



## **Submission on 2010 – 2015 Starting Price Adjustments Update Paper**

Unison Networks Limited

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Public Version

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## **1 INTRODUCTION AND EXECUTIVE SUMMARY**

### **1.1 Opening comment**

1. This submission sets out Unison's views on the Commission's 2010-15 Default Price Quality Path Starting Price Adjustments and Other Amendments Update Paper ("Update Paper").
2. Unison observes at the outset that the Commission's consultation timeframe has prevented Unison from carrying out the research that it would otherwise have sought to commission in light of the Commission's new proposals. Accordingly, the focus of the submission is on recommendations for the Commission to undertake the necessary research to ensure that final starting price adjustments are based on robust inputs. As the Commission's model is indicative only, and requires significant updating based on improved input assumptions and EDB-specific data, Unison submits that it is critical that the Commission releases the final model as soon as possible. It would be an ineffective process for all if the Commission waited and consulted on all issues simultaneously at the draft determination stage.
3. We strongly recommend that in future the Commission provide more informal updates on its key work-streams as it develops its thinking. The Update Paper has come some eight months after the previous Commission paper on starting price adjustments. It proposes new approaches and corresponding data and analysis that have substantial value impacts on EDBs, with only limited timeframes to respond. EDBs could have provided much more informed and meaningful submissions had the Commission communicated two simple points much earlier in the process:
  - a) It was now considering the adoption of a projection approach; and
  - b) This could potentially be based on a mix of supplier specific conditions as well as macro-assumptions about how different variables would escalate.
4. The provision of such updates would not compromise the Commission's legal consultation obligations, would foster improved relations with stakeholders, and also importantly allow time for EDBs to consider the issues and collect data and evidence to better inform the Commission's decisions. The current consultation approach has unreasonably compromised these objectives.
5. While Unison is sympathetic to the difficulty the Commission confronts at this first reset, given the limited data available and time constraints, we are concerned that the Commission appears to have undertaken limited testing and validation of its key input assumptions. This risks outcomes that are either systematically biased in favour of consumers, (thus necessitating undue numbers of CPPs or under-investment if suppliers attempt to remain on their DPP path), or suppliers receiving prices that are higher than need be. From Unison's perspective, the first situation appears more likely, as Unison's 2010 ROI reflects the effects of a cold

winter, and hence higher than normal revenues/ROI, as well as a revenue growth assumption that does not reflect the economic and demographic circumstances confronting its networks.

## **1.2 Submission key points**

6. Unison makes the following key points in this submission:

- a) We welcome the Commission's change in approach to adopt a forecasting framework for assessing "current and projected profitability". It is important that the relative change in costs and revenues is robustly assessed over the regulatory period, especially in light of capital expenditure requirements;
- b) Unison submits that there are a number of improvements to the Commission's approach, which would make it consistent with the requirements for DPP/CPP regulation and to better achieve the target of aligning the present value of returns over the regulatory period with WACC. These changes include:
  - i. Adopting a margin to reduce the likelihood of CPP applications. The Commission's conception of the DPP/CPP framework is that businesses that do not expect they can earn their WACC under the DPP can simply (and relatively costlessly) apply for a CPP. Unison submits that the regime was not intended to work in this manner: applying for a CPP is intended to be by exception, rather than a likely event to deal with forecast errors. In addition, there are a number of costs and risks associated with a CPP application that the Commission under-estimates, which would be a barrier to applying for a CPP;
  - ii. A more robust evaluation of the input assumptions must be carried out. The time the Commission has allowed EDBs to submit on the Update Paper has been insufficient for Unison to carry out the research it would otherwise have done, but we note that:
    1. It is unreasonable to rely on un-normalised 2010 ROIs to make starting price adjustments. For example, 2010 included record-setting cold temperatures (as documented in NIWA information and clearly evident in Unison's revenue data) which resulted in revenues for Unison significantly exceeding that of a normal year. There are known statistical techniques that can be used to normalise revenues for temperature-related effects;
    2. The Commission's real revenue growth assumption of 1.5% per annum is unrealistically high and should be business-specific. The use of Economic Insights' "output measure" from its TFP modelling appears to be based on convenience, and the Commission does not appear to have undertaken any proper comparative analysis of alternative approaches and data sources. Even under the Economic Insight

approach it is clear that EDBs experience considerable divergence in output growth.

3. Unison agrees that the Commission should adjust real revenue growth forecasts for economic and demographic factors expected over the 2010 to 2015 regulatory period. However, the relationship between revenue growth drivers and GDP has not been robustly developed;
- c) Claw-back should apply. The Commission has consistently expressed the view that what matters most for investment incentives is that investors can expect to make a return on future investments. From the start of the regulatory period in 2010, Unison continued to invest in its network under an expectation that the Commission would ensure that those investments would be compensated. A failure to apply claw-back in circumstances where there is a material disadvantage to Unison would undermine confidence in the regulatory regime. In particular, this is of concern as Unison has had to write-off a portion of its RAB due to the retrospective change in treatment of capital contributions in 2009/10, prior to the claw-back period. While there may be some administrative inconvenience, applying claw-back would not distort future decision-making as is asserted by the Commission, as all EDBs would have an expectation that future investments would (under either a DPP or CPP) earn their WACC.

### **1.3 Structure of this submission**

7. Unison's submission is structured as follows:
  - a) First, we address the Commission's conceptual framework for DPP/ CPP regulation;
  - b) Second, we address the Commission's modelling framework, highlighting a number of areas that the Commission must address in establishing reasonable DPP paths;
  - c) Third, we address claw-back; and
  - d) Finally, we address how EDBs might address compliance.

## **2 DPP/ CPP FRAMEWORK**

### **2.1 Unison's understanding of the Commission's approach**

8. In the August 2009 Discussion Paper, the Commission proposed an approach to starting price adjustments based on a band around WACC. Those EDBs whose returns fell inside the WACC band would face no starting price adjustment, whereas those whose returns were above the band would face a decrease to the top of the band, and those below an increase to the bottom of the band. The Commission's logic was that there was uncertainty in the ROIs, which needed to be dealt with separately from uncertainty in the estimation of WACC. Therefore the Commission would adjust prices to an estimate of where there would be some statistical confidence that the ROI would not be statistically different to the WACC.
9. Unison and a number of others submitted that this approach would not provide the correct adjustments to ensure that the statutory objective, of only a few CPP applications by EDBs, is met. If the Commission established a band which was significantly less than the WACC, then CPP applications would be made simply to achieve the WACC, rather than to meet any significant increase in capital expenditure. The ENA subsequently provided statistical analysis demonstrating the variability in ROIs, and proposed an approach which sought to ensure that only a small proportion of EDBs would need to apply for a CPP, in line with the statutory scheme.
10. The Commission appears to have accepted the principle that each EDB should have a reasonable expectation that under a DPP it should be able to earn its cost of capital, without needing to resort to making a CPP application. However, a fundamental difference exists between the ENA proposal and the Commission's. In the Commission's view the role of a CPP is as a "safety valve", with relatively low barriers to EDBs accessing a CPP. The basis for the Commission's approach is as follows:
  - a) The Commission states that any supplier facing subnormal returns under a DPP will apply for a CPP, and therefore the actual cost of setting starting prices below normal returns is the cost of a CPP application, not that investment will be deterred.<sup>1</sup> On the other hand there is no mechanism for correction of above normal returns under a DPP.
  - b) The Commission states that the majority of incremental costs of a CPP application are recoverable and are therefore incurred by a supplier's consumers rather than the supplier.<sup>2</sup>

<sup>1</sup> Commerce Commission, 2010-2015 Default Price-Quality Path Starting Price Adjustments Update Paper, 11 April 2011, paragraphs 2.9 and 4.59.

<sup>2</sup> Commerce Commission, 2010-2015 Default Price-Quality Path Starting Price Adjustments Update Paper, 11 April 2011, paragraph 4.65

c) Given the above, the Commission argues that "the consequences of an underestimate of a supplier's actual profitability are more serious than that of an overestimate in terms of the probability that the error will have a detrimental impact".<sup>3</sup>

11. Unison submits that this role of a CPP is at odds with what was intended by Parliament, is inconsistent with the statutory framework, and under-appreciates the costs and risks perceived by EDBs in making a CPP application.

12. Relevant Commission comments are as follows:

4.64 As set out in the IM Reasons Paper, most (if not all) of the information necessary to prepare a CPP proposal should be readily available to a supplier, whether or not it is applying for a CPP.<sup>75</sup> A majority of the requirements relating to a CPP are therefore unlikely to represent an additional cost to suppliers. The additional cost that a business is likely to incur with making a proposal are likely to be the costs associated with auditing and verifying the proposal, in particular the requirement to provide an independent verification report completed and included alongside the proposal.

...

4.68 As highlighted above, moving to a CPP that better meets a supplier's particular circumstances will involve cost but is likely to result in benefits (such as providing for a step change in investment that better meets consumers' demand). The Commission considers that these benefits would outweigh the costs incurred by consumers as a result of a supplier applying for a CPP. Because suppliers have the option of applying for a CPP, the Commission does not consider that it needs to make a generous allowance for uncertainty in setting starting process.

13. And in footnote 76, the Commission states:

The ENA submitted that one of the possible consequences of setting starting prices too low is that an EDB may discontinue investment in its network which in turn may lead to a reduced quality of services. This might only be a potential consequence if the regime only consisted of a DPP. Given that the regime provides for an alternative price path in the form of a CPP, the discontinuation of an investment as a direct result of regulatory decisions on starting prices under the DPP is unlikely to be an observed outcome.

14. In the following subsections Unison addresses the relevant statutory considerations, the costs and risks an EDB would face in making a CPP application, the need to distinguish between uncertainty in the WACC versus uncertainty in measuring and projecting returns, and finally recommends an approach and matters that would need to be considered in implementing that approach.

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<sup>3</sup> Commerce Commission, 2010-2015 Default Price-Quality Path Starting Price Adjustments Update Paper, 11 April 2011, paragraph 4.62.

## **2.2 Statutory framework for CPPs**

15. Unison submits that it was clear when the new Part 4 was introduced that CPPs were intended to be the exception, not an event with high probability of occurrence due to the manner in which the DPP has been reset. CPPs were intended to deal with situations of abnormally high capital expenditure, or other atypical events. Section 53K sets out the purpose of default / customised price-quality regulation as follows:

The purpose of default/customised price-quality regulation is to provide a relatively low-cost way of setting price-quality paths for suppliers of regulated goods or services, while allowing the opportunity for individual regulated suppliers to have alternative price-quality paths that better meet their particular circumstances.

16. Unison submits that DPPs and CPPs are intended to work together to provide a regime that is low cost overall, recognising that it is not desirable for a significant number of EDBs to apply for CPPs. This is reflected in:

- (a) the stated policy concern that "a large proportion of firms [might] propose customised terms, thereby undoing the cost-effectiveness benefits of [default paths]";<sup>4</sup> and
- (b) Parliament's stated objective to "tailor the regime to New Zealand's small size (with small firms and limited resources)".<sup>5</sup>

17. Specifically, the effective operation of the DPP/ CPP regime requires that:

- (a) CPP proposals are the exception to the rule. To achieve this, DPPs must be set in the way that meets the needs of most suppliers. If DPPs are too stringent in their application:
  - i. suppliers will be forced to apply for a CPP in order to receive satisfactory outcomes (and any more than a few CPP applications in one regulatory period is likely to undermine the intended low cost nature of the regime); and
  - ii. given CPP proposals are risky, expensive and time consuming, it is also likely that some suppliers will be forced to choose to remain on a defective DPP, negatively impacting on investment and maintenance decisions.
- (b) CPPs are available to suppliers to accommodate their specific circumstances due to, say, a step change in investment that better meets consumer's demands. This is reflected by the stated policy objectives that:

<sup>4</sup> Ministry of Economic Development, *Review of Regulatory Control Provisions under the Commerce Act 1986: Discussion Document*, April 2007, paragraph 163.

<sup>5</sup> Explanatory Note to the Commerce Amendment Bill 2008, page 3.

- i. a key weakness of the previous regime was that it did not provide firms with an ability to seek *ex ante* approval of "major capital expenditure" or "abnormal investment";<sup>6</sup>
- ii. accordingly, CPPs would be expected to relate to "significant capital expenditure (that is, of a different level and character than in the recent, say 10 years, past) required in order to meet customers' quality expectations and requirements";<sup>7</sup> and
- iii. In the First Reading Debate on the Commerce Amendment Bill, then Minister of Commerce Lianne Dalziel said<sup>8</sup>:

Suppliers may apply to the commission for a customised price-quality path if they have special requirements, such as needing to make significant new investments...

The replacement of Part 4A is expected to provide much more certainty for businesses, including giving them an upfront opportunity to get approvals for customised price-quality paths to cover the cost of a step change in investment requirements, for example.

18. That CPPs are envisaged to be the exception, rather than the rule, is further emphasised by the Act providing that the Commission is required to process only four CPP applications a year, and CPP applications cannot be made in the final year of a regulatory period.
19. Overall, Unison submits that the Commission should recognise that policy-makers intended that the regime should avoid the costs and risks of intrusive CPP applications (we elaborate on these in the next section). There was a clear focus by policy-makers on the importance on incentives for investment, whereas the Commission is only required to limit rather than eliminate monopoly rents. This reflects the policy concern that:<sup>9</sup>

The costs of regulatory error tend to be asymmetric (i.e. the cost of errors leading to too-tough control terms and under-investment are likely to outweigh the costs of errors allowing higher than normal rates of return).

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<sup>6</sup> Ministry of Economic Development, *Review of Regulatory Control Provisions under the Commerce Act 1986: Discussion Document*, April 2007, paragraph 49; Cabinet Paper, 22 January 2008, paragraph 40.

<sup>7</sup> Ministry of Economic Development, *Review of Regulatory Control Provisions under the Commerce Act 1986: Discussion Document*, April 2007, paragraph 171.

<sup>8</sup> Parliamentary Debates (Hansard) for Thursday, 10 March 2008.

<sup>9</sup> Ministry of Economic Development, *Review of Regulatory Control Provisions under the Commerce Act 1986: Discussion Document*, April 2007, paragraph 75.

### **2.3 Costs and risks associated with applying for a CPP**

20. The Commission assumes that an EDB will find it relatively attractive and costless to apply for a CPP in the event that a DPP does not meet its needs, especially as audit and independent verification costs can be passed through to consumers.
21. In regard to costs, Unison submits that the Commission has substantially underestimated the costs of preparing a CPP application and working through the process. There is a substantial difference between the information used in a business to manage itself on a day-to-day, year-to-year basis compared to that which would be required to apply for a CPP. A key difference is that Boards do not have any need for capital and operating expenditure plans that cannot be revisited or amended for five year (regulatory) periods. While EDBs must have long-term plans for internal purposes, their primary purpose is to provide a long-term context for near-term decision-making (e.g., to establish sustainable resource requirements, understand long-term funding requirements).
22. To prepare a CPP application will require significant effort and improved modelling and forecasting tools. It will not be an exercise in simply having existing plans audited and verified. Compared to existing disclosed AMPs, Unison would expect any CPP application to have significantly greater attention on outer year forecasts, as such forecasts would directly translate into financial outcomes that cannot be revisited.
23. A further difference between a Board reviewing an EDB's budgets and the Commission evaluating a CPP is that Boards have regular and ongoing interactions with Management. There are not the same concerns about "information asymmetries" that would cause Boards to require independent verification or endless volumes of data and written justifications for projects. While we would agree that well-managed EDBs should be capable of producing a robust CPP proposal, this will not be the incremental activity envisaged by the Commission. Rather an application would be a costly exercise, both in direct costs and opportunity costs for staff required to prepare any proposal.
24. Making a CPP application also involves risk to the EDB of a worse outcome, since applications cannot be withdrawn. This is because the Commission and, or, its experts may take a different view on operating and capital expenditure costs or other key forecast variables. It is evident from overseas experience that regulators have frequently significantly reduced capital and operating expenditure proposals put forward by regulated suppliers. It is difficult to know whether the extent of those reductions has been excessive. However, it does highlight that there can be significant divergences in views between regulators and suppliers and *ex post* outcomes have not always shown that the regulator was "right". For example, returns fell below the *ex ante* WACC for a number of New South Wales distributors in the early 2000s.
25. Accordingly, consider the position of an EDB where the Commission has set the price path too low by, say, 4% per annum. The EDB will face the choice of:

- a) Cutting operating and capital expenditure to meet the shortfall (most likely operating expenditure as this has a more direct short-term impact on returns, whereas a large amount of capital expenditure has to be avoided to increase returns); or
- b) Apply for a CPP, taking the risk of the Commission taking a different view of the input assumptions under-pinning the CPP, as well as the costs incurred in working through the process.
26. A prudent EDB is likely to take the first option. As the Commission's indicative model shows, relatively small changes in input assumptions can make a material difference to any  $P_0$  adjustment. For example, a 1% difference in the real revenue growth forecast would lead to a 3.1% difference in Unison's price path according to the Commission's model. Accordingly, only in circumstances where the DPP path is substantially incorrect, would an EDB be likely to apply for a CPP. In the interim an EDB is likely to defer capital and operating expenditure until a point is reached that the EDB can no longer sustainably meet the quality targets, placing consumers at risk of a less reliable network.
27. In addition to the process risks, EDBs also face a barrier if WACC parameters have moved adversely compared to those under-pinning a DPP determination. An EDB that has locked in its funding costs in the September prior to the start of the DPP to align with the regulatory period, will then face the jeopardy that a DPP path may be insufficient to cover those funding costs, but a CPP path would be based on a lower WACC. EDBs cannot simply adjust their funding costs in the event they are forced to apply for a CPP based on a lower WACC.
28. Such a hurdle is already evident from the Commission's recent WACC determinations, where the vanilla WACC has fallen from 8.77% to 8.05% between 2009 and 2010. By changing the WACC in the Commission's illustrative model from 8.77% to 8.05%, this reduces the five year price path adjustment for Unison from 7.9% to 2.0%.<sup>10</sup> Accordingly, under current market conditions the Commission would have to be wrong by more than 5.9% in the starting price adjustment for it to be viable for Unison to apply for a CPP, even before any risk factor is considered in evaluating the merits of CPP application. Accordingly, it is wrong for the Commission and Economic Insights to assume that investment incentives will not be distorted by a DPP that is set too low, because there is an option to apply for a CPP. Confronting this invidious situation, an EDB would either be forced to cut capital and operating expenditure to cover its ROI requirement or accept a sub-WACC return if the DPP is set too low.
29. Under the Commission's approach, EDBs would also face the prospect that a CPP application may not be considered for a period of time if a proposal is not prioritised by the Commission to be considered in the first year. Accordingly, those EDBs will face an extended period of uncertainty whilst they wait for the Commission to process the application. In such circumstances an EDB would

<sup>10</sup> A similar result applies to all other EDBs.

prudently manage such risks by deferring capital and operating expenditures until there is certainty that such expenditures have been approved.

30. In summary, for the foregoing reasons, EDBs are unlikely to avail themselves of a CPP except in circumstances where a DPP path significantly over-estimates expected returns. Accordingly, the design framework needs to take steps to ensure that EDBs can, with high likelihood, sustain their DPP path.

#### **2.4 “No need to apply a margin because the WACC is already biased”**

31. As part of its reasoning that a margin is not required in setting a DPP, the Commission now contends:

The proposed approach compares suppliers' forecast profitability with the 75th percentile WACC estimate. Starting price adjustments will therefore be biased in favour of suppliers due to the use of this WACC estimate. The Commission considers that the proposed approach does not need to provide further bias in favour of suppliers, by providing for uncertainty in profitability forecasts.

32. Unison is concerned that the Commission is putting an interpretation on the 75th percentile WACC that is inconsistent with how investors view required returns. In estimating the WACC parameters, the Commission established as a point of principle that the risks of under-investment meant that the WACC should be set at a level where there would be a degree of confidence that the estimate would not under-compensate investors. The Commission therefore selected parameters at their 75th percentile value to establish the WACC where investment would be incentivised.
33. It is inconsistent now for the Commission to effectively take the risk, that by not recognising the uncertainty in making starting price adjustments, EDBs may still invest optimally if the DPP path leads to sub-WACC outcomes. This signal suggests that the Commission is not averse to taking a risk on setting prices low when it makes parameter judgements, giving rise to concern that the Commission is now implicitly targeting a lower WACC.
34. We also note that the Commission has previously recognised that uncertainty in ROIs is distinct from uncertainty in WACC:

The Commission notes that uncertainty in the returns assessment is distinct from the uncertainty in determining an appropriate WACC point estimate.<sup>11</sup>

35. No reasons appear to have been advanced by the Commission in setting aside uncertainty in ROIs under its new approach, but it is clear from the Peter Thomson/Tony van Zijl work that there is material variability in ROIs, which must be dealt with under the DPP regime.

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<sup>11</sup> Paragraph 4.16 of the August 2009 Discussion Paper.

## **2.5 Recommended approach**

36. In light of these considerations, Unison submits that it is in line with the statutory scheme and purpose statement that the Commission take a more conservative view in setting starting price adjustments. We agree with the Commission that it does not need to make a “generous” allowance for uncertainty, but some allowance must be made to ensure that the regime adheres to the statutory requirements of DPP/CPD regulation and achieve the Purpose Statement. A balance must be struck between the interests of consumers in not paying prices that are too high, relative to the adverse consequences of setting the DPP too low.
37. To provide a context for how this assessment may be made, consider for example, adopting a 0.5% margin above the WACC. A margin at this level would equate to distribution prices being around 3% higher than otherwise. For a typical domestic consumer, this would equate to an estimated \$1.40 per month on a monthly electricity bill of \$168.<sup>12</sup> Given the significant uncertainties associated with the Commission’s modelling approach, a margin at this level would be inconsequential from a consumer perspective (in terms of income and allocative efficiency impacts), but would better mitigate the risk of under-investment/under-maintenance.
38. At this point Unison has not established a definitive view on how to establish quantitatively an appropriate margin over the WACC to mitigate the risks of adverse consequences of over-estimating expected ROIs in making starting price adjustments. In part, this will depend on the degree to which there is confidence that starting price adjustments are based on methodologies and data that can be shown to be likely to match EDBs’ expected returns. Unison has a number of concerns about the input assumptions to the DPP model, which would suggest that the margin would need to be above the 0.5% used for illustrative purposes in paragraph 34 in order for Unison to achieve the Commission’s WACC.

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<sup>12</sup> Based on MED’s February 2011 quarterly survey of electricity prices, and assuming that transmission charges are 25% of a distributor’s line charges.

### **3 MODELLING FRAMEWORK**

#### **3.1 Unison's understanding of the Commission's approach**

39. As Unison understands it the Commission's modelling framework is as follows:

- a) Based on un-normalised 2009/10 results the Commission will project forward each EDB's returns over the regulatory period, based on business-specific starting conditions and industry-wide input assumptions;
- b) These returns will then be compared to WACC to establish the expected present value of excess/insufficient earnings;
- c) An adjustment will be made to 1 April 2012 prices, reflecting the notional/allowable revenue comparison in the DPP Determination, and a common X-factor;
- d) The adjustment may be made based on a five-year or three-year IRR calculation: the Commission seeks feedback on the application of claw-back; and
- e) No allowance is to be made for uncertainty in how suitable the 2009/10 ROIs are as a base to project future returns or in the projection framework. If EDBs find that their price path does not deliver a sufficient return then they can either improve efficiency or apply for a CPP.<sup>13</sup>

#### **3.2 Overall modeling framework**

40. As noted in Unison's key submission points, we support the Commission's new approach of projecting profitability by projecting key parameters that will drive returns over the coming regulatory period. This support is subject to the caveat that the key input parameters need to be established using a robust process and analytical techniques.

41. Unison acknowledges that there is a need to strike a balance between cost and complexity in developing a projection approach; a DPP path is not intended to be based on detailed business-specific modelling. Nevertheless, each business should have a reasonable expectation that the modelling framework should be unbiased, such that for any given business there should not be any different probability of needing to apply for a CPP and, on an expectations basis, should be able to remain on the DPP. Nothing in the legislation prevents the Commission from undertaking business-specific analysis of particular key parameters, and indeed the Commission must carry out such analysis if this is required to ensure that the overall DPP/ CPP approach is low-cost.

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<sup>13</sup> See paragraph 4.57 of the Update Paper.

42. In this submission, we provide some preliminary comments on the Commission's modelling framework and suggestions for further research and analysis the Commission should undertake. Unison expects to develop its thinking on these issues and will make further comments by 23 May.
43. Overall, in light of the fact that DPPs are required to be established using low cost approaches, Unison submits that the Commission's general approach of using business-specific starting conditions (e.g., RAB, recent capital expenditure etc) and projecting key variables forward is a reasonable approach. The key challenges for the Commission are to:
- a) determine robust escalators; and
  - b) to account for uncertainty associated with the use of a single data point to establish the starting conditions.
44. In regard to developing robust escalators, Unison submits that each input assumption used in the Commission's modelling should be examined for materiality and the likelihood that circumstances for that variable would differ between businesses, such that it may be desirable to use business-specific input assumptions. For example:
- a) The CPI forecast has a material impact on EDBs, but does not differ across New Zealand and therefore it is suitable to use it as an industry-wide input assumption;<sup>14</sup>
  - b) Revenue growth has a highly material impact on the DPP price path, but is highly dependent on business-specific drivers. For example, it is quite clear from historical data that different areas of New Zealand have experienced different growth rates (e.g., in population and economic growth). If the Commission assumes a common rate of revenue growth across all regions, then it is highly likely that EDBs in those low growth regions will face a bias in the modelling approach leading to an unjustifiably low DPP path that could be avoided through the use of region-specific growth forecasts;
  - c) On the face of it, capital expenditure growth forecasts do not have a material impact on EDBs DPP paths. For example, changing the 3.3% per annum capital expenditure growth assumption to 4.3% per annum changes the five-year sector-wide estimate of the NPV of costs by 0.2%. Nevertheless, the Commission should seek to validate its capital expenditure forecast projection, with reference to reputable forecasting of key materials costs, as well as labour input costs. Unison observes that commodity prices (e.g., copper) continue to rise at significant rates, and once the Government's fibre projects commence, there will be substantial pressure on key civil resources, which is likely to contribute to rising capital goods price increases.

<sup>14</sup> In addition, we also note the CPI used for indexing the asset base should align to the expected CPI used to establish the WACC in September 2009.

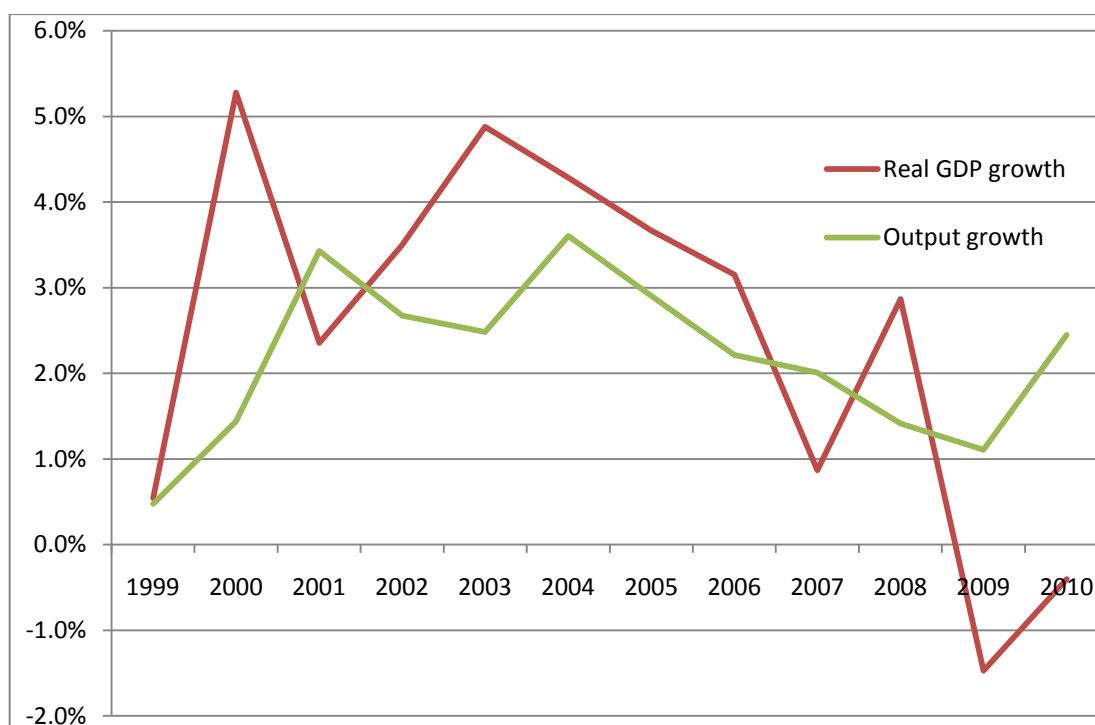
45. Once a decision has been made on whether or not an industry-wide approach is to be taken, it will then be necessary to undertake robust analysis of data relevant to each parameter to establish a value that is, based on information available, an unbiased estimate of how that variable is likely to change over time. At this point the Commission does not appear to have undertaken a comprehensive analysis of the possible sources of data for populating the input parameters, but rather has adopted a relatively heuristic approach with little evidence of testing the validity of the resulting parameter proposals. Unison submits that this is not an appropriate approach given the significant consequences of parameter error on the starting price adjustments.
46. In the next sections we:
- a) comment on the Commission's approach to real revenue growth as our initial assessments indicate that it is this variable which the Commission's model is most sensitive to, and which requires more research to establish final projections; and
  - b) demonstrate the risks associated with relying on an un-normalised 2010 dataset, which in Unison's case leads to a significant disadvantage under the Commission's modelling approach.

### **3.3 Real revenue growth assumption**

47. The Commission proposes a cross-sector real revenue growth assumption of 1.5% per annum, based on the following propositions:
- a) Based on the Economic Insights output growth measure, the Commission calculates trend output growth of 2.1% per annum over the period 1996 to 2010;
  - b) The Commission "explores" the relationship between GDP growth and real output growth by charting time series of the real output and real GDP. Both series increased over the 1996 to 2010 period. The Commission calculates real GDP growth was 2.6% per annum over the 1996 to 2010 period;
  - c) The rolling average difference between real output growth and real GDP growth is 1%;
  - d) As the Reserve Bank predicts real GDP to grow by 2.5% per annum over the 2010 to 2014 period, a real output growth of 1.5% is predicted for EDBs.
48. Economic Insights, who reviewed the Commission's choice, states that in its view a 1.5% per annum real revenue growth factor is conservative and likely favours EDBs.

49. Unison has a number of comments to make on the Commission’s analysis:

- a) As a general matter, the real revenue growth assumption variable is extremely important in the Commission’s model and needs to be established carefully. There is little evidence of testing or rigour in the development of the Commission’s initial proposal: for example, cursory scrutiny of the data used in the Meyrick and Associates 2007<sup>15</sup> report shows substantial variation in output growth rates across EDBs. Many EDBs have experienced low, and even negative growth rates.
- b) Vector and, to a lesser degree, Powerco dominate the output growth measure. No testing has been completed of how representative they are of conditions in the rest of New Zealand, but we note that their networks have comprised some of New Zealand’s most strongly growing cities: Auckland and Tauranga.
- c) We agree that some effort must be made to normalise the growth assumption for future revenue drivers. However, the Commission’s linkage between GDP and real output growth lacks robustness. The correlation between real GDP and output growth rates is only 33%, and in a simple regression of output growth on real GDP growth, there is no statistically significant relationship. The following chart, which shows the two different growth rate series, illustrates this poor correlation:



50. At this point, all that can be reasonably said about the 1.5% real revenue growth assumption is that it purely arbitrary, based on an unknown correlation of Economic Insight’s output growth variable and real revenue growth drivers, and

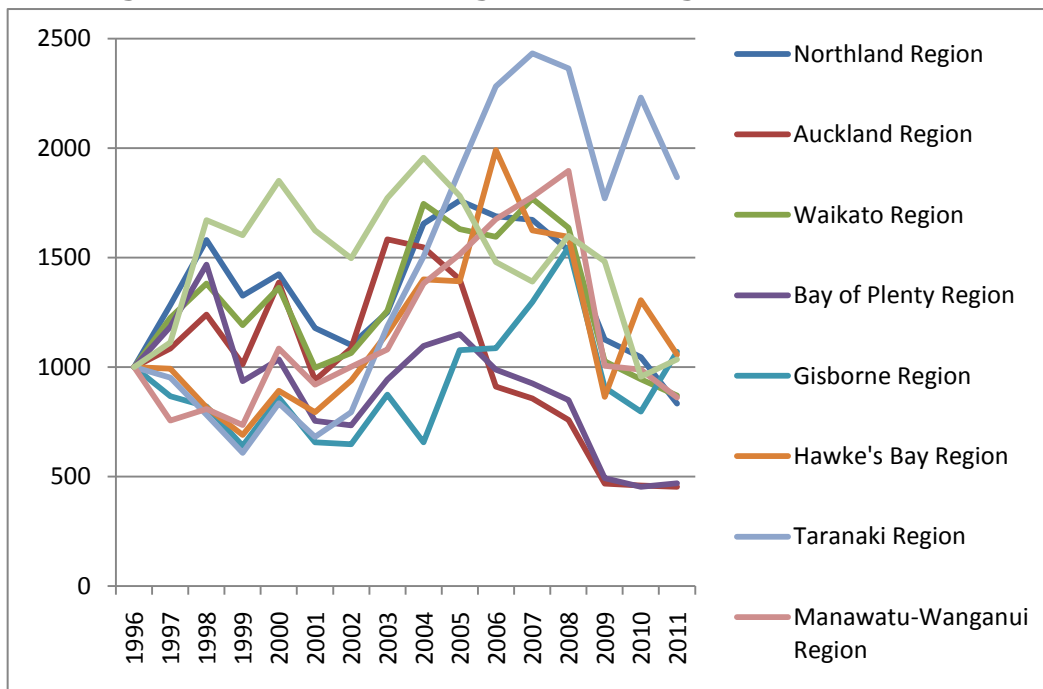
<sup>15</sup> Meyrick and Associates (2007) *Electricity Distribution Businesses Productivity and Profitability Update*

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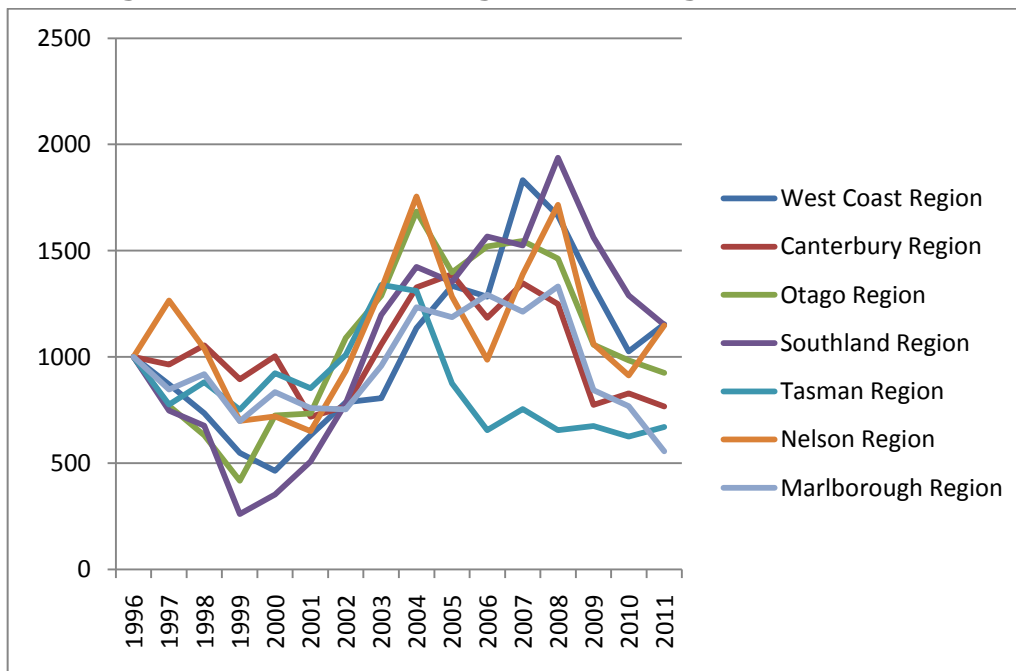
an unscientifically determined relationship between real GDP and output growth. This is inadequate for such a critical variable.

51. In addition to these concerns about the estimation of an industry-wide estimate of real revenue growth, there is strong evidence to support different revenue growth assumptions based on regional factors. For example, new connections represent new businesses and dwellings. The following charts represent the levels of building consents (on an index basis 1996=1000) by region. From the building peaks there has been a substantial decline in new dwelling consents. In some regions, consents are less than 50% of their 1996 levels:

**Figure 1: North Island Regional Building Consents**



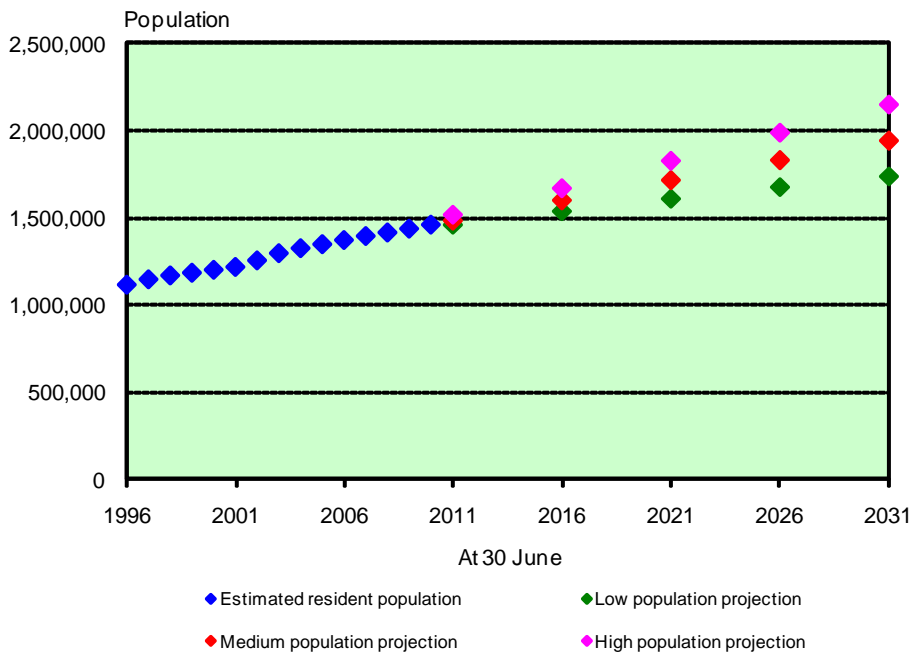
**Figure 2: South Island Regional Building Consents**



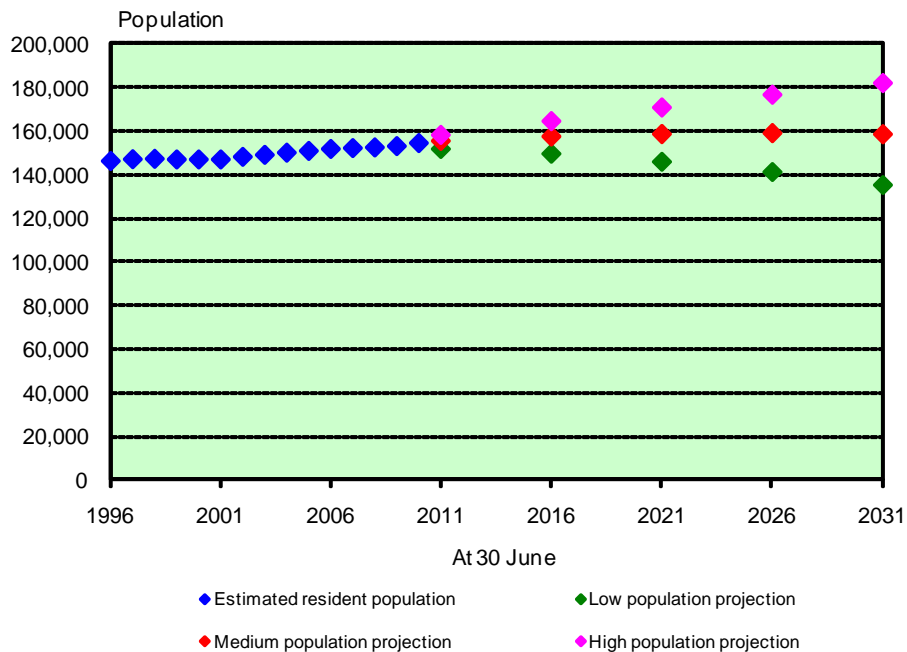
52. On a projections basis, Statistics New Zealand’s local population projections<sup>16</sup> also indicate significant ongoing regional disparities, which would manifest in divergent real revenue growth rates. We reproduce charts for a few regions to highlight the extent of regional dispersion in projected population growth:

<sup>16</sup> Statistics New Zealand (2010) *Local Population trends* December 2010

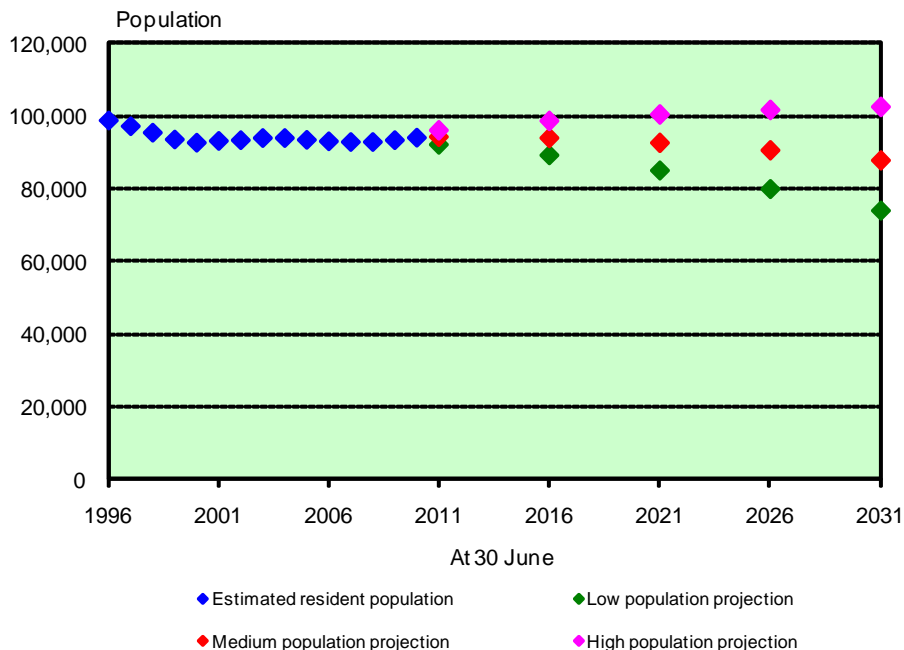
**Estimated and Projected Population – Auckland Region**



**Estimated and Projected Population – Hawke's Bay Region**



**Estimated and Projected Population – Southland Region**



- 53. Overall, Unison would be very happy if it could achieve long-term real revenue growth of 1.5% per annum. Economic Insights suggestion, that if anything 1.5% real revenue growth is conservative, is not grounded in any proper analysis. Given the depressed economic conditions, deteriorating net migration picture, and low numbers of building consents, Unison submits that average real revenue growth is likely to be substantially lower than the forecast 1.5% per annum over the regulatory period. Even if 1.5% was the best estimator of national real revenue growth, it is evident that it would be necessary to modify this on a regional basis.
- 54. Accordingly, Unison submits that the Commission should place significant effort into establishing a more robust basis for projections, including at a regional level.

**3.4 Reliance on the 2010 dataset**

- 55. A matter that does not receive attention in the Commission’s Update Paper is the reliance on the 2010 data as the base for making projections. As the work by Peter Thomson and Tony van Zijl demonstrated, there is significant variability in ROIs, so relying on an un-normalised single data point introduces significant potential for error in the starting price adjustment process. In Unison’s case 2010 represented an abnormal year, where revenues grew significantly due in material part to the cold winter experienced, as demonstrated in these excerpts from NIWA reports:

May

Early start to winter. Lowest May temperatures ever in many locations and double normal rainfall for most of South Island.

Temperature: Well below average over most of the country; many areas experiencing lowest recorded May temperatures.

Rainfall: Well above normal rainfall in Northland, Wairarapa, Canterbury, Otago and Southland. Above normal everywhere else with the exception of western Bay of Plenty and Tasman Districts.

Sunshine: Below normal along Taranaki and east coast of the North Island and Central Otago; above normal in Northland, Manawatu, the south-west of the North Island, and the West Coast.

Extremely low temperatures (between 2.0 and 2.5 °C lower than normal) were recorded over most of the South Island, lower parts of the North Island, King Country, Waikato, Auckland and parts of Northland. Most other locations experienced well below average temperatures (between 1.2 and 2.0 °C lower than normal). The national average temperature of 9.0°C was 1.6°C below the long-term average for May.<sup>17</sup>

#### July

Temperature: Below average temperatures over much of the country, except for near average temperatures in the southwest of the South Island, and the north of the North Island.

Rainfall: Well above normal rainfall in the far south; very dry in Taranaki, the Kapiti Coast, Wellington, southern Wairarapa, Marlborough, Canterbury and Otago. Near normal elsewhere.

Sunshine: Well above average sunshine totals across the northern South Island; gloomy in and around the Capital (Wellington, the Kapiti Coast and the southern Wairarapa).

It was the third month in a row with below average temperatures over much of the country – although the cold temperatures in July were not as unusual as those in May or June. Well below average temperatures for July (between 1.2 and 2.0 °C lower than normal) were recorded in North Otago, alpine areas of Canterbury and Westland, and Waiouru. Most other regions around the country experienced below average July temperatures (between 0.5 and 1.0 °C lower than normal), except for near average temperatures at either end of the country (in the southwest of the South Island and the north of the North Island). The national average temperature of 7.3°C was 0.4°C below the long-term average for July.<sup>18</sup>

#### October:

Coldest October in over half a century

- Temperature: The coldest October in 64 years, with all-time record low October temperatures in many areas. Exceptionally late snowfalls. Record low October temperatures were recorded on the 4th/5th in most North Island locations, and on the 9th at many South Island sites.

<sup>17</sup> <http://www.niwa.co.nz/our-science/climate/publications/all/cs/monthly/mclimsum-09-05>

<sup>18</sup> <http://www.niwa.co.nz/our-science/climate/publications/all/cs/monthly/climsum-09-07>

Unseasonable snowfalls characterised October 2009. An exceptionally heavy snow event on the 4th/5th in the Hawke's Bay and Central North Island was estimated to be the worst in October since 1967, stranding hundreds of travellers, closing roads, and resulting in heavy lambing losses. Many locations in the North Island experienced record low October temperatures on the 5th. Snowfall was also observed in Taranaki, Waikato and Rotorua on the 6th, for the first time in about 30 years around Rotorua. Snowfall also affected Otago and Canterbury on the 8th/9th, with many sites observing record low October temperatures on the 9th.<sup>19</sup>

56. By adopting an un-normalised revenue position to make starting price adjustments will significantly and predictably disadvantage Unison through-out the 2010-2015 regulatory period.
57. Unison has also checked its records to determine whether as a result of the abnormally cold weather in 2010, there were additional network costs such that this would offset the ROI impact of a cold winter. It is notable that Unison's SAIDI level for 2010 was 110 minutes, well below the 152.7 minute quality threshold, so costs were not materially adversely impacted by storms etc. The October storm referred to in the NIWA information above caused Unison to incur an additional ~\$260,000 above budget (capex and opex combined), which is minor in relation to the weather impact.
58. As weather is such a significant influence on EDB's revenues, Unison submits that the Commission cannot ignore its influence on the base year revenues and must make some effort to either adjust for it directly or account for it in the overall starting price adjustment framework. Alternatively, the Commission could require each EDB to normalise their revenues for temperature effects, using an accepted methodology.
59. Unison also notes that all EDBs should now have their 2011 revenue results, so actual revenues could be used for the 2011 year, rather than estimates.

<sup>19</sup>

<http://www.niwa.co.nz/our-science/climate/publications/all/cs/monthly/climate-summary-for-october-2009>

### **3.5 Consistency of WACC and CPI inputs**

60. The Commission's projection model is also extremely sensitive to the CPI forecast.
61. The Commission adopts the WACC calculated as at September 2009 to establish the relevant starting price adjustments. It is important for the Commission to recognise that the WACC calculated in September 2009 is a nominal WACC, which includes an implicit assumption about expected CPI inflation over the 2010-2015 regulatory period. At the time the WACC was set, cash returns would have expected to be 6.4% (8.7% less 2.3% inflation assumption) and capital gains based returns 2.3%, (RBNZ's then CPI forecast which applies to the revaluation of the RAB).
62. It is necessary to ensure consistency between the expected CPI used to establish the WACC and the expected inflation over the regulatory period. Absent such consistency, if the Commission established the WACC at 8.7% in 2009, but inflation expectations grew to, say, 10% by the time of the reset in October 2011, then it would be expected that nominal interest rates in October would also be considerably higher than those used to establish the WACC. To put it another way, investors would not expect a negative cash return if the inflation expectation in October 2011 was 10%, but the WACC remained at its 2009 level.
63. Accordingly, to ensure consistency with the WACC input methodology, the Commission should use the Reserve Bank's CPI forecast available in September 2009 for the purpose of revaluing the RAB. At that time, the RBNZ was forecasting CPI inflation of 2.3%, which just happens to coincide with the 2.3% forecast in the March 2011 Monetary Policy Statement ("MPS"), although this may change in the June MPS.

## **4 CLAW-BACK**

### **4.1 Policy issues**

64. The Commission seeks views on whether or not claw-back should apply.
65. The Commission states that the disadvantages of claw-back may be as follows:
- a) It may distort future decision-making if the claw-back amounts are substantial. The Commission does not specify how future decisions may be affected;
  - b) It may be seen as penalising or rewarding past pricing decisions, whereas economic decisions should be based on forward-looking considerations; and
  - c) Claw-back would make the DPP reset more administratively complex.
66. In respect of distorting future decisions, Unison makes the following comments:
- a) As the Commission has oft-repeated, investors must have a clear expectation that they can make a return on their investments, past and future, in order to continue to invest. Claw-back would not disturb this principle. So long as the Commission's model (either under a DPP or CPP) provides for returns to be made on future investments, and provides for a return on investments during the period 2010 – 2012, investors would have no reason not to invest;
  - b) Vector and Powerco are operating under a claw-back situation under the terms of the Gas Authorisations, whereby their prices are lower than otherwise to refund the Commission's estimated excess recoveries between the time of the Provisional Authorisation and Final Authorisation. If there is evidence that claw-back may distort future decision-making then Vector and Powerco would provide good case studies;
  - c) If the Commission refuses claw-back for companies that have earned insufficient returns over the 2010-12 period, then the principle of FCM is not met. By the Commission's logic this should cause investors concern about the credibility of the regulator;
  - d) Claw-back may cause prices to be higher or lower than they would otherwise be absent claw-back. From a consumer perspective, given that EDB prices make up around 40% of overall delivered electricity charges, and demand elasticities are very low, there should be muted impact on consumption decisions; and
  - e) Although input methodologies only became known in December 2010 (meaning that the impact on ROIs could then be calculated), if the Commission is to sustain its argument that investors expectations were set by reference to the prior information disclosure regime, then investors would have expected much lower prices than is

predicted by the Commission's model. This is because the changes in treatment of capital contributions and tax approach have reduced the extent of price reductions in the short to medium term.

67. Accordingly, it is unclear why claw-back would distort investment decisions or cause any surprises for investors which would undermine confidence in the regulatory regime.
68. In respect of rewarding or penalising past pricing decisions, Unison agrees that, in general, regulatory decisions should not be retrospective. However, this is a unique situation where input methodologies have been established and where the prospect of claw-back has clearly been signalled. The Commission should be mindful that the 2009 reset has been effectively deferred, so that input methodologies could be established and prices be established on the basis of those methodologies. The legislation clearly provided for claw-back given this sequence of regulatory activities and hence, it comes as no surprise that claw-back may apply. Pricing decisions have been made with a clear context that they may be effectively modified by the application of final input methodologies.
69. Where claw-back may cause concern, however, is in respect of efficiency improvements made during the 2010 to 2012 period. Investors would justifiably object to efficiency improvements made during that period being confiscated due to the application of claw-back. Unison submits that this could be addressed as a design issue, rather than be a barrier to claw-back.
70. In respect of administrative complexity, Unison submits that the value of claw-back to affected consumers/suppliers is sufficiently material that administrative complexity is not a material consideration in comparison.

#### **4.2 Claw-back – implementation issues**

71. If the Commission is to apply claw-back then two questions must be addressed:
  1. How to calculate the claw-back amounts; and
  2. How to adjust prices/returns.
72. First, Unison notes that the definition and constraints on claw-back are set out in section 52D:

##### **52D Meaning and application of claw-back**

- (1) A reference to the Commission applying claw-back is a reference to the Commission doing either of the following:
  - (a) requiring a supplier to lower its prices on a temporary basis in order to compensate consumers for some or all of any over-recovery that occurred under the prices previously charged by the supplier:
  - (b) allowing a supplier to recover some or all of any shortfall in its revenues that occurred under the prices previously charged by the supplier.

(2) If the Commission requires a supplier to lower its prices, it must also require that the lowering of prices must be spread over time in order to minimise undue financial hardship to the supplier.

(3) If the Commission allows a supplier to recover any shortfall, it must require that any recovery must be spread over time in order to minimise price shocks to consumers.

73. In respect of how to calculate claw-back, the Commission has suggested that it may base claw-back on actual financial performance, and therefore would specify a formula to calculate claw-back in the definition of recoverable costs. While Unison agrees that it would be possible to specify claw-back in this manner, the Commission does need to be mindful that if it bases claw-back amounts on actual costs in 2011-12, EDBs may face an incentive to bring forward costs to mitigate any claw-back. It may be appropriate to base the claw-back therefore on the Commission's projected operating expenditure approach.
74. As we note above, it would also be important to recognise that EDBs should not be penalised for making efficiencies in the 2010 to 2012 period. An allowance as a fixed percentage of operating expenditure could be made, with individual EDBs permitted to provide specific evidence of efficiency improvements in the event that the fixed allowance proved inadequate.
75. It is also not clear to Unison that the Act specifically requires claw-back to be based on actual financial results. The Commission may be able to claw-back based on the difference between the actual prices previously charged and the prices that the Commission would otherwise have set had the input methodologies been available earlier, which necessarily would have relied on parameter assumptions and not actual performance. Unison has not sought specific legal advice on this point, but the advantage of this approach is that the amounts would be determined through this determination process, rather than leading to future uncertainty under a formulaic approach.
76. Finally, while the Commission has implicitly suggested that claw-back could be addressed through actual price impacts during this regulatory period, Unison also suggests that the Commission also consider whether claw-back could be implemented as an adjustment to the RAB at the end of the regulatory period, recognising the time value of money in any delay. The Act does not specify any timeframe for how claw-back might apply, and it would be a relatively straight-forward process to calculate a RAB adjustment. This could then be amortised over a period of time to ensure that the requirements to spread claw-back over time are met.

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