



Submission to the
Queensland Competition Authority
on the Draft Decision
Benchmark Retail Cost Index for
Electricity: 2008-09

29 February 2008

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Executive Summary

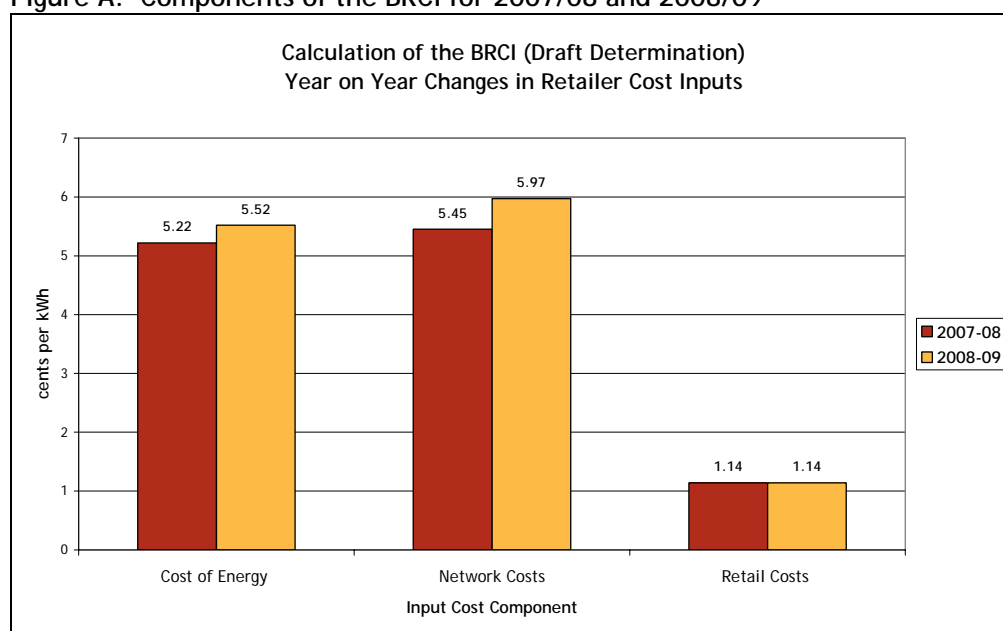
Background to the Draft Decision

Origin Energy (Origin) remains fully supportive of the Queensland Government's stated intent of ensuring that regulated retail tariffs are adjusted annually to reflect changes in the cost of supplying electricity to Queensland customers and appreciates the establishment of this independent process. As such, the BRCI process covers:

- Changes in the network costs arising from annual increases in:
 - charges from both ENERGEX and Ergon distribution companies as determined by the Queensland Competition Authority (QCA) ;
 - charges from the transmission company, Powerlink, as approved by the Australian Energy Regulator ;
- Changes in the energy costs that retailers incur in supplying Queensland markets, largely dependent on generation costs and mandatory market and renewable energy costs; and
- Changes in retailers own retail operating costs, including retail margin.

Figure A illustrates the QCA's view of the cost of each component in the two years 2007/08 and 2008/09

Figure A: Components of the BRCI for 2007/08 and 2008/09

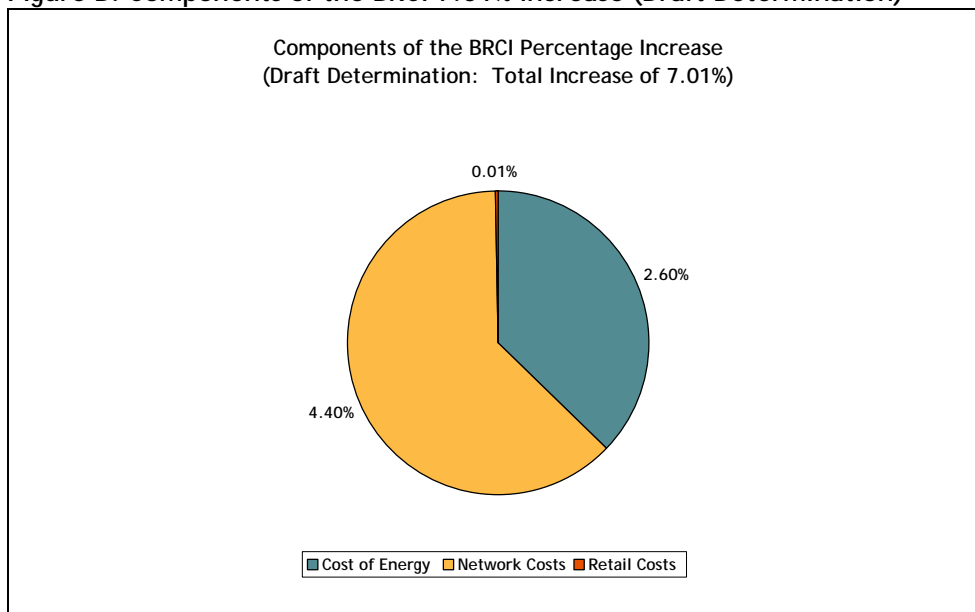


Source: QCA (2008), *Draft Decision Benchmark Retail Cost Index for Electricity 2008-09*

It also demonstrates that network costs are the dominant component of a retailer's price to customers. This is closely followed by wholesale energy costs.

For this reason, changes in the network and energy cost components have the strongest influence on the overall BRCI calculation. Figure B below highlights the importance of the network cost increases (as independently approved by the QCA), in the proposed 7.01 per cent change to the retail prices. Almost two thirds of the proposed increase is due to network cost changes, one third to energy purchase cost changes, and almost no change in the retailer's direct operational costs.

Figure B: Components of the BRCI 7.01% Increase (Draft Determination)



Source: QCA (2008), *Draft Decision Benchmark Retail Cost Index for Electricity 2008-09*,

Importantly, the significant changes in the network costs that are occurring in this period are a reflection of the massive capital expenditures planned by the distribution and transmission network companies in Queensland. For example, the QCA's draft decision has calculated that there is an estimated 10.9 per cent increase in network costs for 2008-09.

The changes in energy costs also reflect the changing dynamics of the Queensland and Australian wholesale energy market. For instance, growing peak demand combined with water shortages, have driven both government owned and private sector generators to increase both their contract and spot market prices. These events upstream of the retailers will over time find their way into the BRCI calculation.

Nevertheless, and despite a period of unprecedented high wholesale prices in the National Electricity Market and strong inflationary pressures on wages and business costs, energy cost increases account for only 2.6 per cent of the proposed 7.01 per cent retail price change. This is because of the smoothing methodology used by the QCA to manage the impact of short term contract and spot market price fluctuations.

Overview of Origin's Submission

Origin's submission addresses all the three cost elements set out above, noting however, that the retailer has no control over the network cost changes and very limited influence on the energy cost component.

In particular, Origin has identified several aspects of the BRCI calculation that need to be revisited in the QCA's Final Decision. These include:

- the method for including the impact of ENERGEX's approved additional capital expenditure in the 2008-09 AARR and the calculation of the change in transmission charges for 2008-09;
- a number of the assumptions that appear to be part of the energy cost calculations

- forecasting the cost of renewable energy certificates as fundamental changes in the renewable energy market mean that the formula does not accurately represent future costs;
- the customer churn forecasts used by CRA in calculating customer acquisition costs as the current forecast appear unrealistically low; and
- fixing an appropriate retail margin to cover the retailer for its risk-weighted investment given recent changes in financial markets.

With regards the calculation of the cost of energy, Origin has found it difficult to effectively review the report by Charles Rivers Associates International (CRA) because of a lack of transparency. As such, Origin would like further explanation in the Final Decisions provided on:

- CRA's LRMC model and the assumptions regarding input costs for 2007-08 and 2008-09 used in the model;
- the calculation of LRMC as the LRMC results that have been produced are questionable in both magnitude and direction of relative change between years;
- the Queensland load profile used in the modelling; and
- the energy purchase cost calculation.

Origin's view is that the method proposed in the draft decision, whilst generally consistent with the aims of the legislation:

- sets benchmarks at inappropriately low levels that are not supported by the industry;
- sets LRMC at a level that does not recognise the increased cost inputs and risks facing new entrants and potential new entrants to the market; and
- fails to recognise the wholesale risks facing a retailer including a failure to recognise prudent risk policies, sensitivity analysis or hedging strategies for extreme weather events.

Finally, Origin notes that the QCA and CRA propose to update a number of their calculations, such as network charges and energy purchase costs, in the Final Decision using additional data available to them at this time. Origin accepts that this is appropriate and we would be keen to see the detail of these changes in the Final Decision.

However, the corollary to this, Origin would strongly urge the QCA and CRA to update a number of other parameters in the modelling for the Draft Decision. For example:

- information available to CRA regarding increases in input costs for the LRMC;
- the confirmation by the Federal Government of the 20 per cent MRET target for 2020 and commitments to the implementation of the Emissions Trading Scheme by 2010;
- the most recent information available on inflation generally, wage and salary forecasts and cost of capital; and
- churn rates in Queensland and in other Australian retail markets.

Origin's concern is that if these new costs, and other issues raised in our submission, are not adequately addressed then the BRCI index will fail to achieve its fundamental objectives of ensuring retail headroom and avoiding losses on reversion.

More importantly, the risk is that the BRCI may fail in its role of supporting competition and investment in the Queensland energy industry at the very time, such investment is vital to growth in Queensland.

Origin notes here that the previous determination of the BRCI, by underestimating the energy costs facing retailers, has already resulted in a significant squeeze on retail margins in the latter part of 2007 and 2008, an outcome which may have put under threat the viability of some small retailers and certainly their propensity to enter the Queensland market.

The fact that even very large customers consuming over 1 GW.h per annum, who would normally be active participants in the competitive market, are choosing to stay on or connect to a regulated retail price in Queensland is further indication that the current regulated retail price may well be below efficient retailer costs.

Origin emphasises, that the great majority of a retailer's costs are outside the direct control of the retailer, which in turn, places a heavy responsibility on the Regulator to make a careful assessment of these costs. They should do so noting that the dynamics of a competitive market are different than the previous monopoly control market.

In a competitive market, the risks are asymmetric as if the regulated price is "too high", then competition will drive real prices to customers down (as they did at the start of FRC), but if regulated prices are too low, then these opportunities may simply dry up.

1. Introduction

Origin Energy (Origin) appreciates the opportunity to make submission to the Queensland Competition Authority (QCA) regarding their *Draft Decision: Benchmark Retail Cost Index for Electricity: 2008-09* (draft decision).

This submission focuses on issues arising from the draft decision that Origin believes the QCA and their consultants, Charles Rivers Associates International (CRA), need to take into account in order to finalise the BRCI for 2008-09. Several of these concerns relate to a lack of information in the draft decision and especially within the CRA draft report as Origin has found it difficult to review several elements of the BRCI because of this lack of transparency.

Nevertheless, Origin looks forward to participating in the next workshop as part of the QCA's consultation process and to having its queries from this submission answered in that forum or within the QCA's final decision.

Origin has always supported the objectives of the benchmark retail cost index (BRCI), as stated in the delegation of powers¹ (Delegation) to the QCA, being:

- ensuring the existing retail headroom in the tariffs at the date of the delegation are substantially maintained; and
- to avoid the policy of customer reversion to regulated tariffs resulting in the retail entity incurring a financial loss to supply those customers.

Origin's comments within this submission have been made with these objectives in mind.

The major areas of the draft decision that Origin would bring into question or request further information to be released in order to consider fully are:

- the new method proposed for calculating the change in energy cost for 2008-09. It is now based on an average of Long Run Marginal Cost (LRMC) and an estimate of the purchase cost for energy and Origin questions the relevance and application of this methodology;
- the CRA model used for calculating the LRMC for electricity in Queensland. There is only cursory information provided on the LRMC modelling with CRA concluding that LRMC declined by 3.6 per cent in 2008-09 due mainly to changes in load profile from 2006 to 2007. Origin would like to understand how the differences in input costs and market expectations between 2007-08 and 2008-09 were reflected in CRA's LRMC modelling;
- the assertion that the load for 2007, as used in the LRMC calculation, was less volatile than in 2006. Origin has no exposure to this load shape and publicly available data for Queensland in 2007 does not indicate such a change. Origin wishes to understand the reduction in load volatility and why this is having some a significant impact on the LRMC modelling;
- the adjustment in ENERGEX's AARR for its approved capex pass-through. It appears that the adjustment has been made net of under and over recoveries which is in contradiction to the intent of the BRCI;
- the reduction in customer churn forecast for 2008-09. The customer acquisition costs are based upon this forecast which results in total costs per customer declining. Origin has grave concerns with the validity of the assumed customer churn forecasts; and

¹ Certificate of Delegation: Under section 90(3) of the Electricity Act 1994 (as amended)

- the conclusion by CRA that retail margins should be constant (in percentage terms) in the face of considerable evidence regarding both increased retailer risks and higher rate of return requirements across the economy as a whole.

Origin would also highlight that as an underlying principle, the QCA needs to ensure the utmost transparency and consistency in their approach to the BRCI calculation. As a specific example, it is important that there is a consistent approach in the updating of market data for the Final Determination that involves not only the updating of the energy purchase cost calculations, but also taking into account other data that impact on the LRMC, retail costs and retail margin.

Finally, Origin recognises the difficulty in interpreting and applying the regulations in the context of the BRCI and also understands the need for methodological changes for the 2008-09 BRCI calculation specifically. However, Origin would stress that market participants will be making long-term commercial decisions based, not only on the QCA's final decision for 2008-09, but also on expectations on future BRCI decisions using this methodology. As such, a commitment to consistency and transparency is paramount.

2. Network Costs

This component is the least contentious element of the BRCI calculation because it is based on publicly known, regulated annual costs which are mostly under the control of the QCA.

As such, Origin primarily supports the conclusions reached in the QCA's draft decision regarding the change in network costs for 2008-09 and the resultant calculation of a 10.9 per cent increase in annual cost.

However there are several elements that the QCA needs to review, namely:

- the method for including the impact of ENERGEX's approved additional capital expenditure in the 2008-09 AARR; and
- the calculation of the change in transmission charges for 2008-09.

Further detail is provided in the following sections.

Origin is pleased that the QCA has predominately followed the same methodology for estimating the 2008-09 network costs that it established in the 2007-08 indexation process. As stated earlier, it is essential that a consistent method is used every year as stakeholder's confidence in a consistent methodology reduces retailer's risk when making commercial decisions based on future BRCI outcomes.

Furthermore, Origin acknowledges that the QCA has previously indicated that no changes to network charges will be made for 2008-09 following the calculation of the BRCI. Origin would again request formal assurance from the QCA that there will be no mid-year changes to network or transmission charges in 2008-09 to reflect any additional network adjustments.

2.1 Distribution Network Costs

With regard to the method for calculating the 2008-09 total distribution network costs, Origin agrees that it be based on the Ergon and ENERGEX Average Annual Revenue Requirements (AARRs) as determined in their respective regulatory determinations. These AARRS should not be adjusted to account for annual over and under-recovery of network revenue as this process is revenue neutral over the period. More specifically:

- Ergon's total revenue requirement must be the recalculated 2008-09 AARR as determined by the QCA during their 2007-08 BRCI process.

Origin agrees with the positions held by the QCA in their draft decision that the Mt Isa distribution costs are removed from the Ergon AARR and that, at this stage, there is no allowance included for pass-through costs for the Tropical Cyclone Larry event; and

- ENERGEX's AARR must incorporate the impact of ENERGEX's cost pass-through applications. These include the impact of the \$720 million of additional capital expenditure as previously approved and any FRC costs that are approved for 2008-09.

Origin would query the manner with which the QCA has included the impact of ENERGEX's additional capital in 2008-09 and this is highlighted in the following section.

Origin does understand that the \$15 million in the draft decision is an indicative FRC cost and is pleased that the QCA has committed to reflect an approved adjustment in ENERGEX's revenue cap for FRC costs within the BRCI calculation for 2008-09.

Origin would also query the adjustment of the ENERGEX and Ergon AARRs to account for non-DUOS services calculation within the draft decision.

Although Origin believes the methodology is appropriate, it is surprising that the quantum of non-DUOS costs remains unchanged from that identified in the 2007-08 BRCI process. Origin would have expected that as a result of the QCA's recent examination of distributors' non-DUOS services² that there may have been a review and further clarification of the network's operating costs attributable to these services. Origin seeks confirmation.

2.1.1 ENERGEX Capex Cost Pass-through

In the QCA's Final Decision³ that gave approval to the application by ENERGEX for additional capital expenditure, the QCA offset some of the pricing impact of the additional capital expenditure in 2007-08 through ENERGEX's revenue over-recoveries of previous years.

Although Origin supported this approach from a network pricing perspective, it was submitted to the QCA that this approach cannot be used in the BRCI calculation as it contradicts the intent of the entire BRCI process. Origin's understanding was that this approach was accepted by the QCA.

For 2008-09, Origin expected an adjustment of \$32.5 million to the ENERGEX AARR to match the additional revenue specified by the QCA in their Final Decision on the additional capital expenditure. The draft decision only includes an \$8.5 million adjustment.

Origin can only surmise that revenue smoothing has been used with regard to the capital expenditure figures and it does appear that the smoothing incorporated adjustments for prior DUOS over-recoveries.

If this is the case, it is not appropriate. As the QCA is aware, ENERGEX's previous over-recoveries of DUOS have not been reflected in the BRCI process because they are a temporary reduction in retail headroom. The reduction is only temporary because it is returned to retailers through reduced network charges in subsequent years.

If the QCA has used DUOS over-recoveries to offset against the new network costs resulting from ENERGEX's additional capital expenditure in the BRCI then they are making a permanent reduction in retail headroom. That is, retailers are not receiving the expected network reduction but they are also not receiving the required increase in retail tariffs to account for ENERGEX's additional capital spend.

Origin requires the QCA to review this and if it is the case, to rectify it by including the full impact of the new network costs in the BRCI calculation. Only then will retailers' headroom be returned to the position that would have eventuated without the DUOS over-recoveries.

2.2 Transmission Network Costs

The final element of total network costs is Powerlink transmission costs and Origin fundamentally agrees with the QCA that this be limited to transmission costs that are passed through to the Queensland customers utilising the distribution networks.

² QCA (2007), *Final Decision: Electricity Distribution, Review of Excluded Distribution Services*.

³ QCA (2007) *ENERGEX Application for Capital Expenditure Cost Pass-through: Final Decision*

Origin is aware that because a significant proportion of Powerlink revenue is derived from customers not connected to the Queensland distribution networks, the QCA cannot simply use the Powerlink AARRs as defined in their regulatory determination. Instead, the QCA's method of utilising the actual transmission charges provided to the distribution networks within the BRCI calculation is an acceptable alternative.

In addition, Origin notes the QCA's use of an estimate for 2008-09 in the draft decision but would stress that the actual TUOS charges that Powerlink is intending to levy on ENERGEX and Ergon must be used in the Final Decision. This is imperative because the QCA estimate for the draft decision is made without full understanding of the impact the new determination will have on Powerlink's AARR and its actual transmission charges.

Origin would highlight that in its best intentions to apply a method consistently, the QCA appears to have errantly recalculated the transmission network costs for 2007-08 and by doing this, contravened:

- the BRCI legislation - by recalculating this cost element despite no material change to the methodology; and
- the intent of the policy - by calculating a change in the cost that is not adequate and hence reducing retail margin.

To explain, the 2007-08 BRCI reflected a price escalation that would accommodate TUOS increasing to \$412.2 million. For consistency sake, the QCA has estimated that the 2008-09 BRCI should be based on TUOS increasing from 417.1 million in 2007-08 to \$462.3 million in 2008-09.

This results in \$4.9 million of TUOS costs not being reflected in retail tariffs in 2007-08 nor 2008-09 and therefore a reduction in retail headroom. Consistency requires either:

- the 2007-08 BRCI having being calculated to incorporate TUOS increasing from \$370.1 million to \$417.1 million; or
- the 2008-09 BRCI being calculated to incorporate TUOS increasing from \$412.2 million to \$462.3 million.

As the first option is not available, Origin believes the QCA should correctly apply the BRCI and not recalculate TUOS for 2007-08.

Importantly - and this issue applies to both the distribution and the transmission charges (and perhaps a number of other areas of the BRCI) - by recalculating the 2007/08 base each year, the methodology effectively means that errors in the forecast in a given year are never readdressed. Over time, this will clearly violate the policy intent of maintaining retail margins and ensuring customers reverting to tariff will not incur a loss to the retailer.

3. Cost of Energy

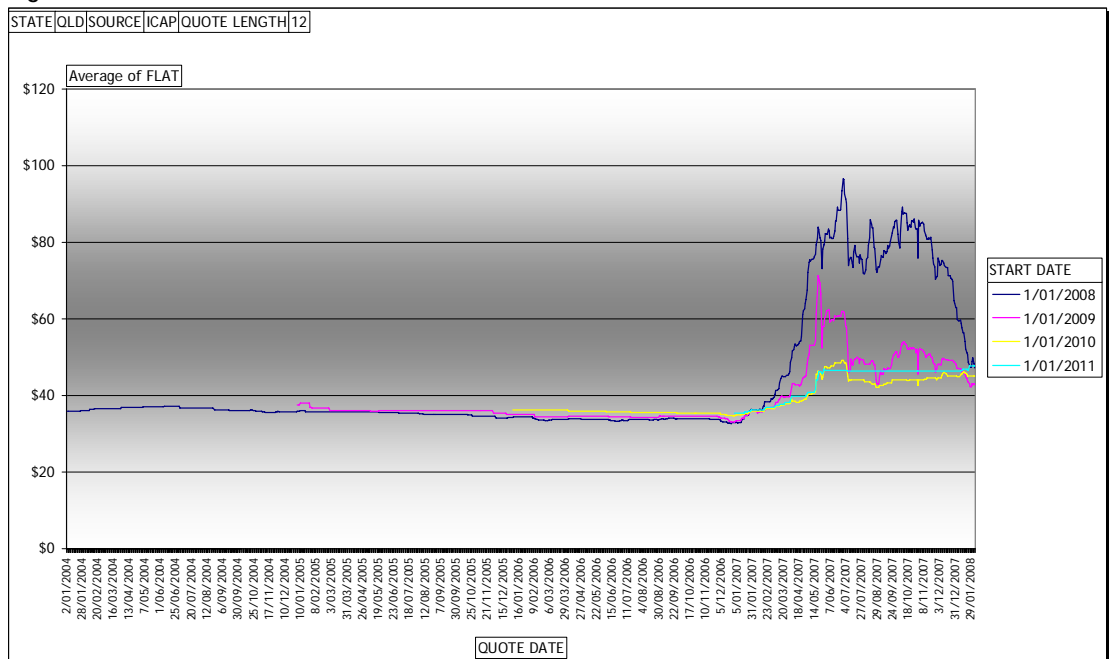
Origin believes that in order to be consistent with the legislation, the methodology derived to estimate the change in cost of energy must balance the three key conflicting objectives of this component of the BRCI. Namely:

- that it be based on recent estimates of LRMC;
- that it takes into account actual purchase costs of energy; and
- that the BRCI maintain existing retail headroom.

Theoretically, over time the LRMC and actual purchase costs of energy should converge. However, the BRCI as currently constructed has a focus on year by year comparisons. Inevitably within this time horizon there will be significant divergence between the two elements, even where the purchase costs are “smoothed” over time as they are in the proposed 2008/09 CRA methodology (see below).

In this context, Origin understands the general concern with the volatility issues that arose from the methodology used by the QCA to calculate the energy cost component in its previous BRCI calculation (for 2007-08) given current electricity market conditions. Figure 1 shows the contract prices on offer from January 2004 until January 2008 and clearly demonstrates the rise in costs for 2008 and 2009 (spot market prices show even greater volatility). The use of the previous methodology would reflect this rise in cost in the current BRCI but may lead to downward pressure in later years.

Figure 1: Movement in Flat Contract Prices for 2008-2011, \$/MW.h,



This has obviously led to an examination of the appropriate method for 2008-09 and Origin has itself acknowledged this issue in its submission to the QCA’s Interim Consultation Notice where it suggested exploring mechanisms to increase smoothing of the short-term volatility in the electricity market.

In proposing this, Origin still clearly expected full recovery of the costs of supply it has been exposed to but was amenable to a methodology that recognised those costs over a longer period through smoothing or a price path. Origin did not expect

a method that would flatten the actual purchase cost of energy to the degree that the weighting of LRMC and energy purchase cost has achieved.

Origin's view is that the method proposed in the draft decision, whilst it attempts to recognise the policy objectives and requirements of the legislation;

- sets benchmarks at inappropriately low levels that are not supported by the industry;
- sets LRMC at a level that does not recognise the increased cost inputs and risks facing new entrants and potential new entrants to the market;
- fails to recognise the wholesale risks facing a retailer including a failure to recognise prudent risk policies, sensitivity analysis or hedging strategies for extreme weather events ; and
- if not addressed, will ultimately fail to attract sufficient investment in new generation in the state and inhibit the development of competition in the Queensland electricity market.

Origin believes that as a result, the methodology is too heavily weighted on long term pricing principles with only a small and diluted reflection of the relevant market prices. This is particularly erroneous approach to capturing retailer costs in a market that is no longer vertically integrated⁴, that is, in a market where generators are in most instances owned by different entities (largely the Queensland Government) to the retailers.

In addition, as noted previously, the methodology applies only to short-term year on year comparisons. A methodology such as the one put forward would be more applicable to a longer term agreement or price path over three to five years. In the shorter term, retailers' energy purchase costs will reflect the profit making/cost recovery incentives of the generators who in times of supply constraints will have little incentive to sell at LRMC. Figure 2 below indirectly illustrates this point further; there is minimal market contract offers for Calendar 2008 sitting at or near the LRMC.

The inference that energy market cost increases can be managed by retailers with prudent risk management strategies is a misconception that presumes retailers have access to fully risk managed hedges at discounts of almost 50 per cent when compared to a situation of the highest prices and market volatility since inception of the National Electricity Market (NEM). A prudent retailer manages risk appropriately and within board endorsed risk policies - this does not mean they can buy energy at prices below where the market is prepared to sell.

Origin specific concerns and queries for CRA on the different elements used in calculating the cost of energy are outlined in the following sections on:

- the weighting of the model;
- CRA's LRMC model and resultant calculation of LRMC;
- the Queensland load profile;
- assumptions regarding input costs for 2007-08 and 2008-09 within the CRA model;
- the energy purchase cost calculation; and
- the cost of renewable energy certificates.

If the QCA persist with the proposed methodology, Origin would encourage the following concerns to be taken into account.

⁴ At least in the previous ENERGEX retail region.

3.1 Weighting of LRMC and Energy Purchasing Cost

The weighting between LRMC and energy purchase cost model is recognised to be fairly arbitrary with no conceptual basis.

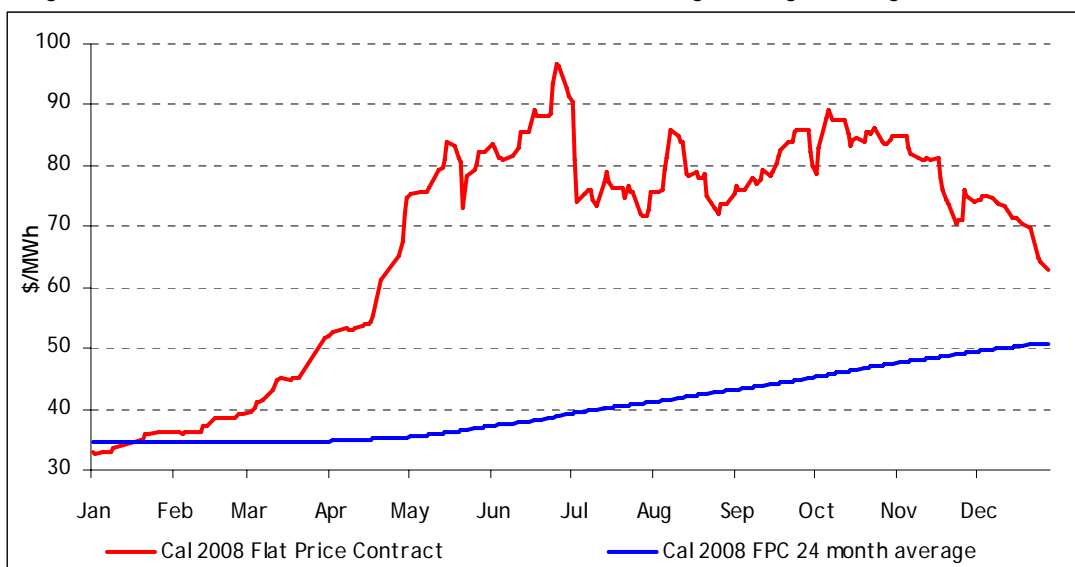
Since the model is hypothetical, in the first place, there is no weighting which would accurately represent an energy retailer's actual purchasing behaviour or costs (although 100% weighting on energy purchase costs would be more authentic as no Queensland generator was selling at proposed LRMC levels in recent periods - see above and Figure 2 below). Obviously, a higher weighting would better reflect a retailer's energy costs but it would also increase annual volatility in the model.

Origin does have concerns that market price pressures are not being recognised satisfactorily within this construct. The LRMC of energy is already reflected in the market prices, underlying supply demand positions, hydrology and spot price pressures. This means that the weighting effect of the proposed 50/50 split is probably more reflective of 75% LRMC emphasis and only 25% for actual purchase costs.

Furthermore, the estimate of energy purchase cost is already considerably smoothed by use of the 24 month rolling average in calculating the charge. Figure 2 highlights the change in the rolling 24 month average for Calendar 2008 contract prices throughout last year. It also shows the actual Calendar 2008 flat contract prices during 2007. The use of the 24 month average clearly has a considerable smoothing effect as it removes most of the contract volatility faced by retailers⁵.

The proposed approach for 2008/09 is in effect a "double smoothing", through the combination of the LRMC (at 50% weighting) and the 24 month smoothed contract price (at 50% weighting).

Figure 2: Calendar 2008 Flat Price Contracts vs Rolling Average during 2007



⁵ Origin notes here the quotation in the OCA Report (page 10 - 11) from the Queensland Treasury (2007). Queensland Treasury claimed that the 2007/08 approach was "based on the assumption that a retailer would be subject to electricity contract price shocks at any point in time" and that an efficient retailer would develop strategies to manage this risk. Origin would highlight that the 2007/08 approach also involved a 24 months smoothing approach, however, the outcome of this was used to adjust the LRMC directly.

Origin believes that the 50/50 subjective weighting of LRMC and energy purchase costs therefore does not recognise market cost satisfactorily in a disaggregated supply market. However, there is no theoretically correct weighting so Origin seeks:

- enhancement of the cost reflectivity of the LRMC and energy purchasing cost calculations in order to improve the rigour of the methodology and consistent with the disaggregated structure of the Queensland electricity industry; or
- a paradigm shift that looks at a longer term pricing agreement where real market volatility and risks relating to one period can be recognised and smoothed over a longer timeframe.

3.2 Long Run Marginal Cost (LRMC)

CRA have modelled the LRMC of electricity in Queensland using CEMOS, a proprietary electricity market model. Whilst the modelling arguments for LRMC put forward by CRA appear reasonable in principle and address many of the known complexities, the exact detail of the model and its application of these principles remain unknown.

What is evident is that the LRMC results that have been produced are questionable in both magnitude and direction of relative change between years and are at odds to industry expectations and intuitively, to common sense.

Moreover, while Origin understands that the BRCI is only considering annual change and not actual quantum, the absolute value of LRMC appears too low and this raises further questions regarding the validity of the LRMC modelling.

A fully shaped LRMC of \$39.71/MWh, including transmission losses, would appear to be at odds with almost all other analysis available on the subject. Origin's own experiences in energy risk management and cost analysis, in the absence of any further information on the modelling assumptions, suggest that this figure is \$8-\$16/MWh too low (excluding losses and other risk costs). It does not sufficiently allow for the:

- capital costs of generation;
- premiums associated with supplying a shaped load;
- reserve plant margin required to provide a secure system operations; or
- purchase and risk costs adequately eg. for extreme weather.

As a comparison, a recent report prepared for the Essential Services Commission of South Australia employed robust modelling techniques using a "recognised and acceptable theoretical framework". The analysis resulted in LRMC figures that were 40-50 per cent higher than the proposed LRMC for Queensland, an outcome that cannot be readily explained by the different load profiles used in the two studies.

Table 1: Summary of 2008 LRMC Estimates (delivered energy cost), \$MW.h⁶

New entrant cost scenario	Load growth scenario					
	Including CL water heating			Excluding CL water heating		
	Base	High	Low	Base	High	Low
Base case	69.50	69.16	69.79	73.50	73.07	73.87
Sensitivity 2	71.45	71.09	71.76	75.67	75.22	76.06
Sensitivity 3	67.78	67.46	68.06	71.59	71.18	71.94
Sensitivity 4	71.49	71.12	71.81	75.76	75.30	76.17
Sensitivity 5	68.18	67.86	68.45	72.00	71.59	72.35
Sensitivity 6	72.74	72.40	73.04	76.78	76.34	77.15
Sensitivity 7	66.54	66.20	66.83	70.50	70.08	70.87
Sensitivity 8	70.74	70.39	71.04	74.86	74.42	75.24
Sensitivity 9	67.24	66.92	67.51	70.98	70.58	71.33

The sensitivity that the Planning Council considers best represents a base case indicates an energy only cost of \$69.50/MWh for the small customer market during 2008. If the hot water load is excluded the estimated LRMC is \$3.99/MWh higher on average.

Origin would also reinforce our view that the lack of vertical integration in Queensland means that no retailer's current cost base is actually representative of LRMC and no generator is selling fully shaped volume at the suggested levels of LRMC. This is transparent as even flat swaps are above this price level and have been consistently for the past two years.

The other significant concern regarding CRA's LRMC results is that there is a decrease in LRMC. This is clearly unexpected, as noted by the QCA itself. To Origin's knowledge there is no credible industry analyst holding the view that, in the real Australian context, the LRMC of generation is declining (a number of these views are canvassed later in this Submission). Origin can only conclude that the outcome in the draft decision of a decrease in LRMC is either an artefact of the model or of the inputs to the model.

Although CRA advise that the finding of a decrease in the LRMC is due to changes in load shape between 2006 and 2007, the lack of information on the load shape and capital inputs to the model prevent Origin from determining how this occurs. Origin has reviewed the Queensland load information that is publicly available but cannot verify CRA's conclusions.

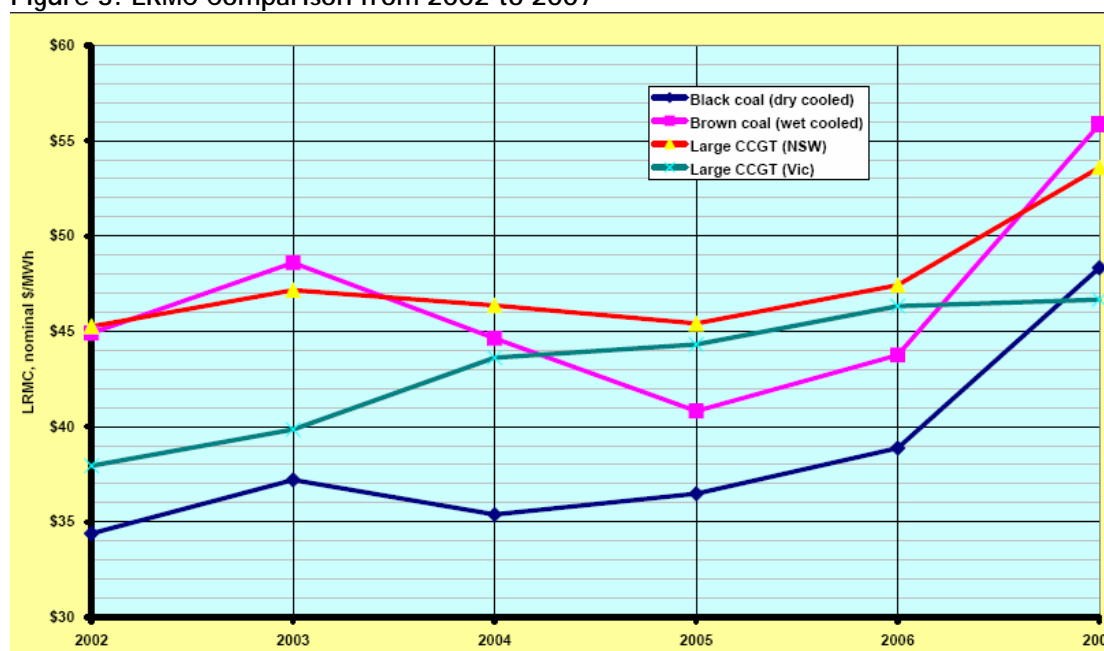
This is discussed in the next section. As a general point, however, Origin requests that the QCA provide the industry with a clear account of the components of this decrease in the LRMC. In other words, can CRA explain the separate effects of load shape and various input costs into the net decrease of 3.6 per cent in LRMC (in c/kWh). Given the counterintuitive nature of the result, this may give the industry some level of comfort on the analysis.

More specifically, Origin is unable to calculate the decline in LRMC that is attributable to improved load shape as industry expectations are for significant annual increases in LRMC given current increases in many economics factors.

For example, Figure 3 highlights increases in LRMC calculated for 2007. Given the economic factors driving these increases have continued in 2008, it was logical that similar increases would result for 2008.

⁶ Electricity Supply Industry Planning Council (2007), *Estimates of the long run marginal cost of supplying electricity to small customers in 2008*

Figure 3: LRM Comparison from 2002 to 2007⁷



A key input into any LRM model is the assumptions on the costs of building and operating generation plant.

An LRM model requires inputs on the capital costs of new plant, as well as operating costs and fuel costs. Nowadays in most power system/market models there is also a detailed treatment of the dynamics of transmission system and power generation system. In the absence of any details about CRA's model, Origin presumes that these minimum requirements are met.

In modelling the LRM of electricity in Queensland, CRA has stated that it relied on cost inputs from the following sources:

- ACIL Tasman, Fuel resource, new entry and generation costs in the NEM, Report 2 - Data and documentation, Report prepared for NEMMCO, June 2007 (ACIL Tasman Report);
- US Energy Information Administration, Assumptions to the Annual Energy Outlook, April 2007 (EIA Report); and
- P. Graham et al, Options for Electricity Generation in Australia, Cooperative Research Centre for Coal in Sustainable Development, Technology Assessment Report, 31 January 2005 (CRC CCSD Report).

As the BRCI is an index designed to measure the changes in costs from year to year, it is important when modelling LRM to attempt to capture changes in the cost of providing the energy from year to year. For instance, if it is the case that the costs of building and operating generation plant are expected to increase over time, **the only way to capture these increases in costs in the LRM is by reflecting these increases in costs in the input cost assumptions.**

Origin cannot determine from CRA's report whether they attempted to account for expected changes in the costs of building and operating generation plant from year to year.

⁷ Sinclair Knight Merz Pty Ltd (2007): *New Entrant prices & wholesale price projections, 2007*

CRA acknowledge that there is evidence that the costs of building and operating generation plant are increasing. For instance, in their report, CRA notes that ACIL Tasman - upon whom CRA relies for capital costs assumptions - revised capital costs upwards between 2005 and 2007. However, CRA conclude that, rather than incorporating an increase in capital costs into their modelling, it is more appropriate to rely on ACIL Tasman's more recent and higher capital costs for both 2007/08 and 2008/09.

Following this logic in the BRCI, however, would result in each estimate of LRMC failing to incorporate increases in capital costs even if ACIL Tasman were to continue to release reports with higher capital costs. In the context of trying to determine the change in the cost of energy from year to year, this is not an appropriate outcome.

Origin therefore questions the impact of load shape and input costs and request further information on the modelling of these elements be provided by CRA.

3.2.1 Load Shape

Section 105 (c) of the Electricity Regulation 2007 requires the LRMC of energy to be calculated to meet the demand profile of the previous calendar year.

CRA have calculated a reduction in LRMC of energy between 2007/08 and 2008/09 and note that the fall is because the NEM load for Queensland in 2007 was less variable than in 2006. As a result, the plant mix to supply the load in 2007 would have included less of the costly peaking generation compared with 2006.

Intuitively, a reduction of 3.9 per cent in LRMC appears large in magnitude and inconsistent in direction given the change in the load duration curve based on system loads between 2006 and 2007 (Table 2). This translates into a 3 per cent decline in the load factor rather than an improvement. The deterioration in the load shape from 2006 to 2007 is expected to translate into an increase in the LRMC of energy, all else being equal, as more costly peaking plant will be utilised.

Table 2: NEM and Queensland load factors

	Queensland	NEM
2006	70%	73%
2007	67%	71%

On the publicly available load shapes that Origin has access to, the results which we have modelled show very little change year on year with the most recent year's data having an increased maximum of approx 300 MW.

The following figures highlight various load shapes and load duration curves for both 2006 and 2007. The differences are not significant.

In order to achieve a decrease in LRMC of the order observed by CRA, again holding all other input cost parameters constant, Origin has estimated that the peak system demand would have to have fallen by 1000MW.

This is not conceivable so Origin would like additional explanation by CRA on the variations to the load shape and why this is causing such a significant decrease in LRMC.

Furthermore, the most recent 12 months of data for Queensland have been significantly more volatile with more observations of higher prices and at a much

higher level than previously. Origin would therefore suggest that, not only has shape deteriorated but that price volatility has also increased significantly thereby compounding risks for a retailer.

Figure 4: Average Load Shapes and Pool Price 2006 and 2007, all days

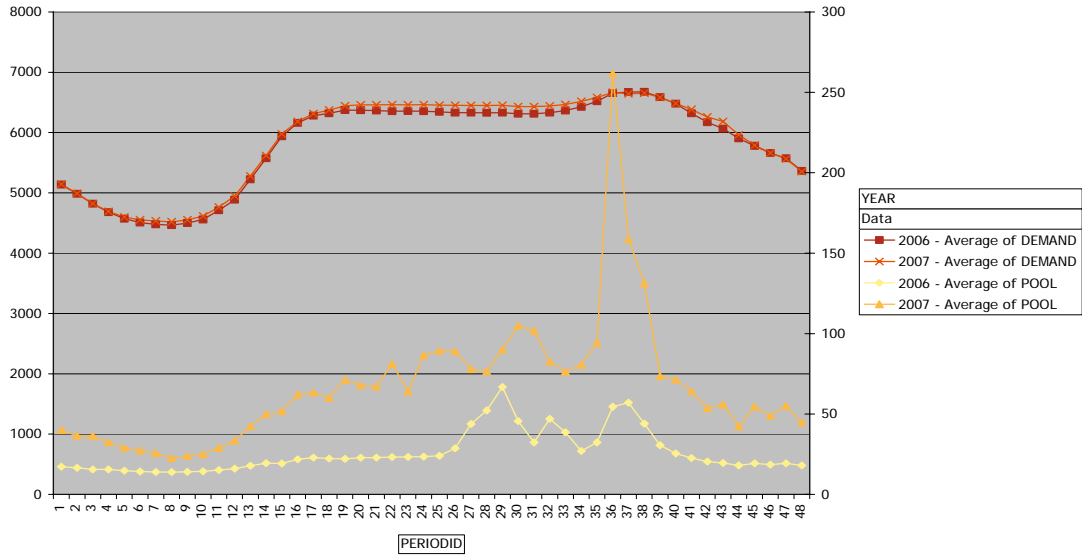


Figure 5: Average Load Shapes and Pool Price 2006 and 2007, Fridays

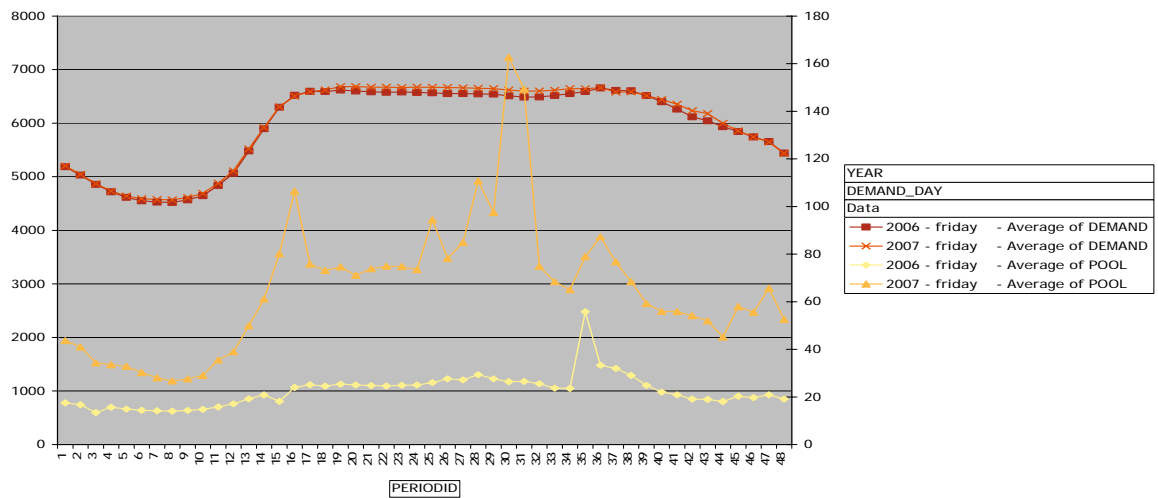


Figure 6: Load Duration Curves 2006 and 2007

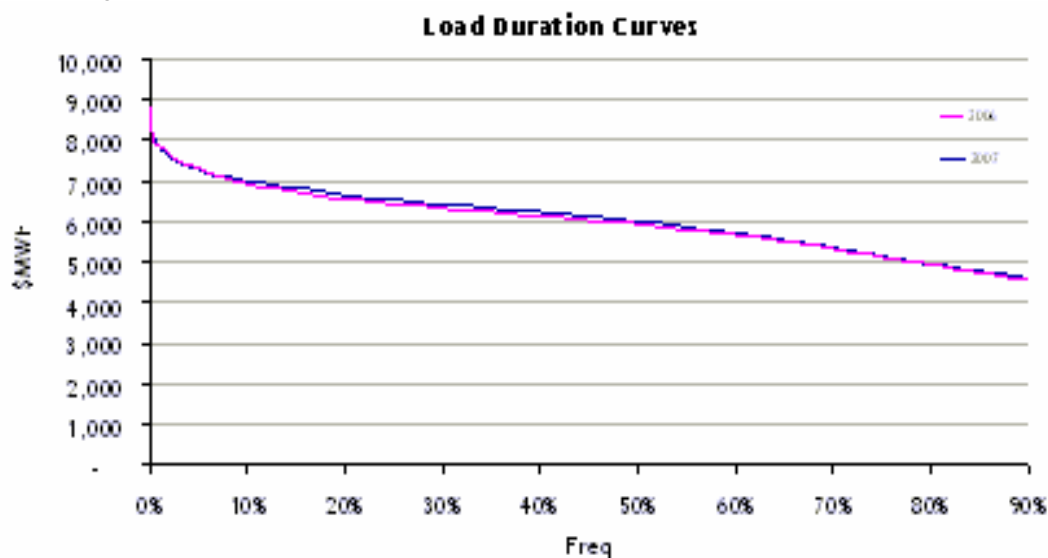
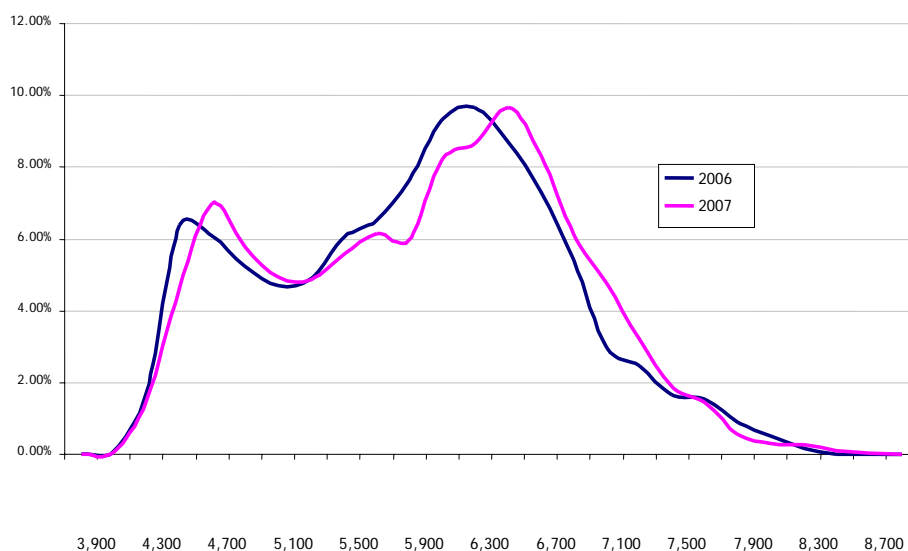


Figure 7: Load Duration Curve 2006 and 2007



Since the reported improvement in load shape is the main contributor to the modelled decrease in LRMC and since Origin has neither access to this data or detailed modelling techniques which produce this outcome, it should be validated more rigorously with further sensitivity analysis and given the materiality of this result, a normalised shape considered to reduce annual volatility.

3.2.2 LRMC Cost Input Assumptions

As a matter of principle, changes in input cost assumptions from 2007/08 to 2008/09 need to be included in estimating LRMC for the purposes of the BRCI. In addition, there is strong evidence to support the view that the costs of building and operating generation plant are likely to increase from 2007/08 to 2008/09.

Capital Costs

CRA's capital cost assumptions are primarily based on the ACIL Report, with some assumptions based on the EIA Report and the CRC CCSD Report.

It is unclear whether CRA's capital cost assumptions include any change in the costs from 2007/08 to 2008/09. Certainly, Table 21 of the CRA report suggests that CRA's model does not incorporate any such change. Origin does note that the ACIL Report includes estimates of capital costs that vary by year (generally, capital costs of generation plant are assumed to increase that 80 per cent of CPI). However, ACIL Tasman acknowledges that there is evidence to suggest that the capital costs for generation plant have been increasing more rapidly in recent years. For example, ACIL Tasman have revised their estimates of capital costs upward between their 2005 report and their 2007 report, as acknowledged by CRA:

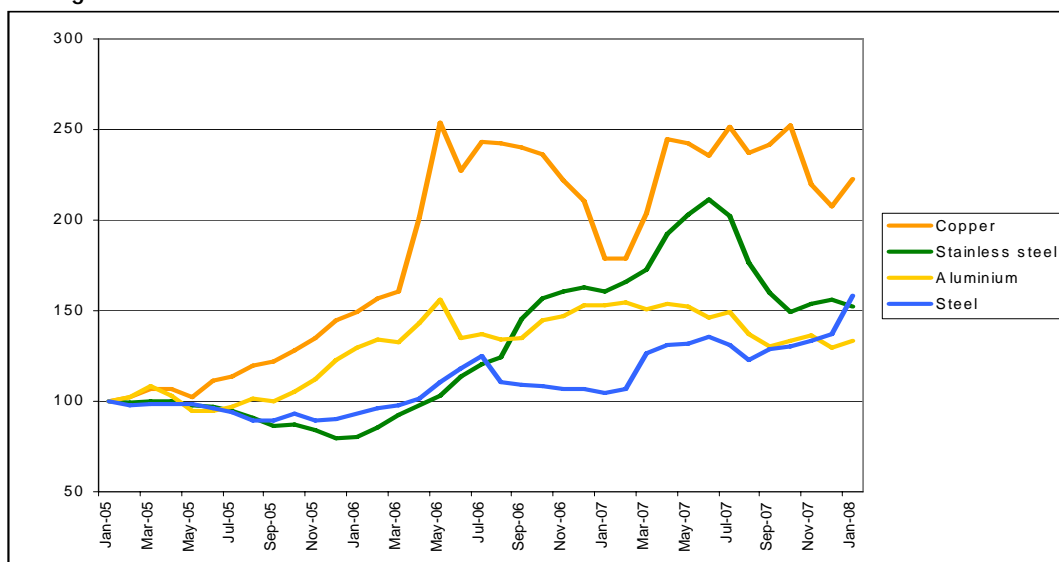
Similar divergence in cost estimates has been noted in the Australian context. ACIL Tasman has revised its estimate for CCGT and (black) coal from \$850/kW and \$1,400/kW in 2005 to \$1,050/kW and \$1,700/kW in 2007.

ACIL Tasman also note that the evidence on which they base their estimates of the capital costs of new generation plant, which includes projects up to 2006, indicates that the increasing global price of steel is driving generation capital costs higher. The evidence suggests that the capital costs of new generation plant have continued to increase since the ACIL Tasman report and that, on the basis of existing trends, input costs will be higher in 2008/09 than in 2007/08.

A recent report by the Renewable Energy Policy Network for the 21st Century⁸ highlighted similar cost concerns:

...the industry continues to experience supply-chain difficulties due to booming demand, putting unprecedented pressure on component manufacturers. Two consequences were an increase in turbine lead-times (some reaching up to two years) and higher turbine prices. Higher world commodity prices for steel, copper, and carbon fiber contributed to price increases.

Figure 8: Metal Price Indices⁹



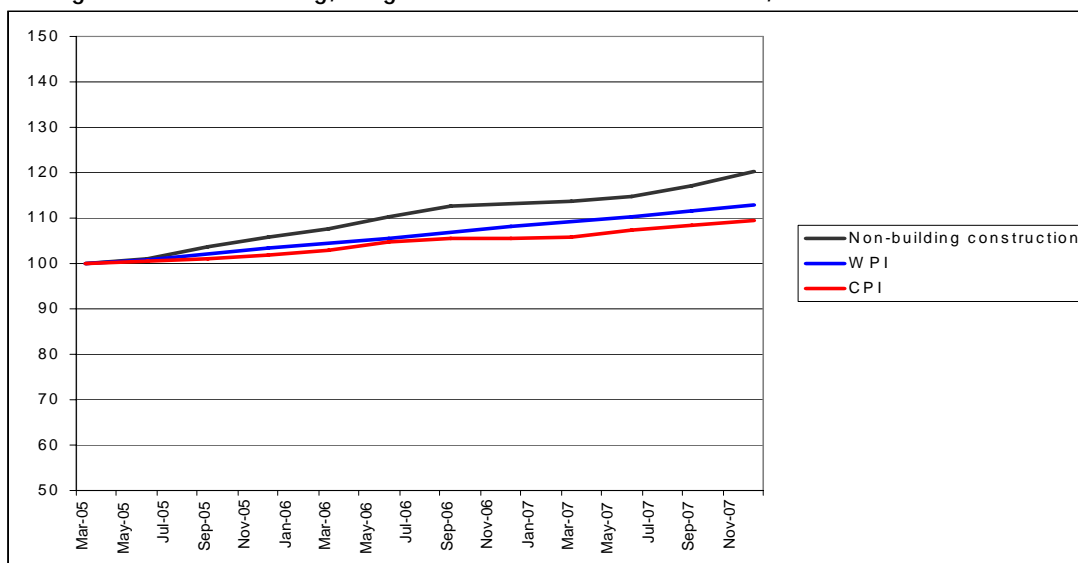
⁸ REN21. (2008). "Renewables 2007 Global Status Report" (Paris: REN21 Secretariat and Washington, DC:Worldwatch Institute).

⁹ Indices are based on 1) global prices for basic commodity construction steels; 2) US and Asian export prices for grade 304 (8%Ni - 18%Cr) stainless flat products; 3) Monthly average LME settlement price for copper cathode; 4) Monthly average LME settlement price for primary aluminium.

Figure 8 sets out price indices for metals that are inputs into the construction of generation plant, including steel, stainless steel, copper and aluminium. Since the beginning of 2005, the prices of these metals have trended strongly upwards. In particular, the price of steel has continued to increase since the beginning of 2005, and has now increased over 50 per cent since the beginning of 2005.

More general indices of input costs into the construction of generation plant have also increased since 2005. Price indices for non-building construction in Queensland and labour prices in Queensland have increased at a greater rate since the beginning of 2005 than has the consumer price index (see figure 9).

Figure 9: Non-Building, Wage and Consumer Price Indices, Queensland¹⁰



The evidence pointing to increasing capital costs for new generation plant is also supported by more recent examinations of the capital cost and LRM of new generation plant in Australia. For instance, a recent presentation by Sinclair Knight Merz (SKM) suggests that the capital cost of new generation plant in Australia has escalated rapidly in the last few years, with the capex of black and brown coal technologies having increased by 39 per cent (real) since 2004 and the capex of CCGT technology having increased by 25 per cent (real) since 2004 (see figure 3). SKM also reports that this rapid escalation in capital costs has translated into an upward trend in LRM since 2006.

Fuel costs

CRA's fuel cost assumptions are based on the ACIL Report. CRA's report suggests that the fuel cost inputs assumed remain constant from 2007/08 to 2008/09. In any case, the fuel cost assumptions set out in the ACIL Report do not include any material increase in real fuel costs from 2007/08 to 2008/09.

Origin believes there is good reason to expect that gas prices will be higher in 2008/09 than in 2007/08.

This is particularly the case in NSW, where a tight supply-demand balance is leading to higher gas costs over the winter period than in previous years. This is apparent from the recent tender for capacity on the EGP, with an average price of \$7.35/GJ

¹⁰ 1) Quarterly index for non-building construction in Queensland. This index includes, among other things, units mainly engaged in the construction, repair or maintenance of electricity transmission towers or lines and power station buildings. 2) Quarterly index for total hourly rates of pay excluding bonuses in Queensland.

for the 35 TJ/d on offer. Gas price increases have resulted in both AGL and ActewAGL applying to IPART¹¹ for a 7.3 per cent increase in retail tariffs to account for material increases in their costs of securing gas.

Furthermore, announcements from both Santos and Origin in presentations on their financial results have indicated significant increases in gas prices in Eastern Australia. It is naïve to think that Queensland can be isolated from these changes, noting in particular, that the CEMOS model appears to solve for generation optimisation in an integrated Eastern state market.

Water costs

In response to the current water supply emergency in South East Queensland, the Government is spending \$15 billion on water infrastructure to secure the essential water supply needs of the region. A key component of this capital works programme is the \$9 billion Western Corridor Recycled Water Pipeline, which commenced supplying 13 megalitres of water per day to Swanbank Power Station in August 2007 and is due to provide up to 66 megalitres of water to both Swanbank and Tarong Power Stations from June 2008.

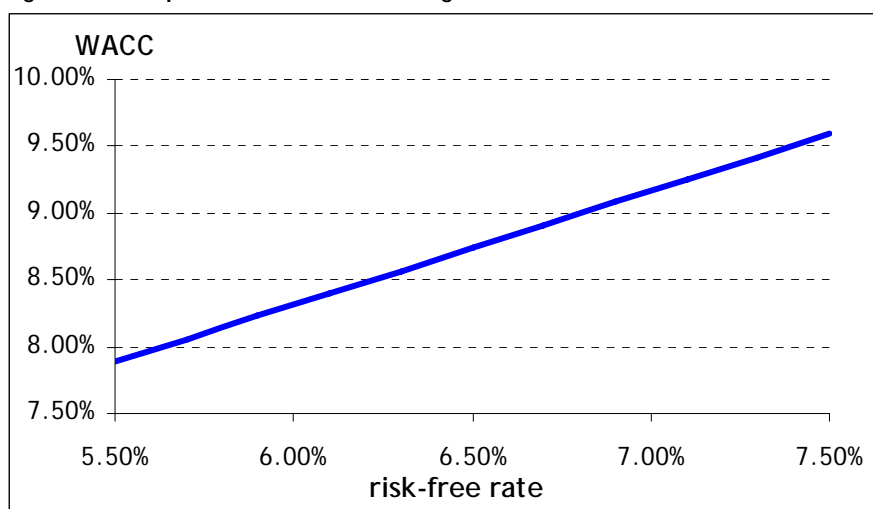
These power stations will be required to pay for this alternative water supply and it will substantially increase the LRMC of these plants, with likely flow-on impacts on the cost of purchasing energy. Origin can confirm that Queensland generators are factoring in the increased cost of water into their future expectations.

Cost of Capital

CRA's Weighted Average Cost of Capital (WACC) assumptions are based on the ACIL Report. In calculating the appropriate WACC, ACIL acknowledges recent increases in the risk free rate and revises its WACC calculation up when compared with the previous report in 2005. ACIL reports a risk free rate of 5.70%.

Origin would highlight the recent increases in factors placing upward pressure on the WACC. For example, interest rate movements during 2007 show the 40-day moving average of the 10-year Commonwealth Government bond yield has increased from 5.87% (early 2007) to 6.17% (late 2007) and high probability of further increases for 2008-09. Figure 10 highlights the sensitivity of the WACC to changes in the risk free rate.

Figure 10: Impact on WACC of changes to Risk Free Rate



¹¹ AGL/ActewAGL (2008), IPART submissions

In addition, Origin has access to a number of proprietary economic market services which all support the fact that both short and long term funding costs have increased between 2007 and 2008.

For instance, the swap yield curve has moved significantly upward between June 2007 and February 2008 as measured using independent market data from the Bloomberg market data system¹². Similarly, the 5-year swap rate has increased substantially during the 2007/08 financial year as has the cost of short term funding, as measured by the 3 month bill rate.

Other market data confirms that the premium (or "Credit Spread") that lenders charge borrowers over the base interest rate has increased significantly since the 5 per cent margin was established for 2007/08. It has been suggested to Origin that the Corporate Credit Spread has typically increased from around 50 - 100 points (a level that has remained relatively stable since 1996) to over 250 points by January 2008¹³.

The question of changes in the cost of funds has been well canvassed in recent regulatory decisions such as the Australian Energy Regulator (AER) in the Final Decision on SP AusNet Transmission determination (January 2008).¹⁴ In determining SP AusNet's revenue requirements for the five years commencing 2008/09, the AER has allowed a debt risk premium (based on BBB+ rating) of 2.11% (or 211 points), for a total nominal vanilla WACC of 9.76%¹⁵. The AER also predicted higher short term inflation for 2008/09.

Events in subsequent months since the Final Determination analyses provide further evidence of these changes, and CRA's modelling should be updated with the latest information on the bond yield and credit spread as part of the Final Determination.

In Brief

There is considerable evidence available to the QCA and CRA that costs for generation construction, input fuel costs and costs of capital have increased, and in many cases, increased substantially and rapidly in the last few years. The expectation is that these costs increases, well above CPI, will continue for the foreseeable future.

In this environment, Origin believes it is not appropriate for CRA to rely on the 2007 ACIL report only and ignore later reliable objective evidence of cost trends in the calculation of the LRMC. Moreover, this is compounded by CRA rejecting again, the changes in ACIL's own evaluation of LRMC and ACIL's stated claim that LRMC costs are increasing. The fact that there has been a change in methodology between the 2005 and 2007 studies, while hindering direct quantification of change in costs, should not detract from the underlying principle that these costs have substantially changed - particularly in the face of much other evidence to this fact.

3.3 Energy Purchasing Cost

Origin supports a methodology and short term agreement for calculating energy purchasing cost that recognises short term market risks and volatility. However, Origin has concerns that recent and real market price pressures are not being recognised fully within this construct for 2008/09 specifically.

¹² As this is proprietary information, Origin has not released the details in a public document, but is able to discuss this on a confidential basis.

¹³ Based on Single A credit rate. Detailed supporting data is available on a confidential basis only.

¹⁴ Op cit, AER Final Decision, 2008 op cit.

¹⁵ Ibid, page 106. The AER decision was based on recommendations by Bis-Shrapnel on behalf of SPAusNet, but supported by independent advice from two separate consultants, Econtech and PB.

To the extent that the BRCI focuses on year on year movements it is more important that these short term fluctuations are appropriately recognised (albeit smoothed to some extent consistent with a matching short term hedging strategy) If, however, these costs and retail risks are not being fully appreciated for the period in question, then Origin considers that it is appropriate to consider a different time horizon for the BRCI so that it better aligns with the methodology.

Similarly to the issues raised in regard to the LRMC modelling, Origin cannot comment on the exact modelling techniques that have been applied by CRA as there is insufficient detail within the CRA report.

However, on the information available, it appears the purchase costs remain diluted to the extent of being smoothed over the two year period and having insufficient premiums applied to cover off retailer risks and hedging to extreme events.

With regard to the assumptions in the CRA's report, Origin raises the following concerns to be considered in the QCA's Final Decision:

- as CRA notes, there are significant limitations with using D-cypha data as prices often not available for any significant volumes. CRA should note that ESCOSA allowed an additional \$3/MW.h within the South Australian tariff price path due to similar limitations with AFMA data. Origin would highlight especially, the lack of market liquidity in the past 12 months.

"...the issue of reliability of AFMA prices in South Australia over the contracting period. Over this period, the level of contributions to AFMA was very low (and still remains low), meaning that the reliability of AFMA prices, while being considered very good in Victoria and NSW, was questionable. This has been generally recognised in the market..."

...The basis of the \$3/MWh premium used was the consistency with evidence that there had been a softening of contract premiums over the past year, and also the consistency with the level of price premiums that have been observed in the market."¹⁶;

- only a single track of load shape is utilised with no weather sensitivity for extreme events as per a prudent retailer's board and risk policies. This may be a concern in the calculation of the BRCI given increasing volatility and peakiness;
- there is no recognition of transmission failures in Queensland. Transmission failures have caused VOLL spikes at spurious times and often to a prudent retailer's unexpected cost. These VOLL incidents are often not correlated with demand but with weather;
- Table 7 of the CRA report highlights the average contract and spot prices used for each quarter. Origin notes that CRA has used load weighted premiums of almost 20 per cent in the first quarter of the year. In Origin's experience in the market, applying risk premiums to Net System Load Profile (NSLP) can be 30-50 per cent over the flat swap prices ;
- there is a lack of recognition of hedge mismatch premiums in CRA's modelling;

"Hedge mismatch risk refers to the degree to which purchase costs can change depending on variations in customer load and spot prices. If the load profile were perfectly matched with contracts that increased or decreased with load changes (i.e. so called flexing contracts) then there would be no hedge

¹⁶ Intelligent Energy Systems (2003), *Wholesale Electricity Price Assessment for 2004 - Response to Identified Issues*, A Report to ESCOSA

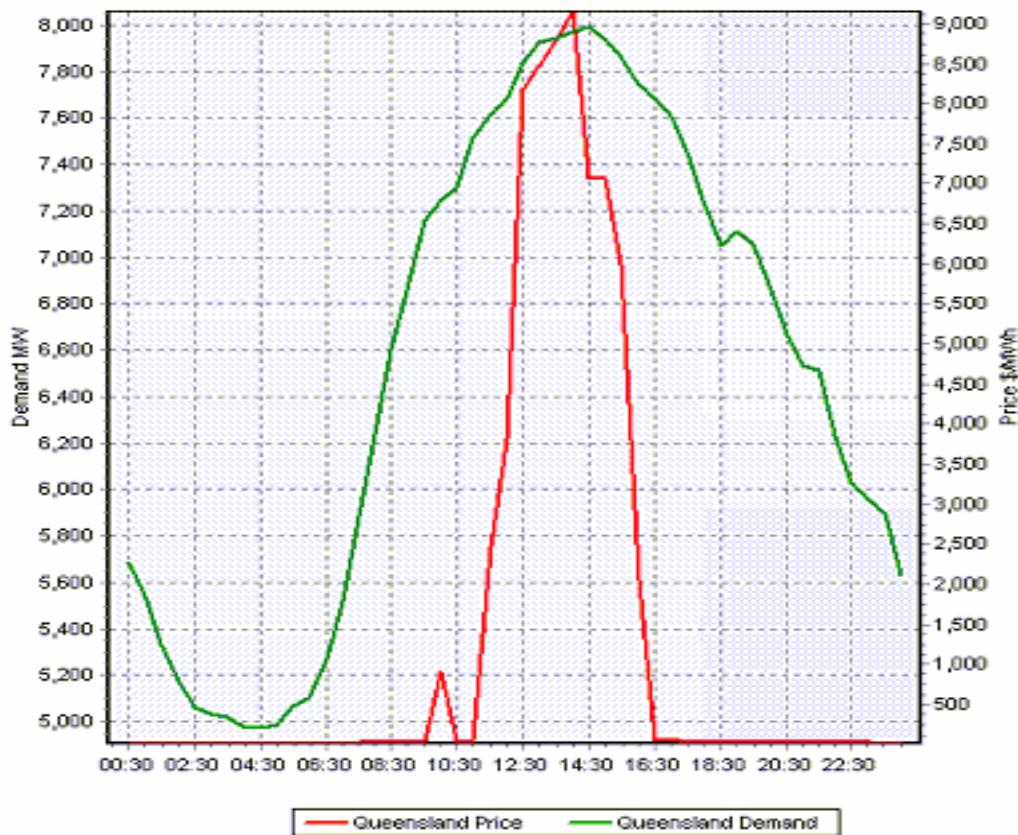
mismatch risk. However, this is never the case, and the actual purchase costs reflect contracts not perfectly matching load"

"The hedge mismatch of 6.5% used in the 2003 price study was derived from the results of a study into mismatch risk undertaken by Charles River Associates for ESCOSA and by studies conducted by IES into mismatch risk."¹⁷

"Since the actual days will be set on a monthly average profile, the actual days will result in under & over contracting. As was the case for 2003, the impact of this will be calculated by notionally settling the whole year against a half hourly spot price profile derived from historic analysis"¹⁸

- Origin expects that CRA will update the pool price shaping used in their modelling in the Final Decision to account for recent market outcomes and volatility. An example is shown in Figure 11;

Figure 11: Pool Price and Queensland Demand, 23 February 2008



- it does not appear that the cost of bank guarantees (typically 10 cents) for providing NEMMCO prudentials have been included in the modelling. These need to be included and should show significant increases in the past 12 months given market credit issues and the first ROLR situation in the NEM; and
- the CRA modelling appears to have excluded any identifiable risk premiums.

"In addition, the analysis will review the impact of random fluctuations in demand such that the total remained the same, but each half hour could fluctuate by up to 15%. The additional cost of such fluctuations will be added to the risk premium.

¹⁷ Intelligent Energy Systems (2003), *Wholesale Electricity Price Assessment for 2004 - Response to Identified Issues*, A Report to ESCOSA

¹⁸ Charles Rivers & Associates (Asia Pacific) Pty Ltd (2003), *Victoria Electricity and Gas Standing Offers and Deemed Contracts*

Other sensitivity analysis will be undertaken by varying the total standing offer & deemed contract load & the spot price. This reviews the risks of retailers losing customers to competitors & the risks associated with spot prices varying from forecast, respectively” 19

“the Tribunal decided to base its calculation of the electricity purchase cost allowance on the ‘normal hydrology’ market-based cost of electricity purchase (rather than the ‘drought’ cost), plus a volatility allowance to address the cost associated with normal system volatility”²⁰

“that a retailer would be able to acquire a substantial share of its contract cover at a theoretical price (LRMC) rather than a market price arguably adds to the expected volatility of the purchase price under its model, in view of the large range of long run marginal cost estimates submitted to the Commission during this price review”²¹

The 2 year purchasing period is a reasonable proxy for prudent retailer behaviour and it should be noted that this methodology engineers a considerably lower outcome than would have been the case under the methodology adopted for 07/08.

The timeframe is consistent with methodologies in other jurisdictions, where FRC is more established, but Origin has concerns that the methodology outlined has some flaws and fails to recognise costs and risks from the previous 12 months and given actual market practicalities.

3.4 Renewable Energy Certificate Costs

Origin believes that the general methodology used for calculating the cost of renewable energy certificates (RECs) is reasonable. However, fundamental changes to the market mean that the formula does not accurately represent costs on this occasion. It is essential that these are updated to reflect recent developments, some of which are summarised in the discussion below.

In October 2007, Kevin Rudd released a policy document titled *“Labour’s 2020 target for a renewable energy future”* which formed a key component of Labour’s election campaign²².

As part of this policy, Labour committed that by 2020 it would:

“increase the Mandatory Renewable Energy Target (MRET) to 45,000 GW.h.

Following its meeting on 20 December 2007, the Council of Australian Governments (COAG) released a communiqué including a work plan to:

“report to COAG by September 2008 with final MRET design and proposals for a streamlined set of complementary policies across jurisdictions.”

Senator Wong reiterated this policy during a speech to the Australian Industry Group Luncheon on 6 February 2008 stating:

“Under a working group established through the Council of Australian Governments, we are working co-operatively with the states and territories to implement our national 20 per cent Renewable Energy Target. The design work will be finalised by September. Legislation will be introduced early next year.”

¹⁹ Charles Rivers & Associates (Asia Pacific) Pty Ltd (2003), *Victoria Electricity and Gas Standing Offers and Deemed Contracts*

²⁰ IPART(2007), *Promoting retail competition and investment in the NSW electricity industry Regulated electricity retail tariffs and charges for small customers 2007 to 2010*

²¹ Allen Consulting Group (2007), *Wholesale Energy Cost Issues Raised in Response to Draft Determination for Electricity Standing Contract Price*

²² http://www.alp.org.au/download/071030_renewable_energy_policy___final.pdf

Based on discussions with the Federal Government, Origin anticipates that the proposed legislation will increase the current MRET target from 2009 onwards with the target ramping up to 45,000 GW.h in 2020.

Based on this information, the Renewable Power Percentage (RPP) should be increased to factor in the anticipated higher target. Origin estimates that the RPP for 2009 will increase to 4.53% as shown in the following table.

Table 3: Origin Estimate of RPP for 2009

	2008	2009
Target (GW.h)	6800	8100
Demand (GW.h)	216,561	220,218
RPP	3.14%	3.68%
Expanded MRET	6,800	9,983*
RPP for Expanded MRET	3.14%	4.53%

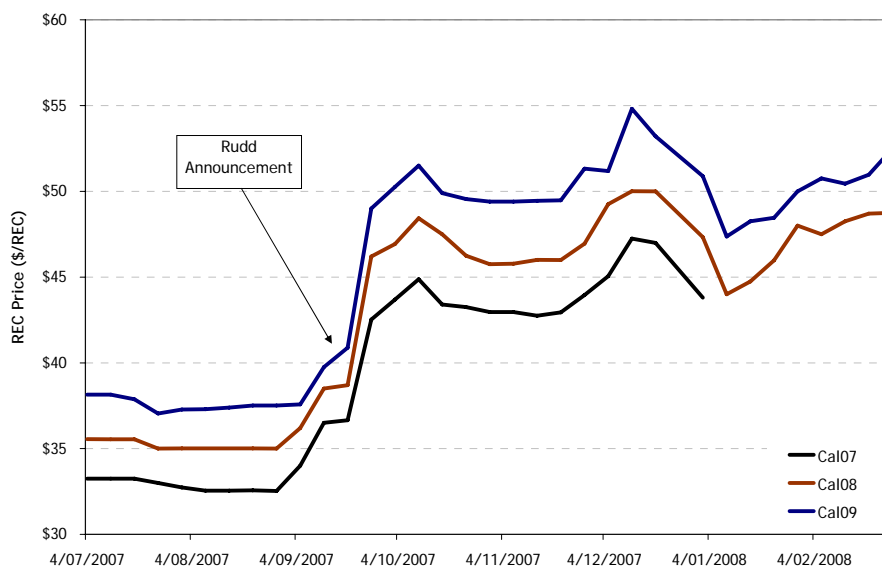
Note: * assumes linear ramp rate from 2009

Origin would also point to the Global Status Report for Renewables in 2007²³ which highlights the cost pressures being placed on the renewable sector:

"...price increases in 2005-2007 have hindered solar PV, wind, and biofuels. Solar PV has not declined from the \$3.00-3.50/watt range due to high demand and silicon feedstock shortages. Wind turbine costs actually rose, from \$1,000-1,100/kW in 2003 to \$1,500/kW or more in 2006, partly due to high prices for steel and fiberglass... could all be viewed as short term, as markets will adjust with increased capacity, but these cost trends still captured industry attention."

Furthermore, the market price for RECs has increased significantly since the announcement of the higher target. Figure 12 highlights changes to REC prices for the 2007, 2008 and 2009 calendar years that have occurred since the announcement.

Figure 12: Change in RECs Market Price (3 October 2007 - 27 February 2008)



²³ REN21. (2008). "Renewables 2007 Global Status Report" (Paris: REN21 Secretariat and Washington, DC: Worldwatch Institute).

The approach used by CRA takes the average of weekly prices from AFMA. The average calculated for 2008-09 includes prices that were quoted prior to the announcement of the higher target and these do not accurately reflect prices under the current regime. Origin proposes that prices quoted prior to the release of Labour's policy (October 2007) are excluded from CRA's calculations due to the fundamental change in the market.

Averaging prices since the announcement and using the adjusted RPP calculated by Origin gives more appropriate charges as shown below in table 4.

In Origin's view there is sufficient data now available on the MRET scheme at least for CRA to take some account of this development in terms of both the mandatory green costs and the impact on LRMC.

Origin therefore requests that CRA updates their assumptions in the Final Decision with a reasonable forecast of the REC prices. Again we highlight that under the BRCI year on year approach, if CRA ignores what will be very real costs for retailers in 2009, these are not likely to be recovered in subsequent years.

Table 4: Estimated REC Prices

	RPP	Price	\$/MW.h
2007	2.70%	\$44.15	\$1.19
2008	3.14%	\$47.24	\$1.48
2009	4.53%	\$50.43	\$2.29

4. Retail Costs and Margin

Origin believes the QCA's use of retail cost and retail margin benchmarks as a basis for calculating the BRCI in their draft decision is satisfactory and is consistent with the 2007-08 process.

Furthermore, Origin supports CRA's method of estimating the 2008-09 retail costs by escalating last year's retail cost to reflect price and wage inflation as a simple, transparent and efficient method.

With regard to customer acquisition costs, Origin supports further examination of these costs as the single retail cost element identified separately in last year's process. CRA's analysis of customer acquisition cost for 2008-09 focuses on the cost incurred by retailers in maintaining customer base and is a significant improvement on last year's methodology that concentrated on the loss of scale impact on retailers. Unfortunately, the final results of CRA's analysis of customer acquisition costs do not provide a complete picture because they are based on customer churn forecasts that are unrealistic and contradict previous behaviour in FRC markets.

Finally, estimation of the BRCI requires an appropriate retail margin to cover the retailer for its risk-weighted investment and the QCA's previous use of a 5 per cent net margin of sales was considered reasonable.

However, Origin proposes that the QCA consider the impact of recent changes in financial markets on shareholder's expected returns. There is clearly a change from 2007-08 to 2008-09, as outlined below and in the previous discussion on costs of capital. Origin believes this in turn requires a change to retail margins.

An increase in allowed in retail margin between 2007/08 and 2008/09 is also supported by the increasing volume and price risks in the energy market, risks that are not necessarily captured in the allowed costs, particularly given the "smoothing" of real wholesale market volatility under the proposed methodology for the 2008/09 BRCI.

4.1 Retail Operating Cost

Origin accepted the use of a retail cost of \$75 per customer for 2006/07 but made it clear in its submissions to the previous BRCI process that this did not constitute Origin supporting this estimate as an adequate representation of retail operating cost. It was purely to expedite the process by using a figure that was a public finding of the Independent Pricing and Regulatory Tribunal (IPART)²⁴ at that time.

Origin is therefore most concerned to see that this retail cost estimate is being quoted in other regulatory decisions²⁵ and that CRA has thoroughly examined this retail cost figure as if it were a cost-reflective benchmark, supported by retailers. Origin would again highlight that it only supports the \$75 retail cost benchmark for the purposes of the BRCI calculation.

Experiences in other jurisdictions have shown Origin that separately estimating retail cost elements is data intensive and a contentious issue given the different structures and activities of various retailers. As the BRCI is derived from a change in retail operating cost rather than the actual total cost, it follows that debate about the absolute value is largely irrelevant in this case; hence retailer acceptance of this figure in the calculation.

²⁴ IPART (2007), *Promoting Retail Competition and Investment in the NSW Electricity Industry - Regulated Electricity Retail Tariffs and Charges for Small Customers 2007 to 2010*

²⁵ ESCOSA (2007), *2007 Review of Retail Electricity Price Path*

However, there is considerable interest in examining the factors that lead to a change in retail operating costs from one year to the next.

Origin does have some concern with the calculation performed by CRA in escalating the 2007-08 retail cost by wage and price inflation to produce the 2008-09 retail cost estimate. Assuming labour is 60 per cent of the retail cost (as stated by CRA) then the CRA methodology applies the forecast wage inflation costs to the 60 per cent labour component and applies general price inflation to all other costs. Origin generally supports this approach and would be comfortable if such a formula could be built into a fixed principle to apply for the next few years.

However, in determining the two forecast inflation rates, CRA has relied on the Treasury forecasts prepared in advance of the 2007 Federal elections and concluded that "*The latest Treasury forecasts show a nominal wage increase of 4.25% and CPI increase of 2.75% for both 2007/08 and 2008/09*".

There is reason to believe that these forecasts understate the expected inflation rates for 2008/09. For instance, the Australian Energy Regulator in their January 2008 Final Decision on SP Ausnet's transmission revenue for 2008/09 to 2013/14 used the following forecasts²⁶:

- A general price inflation forecast of 3 per cent for 2008 and 2.88 per cent for 2009 (an average of 2.94 per cent for the financial year 2008/09); and
- A utility industry average labour cost escalator of 2.8 per cent above general inflation.

This represents a labour cost increase of around 5.8 per cent for 2008/09. While the AER decision applied to a Victorian transmission company, there is reason to believe the utility services wage price escalators would be equal to or higher in the Queensland context given the significant growth rates in the industry across Queensland.

Origin therefore requests that the QCA review the assumptions used by CRA in the draft decision before making their Final Decision, particularly given that the relevant data was derived from an October 2007 report and more recent data and forecasts should be available to them.

4.2 Customer Acquisition Costs

Origin supports the QCA position that an efficient retailer is required to incur marketing and other acquisition or retention costs in order to sustain its customer base.

Furthermore, Origin is pleased that in calculating the change in acquisition costs for 2008-09, that CRA has opted to consider actual customer acquisition costs rather than estimating a loss of scale impact on retailers. This is far more suitable methodology as the examination of retailers' costs of acquiring customers produces a more reasonable estimate of the impact of churn on the theoretical retailer attempting to maintain their "*reasonable customer base*"²⁷.

²⁶ Australian Energy Regulator, *Final Decision SP AusNet transmission determination 2008-09 to 2013-14*, January 2008.
<http://www.aer.gov.au/content/item.phtml?itemId=717343&nodeId=685d9eef34df08b1e84bb351079621c8&fn=Final%20decision.pdf>

²⁷ As per, for instance, set out in Attachment B of the Minister's Certificate of Delegation.

Origin notes the CRA methodology:

- utilises the \$30 per annum annualised customer cost produced by IPART²⁸ to calculate customer acquisition costs per acquired customer for 2007-08 and 2008-09;
- produces a forecast of customer churn for 2008-09 based on monthly customer transfers up to December 2007; and
- produces estimates of cost allowance per total number of retail customers for both 2007-08 and 2008-09.

Although not ideal, Origin considers that:

- CRA's use of New South Wales cost estimates produced by IPART;
 - pro-rating of the original customer acquisition cost of \$200 using the IPART reduction from \$35 to \$30 per annum; and
 - the formula for estimating an allowance for customer acquisition costs;
- are reasonable.

However, the forecast of customer churn reducing from the current annualised level of over 21 per cent to only account for 10 per cent in 2008-09 is quite unrealistic. The following table shows the level of churn experienced in other jurisdictions as FRC for gas or electricity were introduced. Clearly, customer churn has continued to increase following the opening of most energy markets with an eventual equilibrium reached for customer transfers of approximately 15-25 per cent²⁹.

Table 5: Mass Market Churn by State and Fuel

State	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 (to Jan08)
Electricity						
Vic	8.6%	13.3%	20.3%	22.4%	27.4%	22.0%
QLD						21.2%
SA	0.8%	8.5%	22.3%	16.1%	24.1%	18.1%
NSW	3.6%	4.5%	5.5%	9.0%	12.6%	9.8%
Gas						
Vic	7.8%	12.8%	16.8%	17.9%	22.2%	21.5%
SA			24.6%	15.3%	18.1%	13.5%
NSW	3.2%	3.7%	5.0%	4.1%	6.1%	6.4%

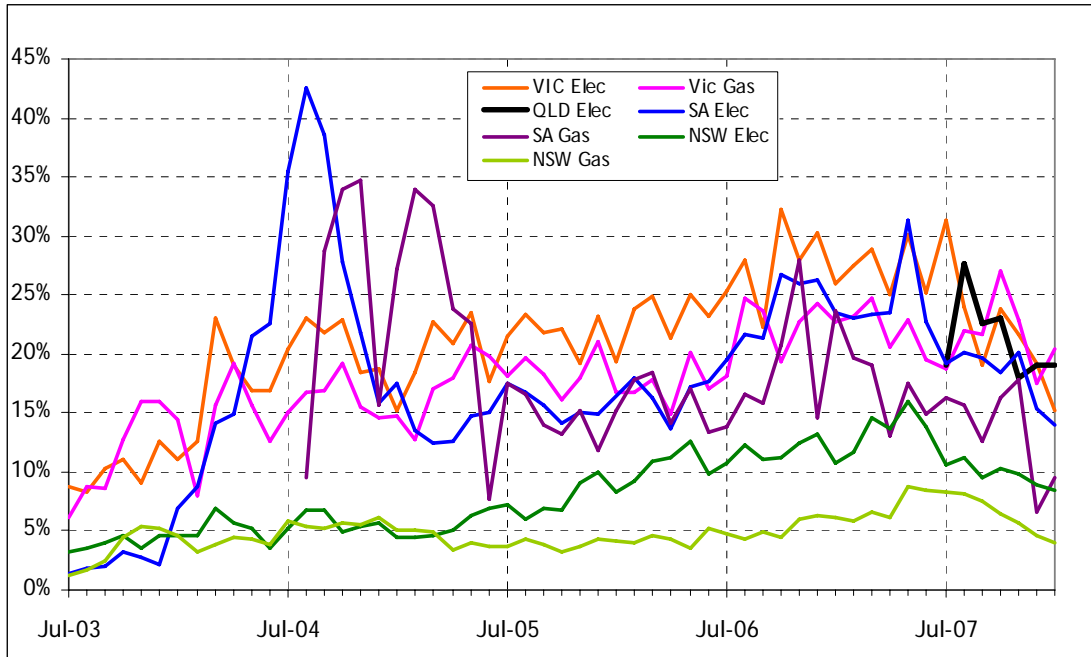
Note: Average of Monthly Churn Annualised for FY

Figure 13 also demonstrates that the monthly churn experienced in the Queensland electricity market is of a level experienced in other states and if the experiences from these jurisdictions are heeded, it will continue at this level.

²⁸ IPART (2007), *Promoting Retail Competition and Investment in the NSW Electricity Industry - Regulated Electricity Retail Tariffs and Charges for Small Customers 2007 to 2010*

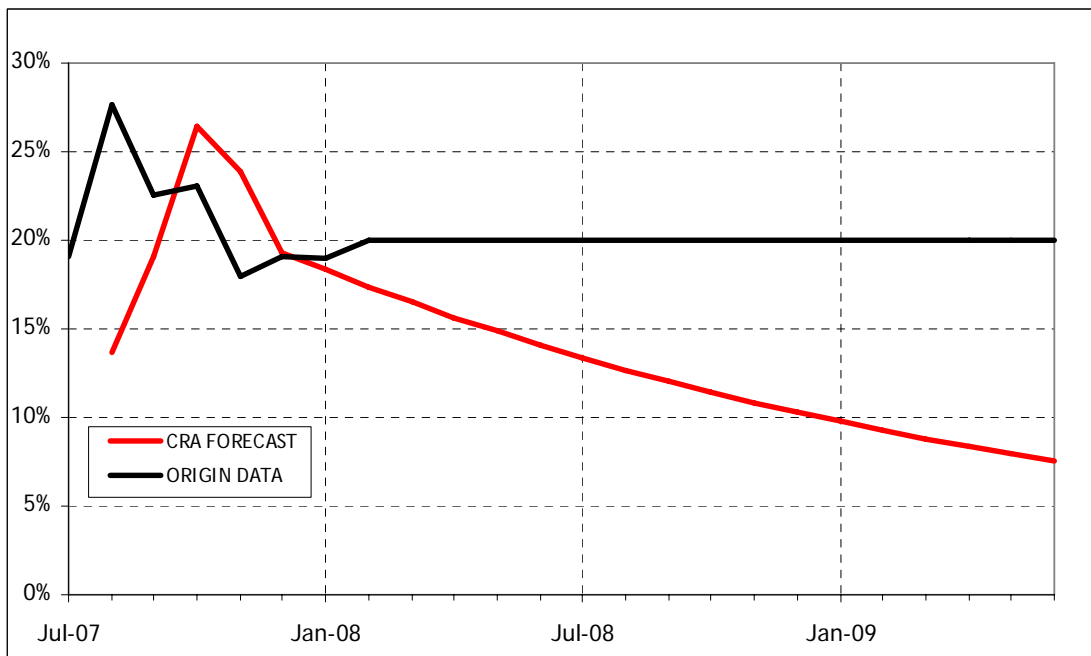
²⁹ The lower NSW churn rates up to July 2007 are generally regarded to reflect the constraints imposed by the regulated pricing regime, together with the intrinsic advantage to incumbent retailers of the ETEF scheme. This has been recognised in the revised pricing process from July 2007, however, this coincided with very significant wholesale price increases that impacted on new entrants not covered by ETEF and which were not captured in the new pricing arrangements for 2007/08.

Figure 13: Mass Market Churn: Completed and Pending



It appears that CRA has predicted a 5 per cent reduction in monthly customer churn based only on the observation that customer transfers from November and December of 2007 were less than the transfers recorded in October 2007. This is obviously a very subjective conclusion, the basis for which is limited to one month of churn data at the end of 2007 and is a conclusion that is not supported by the evidence from other contestable retail markets in Australia.

Figure 14: Comparison of CRA and Origin Forecast



Origin believes that the customer churn will continue to average 15% - 20% per annum³⁰. Figure 14 shows the Origin data and forecast in comparison to CRA expectations with Origin's forecast based on its considerable experience in other Eastern States markets. If churn was, in practice, to drop to the level of 10 per cent as indicated by CRA, it would be a clear indication that the objectives of maintaining retail head room had failed and the decisions of the regulator had directly impacted on the development of the competitive Queensland retail market.

Origin proposes that for the purposes of calculating customer acquisition costs, CRA should, at a minimum, retain customer churn levels for 2008-09 at a level equivalent with 2007-08.

It would not be unreasonable for customer transfers to actually increase in 2008-09 and for the QCA to accept a forecast that shows a reduction in churn to less than an annualised churn of 10 per cent by June 2009 is to ignore all evidence from electricity markets that show the contrary.

³⁰ Origin is aware of the current data difficulties in establishing churn rates between retailers based on NEMMCO data. We understand that this difficulty will be addressed later in the year, and should result in a churn rate remaining at underlying levels of 15% to 20% per annum.

4.3 Retail Margin

The BRCI requires an appropriate retail margin to cover the retailer for its risk-weighted investment.

As CRA states in their report to the QCA:

Retailers need to expect to earn a sufficient net margin to attract the risk capital necessary to provide an energy retailing services. What investors require by way of expected net margin will depend on various risks deemed to be inherent in the business. Over time, failure to meet or exceed these net margin expectations would be consistent with an inability of the business to sustain necessary and appropriate investment and/or remain financially viable.³¹

CRA continues by noting “...the net margin is intended to provide an appropriate return for the capital that is invested in the retail business including working capital and provision for bad debts”³². CRAI then identifies the typical risks facing a retailer as:

- Volume risk: arising from customers’ usage changing unpredictably, and through gains and losses in the FRC environment; and
- Price risks: arising from the volatility of wholesale energy prices.

In the 2007-08 BRCI determination, the QCA settled on a net margin of 5 per cent to apply for both 2006/07 and 2007/08. As the net margin percentage remained fixed between the two years it had no impact on the overall BRCI.

Origin at the time “accepted” the 5 per cent return on sales as it applied to the BRCI, but not because Origin accepted this as the appropriate margin for a retailer in Queensland in any absolute sense.

Origin’s acceptance of this figure - in the Queensland context - was only because the BRCI outcome is driven by the change in the retail margin from one year to the next, not the absolute percentage value of the margin³³. There did not seem any particular reason at that time to posit a change in retail margin requirement between the two years 2006/07 and 2007/08 given the additional FRC related risks appeared to be captured in the adjustment of the retail operating costs. Of course, had the extent of the wholesale market volatility been forecast at the time (early 2007), Origin may not have been so accepting of that outcome.

In the draft decision, the QCA, following the recommendation of CRA, has proposed to apply the same approach of applying a constant 5 per cent return on sales margin for both 2007/08 and 2008/09.

Origin believes the assumption of a constant margin no longer applies and there has been a change in the retail margin of a retailer investing in the Queensland market between 2007/08 and 2008/09

There are a number of specific reasons for Origin’s view on this matter, but these can be broadly categorised into two areas, namely (1) the increase in the volume and price related risks between the two years; and (2) the increase in costs of funds to retailers between the two periods due to the change in the general economy from a relatively benign capital investment environment to a very challenging one. These two issues are discussed further below.

³¹ CRA (2007): *Calculation of the Benchmark Retail Cost Index for 2007/08 and 2008-09*.

³² Ibid, CRA (2007).

³³ Origin’s position here parallels our comments on the retail operating costs.

(1) Increase in volume and price risk.

The benchmark margin assumed that the increased risks surrounding energy purchasing and customer acquisition were fully taken into account in other elements of the BRCI. The retail margin for 2008-09 may therefore need to be substantially reviewed to more accurately reflect the change in the risks facing the retailers.

Moreover, while Origin has no doubt that there has been a fundamental change in risk perceptions, we also highlight that the extent to which this is needed to be captured in the retailer return depends in part on the QCA's treatment of energy purchasing costs and retail churn in the relevant cost components themselves. If risks are captured in the cost calculations then they do not need to be directly counted in the net margin.

The corollary of this, however, is that where risks are not adequately captured in the individual cost components, then a higher margin must be considered. This has been noted by CRA in their recommendations to the QCA:

...it is important to ensure that costs of risks are not missed or double counted. In particular, the approach to determining the appropriate energy costs must be consistent with the net margin calculation, in regard to where compensation for risk lies³⁴.

It is Origin's view that there are costs associated with a retailer managing the significant changes in market risks (both energy costs and retail costs) and that these additional costs have not been adequately incorporated into the costs assessment by CRA. Therefore, to the extent that any of these costs are not adjusted in the Final Decision to more adequately reflect new risk costs, then there should be an adjustment to the allowed retail margin in 2008/09 to compensate investors.

Origin's views on these additional risks and costs are outlined below. To some extent, these arguments repeat the comments placed in previous sections of this Submission. This is because, if these risks are not captured adequately in the cost components then they need to be incorporated into the margin assessment. Therefore we repeat a number of the arguments here for the purpose of completeness.

Volume risk

Volume risk arises from errors in the forecast load shape and forecast customer volumes.

The calculation of the LRMC in the BRCI, as set out in the relevant Regulation, takes a very unusual and theoretically questionable approach to assessing the change in LRMC. As a result, although the QCA is instructed to adopt a theoretical approach to calculating the LRMC that is "*generally recognised and understood in economic theory*" (which CRA have attempted to do), the Regulations impose a constraint on the calculation of the change in LRMC that would not be recognised or understood in economic theory.

In particular, the methodology set out in the Regulation means that the change in LRMC from one year to another is considerably influenced by the change in NEM demand from one year to the next, and outcome that is quite contrary to normal concepts of a LRMC model. Any standard LRMC methodology would either assess

³⁴ QCA, *ibid*, page 69.

the load profile based on multi-year averaging, probabilistic simulation and/or underlying trend analysis, with the specific intent of smoothing out annual fluctuations and focussing on underlying volume and profile (shape) trends.

The approach in the Regulation therefore, by focusing on year on year fluctuations, incorporates a significant additional volume/profile risk not observed in other jurisdictional approaches. This is reflected in the BRCI based calculation showing a decline in LRMC driven largely by the claimed year on year movement in the profile to a “flatter” profile³⁵.

Origin highlights that CRA state that the 2006 “base” demand used in the LRMC calculations did not represent an “abnormal” year, that demand growth projections represent the 50% probability of exceedance, and that “*no extreme peaks, such as the 10% POE peaks, or water shortages have been modelled*”. A LRMC calculation that excludes modelling of these extremes as part of its calculation is likely to increase the chance that the resulting LRMC calculation does not represent the real future costs of generation to meet future demand possibilities. Again, a volume forecast error is introduced into the analysis that needs to be taken into account in assessing the retail margin.

While it is not entirely clear from the draft decision and the CRA Report, it appears that the forecast load for the energy purchase cost calculations has been based on the 50% POE load profile derived from the SOO guidelines from NEMMCO for 2007/08 and 2008/09. However, these forecasts estimates have been overwritten with actual load data where that is available (up to 23 January 2008). To the extent that 2007 data happens to be “flatter” than 2006 (against the average trend in profile), this overwriting of normalised forecast data with actual load data may also lead to the similar increase in volume risk embedded in the 2008/09 costs as noted for the LRMC calculation. Origin would ask the QCA to investigate this and, if so, address this second leg of the volume risk with the allowed retail margin for 2008/09.

The very conservative customer churn rates proposed by CRA and accepted by the QCA in the Draft Determination despite evidence from other markets, simply add further to the volume risk imposed on the relevant retailer.

Price Risk

Price risk arises from the volatility of wholesale energy prices. It is linked to volume risk in that a volume forecast that underestimates load for a given year, particularly peak load, will increase the chance that a retailer will not be adequately hedged and therefore exposed directly to the spot market. Spot price volatility also flows through to both swap and cap contract prices as reflected in the rapid rise in contract and cap prices during the middle of 2007.

The difficulties with the CRA approach to contract pricing have been discussed previously. With respect to assessing the retail margin, however, the two key interrelated questions are (i) whether the cost of volatility is adequately captured by the BRCI calculations and (ii) whether investors are adequately rewarded given the changed perceptions of risk in the energy market as a result of wholesale price volatility.

In Origin’s view, the answer to the first question is no, and indeed, CRA themselves note that their model CEMOS has been calibrated by averaging spot market prices to reduce the impact of observed high prices. More particularly, the calibrated

³⁵ Origin has previously noted its views that the relevant volume/profile data for 2006 and 2007 as used in the current BRCI calculation is not consistent with our expectations.

CEMOS model appears to fall short of being able to predict extreme price events above \$2,000 MW.h up to VoLL of \$10,000MWh.³⁶

In turn, it is reasonable to argue that in 2008/09, any investors observing price exposure through shortfalls in hedging strategy matched to uncapped high price events, will demand a higher rate of return in the future than they required under more stable conditions that were forecast for 2007/08 (that fact that this did not eventuate in practice will only feed into expectations for greater risk/reward requirement in later years).

(2) Cost of Funds Risk.

The previous discussion focussed on the changing level of perceived risk (volume and price) and the impact this will have on expected returns. There is a second factor, the changing cost of funds for a retailer given a specified level of risk that also needs to be taken into account in the BRCI margin calculation.

The impact of recent increases in costs of funds has (as discussed previously) is also of importance in retail margin calculations.

The two significant events emerging over the 2007/08 period that will impact on retailers' financing costs for 2008/09 are:

- the increase in interest rates in Australia reflecting a general increase in inflation in the Australian economy; and
- the "sub-prime" crisis in America which has significantly reduced liquidity and increased the "margin" at which lenders will lend funds to borrowers

Growth in the real inflation rate and subsequently, in interest rates is well known and the forecasts for 2008/09 see a continuation of these changes. Similarly, the recent liquidity issues are more than apparent in the economy in general as highlighted earlier in this submission. The theoretical retailer will have to compete for funds in this difficult market.

4.3.1 Margin Summary

Origin has identified significant changes in the retail risks and in the cost of capital. These changes are central to the consideration of the retail margin for 2008/09, and to the assessment of changes in margin requirements between 2007/08 and 2008/09. If these changes are not recognised appropriately, the BRCI will fail to meet the criteria of providing an appropriate return for the capital that is invested in the retail business including working capital and provision for bad debts.

³⁶ While few details are available on this, Figure 8 on page 92 appears to suggest that CEMOS model does not predict prices in the NEM above \$2,000 MW.h. As noted previously, however, it is these very same high prices that raise the risk perception of investors.