



**Submission on 2010-2015 Default Price-
Quality Path for Electricity Distribution:
Draft Decisions Paper**

Unison Networks Limited

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1 INTRODUCTION AND EXECUTIVE SUMMARY

1.1 Opening comment

1. In this paper, Unison responds to the Commerce Commission's "2010-2015 Default Price-Quality Path for Electricity Distribution: Draft Decisions Paper" (Draft Decisions Paper).
2. Unison has read and supports ENA's submission.

1.2 Executive summary

3. The Commission has made major changes to its indicative model of April 2011, many in light of EDBs' submissions that the Commission needed to make its models more reflective of EDBs' individual circumstances (whilst still recognising the intended low cost nature of a DPP).
4. Overall, Unison is supportive of:
 - a) The changes to the forecasting approach, albeit we have some recommendations of how these should be further improved and some errors corrected. In particular, the Commission's approach to real revenue growth has internal inconsistencies which over-states forecast volume growth;
 - b) The change to the modelling framework, which now avoids reliance on 2010 revenues to establish the starting price adjustments; and
 - c) Use of Asset Management Plan (AMP) forecasts for capital expenditure, albeit only because there is an absence of viable alternatives for this reset. Unison has adopted a "smart grid" approach which seeks to enhance capital efficiency. Unison's concern is that by using AMP forecasts, particularly at any future reset, this would immediately transfer forecast capital efficiencies to consumers.
5. Unison:
 - a) Disagrees that claw-back should not apply. We submit that the Commission has overstated the costs of calculating claw-back, and has not justified its conclusion that claw-back would detrimentally impact on incentives. The Commission has applied claw-back in the past (Gas Authorisation) in the same circumstances (mid-period reset) without any apparent negative impact on incentives to invest. We ask that the Commission be transparent about the basis for its reasoning and conclusions in respect of claw-back;
 - b) In the alternative, if the Commission continues to reject claw-back, Unison submits the Commission should reverse the GST adjustment to CPI. If the Commission is to apply a consistent approach to claw-back, then it should not

make retrospective *ad hoc* adjustments which suppress returns in the 2011 disclosure year;

- c) Disagrees with the approach to cash-flow recognition. If the Commission is to account for intra-year cash-flows, then it must be undertaken on a comprehensive basis, and account for working capital and the actual timing of tax payments. The Commission should avoid making arbitrary adjustments to correct for asserted biases in particular variables;
- d) Submits the Commission should undertake work to validate its input price forecasts. Given Unison's recent experience of input price inflation and the evidence provided in the ENA submission, we submit that the Commission's forecasts understate likely inflation. The economy is in a two-step mode currently, with GDP underpinned by commodity export-based sectors, infrastructure investment (including the fibre roll-out, which will directly impact resource pressures for EDBs) and the Christchurch rebuild, whereas consumption-linked sectors, such as retail are struggling. Use of economy-wide input price inflation forecasts does not recognise these differentials.

6. In the remainder of this submission we set out the basis for these views.

2 UNISON RESPONSE

2.1 Overall modelling and forecasting approach

Unison's understanding of the Commission's approach

7. As Unison understands it,¹ the Commission's model:
 1. Establishes the cost building blocks elements for the five disclosure years 2011 to 2015, based on:
 - a. 2010 as a starting point for RAB, operating expenditure, tax positions, and capital expenditure;
 - b. Cost escalations based on 2010 AMP forecasts, real output growth, indexed for various economy-wide measures of input price inflation;
 - c. Asset valuation and tax roll-forward using the relevant input methodology approaches;
 - d. The 2009-based WACC.
 2. Converts the cost building blocks into a net present required revenue requirement for the 2013 to 2015 disclosure years. The present value calculation assumes that revenues and opex are received in the middle of the year and tax payments and other non-cash items occur at the end of the year;
 3. Establishes a starting allowable revenue for disclosure year 2013 taking account of revenue escalation in the 2014 and 2015 disclosure years using forecast CPI and volume growth; and
 4. Converts the 2013 allowable revenue into notional allowable revenue, by taking into account the fact that the DPP compliance formula uses T-2 quantities.

Comments on the approach

8. Compared with the Commission's previous model, which relied heavily on 2010 revenues to determine the starting price adjustments, Unison submits that the building blocks-based approach is an improvement.
9. In general, Unison submits that the modelling framework is reasonable, but we recommend some further improvements and changes to the:
 - a) Discounting approach;
 - b) Treatment of disposals;
 - c) Long-term appropriateness of use of AMP forecasts;

¹ To obtain this understanding took significant effort to trace through the Commission's model; an effort that was replicated across non-exempt EDBs. As a matter of model design, we recommend that the Commission establish future models in a manner that is more transparent and intuitive, as well as holding workshops immediately following release.

- d) Potential understatement of input price inflation;
 - e) Overstatement of expected future volume growth;
10. These matters are addressed in the following sections.

2.2 Discounting approach

Commission's proposal

11. In its July model the Commission has introduced an additional level of precision in its discounting approach, by assuming that all revenues and operating expenditures occur on average midway through the year, but other costs (tax, depreciation, revaluation and return on assets) occur at the end of the year.
12. The Commission justifies this new approach as being more reflective of EDBs' actual circumstances; with the assumption that because more revenues are likely to be received in the first half of the year, this can be offset by recognising tax costs as occurring at the end of the year. The Commission offers no evidence to support these assumptions, or that the tax offset addresses the assumed revenue profile bias.

Unison's response

13. While we understand that the Commission is seeking to improve the precision of its approach, we do not support the change from historical practice unless it is undertaken on a comprehensive basis (for example, by allowing for working capital requirements), nor do we support the use of arbitrary approaches to offset perceived biases (i.e., not recognising provisional tax payments, because of perceived front-loading of revenues in the first half of the financial year).
14. Unison is aware that there are some networks with comparatively flat revenue profiles, some that are summer peaking, and it is also important to recognise that volume growth associated with new connections grows progressively over the year. There is therefore a significant risk attached to making an assumption that there is a uniform revenue bias towards the front end of the year, and that making an *ad hoc* adjustment to the recognition of timing of tax payments is an appropriate "correction".

2.3 Treatment of disposals

15. Unison had not noted the technical guidance offered by the Commission to the information requests:

"The model is consistent with input methodologies as disposed assets do not form part of the closing RAB value with effect from their year of disposal. **The treatment of any gain or loss on disposal of assets is not prescribed by input methodologies, however in providing technical guidance on section 53ZD information requests the Commission clarified that loss on disposal of assets should be recorded as "other" operating expenditure (see response to technical query 11). It also clarified the treatment of assets subject to accounting write-offs (see response to technical query 22).**"

16. As recorded in cell K32 of Schedule A3 of Unison's response to the Information Request, Unison disposed of assets of \$871,833 in 2010, but was not aware of the

Commission's guidance that this should be included in "other operating" expenditure in Schedule A2, which states only \$13k of expenditure. Unison had conceived that Schedules A1 and A2 covered items of operating expenditure, while schedule A3 separately identified RAB-related items, including disposals; so to have included disposals as an item in A3 as well as A2 would have led to a double-counting (absent the Commission's guidance).

17. Accordingly, Unison requests the Commission include the \$871,333 in other operating expenditure, per the Commission's guidance. If the Commission requires Unison to confirm that it should add the \$871,333 of disposals in cell K32 of Schedule A3 to the other operating expenditure items in Schedule A2, by way of re-audited and recertified spreadsheets then we would do so, although given the simplicity of the correction this would seem to be a somewhat excessive requirement.

2.4 Capital expenditure forecasts

Commission's proposal

18. The Commission proposes to use 2010 AMP forecasts adjusted for forecast "all industries" capital goods price index inflation as the basis for capital expenditure forecasts.
19. The Commission notes concerns about the quality of AMP data, but determines that, as suppliers did not know it would be used for the purposes of starting price adjustments, it would be most suitable to use AMP forecasts at this reset, as individual EDBs have wide variations in investment requirements that would not be accommodated by an industry-wide assumption.
20. The Commission agrees with submissions that it would be preferable to use industry-specific price escalation forecasts rather than the economy-wide forecasts of capital goods price inflation, but considered that there was insufficient time to develop an industry-specific approach.

Unison's response – real capital expenditure growth

21. Unison agrees that use of AMP forecasts is likely to be the best available forecasts of capital expenditure in the circumstances. Nevertheless, we do note caution about the appropriateness of using AMP forecasts as we describe in the paragraphs below. We note that the expenditure forecasts were not prepared according to the input methodology approaches, for example, in relation to capitalisation of interest during construction (negative impact on estimated commissioned assets), asset allocation rules (positive impact for those affected), or capital contributions on customer projects (uncertain impact). However, we see little choice but to adopt AMP forecasts in the absence of alternatives that would not result in undue numbers of CPP applications.
22. The Commission does not explain why it chooses the 2010 rather than 2011 forecasts, but we note that in aggregate 2011 forecasts exceed 2010 forecasts and, therefore, we

anticipate a number of EDBs will provide reasons for the use of their 2011 forecasts. Accordingly, it is important that the Commission understand the context for Unison's 2010 AMP and why we consider it is more appropriate to use it.

23. Unison's 2010 AMP reflects a transitional year, where we were shifting from a conventional asset management approach to a "smart grid" approach. A smart grid involves the application of innovative technologies to manage the network, including enhanced load control through smart meters, enhanced network monitoring through high-speed communications systems and deployment of network sensors. Over the course of 2010/2011, Unison carried out testing and analysis of smart grid technologies and in the 2011 AMP adopted a smart grid approach, resulting in a reduced capital expenditure forecast compared to the 2010 AMP. In our view, it would not be appropriate for the Commission to adopt the 2011 AMP as the basis for Unison's capital expenditure forecasts as, in effect, it would result in the immediate confiscation of the initial efficiency improvements that Unison has identified by improving asset utilisation and extending asset lives through innovation. Unison expects to continue to improve its asset management capabilities, resulting in further improvements (relative to forecast) in capital expenditure over time as a result of continuous improvement that underpins a smart grid philosophy.
24. In Unison's view, a key policy issue emerges in determining capital expenditure forecasts for use in starting price adjustments (or indeed in evaluating a CPP application). In an ideal sense, Unison submits that the Commission should not use AMP forecasts at all, as these reflect EDBs' views on efficient capital expenditure over time. As EDBs increasingly move to smart grid philosophies, they should be rewarded (for a suitable period) for doing so relative to a conventional network spend, which is driven by comparatively simple age and condition-related asset maintenance and renewal cycles. Unison submits it should be a high priority activity, subsequent to completing the DPP process, to establish a capital expenditure forecasting approach for use in future resets.

Unison's response – capital expenditure price escalation

25. Unison disagrees with the use of the all-industries capital goods price index inflation forecast. As noted in the ENA submission, there is significant evidence to demonstrate that the use of an all-industry forecast would understate capital expenditure price inflation. While we agree that it would be difficult for the Commission to establish a sector-specific price index and compile relevant forecasts, it is not appropriate to default to the use of an index which has no observed correlation to past inflation experienced by EDBs. At the very least, the Commission should apply a margin to NZIER's forecast, based on historical differences in the all-industry and sector-specific indices.

2.5 Operating expenditure forecasts

Commission's approach

26. The Commission forecasts operating expenditure growth by taking 2010 operating expenditure and escalating it at the rate of output growth (a weighted average of kWh, population and GDP growth forecasts) multiplied by growth in a 40:60 average of forecast all industries PPI and LCI inflation.
27. The Commission undertakes a reasonableness check, by comparing in constant price terms average opex in 2008 to 2010 with average opex in disclosure years 2013-2015. The Commission calculates that on average real opex will be 11% higher in 2013-15 compared with 2008-2010, and on this basis states that the forecasts are not unreasonable.

Unison's response – real operating expenditure growth

28. Unison submits that the Commission's approach to forecasting real operating expenditure growth lacks rigour. Output growth is based on variables that EDBs charge on, not the drivers of operating expenditure growth, which are primarily linked to the extent, condition and age of EDBs' networks.
29. The "reasonableness check" also lacks rigour. For example, the Commission could have used virtually any forecast variable, as long as it was low and positive, and reach the conclusion that relative to past expenditure the forecast was not "unreasonable". Unison submits that the proper test for reasonableness is that the forecasting approach has some heuristic basis and is the best forecast available in the circumstances, in terms of likelihood of predicting actual future real operating expenditure. No evidence is provided by the Commission of alternative forecasting approaches that were considered and rejected, which we would expect in a rigorous examination of this issue.
30. A superior test of the Commission's approach would be of how well the forecasting approach matches up with EDB's 2011 disclosed results to be disclosed imminently. In Unison's case, the Commission forecasts that operating expenditure will be \$26.3 million, whereas our actual disclosed operating expenditure is \$28.8 million, a material under-estimate.
31. Unison submits that the Commission should examine other operating expenditure growth forecast approaches including that suggested in the ENA submission. A suitable test of potential approaches is how well a back-cast of the approach matches disclosed expenditures.

Unison's response operating expenditure price escalation

32. In regard to the use of price escalators, Unison's response is the same as in regard to capital expenditure price escalation; the use of economy-wide forecasts is likely to understate actual inflation experienced by EDBs given the relative pressures in the infrastructure sector compared with the broader economy, which is considerably weaker apart from in a select group of commodity-based sectors (e.g., dairy). Unison submits that the Commission should at the very least apply a margin to economy wide PPI and LCI forecasts, based on recent historical margins between the economy-wide and sector-specific forecasts.

2.6 Real revenue growth forecasts

Commission's approach

33. The Commission has accepted submissions that real revenue growth forecasts should be based on regional conditions.
34. The Commission's approach is to base:
- a) Fixed revenue growth on Statistics New Zealand's median population projections;
 - b) Peak demand growth on NZIER's 2011 regional GDP forecasts; and
 - c) Volume growth on the Electricity Commission's² 2009 regional GWh projections.
35. These forecasts are weighted by the proportion of each component in the revenues of each EDB.

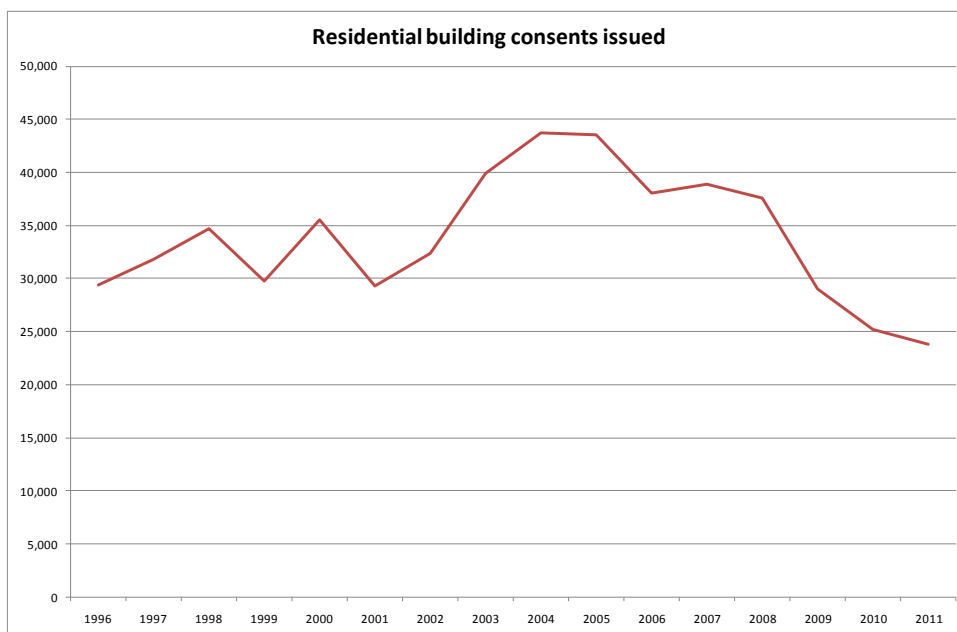
Unison's response

36. Unison supports the change in approach to a regional basis. This is more likely to result in forecasts that reflect revenue drivers for each EDB.
37. Nevertheless, there are some improvements that Unison submits should be made to the forecasting approach, based on the following considerations:

Fixed revenue growth

1. In respect of fixed price-related revenue growth, as shown in the following chart, residential building consents have fallen significantly and are now at fifteen year lows. Given the lags between new consents being issued and work commencing, we expect that fixed revenue growth will be low for at least the next few years. The Commission does not offer an explanation for the use of median population projections, but Unison submits in the current domestic economy, the Commission should adopt the low population projections for this regulatory period.

² Now the Electricity Authority (Authority)



2. In respect of Unison, the Commission adopts population growth forecasts for the Bay of Plenty to represent population growth for Rotorua and Taupo. Unison's key concern is that population growth in Tauranga is the overall driver of population growth in Bay of Plenty, leading to an overstatement of Unison's real revenue growth. It is straight-forward to obtain the under-lying projections for the Territorial Local Authorities and use this data weighted to the regions to more accurately project the regional forecasts. To illustrate the impact on Unison, we note that the medium growth projections for Hawke's Bay (Napier and Hastings Districts) and Central (Rotorua and Taupo Districts) are 0.33% and 0.25% respectively, compared with the Hawke's Bay Region (0.26%) and Bay of Plenty Region (0.88%) used in the Commission's forecasts;

Peak demand revenue growth

3. The Commission assumes that peak demand growth will change 1:1 with GDP growth. We note that the New Zealand Energy Outlook 2010 establishes that historic improvements in energy intensity of the New Zealand economy have led to a 1.3% per annum decline in the energy intensity of GDP and that since 1990 average annual growth in electricity consumption has been 1.6%, relative to GDP growth of 2.7% per annum. Accordingly, taken together the Commission's forecasts are implying a substantial worsening of energy intensity in the New Zealand economy;
4. Unison submits that the Commission needs to scale the peak demand growth forecast by an energy intensity improvement factor, reflective of long-run trends;

Consumption volume revenue growth

5. In respect of volume growth forecasts, Unison notes that the Electricity Commission's volume projections were finalised in December 2009. These are underpinned by population and regional GDP forecasts;
6. By way of comparison to the GDP forecasts used in the Authority's model, which average 3.7% over the 2011-2014 period, the Reserve Bank forecasts 2.5% GDP growth (excluding the Christchurch earthquake rebuild) or 2.7% (inclusive of rebuild) over the same timeframe. Hence, the volume growth projections are likely to be over-stated. With the recent turmoil on bond markets, and the resultant pressures on fiscal deficits in Europe and USA, down-side risks appear more likely, making it more likely that growth will be lower than that which underpins these volume forecasts;
7. It is also important to recognise that the Authority projects that there is stronger commercial growth compared with residential volume by an average 0.7% per annum, and commercial volumes make up 67% of total volumes;
8. Unison notes that of the total volumes supplied by Unison, approximately 40% is not a chargeable quantity, as services are either provided using a purely fixed charge to large commercial customers, or to commercial customers who face peak demand (kVA) – based charges only. Accordingly, the use of unadjusted volume projections based on strong assumed GDP growth and including the stronger contribution from commercial volumes leads to an upward bias in forecast real revenue growth. Of Unison's chargeable kWh volumes around 66% are attributable to residential demands;
9. This upward kWh bias in volume forecasts is demonstrated by the mis-match between fixed charge revenue and variable revenue growth, implying worsening energy intensity from existing consumers. This is at odds with the 2010 New Zealand Energy Outlook where aggregate residential volume growth of 1.3% per annum is projected to increase at the same rate as connection growth of 1.3% per annum according to long-term historical averages;

10. Unison submits that the use of the Authority's kWh forecasts should be set aside in favour of a more internally consistent approach to volume growth, which better matches historical trends, population and GDP projections. Unison submits that the Commission should adopt the following approach:

- a. The Commission obtains for each non-exempt EDB the volume weights for residential and commercial consumers as a proportion of billable kWh;
- b. The growth in residential volumes is estimated as follows:

$$Q_r \times (1 + P_i) \times (1 + E_r)$$

Where Q_r is the proportion of billable volumes consumed by residential consumers, P_i is the forecast population growth for EDB i ; and E_r is the assumed improvement in energy efficiency for residential consumers. Based on historic trends, it appears that E_r should be set equal to zero;

- c. Growth in commercial volumes is calculated as:

$$Q_c \times (1 + GDP_i) \times (1 + E_c)$$

Where Q_c is the proportion of billable volumes consumed by commercial consumers, GDP_i is the forecast GDP growth for EDB i ; and E_c is the assumed improvement in energy efficiency for commercial consumers. Based on historic trends, it appears that E_c should be set equal to -0.9%³;

11. Overall, Unison recommends that the Commission needs to revisit the components of the real revenue projections to ensure that they are internally consistent and logically consistent with past trends. The low forecast rates of GDP growth and population growth are inconsistent with the high rates of forecast volume growth used in the Commission's model, implying a significant worsening of energy intensity/efficiency in the New Zealand economy, compared with historical trends.

³ MED's New Zealand Energy Outlook finds that since 1990 volume growth has been 1.6% per annum, whilst GDP growth has been 2.7% per annum.

3 POLICY ISSUES

3.1 Claw-back

Commission's proposal

38. The Commission proposes that it would not apply claw-back to the first two years of the regulatory period for the following reasons:

"2.55 We note that the modelling suggests that some EDBs have been achieving returns well in excess of normal returns since the beginning of the regulatory period. While the scale of the estimated excess returns in a number of cases makes it unlikely that the estimated level of returns would be the result of efficiency gains or of cost factors not captured by the modelling, we cannot rule out these possibilities. We therefore do not consider that claw-back should be applied in these cases as it could, given this is a reset within period, result in outcomes which may not be in the long-term interests of consumers.

...

2.57 Unison was the submitter to object to the use of a three-year modelling approach, rather than a five-year approach involving claw-back for under- or over-recovery in the first two years. We acknowledge that there is merit to the arguments advanced by Unison, and that our modelling does suggest that some suppliers have previously under-recovered their costs. However, because it is too costly to verify every supplier's costs under a DPP, it may in fact be inappropriate for these EDBs to be able to claw-back revenue from consumers. In some cases, it could simply exacerbate the extent of over-recovery in future. Ultimately, it is not a question with an easy answer.

2.58 We note, however, that this within regulatory period reset is unusual. Any issues that this causes for a particular supplier could potentially be accommodated under a CPP. That is, if an EDB is in a position where under-recovery is indicated, it could consider applying for a CPP with claw-back applied (this may require it to seek a variation of the IMs which apply to a CPP pursuant to s 53V(2)(c)). In calculating claw-back in such a situation, our current view is that it would be most appropriate to use the costs actually incurred by the supplier."

Unison's response

39. It is very difficult for Unison to respond to the Commission's reasoning as it does not transparently set out the basis for the conclusions, asserting that:

- a) It would be too costly to verify suppliers costs to establish the claw-back amounts;
- b) The Commission cannot rule out that any high profits in disclosure years 2011 and 2012 would be due to efficiency improvements, and implementing claw-back

in such circumstances may result in outcomes which may not be in the long-term interests of consumers.

40. Unison submits that these claims are not well-founded and lack consistency with the Commission's approaches elsewhere. Claw-back amounts could readily be established through the roll-forward of regulatory information in the 2011 and 2012 years, which must be prepared to enable RAB roll-forward and deferred tax calculations. It is not obvious that there would be high costs from translating this into amounts to be clawed back. Administrative costs would appear to be insignificant in relation to the impact on consumers/investors.
41. In regard to the Commission's comment that it would be too costly to verify cost information, we assume that the Commission is suggesting that to apply claw-back it must verify the efficient costs of each EDB. However, later in the Draft Decisions Paper, the Commission notes in reference to CPP applications, that it would use the EDB's actual expenditures to determine claw-back. The Commission does not provide any basis for the alleged high costs. There would be a clear inconsistency between the Commission's use of unverified expenditures incurred in 2010 for the basis of establishing the 2012-2015 DPP path, compared to requiring such an assessment for claw-back. Given the Commission's stance on claw-back, there is no reason to consider that EDBs would incur higher expenses in an expectation they could be used to reduce claw-back.
42. In regard to the risks associated with inappropriately clawing back efficiency gains in the first two years of the regulatory period, we note that the Commission has sufficient data to calculate returns in 2009/10 to enable comparisons with 2010/11 data, and therefore would be able to establish whether any efficiency improvements have emerged in the first year of this regulatory period. In addition, the Commission could apply a safety margin to ensure that any efficiencies are not part of the claw-back.
43. Unison also notes the inconsistency between the refusal to apply claw-back and the Commission's *ad hoc* adjustment for the effects of GST on CPI inflation. On the one hand the Commission to make no claw-back adjustment for 2011 and 2012 financial performance, but on the other hand it detrimentally affects returns in 2011, by retrospectively removing the GST impact from revaluation gains. For 11 out of the 16 EDBs subject to the DPP, returns are modelled by the Commission as being lower than the WACC in the 2011 and 2012 disclosure years.
44. Finally, in regard to the Commission's suggestion that any disaffected party could apply for a CPP and an amendment to the input methodologies to obtain any claw-back, we submit this is inappropriate. Up to 11 EDBs would have to incur the costs and expenses of applying for a CPP to achieve such an outcome, which is inconsistent with the low-cost nature of the regime. Conversely, consumers cannot apply for claw-back in situations where they may consider they are owed a refund. In addition, the suggestion of applying for a CPP to address claw-back when the applicable WACC has fallen is a Clayton's solution.

45. Unison continues to recommend the Commission apply claw-back. It would be consistent with the real financial capital maintenance principle being applied for the regulatory period, can readily be calculated, can provide EDBs with a notional allowance for improving efficiency to allay any concerns about confiscation of EDB's recent efficiency gains, and accordingly not negatively impact on incentives to invest.