

POWERco

**SUBMISSION ON
2010-2015 DEFAULT PRICE-QUALITY PATH FOR
ELECTRICITY DISTRIBUTION
DRAFT DECISION PAPER**

24 August 2011

POWERCO SUBMISSION IN RESPONSE TO 2010-15 DEFAULT PRICE-QUALITY PATH FOR ELECTRICITY DISTRIBUTION

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INTRODUCTION

- 1 Powerco Limited (Powerco) welcomes the opportunity to make this submission on aspects of the Commerce Commission's (Commission) July 2011 Default Price-quality Path Draft Decisions Paper (the draft decision).
- 2 The draft decision on the 2010-15 default price-quality path (DPP) reset comes at the end of a long process of engagement between the Commission and electricity distribution businesses (EDBs). Important policy issues have been raised in the context of both the consultations on the Input Methodologies (IMs) and during the previous rounds of engagement on the starting price adjustment. Our understanding of good regulatory practice led us to expect that there would be no surprises in the draft decision – in other words, that no material policy decisions would be introduced into what should be a technical implementation of already established policies. In fact, the draft decision breaks a considerable amount of new conceptual ground, and could not be described as a technical and predictable implementation of an already accepted framework.
- 3 For this reason, we believe that it is important to see the policy choices introduced by the Commission in the draft decision within a broader policy and legal context. This submission is structured as follows:
 - 3.1 In Part 1 we review the Commission's broad approach and the process followed by the Commission. This provides an important context for considering the idiosyncratic implementation of the regulatory financial model used by the Commission in the draft decision.
 - 3.2 In Part 2 we comment on the material modelling choices made by the Commission. We show that these choices are at odds with good regulatory practice, are internally inconsistent, and lead to unexpected and undesirable outcomes.
 - 3.3 In Part 3 we address the remaining technical issues, such as incorporation of the IMs into the draft DPP determination.
 - 3.4 Throughout the submission, we refer to the analyses in the enclosed expert reports:
 - (a) Castalia, "*Review of Draft Decision Paper for the 2010-15 Default Price-Quality Path for Electricity Distribution: Report to Powerco*" August 2011.
 - (b) NZIER, "*Forecast of PPI and LCI, and Uncertainty of Forecast - A review of the Commerce Commission Draft Decisions Paper: Reset of Starting Prices, CPI Adjustment and Other Amendments*", 18th August 2011.
 - (c) Mr Jeff Balchin, PriceWaterhouseCoopers, "*2010-15 Default Price-Quality Path Starting Price Adjustments Draft Decision Paper: Modelling Issues*", 22 August 2011.
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EXECUTIVE SUMMARY

- 5 Powerco is deeply concerned that the Commission's proposed reset of the DPP is based on an idiosyncratic implementation of a regulatory financial model and, at least as applied to Powerco, on unrealistic forecasts. The Commission's approach to implementing the regulatory financial model is at odds with internationally recognised best practice. The highly unusual implementation is closely linked to the poor quality of the process that has been followed by the Commission.
- 6 The proposed starting price adjustment for Powerco of -9.2%¹ is very largely influenced by the Commission's unprecedented and inconsistent approach to treating the timing of cash flows. Regulators commonly face a trade-off between building complex financial models which define precisely the different points throughout the year when cash will be received or paid, and using simplified regulatory models. Investment analysts generally construct precise cash flow models to inform investment decisions. In contrast, regulatory financial models often make a deliberate choice to simplify how the timing of cash flows is treated – by using either an end-year or mid-year convention for discounting. **Whether a detailed investment appraisal approach is used or a simplified regulatory approach, the treatment of different cash flow items needs to be consistent.** The Commission can either apply a level of precision that would be observed in an investment appraisal, or the Commission can accept that regulatory modelling does not need this level of precision. The approach applied in the draft decision is not consistent with either of these positions. Rather, the Commission bases its modelling of some items on a preference for greater precision (revenues and opex), while not accepting that other cash flow items (such as financing costs, depreciation, and tax) also vary throughout the year. An inconsistent modelling approach inevitably results in an arbitrary financial shock to the service provider and fails to achieve the financial capital maintenance (FCM) sought by the Commission.
- 7 We have identified a number of further errors, inconsistencies and unrealistic assumptions in the Commission's financial model. For example, the Commission has based Powerco's capex growth forecast on information from Powerco's 2010 AMP, without adjusting for customer contributions and an allowance for finance during construction. Such adjustments are needed to align the capex growth forecasts with the IMs. Similarly, forecast growth in the Commission's labour cost index used for operating expenditure growth is lower than forecast growth in the CPI, and does not take into account the increasing costs facing EDBs due to labour shortages and an increasingly complex regulatory environment.
- 8 Further, the Commission's forecast of real revenue growth is unduly positive and bears no resemblance to recent performance. There is too much reliance on the Electricity Authority forecasts, which are not supported by strong evidence. The Commission forecasts real revenue growth for the period 2011 to 2015 using an average annual growth rate of 1.42%. However, the cumulative growth rate in Powerco's region the last two years has been substantially lower, with negative growth forecast for 2010/11.² Powerco is not aware of any explanations that would support such a turn-around in real revenue growth and believe the forecasts used by the Commission to be unreasonable. It is arbitrary for the Commission to use unexplainable forecasts rather than historically consistent growth rates.

¹ The Commission's original draft decision identified that Powerco faced a P₀ adjustment of -9.2%. This has been reduced to -8.5% following the correction of some errors within the Commission's models.

² Refer to Table Three in this submission.

- 9 Against this background, Powerco has calculated its post-tax return on investment for the 2010/11 year under the IMs as 7.38%³, well below the Commission's own view of a reasonable post-tax return (7.78%). Powerco is not earning an excess return (when calculations are made using the discipline of the IMs), and can see no justification for the Commission to force a significant price decrease part way through the regulatory period on the basis of an unusual and arbitrary modelling approach.
- 10 We believe that if the Commission corrects the key errors, inconsistencies and unusual modelling methods it too will conclude that there is no justification for a P_o adjustment for Powerco. Such corrections to the model would also go a long way to correcting the errors in law, policy and process which have so far characterised the DPP reset.
- 11 The Commission's approach to the reset has been fundamentally at odds with the intention of Part 4 of the Commerce Act (Act). Powerco has supported the move towards internationally orthodox and predictable regulation of EDBs. Following the change in the Act, the Commission had moved a long way towards re-building the credibility of the New Zealand regulatory regime through development of the IMs and a cautious and practical initial DPP. While Powerco did not accept the merits of all of the individual decisions, the process followed by the Commission contributed significantly to a more positive and pro-investment regulatory environment.
- 12 By contrast, the proposed reset of the DPP undoes much of the Commission's prior achievement:
- 12.1 The reset is not justified under the Act. Powerco submits that there is no evidence to show that the requirements of section 54K(3) have been met. The Commission has misunderstood the threshold for engaging in this one-off exercise, taken into account irrelevant matters, and failed to undertake the empirical work required to reach its conclusion that a materially different price path would have been decided. Castalia's analysis of a reasonable range of returns in workably competitive markets indicates that if the Commission had applied a similar band to EDBs' returns, the path set would not have been materially different.
- 12.2 Resetting the 2010-15 DPP does not promote the objectives of the Act. In this submission we refer to analysis by Castalia showing that as a matter of fact, law and policy, the objectives of the Act would be best served by leaving the DPP as they are now. The existing DPP does all that is needed under the Act, and already embodies the principles of good regulatory practice. By contrast, the proposed DPP effectively introduces a naïve style of rate of return regulation. The shortcomings of an approach that emphasizes resetting prices to bring returns into line with an estimated cost of capital over short periods of time were recognised by Stephen Littlechild and others when designing the price cap approach adopted in the United Kingdom from the mid-1980s, and later adapted and applied in Australia in its 'building blocks' approach to price control. The regulatory objective is clearly set out in Part 4 – to benefit consumers by promoting investment, efficiency and innovation, and passing the benefits on to customers over time, as happens in competitive markets. The Commission has failed to recognise that this objective is quite different from limiting returns to an estimate of the cost of capital over a short period of time. By effectively converting the DPP into a form of rate of return

³ Vanilla 75percentile WACC as per "Determination of the Cost of Capital for Services Regulated under Part 4 of the Commerce Act 1986, Pursuant to Decisions 709, 710, 711, 712 and 713 Decision Number 718" converted to post-tax.

regulation, the Commission is embarking on a form of regulation largely abandoned by other jurisdictions.

- 12.3 The process for obtaining a customised price path (CPP) cannot be relied on by the Commission as a fall-back mechanism to correct the errors in the proposed starting price adjustment methodology. The expense and risk of moving to a CPP means that many suppliers will be reluctant to make a CPP proposal. Further, if a DPP is “incorrect” the supplier will need to remain on that DPP for at least one year (and more likely two years) before a CPP will take effect.⁴ The result will be that some EDBs remain on a DPP that does not allow them to earn a normal return on their investment. Acknowledging the proper role of the CPP requires the Commission to revisit the design of its proposed starting price adjustment methodology. The current methodology is predicated on the assumption that the CPP will compensate for the lack of a margin for error in the DPP. This is not the role of the CPP, and the Commission is mistaken in its belief that a CPP is relatively inexpensive and simple, or even practically available before the next reset.
- 12.4 The process for translating the IMs into a regulatory financial model did not follow good regulatory practice, denies natural justice, and is likely to lead to outcomes which are counter to the objectives of the Act. The Commission’s modelling approach has undergone arbitrary, yet very material changes, with no opportunity for EDBs to engage prior to the publication of the draft decision. In effect, the Commission is reverting to the previously discredited model of making significant policy choices in the heat of specific regulatory decisions. By contrast, as this submission demonstrates, in other high quality regulatory jurisdictions – such as Australia and the United Kingdom – it is standard practice to consult during the development phase of the regulatory financial model. This recognises the fact that translating input parameters into a model that determines prices is not a trivial or mechanical exercise. Rather, the process of translation has material policy content and relies on regulatory judgements that should be transparent and subject to debate.
- 13 Powerco believes that it is now critically important to restore confidence in the regulatory process, and for the Commission to correct the errors in the process, methodology and financial model identified in this submission. Part 1 of this submission explains the regulatory framework concerns with the draft decision. Part 2 demonstrates the analytical corrections that are needed in the Commission’s model. Powerco submits that an appropriate objective from here is a pragmatic modelling approach that recognises the limitations of the information available to the Commission and minimises the impact of arbitrary decisions. Such an approach would enable the Commission to comply with the requirements of the Act and would offset the poor regulatory practice to date, while giving the Commission the space to invest in appropriate, high quality consultations in time for the next DPP reset.

⁴ Once the Commission releases its final decision on the Starting Price Adjustment in October 2011 it is likely to be too late to submit a CPP in January 2012, bearing in mind the requirement to consult with consumers more than 40 working days prior to the submission of the application. In this situation it is likely that a CPP application will not be able to be made until January 2013. Given this is the first time EDBs will have developed a CPP application, it is also likely to take longer than 12 months to complete the proposal.

PART 1: APPROACH AND PROCESS

ISSUES

- 14 This part of our submission evaluates the draft decision against the legal and policy requirements contained in Part 4 of the Act. We show that the Commission should leave the existing DPP in place because:
- 14.1 the Commission has misunderstood the exceptional nature of the power to reopen the DPP mid-period, and so misunderstood the materiality threshold set by the Act;
 - 14.2 the Commission has included irrelevant considerations when assessing whether a new DPP is appropriate;
 - 14.3 resetting the DPP would retard the objectives of the Act;
 - 14.4 the existing DPP already achieves the objectives of the Act;
 - 14.5 Powerco is not making excess returns (by reference to the best available information and the Commission's IMs); and
 - 14.6 the consultation process so far falls well short of what would be required to support the significant policy innovations introduced by the Commission.
- 15 If the Commission, contrary to these arguments, persists in resetting the DPP, then in this part of the submission we explain that the Commission should:
- 15.1 extend the consultation process, in particular to allow consultation on the financial model. As explained in Part 2 of our submission, significant changes to the financial model are required, and a further round of consultation will also be required; and
 - 15.2 use a return band concept, where prices are kept at CPI-0, except for those EDBs whose current profitability is so far outside the reasonable bounds of profitability that the Commission deems it clearly excessive or excessively low.

REGULATORY FRAMEWORK

The Commission cannot reset the DPP under section 54K(3) of the Commerce Act

- 16 In Powerco's 16 May 2011 submission on the 2010-2015 Default Price-Quality Path Starting Price Adjustments and Other Amendments Update Paper, we submitted that the Commission is not permitted to reset the 2010-2015 DPP under s 54K(3) of the Commerce Act. Section 54K(3) provides that:

If an input methodology is published after 1 April 2010 and if, had that methodology applied at the time the default price-quality paths were reset as required by subsection (1), it would have resulted in a materially different path being set, then the Commission may reset the default price-quality paths in accordance with section 53P and may apply claw-back, despite section 53ZB(1).

- 17 In its draft decision, the Commission asserts that it is permitted to reset the 2010-2015 DPP under s 54K(3) because in its view a materially different price path would have been set had the

IMs applied at the time of the initial reset (determined on 20 November 2009 and effective from 1 April 2010). The Commission gives three reasons in support of its view:

- 17.1 had the Specification of Price IM applied at the time the Commission determined the 2010-2015 DPP, the Commission would have determined a materially different path (paragraph 1.23 of the draft decision);
- 17.2 a materially different path would have been determined if the IMs had applied at the time the 2010-2015 DPP was determined, because the availability of the IMs would have impacted the choice between s 53P(3)(a) and (b) (paragraph 1.24 of the draft decision); and
- 17.3 applying the Treatment of Tax IM, in combination with applying other IMs, would have resulted in the Commission determining a materially different path than that currently specified in the 2010-2015 DPP determination (paragraph 1.28 of the draft decision). Allied to this reason, the Commission asserts that using the results of applying the IMs produces a materially different path, irrespective of the approach used for resetting the starting prices (paragraph 1.30 of the draft decision).

18 Powerco remains firmly of the view that the Commission is not permitted to reset the DPP under s 54K(3). We demonstrate below that:

- 18.1 the Commission has misdirected itself on the threshold test to be applied under s 54K(3); and
- 18.2 none of the Commission's three reasons for its view that a materially different path would have resulted from the application of the IMs are valid.

Commission has misdirected itself on the threshold test to be applied under s 54K(3)

19 Section 54K(3) enables the Commission to reset the DPP if, and only if, it can be shown to meet an objective standard – that a “materially different” path would have resulted had the IMs applied at the time of the initial reset. The legislation therefore sets a clear threshold which must be met.

20 The Commission does not clearly define what it considers would constitute a “materially different” path. However, the Commission:

- 20.1 does consider that a 2% change in EDBs' allowed prices is material, even in a single year;⁵ and
- 20.2 implies that 1% of aggregated allowable notional revenue may be sufficient to meet a materiality threshold.⁶

21 In Powerco's view, the Commission has underestimated the level at which the s 54K(3) threshold has been set by Parliament, such that the Commission has misdirected itself as to the legal test to be applied.

⁵ Commerce Commission, *2010-15 Default Price-Quality Path for Electricity Distribution – Draft Decision*, July 2011, paragraph 1.23.

⁶ Commerce Commission, *2010-15 Default Price-Quality Path for Electricity Distribution – Draft Decision*, July 2011, footnote 18.

22 Part 4 provides for a default five year regulatory period, with starting prices to be set at the beginning of that period (see sections 53P(1) and 53M(4)). Parliament has been careful to implement a regime that provides settled prices for a carefully specified regulatory period, in order to promote certainty and appropriate efficiency incentives (see sections 53M(4) and (5)). However, Parliament has also provided a tightly circumscribed, one-off, exception from the general rule of setting starting prices at the beginning of the regulatory period in s 54K(3). That exception can only be exercised where a “materially different” path would have resulted, had the IMs applied at the time of the initial reset.

23 The “materially different” threshold must be interpreted in light of relevant purposive and contextual factors, namely:

23.1 the objective of the Commerce Amendment Act 2008 to provide certainty for suppliers. This objective is also strongly implied by the requirement to provide incentives to innovate and invest. In this respect, resetting the DPP is a major interruption to suppliers and will reduce certainty;

23.2 Parliament’s general preference for default five year regulatory periods; and

23.3 the principle of proportionality in respect of regulatory intervention. In this case, the costs and interruption of a mid-regulatory period reset mandate a higher materiality threshold.

24 In Powerco’s view, the “materially different” threshold is context specific and should not be interpreted as merely “not immaterial”. Interpreting this threshold requires a careful exercise in proportionality. In other words, given that Parliament recognised that regulation places impositions on regulated firms, the special “one-off” regime created by s 54K(3) should only be used if the IMs contain something that is seriously at odds with the purpose of Part 4 when compared with the existing DPP. Applying this interpretation, the Commission would need to ask itself whether this higher threshold been overcome, and provide reasons for its answer.

25 Powerco submits that the Commission has not asked the question that is posed in the statute, nor can the Commission reasonably claim that the higher threshold has been overcome. In fact, as found in the Castalia report accompanying this submission, the IMs and the existing DPP are entirely consistent with the purpose of Part 4 in s 52A (Part 4 Purpose).

26 This failure to apply the correct threshold is a sufficient reason for not continuing with the draft decision. However, we also demonstrate below that the reasons the Commission gives for believing the IMs would result in a materially different threshold are incorrect.

No evidence of material difference arising from Specification of Price IM

27 The Commission has particularly targeted the application of the Specification of Price IM as justifying a materially different path. Specifically, the Commission claims that removing the GST component of the change in CPI will mean that EDBs’ allowed prices are around 2% lower from 2012/13 onward (paragraph 1.23 of the draft decision).

28 Powerco submits that the Commission has erred in its conclusion that the Specification of Price IM would have resulted in a materially different path, had that IM applied at the time of the initial reset. The error in that approach is that it isolates one specific IM (out of a number of IMs) and claims that this satisfies the test of showing that a materially different path would have been set. However, s 54K(3) requires the Commission to take into account the net effect of all of the IMs it intends to retrospectively apply. The Commission cannot arbitrarily pick and choose specific

effects from particular IMs and conclude that the effect would have resulted in a materially different path.

Choice between section 53P(3)(a) and (b)

29 The draft decision also states that a materially different path would have been determined if the IMs had applied at the time the 2010-2015 DPP was set because the availability of the IMs would have impacted the choice between ss 53P(3)(a) and (b).

30 The Commission has again misdirected itself on the proper test it must apply under s 54K(3). That test does not ask whether the Commission would have used a different basis for setting starting prices (i.e. those prices that applied at the end of the preceding regulatory period versus prices based on the current and projected profitability of each supplier). Instead, the test requires the Commission to identify whether a materially different path would have resulted had the IMs applied at the time of the initial reset.

31 It is possible that a materially *equivalent* path would have been set whether the Commission chose to base starting prices on the prices that applied at the end of the preceding regulatory period or on prices based on the current and projected profitability of each supplier. The Commission is therefore not permitted to reset the DPP on the grounds of it choosing a different basis for setting starting prices.

No material difference arising from tax IM and other IMs

32 At paragraph 1.27 of the draft decision, the Commission asserts that:

Until the IMs were determined, the current and projected profitability of suppliers would likely have been assessed by defining a supplier's costs in a different way. For example, a supplier's profitability is usually assessed after taking into account tax costs. Prior to IMs being determined, under the previous Part 4A regulatory regime, EDBs were required to disclose information about tax costs on a tax payable basis; now, the IMs require that a modified deferred tax approach must be used.

33 The Commission goes on to say at paragraph 1.29 of the draft decision:

It is clear from the information that EDBs have provided that IMs have a material impact on the level of costs used to assess profitability.

34 And finally at paragraph 1.28 of the draft decision:

We consider that applying the treatment of tax IM, in combination with applying other IMs, would have resulted in us determining a materially different path than that currently specified in the 2010-15 DPP.

35 In summary, the argument the Commission is making is that:

- 35.1 the IMs require suppliers to calculate their tax costs differently to previous calculations;
- 35.2 because of the IMs, there are material differences in the costs that inform the assessment of profitability; and
- 35.3 material differences in costs equates to a material difference in the path that would have been set, had the IMs applied at the time of the initial reset.

- 36 In Powerco's view, the argument that differences in costs will equate to a different path is a fundamental flaw in each of the Commission's claimed justifications for resetting the DPP under s 54K(3). As we show below, the Commission's argument on this point is incorrect.
- 37 Section 54K(3) requires the Commission to calculate the DPP that would have resulted had the IMs applied at the time of the initial reset. This allows an assessment to be made of whether there is a material difference between the hypothetical DPP and the DPP that was set. However – and this is a key point – the Commission's IMs alone do not establish price paths. An extra step is required to translate the costs established by the application of the IMs into a price path for each EDB.
- 38 That extra step is a starting price adjustment methodology. Changes to the Commission's IMs tell us nothing about the impact, if any, on a DPP until we know the starting price adjustment methodology. The key issue is the draft decision ignores this step. The draft decision simply assumes that different costs equate to a different path, and therefore using the results of applying the IMs produces a materially different path, irrespective of the approach used for resetting the starting prices (paragraph 1.30 of the draft decision).
- 39 However, s 54K(3) is specific about the limited set of new information that justifies a one-off mid-period change to what would otherwise be a five year DPP:
- 39.1 only the IMs published after 1 April 2010 may be retrospectively applied to the time of the initial reset to determine whether a materially different path would have resulted;
 - 39.2 to make the above point clear, section 54K(3) does not permit any framework, method or consideration outside of the IMs to be applied in determining whether a materially different path would have resulted. This means changes in starting price adjustment methodology cannot be used to generate or contribute to a materially different DPP for the purposes of s 54K(3); and
 - 39.3 in particular, s 54K(3) does not give the Commission a discretion to engage in a "what would we have done?" thought exercise, in which it is free to hypothesise about the method it would have used to translate EDBs' costs into starting prices.
- 40 There is no good reason for reading s 54K(3) more expansively than its plain reading – and in particular no reason to read in additional matters that would justify re-opening a DPP. As noted above, the statutory context is an exceptional power to make a one-off mid-period change to the DPP. Plus, this exercise potentially exposes firms to claw-back if the DPP is changed mid-period. In this context Parliament has specified in s 54K(3) the particular new information that justifies this exceptional regulatory volatility – the finalisation of IMs. There is a good reason for targeting s 54K(3) in this way, as IMs are subject to the accountability mechanism of merits review.
- 41 This has serious implications for the approach in the draft decision. In the draft decision the cumulative effect of both IMs and the Commission's new starting price adjustment methodology is used to support a claim of a materially different DPP. For the reasons explained above, this fails to distinguish between relevant and irrelevant considerations (putting aside for these purposes the concern that the draft decision misunderstands the level of materiality required).
- 42 This means the draft decision is left arguing that the IMs would result in a materially different DPP *regardless of the starting price adjustment methodology that is used*. This is clearly problematic. Concerns include:

42.1 it is unlikely to be correct for all possible starting price methodologies. For example, the starting price methodologies that incorporate a reasonable range of returns and allow for modelling error, as previously proposed by the Commission, are unlikely to result in a materially different DPP; and

42.2 the claim is imprecise and vague, and does not meet the evidentiary standard required in s 54K(3).

43 The fact is the Commission does not have a consistent starting price adjustment methodology that it can point to when isolating and assessing the impact of the IMs for s 54K(3) purposes. The Commission has significantly changed its proposed starting price adjustment methodology several times. Further, the Commission chose not to establish the starting price adjustment methodology as an IM. This means the starting price adjustment methodology is not subject to merits review, but it also means the impact of finalising the starting price adjustment methodology is not relevant for s 54K(3) purposes.

44 Given the previous decisions made around starting price adjustment methodology, Powerco submits the Commission cannot now demonstrate the requirements of s 54K(3) are met. Powerco is aware that the Commission signalled an intention to reset the DPP under s 54K(3) after the IMs had been determined.⁷ However, this showed an element of pre-determination when it was not possible to know whether a materially different path would have been set (see paragraph 1.16 of the draft decision). Now, in the absence of a settled starting price methodology or one that is an IM, it is not possible to demonstrate that the IMs alone would have resulted in a materially different DPP.

45 The closest that the Commission could come to isolating the impact of the IMs would be to return to a starting price adjustment methodology that incorporated a range of returns and allowed for modelling and estimation variability, on the basis that this has continuity with the approach being discussed with the EDBs in 2010. However, this is not the approach taken in the draft decision.

The draft decision to reset the DPP does not promote the Part 4 Purpose

46 The Commission has been accorded a discretion under s 54K(3) to reset the DPP under certain strict circumstances. While we consider that the Commission is not permitted to exercise this discretion for the reasons given above, we have also considered the key constraint on the exercise of the Commission's discretion: the Part 4 Purpose. The Commission acknowledges that the exercise of its discretion must promote the Part 4 Purpose, and attempts to demonstrate this in the draft decision.⁸

47 Powerco asked Castalia to give its professional opinion on the extent to which the Part 4 Purpose is served by the Commission's draft decision to reset the DPP. Castalia is firmly of the view that resetting the DPP will work against achieving the Part 4 Purpose, and it has not been shown that the reset would promote the Part 4 Purpose in any respect. In particular, Castalia found that:⁹

47.1 the Commission's framework of inquiry for assessing whether the reset DPP would promote the Part 4 Purpose is wrong. The inquiry must be focussed on whether the reset

⁷ Commerce Commission "Initial Reset of the Default Price-Quality Path for Electricity Distribution Businesses: Decisions Paper", 30 November 2009, paragraph 4.53.

⁸ Commerce Commission, 2010-15 Default Price-Quality Path for Electricity Distribution – Draft Decision, July 2011, paragraphs 1.40-1.44.

⁹ Castalia, "Review of Draft Decision Paper for the 2010-15 Default Price-Quality Path for Electricity Distribution: Report to Powerco" August 2011.

DPP would do more to achieve the Part 4 Purpose than the existing DPP – that is, the proper inquiry is what marginal impact the reset DPP would have over the existing DPP in promoting the Part 4 Purpose. Instead, the Commission has wrongly focussed on whether the reset DPP, relative to no DPP, would promote the Part 4 Purpose;

47.2 the reset DPP would not promote:

- (a) outcomes consistent with outcomes produced in workably competitive markets;
- (b) incentives to innovate and invest;
- (c) incentives to improve efficiency;
- (d) the sharing of efficiency gains; and
- (e) the limiting of EDBs' ability to extract excessive profits.

48 Therefore, in Powerco's view:

48.1 the Commission has erred in the way that it has considered whether resetting the DPP will promote the Part 4 Purpose;

48.2 resetting the DPP will not promote the Part 4 Purpose. In fact, resetting the DPP is inconsistent with the Part 4 Purpose; and

48.3 leaving the DPP intact will promote the Part 4 Purpose.

49 Powerco agrees with Castalia that the Commission's draft decision to reset the DPP seems to be primarily driven by the desire to align EDBs' current and forecast profitability with the Commission's estimate of industry WACC. The Commission apparently considers that any profits earned in excess of the industry WACC are excessive profits.¹⁰

50 In this respect, the central problem with the Commission's reasoning is that it has misinterpreted what is meant by "limited in their ability to extract excessive profits". The Commission treats this phrase as synonymous with "ensuring that all EDBs earn returns at or close to the industry-wide WACC". In the context of workably competitive markets, where firms earn a range of profits over the short and medium term, excessive profits must mean something different than earning profits in excess of WACC. Standing back, a narrow focus on aligning short term returns with WACC is not consistent with the incentive regulation intended under Part 4. Parliament intended that consumers benefit by incentivising investment and efficiency, and sharing gains over time, not a narrow cost plus approach.

51 Powerco submits that a useful analogue for excessive profits is the concept of "functionless monopoly rents". In *Telecom Corporation Ltd v Commerce Commission* (1991) 4 TCLR 473, the High Court characterised functionless monopoly rents as "supranormal profits that arose neither from cost savings nor from innovation". The key, then, is to distinguish between profits above WACC that reflect superior performance and welfare enhancing practices, or simply the normal fluctuations in workably competitive markets, and those profits that are solely attributable to the exercise of market power. Only the latter may be characterised as excessive profits. When the

¹⁰ Commerce Commission, *2010-15 Default Price-Quality Path for Electricity Distribution – Draft Decision*, July 2011, paragraph 1.34.

meaning of “excessive profits” is seen in this light, Powerco submits that the Commission has erred in using profits in excess of WACC as a proxy for excessive profits, and is wrong to assert that aligning returns with WACC will limit the ability of EDBs’ to extract excessive profits.

- 52 Castalia also observes that, under the existing DPP, companies earn a range of rates of return, but that range is no wider than in competitive markets. Castalia’s analysis of industries that the Commission has previously judged to be sufficiently competitive to sustain a merger (such as the horticulture industry) shows that rates of return can vary in any year from 2% to around 10%.¹¹

CPPs cannot be used to costlessly correct problems with DPPs

- 53 The discussion above highlights the fact that the approach to resetting the DPP proposed in the draft decision – that is, setting expected returns as close as possible to WACC for the next three years – will not advance the statutory purpose any better than the current DPP. This approach also involves significant risk to EDBs, given the difficulty of making the necessary forecasts based on available information and modelling simplifications. A related aspect of the Commission’s framework that continues to concern Powerco is the presentation of the CPP as performing the role of a cure-all for any errors, inaccuracy or uncertainty in the DPP.
- 54 Powerco submits that this view is not tenable, for the reasons given in our previous submission to the Commission.¹² This included a detailed consideration of the costs of completing a CPP. The Commission’s approach also assumes an EDB could apply for a CPP immediately to correct for error in the DPP. This is clearly not feasible given the time and resource needed to complete a CPP proposal. Extra time will also be needed as it will be the first time an EDB will have undertaken a CPP application.

¹¹ Castalia used the financial statements of publicly listed companies to determine this range. Including the returns made by private companies would obviously widen this range. For this calculation, returns are expressed as earnings before interest, tax, amortisation and depreciation (EBITDA) as a proportion of total assets.

¹² Powerco “2010-15 Default Price-Quality Path Starting Price Adjustments and Other Amendments: Update Paper” (16 May 2011), paragraphs 46-60.

CONSULTATION PROCESS

55 Powerco has significant concerns over the way the Commission has consulted on the draft decision's regulatory financial model. The failure of the consultation process is obvious in the fact that no signal was provided by the Commission about its intention to significantly change its approach. In light of this, Powerco asked Castalia to give its professional opinion on whether the consultation process on the reset methodology has provided the same degree of quality assurance and certainty as one observes in regulatory systems New Zealand would aspire to emulate. We refer to Castalia's report and make the following further submissions.

Consultation on financial model

56 The Commission did not consult with EDBs on the content of the financial model before applying the model to calculate the proposed P_o adjustments. As a result, EDBs did not have an opportunity to review and comment on the way that the IMs had been translated into the financial model, or to correct any modelling errors.

57 The Commission has stated that the model on which the draft decision is based has been reviewed both internally and externally. None of these reviews has been made available to stakeholders. The very substantial modelling errors, some of which have now been acknowledged by the Commission, further undermine the credibility of these reviews.

58 Powerco's review of the model has identified three calculation errors – the translation of the CPI forecasts (two errors) and the calculation of the labour cost index which has an obvious error. In response to the errors highlighted by the industry, the Commission revised the draft decision model and growth projections on 15 August 2011.

59 Equally importantly, the Commission made changes to the financial model used to calculate the P_o adjustments in the draft determination that departed from previous work done by the Commission. The Commission has also signalled that further changes may be made to the model in calculating the final P_o adjustments.

60 Powerco is concerned that a further iteration of the model will be used for the final decision and that this model will contain errors that will have a direct effect on allowable revenue for EDBs.

61 The overall complexity of the model increases, rather than decreases the possibility of error. For example, when a single formula (cell 101) requires a four page algebraic derivation to explain it¹³ – and even then there are mixed opinions as to whether the formula is correct – some questions must be asked about the whether the correct approach has been taken. Moreover, since the purpose of the DPP model is supposed to be to provide a relatively simplified approach compared to a CPP, the complexity of the model appears to represent a quest for false precision.

62 As Castalia notes in its report, regulators overseas routinely consult on the financial model and finalise its design before calculating price adjustments. Such an approach is procedurally fair and provides greater predictability for regulated businesses. We consider that the Commission's consultation process for resetting the DPP was inadequate.

¹³ Commerce Commission, *Derivation of a formula for the 2012/13 allowable revenue, taking into account intra-year timing of cash flows*, 19 July 2011, from <http://www.comcom.govt.nz/2010-2015-default-price-quality-path/>.

The process from here

- 63 In Powerco's submission, significant changes are required to the model and the methodology. It is important that the remainder of this process is conducted in a way that gives affected companies an opportunity to comment on material changes, and affords an opportunity to flush out any errors arising from further modelling changes. In particular, Powerco requests that the Commission release the model used for the final decision, and the details and findings of any reviews undertaken on the model, prior to the finalisation of any price adjustment. EDBs should have an opportunity to review and comment on the model.
- 64 While the Commission may not relish the prospect of a further round of consultation there are two good reasons for doing so. First, natural justice and the credibility and legitimacy of the end decision requires this be done. The Commission will need to respond to the methodological problems that we have identified in this Part 1 of the submission, and if it proceeds with a reset, correct the matters identified in Part 2. It seems likely that material changes will be made, and affected parties should be afforded an opportunity to comment on material changes. Second, consultation will improve the accuracy of the decision, which again goes to credibility and legitimacy. The methodologies and models involved are complex and errors get made. Consultation identifies and corrects these.
- 65 Powerco is conscious of the deadline of 20 October for the Commission to decide whether a reset is appropriate. A further round of consultation, at least on key changes, is doable in this timeframe.

PART 2: CALCULATION ISSUES

66 In this part of the submission, we focus on the technical aspects of the implementation of the regulatory financial model. We start by presenting information on Powerco's current and future profitability. The stark contrast between the reality and the outputs of the Commission's model provides a clear context for understanding the errors in the Commission's modelling approach. We then:

66.1 focus on how the Commission has translated the IMs into the model, and show that the model makes material and arbitrary policy choices which go beyond the bounds of mere technical implementation; and

66.2 review the forecasts used by the Commission, and show that they are not supportable.

67 The following table summarises Powerco's recommended changes or corrections to the regulatory financial model.

Issue with the financial model	Recommended change or correction
The financial model does not apply the most current profitability measures available to the Commission. Therefore, starting prices are not based on the current profitability of each supplier, as required by s 53P(3)(b).	The financial model should apply information from the 2010/11 Information Disclosure Statements, adjusted for consistency with the IMs. (paragraphs 68-72)
The financial model sets EDBs' returns equal to the 75th percentile of the WACC.	Commission should adopt a "reasonable range" approach, where EDBs' returns are adjusted to fall within the estimated WACC plus or minus a reasonable range. EDBs with returns within the reasonable range would have no starting price adjustment. (paragraphs 84-89)
The financial model applies mid-point discounting for various elements of the regulated supplier's costs and revenues, while leaving other elements to be discounted at the end of the year ("mixed-point discounting").	The Commission should bring the discounting period to a single point, preferably at the end of the year. (paragraphs 90-114)
Inappropriate method in the financial model for adjusting the regulatory asset base over the regulatory period.	The method should be adjusted such that: <ul style="list-style-type: none"> • a year of inflation is added to the depreciation allowance in each year; • the starting remaining asset life is reduced by one year each year; • a half year of depreciation is attributed to capital expenditure in the year it enters service; and • the regulatory asset base roll forward calculation includes a half year of inflation indexation for the projects that commence

	<p>within a particular year.</p> <p>(paragraph 115 and Jeff Balchin “2010-15 Default Price-Quality Path Starting Price Adjustments Draft Decision Paper: Modelling Issues” (24 August 2011), paragraph 2.3)</p>
<p>The real revenue growth forecast for Powerco is overly aggressive, particularly given Powerco’s real revenue growth of -0.18% in 2011 and average annual growth rate of effectively 0, since 1 April 2008.</p>	<p>The following changes to the model to forecast real revenue growth should be made:</p> <ul style="list-style-type: none"> • a historical check against previous growth levels; • a margin for error; and • Powerco’s Coromandel region should be proxied by a lower growth rate. <p>(paragraphs 116-131)</p>
<p>Treatment of capital expenditure is inconsistent with other parts of the IMs.</p>	<p>Adjust the capex forecast to correct for the following two inconsistencies:</p> <ul style="list-style-type: none"> • capital contributions have been included in the capital expenditure growth forecasts, but capital expenditure is required to be net of customer contributions; and • finance during construction costs are allowed to be included in capital expenditure, however no cost allowance for finance during construction costs have been included in the capital expenditure growth forecasts. <p>(paragraphs 132-137)</p>
<p>Deficiencies in the Commission’s use of the Labour Cost Index (LCI) and Producers Price Index (PPI)</p>	<p>Powerco recommends that:</p> <ul style="list-style-type: none"> • the LCI and PPI forecast must be used with caution, due to forecast error; • the Commission incorporates mechanisms to account for the range of possible errors in the LCI and PPI; • the Commission take sector specific shocks into account if it uses the economy-wide PPI; and • the unadjusted LCI should be used for Powerco. <p>(paragraphs 139-154)</p>
<p>Use of real revenue growth to forecast opex is not as accurate as line length growth</p>	<p>The Commission should use average historical line length growth of EDBs (for example, from 2005-10).</p> <p>(paragraphs 155-157)</p>
<p>The forecast operating expenditure does not include any allowance for the following events that are beyond the control of EDBs:</p> <ul style="list-style-type: none"> • increased insurance 	<p>Powerco recommends that the operating expenditure allowance for all EDBs be increased:</p> <ul style="list-style-type: none"> • by 0.1% for 2011/12 to reflect the increased cost of insurance; and • by \$0.6 million per annum to account for the increase in prudential costs.

<p>costs; and</p> <ul style="list-style-type: none"> • the Electricity Authority proposal to increase the prudential costs borne by EDBs. 	<p>(paragraphs 158-169)</p>
<p>The treatment of inflation indexation is inappropriate in a number of respects.</p>	<p>Powerco recommends the following changes to the treatment of inflation indexation:</p> <ul style="list-style-type: none"> • for years when the Reserve Bank of New Zealand (RBNZ) does not forecast CPI, inflation should be forecast using the midpoint of the RBNZ target range for inflation (i.e. 2%); • a constant rate of inflation should be assumed, rather than uneven annual rates of inflation; • an adjustment must be made when setting actual prices to adjust for the difference between the forecast of inflation and actual inflation. An adjustment to the 2012-13 revenue should be made for the difference between the forecast and actual inflation as this information will be available at the time the price controls are set; and • include the one-off increase in inflation arising from the change in the GST rate. <p>(paragraphs 170-175 and Jeff Balchin “2010-15 Default Price-Quality Path Starting Price Adjustments Draft Decision Paper: Modelling Issues” (24 August 2011), paragraph 2.2)</p>

CURRENT & FUTURE PROFITABILITY

Commission has to consider current and future profitability

- 68 The Act requires that the starting prices set by the Commission be “based on the current and projected profitability of each supplier”.¹⁴
- 69 While the Commission has not explicitly stated what it considers “current profitability” to mean, it is implicit from the Commission’s approach that it considers “current profitability” to be EDBs’ profitability for the 2009/10 year.¹⁵
- 70 Powerco submits that the most current profitability measures available to the Commission will not be the 2009/10 year data, but the 2010/11 Information Disclosure Statements required to be made by EDBs before 31 August 2011. While the 2010/11 Information Disclosure Statements are not required to comply with the IMs, current and projected profitability calculated on the basis of the IMs should rationally underpin any price reset which is itself justified by the implementation of those IMs. It would be relatively straightforward to convert the disclosures for consistency with the IMs – several simple adjustments would be all that is required to estimate the effect of the IMs.
- 71 For the Commission not to properly consider current profitability is not only contrary to the Act, but is also contrary to the Commission’s statement that:

*... by, adapting our projections to individual EDBs and using independent reputable forecasts, we have minimised the likelihood that suppliers will ... earn returns that are inadequate to incentivise investment.*¹⁶

- 72 If an EDB is behind the Commission’s forecasts at the end of 2010/11 because real revenue growth is less than expected, CPI is different from that expected or other forecasts are inaccurate, the reality is that some EDBs will not be able to earn adequate returns.

Powerco current profitability

- 73 Powerco is set to release its Electricity Information Disclosure Statement for the year ended 31 March 2011 on 31 August 2011. In this Statement, Powerco will disclose a regulatory return on investment (“ROI”) of 10.22%.
- 74 While the Commission has not disclosed a final approach on how it will calculate the regulatory ROI it is possible to ascertain the general parameters that are consistent with the model used by the Commission for the starting price adjustment and the new Information Disclosure discussion documents, published in June 2011.
- 75 Powerco has had our calculation of Input Methodology ROI externally and confirmed that as reasonable and the details of our calculation are available at the Commission’s request.
- 76 Powerco has determined that its regulatory Input Methodology ROI is 7.38% for 2010/11. The largest changes from the Information Disclosure Statement are the removal of customer contributions from revenue, the removal of the effect of GST from the inflation index, altered tax

¹⁴ Commerce Act 1986, section 53P(3)(b).

¹⁵ Commerce Commission, *2010-15 Default Price-Quality Path for Electricity Distribution – draft decision*, July 2011, para 1.31, “The current and future profitability of each EDB can only be assessed with adequate information about the EDB’s cost at the start of the regulatory period”.

¹⁶ Commerce Commission, *2010-15 Default Price-Quality Path for Electricity Distribution – draft decision*, July 2011, para 2.29.

calculations and a higher Regulatory Investment Value reflecting the IM changes to valuation multipliers.

REGULATORY ROI	2011 Information Disclosure Statement	2011 Information Disclosure: Applying IMs
EBIT	108,634	101,056
Add Revaluations	55,277	31,587
Less Tax	(17,580)	(19,628)
Less Interest Tax Shield	(10,503)	(14,031)
Adjusted regulatory profit	135,828	98,983
RIV	1,328,413	1,340,443
ROI	10.22%	7.38%

Table One: Comparison of 2011 Return on Investment

- 77 Converting the Commission's 8.77% vanilla WACC¹⁷ to a post tax WACC gives a reasonable post tax allowance return of 7.78%. Therefore, Powerco's Input Methodology ROI is underneath what the Commission considers a reasonable return.
- 78 The 2010/11 Input Methodology ROI outcome is consistent with Powerco's internal results for the year ended 31 March 2011, following warmer than average weather and lower than expected demand. The warmer weather experienced in the first few months of the 2011/12 electricity pricing year suggests that our revenue will again fall short of our allowable revenue target (as calculated in the Commission's price adjustment model).¹⁸
- 79 The only way that Powerco can reconcile this obvious disjoint between our current profitability and the proposed price adjustment is through a combination of the following factors, which are discussed in further detail below:
- 79.1 aggressive real revenue growth forecasts that are out of step with actual results seen over the past five years, and unlikely to be achieved over the forecast period;
 - 79.2 capex growth forecasts that have been calculated in error, as they do not factor in IM requirements of being exclusive of capital contributions, and inclusive of finance during construction;
 - 79.3 opex forecasts that do not reflect industry specific issues;
 - 79.4 assumptions used to forecast future profitability are based on point estimate forecasts and do not allow for error; and
 - 79.5 model bias in terms of mixed point discounting that deliberately disadvantages EDBs by a significant amount.

¹⁷ Commerce Commission, "Determination of the Cost of Capital for Services Regulated under Part 4 of the Commerce Act 1986, Pursuant to Decisions 709, 710, 711, 712 and 713 Decision Number 718", 3 March 2011

¹⁸ May for example, was the warmest May recorded, being 2.3 degree centigrade higher than average. NIWA, "It's Official: Warmest May on Record", 1 June 2011, at <http://www.weatherwatch.co.nz/content/its-official-may-warmest-record-niwa>.

ISSUES WITH THE MODEL

Translating the IMs into a financial model

80 Translating the IMs into a financial model is not simply a mechanical task. In practice, it involves a series of value judgements and assumptions by the regulator that can have a material impact on the results produced from the modelling. In this section we look at how high-level regulatory principles have been translated into the detailed financial model used by the Commission to reset the DPP. Further detail on translating regulatory principles into financial models is provided in section 4 of the attached Castalia report.

81 The IMs are based on high-level principles, such as NPV=0 and financial capital maintenance (FCM), as well as defined building blocks, such as the return on and of capital, operating expenses, capital expenditure and tax. Reflecting these principles in a financial model requires judgements and assumptions because of the simplifications involved in translating real world financial flows into a modelling tool that has limitations – in this case an Excel spread sheet.

82 Many of the detailed modelling issues that we raise in this section result from the judgements made by the Commission in translating the principles into the model. These include:

82.1 **WACC range issues.** The process adopted by the Commission sets returns equal to WACC, rather than using a “reasonable range” approach. This presumes a high level of precision in the modelling. An alternative approach would be to bring the returns of all businesses within the estimated WACC plus or minus a reasonable range.

82.2 **Timing of cash flows.** The financial model operates in discrete periods, which means that cash flows can be recognised at the beginning, middle or end of each period. Each treatment has a different impact on value. Making a judgement on how to treat cash flows not only needs to reflect reality as closely as possible, but also needs to achieve internal consistency. For example, revenue and operating expenses generally occur throughout the year and tend to offset each other, suggesting a similar treatment is warranted. Other expenditures, such as tax, capital, dividends, and interest may require more careful consideration. Any obvious mismatches in treatment raise issues of the treatment of working capital.

82.3 **Financial capital maintenance.** Under FCM, all changes to the RAB must be accounted for as income (revaluations), capital additions or expenses (depreciation and disposals) in accordance with accounting principles.

83 All of these judgements, assumptions and simplifications must be made transparently and with appropriate reasons or justifications. The judgements made on each of these points of apparent modelling detail should be based upon a consistent view of the purpose and objectives of the IMs.

WACC range issues

84 A comparison of the P_0 adjustments proposed (shown in Figure 2.2 of the Commission’s draft decision) highlights a surprisingly large variation in prices between the original DPP set in 2009 and this proposed adjustment. For all of the positive P_0 adjustments, price increases are around 10% – while all of the negative adjustments are around 8%. Given that the actual businesses themselves are relatively stable – that is, their costs, revenues and growths have not changed materially – the variations in price adjustments appear to be driven by trying to shoehorn each firm’s returns into the industry-wide WACC in the short to medium term.

- 85 As we discuss in Part 1 of this submission, the Commission’s desire to align the returns of all EDBs to the Commission’s estimate of WACC is inconsistent with outcomes typically observed in workably competitive markets. In turn, the mechanical attempts to impose a single return on all EDBs will result in wide price oscillations. Using a simple high level model designed to support the DPP process to set returns exactly to the Commission’s estimate of WACC (to two decimal places) does not accord with the objective of Part 4 to promote workably competitive market outcomes. In workably competitive markets, firms earn a range of returns due to a range of factors, including relative efficiency and performance.
- 86 The Commission rejects the idea of a range around the WACC on the grounds that the WACC itself is derived from a range of WACC estimates, and is set at the upper end of that range. This argument fundamentally confuses the difference between the process of determining an industry-wide WACC and the process for dealing with short-term variations in returns among the EDBs. There is no doubt that an industry-wide WACC represents an approximation, and is derived from a range of possible values. However, once an approximate value within such a range is determined, there is a completely different question of whether individual EDB’s deviations from that value fall within a “reasonable range”.
- 87 The Commission’s logic is that because an industry-wide WACC is derived from a range of possible value, no variation around that derived value is reasonable. This logic makes no economic or financial sense. The range for the WACC estimates relates to the uncertainty about identifying the true cost of capital from the available methodologies. The range of actual ROIs around the WACC relates to the individual circumstances and performance of each EDB, which more often than not have more to do with relative efficiency than any aspect of excessive profit.
- 88 Given the approximations and inaccuracies in the regulatory financial model (which are separate from the approximations and inaccuracies in estimating the WACC from the financial market data), the key question that the Commission needs to address is what degree of deviation from the estimated industry-wide WACC represents a reasonable range of firm-specific outcomes, and when such deviations justify P_o adjustment. The Commission’s current approach is effectively that no deviation from the industry-wide WACC could represent a reasonable variation in firm-specific performance and cyclical circumstances. This is clearly an extreme position, not justified by the actual observations of workably competitive markets or by simple commercial logic.
- 89 Setting the returns of all EDBs exactly equal to the WACC assumes a false precision in the model, which does not reflect the purpose of the DPP process or how the IMs should be translated into the financial model.

Mixed-Point discounting

Summary of the Commission’s decision on the timing of cash flows

- 90 The single largest change made to the Commission’s model between April and July is the adoption of mid-point discounting for various elements of the regulated supplier’s costs and revenues, while leaving other elements to be discounted at the end of the year. We refer to this approach as “mixed-point discounting”. The justification for this change is set out in below¹⁹:

We have changed the calculation of present values for revenues because revenues are received throughout the year, not at the year-end (which is the basis on which present values were calculated in the Update Paper). This has been modelled by assuming that the timing of

¹⁹ Commerce Commission, 2010-15 Default Price-Quality Path for Electricity Distribution – Draft Decision, July 2011, paragraph 2.29.

revenues is equivalent to the revenues being received in the middle of the year. Operating expenditure has also been modelled as occurring at mid-year. This should reduce much of the modelling bias towards EDBs. However, this assumption ignores the fact that—due to seasonal factors—revenues are likely to be higher in the first half of the year than in the second half of the year. This provides a slight timing benefit in favour of EDBs. To offset this effect, and to improve the accuracy of our modelling overall, we have modelled tax costs as falling at the year-end (rather than throughout the year as would be likely in practice).

91 The mixed-point discounting approach differs from the Commerce Commission's April Update Paper.²⁰ The Commission indicated that its approach in April was to assume cash flows were at the end of each year (although we note that the formula in the April Model did not discount the cash flows for the first period, which would be correct if the cash flows were being considered from the end of the first period (i.e. 31 March 2013)). The important change in approach from April 2011 (and the Commission's approach in all previous regulatory decision relating to gas and electricity distribution businesses) is that the Commission no longer considers it appropriate to assume that all revenues and costs are incurred or earned at the same point in time.

92 In addition to the rationale provided in the draft decision, the Commission staff have also indicated that the rationale for the move to mid-point discounting of some elements is necessary:

92.1 to preserve Financial Capital Maintenance (FCM);

92.2 to ensure consistency with the IMs;

92.3 to be consistent with international approaches; and

92.4 to ensure consistency with the historic practices of the Commission.

Mixed-point discounting is internally inconsistent

93 In deciding how to treat the timing of cash flows, the Commission is trading-off the desire to achieve accurate modelling results with the benefits of using a simple approach that is easy to understand. Complex financial models can be built to define precise different points throughout the year when cash will be received or paid. Investment analysts commonly construct these models to inform investment decisions. In contrast, regulatory financial models often make a deliberate choice to simplify how the timing of cash flows is treated – by using either an end-year or mid-year convention for discounting.

Whether a detailed investment appraisal approach is used or a simplified regulatory approach, the treatment of different cash flow items needs to be consistent

94 This means that the Commission can either apply a level of precision that would be observed in an investment appraisal, or the Commission can accept that regulatory modelling does not need this level of precision. The approach applied in the draft decision is not consistent with either of these approaches. Rather, the Commission claims to be modelling some items with more precision (revenues and opex), while not accepting that other cash flow items (such as financing costs, depreciation, and tax) also vary throughout the year.

95 The table below sets out the two approaches that we consider are available to the Commission – the complex investment appraisal approach and the simplified regulatory modelling approach.

²⁰ Commerce Commission, 2010-15 Default Price-Quality Path Starting Price Adjustment and Other Amendments– Update Paper, April 2011.

	Complex Investment Appraisal	Simplified Regulatory Modelling
Operating expenses	Match expected timing if intra-year profile of operating expenses impacts on value	
Revenues	Match expected timing if intra-year profile of revenues impacts on value	
Capital expenditure	Match expected timing if intra-year profile of capital expenditure impacts on value	Approximation of timing assumed at end or middle of year
Depreciation	Accounted for throughout the year and subtracted from the asset base at that time	
Return on capital	Reflects timing of payments to debt and equity (some models use quarterly discounting)	
Tax	Reflects timing of tax payments	
Working capital	As required to balance intra-year cash flows	If timing is mid-year, then allowance incorporated for working capital.

Table Two: Comparison of modelling approaches

- 96 The Commission’s mixed-point discounting approach accepts the logic of the complex investment appraisal approach for the timing of operating expenses and revenues. The Commission then takes a simplified approach to modelling capital expenditure at year end, but does not incorporate an allowance for working capital. The Commission’s failure to allow for working capital is inconsistent with working capital not being included in the regulatory asset base. The Commission assumes end of year treatment for depreciation, return on capital and tax – which is inconsistent with the apparent desire to accurately model cash flow timing when sufficient information is available.
- 97 The Commission’s claim that modelling tax costs as falling at the year-end improves the accuracy of the modelling is clearly not correct. Again, the Commission could take a precise approach to modelling tax such as would be done in a complex investment appraisal, or the Commission could adopt the simplified regulatory modelling approach to the treatment of tax by assuming a single end of year tax payment.
- 98 In essence, the Commission is adding significant complexity to the model in an attempt to achieve a level of modelling accuracy that is illusory. The Commission knows that other assumptions will not be correct (such as demand growth). Powerco believes that instead of trying to achieve this unobtainable level of accuracy, the Commission should instead bring the discounting period to a single point, preferably the end of the year. This would significantly lower

the complexity of the model, bring the approach into line with international regulatory practice, and would correct the inconsistent and flawed approach that would have an arbitrary negative material impact on the value of the EDBs. Were the Commission to utilise mid-period discounting then an allowance would be required for working capital.

- 99 Powerco does not believe that the use of mixed-point discounting is appropriate but were the Commission to adopt the complex investment appraisal approach it must, as a minimum, allow for working capital and adjust the timing of the taxation expense and the receipt of revenue to reflect reality.

Mixed-point discounting is not consistent with international regulatory practice

- 100 There is evidence to suggest that the Commission is also out of step with how regulators in other jurisdictions approach discounting. As Jeff Balchin observes in the attached report, the AER uses a different regulatory approach that uses mid-point discounting in an internally consistent way.

- 101 Powerco is concerned that the Commission made such a significant change to the discounting approach without first consulting with the industry to obtain their input on how cash flows are received. As discussed below, Powerco believes that some of the Commission's assumptions about industry practices are wrong and that the way the draft decision model is discounting creates significant bias against the EDBs.

- 102 The Commission's claim that treating tax as a single payment that occurs at the end of the year has been done "to improve the accuracy of our modelling overall" is clearly incorrect. The Commission argues that this offsets the timing benefit that comes from EDBs having higher demand and higher revenues in the earlier months of the regulatory year. However, the Commission provides no evidence that these two incorrect assumptions actually do offset each other.

Mixed-point discounting does not achieve FCM

- 103 The attached independent expert report from Jeff Balchin explains why the Commission's new and highly material mid-year timing of cash flows adjustment suffers from error and does not achieve FCM.
- 104 In summary, Mr Balchin finds that the Commission is incorrect that the seasonal profile of Powerco's revenue provides an advantage compared to receiving the revenue mid-year (which the Commission uses to justify its idiosyncratic assumption about the timing of taxation payments). In fact, Powerco receives revenue in arrears for providing distribution services, which imposes a detriment (in present value terms) that more than offsets any benefit from the seasonal profile of its revenue.
- 105 If the Commission does decide to calculate the revenue requirement on the assumption that revenue is received and expenses incurred at the mid-point of the year (that is, even after the formula is changed to remedy the timing assumption about taxation, discussed above), the lagged nature of Powerco's revenue means that its economic costs will be understated, and as such an increment to its revenue requirement is required to meet the Commission's intentions (this increment is analogous to a return on working capital). Mr Balchin estimates on conservative assumptions that this increment to revenue is approximately 0.5 per cent.
- 106 There are a number of other reasons why the Commission's mixed-point discounting approach will not lead to FCM.

- 106.1 Firms outlay cash for capital expenditure before those assets are recognised in the RAB, and finance during construction (FDC) cannot be added to all assets. The standard NZIAS 23 (Borrowing Costs) outlines how to apply FDC under GAAP. The Commission recognises this in section E5 of the Input Methodologies Reasons Paper. The definition of qualifying assets in NZIAS 23 limits the ability to apply FDC to an 'asset that necessarily takes a substantial period of time to get ready for its intended use or sale'. Although a 'substantial period of time' is not defined, it is likely that very few of Powerco's assets would meet this definition. The majority of Powerco's capital expenditure is asset renewal which involves only short term construction. Therefore, Powerco has very few assets where FDC can be applied, but all Powerco's capex is funded through debt and equity, generally with a gap between when the capex was paid for and when it was commissioned.
- 106.2 Firms expend cash which is not included in RAB, and as a result do not receive a return on this capital investment. Property transactions are particularly likely to fall into this category.
- 106.3 Not all costs of a regulated firm are recoverable. For example, Powerco is currently subject to a Gas Authorisation for our gas business and the IMs for our electricity business. From 1 April 2012 the proposed regulatory indirect costs for both businesses will not cover all of Powerco's actual indirect costs.
- 106.4 Firms pay tax before the end of the year in instalments.
- 106.5 Revenue is not received as cash until 20 days into the month following invoicing.
- 107 For the Commission's modelling to achieve FCM, the Commission needs to be consistent in its approach. The Commission either needs to treat all cash flow items using a complex investment appraisal approach, or treat **all** cash flow items using a simplified regulatory modelling approach.
- Mixed-point discounting adds unnecessary complexity**
- 108 Powerco is also concerned that the Commission is adding significant complexity to the cash flow modelling and trying to achieve spurious accuracy in its approach to discounting, while its various assumptions around real revenue growth, capex and opex are necessarily coarse.
- 109 This point is highlighted by the response the Commission gave to question 18,²¹ when asked what adjustments would need to be made to the model if the Commission moved the tax payments to being discounted at the mid-period:

If a tax payments were modelled as occurring during the year rather than at year-end, the following changes would be required. A change to deferred tax would arise at the time the provisional tax payment is modelled to occur. The change to deferred tax would in turn change the regulatory investment value. Each year would therefore be split into a first part (with one regulatory investment value), being up until the tax payment date and a second part after this date (with a different regulatory investment value). The change in regulatory investment value would mean that the calculation of the return on capital would need to be split into two parts, one relating to the first part of the year and the other relating to the second part of the year.

²¹ Commerce Commission. *Issues Register – Technical Queries 2010 -15 DPP Reset*, 15 August 2011.

- 110 The level of complexity that the Commission is trying to achieve with its modelling of cash flows is well out of step with international regulatory practice.
- 111 As we identified in Part 1, Powerco believes there is excessive complexity where, for example, a four page algebraic equation is required to justify a single formula in the model.²² The additional changes required to correct the timing of taxation cash flows will add further complexity and require Powerco to again engage experts to review and express an opinion on the approach used in the model.
- 112 The level of complexity of the Commission's mixed period approach also greatly reduces the ability of all of Powerco's stakeholders to understand the reasons behind the Commission's price adjustment decisions.
- 113 Powerco's debt and equity investors require certainty of outcome before they are willing to invest at the low regulated rate of return. If they cannot easily understand the Commission's approach, or they perceive that there is a risk that a small tweak to the discounting formula could see Powerco's earnings plummet by 4% (as was the case between the Update Paper and the Draft Decision), then they are likely to either not invest at all, or require a greater return to compensate for the uncertainty. This is not a desirable outcome for the industry in New Zealand and will lead to higher electricity prices in the long term.
- 114 Powerco strongly requests that the Commission takes a pragmatic approach to discounting, consistent with international and historic practice, and reverts to its previous single-period approach, preferably at year end.
- 115 If the Commission wishes to continue seeking greater precision in its financial model, then it needs to give appropriate consideration to consistent treatment of all cash flows, particularly the timing of revenue, tax payments and capex. At present, the Commission's assumptions in these areas are not factually based.

Adjusting the Regulatory Asset Base

- 116 If the Commission continues with the current financial model, there are four separate elements to the Commission's method for adjusting the regulatory asset base over the regulatory period that are inappropriate. This is analysed in more detail in Jeff Balchin's independent expert report. In summary these are:
- 116.1 **Setting depreciation in beginning of year dollars:** the Commission's model does not apply inflation to depreciation within each year (thus setting the allowance in beginning of year terms), which is inconsistent with the implicit assumption in the Commission's target revenue formula that the depreciation allowance be specified in end of year terms.
- 116.2 **Remaining lives of assets:** the Commission's model applies a static remaining life for existing assets, whereas the remaining life of each asset declines by a year each year, which should be applied. In addition, the Commission should apply a life to capital expenditure that reflects the life of the assets in question.
- 116.3 **Depreciation on capital expenditure:** the Commission also commences the depreciation of capital expenditure from the year after projects have commenced,

²² Commerce Commission, *2010-15 Default Price-Quality Path Derivation of Formula for Allowed Revenue Draft Decision*, July 2011.

whereas it would be more appropriate to calculate half a year of depreciation for the projects that commence within a particular year.

- 116.4 **Inflation on capital expenditure:** equally, the Commission's model does not escalate capital expenditure for inflation in the year in which projects commence, whereas it would be more appropriate to apply half year of inflation indexation for the projects that commence within a particular year.

PROJECTED EXPENDITURE AND REVENUES

Real revenue growth

- 117 The real revenue growth (RRG) assumption has a significant impact on suppliers earning a fair return on capital investment and FCM being maintained. It impacts both the forecast of allowable notional revenue from 2010-2015, and the price path formula in 2013 by the inclusion of the ΔD term.
- 118 Powerco welcomes the Commission's move to supplier specific forecasts. The variation in annual RRG forecasts between EDBs is from 0.93% to 3.39%, illustrating the need for a company specific assumption. Based on our engineering and commercial expertise, however, we consider the Commission's real revenue growth forecast for Powerco to be overly aggressive, particularly given Powerco's real revenue growth of -0.18% in 2011 and average annual growth rate of effectively 0, since 1 April 2008.

Powerco Real Revenue Growth - Commerce Commission & Actual					
	Weighting	Commerce Commission	Powerco Actuals		
			2008/09	2009/10	2010/11
Fixed²³	20.20%	0.49%	3.38%	0.67%	0.53%
Demand²⁴	26.90%	0.96%	-1.55%	8.18%	-1.48%
Variable	52.90%	2.15%	-2.69%	-1.85%	0.21%
Weighted Real Revenue Growth		1.50%	-1.16%	1.36%	-0.18%

Table Three: Powerco Real Revenue Growth 2008-2011

- 119 Some of the issues can be identified in the Commission's model to forecast real revenue growth. The following simple changes can easily be made and will improve the accuracy of the real revenue growth assumption. The changes relate to the use of the Electricity Authority's volume forecasts and the need for a margin for error.
- 119.1 There must be a historical check against previous growth levels given that many of the forecasts are much higher than in the previous five years;
- 119.2 A margin for error must be included due to the inaccuracy of the smaller, regional forecasts, the historical inaccuracy of the forecast and the use of less up to date information; and
- 119.3 The Coromandel region that Powerco operates in is currently attributed to the Waikato region. Powerco's Coromandel region should be proxied by a lower growth rate as the 2011 growth is less than a fifth of the Waikato region.

Unjustified movement from historical forecasts

- 120 Powerco submits that the Commission's volume growth forecast needs to be revisited in light of historical growth figures. The implications of the following graph, which compares historical growth with the Commission's forecast growth, are self-evident.

²³ Fixed growth is calculated by changes in the number of Powerco ICPs.

²⁴ Change in demand is based on the total (non-coincidental) demand recorded by Powerco. This is a reasonable proxy for the demand charges which are the basis for the weightings used by the Commerce Commission.

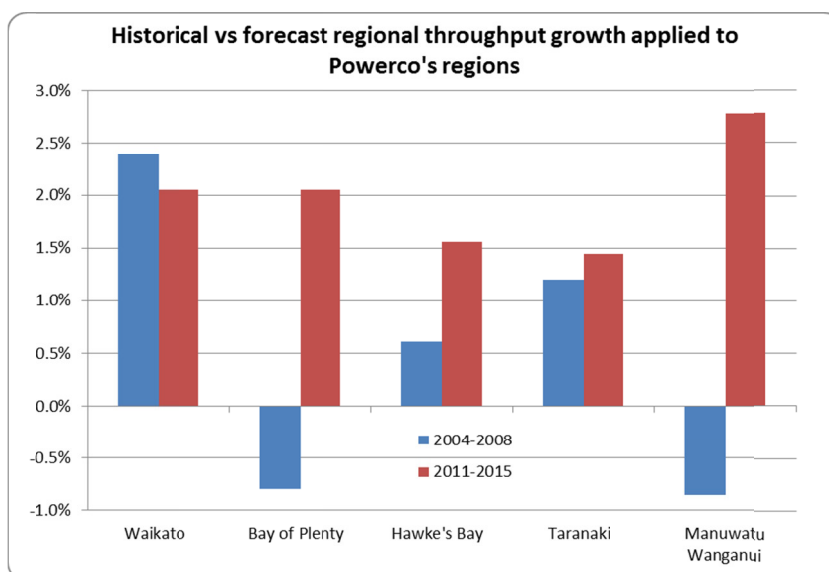


Figure One: Historical v Forecast Region Throughput Growth applied to Powerco's regions

- 121 Most of the regions in which Powerco operates – Bay of Plenty, Hawke's Bay and Manawatu-Wanganui – have forecast growth rates in the draft decision model well in excess of actual historical growth rates. It is difficult, in the absence of significant changes in customer composition or demographics, to see why electricity consumption is expected to reverse such historical trends.
- 122 The forecast growth rates have a substantial impact. For example, changing the forecast growth rates for volume to the historic rates for Powerco's footprints reduces Powerco's real revenue growth from an average of 1.4% to 0.6%.
- 123 Powerco can see no reason why the growth rate in 2011-2015 would be materially different to the historical growth rates between 2004 and 2008. In fact, the economic situation has worsened since the Electricity Authority forecasts were completed and GDP forecasts have fallen, and this is probably one reason why 2010/11 growth is much lower.
- Margin for error must be included**
- 124 The Commission needs to carefully balance the extra accuracy that comes from its regional approach with the increased variability and inaccuracy that is inherent in the use of smaller/regional forecasts. Forecasting population, GDP, and electricity demand at a regional level is much more difficult and error-prone than country-wide forecasts.
- 125 For example, Bain found five year population forecasts have an accuracy of +/- 5%.²⁵ In addition, figure two shows that the Electricity Authority's own estimate of the band of uncertainty around the 2015 forecast is approximately 10%. Relative to expected growth in the Bay of Plenty of 2.0% pa, this suggests that potential error in the forecasts is very high.
- 126 As the Electricity Authority states in relation to the electricity volume forecasts:²⁶

²⁵ Bain, "Errors And Optimism Bias in Toll Road Traffic and Revenue Forecasts", Presented at the Bureau of Infrastructure, Transport and Regional Economics Traffic Forecasting Symposium, Canberra, June 2011.

²⁶ Electricity Commission, *Statement of Opportunities*, September 2010, page 27.

the limited availability of regional sectoral demand and key driver information severely restricts the options available for forecasting regional-level demand.

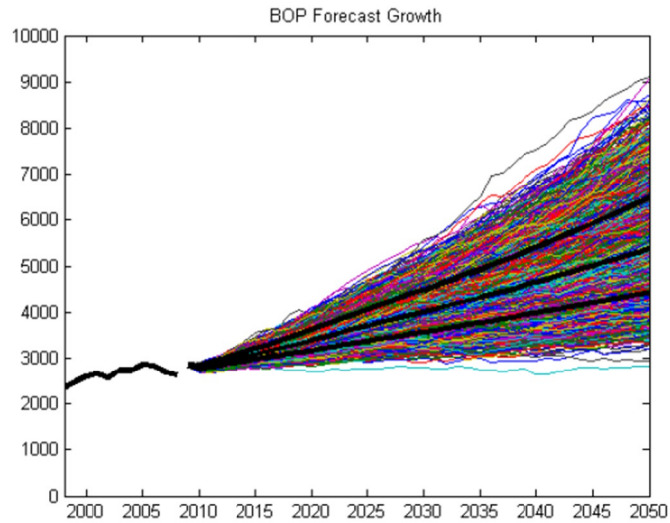


Figure Two: Confidence Limit of Bay of Plenty Forecast²⁷

- 127 This issue is made worse by the fact that many of the inputs are not fully up to date. For example, the Electricity Authority’s forecasts were made in 2009, using data up to 31 March 2009. The Statistics New Zealand population forecast is based on the 2006 census information, which is now five years out of date.
- 128 The Electricity Commission has also historically over-forecast electricity volume. The 2005 Statement of Opportunities volume forecast is well above the actual volume outturn – only three years after the forecasts were issued, the forecasts exceeded actual by more than 3%.

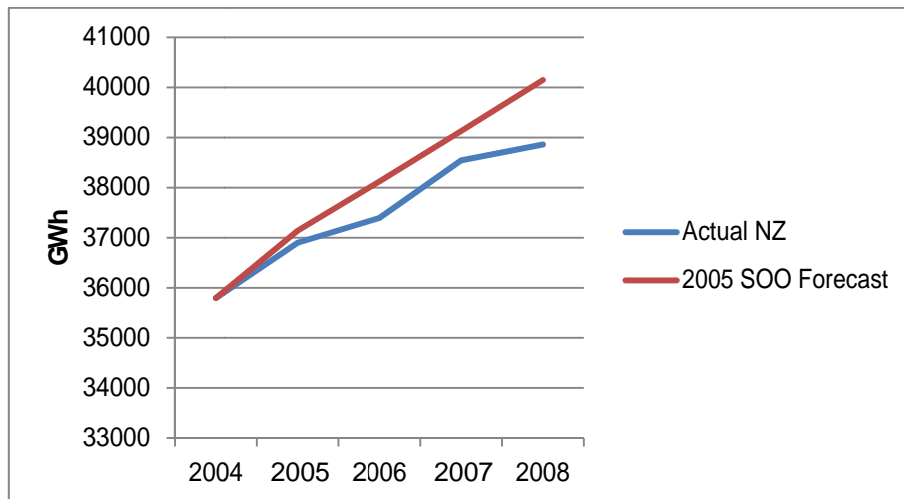


Figure Three: Accuracy of Electricity Commission’s 2005 Electricity Volume Forecast

- 129 The 2009 forecast for the Central Region below also shows a significant increase in the forecast from the 2008 Statement of Opportunities. Given the continued challenging economic climate,

²⁷ Electricity Commission, *2009 Electricity Demand Forecasts*, 19 December 2009.

this increase seems particularly aggressive. It also illustrates the volatile nature of the forecasts under the Commission’s methodology. The 2015 forecasts for Central region increased by around 9% only a year after they were made.

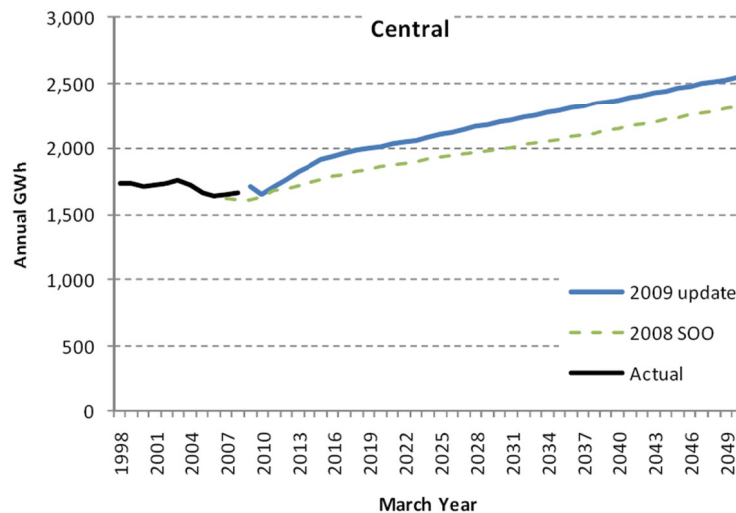


Figure Four: Change in Annual GWh forecast between 2008 and 2009 for Central Region

NZIER modelling

- 130 The attached NZIER Report notes that the Commission has used point estimates for its forecast values and used these precise points in setting the initial price for EDBs. The NZIER has analysed the uncertainty associated with the forecasts used by the Commission using a reasonable range of CPI estimates and the effect of PPI shocks consistent with recent movements in the sector.
- 131 NZIER intended to model the uncertainty related to regional GDP forecasts, but was unable to obtain sufficient information to calculate a confidence interval. This itself indicates the degree of “error” inherent in regional GDP forecasts.
- 132 Instead, NZIER has been able to present a range of scenarios. This scenario analysis indicates that Powerco’s maximum allowable revenue under the Commission’s model could vary significantly – and most particularly with variations in CPI forecasts.

Capex Assumption

- 133 The Commission’s treatment of capital expenditure is inconsistent with other parts of the IMs, namely:
 - 133.1 capital contributions have been included in the capital expenditure growth forecasts, but capital expenditure is required to be net of customer contributions; and
 - 133.2 finance during construction costs are allowed to be included in capital expenditure, however no allowance for finance during construction costs have been included in the capital expenditure growth forecasts.
- 134 Powerco’s capital expenditure forecast from its 2010 Asset Management Plan and 2010 Electricity Information Disclosure are as follows:

	09/10	10/11	11/12	12/13	13/14	14/15
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
Customer Connection	25,457	19,860	18,919	18,141	17,123	16,262
System Growth	28,395	23,796	24,411	25,023	23,940	22,787
Reliability, Safety and Environment	2,882	13,567	14,281	15,042	15,202	15,399
Asset Replacement and Renewal	23,719	24,441	27,131	30,098	33,390	37,043
Asset Relocations	7	2,207	2,338	2,242	2,335	2,218
Total capex	80,459	83,871	87,080	90,546	91,990	93,709
Growth rate		4.24%	3.83%	3.98%	1.59%	1.87%

Table Four: Capital Expenditure Forecast in Powerco's 2010 AMP

- 135 The majority of Powerco's Customer Connection capital expenditure is funded by capital contributions, and therefore to be consistent with the IMs, this portion of capital contributions should be removed from the above before calculating the capital expenditure growth rate. Powerco forecasts capital contributions to be 76% of Customer Connection capital expenditure, and therefore adjusted capital expenditure forecasts are as follows:

	09/10	10/11	11/12	12/13	13/14	14/15
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
Total capex (as above)	80,459	83,871	87,080	90,546	91,990	93,709
Less capital contributions	17,677	15,094	14,378	13,787	13,013	12,359
Net capex	62,782	68,777	72,702	76,759	78,977	81,350

Table Five: Powerco's capex forecasts net of capital contributions

- 136 The Commission also allows the costs of finance during construction to be included in the commissioned assets amount.²⁸ Powerco's 2009/10 commissioned assets value did not include any finance during construction costs as the old Electricity Information Disclosure regime did not require this to be calculated on an asset by asset basis, unlike the requirements under NZ IAS 23 (GAAP). Powerco intends to complete further work on finance during construction costs and start adding it to capital expenditure forecasts going forward.

²⁸ Commerce Commission, *Electricity Input Methodologies Determination*, December 2010, s.2.2.11.

- 137 Powerco considers that approximately 25% of its annual capital expenditure will meet the definition of a qualifying asset under NZ IAS 23: “an asset that necessarily takes a substantial period of time to get ready for its intended use or sale”. Powerco will only be able to capitalise its borrowing costs against these assets. Estimates of finance during construction costs, in line with this treatment, are included below.

	09/10	10/11	11/12	12/13	13/14	14/15
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
Net capex	62,782	68,777	72,702	76,759	78,977	81,350
Qualifying capital expenditure	15,696	17,194	18,176	19,190	19,744	20,337
Finance during construction costs	Not applied	1,508	1,594	1,683	1,732	1,784
The alternative method would be to apply the Commissions previous 2.45% rate to the net capex allowance	Not applied	1,685	1,781	1,881	1,935	1,993

Table Six: Powerco’s capex forecasts net of capital contributions and applying finance during construction costs

- 138 Adjusting the capex forecasts to correct for the two inconsistencies in the Commission’s capital expenditure forecast results in the following capital expenditure:

	09/10	10/11	11/12	12/13	13/14	14/15
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
Net capex	63,656	68,777	72,702	76,759	78,977	81,350
Finance during construction cost	0	1,508	1,594	1,683	1,732	1,784
Adjusted capex	63,656	70,285	74,296	78,442	80,709	83,134
Growth		10.41%	5.71%	5.58%	2.89%	3.00%

Table Seven: Powerco nominal capex growth assumption correcting for capital contributions and applying finance during construction

Opex Assumption

- 139 The Commission has developed an opex forecast based on real revenue growth, the LCI and the PPI. Powerco generally supports this approach, although has the following concerns:

- 139.1 NZIER has provided an independent report that recommends improvements to the LCI and PPI forecasts used by the Commission:

- (a) NZIER forecasts are subject to forecast error and the forecast must be used with caution.
- (b) There are a wide range of possible errors and these can be significant. The Commission must incorporate mechanisms to accommodate for this uncertainty (for example, by using a band) or FCM will not be maintained.
- (c) The Commission should take sector specific shocks into account if it uses economy wide PPI due to the historical trends in the Electricity, Gas, Water and Waste PPI index.
- (d) A comparison with Powerco's labour inflation rates strongly suggests that the unadjusted (rather than the adjusted) LCI should be used.

139.2 A key driver of opex growth is line length. A more robust opex forecast would be to use the average historical line length growth of EDBs (for example, from 2005-2010) instead of real revenue growth.

NZIER Forecasts and issues with point estimates

140 The Commission has used the point estimates of the NZIER forecasts of the LCI and PPI to calculate the nominal opex growth assumption. In its report, NZIER state that its forecasts need to be used with caution, as like all forecasts, they are subject to error. The Commission's draft decision paper makes no mention of any analysis of the level of error in the forecast or the impacts of this on FCM. NZIER cite the example of accuracy of GDP forecasts since 1995. For example, in October 2008 the consensus forecast was that the economy would grow by +1.3% in 2009. However, the economy contracted by -1.7%.

141 NZIER also observe that the Commission's methodology does not consider the uncertainty associated with using forecasts, as only point estimates are used. According to NZIER, the risks of uncertainties arise from:

141.1 exogenous assumptions, such as GDP growth and population growth, which are particularly difficult to forecast at the moment given the uncertainty associated with the global financial situation;

141.2 stochastic model error, as it is usually impossible to perfectly estimate the relationship between all possible factors and electricity demand; and

141.3 non-stochastic error, such as from poor input data and misspecification of the forecasting model.

142 NZIER suggest options for accounting for the uncertainty of forecasts, such as not using the midpoint, but adopting a more suitable percentile (as the WACC adopts the 75th percentile) or using a band as discussed earlier in the submission. This conclusion is supported by NZIER modelling that demonstrates the range of P_o outcomes possible under various scenarios.

Industry fluctuations in PPI Index

143 Powerco asked NZIER to review if it was possible to use a sector specific LCI and PPI for the electricity distribution sector. NZIER found that while the electricity and gas industry specific PPI tends to track the economy-wide PPI well, it is much more volatile than the economy wide PPI. For example, the sector specific PPI increased by around 80% in 2008, in comparison to an only 20% increase in the economy wide PPI. NZIER found that if this historical pattern is repeated

again in 2012, EDBs costs would increase and the Commission's model would not follow FCM. NZIER calculate that the impact on Powerco of this shock would be a PV cost of more than \$17 million (2012/13-2014/15).

- 144 NZIER therefore recommend that the Commission take sector specific shocks into account in modelling opex growth. Again, a suitable band around the WACC would help achieve this.

Labour Cost Index

- 145 As already mentioned, the Commission has calculated operating expenditure growth based on a mix of LCI and PPI forecasts. Powerco is particularly concerned with the LCI used and believes that the LCI value significantly understates the forecast wage growth facing Powerco. The Commission has used an all industries index which is inappropriate to apply to EDBs without taking sector specific issues into account.

Comparison to Powerco and its service providers wage growth

- 146 Powerco's 2009/10 operating costs were \$54.3 million dollars (excluding loss on disposals), of which approximately \$17 million was employee benefit expenses. In the 2009/10 year Powerco employed around 220 staff, of which the majority work in the following professions: Electrical Engineers, IT professionals, Accountants, Lawyers and Office Support staff. These are highly skilled professionals and their remuneration requirements are quite distinct from that of the entire New Zealand economy. The increasing complexity of the regulatory environment in New Zealand is likely to require an increasing number of highly qualified staff to be employed.

- 147 Powerco also contracts external parties to complete the physical maintenance work on the lines. The amounts paid to these parties for labour makes up a further \$18 million of the \$54.3 million of operating costs. A significant increase in the demand for skilled linesmen in Australia has meant that wage costs are forecast to rise faster than inflation.

The unadjusted LCI should be used

- 148 The LCI used is the *All industries/occupations combined - All sectors combined (SG53Z9)* index which reflects "movements in base salary and ordinary time wage rates, and overtime wage rates for a fixed quantity and quality of labour input. This means that changes in pay rates due to the performance of employees and promotions, among other things, are not shown in the index".²⁹

- 149 NZIER state that the increasing engineering and regulatory complexities that Powerco faces is likely to require an increasing number of more highly qualified staff to be employed, and therefore a reasonable measure of future labour cost increases must account for quality changes in the workforce. The adjusted LCI index used does not accommodate such quality improvement demands, such as improvements in the performance of employees (and associated performance pay), changes in qualification, duties, responsibilities, numbers of hours worked and levels of experience of length of service. These are all quality aspects that Powerco must remunerate in the coming years to fulfil increasing quality output and productivity demands.

- 150 Statistics New Zealand recognises the limitations of the adjusted LCI and so produces an unadjusted LCI which accounts for changes in the quality of a labour input while holding the quantity of labour input fixed. This is in some way similar to the Quarterly Employment Survey (QES) measure, but unlike the QES remains unaffected by changes in workforce composition.

²⁹ Statistics New Zealand website, *A comparison between the adjusted and unadjusted labour cost index*, July 2008

151 As a measure of labour productivity, the unadjusted LCI better reflects relative gains or losses because it accounts for quality improvements within a fixed quantity of labour input. If the adjusted LCI is used then Powerco would not be adequately compensated by regulation for rewarding the productivity gains of its employees. As a result, there is no incentive to improve the relative efficiency and effectiveness of Powerco's employees.

152 There is a limitation within the unadjusted LCI in that it is an analytical series on the salaries and wages component only (i.e. it excludes overtime pay). As the overtime component of the index is only 2.7% (for the All sectors combined series), this omission has a minimal impact that can be overlooked in favour of using a more representative LCI measure determining the true future changes in Powerco's employee costs.

153 Although it is not the main published LCI series, there is precedent for use of the unadjusted LCI. The Department of Labour uses the measure to determine real wage growth, in preference to using the less representative QES and adjusted LCI series.

154 Powerco strongly encourages the Commission to specifically consider the labour costs that EDBs are likely to incur over the forecast period in terms of the professional staff and skilled linesmen that drive operating costs.

Drivers of opex growth

155 Sections 7.3 and 10.5 of Powerco's 2011 Asset Management Plan describe the key drivers of Powerco's operational expenditure. This is a complex area, impacted by the asset management strategy adopted by Powerco, the condition of assets and many other factors. However, Powerco has found that an accurate proxy for opex growth is system line length.

156 In Powerco's experience, real revenue growth is not a sound proxy as it:

156.1 is weighted by the proportion of fixed, variable and demand charges that link to Powerco's pricing methodology, and which have no connection to opex; and

156.2 includes volume growth, which is not a major factor driving opex growth.

157 The Commission should therefore use historical growth in system line length (for example, from 2005-2010) to forecast the operational expenditure growth level, rather than real revenue growth. This information is easily available and audited by the annual electricity information disclosure process.

Un-controllable changes to operating costs

158 The forecast operating expenditure contained in the Commission's modelling of the starting price adjustment for EDBs does not include any allowance for two additional events that are beyond the control of EDBs:

158.1 increased insurance costs due (pre-dominantly) to the Christchurch and Japan earthquakes; and

158.2 the proposal by the Electricity Authority to increase the prudential costs borne by EDBs.

Insurance Costs

159 At paragraph 3.27 of the draft decision the Commission has recognised that there could potentially be a large impact on the insurance costs due to recent earthquakes, affecting the whole industry.

- 160 Powerco has received an estimate from our insurance brokers, Marsh Limited, indicating that to replace our 2010/11 insurance portfolio in 2011/12 will cost an additional 39%. This reflects an increase of 0.1% of Powerco's operating expenditure.
- 161 The increased costs reflect the increased risk and cost of insured events occurring to Powerco's network. The majority of Powerco's assets (by value) are not insured against events such as earthquakes or other natural disasters. Therefore the cost of the risk that is being borne by Powerco through self insurance has also increased.
- 162 We recommend that the operating expenditure allowance for all EDBs be increased by 0.1% for 2011/12 to reflect the increased cost of insurance that is clearly evident for all EDBs in New Zealand.
- Electricity Authority change to prudential requirements*
- 163 On 11 August 2011 the Electricity Authority released a discussion document proposing to standardise certain components of the treatment of prudential arrangements between retailers and EDBs.³⁰
- 164 The upshot of the proposed changes is that EDBs will be required to accept a lesser level of security for the provision of distribution services than is currently the industry average, or will be required to pay to retailers the costs of any additional security.
- 165 While Powerco disagrees about the level of bad debt implicit in the WACC influenced by predominantly off-shore companies (who generally have a two month prudential requirement), we do believe that it is appropriate for the Commission to recognise the cost of maintaining our current level of retailer default risk in our forward looking opex.
- 166 Based on a 90 day bank bill of around 3%, and given the current portfolio of retailers on Powerco's network, we expect to pay an annual prudential fee, based on the Authority's current proposal, of around \$600,000 per annum. Powerco expects that this will increase as the mix of retailers changes.
- 167 This cost is necessary to maintain Powerco's risk from retailer defaults at the same level as international firms (most of whom have a two month prudential requirement) and at the level it was set when the Commission estimated the WACC.
- 168 The Electricity Authority has identified the annual cost as a wealth transfer – so any increase in charges by Powerco should be offset by a reduction in costs to retailers and no net movement in delivered costs to consumers.
- 169 Powerco therefore recommends that the Commission increase opex by the amount of \$0.6 million per annum.

³⁰ Electricity Authority, *Standardisation: Model use-of-system agreements and proposed Code amendments*, 11 August 2011.

INFLATION

- 170 There are a number of matters related to inflation indexation where the Commission's treatment is unsound. We refer to Jeff Balchin's report which we summarise below.

Forecasting method

- 171 The Commission has continued to forecast inflation by using the last year of the Reserve Bank of New Zealand's short term forecast as a proxy for the long term. As Mr Balchin remarked in earlier advice to the Commission, there is no basis for this assumption and a more reasonable proxy for long term inflation is the midpoint of the Reserve Bank of New Zealand target range for inflation. This latter method reflects the Australian Energy Regulator's standard approach for forecasting inflation in Australia. Indeed, the forecasts that were produced by NZIER in September 2009 suggest that the Reserve Bank's forecasts of inflation were already very high, especially in the longer term, which argues strongly against the Commission using the last year of the Bank's forecast (which was high compared to previous years and NZIER) as a proxy for a long term forecast.

Use of different annual inflation forecasts

- 172 The Commission's updated modelling incorporates uneven annual rates of inflation over the regulatory period, rather than a constant (geometric) average rate that it previously had used. The effect is that the assumed real risk free rate of return and real WACC are assumed to fluctuate substantially over the period. Mr Balchin states that there is no rationale for such an assumption. The evidence that the Commission has considered does not allow it to infer that the expected real rate of return would have been expected to fluctuate materially over the period. The more reasonable assumption is that the expected real rate of return is constant – which is achieved by using a constant forecast of inflation in the financial modelling. This is consistent with how the AER uses forecasts of inflation in its financial modelling.

Adjusting for actual inflation over the regulatory period

- 173 The objective of inflation indexation is to ensure that the same real return is provided irrespective of how inflation turns out. Where price controls are determined using forecasts in nominal ('money of the day') terms, this objective requires an adjustment when setting actual prices to adjust for the difference between the forecast of inflation and actual inflation. Failing to make such an adjustment means that the regulated businesses would make the target nominal return irrespective of whether the forecast of inflation was correct – thus exposing the entity to inflation risk.

- 174 In the current matter, the price controls the Commission has determined commence with fixed nominal revenue level for 2012/13, which reflect forecasts of inflation over 2009/10, 2010/11 and 2011/12 (for the years thereafter, the prices will be set with reference to a measure of actual inflation and so this issue ceases). Mr Balchin notes that actual inflation over 2009/10 and 2010/11 (that is, the change in the CPI between the start and end of the year) was 2.05 per cent and 2.42 per cent, which compares to the September 2009 forecasts of 1.72 per cent and 1.98 per cent. An adjustment to the 2012/13 revenue should be made for the difference between the forecast and actual inflation as available at the time the price controls are set.

Removal of the GST-related change in inflation

- 175 The Commission has removed the one-off increase in inflation arising from the change in the GST rate from being incorporated into prices and asset revaluations without considering the matter in detail against the purpose statement and the principle of financial capital maintenance. Mr Balchin states that It is not obvious that the one-off inflation increase should be removed in this manner – if it is not passed through into prices and asset values, then the real value of the

dividends generated by the regulated assets in the hands of investors would have decreased, which means that financial capital maintenance would not be met.

Definition of CPI should be amended in IM

176 The Input Methodology Determination includes a definition of “CPI” and “forecast CPI” in section 1.1.4(2) that:

176.1 requires the CPI in each quarter prior to December 2010 to be multiplied by 1.02, effectively removing the estimated impact of the Government’s October 2010 GST increase; and

176.2 where a Reserve Bank of New Zealand forecast is not available, requires a constant annual percent change equal to the arithmetic average of the values forecast in the most recent four quarters in respect of which a forecast has been made by the Reserve Bank of New Zealand.

177 Powerco disagrees with these definitions for the reasons summarised above and stated in Mr Balchin’s independent expert advice. Submitted alongside this submission is a change request for the “CPI” and “forecast CPI” definitions in the Electricity Distribution Input Methodology Determination.

178 On 8 March 2011 the Commission published a process to allow amendments to be proposed to the IMs. In this paper the Commission states that, “However, the Commission recognises that these IM determinations are being applied for the first time and are complex. Amendments to the determinations, for example to correct errors, may be required.”

179 While the Commission has outlined an annual process to amendments to be proposed, Powerco strongly argues that its amendment request must be considered before 20 October 2011. This is for the following reasons:

179.1 The amendment process in March 2011 was not well publicised, demonstrated by the very few amendments submitted.

179.2 It is logical that errors and issues will arise as the IMs begin to be implemented. It is vitally important the issues are dealt with as they arise and before they impact key decisions. Waiting nine months to be able to submit an IM amendment to fit with an arbitrary annual timeline is inappropriate. The Commission recognises this in its 8 March paper, stating urgent amendments can be considered.

179.3 The method for forecasting CPI in particular was not discussed in detail during consultation on the IMs. The method proposed by the Commission is very simplistic, and against best practice in Australia. Mr Balchin has proposed a robust method that better meets the Part 4 Purpose.

Part 3: Other DPP Changes

COMMENT ON INCORPORATION OF INPUT METHODOLOGIES INTO DPP DETERMINATION

Overview

180 Most of the changes provided by the Commission are incorporations of the IMs into the DPP Determination and do not raise any significant issues. While the numerous cross referencing to the IMs makes the draft determination more complex, it also avoids the DPP Determination having to be reissued if the applicable Input Methodology changes.

181 Schedule One of the Draft DPP Determination specifies the inputs to determine the starting prices that apply for the third DPP assessment period. Allowable Revenue is specified to one decimal place (in \$millions) and the demand change is specified to one decimal place. Powerco recommends that if the figures in Table 1 (Input for determining Prices for the Third Assessment Period) are rounded to one decimal place; the AR2013 figure should be rounded up and the ΔD should be rounded down. This ensures FCM is not undermined.

Approval of Recoverable costs: Assets purchased from Transpower

182 Section 12 has been modified to include disclosure requirements relating to the pass through of costs of assets EDBs have purchased from Transpower. Clause 12.1(b) states that the Annual Compliance Statement must include:

(iv) information relating to any amounts specified as Recoverable Costs consistent with clause 3.1.3(1)(e) of the IM Determination including:

(a) proof that a transaction was completed consistent with clause 3.1.3(1)(e) of the IM Determination;

(b) the amount of charge relating to clause 3.1.3(1)(b) of the IM Determination that the Non-exempt EDB has avoided liability to pay as result of that Non-exempt EDB having purchased transmission assets from Transpower, subject to clause 12.2; and

(c) proof of the amount of charge relating to the contract entered into in relation to clause 3.1.3(1)(c) of the IM Determination, which may be provided by confidential disclosure of the contract to the Commission;

183 As the Commission is operating an ex post compliance process, it is vital that there is a high degree of certainty up front in what must be provided for the Commission to approve the cost. Powerco supports the inclusion of this detail in the DPP Determination.

184 Clause 12.2 states that:

The amount of charge referred to in clause 12.1(b)(iv)(b):

(a) for the Assessment Period in which the charge is first recovered, is the amount that would have been charged by Transpower for the use of the assets transferred to the Non-exempt EDB as specified in a pricing schedule determined by Transpower for the year immediately preceding the Assessment Period in which the charge is first recovered; and

(b) for each of the remaining Assessment Periods in which the charge may be recovered under clause 3.1.3 (4) of the IM Determination, may be adjusted where a Non-exempt EDB can demonstrate to the Commission that the Non-exempt EDB has

made adjustments using a method consistent with the Transmission Pricing Methodology.

185 Powerco supports the charge in the remaining Assessment Periods being able to change using a method consistent with the Transmission Pricing Methodology. Given the uncertainty of how this clause is interpreted, the Commission should establish a process where EDBs can seek approval in advance of charge changes. For example, applications by mid November each year, with decisions made by the Commission by mid December.

Additional category of avoided transmission costs

186 The definition of avoided transmission charges in the IMs is different to the current DPP definition. This has the effect of potentially excluding from recoverable costs, the recovery of costs from investments already made in accordance with the previous definition. This is unjustifiably retrospective and inconsistent with promoting investment certainty.

187 Accordingly, the avoided transmission charge component of recoverable costs under the reset DPP needs to include an additional category of avoided transmission costs which permits the recovery of any expense (including the cost of capital) from any investment or activity which substitutes for the use of the transmission system that existed on or before 31 March 2012. This should apply until the end of the current DPP (i.e. until 2015) which would be consistent with the expectations of EDBs when prices were set.

Transactions

188 Transactions are covered by clause 3.2.1 in the IMs, although the 2011 DPP Draft Decision addresses significant transactions which are not amalgamations. The additional clauses are cumbersome. Powerco recommends that in the event of a non amalgamation transaction, EDBs should submit self assessments in the year of the transaction against the existing DPP. In addition, an EDB should notify the Commission of the transaction where the following criteria are met:

188.1 The non-exempt EDB's value of assets associated with the provision of electricity distribution services increases or decreases by more than 10% within an assessment period, as a result of a transaction; or

188.2 The non-exempt EDB's notional revenue associated with the provision of electricity distribution services increases or decreases by more than 10% within an assessment period, as a result of a transaction.

189 The term "transaction" could be defined as a purchase, merger, takeover, disposal or other similar transaction (as per the existing DPP) in order to distinguish changes in asset values and revenues arising from a transaction from those which may occur in normal business circumstances.