



**Assumptions in  
2010-15 Default Price-Quality Path Starting  
Price Adjustments and Other Amendments  
Update Paper**

**23 May 2011**

## INTRODUCTION

- 1 Powerco Limited (*Powerco*) welcomes the opportunity to make this submission on the Commerce Commission's update paper *2010- 15 Default Price-Quality Path Starting Price Adjustments and Other Amendments* (April 2011) (*Update Paper*).
- 2 This submission comments on the industry-wide assumptions used by the Commission in the DPP Starting Price Adjustment model. It should be read in conjunction with (and is intended to be complementary to) the Electricity Networks Association's (*ENA*) *Submission on the Assumptions in the DPP Starting Price Adjustments and Other DPP Amendments* (23 May 2011).
- 3 A significant issue raised in Powerco's previous submission on 16 May was the variability from the industry assumptions across non-exempt EDBs. While this document now focuses on the most suitable method for forecasting average EDB growth, the variability from the average is a significant concern for the accuracy of forecasts.
- 4 In addition, the calculations of the assumptions have a number of issues. This is to be expected as it is the first attempt. Powerco is not opposed to using assumptions in the Po process, however the Commission must recognise the errors inherent in the calculations it is proposing. Powerco strongly recommends the Commission adopt a long term process to improve the derivation of the forecasts. For example, the Commission could invest in an industry specific cost index, rather than rely on generic labour or cost indexes.
- 5 In conclusion, Powerco considers that the current SPA model does not have the necessary robustness to ensure that non-exempt EDBs will be able to earn sufficient earnings to earn a normal return. We repeat out earlier submission, that a band around the 75<sup>th</sup> percentile WACC will help overcome these short comings and is a vital component of the Po methodology.
- 6 Powerco's contact person in respect of this submission is:

Paul Goodeve,  
Regulatory and Business Manager,  
Powerco Limited  
Private Bag 2061  
New Plymouth 4342  
Tel: 06 759 6216  
Email: [Paul.Goodeve@Powerco.co.nz](mailto:Paul.Goodeve@Powerco.co.nz)

## **REAL REVENUE GROWTH**

- 7 The assumption of real revenue growth uses the Reserve Bank of New Zealand's real GDP forecast, and adjusts it with an estimation of how EDB output growth has varied with real GDP historically. The measure of output growth is based on the Economic Insights output measure in its study of EDB total factor productivity.

### **EI Output measure**

- 8 Powerco struggles to understand how a measure including line length and transformer capacity can forecast EDBs real revenue growth better than a measure that only includes EDB billing determinants. Powerco demonstrated in its earlier submission on the estimation of TFP that the most relevant measures of output when TFP is used to set a price cap are the measures of output that are used for billing purposes.
- 9 The issue the Commission is now addressing, however, is not how TFP is to be estimated, but rather how the EDBs' real growth in revenue is to be forecast. There is no justification for using an indirect proxy for output when forecasting revenue in preference to the measures of output that relate directly to revenue.

### **Real revenue growth relationship with GDP**

- 10 Powerco also considers real GDP growth to be a poor proxy for the growth in real revenues for EDBs (and indeed is likely to be a poor proxy for the growth in the indirect measures of output the Commission has employed). A better forecast of real revenue growth is one that takes account of how EDBs actually charge and that reflects factors that most closely predict how those parameters are likely to grow over time. Revenue for Powerco's customers tends to be most closely related to:
- 10.1 the number of customers (which assumes that average use per household remains constant following research commissioned by Powerco), for which population growth in the local area would provide a close prediction of growth (for residential customers); and
  - 10.2 the number and size of customers, for which local economic growth would be expected to predict growth closely (for commercial and industrial customers).

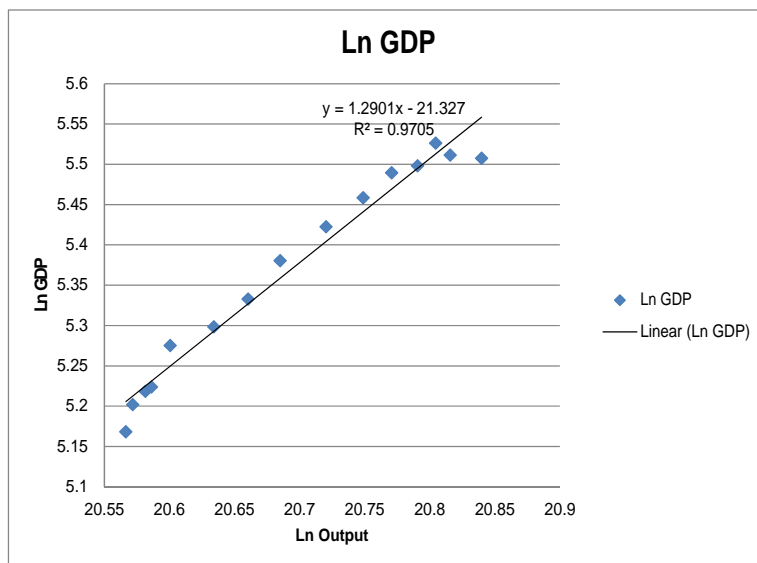
### **The Commission should use regional information**

- 11 The Commission should use local or regional information for the different EDBs where the necessary information is easily available from public sources. In particular, using information that is more responsive to the local conditions of EDBs reduces the likelihood that an EDB would be forced to apply for a CPP in circumstances where this could be avoided by the Commission using a more relevant – but equally low cost – forecast of revenue growth.
- 12 Forecasts on population growth and economic growth are readily available at the regional level. This would be a significant improvement over the use of a single national average.
- 13 Powerco supports ENA's recommendation that the data from threshold and DPP compliance statements (which normalises the output impact) combined with actual revenues provides a potential source of information for determining output and price growth using revenue weights which are relevant to each EDB.

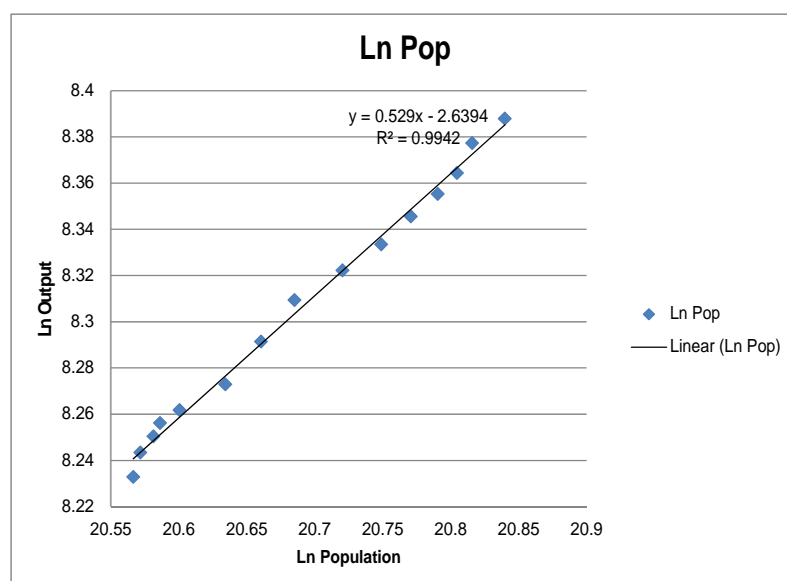
### Measures used to forecast real revenue growth

- 14 The Commission has determined the forecast of real revenue growth using the forecast of real GDP. Powerco does not consider GDP when forecasting residential growth; factors such as population growth and household growth are more significant. For example, the graph below shows the relationship between population growth and the EI output index between 1996 and 2010. The  $R^2$  is 0.99, so a more significant relationship than with real GDP growth. Powerco recommends population growth is included in the calculation of real revenue growth.

**Graph 1: Relationship between real GDP growth and the EI output index between 1996 and 2010.**



**Graph 2: Relationship between national population growth and the EI output index between 1996 and 2010**



## NOMINAL CAPEX GROWTH ASSUMPTION

- 15 The Commission’s nominal capex growth assumption is calculated from the average annual growth in the capex forecasts from 2010 to 2015 in the 2010 AMPs. A key issue is that it assumes the capex forecasts are nominal. A number of EDBs forecasts are real and inflation must be added to the figures.
- 16 In Powerco’s experience, AMP forecasts are the most accurate in the t+1 period. Beyond t+1 the capex tends to tail off as this reflects the uncertainty of scheduling projects in the future and the opportunity to update forecasts annually.
- 17 This is evident in the annual trend in total capex picture. Forecast growth in (log) capex is 20.3% in 2011 and 9.9% in 2012. The growth reduces dramatically with the average annual growth rate of 3.3% for the five year period.
- 18 To further illustrate this point, the graph below is from Powerco’s 2011 AMP. It shows how Powerco’s AMP forecasts made between 2002 – 2010 vary compared to actual expenditure. After two years every Powerco AMP forecast has been less than the actual capital expenditure.

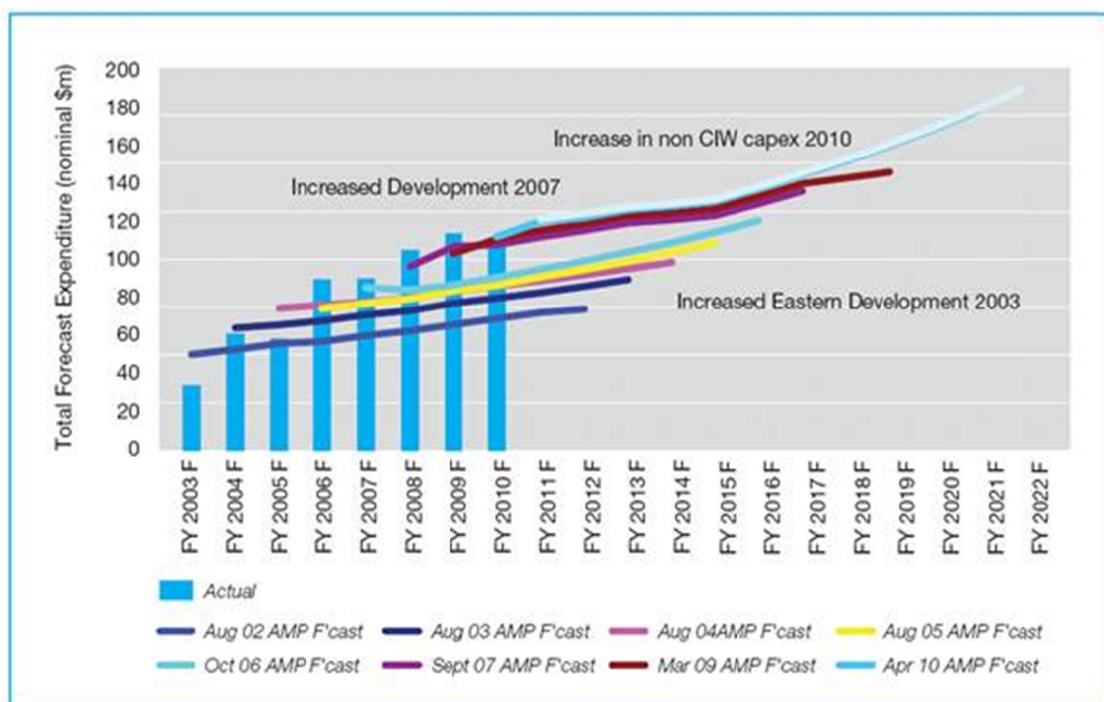


Figure 10.1: AMP Expenditure Forecast against Previous AMP Expenditure Forecasts.

- 19 As the Po methodology uses a five year forecast, the most relevant AMP forecast to consider is the 2005 capex forecast (the yellow line). In every year after 2005 actual expenditure was higher than the 2005 AMP capex forecast. This gap averaged \$21 million and was most significant in 2009 when actual capex was 36% or \$30 million above the 2005 forecast. If the 2005 forecast was used in the Commission’s model,

and all other variables held constant, Powerco's theoretical Po adjustment in 2005 would have been 0.4% too high.<sup>1</sup>

## **NOMINAL OPEX GROWTH ASSUMPTION**

- 20 The nominal opex growth assumption is fraught with issues, particularly as the historical relationship between total output growth and opex growth is difficult to interpret. Powerco recommends that whatever approach is used, it includes a degree of conservatism.
- 21 In operating our business, it is clear to Powerco that opex growth will increase in the future, and many cost pressures are not factored into AMP forecasts. For example, the Consumer Law Reform Bill in Parliament proposes to define electricity distribution as a "good" rather than a "service". If passed into legislation, the definitional change is likely to have significant implications on all EDB's costs. Eg, by being liable for compensation payments made by retailers or carrying out more maintenance work to avoid claims.
- 22 The Government is also proposing a number of measures in the budget that will increase the costs of operating a business. For example, the proposal to increase employer kiwisaver contributions.

### **Input price inflation**

- 23 The Commission's forecasts of operating expenditure assumes that input prices increase by only CPI each year. Even as a default position, there is little logic for such an assumption – after all, for the economy as a whole, input prices are expected to increase at a faster rate than CPI, the difference being the expected growth in productivity. Moreover, input prices for EDBs have risen by much more than CPI over the last decade, a fact of which the Commission is well aware. Failing to account for input price inflation would be expected to overstate required price reductions, and again lead to more EDBs being in a position whereby applying for a CPP is necessary.
- 24 In Australia, the AER adopts a relatively sophisticated approach to forecasting input price growth for EDBs (see AER, 2010, Final Decision for the Victorian Electricity Distributors, October, Appendix K), drawing for the most part upon information that is external to the relevant businesses. Key components of this method are that:
- 24.1 The price of operating and capital inputs are assumed to rise in line with the underlying materials or labour prices, with the different input prices weighted according to the importance to each EDB (these weights can vary across EDBs, it is expected that a standard set of weights could be employed when deriving a forecast for the DPP);
- 24.2 Materials prices are forecast either from forward/futures prices for the relevant commodity where available, or from official or publicly available forecasts of future prices otherwise; and

---

<sup>1</sup> The 2005 AMP Capex forecast CAGR is 3.88%. Capex growth from 2005 to 2010 was 4.96%. The difference to Powerco's Po adjustment, using the 3 year model and keeping all other assumptions constant, is a change from a -0.3% Po adjustment to a 0.1% Po adjustment.

24.3 Forecasts of wages growth and the price of non traded inputs (like civil works) are derived from official or publicly available sources or commissioned from well credentialed forecasters otherwise.

25 Powerco considers that with a reasonably small investment, the Commission could derive a forecasting method that provides a much closer estimate of the likely change in unit cost of both operating and capital expenditure, and in turn advance the objective of the overall regime being low cost.