

26 November 2020

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Part 4 Branch
Commerce Commission
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Dear Dane,

Re: Aurora Customised Price Path Draft Decision

1. Vector's submission to the Aurora Draft Customised Price Path (CPP) Decision discusses our views on the expenditure analysis, the cap on annual price changes and the proposal to update the expected inflation assumptions used for estimating revaluation gains.

The Commission's assessment of Aurora's expenditures

2. Vector does have significant reservations about the Commission's approach for assessing expenditures for the Aurora CPP. We are concerned the Commission's approach for assessing expenditures for a CPP do not appear to demonstrate a clear and certain approach for evaluating expenditures for CPP applications. During the 2016 IM review the Commission indicated the pre-application verification process is intended to provide certainty to suppliers as to how expenditures are expected to be assessed as part of establishing the CPP revenue.
3. This was the approach adopted by the Commission for the Powerco CPP where the Verifier's review of Powerco's expenditure programme to deliver its CPP commitments was generally accepted as being a skilled reasonableness check on the expenditure programme.
4. Indeed, the Electricity Distribution Input Methodologies (EDB IMs) require the Verifier to assess the supplier expenditure programme based on whether the forecast opex and capex are consistent with the **expenditure objective** defined by the Customised Price Path (CPP) IMs.
5. However, the Aurora CPP is a significant departure to the approach adopted in the Powerco CPP. Instead the Commission has used an alternative view from Strata Consulting to

determine the sufficiency of the opex profile required by Aurora – which has resulted in the opex allowance for Aurora being set at a level below that forecasted by the DPP.

The Aurora Opex allowance

6. In setting the opex allowance the Commission, on the recommendation of Strata, has cut significant components of Aurora's system operation and network support (SONS) service opex and its forecast vegetation management opex.
7. The significant cuts to Aurora's SONS expenditure have been primarily been justified on comparative benchmarking of Aurora's business. We do have reservations about such high-level benchmarks being used to overturn the original verifier's opinion on the resourcing of Aurora's SONS. Given the CPP proposal was validated as being largely consistent with the CPP expenditure objective, then there is a greater risk that the cutting of this resourcing could compromise the delivery of the CPP.
8. It is important for the Commission to ensure its decisions are consistent with the IMs. If the expenditure objective has been found by the Verifier as being met, then further cutting from this resourcing needs to be determined against the risk of the supplier's need for the CPP being compromised.

The role of CPI in the Commission's DPP/ CPP revenue modelling

9. In appendix J of the Draft Decision the Commission discusses Input Methodologies (IMs) that could be amended for implementing the final CPP. On page 548 of appendix J the Commission discusses the option of using a new forecast of CPI for estimating expected inflation for revaluation gains over the CPP and price path profile.
10. Vector supports the proposal to provide a more current CPI forecast for the Aurora CPP. Continuing to use the DPP3 inflation forecast from August 2019 will materially over-estimate the expected inflation for the Aurora CPP.
11. The most significant role of the CPI forecast in the financial model is to convert the nominal WACC into a real WACC through the forecast of expected revaluation gains over the regulatory period. Lowering the CPI forecast for Aurora's CPP will have the effect of raising the real WACC that Aurora earns on its RAB compared to the real WACC set in the DPP (and which other EDBs who have not applied for a CPP will continue to earn).

12. The Commission's original logic for the IMs applying the same nominal WACC and CPI forecast in both DPP and CPP was so that the real WACC would be unchanged by the movement from DPP to CPP. Accordingly, changing the CPI forecast reverses the 2016 IM review policy for WACC alignment between DPPs and CPPs.

Vector supports the proposed IM changes for the Aurora CPP

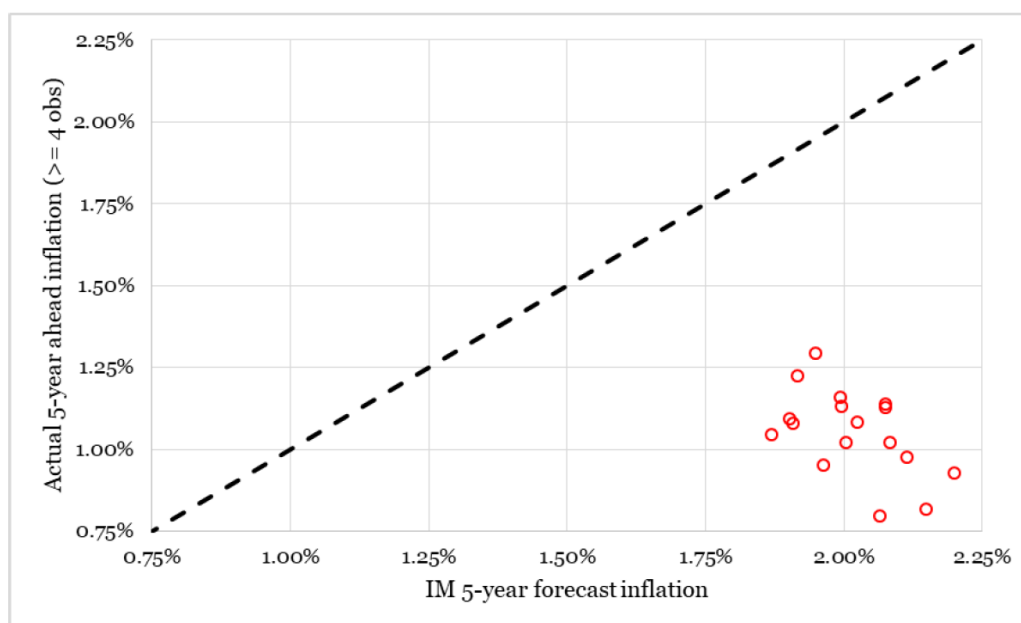
13. Vector fully supports this change to the IMs. This is because the Commission's application of its target real return has had a deleterious effect on sector performance and the ability of suppliers to make the appropriate investment in their networks.
14. This is because the debt portion of the WACC IM is clearly specified, and incurred, in nominal terms. It follows that if the best forecast of inflation has fallen since the start of the DPP then, for Aurora to have an expectation of recovering its cost of debt, that lower inflation forecast needs to be used in the CPP. Accordingly, for Aurora to make the necessary catch up investment programme for its network it should be able meet its forecast efficient debt costs – which are determined by the Commission in nominal terms.
15. Second, there is good reason to believe that the IM inflation forecast made for DPP3 underestimated expected inflation over DPP3 even at the time it was made. That is, the DPP3 real WACC was set artificially low. Updating the inflation forecast for Aurora's CPP to reflect the fact that actual inflation is lower than the DPP3 forecast will reduce the magnitude of the original bias in the estimate of expected inflation for DPP3.

The Commission's forecast of expected inflation has persistently over-forecast expected inflation

16. The Commission's method of forecasting expected inflation for five years relies on the CPI forecasting published in the Reserve Bank of New Zealand's Monetary Policy Statement and then a linear transition to the RBNZ's Inflation Band mid-point, has performed poorly over an extended period.
17. Accordingly, the five-year inflation forecasting method merely assumes for the final three years of the DPP/ CPP inflation will linearly drift to the "middle" of the RBNZ's inflation target band of 1-3 percent, i.e. inflation will settle at 2 percent for year five.
18. In an expert report for Vector, CEG applied the Commission's method of forecasting year five inflation across multiple RBNZ monetary policy statements to assess how effective the

method was at predicting actual inflation five years ahead. Graph 1 shows CEG analysis of the IM Inflation Forecasting Method performance for estimating year 5 inflation from December 2008.

Graph 1: Application of Commission’s Year 5 Inflation forecasting method to Monetary Policy Statements from December 2009



19. The CEG analysis found the Commission’s year 5 inflation forecasts were persistently over-forecasted. There is no reason to expect this performance not to change in DPP3.

Persistent over-forecasting of inflation has materially impacted financial performance over DPP1 and DPP2

20. CPI forecasts for DPP1 and DPP2 averaged between 50-80 basis points above actual inflation. The over-forecasting of CPI had a material impact on supplier revenues for the past decade. Indeed, supplier revaluation gains were materially less than assumed in the Commission’s financial modelling of revenues for a DPP.

21. At the time of Aurora’s CPP decision the bias in the DPP3 inflation forecast will be more apparent, as evident in more recent inflation outlooks. That is, expected inflation over the remaining years of the DPP will be lower than implied by the original DPP forecast (not to mention that inflation in the first year of the DPP will have been lower than was forecast).

Correcting the CPI outlook will assist Aurora but not suppliers remaining on the DPP

22. Correcting the DPP inflation forecast in Aurora's CPP decision will result in a more accurate estimate of the true level of RAB revaluations that Aurora can expect to earn. Consistent with this, Aurora will have a better opportunity to recover its true nominal and real cost of capital.
23. Vector notes that this will not be true of the businesses that remain on DPP3. The fact that inflation over the DPP3 is now expected to be materially lower than forecast means that these businesses will earn less than their nominal WACC. That is, inflation compensation that is 'taken out' of revenues (via forecast RAB revaluation modelling in the financial model) will be **more** than inflation compensation provided in actual RAB revaluation).
24. Vector submitted in the context of DPP3, that this experience, which mirrors the experience of DPP1 and DPP2, was wholly predictable. Now that we have more evidence that confirms this view it is appropriate that the Commission adopt a more accurate estimate for Aurora's CPP decision.
25. Given the way that Aurora will transition back to DPP4 from its CPP, it is only the first four years of the new CPP inflation forecast that will have any effect of Aurora's returns. This means that the assumption in the current IM forecast that inflation returns to 2% in year 5 of the forecast will not play a significant role in influencing the returns earned by Aurora. Given Vector's view that this "year 5" assumption is a contributing source of bias in the current IM forecast methodology, removing some of the effect of this assumption already improves the relative position of the CPP inflation forecast to the DPP.

The proposed IM change for the Aurora CPP contradicts the 2016 IM Review decision for alignment of the WACC and target real return

26. During the 2016 IM review the Commission sought to address the concern of suppliers to seek out a CPP purely due to changes in the prevailing cost of capital. Given the Commission's largely "on the day" method for setting the WACC, the opportunity for volatility in the benchmark WACC is quite significant.
27. At the time, the Commission's expert Dr Lally considered there were four methods which could potentially address the opportunity for arbitrage where some potential solutions considered by Dr Lally included reducing the volatility in the Commission's benchmark

WACC by adopting an annual updating or trailing average cost of debt.¹ The preferred model adopted by the Commission was to adopt a “fixed” five-year WACC even for suppliers that did choose to move onto the CPP.

28. The logic of this policy position required that the CPP apply the same nominal WACC and inflation forecast from the DPP. This is precisely what the IMs do.

29. If the nominal WACC were held fixed, but expected inflation revised, then anytime expected inflation fell below DPP expected inflation an EDB would have an incentive to move to a CPP. Nonetheless, Vector supports the proposed approach for Aurora despite it being a clear departure from the 2016 IM Final Decision. This is because the previous policy was flawed in two important respects.

30. First, the previous policy was predicated on the assumption that WACC should be conceived of as an entirely real cost of capital. From this assumption it followed that, if inflation expectations fell between the time of the DPP forecast and the time of the CPP, then Aurora should require a similarly lower nominal return.

31. However, Vector rejects the assumption that the WACC should be conceived of as a real return. At a minimum, it is clear that the cost of debt is efficiently incurred in nominal terms (and is estimated as such in the IMs). On this basis, adjusting the inflation forecast in the CPP can be viewed as imperfectly correcting an important error in the original target return framework (even if the original DPP inflation forecast was the best available at the time).

32. Secondly, Vector submits that the IM inflation forecast method is biased in its assumption that inflation will transition smoothly back to 2% by the end of the five-year forecast period. Updating the forecast one year into the DPP will (at least partially) correct this bias for Aurora and will result in a better estimate of the true real cost of capital for Aurora.

Recent Commission Decisions – in last two months – demonstrate a faltering commitment to its inflation forecasting method and target real return

33. The proposed changes for the Aurora CPP would result in the Commission effectively moving away from the real return on investment model. This would be the second recent instance where the Commission has deviated from its model of targeting real financial

¹ *Input Methodologies Review Final Decisions, Topic 4 Cost of Capital Issues*, page 159

capital maintenance (real FCM). The other recent decision was confirmed in the calculation of losses for the financial loss asset for Chorus under Part 6 of the Telecommunications Act. In that instance, the Commission allowed Chorus losses to be carried forward by applying a nominal WACC (with no adjustment for differences between expected inflation embedded in the nominal WACC and actual inflation). The Commission chose not to retrospectively apply its method of forecasting expected inflation to remove expected inflation from the estimated nominal WACC.

34. The effect of this is that Chorus earns a nominal return on its investments over the loss-making period rather than a real return, i.e. where inflation compensation does not exceed actual inflation. Given the Commission's estimate of expected inflation (if applying the CPI forecasting methodology specified in the EDB IMs) over this period was substantially higher than actual inflation. This mean Chorus earned a materially higher return than it would have earned if it was regulated to earn a real return – using the Commission's IM method of forecasting expected inflation. Vector notes that this loss period for Chorus covered both DPP1 and DPP2 in which EDB's nominal returns were substantially lower than the nominal WACC used to set price paths. This difference between the nominal and real return was only because of the Commission's IM method for estimating expected inflation was substantially higher than actual inflation.
35. More importantly, Chorus will now include the financial losses in its RAB and index these losses by actual inflation – therefore earning more inflation compensation despite the financial losses being calculated in nominal terms.
36. The common features of the Chorus FLA and Aurora Draft CPP decision are that they involve the Commission effectively targeting a nominal WACC by adapting its treatment of inflation as new information becomes available. In the case of Chorus, the Commission set a fixed nominal WACC and then, in effect, retrospectively set expected inflation equal to actual inflation over the loss period (i.e. it ignored actual inflation over the loss-making period). In the case of Aurora, the Commission is proposing to set a fixed nominal WACC but revise expected inflation in the light of new information since the DPP forecast was made.
37. Both approaches are a departure from the real return framework. For EDBs the Commission settled on a fixed real WACC for a fixed period where the real WACC does not change.

The impact of exaggerated inflation forecasting is not unique to Aurora

38. Vector supports a more reasonable inflation forecast being adopted for the Aurora CPP. This is because Aurora has identified a significant catch-up investment programme to remedy historic under-investment in its system. Accordingly, the impact of the Commission's forecast of expected inflation will constrain Aurora's ability to finance this investment programme given its impact on supplier cashflows through the CPP period.
39. However, Aurora is not the only supplier affected by the fact that DPP3 forecast inflation, like DPP1 and DPP2 forecast inflation before it, appears very likely to overestimate actual inflation. Suppliers such as Vector which have a significant investment programme over the DPP3 period are similarly affected by the errors in the Commission's estimates of expected inflation. Therefore, we strongly encourage the Commission to reconsider its inflation forecasting methodology and whether its target return model continues to remain appropriate.
40. The shortcomings of the real return model are increasingly being recognised by suppliers as limiting the capability of networks to make the requisite investments. In Australia transmission system providers have sought to modify their return framework to ensure they are able to fund new investments into Australia's interconnected transmission grid to meet the Australian Energy Market Operator's integrated system planning objectives. Similarly, the Commission will be aware of the Australian EDBs and the Australian Energy Networks Association also raising concerns with inflation forecasting in their own regulatory setting.
41. The Commission's proposals around forecast inflation for the Aurora CPP would be a marked departure from the 2016 Final IMs decision of adopting a target real return fixed for five years. We support the proposal to adopt new CPI forecasts.
42. We strongly recommend the Commission consider more broadly:
- a. Its inflation forecasting methodology given the current method has performed poorly over an extended period; and
 - b. The suitability of the target return model – especially for providers with large immediate investment programmes and who rely on debt funding for those programs.
43. The Commission's expert Dr Lally acknowledged the extremity of the risk for when the Commission's forecast of expected inflation exceeds actual inflation. He recognised this

type of forecasting error will result in supplier cashflows being lower than forecasted at the time of setting the regulatory period. Dr Lally also observed that interest payment terms (as recognised by the Commission's cost of debt and by the debt raising practices by suppliers) are not adjusted for inflation. Therefore, the shortfall in cashflows from the Commission's DPP/ CPP assumptions are fully borne by shareholders through lower returns. However, Dr Lally describes the extreme scenario where the DPP/ CPP cashflows are insufficient to meet interest payment terms – resulting in the supplier declaring bankruptcy.

44. Indeed, Dr Lally noted:

This methodology exposes businesses to some bankruptcy risk when inflation is lower than forecast, because the interest payments to debt holders are fixed in nominal terms. Nevertheless, the Commission's inflation forecast errors are likely to be uncorrelated over time and therefore will tend to offset over time.³

45. However, the impact of the Commission's inflation forecasting methodology for expected inflation has proven to be asymmetric and shown a bias to over-forecast inflation for an extended period. Therefore, the mitigation of DPP cashflows being constrained from over-forecasting inflation (namely the shortfall being transient) and forecasting errors being uncorrelated over time has not held true.

46. More importantly, recent decisions by the Commission demonstrate its own commitment to the model falters when having to apply its assumptions in cases such as the Aurora CPP.

Setting of the 10 percent cap on annual price changes

47. Vector is concerned about the annual 10 percent cap on annual price changes that applies to both Aurora's CPP and the recent DPP decision. The application of the cap at the gross level means there is greater risk of annual network charges not being able to be fully recovered in any one period due to significant changes in the recovery of other costs recovered through the lines charge. This is especially relevant with the significant changes being proposed for the recovery of transmission grid charges through the implementation of the new TPM and the investment programme being embarked upon by Transpower.

³ Dr Lally, *Review of Further WACC Issues*, 22 May 2016, p. 37

Under the new TPM any new investment will be recovered from a small group of customers which will have a significant effect on transmission customers.

48. We strongly encourage the Commission to consider the full impacts of cap and how this interacts with other energy policy changes such as the new TPM.

Conclusion

49. The Aurora CPP provided the Commission an opportunity to demonstrate a clear and certain process with CPP proposals given the recent experience of setting revenue paths for Powerco and Wellington Electricity. However, the Aurora CPP Draft Decision shows the framework for evaluating expenditures is far from certain with key expenditure analysis differing between CPP assessments.

50. However, we are encouraged by the Commission's practical approach for reviewing its inflation forecasting for the setting of the price-path and expected revaluation gains for the Aurora CPP. The Commission's forecast of expected inflation is a material contributing factor for suppliers to obtain their forecast headline return in any one period. To that end, we note the position of Aurora is not so different from suppliers on the DPP which are not expected to realise the forecast revaluation gains forecasted over the five-year DPP. Given the change to the Aurora will re-introduce the arbitrage risk for suppliers requesting a CPP for a new forecast of expected inflation then we consider there are more fundamental issues in the framework which require revisiting.

Yours sincerely



Richard Sharp

GM Economic Regulation and Pricing