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18 September 2020

Dane Gunnell
Manager, Price-Quality Regulation
Commerce Commission
44 The Terrace
WELLINGTON

By email only: feedbackauroraplan@comcom.govt.nz

Dear Dane

FEEDBACK ON CONSUMER SUBMISSIONS TO THE COMMISSION'S CPP ISSUES PAPER

1 Aurora Energy wishes to make comment on the submissions made in response to the Commerce Commission's process and issues paper, which were published on the Commission's website on Tuesday 8 September 2020.

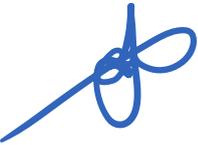
Consumer impact

- 2 We wish, foremost, to acknowledge community concern over the impact of our investment plan. We recognise that, owing to past failures, we have lost much of the community's trust and support. Since 2017, and the establishment of Aurora Energy as a new business with a new Board and management team, we have been delivering on a major programme of network renewal and investment to ensure that the network is safe and is in a fit state to deliver the services that our customers want.
- 3 Our aim is that, by clearly setting out our plans and the work we need do, by delivering the work efficiently and by improving the experience our customers have when dealing with Aurora Energy, confidence in the company will be restored.
- 4 Our CPP proposal, which sets out the investment we need to make over the next three-to-five years, is an important part of the process. It is a no-frills, safety-focused plan which has been scrutinised and independently assessed by the Commerce Commission's technical consultant – the Independent Verifier. The Independent Verifier's report is publicly available, and the overriding conclusion of the report is that our investment plan (for the next three years) is both necessary and prudent.
- 5 While we accept that some of the criticism directed at us by the community is not unfounded, we reiterate that Aurora Energy's current Board and Executive Management Team did not create the environment we find ourselves in. We have instead inherited the challenge of safely returning our network and the services we provide to a level of quality that our customers consider appropriate.

Informed comment

- 6 We thank those submitters who have obviously taken the time to read our CPP application material, as well as the Commission's issues paper. We do not expect that all submitters will agree with all aspects of our investment proposal or its outcomes; however, it is important that the drivers of our investment plan and its regulatory context are clearly understood by submitters, if informed and reasoned debate is to occur. We note that a large proportion of the submitters do not in fact disagree with the need to significantly lift investment; as noted, the main concerns are around price and affordability, and dissatisfaction with how the company was permitted to underinvest in the past.
- 7 We note a very high proportion of submissions where it can be concluded from their content that it is unlikely the submitter has taken the opportunity to familiarise themselves with the detail of our proposal. In these cases, submitters appear to have relied solely on the Commission's high-level summary material, and have presented largely subjective and unsubstantiated views, or drawn on media reports of impending price rises.
- 8 We also note that a small number of submitters are neither consumers on the Aurora Energy network nor associated with groups linked to consumers or industry and appear to have submitted solely to further interests that do not pertain to a CPP application.
- 9 In this document, we address some of the main themes that have emerged from the Commission's consultation, and address several misconceptions and specious claims that we have observed throughout the submissions.
- 10 No part of our cross-submission is confidential.

Yours sincerely



Alec Findlater
General Manager, Regulatory & Commercial

Appendix 1 - Submission themes

- 11 In this appendix, our comments are confined to the common themes that we have observed throughout submissions:
- Affordability;
 - Pricing regions;
 - Effectiveness of consultation;
 - Industry structure; and
 - Delivery reporting.

Affordability

- 12 We have acknowledged from the outset that our proposal carries affordability concerns for some consumers. The historically low carrying value of the network, and constrained operations and maintenance expenditure, has suppressed Aurora Energy's allowable revenues, and hence prices.
- 13 With a period of significant renewal underway, Aurora Energy's charges now need to rise to provide adequate compensation, as determined by the regulatory rules, for the investments we are making. We have signalled the need to lift prices for some time now, and our expenditure plans have been developed and publicly disclosed for several years.
- 14 In many ways, the issue boils down to paying earlier or paying now. If our historical investment had been at levels that would have avoided the need for our CPP application, our charges would already be higher than they are now. This is because our allowable revenues are based as much on historic expenditure as they are on forecast expenditure needs. The regrettable aspect of our proposal is that it results in a step-change in charges, rather than the steady increase in charges that earlier investment would otherwise have produced.
- 15 A number of submitters have dismissed our proposal as simply unaffordable; however, in our view those submitters have neglected to consider the broader context of affordability. For example, Queenstown Lakes District Council notes that:
- "Queenstown Lakes District has historically been an area of high growth, with resident numbers growing at a higher rate when compared to other areas in New Zealand. It has also been a district that has consistently seen lower than average wages than the rest of the country, and higher than average land and house prices."*
- and states that:
- "Queenstown Lakes District requires an investment plan from Aurora that will take into account high living costs, low wages and higher than average growth and visitor numbers."*
- 16 These would be entirely reasonable points to make if Aurora Energy was solely responsible for the affordability issues of the District, and not just one component of it. While our proposal will apply upward pressure on affordability issues within the District, it is clear that our proposal is not the principal driver of unaffordability issues.
- 17 We recognise that affordability is an issue for some consumers; not just the affordability of line charges, which are around a quarter of an average electricity bill but, because of the Covid-19 induced economic downturn, affordability has decreased across the board.

- 18 We have done all we can to ameliorate affordability impacts. We have challenged our investment plan, deferred selected projects where this can be done prudently by anticipating medium-term Covid-19 impacts, and delayed revenue recovery which, while it impacts our cashflow, has avoided even higher charges than proposed.
- 19 The unavoidable fact is that investment is needed now to address deteriorating assets and keep the network safe. We have had this confirmed independently, and the Commission will now need to assign its own view; however, we would be surprised and disappointed if the Commission drew a significantly different conclusion than their Independent Verifier, given the weight of analysis and information we have supplied.
- 20 Providing a counter view to affordability issues, Infrastructure New Zealand noted that “costs of the CPP are noteworthy, but not unreasonable” and further comments that:
- “It is also important to consider the ‘opportunity cost of inaction’. Aurora’s assets are in poor condition and continuing to deteriorate. Failure to pay for this investment now will likely lead to larger costs in future. Prudent increases now will be necessary for long-term well-being.*
- We believe Aurora’s proposed price increases are reasonable and the benefits to its network far outweigh the costs.”*
- 21 In summary, Aurora Energy should not be asked to solve affordability issues that it cannot influence – that is the function of the wider social welfare framework. Instead, we have addressed affordability by focussing our plan on necessary elements, as set out in our CPP application, and discarding optional initiatives that would have resulted in higher costs.
- 22 We need to raise prices in line with this increased investment to keep the business financially viable. In our view, consumers can confidently rely on the Commerce Act framework for continued protection, under which the Commission has demonstrably ensured that electricity distributors’ profitability is appropriately constrained. Additionally, the framework ensures that we have strong incentives to deliver our investments efficiently.
- 23 To be clear, the alternative to our proposal is to go back to where we were prior to 2017, with continuing underinvestment and gradual but unrelenting deterioration of network performance and safety, which is clearly unacceptable to Aurora energy and its customers.

Pricing regions

- 24 Some submitters voiced opposition to Aurora Energy’s approach to regional pricing. We feel bound to reiterate that the CPP process is about determining a maximum allowable revenue that Aurora Energy may recover in compensation for its past and future investments. The manner in which those revenues are allocated to consumers, through pricing, is out of scope of a CPP and is in fact regulated by the Electricity Authority. Nonetheless, it is obviously an important issue and one which the Commission should consider taking some time to explain in its CPP decisions.
- 25 A key feature of our pricing approach is disaggregation into three pricing regions; Dunedin, Central Otago and Wanaka, and Queenstown. Our selection of pricing areas is informed by three criteria:
- Whether candidate pricing areas are readily defined and identifiable (from the perspective of network layout, rather than geography or arbitrary boundaries);
 - Whether there are areas that are interconnected and able to provide mutual support, and therefore candidates for a consolidated pricing area; and
 - Whether there are adjoining areas with similar network characteristics that would make them candidates for a consolidated pricing area.

- 26 The three areas of our network in Central Otago served by the Clyde, Cromwell, and Frankton GXP's are all electrically separate, with no interconnecting assets. This would logically lead to three pricing areas; however, on acquisition of the Central Electric network in 1999, Aurora Energy decided that the similar, low density, rural, nature of the networks served by the Clyde and Cromwell GXP's made it feasible to consolidate into a single pricing area, despite that neither area is connected and therefore unable to provide mutual support.
- 27 Our approach is aimed delivering fair pricing, consistent with the pricing principles set by the Electricity Authority. In principle, we consider that where there are common costs, these should be recovered across the entire consumer base. However, where costs are specific to a particular pricing region, those costs should be recovered within that pricing region. At an infrastructure level, we consider that it is unreasonable to ask consumers to subsidise the cost of assets from which they derive no benefit.
- 28 Central Otago consumers face higher prices because the Central Otago pricing area has a higher cost-to-serve than other areas, driven largely by consumer density.
- 29 Infrastructure New Zealand's submission notes that a beneficiary pays approach is appropriate:
- "We believe that users of infrastructure should, wherever possible, shoulder the costs of infrastructure which they benefit from, in proportion to the benefits received.*
- In this case, users of Aurora's networks are the appropriate, efficient, and fair party to shoulder the costs of the work now needed."*
- 30 Some socialisation of costs is unavoidable, however. One submitter noted their proximity to the Clyde grid exit point and implied that their line charges should be lower as a consequence. This, however, is a situation that occurs in all of Aurora Energy's pricing areas (and most New Zealand networks in our view) and is not evidence of unfair pricing practices. It is simply not practical to implement distribution-level locational marginal pricing at this time¹.

Effectiveness of consultation

- 31 Several submitters alleged that Aurora Energy's consumer consultation was inadequate. The Central Otago District Council (CODC) is particularly critical in its submission:
- "Aurora's consultation with the community about its proposed Plan was abysmal to the point of providing mere lip service in Council's view. This was reflected by the number of people who attended the Aurora consultations as opposed to the numbers attending the Commissions [sic] consultation."*
- 32 We disagree with CODC's views on this matter. In our view, we lifted the bar on previous CPP consultations, a fact acknowledged by the Major Electricity Users' Group (MEUG) who said in their submission:
- "MEUG congratulates Aurora on learning from the lessons of earlier CPP applications by other parties."*
- We also acknowledge MEUG's criticism that there is room for improvement in the CPP consultation framework.
- 33 Aurora Energy's consultation was designed to meet the IM requirements and the Independent Verifier confirmed that much of Aurora Energy's consultation was in line with best practice in New Zealand and other jurisdictions and that the expected level of consultation had been

¹ Sapere. (2017). *An exploration of locational marginal pricing at the distribution level in the New Zealand context*. Available from <https://www.ea.govt.nz/development/work-programme/pricing-cost-allocation/distribution-pricing-review/development/locational-marginal-pricing/>

met.² Our customer consultation went beyond the regulatory requirements. As outlined in our CPP Consultation Report, we identified barriers to participation and sought to address these in the design and implementation of the consultation.

- 34 Drop in sessions were held at seven different public locations across our network area for members of the public to meet an Aurora Energy representative face-to-face to discuss our proposal and provide feedback. The effectiveness of drop in session notification cannot be measured by attendance. Pre-consultation, customers told us that while they wanted us to offer public sessions as one of a wide range of consultation methods, they themselves would be unlikely to attend.
- 35 CODC's substantive concern appears to be that Aurora Energy may have interpreted low turnout at the Alexandra drop-in session as reflecting a lack of community concern about Aurora Energy's proposed future investment. On that point, we did not base our understanding of community feedback on attendance figures, or any single engagement channel in isolation.
- 36 Some submitters were more complimentary of our consultation process, however. Mercury Energy, for one, commented:

"Mercury credits Aurora for the extensive consultation undertaken with stakeholders, the public and for the establishment of the Customer Advisory Panel in 2019 ("Panel"). The feedback from the Panel has been positive and recognises Aurora staff for being genuine professional and transparent in their dealings."

Industry structure

- 37 It is evident from submissions that several submitters would prefer a different industry structure to that which prevails today. A number of submitters expressed enduring anger at the Bradford reforms of 1998/99 that resulted in the (then) Otago Central Electric Power Trust choosing to divest itself of the distribution network and retail business of Central Electric Limited in compliance with the Electricity Industry Reform Act 1998.
- 38 Other submitters have expressed a preference that Aurora Energy be converted to a consumer trust.
- 39 The past cannot be rewritten, and consideration of submitters' preferences in this regard is beyond the scope of the Commerce Act framework and generally unproductive. The reality is that Aurora Energy purchased the distribution network in a competitive tender process, and that the proceeds of that sale were retained in trust to the benefit of the wider Central Otago and Queenstown Lakes communities. It is also important to note that any alternative ownership model would not avoid the fact that the network requires investment now, which would need to be reflected in higher charges.

Delivery reporting

- 40 A significant number of submitters have noted that it is important for Aurora Energy to provide reports to consumers of progress against the investment plan. There was reasonable consensus that reporting should include public meetings. We note that a number of submitters appeared unaware that distributors already undertake significant public reporting through information disclosure regulation.
- 41 A divergent range of views were held by submitters on the frequency of reporting. Views ranged from monthly to half-yearly to annual reporting. The frequency of reporting is important – additional information gathering and reporting will come at additional cost, and needs to be

² Farrier Swier. (2020). *Verification Report: Aurora Energy CPP Application*. P21.

as efficient as possible while providing sufficient information to allow all stakeholders to track performance during the CPP period.

- 42 Aurora Energy recognises the importance of delivery reporting and considers that the annual delivery report framework established in the supplementary s53ZD notice to the Powerco CPP determination is appropriate. Some changes should be anticipated, however, to cater for the different drivers for Aurora Energy's CPP and the fact that some of the systems proposed in our plan that will support enhanced reporting will not be immediately available from the Commencement of the CPP period.
- 43 Given the safety-related nature of Aurora Energy's CPP proposal, two submitters suggested a detailed list of safety metrics that should be reported on. While we consider that some of the suggested measures may be appropriate, most are at a level that would be too detailed to provide the governance-level view that the annual delivery report should be focussed on.
- 44 Furthermore, the measures themselves are not that meaningful without context. All networks experience the type of events that these submitters would prefer we report on and should therefore either be reported on by all distribution businesses, to provide context, or against some objective standard (which we do not think exists). In the absence of context, the information disclosed is likely only to be used by Aurora Energy's detractors, applying their own subjective standards as evidence, to continue their campaign of vilification against the business.

Appendix 2 - Corrections and misconceptions

- 45 In this appendix, we address a number of specific misconceptions and specious assertions made collectively or in specific submissions.
- Misappropriation;
 - Funding of investment;
 - Pecuniary penalties;
 - Land investments;
 - Waipori lines;
 - Charges for distributed generation connection assets;
 - Deliverability;
 - Impact of 5-year versus 3-year regulatory period; and
 - Security of supply.

Misappropriation

- 46 Several submitters have alleged that Aurora Energy or its shareholder has historically misappropriated monies in the past by:
- Not spending line charges on maintenance activities and diverting those charges to supernormal profits; or
 - Extracting excessive dividends.

47 Those submitters alleging that line charge monies have been diverted to profits appear to have a limited understanding of the components of regulated revenue, which we believe that the Commission should consider addressing in its decision making process. In the regulatory period 1 April 2016 to 31 March 2020 (DPP2), direct network maintenance allowances set by the Commission represented approximately 24% of total allowable revenue. The remainder of line charges monies recover an adequate return on investment³, depreciation, non-network operating expenses, tax and other allowances.

48 An example of allegations that Aurora Energy diverted maintenance monies from their intended purpose is given in Scorpion Engineering Limited's submission:

"The line charges over [sic] last 20 years should have had capital, maintenance & operational components. Maintenance was not done so clearly funds were extracted from the company."

49 Had Aurora Energy been neglecting to spend its maintenance allowances, then supernormal profits would have been evident in its regulatory information disclosure accounts. This has not been the case, and the Commerce Commission has noted, in its consumer summary paper, that:

"In comparing Aurora's profitability over the past seven years against our allowable rate of return, we found no evidence of Aurora making excessive profits. This finding is supported by our 2016 assessment on electricity distributors' profitability and the Government's recent Electricity Price Review. We also note Aurora's profitability

³ As determined by the Commerce Commission in its various cost of capital determinations – refer <https://comcom.govt.nz/regulated-industries/input-methodologies/cost-of-capital>

has reduced significantly in recent years as it has begun to address its historic under-investment.”⁴

- 50 Other submitters have argued that excessive dividends were extracted from the Company, and that these dividends should now be paid back by Aurora's shareholder.
- 51 It is important to note the Aurora Energy's pricing for customers is not driven by the level of dividends the company has paid or its balance sheet position. Pricing is set according to a regulatory model that allows a 'normal' return on the amount invested in the network.
- 52 Lower levels of historic investment in the network has resulted in an extended period where average line charges have been among the lowest in the country. If more had been invested in the network historically, this would have flowed through to prices at the time resulting in higher historical charges. It might have negated the need for such a sharp increase now – but only because customers would be paying higher prices already.
- 53 There was historic under-investment in the network, but dividends are not the reason for the current state of the network.
- 54 Finally, it is worth reiterating that profits and dividends in a privately held business accrue to the business owner, and not the consumers of goods or services supplied by that business. There is, therefore, no basis, as some submitters have asserted, that consumers should lay claim to repayment of dividends.

Funding of investment

- 55 We acknowledge the complexity of regulatory economics and that some submitters may not be fully aware of how Aurora's investments are funded; assuming that their line charges represent direct capital investment. We would ask Commission to provide some clarity around this information in its draft decision.

- 56 Examples include:

“We question the proposal to pay for capital items in full prior to installation and consider that Aurora borrowing the funds required with the consumer servicing principle [sic] and interest of the loan over the expected life of the purchase to be more in line with normal business practice.”

Cromwell Electric Trust Action Group

“For a normal business under this situation they would make a capital call on their investors in return for a percentage stake in the business equity. In Aurora case, they are essentially carrying out the same capital call but not against their investors but their consumers for a 0% return in equity.”

Trevor Tinwald

- 57 Both examples are incorrect. Aurora Energy is funding the direct capital investment, and not consumers. Aurora's allowable revenues, which flow through to distribution prices, then recover return on investment, depreciation, operating expenses, tax and other allowances. This information was set out in detail in our Financial and Modelling Information Report and CPP Application (Appendix K).

⁴ Commerce Commission. (2020). *Have your say on Aurora Energy's investment plan: Consumer summary*. p5.

58 When publishing its draft and final determination of Aurora's CPP, the Commission may wish to consider including an explanation of the revenue limit setting process, similar to and expanding on the explanation provided in the DPP3 reasons paper⁵.

Pecuniary penalties

59 A number of submitters have suggested that pecuniary penalties are an ineffective deterrent against poor conduct by businesses like Aurora Energy, because the fine is recovered from consumers. Again, this is incorrect.

60 The Commission determined in late 2019⁶ that pecuniary penalties would not form part of allowable opex from 1 April 2020. While the pecuniary penalty ordered against Aurora Energy was paid prior to 1 April 2020, we decided that, in keeping with the intent of the Commission's determination, we would omit the fine from the regulatory information disclosure accounts for the year ending 31 March 2020.

61 Had we included the penalty in the regulatory information disclosure accounts, there would have been no prospect of recovering it from consumers, since we were already overspending our opex allowance. Under the opex IRIS incentive mechanism, however, it would have been possible to pass approximately 76% of the penalty amount to consumers in future years. We recognised this would clearly be a perverse outcome of the enforcement process, which reinforced our decision to exclude the penalty amount from the regulatory information disclosure accounts. The regulatory information disclosure accounts are independently audited.

Land Investments

62 Some submitters (for example, Otago Regional Council) have alleged that Aurora Energy has invested in speculative property developments, and 'failure' of those investments contributed to underinvestment in the network. Delta Utility Services invested in property and developments, not Aurora Energy, a fact borne out in an examination of the investigation report produced by the Controller and Auditor General⁷. Aurora Energy's network investments, and Delta's contracting investments (including property development), were separately accounted for in each respective company's financial accounts. These accusations are baseless and entirely without merit.

63 The only property acquired by Aurora Energy in the past decade or so has been specifically for the new Carisbrook zone substation in Dunedin, and for a substation associated with Contact Energy's Hawea Gates generation proposal (with retention of that land parcel now under review since Contact's resource consent for the project has lapsed).

Waipori Lines

64 Anonymous 0483 chose to comment on the Waipori lines replacement project and offered in support a 2013 report to TrustPower Limited prepared by Electronet Services Limited. Anonymous 0483 asserted that the report indicated that replacement and raising the voltage of the Waipori lines to 110kV was not only feasible but supported by Trustpower.

⁵ Commerce Commission. (2019). *Default price-quality paths for electricity distribution businesses from 1 April 2020 – Final decision: Reasons paper*. Chapter 5. Pp 90-114.

⁶ Commerce Commission. (2019). *Electricity Distribution Services Input Methodologies Amendments Determination (No. 2) 2019*. 26 November 2019.

⁷ Controller and Auditor General. (2014). *Inquiry into property investments by Delta Utility Services Limited at Luggate and Jacks Point*. Available from <https://oag.parliament.nz/2014/delta/docs/delta.pdf>

- 65 This is not the case. That report was prepared to support Trustpower's application to Transpower for a prudent discount agreement based on notional embedding of Waipori generation within Aurora Energy's distribution network.
- 66 Absent the Waipori generation, Aurora would be required, under security-of-supply guidelines, to maintain at least two circuits to Outram zone substation and a single circuit to Berwick zone substation. Under the pricing principles contained in Part 6 of the Electricity Industry Participation Code, generators are expected to pay the incremental costs of connecting the generation. If Trustpower required the lines to operate at 110kV, then they would be expected to pay for the incremental cost of 110kV lines above the 33kV lines used for distribution purposes. As Trustpower has a customer interest in these lines, we have been consulting with them as the project has been progressing through its design and planning phases.

Charges for distributed generation connection assets

- 67 Submissions by Pioneer Energy Limited and its subsidiary Southern Generation Limited Partnership assert that Pioneer Energy was advised that their distributed generation (DG) charges would increase by 100% during a meeting on 29 November 2019. Our recollection of that meeting is somewhat different, as we advised Pioneer Energy that analysis of the pricing impact on DG connections had not been assessed.
- 68 As detailed in Aurora Energy's published pricing methodology, DG connection charges are based on the cost of assets that otherwise would not have been constructed, or would have been constructed at a lower capacity, absent the generation connection. This results in a set of assets that are readily identifiable, and which can be charged for on a dedicated basis.
- 69 Our published pricing methodology describes the calculation of DG charges, which is based on the depreciated replacement cost (DRC) of the assets dedicated to supporting the DG connection.⁸ As renewal of DG-dedicated assets occurs, the DRC of those assets rises and causes the connection charges to rise consequentially.
- 70 As Aurora Energy has had to invest in renewal of poles within circuits supporting DG connections in the past 2 to 3 years, recovery of those investments will be through higher connections charges.

Deliverability

- 71 Pioneer Energy argues that Aurora Energy will be undertaking its works programme while Transpower proposes to undertake its Clutha Upper Waitaki Lines Project (CUWLP), and that the two organisations will be competing for human capital to complete these programmes.
- 72 This, of course, neglects the fundamental reality that transmission line work requires a different skill set to distribution work, and that there is no credible prospect of competition for resources emerging. Further, as set out in Appendix M to our CPP Application, Aurora Energy has already set about securing the skilled resources necessary to execute its works programme through bringing on additional field services contractors and other approved contractors. The Independent Verifier noted that:

"In our opinion, the work proposed in the capex and opex forecasts over the CPP and review periods does not appear undeliverable, notwithstanding some risks which are discussed below. Aurora Energy has identified these risks and has an appropriately advanced delivery plan across the capex and opex programs. Aurora Energy has largely already secured the resources it needs to deliver the

⁸ Aurora Energy. (2020). *Pricing methodology*. p35-39.

programs; we consider that Aurora Energy will be able to source any additional resources it needs.”⁹

Impact of five-year versus three-year regulatory period

- 73 Some submitters have suggested that a five-year CPP regulatory period would deliver superior affordability outcomes than the three-year period that we have sought in our proposal.
- 74 We are concerned that those submitters have not understood the rationale for seeking a three-year regulatory period, which is to manage the risk of expenditure being inappropriately disallowed or approved, because of uncertainty in our later forecasts. That risk falls asymmetrically upon consumers – approval of greater expenditure than necessary results in higher prices, while disallowed expenditure that is actually needed means that network improvements are deferred as we curtail our work programmes to match the allowed expenditure.
- 75 It appears that submitters consider that a five-year regulatory period will suppress prices, as three years of work will be spread over five years. This is not the case, as elevated levels of investment will be required for some years beyond a five-year CPP period, before falling to a new steady state. A five-year regulatory period may allow better smoothing of the revenue path, but it will not necessarily result in material reductions to forecast charges.

Security-of-supply

- 76 Several submitters have made comments regarding security-of-supply matters. Some submitters have identified that a number of Aurora Energy’s rural zone substations have only a single transformer (an ‘N’ security substation) rather than two transformers that are each able to carry the entire substation demand (an ‘N-1’ security substation), which is more commonly seen in densely populated urban areas.
- 77 Aurora Energy has security-of-supply guidelines consistent with those established by the Electricity Engineers’ Association of New Zealand Incorporated (EEA). The EEA guidelines provide a method to determine appropriate levels of supply security based on balancing the economic cost of a loss of supply against the cost of duplicating assets to avoid loss of supply. It should be noted that it is not just transformers that need to be duplicated to provide N-1 security, but also subtransmission circuits and switchgear.
- 78 Aurora Energy’s approach to supply security is in line with good electricity industry practice. Further, enhanced security-of-supply needs to be balanced by a capacity and willingness on the part of consumers to pay for the additional charges consequential to the cost of providing duplicated assets. Enhanced security-of-supply in most rural areas is both inefficient and unaffordable.

⁹ Farrier Swier. (2020). *Verification Report: Aurora Energy CPP Application*. p18.