the types of un-intended consequences noted above.

247. As an aside, the draft DPP3 determination does not appear to include the discount for notification of planned outages in the quality incentive. We look forward to further clarity from the Commission on how it will apply in practice.

Guaranteeing service levels to individual consumers

248. Similar schemes are used effectively elsewhere to incentivise network behaviour. In Australia, for instance, EDBs face both a GSL scheme that targets improvements to worst served customers and the STPIS that targets improvements to average customer (or network-wide) performance. This combination of incentives has helped lead to improved service performance over time across most networks – which is something that NZ consumers could also benefit from. A GSL scheme, for instance, arguably provides a much better price-quality nexus for individual consumers than the draft DPP3 does.

249. Such schemes are also much more akin to service commitments offered for other infrastructure services, such as telecommunications where service outcomes are measured for the individual consumer. Measuring and incentivising service outcomes only as an average across all consumers – as the draft DPP3 decision proposes – misses the key point that consumers individually face price and quality outcomes not as a collective.

250. Despite this failing, the Commission has said that it will look at introducing a GSL scheme for the DPP4 period after consulting with stakeholders – a key concern being the lack of data available now. This is an understandable concern. However, we see significant benefit to both our consumers and others in NZ of the Commission at least allowing a trial of a GSL scheme for Vector.

251. For the DPP3 period we propose adopting a GSL scheme for our network. We want to work with the Commission over the next few months to design a scheme that is fit for purpose and supports our consumers' long-term interests. As a starting point, we expect to draw from our existing Vector Promise and international precedent as well as input from our consumers and other stakeholders.

What next

252. As a minimum, the Commission should:

- 1) Retain SAIFI as a measure in the quality incentive – the overlap between SAIFI and SAIDI can be account for by de-weighting SAIFI (e.g. by applying a discounted incentive rate);

- 2) Adjust the criteria for receiving the notified planned outage discount to allow for longer outage windows, alternative days, changes to notifications, and cancellations of outages where there are good reasons – this will avoid creating unintended and adverse incentives; and
 - 3) Consider mandating a GSL scheme for Vector along the lines set out in Attachment D – this trial can provide NZ-wide benefits.
253. Longer term, the Commission should expand the quality measures that it considers for the quality incentive (if retained). We are encouraged that Commission considered alternative measures in its draft DPP3 reasons, but disappointed that no changes have been made as a result.

Proposal 19: Retain SAIFI in the quality incentive

Proposal 20: Adjust the criteria for receiving the incentive rate discount on planned outages to avoid unintended consequences and adverse incentives

Proposal 21: Introduce a mandatory GSL scheme for Vector, on a trial basis

OTHER MATTERS OF IMPORTANCE

Price smoothing

254. The Commission currently seeks to set the revenue path by setting the year 2 to 5 X factors equal to forecast productivity (which was assumed as 0%) and then solves for the year 1 X factor (or P0) that sets the NPV of smoothed revenue equal to the NPV of building blocks revenue. The Commission also caps X factors (as it did for Aurora) if the P0 would be too high.
255. This smoothing mechanism is simplistic and should be refocused on reducing revenue – and therefore price – volatility to consumers. One approach is to adopt a common X factor across all five years, spreading out any changes over the DPP period rather than leaving it in a single upfront hit. Such an approach would:
- 1) Allow for – if not encourage – retailers to more easily pass through any savings or price increases on to consumers; and
 - 2) Reduce the risk of bill shocks to those consumers by spreading the pain out over time.
256. Ultimately, if the purpose of revenue smoothing is to manage volatility in consumer prices, then that principle should guide how X factors are determined. The Commission's current approach does not appear to support that principle.
257. Such smoothing aligns with our submission on how the revenue cap would work (covered in our submission on the proposed IM changes).⁴⁶ We proposed there that the 10% limit on the annual maximum increase in forecast revenue from prices should apply to *net* distribution network charges, excluding pass-through items rather than a gross basis. Using X factors to smooth those charges can help reduce the risk that the limit is needed to restrict revenue changes from one year to the next.

Proposal 22: Allow for revenue to be smoothed in a way that promotes consumer outcomes (e.g. offset anticipated changes in transmission or wholesale charges)

⁴⁶ See: Vector, 5 July 2019, *Submission to Commerce Commission on changes to the input methodologies for electricity distributors and Transpower, due 5th July*, pp. 16-18.

Connection re-opener threshold

258. The Commission intends to introduce a re-opener for large unforeseen new connection projects. We welcome this change – and agree that it is a pragmatic way to deal with the impact of such uncertain but potentially material events.
259. We have two key recommendations:
- 1) The re-opener should be expanded to also **cover relocations** where they do not form part of the expenditure allowances – as noted in our submission on the proposed IM changes,⁴⁷ relocations can be equally as uncertain and material; and
 - 2) The **materiality threshold** for additional expenditure should be set as the minimum of:
 - i. 5% of the average annual revenue (excluding pass-throughs and recoverable costs); or
 - ii. \$5 million.
260. The first recommendation ensures that similar types of expenditure uncertainty are treated in a similar way. There is no obvious basis for adopting inconsistent treatment.
261. The second recommendation ensures that larger EDBs – like us – are not unfairly restricted from seeking a re-opening for similar types of expenditure. There is no obvious basis for allowing a small network to re-open its DPP for a \$5 million connection, but not us. Such expenditure is material to EDBs irrespective of size.

Proposal 23: Extend the re-opener to also cover relocation capex

Proposal 24: Update the materiality threshold to be the minimum of (a) 5% of the average annual revenue (excluding pass-throughs and recoverable costs) and (b) \$5 million

⁴⁷ See: Vector, 5 July 2019, *Submission to Commerce Commission on changes to the input methodologies for electricity distributors and Transpower, due 5th July*, pp. 28-29.

Loss on disposal and other regulated income

262. The Commission is proposing to true up for other regulated income within the DPP3 period once actual data is available. However, by not including a forecast of that income (or effectively assuming a zero value) in the allowed revenue calculation, this means that the true up could materially – and unnecessarily – affect revenues within period.
263. To avoid this, the Commission should instead include a forecast of other regulated income within the DPP3 maximum allowed revenue forecast. The true up would then be for differences between forecast and actual other regulated income. This will help reduce volatility from one year to the next.
264. As a starting point, forecast other regulated income could be a simple – inflation-adjusted – average of past actual other revenue. A more sophisticated approach could incorporate any expected changes, provided there is a clear basis for doing so.

Proposal 25: Include a positive forecast of other regulated income into the DPP3 decision to avoid a potentially material true-up later in the DPP3 period

ATTACHMENT A: ENFORCEMENT GUIDELINE SCOPE

265. As a minimum, an enforcement guideline should cover:
- 1) The *process* that the Commission will follow once there is a breach of the quality standard;
 - 2) The *enforcement tools* that the Commission will consider applying to a breach;
 - 3) The *criteria* that the Commission will use to determine the tool or tools that it will apply;
 - 4) The *aggravating* or *mitigating* factors that the Commission will consider before applying those tools, including how it will consider repeat breaches and adjust for false positives; and
 - 5) The *actions* or *practices* that the Commission expects EDBs to take to avoid or mitigate the effects of a breach, including what is considered 'good industry practice' and what (if any) early engagement is expected by EDBs that anticipate breaching.
266. The guideline should be developed in a way that is consistent with the quality standard adopted. If the standard is set to high – such that a breach is more likely to occur – then the guideline should make clear how the Commission will recognise that in its enforcement approach, and vice versa.
267. The ultimate objective of the guideline should be to clearly communicate to stakeholders – and EDBs in particular – the consequences of a breach and what can be done to minimise or avoid them. Making this clear will help drive efficient EDB behaviour.

ATTACHMENT B: LIST OF RECOMMENDATIONS

268. Table B.1 lists our proposed recommended changes to the DPP3 decision. These are further explained in the body of our submission above.

Table B.1: List of recommendations

No.	Topic	Recommendation
1	Cash flow	Allow for an unindexed RAB where significant investment is needed to promote consumers' long-term interests
2	Cash flow	Accept our proposal to apply accelerated depreciation, either because it would help mitigate economic recovery risk or because it would help promote efficient investment on the network by bring forward cost recovery
3	Capex	Use the 20% cap on capex increases as a first pass assessment, to be followed by further investigation if required
4	Capex	Incorporate forecast regional household growth when testing connection expenditure
5	Capex	Include sub-transmission expenditure and capacity in the system growth test
6	Capex	Use the 20% to 100% sliding scale cap on minor capex increases, including for asset relocations, as a first pass assessment, to be followed by further investigation if required
7	Capex IRIS	Publish and seek stakeholder feedback on the capex IRIS model soon, ensuring that any issues identified it are fixed before the final DPP3 decision is made
8	Opex	Allow step changes for material and likely expenditure increases caused by factors outside of our – and other EDBs' – control

No.	Topic	Recommendation
9	Opex	Use forecast household growth in the opex rate of change as it is a better proxy for connection growth than population growth
10	Opex	Allow a negative 'productivity factor' as this captures costs and other factors not otherwise allowed for in the base, step and trend approach
11	Quality standard	Remove the 5% cap when setting the unplanned SAIDI and SAIFI targets
12	Quality standard	Adjust the historical average unplanned SAIDI and SAIFI for isolation for safety (and perhaps other health and safety changes and external factors)
13	Quality standard	Use a 5-year historical average when setting the planned SAIDI and SAIFI targets
14	Quality standard	Do not introduce a new major event quality standard
15	Quality enforcement	Consult with EDBs, consumers and other stakeholders on a draft enforcement guideline before finalising it
16	Quality enforcement	Build into the enforcement guideline a clear link between the expenditure allowances in the DPP3 and the enforcement approach
17	Quality enforcement	Clarify how automatic reporting will reduce the need for ad hoc information requests following quality standard breaches
18	Quality enforcement	Ensure that the potential for false positives is considered when assessing quality standard breaches, either directly in the standard itself (e.g. by retaining the '2 out of 3' rule) or through the enforcement approach
19	Quality incentive	Retain SAIFI in the quality incentive

No.	Topic	Recommendation
20	Quality incentive	Adjust the criteria for receiving the incentive rate discount on planned outages to avoid unintended consequences and adverse incentives
21	Quality incentive	Introduce a mandatory GSL scheme for Vector, on a trial basis
22	Price smoothing	Allow for revenue to be smoothed in a way that promotes consumer outcomes (e.g. offset anticipated changes in transmission or wholesale charges)
23	Connection expenditure re-opener	Extend the re-opener to also cover relocation capex
24	Connection expenditure re-opener	Update the materiality threshold to be the minimum of (a) 5% of the average annual revenue (excluding pass-throughs and recoverable costs) and (b) \$5 million
25	Other regulated income	Include a positive forecast of other regulated income into the DPP3 decision to avoid a potentially material true-up later in the DPP3 period