

Submission to the Essential Services Commission

Re: Electricity Distribution Price Review 2006 – 2010 Draft Decision

Growth Forecasts



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August 2005



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- 1 Department of the Parliamentary Library: "The 2004 Budget: Some issues arising" Current Issues Brief no. 6 2004-05, August 2004
- 2 NEMMCO 2005 Statement of Opportunities – "Load Forecasting white paper".
- 3 DSE April 2005 Greenhouse Strategy Action Plan Update.
- 4 Hon. Brumby MP 2005-06 Strategy and Outlook Budget Paper No 2, May 2005
- 5 NIEIR, "Electricity consumption and maximum demand projections for Victoria to 2020". A report for the VenCorp, June 2005.
- 6 NIEIR: "The Price Elasticity of Demand for Electricity in NEM Regions" June 2005.
- 7 VenCorp Electricity Annual Planning Report 2005, June 2005.
- 8 NEMMCO's "2005 Energy and Demand Projections", July 2005.
- 9 Statutory declaration of Peter Brain, Executive Director, NIEIR dated 19 August 2005, attaching report titled: "An assessment of the downside risk to manufacturing in Victoria" August 2004.
- 10 Statutory declarations of Peter Brain and Anthony O'Dwyer, NIEIR dated 19 August 2005, attaching report titled: "Electricity Sales and Customer number forecasts for the United Energy Region to 2014 (class and network tariff)" September 2004.
- 11 Statutory declarations of Peter Brain and Anthony O'Dwyer, NIEIR dated 19 August 2005, attaching correspondence:
 - (a) Letter from NIEIR to Citipower and Powercor dated 15 July 2005.
 - (b) Letter from NIEIR to the Commission dated 4 August 2005.
 - (c) Letter from NIEIR to the Commission dated 16 August 2005.
- 12 Ernst & Young: "Electricity Sales Volume in the six months to 30 June 2005" Expert Witness Report, August 2005.

1 Introduction and Structure of Submission

Growth forecasts are an important input into the derivation of the new price controls. Future expenditure requirements are driven partly by expected growth in peak demand and customer numbers. The translation of the revenue requirement into a cap on distribution prices also relies on estimates of future quantities to which prices are applied.

Growth forecasts are required for three key measures: energy consumption, peak energy demand and customer numbers. Particularly important is the forecast rate of growth in these three measures over the regulatory period.

This submission examines the growth forecasting issues arising from the Draft Decision. The remainder of this submission is structured as follows:

- section 2 comments on the Essential Service Commission's (Commission) approach to growth forecasts, from its Issues and Position Papers through to the Draft Decision;
- section 3 addresses the issue of economic growth, highlighting relevant comments from experts Charles River and Associates (CRA), McLennan Magasanik Associates (MMA), and National Institute of Economic and Industry Research Pty Ltd (NIEIR);
- section 4 briefly examines historic and future consumption trends;
- section 5 examines the issue of demand elasticity;
- section 6 identifies United Energy Distribution (UED) specific data errors in the Draft Decision; and
- section 7 provides some concluding comments.

Other relevant submissions and documents noted in this report are attached as appendices.

2 UED's Comments on the Commission's Approach to Growth

The Commission's approach to establishing growth forecasts has "evolved" since the publication of the Final Framework and Approach Guidance Paper in June 2004 in a manner that shows a disregard for due process.

Initially, the Commission's Final Framework and Approach Guidance Paper focused on the requirement for UED (and other distributors) to provide an expert opinion in relation to growth forecasts. In response, the distributors commissioned NIEIR as an expert independent consultant with significant expertise in the electricity sector. In fact, NIEIR has also been retained to conduct independent forecasts for Victorian Energy Networks Corporation (VENCorp), thereby providing the Commission with further confidence that its forecasts for each distributor are consistent with the aggregate forecast for the State.

Although the distributors complied with the Commission's requirements in relation to the appointment of an expert, the Commission appeared to be intent on appointing its own consultant, MMA. To justify this position, the Commission changed its requirements to "independent verification", as UED has previously explained.¹ Despite the Commission's clear objective of engaging its own consultants in relation to forecast growth, the Commission has now disregarded its consultants' advice and raised doubts regarding its veracity.²

UED can only conclude that the Commission is not placing any weight on MMA's advice because MMA essentially corroborated NIEIR's growth forecasts. This outcome contrasts markedly with the Commission's approach to other aspects of the review, for example where the Commission has given great weight to Wilson Cook's report in relation to capital expenditure³ (which argued for significant reductions to all Distributor's proposed expenditure).

In addition to these important procedural matters, the Commission has also markedly changed its approach regarding the relevance of the State Government's Department of Treasury and Finance (DTF) forecasts. In particular, in its Guidance Paper, the Commission did not make any reference to the State Government's DTF's macroeconomic assumptions or its forecast of Gross State Product (GSP).⁴ Instead, the Commission suggested that the distributors were free to adopt assumptions, key input data and forecasting methods providing that these were reasonable. The Commission did not provide any direction to use the DTF's macroeconomic assumptions.

1 United Energy Distribution, response to the Position Paper, 21 April 2005, page 61.

2 Essential Service Commission, Draft Decision, June 2005, page 129

3 Essential Service Commission, Open Letter to Stakeholders 2006 to 2010 Growth and Capital Expenditure Forecasts, July 25th 2005

4 Essential Service Commission, Framework and Approach, Volume I, June 2004, section 3.4, page 56.

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The Commission broadly maintained its approach to assumptions, key input data and forecasting methods in its Issues Paper and its Position Paper. In particular, the Commission did not direct the distributors to adopt any particular data assumptions or modelling approaches. In its Draft Decision, however, the Commission argues that it must effectively adopt the same economic growth forecasts as the State Government, including in particular the DTF's forecast of growth in Gross State Product (GSP).⁵

This is an unexpected development, and an unreasonable one given that the DTF's growth forecast is likely to be less robust than those of other forecasters (for reasons explained in section 3 below). Contrary to the Commission's claims, there is no regulatory requirement for the forecasts approved by the Commission to align with those of the State Government. This was confirmed by the Commission in a meeting with distributors on 6 July 2005. Furthermore, this approach was not adopted in the 2000 Electricity Distribution Price Determination (EDPD) or in the 2002 Gas Access Arrangement Revision (GAAR) process. The constraint the Commission feels, to use forecasts which are consistent with the macroeconomic assumption of the State Government, is not a constraint that has been felt by other regulators. It therefore appears that the Commission has no basis for giving such weight to the DTF's GSP forecasts.

In the light of the issues described here, UED has concluded that the Commission's approach to growth forecasts suffers from a lack of due process and has made errors of fact and law. In particular, the Commission appears to have attached undue weight to advice or evidence that is irrelevant and has a detrimental impact on UED's revenue position, and given little weight to advice or evidence that supports UED's position as outlined in its Price-Service Offering. Moreover, the Commission's sudden and late change of methodology to one which has not been used before by the Commission or other regulators appears to be an opportunistic rationalisation constructed to support a pre-determined outcome. The Commission's Final Decision will be open to challenge unless the Commission correctly applies UED's proposed methodology for forecasting growth and addresses the issues contained in this submission.

5 Essential Service Commission, Draft Decision, June 2005, page 135

3 Economic Growth

3.1 Introduction

The Commission's adoption of DTF's GSP forecast is a key reason for the difference between UED's growth forecasts and those adopted by the Commission in the Draft Decision. The distributors have previously written to the Commission regarding this important issue and the key points from that letter are noted here, alongside a number of additional issues.

3.2 Short-term DTF Forecasts of GSP are High

UED is concerned that the DTF's GSP forecasts, both in the short and medium term, do not provide a sound basis for the Commission to adopt NIEIR's high case scenario in either the draft or final decision. A report from EconTech is the only corroborating source for the DTF's GSP forecasts noted by the Commission in its Draft Decision. However, the report referenced by the Commission is out-of-date and was drafted in the context of stronger Australian economic growth which, moreover, was being supported by a highly competitive exchange rate.

EconTech's most recent forecasts of Victorian GSP (July 2005) align much more closely with the NIEIR base case than with the DTF forecasts. In the short term, the DTF forecasts are inconsistent with other GSP forecasts available. Table 3.1 below compares short term forecasts from DTF, EconTech and NIEIR.

Table 3.1- Short Term Victorian GSP Forecasts

	Average Vic GSP growth rate (annual change), 2004/05 to 2005/06
DTF ⁶	2.9%
NIEIR ⁷	2.2%
EconTech ⁸	2.1%

Table 3.1 shows the DTF short term forecasts to be on average 0.7 per cent per annum above those of NIEIR and 0.8 per cent above those of EconTech. Over such a short

6 Hon. Jon Brumby M.P, 2005-06 Strategy and Outlook, Budget Paper No. 2, May 2005.

7 NIEIR, Electricity consumption and maximum demand projections for Victoria to 2020 (Public version) A report for the VENCORP, June 2005

8 EconTech, Australian State & Industry Outlook, 8 July 2005. Reproduced with permission.

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timeframe, this is a substantial difference. It indicates that the DTF forecast is seriously out-of-line with other forecasters.

3.3 State Governments' Forecasts Higher than Federal Government Forecast

National economic conditions have deteriorated significantly over the last twelve months. Gross Domestic Product (GDP) growth of in excess of 4 per cent, in year-ended terms, in early 2004 has moderated to 1.9 per cent over the twelve months to March 2005. Accordingly, the outlook for economic growth has been revised downward by many forecasters. Table 3.2 below compares the GSP and GDP forecasts produced by Australian governments.

Table 3.2 – 2004 to 2005 GSP Forecasts

	2004 to 2005 GSP Growth Rate (Annual Change)
NSW	2.00%
Vic	2.75%
Qld	4.25%
WA	5.25%
SA	2.50%
Tas	3.20%
Federal (GDP)	2.00%

Source: State and federal budget papers

Table 3.2 shows the federal government forecasting a national growth rate of 2.00 per cent, yet the state governments forecasting growth rates varying from 2.00 per cent to 5.25 per cent over 2004 to 2005. The federal GDP forecast is not consistent with the State Governments' forecasts, where 5 out of 6 states expect growth above the federal growth rate. The fact that the state forecasts exceed the forecast federal growth rate implies that the state forecasts are optimistic.

3.4 DTF Estimates for GSP are Projections not Forecasts

It is important for the Commission to understand the basis of the forecasts presented in the Victorian Budget papers. In particular, GSP growth forecasts presented for 2006 to 2007 onwards are actually 'projections'. The following definition is from the Australian Parliament House website. While this definition relates to the Federal Budget, discussions with relevant DTF staff reveal that it has equal application to the Victorian Budget papers:

"Projections. In the Budget Papers 'projections' refers to future revenues, expenses and other magnitudes that are based on simple extrapolations of past trends in GDP, employment, prices and other relevant magnitudes. By contrast estimates are based on specific forecasts of the economy. For example, estimates of revenue in 2004 to 2005 in the 2004 Budget are based on forecasts of how the economy is expected to behave in

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that year. However, for years beyond, projections are made on the assumption that economic growth and other parameters are likely to behave as they have on average in the past.”⁹

As projections, the GSP growth figures presented in the most recent budget for 2006 to 2007, 2007 to 2008 and 2008 to 2009 amount to little more than a technical assumption that over those years of the forecasting horizon the Victorian economy will return to what the DTF considers to be a long-run growth rate (based on a simple extrapolation of past trends). It is clear from the last four State Budgets that DTF considers this to be 3.5 per cent per annum.

Since the Victorian 2000/2001 Budget there have been 28 projections in budgets and budget updates. Of these, 23 have contained projections of GSP growth of 3.5 per cent and the other 5 have projected growth rates of either 3.25 per cent or 3.75 per cent. Indeed since the 2001/02 budget update, every projection except one has been 3.5 per cent. At the same time GSP forecasts from professional forecasters were moving as economic trends moved. This suggests to UED that there is no expert science applied to the DTF projections at all.

UED believes the DTF ‘forecasts’ are not suitable justification for the Commission’s use of the NIEIR high case because the DTF data are in fact projections (as defined above) and not forecasts. By contrast, Victorian GSP growth forecasts prepared by NIEIR are dedicated economic forecasts that reflect the particular economic conditions that are expected to prevail over the forecast period.

As noted above, State Budget medium term projections are generally close to 3.5 per cent. These DTF projections do not consider the impacts of economic cycles. This means they are likely to under-estimate growth during periods of strong economic growth such as the current regulatory period. Conversely, they will tend to over-estimate growth during periods of weaker economic growth and will fail to adequately forecast downturns¹⁰. Table 3.1- Short Term Victorian GSP Forecasts shows both NIEIR and EconTech forecasting a weakening of GSP growth. The NIEIR and EconTech forecasts provide strong evidence that the DTF projection is overly optimistic, and hence is not an appropriate forecast to be used as the base case GSP forecast for the purpose of the Commission’s price review determination.

UED has engaged NIEIR to provide updated forecasts for the 2005 to 2010 period. These are summarised in the table below and included in detail in the templates provided to the Commission under separate correspondence. Consistent with the company’s original PSO and independent advice received from NIEIR, UED has used the base case adjusted for the down-side risk of Victorian manufacturing as its basis for growth forecasts. This scenario

9 Department of the Parliamentary Library, The 2004 Budget: some issues arising, Current Issues Brief no. 6 2004 05, August 2004

10 This has been demonstrated by Access Economics consulting in its review of the DTF GSP projections. See Access Economics, *Review of Victorian Economic Forecasts*, Report for Powercor, 7 July 2004, p. i.

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has been adopted by Vencorp in their planning process and is therefore consistent with the Victorian state forecasts.

Table 3.3 – UED’s Revised Growth Rates

	Energy (GWh)	Change from previous year
2005	7,545	0.3%
2006	7,628	1.1%
2007	7,749	1.6%
2008	7,846	1.3%
2009	7,919	0.9%
2010	8,005	1.1%
Average annual change from 2004 to 2010		1.1%
Average annual change from 2005 to 2010		1.2%

3.5 NIEIR’s Economic Growth Forecast

As noted in section 2, the Commission observes in the Draft Decision that NIEIR did not provide an unequivocal recommendation on which of the growth scenarios it put forward was the most appropriate to use. Implicitly, the Commission has partially relied upon the absence of a NIEIR recommendation to justify its adoption of the DTF GSP forecasts.

Since the Draft Decision, NIEIR has written to the Commission (in a letter dated 4th August 2005), noting that it is inappropriate for the Commission to adopt the NIEIR high case scenario energy forecasts on the basis that it is consistent with the Victorian Department of Treasury and Finance (DTF) GSP outlook. The NIEIR high scenario is not only a high GSP scenario, but also a high energy growth scenario. NIEIR notes that the high scenario has an extremely low probability of occurrence.

NIEIR also comments that the Commission did not directly seek NIEIR’s advice on this matter, despite contacting NIEIR on another issue. This is somewhat surprising given that MMA considered that the NIEIR was highly qualified to forecast electricity industry demand variables and Gross State Product as evidenced in the following excerpt from MMA’s report to the Commission:

“NIEIR’s forecasts of macroeconomic parameters are generally respected and used widely across Australia. The NIEIR GSP forecasts appear reasonably consistent with those of other economic forecasters and Governments and with the NIEIR forecasts used for VENCORP in a recent study. MMA considers it reasonable to use the NIEIR GSP forecasts.”¹¹

11 McLennan Magasanik Associates, Final Report to the Essential Services Commission, March 2005, page 47.

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In response to the Draft Decision, NIEIR now unequivocally states that the use of the initial high growth scenario is highly inappropriate and the Commission's logic and rationale in using this scenario in the Draft Decision is fundamentally flawed. NIEIR's reasoning for this conclusion is detailed in its letter to the Commission and in a further letter addressed to Mr Andrew Dillon of Citipower and Powercor (dated 15 July 2005), which has also been copied to the Commission.

3.6 Concluding Comments

UED firmly believes that the Commission's Draft Decision has given undue weight to the DTF's GSP forecast and has given insufficient weight to other available evidence, including the advice of its consultants MMA, and other respected economic forecasters and commentators. UED believes that this indicates a lack of robust analysis and due process on behalf of the Commission because in other areas of its Draft Decision it has given "great weight" to the views of its consultants, even though in those cases, the advice of those consultants is not supported by detailed analysis.

In this submission, UED has demonstrated that the DTF's GSP forecast is overly optimistic compared to other available forecasts and that this upward bias is explained by the fact that the DTF forecast is a 'projection' rather than a 'forecast'.

4 Comparison with Historic Trends

In both the Issues Paper and the Position Paper, the Commission expressed concern that the load forecasts proposed by the distributors contained growth rates that were below current levels. In the Position Paper, the Commission also noted *“that history is not entirely determinative of future trends.”* (p.160). It is instructive, therefore, to examine UED’s actual growth rates and actual weather normalised growth rates. In the current regulatory period and to compare these with Commission’s forecast in the next regulatory period. The relevant data are set out in Table 4.1 and Table 4.2 below.

Table 4.1 – Historic Energy Sales and Growth Rate as Reported by the Commission and UED’s Weather Normalised Results

Year	Energy (GWh)	Change from previous year	Weather Normalised	Change from previous year
2000	6,977	-	7,042	-
2001	7,075	1.40%	7,066	0.34%
2002	7,169	1.33%	7,186	1.76%
2003	7,420	3.50%	7,382	2.72%
2004	7,520	1.35%	7,471	1.21%
Average annual change from 2000 to 2004		1.89%	-	1.51%

Table 4.2 – The Commission’s Energy Forecasts (as per the Draft Decision)

	Energy (GWh)	Change from previous year
2005	7,706	2.47%
2006	7,903	2.56%
2007	8,104	2.54%
2008	8,306	2.50%
2009	8,514	2.50%
2010	8,737	2.62%
Average annual change from 2004 to 2010		2.53%
Average annual change from 2005 to 2010		2.54%

Table 4.1 and Table 4.2 show that for UED, the actual consumption growth rate between 2000 and 2004 was 1.89% per annum compared to the Commission’s forecast annual

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growth rate of 2.53% per annum for the period 2004 to 2010 and 1.51% for weather normalised data. By 2010, the Commission forecasts that UED's sales will be about 9% higher than NIEIR's forecast. This is a material difference of view, the source of which is the DTF GSP forecast.

The Commission's consumption forecasts are clearly higher than historical outcomes. For this to be reasonable, it would be expected that forecasts of other factors, such as economic growth, are also higher than reported outcomes over the last regulatory period.

However, this is clearly not the case. All other factors are indicating a decrease, not an increase, in the consumption growth rates. All economic forecasters agree that the 2001 to 2005 regulatory period has been one of exceptional growth in the Victorian economy. The Commission itself acknowledges this in the Draft Decision (p.1) by observing that Victorian economy is reaching *"the mature phase of one of the strongest periods of economic growth in recent history."* Every economic forecaster, is predicting economic growth over the next regulatory period to be lower than that which Victoria has experienced over the current regulatory period.

Non-economic considerations also contradict the Commission's forecasts. Victorian Government initiatives such as the 5 star building standard and the natural gas extension program will reduce electricity consumption. The Environment Minister, John Thwaites has stated that he would like to see the government's successful water conservation campaign applied to energy conservation. This will also reduce consumption growth rates.

A further example of the Commission's apparent lack of robust analysis is its presentation of the distributors' compound growth rate in Table 4.7 (p.141) of the Draft Decision (reproduced below).

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Table 4.7: Compound annual energy consumption growth rates (per cent)

Distributor	Compound growth rate (per cent)	
	1999-2004 Actual ^a	2004-10 NIEIR High Case growth rate
AGLE		
Residential	2.98	2.13
Non-residential	0.10	1.74
Total	0.84	1.85
CitiPower		
Residential	3.86	3.53
Non-residential	2.13	1.22
Total	2.49	1.73
Powercor		
Residential	2.77	2.50
Non-residential	1.50	3.17
Total	1.91	2.95
TXU		
Residential	3.76	3.28
Non-residential	2.86	3.72
Total	3.24	3.53
United Energy		
Residential	2.54	2.49
Non-residential	2.24	2.56
Total	2.35	2.53
Industry aggregate	2.23	2.65

^a Growth rate calculated using the 2004 actual energy consumption submitted in accordance with the distributors' regulatory accounting requirements.

Table 4.7 of the Draft Decision shows UED's growth rate to be 2.35% per annum between 1999 and 2004, a time period which appears to have been deliberately selected to capture UED's unusually very high annual growth rate between 1999 and 2000. As shown in Table 4.1 UED's annual growth rate over the current regulatory period (that is from 2000 to 2004) has been 1.89% and on a weather normalised basis growth is 1.51%.

Table 4.7 of the Draft Decision shows industry aggregate growth rate to be 2.23% per annum between 1999 and 2004. The correct numbers for total Victorian electricity consumption over 2000 to 2004 (the current regulatory period) are shown in Table 4.3 below. The industry aggregate growth rate over this period has been 2.00%.

The correct numbers for the total Victorian Industry are shown in Table 4.3 below.

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Table 4.3 – Comparison of Growth Rates for Total Victorian Electricity Consumption over 2000 to 2004

	Energy (GWh)	Change from previous year
2000	31,354	
2001	31,748	1.26%
2002	32,286	1.69%
2003	33,316	3.19%
2004	33,944	1.88%
Average annual change from 2000 to 2004		2.00%

Overall, it is clear that the Commission's proposed consumption growth rate is substantially higher for UED than recent history, and that the reported data in the Draft Decision appears to suffer from a lack of robust analysis. UED is concerned that the data has been misrepresented by the Commission in a manner that is designed to show the Commission's forecasts to be reasonable. In fact, the Commission's forecasts provide an exaggerated and unsubstantiated view of future sales growth.

5 Price Elasticity of Demand

The price elasticity of demand is a measure of the extent to which the quantity of a product demanded by customers responds to a price change, other things being equal. In its Draft Decision, the Commission stated:

“Given that the Commission has applied NIEIR’s high case growth rates in determining its energy consumption and customer number forecasts and that the underlying forecasts from which the growth rates were obtained make no allowances for elasticity impacts, the Commission considers that the price elasticity impacts resulting from the price variations due to this Draft Decision should be recognised.”¹²

The Commission considered that elasticity impacts of price reductions resulting from the Draft Decision would result in increased usage of electricity, above that in the NIEIR high case growth scenario, and on that basis adjusted the prices that the Victorian distributors will be allowed to charge from 2006.

UED has a number of concerns about the robustness and appropriateness of the Commission’s adjustment to growth to allow for the effect of lower electricity prices:

- it appears to contradict the recommendations of its expert consultants (NIEIR and MMA) that the effect is not significant;
- it uses inappropriate estimates of price elasticity;
- it is dependent upon the reductions in DUoS prices being passed through to customers in reduced retail prices; and
- the DBs’ experts (CRA) consider the Commission’s approach to be overly simplistic.

These issues are discussed below.

5.1 Views of the Commission’

MMA reported that NIEIR assumed very little movement in real retail prices over the period to 2010. UED can find no reference at all to electricity price assumptions in the NIEIR report so it is not clear whether the “no movement” assumption was:

- a simplifying “default” assumption, given that electricity prices have a very limited impact anyway;
- based on an assumption that the underlying drivers of electricity retail prices – in particular DUoS prices would not change; or

12 Essential Service Commission, Draft Decision, June 2005, page 147

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- based on an assumption that retail electricity prices are “sticky” and unlikely to move significantly irrespective of the underlying drivers.

NIEIR has a sophisticated regression model that relates demand to class based electricity prices¹³, and allows for a lag between price change and demand response. Rather than the Commission making its own simplistic assumption about the $P_{(0)}$ impact on retail prices and, in turn, on electricity demand, UED considers that it would be more appropriate for the Commission to go back to NIEIR with its latest estimate of $P_{(0)}$ and then ask NIEIR to make any adjustment to its demand forecasts to reflect this.

In relation to MMA, the Commission quotes MMA’s view that:

“... the price assumptions made by NIEIR in its forecasting for the DBs [...] may be somewhat high, implying an increase in forecast demand beyond that estimated by NIEIR”¹⁴.

However, what the Commission does *not* note is that:

- the price elasticity issue is relegated to a section labelled “other issues”, implying (from MMA points of view) a fairly low materiality;
- on the other hand, in a list of seven “key drivers” of average residential usage, electricity prices are not even mentioned;¹⁵ and
- electricity prices are also not considered, by MMA, to be worthy of a mention in their “Conclusions” section.¹⁶

Finally, MMA note that:

“The MMA methodology has not explicitly factored in any real price changes. However, the trend analysis methodology implicitly assumes that the reducing price trends seen over the past seven to eight years will continue.”¹⁷

It is clear from the above statement that MMA’s methodology and advice to the Commission has taken account of the price elasticity issue, and takes due account of the historic trend in prices. In MMA’s advice to the Commission, those consultants conclude that a UED annual growth rate of 1.61% over the period 2004 to 2010 is appropriate compared to the Commission’s own forecast of 2.53% per annum.

13 As noted in McLennan Magasanik Associates, Final Report to the ESC, March 2005, page 45

14 P146 of the ESC draft decision, referring to P66 of the MMA report.

15 P25-26 of the MMA report

16 *ibid*, section 4.11

17 McLennan Magasanik Associates, Final Report to the Essential Service Commission, March 2005, page 66.

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The Commission's simplistic approach to price elasticity (contrary to its own consultants' methodology) contributes to its over-estimate of future growth rates.

5.2 Estimates of Price Elasticity

The Commission has sourced its estimates of price elasticity of demand from a previous report on the benefits of interval meters¹⁸. These benefits were considered primarily to arise due to customer's shifting their demand from peak to off-peak periods in response to improved time-of-use retail prices. Therefore the Commission's elasticity estimates:

- relate primarily to peak periods, whilst the $P_{(0)}$ adjustment made by the Commission relates to average demand. The interval meter report notes that elasticity during off-peak periods is likely to be much lower;¹⁹
- relate primarily to load shifting between peak and off-peak periods (and so implicitly include a peak/off-peak substitution effect) whereas the $P_{(0)}$ adjustment relates to an overall increase in demand;
- are based on a number of studies involving the trial use of time-of-use electricity prices²⁰ in which consumer awareness of – and responsiveness to – electricity prices is likely to be artificially high;
- measure consumer response to substantial price increases rather than to smaller price cuts;
- are used to model consumer response (and hence benefits) over a 15 year period, rather than the 5 year period used for the $P_{(0)}$ adjustment.

For all these reasons, it is likely that the price elasticity estimates used by the Commission are too high to be used in the $P_{(0)}$ context.

5.3 Amount of Retail Price Pass-through

As far as we are aware, there will be no regulation of retail prices that has the effect of forcing retailers to pass through to customers the reduction in DUoS prices. Therefore, this will only occur – if at all – as a result of the dynamics of retail competition. There are a number of circumstances which could militate against this pass-through occurring:

- a lack of effective retail competition;
- customer inertia, particularly amongst smaller customers;

18 Installing Interval Meters for Electricity Customers – Costs and Benefits – Essential Services Position Paper, November 2002

19 *ibid*, P66

20 *ibid* P62

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- existing retail contracts locking customers into current prices for several years to come;
- margin compression due to existing retail price regulation, meaning that retail margins must be restored before any retail price reductions occur.

It is not clear from the Draft Decision to what extent the Commission has assumed that pass-through will occur. The Commission must make its assumption on this point transparent in order to give proper reasons.

5.4 Views of the DB's Consultants

The distributors have commissioned a report from CRA in relation to the issue of price elasticity. In that report, CRA concluded that:

- In all customer segments the transmittal of changes in distribution charges to end-users is not straightforward, and may not be as assumed in the Draft Decision. In particular, a transition path may be warranted in which end-user price elasticity impacts are phased in as customers are assumed to become exposed to those impacts, rather than to assume that the impact will be experienced from the beginning of the price review period.
- Even where changes in distribution charges are presented to end users the signal they could convey may be blunted or entirely eradicated by changes in other variable components of the overall electricity price.
- In summary, CRA do not think it can be considered a foregone conclusion that “the price elasticity impacts resulting from the variations due to this Draft Decision” will occur. As detailed in the analysis presented by CRA, there are simply too many intervening factors beyond the control of the distributor or the regulator for this to be the case.

6 UED Specific Data Issues

In addition to the generic modelling and methodology issues identified in sections 2, 3 and 4 above, UED has also identified some specific data problems with the forecasts used by the Commission in the Draft Decision. These issues are addressed in turn below.

6.1 Peak/Off-Peak Assumptions

This issue relates to the impact of the interval meter roll-out program on the reported ratio of peak/off-peak sales.

The Commission should note that in UED's forecast all energy consumed by customers with certain meter types is classified as peak, even if it is consumed at 2am. This is because the meters involved cannot distinguish between time of day, and it has been convention to define such "any time" consumption as peak. With the introduction of interval metering technology, it will now be possible to classify the consumption between 11pm and 7am on weekdays (conventional off peak hours) as off-peak.

The interval meter roll-out program will lead to customers being transferred from existing tariffs to an appropriate time of use (TOU) tariff. In fact, the Commission's Position Paper explains that the Commission will allow distributors to mandate the reassignment of customers to new tariffs where an interval meter is installed and a distributor wishes to reassign a customer to a tariff designed to make use of interval metering data. UED already has a number of TOU tariffs, and customers will be transferred to TOU tariffs as interval meters are rolled-out.

Despite the fact that UED's sales forecasts take no account of future possible changes in customer behaviour as a result of the interval meter roll-out program, UED's sales forecast appear to show an increasing proportion of off-peak sales in the forthcoming regulatory period. The apparent change in the peak/off-peak ratio arises from the Commission's incorrect categorisation of tariff sales as either peak or off-peak.

Currently, a single rate tariff is categorised as *peak* – and once customers transfer to UED's TOU tariffs (following the installation of an interval meter) a proportion of these *peak* sales will in future be categorised as off-peak. This is because prior to the installation of an interval meter an end user with a single rate tariff previously consumed 100% of usage over a 24 hour period and was billed as peak usage. An interval, meter will measure usage in 30 minute increments and therefore without any change in consumption patterns will consume energy in both peak and off-peak periods. It therefore *appears* that UED is forecasting a change in the ratio of peak/off-peak sales whereas in fact there is no assumed change in the pattern of sales.

In submitting its tariff sales forecasts to the Commission, UED has not taken any account of future changes in customer behaviour as a result of the interval meter roll-out program. UED's original forecasts preserved the existing consumption patterns. The Commission's Draft Decision wrongly assumed that UED's forecasts included the effect of possible changes in consumption patterns, and the Commission has inappropriately revised UED's

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sales forecasts. UED has written to the Commission regarding this issue, and is currently awaiting a response.

Moreover, UED believes that the Commission should address the impact of customer behaviour changes in its Final Determination because the principal rationale for the interval meter roll-out program is that customers will switch consumption from peak to off-peak periods. It therefore appears to be inconsistent and illogical to assume that consumption patterns will remain unchanged – especially when the Commission expressed the view in the Draft Decision that price elasticity effects could in fact increase sales.

6.2 Launch Point

The Commission's consumption forecast applies its assumed growth rate to UED's 2004 actual energy consumption submitted in its 2004 regulatory accounts. It should be noted, however, that 2004 actual energy consumption has not been weather normalised. It is standard and logical practice to weather normalise the launch point when preparing energy consumption forecasts. On page 62 of NIEIR's report, NIEIR has stated that its growth rates for electricity sales are weather normalised. Therefore, the Commission wrongly has been inconsistent in applying NIEIR's forecast growth rates to the 2004 actual energy consumption without normalising the historic data for weather. If the Commission were to normalise for weather (as it must do), its forecasts would be reduced from those presented in the Draft Decision.

In addition, 6 months of UED's energy sales data for 2005 have now been reviewed by Ernst & Young – their report is attached. UED's view is that growth rates for 2005 should reflect the reforecast of 2005 energy sales taking this 6 monthly review into account. This report implies an annualised growth rate of 0.4% compared to the Commission's forecast of 2.53%.

Table 6.1 – UED's 2005 Energy Forecasts

	Energy (GWh)
2004 Volumes	7,520
2005 Volumes June 2005*	3,713
2005 Forecast December 2005	3,831
2005 Full Year Forecast	7,545

* Refer attached report from Ernst & Young

The matters raised here should be corrected and addressed in the Commission's Final Decision.

7 Concluding Comments

The Commission's evolving approach to growth forecasts reflects unreasonably aggressive growth and is inconsistent with more robust and appropriate analysis. This is best illustrated by the Commission's readiness to adopt its own growth forecasts in preference to its consultant's advice. The Commission's growth forecasts are based on an apparently late decision to adopt the DTF's GSP forecasts, on the false premise that the Commission cannot knowingly adopt a different forecast to the State Government's. Although it obviously did adopt a different forecast in the 2001 EDPD. The Commission's methodology for forecasting growth is contradicted by economic evidence produced by UED and reflected in the reports submitted to the Commission and attached to this submission.

The Commission's decision in respect of growth forecasts suffers from lack of due process and robust analysis for a number of reasons. It is because on other important matters in the Draft Decision, where the Commission has readily adopted its consultants' advice, even though the reports accepted by the Commission (most notably, the Wilson Cook report on expenditure benchmarks) are significantly less detailed and less persuasive than MMA's report. Furthermore, the Commission "selectively" reported the distributors growth rates in the Draft Decision in an attempt to support its forecasts. The Commission has also ignored other available evidence that demonstrates that the DTF's GSP forecast is unlikely to be the best available, and is likely to be systematically biased within an economic cycle.

The Commission's approach to price elasticity of demand is unsophisticated and is likely to overstate the impact of price on future sales. Again, the Commission appears to have quoted selectively from its consultant's report, and failed to consider the adjustments to price elasticity recommended by the relevant experts. UED expects the Commission to correct for this error in its Final Decision.

The Commission wrongly has amended the company's forecast split of peak/off-peak consumption. UED has explained in its Price-Service Offering that the impact of interval meters has been reflected in its tariff forecasts. The Commission has used the specious argument that since distributors have not submitted their tariff strategy reports, the Commission has assumed that the split between peak and off-peak consumption will remain unchanged from 2005 levels. In effect, the Commission has ignored important evidence and information in an apparent effort to encourage distributors to submit a further report to the Commission. This approach is unreasonable and is open to challenge.

If the Commission fails to address the issues raised in this submission and the attached expert evidence and adopt a methodology for forecasting growth that is inconsistent with UED's proposal, the Commission will fall into error and the Final Determination will be subject to challenge.