

Submission

Commerce Commission Part 4 Input Methodologies Review 2022

Process and Issues Paper

11 July 2022

EXECUTIVE SUMMARY

THE BROADER CONTEXT OF THE IM REVIEW.

The distribution sector is entering a period of profound change influenced by New Zealand's drive toward decarbonisation and climate change adaptation.

Input methodologies reviews follow a 7-year cycle, meaning that the outcome of this review is likely to impact electricity distribution businesses' operating environments for the next two regulatory resets (2025 and 2030). As such, this review is critical and presents a significant risk to consumers, because getting the settings wrong at this juncture could stall the sector's contribution to decarbonisation and result in an untenable impact on consumers in the next 10 years.

While the input methodologies set the ground rules of the regulatory framework, the Commission has separate, uncodified processes for setting the expenditure allowances that underpin each distributor's price (revenue) path and setting the quality standards that must be complied with.

The regulatory framework is going to be challenged by significant demand growth, investment needs, and changing consumer expectations, as distributors:

1. prepare and increase the capacity of their networks to ensure that they are ready for electrification and do not pose an unnecessary barrier;
2. adapt their networks to be more resilient to the effects of climate change; and
3. adapt to new security of supply and reliability standards that will be required as a result of electricity becoming the dominant energy source, especially for heating.

In Aurora's view, a more fulsome engagement approach is needed and, before reviewing the input methodologies, the Commission should work with the industry and key stakeholders to reflect on the Part 4 purpose statement and:

1. Consider what scenarios the framework needs to accommodate over the next 10 years. This involves defining the challenges ahead of us, our collective assumptions and biases, and identifying what is going to be different from the 'business-as-usual' environment we are leaving;
2. Confirm and/or define the scope of regulated services in light of the above. What incentives do distributors need to be efficient and make the right decisions? How does price impact fit in given the changing energy mix?; and
3. Consider the limitations of the current framework and identify any major gaps.

DECISION-MAKING FRAMEWORK

Aurora supports the retention of the decision-making framework adopted for the 2015/2016 IM review. We consider that the decision-making framework is familiar, well understood by stakeholders, and largely fit-for-purpose.

Given the impact that climate change response and adaptation is going to have on electricity distribution businesses (as providers of key, enabling infrastructure), Aurora is concerned that, while the Commission has noted the permissive considerations in section 5ZN of the Climate Change Response Act 2002, it has given itself considerable leeway to disregard those considerations if the Commission feels that they conflict with the Part 4 purpose.

Aurora considers that a more supportive, enabling approach needs to be taken - that 'the Commission must have regard to the permissive considerations under s5ZN of the Climate Change Response Act 2002 unless the Commission can demonstrate that doing so would result in an outcome that is inconsistent with the Part 4 purpose'.

Even if stronger direction is provided, this can be compromised by the manner in which the Commission interprets the Part 4 purpose. Historically, in Aurora's view, the Commission has largely taken a constraining view in applying the Part 4 purpose (profit suppression, enforcement of historic quality performance); however, this may not be appropriate in enabling distributors to deal with the impending decarbonisation/electrification challenge.

In this context, Aurora encourages the Commission to consider setting out, within the draft decision-making framework:

1. the challenges and opportunities it foresees within the period that the reviewed IMs will apply;
2. its views on the actions EDBs will need to take during that period to ensure those challenges are overcome and opportunities exploited; and
3. the relative weightings it will need to give to the four limbs of the purpose statement in order to incentivise a successful outcome.

RISK ALLOCATION AND INCENTIVES

Aurora is concerned that the Commission conflates productivity and efficiency. Productivity is merely the ratio of outputs to inputs and, in the context of the distribution sector, can only be coarsely observed. Many factors affecting EDBs' productivity are extrinsic and very difficult to control or influence.

Previous regulatory submissions have highlighted that an abundance of caution is required when comparing the productivity performance of New Zealand EDBs with their counterparts in other jurisdictions.

The broader regulatory environment in New Zealand has had a significant impact on EDBs' productivity over time, including the Health and Safety at Work Act 2015, the Resource Management Act 1991 and the Heritage New Zealand Pouhere Taonga Act 2014. These impacts have been more in the nature of steady and relentless 'creep', rather than readily observable step-changes.

While Aurora supports incentives to improve expenditure efficiency, we consider the current IRIS is applied against a relatively low cost and fairly rudimentary expenditure forecasting approach, and therefore not only rewards/punishes EDBs' efficiency/inefficiency, but also rewards and punishes forecast error.

The IRIS is complex and difficult to operationalise into decision making. We consider that the opportunity should be taken to consider how the IRIS can be simplified.

COST OF CAPITAL

Aurora does not support reduction in the WACC percentile. Electrification/decarbonisation raises the consequences of under-investment, relative to the consequences of over-investment, to such a degree that a reversion to the 75th percentile should not be dismissed.

Aurora supports increasing the tax adjusted market risk premium to 7.5%.

Aurora remains of the view that a trailing average cost of debt approach would be more consistent with efficient debt management strategies.

CPPs AND IN-PERIOD ADJUSTMENTS

Aurora considers that CPPs are not a flexible, adaptive or responsive mechanism, and does not consider that CPPs could be used as a routine adjustment mechanism by New Zealand's 17 price-quality regulated EDBs. Further, we doubt that the Commission is sufficiently resourced to consider multiple CPPs.

Unless a workable approach to expenditure forecasting is developed that focusses on EDBs' future needs, rather than maintenance of historic expenditure levels, flexible and effective re-openers are likely to be needed and, potentially, often.

Aurora considers that reopener mechanisms need to be improved by:

- specifying more workable thresholds;
- prescribing the specific minimum information the Commission requires in a reopener application in order to make a decision; and
- enhancing timeliness of decision-making (3-month maximum)

Further, it should be clarified that there is no prohibition on considering opex in a reopener application where that opex is either consequential to a capex project that triggers a reopener, or forms part of the project solution.

Consideration should be given to how consumer capex can be removed from expenditure incentives. EDBs have limited control over the efficiency of consumer capex, because developer/consumer requirements often override efficiency considerations, provided the developer/consumer is happy to pay the capital contribution that an EDB charges.

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1. INTRODUCTION

1. Aurora Energy Limited (**Aurora**) welcomes the opportunity to submit its views on the Commerce Commission's (the **Commission's**):
 - 1.1. Part 4 Input Methodologies Review 2023: Process and Issues Paper – (the **Issues Paper**); and
 - 1.2. Part 4 Input Methodologies Review 2023: Draft Framework paper (the **Framework Paper**).
2. No part of our submission is confidential.
3. At this stage of the IM review process, our responses are necessarily high-level. We look forward to engaging with the Commission and stakeholders on the specific topic areas as the IM review progresses.
4. Aurora supports the submission made by the Electricity Networks Association (**ENA**).

2. APPROACH TO THE REVIEW

5. While input methodologies (IM) reviews are a regular feature of EDBs’ regulatory landscape, being required at intervals not exceeding 7 years under section 52Y(1) of the Commerce Act 1986 (the Act), this review represents a critical juncture in the economic regulation of electricity distribution businesses (EDBs). At no time in the past have the regulatory settings been challenged by change of the magnitude that is upon us, as the nation prepares to undertake wide-spread decarbonisation to slow or halt the effects of anthropomorphic climate change, and to adapt to its effects.
6. This IM review is important. The ‘normal’ seven-year review cycle means that the IMs that will be set by 2023 are highly likely to apply to both the 2025 and 2030 DPP resets before further review takes effect. Getting the settings wrong at this juncture could stall the sector’s contribution to decarbonisation and result in an untenable impact on consumers in the next 10 years.
7. The IMs set the ground rules for price-quality regulation and information disclosure. However, as important as the IMs are, they are only part of the regulatory picture.
8. For price-quality regulated EDBs, the IMs impact only part of the price-quality setting process, with the Commission having complete autonomy to determine how it establishes the expenditure allowances that will underpin the price (revenue) path for each EDB, and how it sets the quality standards that each EDB must comply with.
9. For all EDBs, the IMs define relatively mechanical aspects of information disclosure (cost of capital, cost allocation, asset valuation, regulatory tax, etc.); however, a large quantity of information is required, with much more proposed,¹ that is designed to help interested persons assess whether the purpose of Part 4 is being met.²
10. The question that arises for EDBs is whether the regulatory framework is fit-for-purpose and flexible enough for the future, given that:
 - 10.1. climate change response is needed and underway;
 - 10.2. some aspects for the framework are codified through the IMs, and
 - 10.3. a significant proportion of the framework is discretionary?
11. The Commission gauged the views of stakeholders on the impact of decarbonisation on electricity lines services during its December 2021 workshop and subsequent submission process. Although stakeholder groups had slightly different perspectives, each according to their interests, it was clear that the decarbonisation imperative was widely acknowledged and understood.

¹ Commerce Commission. (2022). Targeted Information Disclosure Review – Electricity Distribution Businesses: Process and Issues Paper. 23 March 2022.

² Commerce Act 1986. Section 53A.

12. What is unclear, however, is where the Commission sees the decarbonisation imperative leading the regulatory framework. Aside from recognition of the permissive considerations under s5ZN of the Climate Change Response Act 2002 (CCRA), the Commission has not set out its views on the implications for regulatory settings under a climate change response.
13. Aurora considers that the Commission must recognise and acknowledge that the electricity transmission and distribution sectors are leaving a relatively stable, 'business-as-usual' era and entering a period of significant demand growth, investment needs, and changing consumer expectations. The nation-wide drive toward decarbonisation is likely to have profound effects on EDBs as they:
 - 13.1. prepare and increase the capacity of their networks to ensure that they are ready for electrification and do not pose an unnecessary barrier (this is likely to require advance investment in some parts of EDBs' networks);
 - 13.2. adapt their networks to be more resilient to the effects of climate change (severe storm events, etc.);
 - 13.3. adapt to new security of supply and reliability standards that will be required as a result of electricity becoming the dominant energy source, especially for heating.
14. Additionally, we foresee a future where consumers expect EDBs to act responsibly and mitigate or offset their impact on the natural environment, including carbon offsetting. In our view, this form of corporate responsibility and response will quickly become an integral part of supplying "*services at a quality that reflects consumer demands*".³
15. While the general direction of change is clear to the sector, it is underpinned by some uncertainty as to how much future networks will need to develop to support decarbonisation, widespread electrification and development of markets for distributed energy resources (DER). In this context, applying a 'business-as-usual' regulatory approach is likely to create a disparity that will not serve consumers interests. The IMs (and other regulatory instruments) need to enable prudent investment, not constrain it.
16. Aurora encourages the Commission to consider its engagement approach. Our view is that the 'normal, arms-length' approach of 'consult – submit – cross-submit – decide' is reasonably well suited to relatively straight-forward issues, but is not well suited to more complicated challenges like decarbonisation/electrification and climate change adaptation, especially where stakeholders may have different levels of understanding regarding the associated challenges and opportunities. This invites separating the review of more 'mechanical' aspects of the regulatory framework from the more important, strategic issues.
17. In our view, a more fulsome engagement approach is needed, not only targeted at the specific regulatory mechanisms that must periodically be addressed, like the IMs, but also to try and create a shared understanding and vision for the role of electricity networks in decarbonisation, and what this means for consumers. Ideally, in addition to the normal stakeholder groups that become involved in regulatory decision-making, Aurora would like to see organisations like the Ministry of Business, Innovation and Employment, the Energy Efficiency & Conservation Authority, the Climate Change Commission and the Infrastructure Commission deeply involved in the conversation. These organisations have significant, relevant expertise and

³ Commerce Act 1986. Section 52A(1)(b).

can help to create a shared vision for the future, on top of which the Commission can flex its regulatory framework so that it remains fit-for-purpose.

3. DECISION-MAKING FRAMEWORK

18. The Commission has proposed a draft decision-making framework for the 2023 IM review that retains the fundamental aspects of the decision-making framework adopted for the 2015/2016 IM review. Aurora is encouraged by that consistency and, despite some reservations over the extent that the Commission may or may not be minded to have regard to the permissive considerations under s5ZN of the CCRA (*Permissive Considerations*)⁴, we consider that the approach set out in the Framework Paper is familiar, well understood by stakeholders, and largely fit-for-purpose.
19. The Framework Paper notes an enhancement from the 2015/16 decision-making framework, in that it specifically allows that the Commission may have regard to the Permissive Considerations, provided that the Commission considers the Permissive Considerations to be “*relevant and consistent with promoting the section 52A purpose of Part 4*”.⁵
20. Aurora supports the inclusion of the Permissive Considerations; however, it disagrees with the latitude the Commission has given itself to ignore them. The weight of scientific evidence supports the concept of anthropomorphic climate change and the need to reduce greenhouse gases^{6,7} and, recognising the policy positions set by Government, Aurora considers that it is incumbent on the Commission to take a more positive stance.
21. In this regard, Aurora considers that the draft decision-making framework should require that ‘the Commission must have regard to the permissive considerations under s5ZN of the Climate Change Response Act 2002 unless the Commission can demonstrate that doing so would result in an outcome that is inconsistent with the Part 4 purpose’.
22. Aurora considers that the permissive considerations are intrinsically entwined with the Part 4 purpose, particularly in respect of part of limb 2 (s52A(1)(b)) – ensuring that regulated suppliers have incentives to “*provide services at a quality that reflects consumer demands*”. Electrification, in support of decarbonisation, is likely to see an increased reliance on electricity that will significantly shift consumers’ views on the quality and resilience of electricity supply.
23. All else being equal, electrification can be expected to impact consumer demands of electricity networks, and will influence EDBs investment needs:

⁴ A permissive consideration is one that a decision-maker may take into account, in contrast to a madatory consideration which a decision-maker must take into account.

⁵ Commerce Commission. (2022). Part 4 Input Methodologies Review 2023: Draft Framework paper. Para 3.18, p31.

⁶ Lynas, M., Houlton, B. Z., Perry, S, (2021), Greater than 99% consensus on human caused climate change in the peer-reviewed scientific literature. *Environmental Research*, 156.

⁷ The Royal Society & US National Academy of Sciences. (2020). Climate Change Evidence & Causes: 2020 Update. Available from <https://royalsociety.org>

- 23.1. Energy substitution is likely to increase peak demand on networks, as consumers use greater quantities of electricity contemporaneously, and EDBs will see greater volumes of electricity traded through their networks, requiring capacity-building in some locations;
 - 23.2. EDBs will need to develop their capability and systems for dynamic management of 2-way energy flows and integration of distributed energy resources;
 - 23.3. Network resilience will need to be enhanced. Reliance on electricity is likely to see a shift in security-of-supply standards, particularly in rural environments and in areas subject to more extreme cold weather, as consumers will be less able to cope with the duration and frequency supply interruptions permitted by current quality standards.
24. Aurora has started to see the effects of the latter in parts of our network. Air quality standards are impacting the type of heating that consumers can install in areas like Central Otago and parts of the Wakatipu basin.
25. It is inconceivable, given the impact that electrification will have on electricity distribution networks, that consideration of the Emissions Reduction Plan (ERP)⁸ and associated emissions budgets could be considered a side-issue that may conflict with the s52A purpose statement. The ERP and other significant policy instruments, such as the Aotearoa New Zealand Energy Strategy (in development)⁹ and the National Disaster Resilience Strategy¹⁰, will heavily influence EDBs' investment needs for the next decade and beyond, as networks develop, adapt and transition in response.
26. Aurora's view is that consumers' long-term interests are served by EDBs developing their networks to support growing electrification and to be more adaptive to the impacts of climate change.
27. In terms of the regulatory framework, the Act does not define 'long-term benefit of consumers' and it is left to the discretion of the Commission to make an interpretation. To-date, in Aurora's opinion, this has largely meant a focus on price suppression and ensuring no material degradation in historic levels of reliability. This approach has been consistent with the Part 4 purpose, but subjectively and narrowly applied.
28. Aurora considers that the decarbonisation imperative now requires the Commission to take a more expansive view of the 'long-term benefit of consumers'. In an electrified future, consumers are no longer going to be satisfied with maintaining historic reliability levels and are going to be looking for increased resilience and security of supply, in addition to assurance that the prices they pay for line function services are not unreasonable.
29. To give effect to this, the Commission will need to move from a mostly economics-centric view of expenditure needs to a more balanced mix of engineering and economics.

⁸ Ministry for the Environment. (2022). Te hau mārohi ki anamata - Towards a productive, sustainable and inclusive economy; Aotearoa New Zealand's first emissions reduction plan. Available from <https://environment.govt.nz>

⁹ <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-strategies-for-new-zealand/aotearoa-new-zealand-energy-strategy/>

¹⁰ Ministry of Civil Defence & Emergency Management. (2019). National Disaster Resilience Strategy - Rautaki ā-Motu Manawaroa Aitua. Available from <https://www.civildefence.govt.nz>

30. The Commission has noted the rise of revenues and prices, relative to inflation, throughout the Issues Paper, and has recognised that the investment required for decarbonisation will further impact EDB revenues and place upward pressure on consumer prices. These are important considerations; however, they should not be considered in isolation, as consumers' increased electricity costs will, over time, be offset by reductions in spending on other fuel sources for both heating and transport.
31. The Part 4 purpose statement sets out the various considerations that the Commission must balance in the operation of the regulatory framework; however, it does not set out the relative importance of each consideration – that determination is made wholly at the Commission's discretion. Historically, in Aurora's view, the Commission has largely taken a constraining view in applying the Part 4 purpose (profit suppression, enforcement of historic quality performance), which has largely been appropriate in the historic, 'business-as-usual' context. The challenge we see, going forward, is that the relative weightings that the Commission has given to the four limbs of the purpose statement, historically, may not be appropriate in enabling EDBs to deal with the decarbonisation/electrification challenge. In particular, we foresee a need for the Commission to provide greater incentives to invest and innovate, and to think more expansively about the quality of services demanded by consumers.
32. To this end, Aurora encourages the Commission to consider setting out, within the draft decision-making framework:
- the challenges and opportunities it foresees within the period that the reviewed IMs will apply;¹¹
 - its views on the actions EDBs will need to take during that period to ensure those challenges are overcome and opportunities exploited, and
 - the relative weightings it will need to give to the four limbs of the purpose statement in order to incentivise a successful outcome.

¹¹ As noted at paragraph 6, above, the 2023 IMs can be expected to apply to both the 2025 and 2030 DPP resets, given a 'normal' 7-year review cycle.

4. RISK ALLOCATION AND INCENTIVES

4.1. PRODUCTIVITY

33. Aurora is concerned that the Commission conflates productivity and efficiency. Productivity is merely the ratio of outputs to inputs and, in the context of the distribution sector, can only be coarsely observed. Many factors affecting EDBs' productivity are extrinsic and very difficult to control or influence.
34. In the Issues Paper, the Commission has made much of the historic productivity trend analysis undertaken by Economic Insights¹² (for the Commission) and NERA¹³ (for the ENA) in 2014 and 2019 respectively. Both reports show a declining trend in opex partial factor productivity since 2002; however, only NERA attempts any explanation of the underlying drivers of the observed productivity performance. NERA observes that “... *there was sharp rise in productivity between 1996 and 2002 but productivity has been on a consistent decline since. This early period is likely driven by the corporatisation (and in some cases privatisation) of lines companies that occurred in the early 1990s and is therefore unlikely to be repeated going forward.*”¹⁴
35. Despite a declining trend in opex partial factor productivity between 2002 and 2018, it is noted that the 2018 closing indices reported by NERA are still well ahead of the 1996 opening indices.¹⁵
36. Comparisons have also been made with productivity trends observed overseas. In its Issues Paper, the Commission noted that:

“In contrast, there is evidence of positive productivity in electricity lines services in comparable markets overseas. A recent study analysed the productivity growth of electricity transmission and distribution networks in Great Britain, and how changes in incentive mechanisms have influenced the measured total factor productivity. It controlled for service quality and environmental targets. It found low—but positive—productivity growth of about 1% per annum over the 29 years from 1990/1991 to 2018/2019.

“Closer to home, the Australian Energy Regulator (AER) annually reports on the productivity of electricity distribution and transmission networks. Its most recent economic benchmarking reports show that the productivity of both electricity distribution and transmission networks have been increasing since 2015 and 2016 respectively. This is consistent with the observed reductions in operating and capital expenditure, and reductions in network outages (which is opposite to what we have observed in New Zealand)”.¹⁶

¹² Economic Insights. (2014). Electricity Distribution Industry Productivity Analysis: 1996–2014. Available from <https://comcom.govt.nz>.

¹³ NERA Economic Consulting. (2019). Opex Partial Factor Productivity for DPP3. Available from <https://comcom.govt.nz>.

¹⁴ Ibid. p iii.

¹⁵ Ibid. Figure 3.2, p10.

¹⁶ Ibid. Paragraphs 10.48 & 10.49, p162

37. We consider that an abundance of caution is required when comparing the productivity performance of New Zealand EDBs with their counterparts in other jurisdictions. NERA noted that:

“..., measured opex productivity in the United States has switched to being negative since ~2000. Furthermore, while the Commerce Commission cites the positive productivity assumptions used in Australia, Great Britain and Canada, it doesn’t recognise that the opex allowances are set in a different manner in these jurisdictions. In Great Britain, Australia and Canada, EDBs provide an opex forecast, which bears similarities with New Zealand’s CPP process. To the extent that these processes result in opex allowances that consider all the outputs EDBs will deliver, then a productivity adjustment is actually accounting for expected productivity.

The DPP on the other hand is a mechanistic roll forward of historic costs for two outputs. As already discussed, the evidence suggests this model is missing something. If opex allowances were instead determined by a bottom up forecast of the costs associated with delivering the totality of the outputs EDBs expected to deliver, then an adjustment to this cost forecast for productivity would accurately be described as a “productivity” adjustment. This is not the context of the DPP.”¹⁷

38. EDBs have consistently described the effect that the regulatory environment (other than the Commerce Act) has had on their operating costs. In particular, the Health and Safety at Work Act 2015 (HSWA) has sharpened EDBs’ view on risk and lowered risk tolerance. This has directly led to a reduction of live line work over several years, leading to more frequent and prolonged planned outages, as observed by the Commission. In terms of overseas benchmarking, in addition to NERA’s comments on comparability above, it must be recognised that New Zealand’s safety reforms have lagged those of Australia.
39. It might be argued that a significant event like the passing of the HSWA into law would be observed as a step-change in cost as a result of increased compliance obligations. In Aurora’s view, this is rarely the case. It takes time for businesses to understand the new requirements and to adapt its operations processes. Regulators recognise this and often take a transitional approach where they initially focus on encouraging and assisting compliance before moving to enforcement.
40. Further, it is often not just the primary legislation that has an effect. In July 2000, Transit New Zealand introduced its interim Code of Practice for Temporary Traffic Management (CoPTTM), which resulted in an immediate step change in the administration associated with temporary traffic management as well as the quantity and quality of signage and associated equipment like cones and delineators that needed to be deployed at job-sites. Recently, Waka Kotahi New Zealand Transport Agency has completed a consultation on replacing the 4th edition of the CoPTTM with a risk-based guide. Waka Kotahi says that the guide is “*simpler*” than the prescriptive CoPTTM, “*gives more flexibility to plan and manage risks across a wide range of activities*” and “*makes decision making and accountability clearer so that it aligns with the Health and Safety at Work Act 2015 (HSWA).*”¹⁸ While ‘simple’ and ‘more flexible’ sound good in principle, the likely reality is that significant training and procedural adjustment will be required by businesses to adopt the new guidelines, with the alignment to risk management carrying subjectivity that will almost inevitably be dealt with by applying

¹⁷ Ibid. p vi.

¹⁸ <https://nzta.govt.nz/roads-and-rail/new-zealand-guide-to-temporary-traffic-management/frequently-asked-questions/>

conservatism. In Aurora’s view, the changes proposed by Waka Kotahi are representative of the unrelenting ‘creep’ in operational requirements faced by EDBs, which cannot be expected to lower our costs.

41. The Resource Management Act 1991 remains a significant cost burden for EDBs. For Aurora, the cost and resources required to appropriately participate in changes to district plans for the four territorial authorities¹⁹ within which Aurora’s infrastructure is located has not been trivial. It has taken seven years of hearings and appeals just to have most of Aurora’s subtransmission lines categorised as Critical Electricity Lines, giving them protection from reverse sensitivity issues. Processes currently being undertaken at the Otago regional level, which have seen a further review of the Otago Regional Policy Statement (after a period of only 3 months in operation), will potentially unravel all the work undertaken by Aurora at the district level over the last 7 years. Second-generation plans, especially in the Queenstown Lakes District where land is extensively categorised as outstanding natural landscape, are giving rise to a significant increase in the number of resource consents being required for activities that would have previously been categorised as permitted. The implications of this are already being felt in terms of significant increases in cost and delays for projects.
42. For Aurora, compliance with the Heritage New Zealand Pouhere Taonga Act 2014 has become a significant operational burden. The Heritage New Zealand Act applies to places associated with human activity that occurred before 1900 and makes it an offence to modify or destroy an archaeological site unless an authority for the modification or destruction is obtained. In addition to the time and cost of seeking archaeological authorities for projects and work programmes, significant cost and project disruption can ensue when attendance by an archaeologist is required when working in a high-risk archaeological zone. When an archaeological feature is actually discovered, this can result in the project being halted while an archaeological survey is undertaken, sometimes despite the fact that the feature is known and has been documented previously. In some ways, the archaeological burden placed on the construction and infrastructure sectors bridges the gap between what society deems important and what government is willing to directly fund.
43. It must be clearly understood that productivity is not the same as efficiency - productivity is merely the ratio of outputs to inputs. For EDBs, productivity can only be determined through a small number of fairly coarse observations that are not detailed enough to be explanatory. A number of factors can influence productivity:
 - More efficient energy utilisation, including through replacement appliances that are more energy efficient, reduces energy throughput (reduced outputs relative to inputs).
 - The increasing prevalence of small-scale distributed generation similarly suppresses growth in energy throughput (further reducing outputs relative to inputs) while not reducing (and in some cases increasing) network costs.²⁰
 - Increasing regulatory burden, as noted in paragraphs 38 to 42, above, tends to increase inputs relative to outputs.

¹⁹ Otago Regional Council, Dunedin City Council, Central Otago District Council and Queenstown Lakes District Council.

²⁰ Distributed generation may be aggregated to offer flexibility services that may defer network investment in capacity and growth. At a low voltage level, clustered distributed generation can lead to voltage issues that requires upgrading the low voltage networks of manage (or, alternatively, constaining off the generation).

- An EDB’s position on the asset lifecycle (many EDBs face significant reinvestment from historic bursts of development; e.g., rural electrification programme, 1960s demand surge, etc.). Replacement & renewal expenditure is generally recognised as an increased input with no corresponding output.
- Asset investment is ‘lumpy’. New connection and associated growth investment usually results in the creation of capacity headroom owing to the nature of the assets. This results in an immediate increase in inputs, but facilitates an increase in outputs over several decades.

4.2. EXPENDITURE EFFICIENCY INCENTIVES

44. While Aurora supports incentives to improve expenditure efficiency, we consider that some caution is required in assessing the effectiveness of the incremental rolling incentive mechanism (IRIS). The IRIS, for EDBs, was introduced from 1 April 2015 and has been in place for only one DPP regulatory cycle. In Aurora’s view, there is insufficient evidence available to indicate whether the IRIS mechanism is effective or not.
45. One of the challenges with the IRIS, in a DPP context, is that it applies against a relatively low cost and fairly rudimentary forecasting approach that is not necessarily aligned to the needs of EDBs. As such, the IRIS not only rewards/punishes EDBs’ efficiency/inefficiency, but also rewards and punishes forecast error including the degree to which inflation forecasting/out-turn erodes nominal allowances.
46. Another challenge with the IRIS is its complexity. In Aurora’s view, this makes it difficult to operationalise into decision making, so that the implication of capital expenditure versus operational expenditure can be assessed. This complexity increases when EDBs transition from the DPP to a CPP and vice versa. We consider that there is merit, within this IM review, to consider how the IRIS can be simplified so that EDBs can readily assess the implications of expenditure decisions.

4.3. FORM OF CONTROL

47. From 1 April 2020, EDBs subject to the DPP²¹ moved from a weighted average price cap to a revenue cap, as a consequence of decisions in the 2015/16 IM review. Aurora considers that there is no pressing driver for revisiting the form of control; however, there are a couple of areas where refinements could be considered:
- 47.1. A financeability test should be considered that would ensure that EDBs are able to finance the obligations imposed under price-quality regulation. This is a feature of regulation in other jurisdictions.²²
- 47.2. Modifications should be considered to clause 3.1.1.(1)(b) of the IMs to ensure that any limit imposed on the annual maximum percentage increase in forecast revenue from prices remains, to the extent possible, ‘real’ and is not eroded by incorrect inflation assumptions or unforeseen changes in

²¹ Powerco moved to a revenue cap on 1 April 2018 consequent to its CPP application.

²² For example, financability considerations are imposed on Ofgem by s3A of the Electricity Act 1989 (UK) and Section 4AA of the Gas Act 1986 (UK).

passthrough or recoverable costs. We consider that a mechanism similar to that used in Aurora’s CPP determination²³ should be introduced to the IMs.

4.4. LONGER-TERM DEMAND RISK

48. The risk of systematic asset stranding is not expected to increase for EDBs. On the contrary, electrification is likely to lower EDBs’ asset stranding risk. However, climate change adaptation may result in a managed retreat in some parts of the country.
49. For Aurora, the South Dunedin area is particularly susceptible to the effects of climate change, being located on reclaimed land with a low elevation and high water table. The former Parliamentary Commissioner for the Environment, Dr Jan Wright, emphasised South Dunedin’s vulnerability in her 2015 report.²⁴ Debate on managed retreat from South Dunedin has been reported in the media for over a decade.²⁵
50. It is likely that the existing accelerated depreciation provisions will remain workable, provided that EDBs, for whom managed retreat is a material risk, act soon enough.

4.5. RAB INDEXATION AND INFLATION FORECASTING

51. There has been a sustained period of variation in out-turn inflation compared to forecast, which has resulted in EDBs being significantly undercompensated over a number of regulatory periods. PwC (for Vector)²⁶, noted that inflation inaccuracies in revaluations were likely to result in EDBs being undercompensated by approximately \$196 million in DPP1. The gap between out-turn inflation and the Commission’s CPI forecast continued through DPP2. While inflation has recently swung to be above the Commission’s forecasts, it would take a materially sustained period of high inflation before under-compensation was balanced out.
52. We do not consider that it is appropriate for the regulatory framework to tolerate such prolonged variance cycles. Accordingly, Aurora supports the inclusion of inflation forecasting in this topic area, and suggests that the issue should be extended to examine whether there are effective options for washing up inflation variances from forecast.
53. We consider that, given the investment pressures that are likely to be placed on EDBs as a result of electrification, the issue of whether EDBs’ regulatory asset base (RAB) should be unindexed should be explored. In its 2016 Topic 1 decision, the commission noted, in relation to Transpower’s RAB:

²³ Commerce Commission. (2021). Aurora Energy Limited Electricity Distribution Customised Price-Quality Path Determination 2021. Schedule 1.9, clause (2), p52.

²⁴ Parliamentary Commissioner for the Environment. (2015). Preparing New Zealand for rising seas: Certainty and Uncertainty. Available from <https://www.pce.parliament.nz/>

²⁵ See, for example, <https://www.odt.co.nz/news/dunedin/stay-and-fight-or-retreat> and <https://www.rnz.co.nz/national/programmes/ninetoon/audio/2018822787/managed-retreat-possible-to-protect-dunedin-s-coastline> and <https://www.odt.co.nz/news/dunedin/dcc/south-dunedin-strategy-table>

²⁶ PricewaterhouseCoopers. (2014). A wash-up mechanism for the DPP revaluation rate: A report prepared for Vector. Available from [https://blob-static.vector.co.nz/blob/vector/media/vector/pwc-revaluation-wash-up-options-\(april-2014\).pdf](https://blob-static.vector.co.nz/blob/vector/media/vector/pwc-revaluation-wash-up-options-(april-2014).pdf)

“Our lack of indexation of Transpower’s RAB means that capital recovery is front-loaded relative to an indexed approach (as applied to the EDBs). We considered this was appropriate in 2010 given their relatively large investment programme, since an un-indexed approach would likely lead to higher revenues in the near-term that better matched their investment needs.”

54. An unindexed RAB, in conjunction with retention of accelerated depreciation, may also help some EDBs deal with the investment pressures of electrification and climate change adaptation (see section 4.4, above).

5. COST OF CAPITAL

55. While we accept that the Commission is required to review the cost of capital IMs, the methodology is, in Aurora’s view, well tested and does not require material change.
56. Of all of the cost of capital considerations, we expect that that the weighted average cost of capital (WACC) percentile will receive most prominent attention from consumer advocates, with a continuing focus on driving the percentile to the midpoint. Aurora does not expect that the arguments for doing so will be any more compelling than in past reviews. If anything, the drive toward electrification/decarbonisation raises the consequences of under-investment, relative to the consequences of over-investment, to such a degree that a reversion to the 75th percentile should not be dismissed.
57. Aurora supports increasing the tax adjusted market risk premium (TAMRP) to 7.5%. As an “*economy-wide parameter that should not vary by sector, service, or company*”,²⁷ we do not see any material justification why there should be a difference in the TAMPR applying to fibre and gas pipeline businesses (GPBs).
58. In submissions to the 2015/16 IM review, Aurora argued that the Commission should adopt a trailing average cost of debt approach.^{28,29} While the Commission removed one of the debt measurement symptoms by aligning the DPP and CPP WACC, and extended the measurement period from one month to three months, the approach remains relatively instantaneous. Aurora remains of the view that a trailing average cost of debt approach would be more consistent with efficient debt management strategies.
59. Aurora does not support the concept of a split WACC. A key issue from the application of a split WACC that EDBs would need to contend with is that, once an investment enters the RAB, it is compensated at a lower rate. Even if the higher rate was to apply for a number of years after commissioning, EDBs would still need to factor the whole-of-life returns into their investment decisions. In Aurora’s view, the significant added complexity of a split WACC approach, and the erosion of investment incentives, are material considerations that should halt such a proposal in its tracks.
60. We note the Commission’s proposal to adjust the IMs to allow for a four-year regulatory period, as occurred for GPBs earlier this year. Aurora considers that very different futures face GPBs and EDBs, and that there is probably not the same imperative to make this change for EDBs. Having said that, the required modifications seem, on the face of it, to be relatively mechanical and uncontroversial.

²⁷ Commerce Commission. (2022). Part 4 Input Methodologies Review 2023: Process and Issues paper. Paragraph 6.46, p103.

²⁸ Aurora Energy Limited. (2014). Submission - Input methodologies review: Update paper on the cost of capital topic.

²⁹ Aurora Energy Limited. (2016). Submission - Input Methodologies Review: Draft Decision and Determination Papers.

6. CPPS AND IN-PERIOD ADJUSTMENTS TO PRICE-QUALITY PATHS

- 61. Aurora’s view is that the drive toward electrification, in support of decarbonisation, is going to require significant investment by EDBs. There is increasing understanding of the types of investment that EDBs will need to make to enable electrification; however, the timing and scale of investment remains subject to uncertainty.
- 62. It is clear that the relatively predictable, ‘business-as-usual’ era that EDBs have been operating in is coming to an end, and is being replaced, at least for the next three-to-four regulatory cycles, with a future that is likely to be volatile and uncertain. This is not only a challenging setting for EDBs, but it will also challenge the Commission, as it will need to design changes to the regulatory settings to ensure that they can cope with these challenges and remain fit-for-purpose.
- 63. A significant challenge sits outside of the IMs. Rearward looking expenditure forecasting that is focussed on the maintenance of the status quo is unlikely to meet the needs of consumers in the transition to electrified transport and industrial process and domestic heating. Additionally, quality standards that support electrification may need to be more nuanced than the relatively high-level reliability indices that the current standards are based on.
- 64. The challenge is significant, and the scale of change that may be required poses a real risk of adverse consequences, both for EDBs and consumers, if the changes take the wrong direction or are poorly implemented.

6.1. CPPs

- 65. The CPP is the mechanism provided for in the Part 4 regime that is designed to ‘correct’ for DPP settings that do not suit an EDB’s specific circumstances. CPP applications require significant time and resources to prepare and submit. Preparation, verification, and audit can be expected to take a minimum of 12-18 months and cost, literally, several million dollars (some of which, only, is recoverable). A further nine months is consumed in the Commission’s assessment of a CPP proposal before a decision is made, and additional timing constraints exist under the Act, where by an EDB cannot submit a CPP proposal within the 12 months before a DPP reset³⁰. Our observation is that assessment of a CPP proposal is also a considerable drain on the Commission’s resources. CPPs are not a flexible, adaptive or responsive mechanism.

³⁰ Commerce Act 1986. Section 53Q(3).

66. It is difficult to envisage how CPPs could be used by New Zealand’s 17 price-quality regulated EDBs as a routine adjustment mechanism, even if reduced to a single issue proposal, noting that, should the Commission receive more than 4 proposals in any one year, it triggers prioritisation and deferral mechanisms.³¹
67. Further, It is not clear that simplification of the CPP requirements would be achieved by setting any CPP requirements in price-quality path determinations rather than in the IM determination,³² or how that would work, but should be explored.

6.2. RE-OPENERS

68. Unless a workable approach to expenditure forecasting is developed that focusses on EDBs’ future needs, rather than maintenance of historic expenditure levels, flexible and effective re-openers are likely to be needed and, potentially, often.
69. Aurora considers that there are improvements that can be made to the existing reopener mechanisms for both unforeseeable major capex projects (clause 4.5.5A) and foreseeable major capex projects (clause 4.5.5.B):
- 69.1. Thresholds. Both re-openers require the forecast value of commissioned assets for the reopener project or programme to exceed either 1% of the EDB’s forecast net allowable revenue for the DPP period the assets will be commissioned in, or \$2 million. For DPP3, this presented a situation where most (10 of 15) EDBs would be able to reopen their DPP for project values under \$2 million, with the lowest threshold being \$286,000. This represents a threshold that is scaled according to EDB size and is unreasonable – for an equivalent level of investment, an investor in a large EDB must wait for up to 5 years to be compensated for its investment, while an investor in a small EDB can be compensated much earlier through the reopener mechanism. It is reasonable to presume, dollar for dollar, that an investor’s expectations regarding investment compensation do not vary according to the size of the business they invest in. Aurora considers that the reopener thresholds could be improved by removing the scaled element and setting a lower uniform threshold of (say) \$0.5 million.
- 69.2. Timeliness of decision. We note that Unison successfully applied for a DPP reopener on 29 June 2021, with the final decision being made on 4 March 2022. While we don’t have visibility of all the issues that the Commission had to consider including, for example, whether Unison’s reopener application contained sufficient detail, we consider that the time taken to reach the final decision (161 business days) is unreasonable and is too close to the CPP assessment timeframes (maximum 190 working days for a complete application) to be workable. In Aurora’s view, the timeliness of reopener decisions could be improved by prescribing in clauses 4.5.5A and 4.5.5B:

³¹ Commerce Act 1986. Section 53Z.

³² Ibid. Paragraph 7.43.6, p131.

- the specific³³ information that the Commission requires to consider a reopener application complete and make a decision; and
- the timeframe in which the Commission will make a decision (assuming the application is complete). Recognising that reopener projects will often have a consumer associated, Aurora considers that a maximum period of 3 calendar months would be reasonable.

70. Aurora supports the Commission’s proposal to review the wording of the existing reopener mechanisms.³⁴

71. As we set out in our submission³⁵ on Unison’s application to reopen its price-quality path in respect of connecting Contact Energy’s Tauhara generation station, our view is that the IMs only identify foreseeable/unforeseeable major capex projects³⁶ as ‘triggers’ for reconsideration (the circumstances under which the price-quality path may be reconsidered), and do not constrain the categories of expenditure that may be reconsidered, because reconsideration of a price-quality path is a wholly inclusive activity that can potentially include capex, opex and adjustments to quality standards.

72. We are of the view that:

- opex, consequential to a capex project that triggers a reopener, should be considered (EDBs should not be required to simply absorb that consequential expense); and
- projects driving future reopeners may have a significant opex component as non-network solutions are integrated, and therefore opex needs to be explicitly³⁷ provided for in the reopener mechanism.

6.3. CONSUMER CAPEX

73. Aurora expects that decarbonisation will increase the requirement for consumer capex in three broad areas:

- 73.1. electrification of transport networks;
- 73.2. electrification of process and other heating; and
- 73.3. connection of large-scale distributed generation.

74. Forecasting consumer capex is extremely difficult. Often, consumers and developers do not engage early regarding electricity connections. This can be driven by competitive issues, including competition for land, but

³³ The degree of specificity should be similar to the specificity of the CPP expenditure requirements set out in Schedule D of the IMs, but requiring no greater detail than the minimum required to make a decision. It should be an objective matter to determine whether an application is complete or not.

³⁴ Ibid. Paragraph 7.40, p129

³⁵ Aurora Energy Limited. (2021). Reconsideration of Default Price-Quality Path for Unison Networks Limited.

³⁶ Commerce Commission. (2020). Electricity Distribution Services Input Methodologies Determination 2012 (consolidated 20 May 2020). Clauses 4.5.5A and 4.5.5B, p126-130.

³⁷ As we pointed out in our submission, nothing in the IMs constrains consideration of opex when reopening a price-quality path, but explicit recognition that consequential opex may be considered when a reconsideration is triggered by a major capex project would be an appropriate clarification.

frequently we find that, except for large developments where specialised advisors are engaged, electricity connection considerations are neglected or assumed to be 'on tap'.

75. To manage the unpredictability of consumer capex, it has been suggested that consumer capex should be removed from expenditure incentives. This seems logical to us. Even when future connections are known, EDBs do not have much control or influence over many aspects:
- Developers want the capacity that their advisors have told them is necessary. They are difficult to convince, based on experience of similar developments, that lower capacity will be adequate;
 - Developers want their installation connected in sufficient time to meet their business plan. They do not want to wait for regulatory allowances to be sorted out;
 - Provided they can afford the capital contribution that an EDB charges, Developers are not concerned about the efficiency of their electricity connection. They want to be connected at their preferred location, and are not concerned (for example) that it would be more efficient to connect their installation within an industrial precinct rather than the rural location they have selected.
76. The issue is complex, but EDBs should not be given a free ride either. We have been considering whether there are other protections that might be put in place if consumer capex was excluded from efficiency incentives.
77. Because of the difficulty in enforcing efficient connection decisions, it may be useful for the Commission to consider greater regulation of capital contributions, and levels of contributions specifically, to ensure that existing consumers do not end up subsidising inefficient investments.
78. This is likely to require greater specification as to what constitutes a connection asset relative to distribution assets that would be funded from system growth allowances. Further, regulated levels of contribution could lead to first-mover disadvantage issues similar to those Transpower and the Electricity Authority have been grappling with in defining Renewable Energy Zones and the new Transmission Pricing Methodology, respectively. However, under historic legislation, EDBs were required to have reapportionment mechanisms in place to refund part of an historic contribution to the first-mover, when additional consumers connected to distribution assets in respect of which the first-mover had paid a contribution. Some EDBs have retained reapportionment mechanisms.