Aurora
ENERGY LIMITED

Cross - submission

Proposed Default Price-Quality Paths for Electricity Distributors from 1 April 2015

and

Low Cost Forecasting Approaches for Default Price-Quality Paths

29 August 2014

DELTA
THINK.INFRASTRUCTURE

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1 EXECUTIVE SUMMARY

Submissions on the draft DPP reset recognise that the Commission is proposing to make considerable improvements to the operation of the DPP. The submissions were also consistent in expressing concern about a number of substantive matters, backed up with firm evidence from some of the submitters as to why the Commission's position on those matters should be revisited:

- The Commission's proposed restrictions on opex (using 2012/13 as part of the base-year) and capex limits could have damaging implications for service quality;
- Use of 2012/13 as the opex base-year is not appropriate, though there were mixed views about whether 2013/14 only should be used, or a combination of 2012/13 (adjusted) and 2013/14. The general message was that 2012/13 was an atypical year, not 2013/14.
- A 10% capex limit should not be imposed as a punishment for inaccurate forecasts, with such imposition likely to disproportionately penalise smaller EDBs.
- The Commission's forecast of revenue growth for the last reset was overstated, and the Commission risks making the same mistake for the 2015 resets. Forecasts for the next regulatory period should be based on historic revenue growth trends.
- The evidence that the Commission, and others, has provided clearly supports a negative partial productivity factor.
- There are problems with the way that the Commission is proposing to set service quality standards.

Opex base-years and capex limits

Aurora remains firmly of the view that the Commission should adopt 2013/14 as the base-year for opex, and that there is little justification for applying differential caps to capex:

- Opex base-year: We remain of the view that it is preferable to use 2013/14 only as the opex base-year. A two-year base-year may be desirable for addressing year-on-year volatility, but only where (i) it is not known that one particular year is "atypically" low, and (ii), there isn't a trend in costs (up or down) that could mean inclusion of an additional year would be expected to skew the results (too high or too low). Based on the submissions of the ENA, PwC, and others, it would seem clear that both of these conditions would be violated by inclusion of 2012/13 in the base-year for the EDB DPP reset.
- Capex limit: Whether a 110% or 120% cap on historical average capex is applied should not be based solely on the forecast accuracy of each EDB's prior capex forecasts, and/or whether an EDB has a good explanation for the previous inaccuracy. Rather, the test the Commission should apply is whether it has confidence that the EDB's capex forecasts for 2015-20 can be relied on. Past forecasting accuracy is only one test that could be applied. Aurora considers that if an EDB has credible and compelling evidence that it is committed to significant capex increases then this should have greater weight than prior forecasting performance.

How to balance a low cost DPP with minimising the net cost of CPP applications

Aurora has the following observations about Vector's view, and that of its consultant Network Strategies, that it is different to other EDBs. Our opinion is that Vector's proposition is a larger versus smaller EDB argument, rather than one of Vector versus all other EDBs argument.

Aurora believes the Commission should attempt to set the DPPs in a way that balances the low cost DPP with minimisation of the net cost of CPP applications to consumers.

This is not necessarily the same as balancing the low cost DPP with minimisation of the number of CPP applications.

The Commission's 'Attachment H' analysis suggests that the lowest cost outcome for consumers would be to minimise the risk that smaller EDBs need to apply for CPPs, while consumers could be better off if larger EDBs had to (the cost to consumers of larger EDBs applying for CPPs could be outweighed by the benefit of ensuring prices are not higher than they need to be).

One potential implication of this is that the Commission should provide smaller EDBs with an uplift in their DPP prices (and the Commission has suggested that the opposite may be appropriate for larger EDBs). Another implication, though, is that it could be desirable to ensure forecasting is better targeted at safeguarding an appropriate outcome for smaller EDBs, rather than a 'one size fits none' approach.

The Commission has partially gone down this track by excluding Vector from the GDP econometric model, but it could potentially go further. It may well be worth testing whether the accuracy of the Commission's forecasting models is improved by removing larger EDBs.

2 INTRODUCTION

Aurora welcomes the opportunity to provide this cross-submission on the Commerce Commission's "Proposed Default Price-Quality Paths for Electricity Distributors from 1 April 2015", and "Low Cost Forecasting Approaches for Default Price-Quality Paths", 4 July 2014.

No part of our submission is confidential and we are happy for it to be publicly released.

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3 CONSISTENT THEMES

Aurora is pleased to see that there was general recognition that the Commission has put considerable effort and resources into further developing and enhancing the operation of the DPP.

The submissions on the draft DPP reset, however, were also consistent in their concern about a number of substantive matters, backed up with firm evidence from some of the submitters as to why the Commission's positions should be revisited:

- The Commission's proposed restrictions on opex (using 2012/13 as part of the base-year) and capex (caps on historical average capex) could have damaging implications for service quality;

  Vector, for example, argues that:

  "The Commission's forecasts of capex and opex deliver insufficient revenues to maintain necessary investment levels on our network. The forecasts have the effect of cutting the capex and opex Vector can spend below the level we believe is prudent and necessary …; this will affect the quality of service that is provided to consumers. The Commission should acknowledge the potential impacts and incentives that result when they arbitrarily reassess judgements made by regulated suppliers in this way".[1]

- Use of 2012/13 as the opex base-year is not appropriate, although there were mixed views about whether 2013/14 only should be used, or a combination of 2012/13 (adjusted) and 2013/14. The general message was that 2012/13 was an atypical year, not 2013/14.[2]

  As Powerco noted: "For Powerco, 2014 was close to being a normal year, while 2013 an atypical year due to unusually benign weather in Powerco's network regions. A significant proportion of the year-to year change in opex is due to storm-related expenditure".[3]

  And also The Lines Company:

  "… our opex has increased over time, and one of the key reasons for this is the increasing compliance requirements. Health and safety is one example. The increased levels of audit, oversight, reporting and control for health & safety has imposed increased costs in the order of two FTE's. Further, the continued development of work standards, most notably on equipotential zones and arc-flash impose overheads in the form of new personal protective equipment, training and lengthier actual work practices"[4]

- A 110% cap on historical average capex should not be imposed as a punishment for inaccurate forecasts. Doing so is likely to disproportionately penalise smaller EDBs.

  As noted by OtagoNet: "A small EDB with less than five substations could be severely disadvantaged by this approach in the likelihood that a substation would be replaced in every other regulatory control period".[5]

- The Commission's forecast of revenue growth for the last reset was overstated, and the Commission risks making the same mistake for the 2015 resets. Forecasts for the next regulatory period should be based on historic revenue growth trends.

[1] Vector, Submission on the Default Price-Quality Paths from 1 April 2015: Main Policy Paper, 15 August 2015, paragraph 1.

[2] Refer to the next section: Opex base-year and capex limits.

[3] Powerco, Submission on Default price-quality paths for electricity distributors from 1 April 2015 and Low cost forecasting approaches for default price-quality paths, 15 August 2015, page 3.

[4] The Lines Company, Submission on Proposed Default PriceQuality Paths for Electricity Distributors from 1 April 2015, 15 August 2015, page 3.

[5] OtagoNet, Submission of the OtagoNet Joint Venture To the Commerce Commission On the Proposed Default-Price Quality Paths, 15 August 2015, page 2.

Wellington Electricity make the point that:

> *"The financial impact of the difference between the Commission's forecasts and actual CPRG compounds through the regulatory period such that every 1% error in the annual growth forecast compounds through the period leading to a 4% error in total revenue over the five year regulatory period. This applies irrespective of the EDB the error relates to, the starting revenue or the direction of the error".*[6]

- The evidence that the Commission and others have provided clearly supports a negative partial productivity factor.

  We note in particular the evidence provided by Vector, and its consultants, demonstrating that the increase in residential electricity demand caused by electric vehicles will be outweighed by the impact of energy efficient technologies and distributed generation.[7]

- There are problems with the way the Commission is proposing to set the service quality standards.

  The ENA, for example, has submitted that:

  > *"Normalisation for major events – we do not consider that the proposed approach achieves reasonable outcomes because the frequency and magnitude of major events will primarily determine whether a business complies with the quality standard, and whether the cap or collar is reached in any year. The proposed approach to normalisation is contrary to international methods. It is our preliminary view that this is not suitable for a revenue incentive scheme. As a consequence the financial penalties and rewards will be unduly influenced by the weather and other drivers of significant unplanned events."*[8]

Unison sums up these concerns with the observation that:

> *"When considered overall, we are very concerned that at every turn the Commission makes modelling decisions and assumptions that favour lower prices or place risks on EDBs. We note the Commission proposes to:*
>
> *a) Set aside empirical evidence of negative opex partial factor productivity growth trend;*
>
> *b) Set aside the strong recent trend of declining residential growth and assume constant consumption per user;*
>
> *c) Cap capex forecasts;*
>
> *d) Adopt the 2012/13 year as the base year for opex because it is lower;*
>
> *e) Adopt the all-industries LCI forecast which is lower than the LCI Electricity Gas Water and Wastewater forecast;*
>
> *f) Adopt models for forecasting opex that systematically under-estimate past growth in opex;*
>
> *g) Require EDBs to bear the risks of lower demands following a catastrophic event, but there is no allowance for this risk in the WACC or in cashflows; and*
>
> *h) EDBs would have to pay incentive payments for exceeding their quality targets and may also be subject to investigations, despite the fact that there is, by definition, a 50% statistical probability of exceeding the target each year. No allowance is made for the costs of responding to investigations".*[9]

[6] Wellington Electricity, Draft Decision on 2015-2020 Default Price-quality Path, 15 August 2015, section 3.2.

[7] Vector, Submission on DPP low-cost forecasting approaches, 15 August 2015, paragraphs 42-45.

[8] ENA, Submission on proposed default price-quality paths for electricity distributors from 1 April 2015, 15 August 2015, paragraph 87a.

[9] Unison, Submission on the Default Price-quality paths from 1 April 2015: Draft Decisions, 15 August 2015, paragraph 21.

We consider that “reasonable investor expectations”, supported by evidence-based submissions, are that the Commission will address each of the above concerns in the final EDB DPP reset determination.

4 OPEX BASE YEAR AND CAPEX LIMITS

Aurora continues to support the submissions made by the ENA and PwC. Without prejudice to that general support, however, there are two very specific aspects of their submissions where we are not entirely aligned.

- **Opex Base Year:** We remain of the view that it is preferable to use 2013/14 only as the opex base-year. A two-year base-year may be desirable for addressing year-on-year volatility but only where; (i) it is not known whether one particular year is "atypically" low, and (ii), there isn't a trend in costs (up or down) that could mean inclusion of an additional year would be expected to skew the results (too high or too low). It would seem clear to us that both these conditions would be violated by inclusion of 2012/13 in the base-year for the EDB DPP reset.
- **Capex limit:** Whether a 110% or 120% cap on historical average capex is applied should not be based solely on the accuracy of each EDB's historic capex forecasts, and/or whether an EDB has a good explanation for the previous inaccuracy. Rather, the test the Commission should apply is whether it has confidence that the EDB's capex forecasts for 2015-20 can be relied on. Past forecasting accuracy is only one test that could be applied. Aurora considers that if an EDB has credible and compelling evidence that it is committed to significant capex increases, then this should have greater weight than the accuracy of previous forecasts.

2013/14 only is the appropriate opex Base year

Aurora notes that reasons why 2012/13 should not be used as the opex base-year are equally applicable to using 2012/13 and 2013/14 combined as the opex Base Year. For example, ENA argue that "A FY13 base year … is inconsistent with the proposed quality standards as it does not provide for sufficient opex to maintain underlying reliability performance".[10] This statement holds for any base-year option that includes 2012/13.

Combination of the two years would help reduce the adverse impact of the atypical 2012/13 year on forecast opex for 2015-2020, but would not eliminate it.

The observations of submitters that; (i) 2012/13 was "atypically" low, and (ii), opex costs are trending upwards, means that if 2012/13 is used in the base-year, even on a modified basis and combined with 2013/14, then the opex base-year will systematically understate opex for 2015-2020.

These observations, in our opinion, render PwC's views inconsistent that "This year on year trend suggests that a combination of more than one year of data is a reasonable approach to avoid bias in the forecasts which may arise from annual variation".[11]

Aurora remains of the view that 2013/14 only should be used as the opex base-year. In principle, we see that a multi-period base-year has some potential benefit for addressing cost volatility, smoothing efficiency incentives, and reducing gaming incentives. However, we consider this should only be considered for future resets if, and only if; (i) it is set in advance, and (ii), there is no ex ante reason to expect one year would be higher/lower cost than the next.

Forecast accuracy should not be the only test for determining whether the Commission can rely on EDB capex forecasts

[10] ENA, Submission on low cost forecasting approaches for default price-quality paths, 15 August 2014, paragraph 4(a).

[11] PwC, Submission to the Commerce Commission on Low Cost Forecasting Approaches For Default Price-Quality Paths, 15 August 2014, paragraph 22.

Introduction of a two-tier capex limit that applies a lower capex limit on EDBs that inaccurately forecast their previous capex requirements will have the effect of punishing/penalising EDBs for forecast inaccuracy. It will also punish/penalise consumers where it results in a capex limit below the actual requirements of the EDB, and the EDB cuts its capex accordingly to remain within the cap.

The ENA has mixed views on the appropriateness of applying a capex limit, and both the ENA and PwC have stated that the lower limit should not apply where an EDB has a suitable explanation for any over-forecast of its capex. With respect, and while this would be an improvement on the Commission's proposals, we do not believe this goes far enough.

The test the Commission should apply is whether it can have confidence in relying on the EDB's forecast of its capex requirements for 2015-2020. The accuracy of its previous forecast and explanation of any inaccuracy are two example of evidence that might be suitable for the Commission in applying this test.

Hypothetically, would the Commission have any greater confidence in relying on an EDB forecast if; (i) it had accurately forecast its previous needs, and (ii), is now forecasting a substantial increase in capex, while (iii), stating that it would not invest in response to the Commission's proposal to lower the WACC percentile it uses? The Commission's position is based on a blind assumption that if an EDB was (in)accurate last time, it would be (in)accurate next time.

In Aurora's view, backward-looking information is not the only, or necessarily best, information for determining whether the Commission should be able to rely on an EDB's future capex forecasts.

Our situation is a good example of this.

As stated in our submission, there is clear and compelling evidence that our capex requirements are increasing; e.g., from the Commission's Strata report into Aurora's 2012 quality breach[12], and that Aurora has committed to such increases. Aurora is already embarking on the capex increases, and has shareholder agreement to reduce dividends to partially fund the increased capex needs.

We reiterate that the Commission should consider the following questions:[13]

- Is the EDB able to provide clear and compelling reasons why its capex will need to be above 110% above the historical average; and/or
- Is the EDB able to reasonably explain why the forecast error occurred; and/or
- Could the forecast error be due to the lumpy nature of planned investment in the EDB's Asset Management Plans (a particular issue for smaller EDBs); and/or
- Has the forecast error been influenced and/or exacerbated by mixed reporting regimes; e.g., changed information disclosure requirements, and implementation of valuation input methodologies; and/or
- Is the over-forecast part of an ongoing trend that the EDB systematically over-forecasts its capex, or is there a mix of over and under forecasting? (The Commission should not just consider one data point (2010 forecast)).

[12] Strata Energy Consultants, Report on the reliability performance of Aurora Energy Limited, Produced for The Commerce Commission, 24 June 2013.

[13] Aurora Energy, Submission to the Commerce Commission on its Proposed Default Price-Quality Paths For Electricity Distributors From 1 April 2015, 15 August 2015, page 21.

5 THE DPP – CPP BALANCE

How to balance a low cost DPP with minimising the net cost of CPP applications

Aurora believes that the Commission should attempt to set the DPPs in a way that balances the low cost DPP with minimisation of the net cost of CPP applications to consumers.

This is not necessarily the same as balancing the low cost DPP with minimisation of the number of CPP applications. This is because, as the Commission's 'Attachment H' analysis[14] shows, consumers could be better off if some larger EDBs were under CPPs, as this would address over-pricing risks, and worse off if smaller EDBs had to apply for CPPs.

We explain this view in the context of the following observations:

- The Vector argument, supported by Network Strategies, that their size makes them different/not comparable with most other EDBs;

  Network Strategies, for example, has stated that:

  "In the course of our analysis, it became evident that there are a number of clear differences between Vector and the other EDBs. Vector is the largest of all the EDBs and its Auckland market – in terms of scale, diversity, customer mix and geography – is unique within New Zealand".[15]

- The ENA's observation that "The GDP econometric model excludes Vector because of its scale relative to the rest of the industry, and OtagoNet, on the basis that it is an outlier"[16]; and

- The Commission's stylised model which shows, in principle, that for some smaller EDBs, the cost of CPP applications may be such that consumers would be better off if the Commission set more generous (higher price) DPPs to reduce the risk (and cost) of a CPP, but for larger EDBs the opposite may be the case. It may be lower cost, and consumers may be better off, if they incur the cost of a CPP application and avoid the risk that the DPP price is set too high.[17]

- Various submissions, which we support, indicate that the Commission has substantially understated the cost of CPP applications. As a consequence, the Commission's stylised model would then understate the benefit to consumers of erring on more generous (higher price) DPPs for smaller EDBs.

- PwC's view that:

  "We believe that the CPP option itself is biased against smaller suppliers, as CPP costs or demands are not scalable to any great extent. The $2.5m direct cost is a very small proportion of the potential revenue impact of forecasting variances for larger EDBs, however it exceeds 50% of the estimated revenue impact (using the narrow DPP counterfactual approach) for four EDBs, and at least 25% for four others. If the recoverable costs are taken into account, these percentages increase … If we assume another $1.5m for the CPP recoverable costs, then the total costs of applying for a CPP barely outweigh the estimated revenue impact for four EDBs; exceed 50% for two others, and 40% for two more. Given the other risks that a supplier faces when applying for a CPP, and the expected disruption to their businesses, we submit that there is little a supplier within these error bands can do in practice to address the forecast error".[18]

[14] Commerce Commission, Resetting the 2010-15 Default Price-Quality Paths for 16 Electricity Distributors, 30 November 2012

[15] Network Strategies, Forecasting key inputs to DPP reset decision for electricity distribution businesses, 10 April 2014, page 37.

[16] ENA, Submission on low cost forecasting approaches for default price-quality paths, 15 August 2014. Paragraph 107e.

[17] Hence the distinction between minimisation of the number of CPPs and minimisation of the cost to consumers of CPP applications.

[18] PwC, Submission to the Commerce Commission on Proposed Default Price-Quality Paths for Electricity Distributors From 1 April 2015, 15 August 2014, paragraphs 23 and 24.

The conclusion that Aurora draws from these observations is that it is better for the Commission to set a DPP that minimises the likelihood that smaller EDBs would need to apply for CPPs, relative to larger EDBs. This would be a better outcome than a DPP with zero systematic bias that means the expected likelihood of an EDB needing to apply for a CPP is identical for all EDBs.

We agree with PwC that "the DPP should apply to most non-exempt EDBs, most of the time".[19] A DPP that attempts a "one size fits all" approach for all EDBs won't necessarily achieve this.

This could mean that it is better for the Commission to determine a low cost DPP that more accurately reflects the general circumstances of small to medium (the majority) EDBs, even if this increases the likelihood the DPP will not be suitable for larger EDBs.

One potential implication, which the Commission has acknowledged, is that it could be appropriate for the Commission to provide smaller EDBs with an uplift in their DPP prices (and the Commission has suggested that the opposite may be appropriate for larger EDBs). Another implication, though, is that it could be desirable to ensure forecasting is better targeted at safeguarding an appropriate outcome for smaller EDBs rather than a 'one size fits none' approach.

It may, therefore, be appropriate for the Commission to adopt forecasts/econometric modelling that excludes larger EDBs such as Vector, Powerco and Wellington Electricity. This should be tested. The Commission has partially gone down this track by excluding Vector from the GDP econometric model, but it could potentially go further. It may well be worth testing whether the accuracy of the Commission's forecasting models is improved by removing larger EDBs.

Vector, and its consultant Network Strategies, has raised concern that "National economic and demographic characteristics are heavily influenced by Auckland, however as each of the EDBs are given equal weighting within the analysis, the models may not deliver an outcome that is a best fit for Vector's unique situation" (emphasis added).[20]

The influence of Vector may be significant enough that it is best to exclude them altogether, and not just give them equal weighting.

It follows that we do not share Vector or Castalia's concern that:

"*The Commission's decision to exclude Vector and OtagoNet from its analysis suggests that the statistical relationship may not hold for these EDBs (which accounted for around 33 percent of ICPs or 35 percent of overall lines revenue in 2013). Vector agrees with Castalia that the Commission should place limited weight on the relationship when a third of ICPs or revenue are excluded from the analysis".*[21]

Unfortunately, it appears that the current proposals are skewed in favour of larger EDBs. As PwC has noted: "We … consider that the approach to assessing a forecasting error cost is biased against smaller EDBs, which, as demonstrated in Table B1 of the DPP Policy Paper, have a lot less upside available than the larger EDBs ..."[22]

[19] PwC, Submission to the Commerce Commission on Proposed Default Price-Quality Paths for Electricity Distributors From 1 April 2015, 15 August 2014, paragraph 14.

[20] Network Strategies, Forecasting key inputs to DPP reset decision for electricity distribution businesses, 10 April 2014, page 37.

[21] Vector, Submission on DPP low-cost forecasting approaches, 15 August 2015, paragraph 61b).

[22] PwC, Submission to the Commerce Commission on Proposed Default Price-Quality Paths for Electricity Distributors From 1 April 2015, 15 August 2014, paragraph 23.