origin

Supplementary Submission to the Queensland Competition Authority on the Review of Electricity Pricing and Tariff Structures

31 July 2009

Contents

Executive Summary

On the 26 June 2009, the Queensland Premier and Treasurer directed the Queensland Competition Authority (QCA) to review electricity pricing in Queensland that included consideration by the QCA of the opportunity to move towards more cost reflective and efficient pricing and to implement a 3 year price path.

As part of Stage 1 of the consultation, the QCA released its *Request for Comments Paper: Review of Electricity Pricing and Tariff Structures* (QCA Paper) on the 26 June 2009 inviting stakeholders to comment on the appropriateness of the BRCI process, the state of current retail tariffs and to propose alternative pricing methodologies.

Origin Energy (Origin) much appreciated the initiatives of the Queensland Government in this important area and we provided a detailed submission to the QCA on the 17 July in accordance with the requirements. While highlighting some of the issues experienced with the current framework, Origin also put forward a constructive alternative for consideration by the QCA and the Government.

The alternative proposal put forward in our original submission consisted of a transition year in 2010-11 followed by a 3 year price from 2011-12 to 2013-14. It was put forward by Origin after a great deal of consideration of the complexities facing the QCA and the industry over this period.

In particular, Origin highlighted that the next three to four years will see the most significant changes in the energy industry since the National Energy Market (NEM) was established. The energy industry in Queensland in particular faces a number of discrete but significant challenges. These include:

- The extent to which retail prices require restructuring to achieve cost-reflective levels;

- The implementation of a new 5 year determination period for electricity network prices commencing in July 2010 (which in turn impact directly on the level and structure of retail prices); and

- The progressive introduction of a carbon trading scheme from July 2011.

These challenges, significant as they are, are vastly complicated by the very short timetable the QCA faces in developing a new pricing framework and the fact that the decisions will have to be made when key policy and pricing data is missing.

This supplementary submission provides further information on the risks facing the industry if the QCA framework and pricing decisions are made in this environment of uncertainty and information gaps. Much of Origin's thinking on this matter has evolved as a result of concerns identified in the course of the recent investigations by the Australian Energy Market Company (AEMC) of the impact on energy market frameworks of the Carbon Pollution Reduction Scheme (CPRS) and the expanded Renewable Energy Target (eRET) scheme. This process has also highlighted the degree to which both the industry and the many expert consultants differ in their conclusions about the impact of the CPRS on retail pricing. The range of forecast outcomes far exceeds the margins available to retailers.

Finally, we have set out in this supplementary submission many of the factors that the QCA will need to take into account if they do proceed to establish a 3 year framework, and provide a series of recommendations regarding the minimum requirements of such a framework.

1. Background

On the 26 June 2009, the Queensland Premier and Treasurer directed the Queensland Competition Authority (QCA) to review electricity pricing in Queensland and more specifically, to review:

- whether electricity tariffs in Queensland are costs reflective, providing appropriate price signals and facilitating retail competition;
- the current benchmark retail cost index (BRCI) methodology and whether alternative methodologies would more effectively reflect the changes in costs of supplying electricity to Queensland consumers; and
- alternative pricing and tariff structures to assist in management of peak demand.

As part of Stage 1 of the consultation, the QCA released its *Request for Comments Paper: Review of Electricity Pricing and Tariff Structures* (QCA Paper) on the 26 June 2009 inviting stakeholders to comment on the appropriateness of the BRCI process, the state of current retail tariffs and to propose alternative pricing methodologies.

Origin Energy (Origin) provided a detailed submission to the QCA on the 17 July in accordance with the requirements. In that submission, Origin responded to the specific issues and questions raised in this document. While highlighting some of the issues experienced with the current framework, Origin also put forward a constructive alternative that:

- addressed the issues of moving retail tariffs to cost reflective levels;
- considered ways that the network tariffs may reflected in retail prices;
- supported a move towards a 3-year pricing arrangement based on cost reflective principles; but
- argued strongly that 2010-11 should be treated as a transition year, where the emphasis was on commencing the process of tariff reform and adjustment to network prices

Origin's position of a transition year for 2010-11 followed by a 3-year price from 2011-12 to 2013-14 was put forward after a great deal of consideration of the complexities facing the QCA and the industry. Our concern is that establishing a pricing framework in Queensland for a 3 year price path commencing in 2010-11 that simultaneously addresses all the issues of tariff reform, network pass-through and the introduction of a national carbon trading scheme risks embedding problems in the future while failing to provide the certainty that is the main objective of a 3 year price path.

In recommending this alternative approach, Origin was also most conscious of the:

- Many reports by the AEMC, Productivity Commission and expert consultants that have highlighted the issues associated with retail price regulation in a period of transition to a carbon constrained economy; and

- Commitments made by the Energy Ministers of each state to the principle of full pass-through of the CPRS costs, a commitment that is now incorporated into the Australian Energy Market Agreement (AEMA).

Given this, decisions made by retail pricing regulators that cover the period through to the implementation of a carbon trading scheme are ones of great importance and place a heavy responsibility on all parties to undertake a detailed and transparent examination of the issues.

This complexity is exacerbated in Queensland by the time available to the QCA to put forward a framework that adequately addresses the complexities of tariff reform and network cost pass through as well as carbon pricing. In our view, this timeframe is simply too short to come to a robust view that brings to account the views of industry and consumers and gains wide-spread acceptance.

More importantly, the timing of the Review is such that there is minimal data available to assist the QCA in making these decisions about retail pricing frameworks for a period that extends out to 2012-13. That is, the Review imposes the following timetable on the QCA:

- Stage 1: The QCA prepares a report to Government on alternate electricity pricing methodologies and existing tariff structures by 31 August 2009;
- Stage 2: The QCA prepares a report on alternative tariff structures by 30 November 2009;
- The QCA makes a determination with respect to 2010-11 notified prices (and potentially beyond) by May 2010.

Origin's concern with this timetable (given the current circumstances in the industry) is such that we have recommended an approach that in practice extends retail price regulation in Queensland for another 4 years, an outcome that is otherwise very much against Origin's view that price deregulation should be introduced as soon as the retail market is competitive as measured by the AEMC in their jurisdictional competition reviews.

Having stated our preference in our submission for a "1 year, 3 year approach", our previous submission sought to largely address the issues relevant to a single year determination.

We argued that this single year determination should focus on tariff reform and network pass through (noting that a new network pricing determination will apply from 2010-11 under the new AER determination). As a result, we recommended a continuation, for <u>one year only</u>, of the existing BRCI approach to wholesale energy costs and retail costs. The recent publication by Energex and Ergon of their proposed network price increases (CPI+25% and CPI+27% respectively[1]) highlight just how difficult the task of adjusting to the new network prices will be.

Origin is now providing a supplementary submission that addresses the particular issues of establishing energy costs for a 3-year price path which encompasses the transitional year 2011-12 and the full CPRS implementation in 2012-13 and beyond.

[1] These figures will be subject to review by the AER. While they are not yet approved they are indicative of the pressure placed on network costs by the need to reinforce the network system particularly in the face of growing peak demand in Queensland.

2. Objectives & Effectiveness of Retail Price Paths

As highlighted in the AEMA, and reiterated by the AEMC[2], the desired outcome for any retail pricing framework is to promote and support healthy competitive retail markets that deliver efficient prices and services to energy customers. For competition to be effective retailers must be able to charge cost reflective prices. This is also a pre-condition of a sustainable energy market and therefore in the long term interests of consumers as required under the National Electricity Law (NEL).

Origin recognises and appreciates that in establishing this review, the Queensland Government has confirmed it's in principle support for this position, including the importance of cost reflective pricing to ensure customers understand the true costs of electricity supply (peak supply in particular). We also acknowledge the commitment made by the Government to ensure that the retail price regulation framework developed in this review will support the full pass through of CPRS.

Origin's submissions to the review process also bear these principles in mind. In particular, in this supplementary submission we consider the review in the context of both the benefits and risks of a 3 year retail price path (whether established in 2011-12 as we recommend, or earlier) to consumers, retailers and policy makers.

The main benefits cited for a 3 year price path are that it provides a mechanism to achieve more stability and predictability in regulated retail prices and, potentially, provides a path to progressive reform of retail tariffs while limiting consumer price shock in any one year. These are all objectives that are considered in the Review and ones that Origin supports as part of the evolution to efficient, competitive markets and ultimately, retail price deregulation.

However, a 3 year price path also introduces significant risks that must be carefully managed by the pricing regulator. The level of these risks will depend on:

- Clearly defined objectives for the price path: It is important to have a clear view of what the "end-game' of the price path is (a sustainable competitive market with cost reflective pricing for instance), and not just see it as a static control mechanism.

- The starting point of the price-path: Where retail prices are significantly different from true cost-reflective prices, a 3 year price path may require substantial adjustments in each year, raising ongoing political risks unless clear commitments are made at the commencement of the process;

- The structure of the price-path: The degree to which the price path explicitly allows for flexibility in response to new events or to errors in the original forecast assumptions that underpinned the price path.

- The key features of the price-path: For instance:

    - o How specific are the inputs and outputs of the price path - some regulators have set very specific allowances such as a retail price of $x/MWh for each of the three years, while others have set a price-path under which a range of acceptable outcomes are allowed before triggering an automatic review (eg retail margins between 6% and 10%);

[2] See AEMC: *Review of Energy Market Frameworks in light of Climate Change Policies, 2nd Interim Report.* 30 June 2009.

- The extent to which rebalancing is allowed in any one year – this can be a particular issue when there are parallel network price adjustments that are not constrained.

- The degree of uncertainty in the energy market environment. Under stable conditions, the assumptions and forecasts that underpin the price path are likely to be more valid across three years, and in turn, the price path itself is likely to meet the stated objectives.

This last issue is amply demonstrated by monitoring events over the last few years in NSW and South Australia (SA). In both jurisdictions, a 3 year price path was put in place that was designed to achieve cost reflective pricing. However, the underlying modelling also assumed a relatively stable pricing environment.

In both instances, the retail price path arrangements failed to adjust appropriately to reflect the severe impact of the drought on wholesale energy costs over the 2007 – 2008 period. As a result, both the NSW and SA electricity retail markets have seen a drop in the level of retail competition as second tier retailers have retreated from the market or substantially reduced their marketing activity. This did not occur in Victoria where the retail environment was more flexible.

While the NSW price path has since been adjusted for 2009-10 period, this adjustment has had no retrospective effect to address the losses incurred by second tier retailers in 2008-09 under the price cap[3]. If the first tier retailers were not protected by the ETEF[4] scheme for supply to their standard customers, they too may have incurred significant erosion of their financial position in 2008-09 under the constraints of the NSW retail price path.

These outcomes occurred in both NSW and SA even though both jurisdictional price paths included a mechanism for review of the price path or pass through of costs under certain circumstances. Origin concludes that the inability of the retail price-path approaches in NSW and SA to respond effectively to the price volatility in the 2008-09 retail pricing year is evidence of the limits and difficulties of a price path approach in a time of environmental challenge and market instability.

How much more so therefore, when the 3 year price path period will cover the implementation of a carbon trading scheme and the parallel expansion of the mandatory Renewable Energy Target (RET) scheme, particularly if it is implemented at the same time as a significant adjustment in network prices (which is likely to occur in 2010-11).

The potential impact of the new network pricing regime in terms of the cost reflectivity of retail price paths has already been stated in this, and in our previous submission. The previous submission also addressed the issue of how these network price changes could be reflected in regulated retail prices.

This supplementary submission is therefore more concerned with the risks arising from implementing a 3 year pricing framework particularly when covering a period where there is significant policy uncertainty and (at this point in time), very limited relevant data.

As stated in the most recent AEMC Market Framework review (June 2009, op cit) and in many other places, these additional risks include:

- Increases in the base cost of energy (electricity and gas), that are hard to forecast: *"Analysis undertaken for the Commission* (the AEMC) *confirmed that the extent to*

[3] The regulated price acts as a cap to any competing market prices, and the majority of market prices are linked directly or indirectly to this.
[4] Which provides (in effect) a two way load following hedge (at no premium) for sales by first tier retailers to customers on standard contracts, thus removing all the impact of wholesale price volatility and price rises on the retailer margin.

which the CPRS drives up electricity wholesale purchase costs will be uncertain and will be hard to forecast." (page 51). These difficulties are influenced by factors such as :

  - the role of international permits and the nature of the international permit markets; and
  - the extent to which generators flow through to wholesale energy purchase costs, given that the wholesale market is settled on the price bid by the marginal generator (estimates vary from 40% to over 120% of carbon intensity).

- Increases in wholesale electricity cost and volatility are likely to be difficult for retailers to manage through financial instruments. The AEMC notes that for carbon costs there are currently "*no natural counterparties*" to the trade and that "*there is limited depth in the electricity contract market post CPRS commencement*." (page 52*)*

Other observers have highlighted the increase in counterparty credit risk both in the wholesale and retail markets.

The AEMC concludes from their analysis of forecast issues and other risks that it will be difficult for pricing regulators to accurately predict the future impact of carbon costs when setting electricity prices. They further note that:

> The magnitude of the likely cost change and the potentially limited capacity for hedging these costs will, in our view, make the issue substantially different to other forms of cost volatility that pricing regulators address in setting tariffs. (page 52).

As we have highlighted previously, in Queensland this difficulty identified by the AEMC is further complicated by the need for significant tariff reform and the commencement of a new network determination period in July 2010, the details of which will not be known for some time.

While the comments above reinforce the difficulties facing regulators setting a price path at any point in time, Origin is very concerned about the particular context and timing of the Queensland pricing arrangements as we have noted previously.

This means that the QCA will be required to recommend retail pricing methodologies in advance of the Final Framework report by the AEMC. More importantly, the QCA is obliged to recommend methodologies in the absence of any information on the final policy settings of the Australian carbon trading arrangements, the international carbon agreements and any market (or auction) data on energy and carbon purchase costs for 2012-13, including whether it is feasible to "strip" carbon out of the wholesale energy costs. As noted by the AEMC, "*At present there does not appear to be a consensus on the "best" way to estimate future energy costs"* (page 58).

The AEMC further comments:

> … a key consideration for undertaking this task in the future will be the depth of information made available to pricing regulators from markets and retailers about expected future energy and carbon costs.

A principal reason (although not the only reason) for Origin's proposal to delay the introduction of a 3 year price path is to ensure that the relevant framework and the notified prices themselves are developed in the context of (a) a much improved understanding of the overall carbon abatement policy framework; and (b) where the wholesale energy markets have provided some indications of the way they are pricing carbon in their contracts and bidding strategies.

Similarly, there will be considerably more information available to the QCA than there is at this time on the extent and form of any hedging instruments and the on the impact of the final CPRS structure and legislation on plans for the future generation mix (including new renewable energy in response to eRET), transmission augmentation and demand response.

3. Assessment of Wholesale Energy Costs

In our initial submission, Origin focussed on considering how wholesale energy costs might be incorporated into the transitional year 2010-11 decision rather than in a 3 year price path. As we were looking only at this one transition year, we suggested in our submission that the BRCI approach be continued for energy (and retail costs) and that the focus of the 2010-11 tariff review process is then on adjusting to network price changes and retail tariff structure reform.

This continues to be our view. However, in this supplementary submission we also raise specific issues about the calculation of wholesale energy costs in the context of a 3 year price path that covers the period of the introduction of the CPRS and continued expansion of eRET obligations.

Our general concerns with the risks that these two developments pose to retail pricing have been noted above. These in turn have direct impacts on decisions made on the retail price framework including the approach to calculating the wholesale energy cost.

A number of the more specific matters relating to assessing wholesale energy costs in the context of a 3 year price path and policy and market uncertainties are discussed below.

<u>50/50 weighting of LRMC and purchase costs.</u>

The current BRCI wholesale energy cost methodology is based on a 50/50 weighting of LRMC and energy purchase costs.

In the limited context of the BRCI – which was focussed on assessing the "<u>changes</u>" in costs, not the absolute value of the energy costs – Origin considered that the 50/50 approach served as an adequate compromise between the regulatory obligations on the QCA, the objectives of the BRCI and the need to achieve relatively stable year on year outcomes.

In marked contrast, however, Origin considers that the 50/50 combination of LRMC and purchase costs is completely inadequate where the pricing framework is based on a 3 year price path that uses a "<u>cost build up</u>" approach (i.e. an approach that relies on the accurate determination of the absolute value of the costs).

In the context of a cost-build up pricing framework, the 50/50 approach has neither an empirical nor a logical justification. To our knowledge, it has never been used as a basis for estimating wholesale energy costs (in terms of $/MWh) in either industry or regulatory models.

<u>The specification and calculation of the LRMC</u>

The LRMC is a theoretical construct reflecting long run equilibrium pricing outcomes in competitive markets. It is generally defined as the cost to meet an increment of load either in a year or over a period of time. The LRMC construct is widely used in its various forms by industry making decisions about investment in generation for instance. However, it is independent of retailers typical pricing and hedging strategies and is therefore a concept that is rarely used directly by retailers in developing prices for their market products. This is particularly true for setting prices for the smaller consumer markets on limited period contracts.

Moreover, it is widely acknowledged that there are many approaches to calculating LRMC; no single approach serving adequately for all purposes. Much therefore depends on the purpose that the LRMC is being used for. At the same time, however, the particular LRMC model chosen will have a very significant impact on the assessed energy costs.

As the QCA's consultant, CRA, highlighted in 2008: *"There are several choices that must be made in developing the conceptual framework to be used in calculating the LRMC"*[5]*.* In addition, there are important choices to be made "*regarding the specifications of the data to be used*"[6].

In calculating the 2008-09 BRCI, for instance, CRA identified the following framework and data specification options for the LRMC:

LRMC: Conceptual Framework Decisions:

- Greenfield versus incremental generation portfolio;
- Allowance for load growth and load factor changes;
- Deterministic versus probabilistic modelling of outcomes;
- Multi regional versus Queensland specific modelling of the generation portfolio.

LRMC Data Specification Decisions:

- Trended changes in electricity generation costs versus year-on-year changes in electricity costs;
- The relevant load shape to be used in the optimisation and its change over time.

These decisions in turn had a marked impact on the outcome of the LRMC model.

This leaves us with three questions regarding the use of a LRMC in the current Review:

- Is the LRMC an appropriate indication of a retailers energy costs for servicing mass market customers over a 3 year period;
- Does the LRMC provide a useful guide in the assessment of a retailer's costs over a 3 year period; and
- If it is relevant, what conceptual framework and data specification is relevant to the LRMC chosen for the purposes of estimating a retailer's energy costs

<u>Is the LRMC an appropriate measure of a retailers energy costs for mass market</u>

In Origin's view the LRMC (*depending on how it is calculated*) can, in a strictly limited set of circumstances, provide some guidance for a regulator tasked with setting retail prices for mass market customers. But <u>only when</u>:

- External environmental/market conditions are relatively stable and predictable;

- It serves as a guideline to the "floor" in any allowance for energy wholesale cost;

- It is acknowledged that it does not capture the load and price forecast risk and volatility that retailers must manage day to day (and which must therefore be added to the overall cost; and

- It is appropriately adapted to reflect the demand profile of the relevant class of customers being considered – a single LRMC calculated on the basis of supplying an aggregate load profile has limited direct relevance to the wholesale purchase costs facing a retailer seeking hedging cover for a small customer load with a very different profile.

Origin would therefore argue very strongly that a LRMC determined in the context of the total Queensland load, while perhaps a useful measure for the next generation build, is not on its own an indication of the costs facing a retailer to mass market customers in Queensland.

[5] CRA International Pty Ltd, *Calculation of the Benchmark Retail Cost Index for 2007-08 and 2008-09",* 26 May 2008. page 13.
[6] Ibid, page 13.

In the context of the current review, however, the most importance consideration with respect to the use of any LRMC for a 3 year period, is the first of the items above. That is, the stability and predictability of the wholesale market conditions.

As Origin has highlighted, the next 3 years will be one of the most challenging period facing the wholesale electricity and gas markets since the commencement of the NEM. Moreover, we are still in a period where the final policy settings are not clear. Equally important from the perspective of the LRMC calculation for a 3 year review, the response of the generation industry to the eRET is still to evolve. However, there is no doubt that the combination of a carbon trading scheme and eRET will drive a step change in the electricity and gas market structures, generation mix, transmission systems, market interconnections and input fuel costs of the future – all vital elements of a LRMC.

The sorts of questions that would have to be addressed - in addition to forecasting the carbon price in the initial scheme years, the availability of free permits, international carbon market developments and all the other dimensions specifically related to the CPRS - include (this list is not exhaustive):

- What new mix of generation will apply over the period of the LRMC calculation;
- Which, if any coal plants will retire or be progressively withdrawn;
- Which types of gas generation will be built, and where;
- What will be the delivered cost of gas for generation, given the demand/supply situation both nationally and internationally
- What will be the availability of the various plants (the expansion of renewable generation such as wind for instance impacts on availability of gas plants);
- What renewable energy sources will be built, and where, in response to eRET and other government policy settings, at what cost;
- What transmission constraints and augmentations will emerge and what will be the resolution of these and the impacts on transmission and generation costs; and
- What will be the demand response to the CPRS and related energy efficiency measures etc both in total load and load shape.

These questions are being addressed in the context of the considerable literature associated with the policy development around the CPRS. What is very clear, however, is that there is no consistency in the various views about how the energy market and the energy market infrastructure will respond to the combined effect of the CPRS and eRET (plus other environment policies)

Given that there is so much uncertainty about the answers to these fundamental questions, it is a moot point as to what should be the specifications of any LRMC, if the LRMC became part of the pricing framework. This too, is almost impossible at this point in time to answer with any degree of confidence, except to say that much of the historical data (such as the data used by CRA in the BRCI LRMC calculations) will be of little relevance to the prediction of future LRMC.

As a result Origin does not believe the LRMC can be used in the proposed retail pricing framework in Queensland if this involves a cost-build up approach[7], at least given the gaps in our knowledge of the future policy settings that now prevail.

Even if there is some resolution of the CPRS policy settings, the use of a LRMC (suitably adapted to reflect the retailer's market and risks) should be limited to providing a "sense check" rather than be used to directly forecast the wholesale energy costs of a retailer in Queensland.

Energy Purchase Costs/Energy Market Cost to Assess a Retailers Wholesale Energy Costs

[7] In contrast to the extension of the BRCI process for another year, as suggested by Origin as a practical solution to the current dilemmas and shortage of policy details.

The other approach, taken in isolation or in conjunction with the LRMC (as in Queensland BRCI), is to forecast the retailer's costs of purchasing energy directly.

Origin believes that the difficulty of developing a reasonable and robust LRMC at this particular point in time are such that the emphasis in setting a 3 year price path should be on the forecast of energy purchase costs.

This is because any LRMC specification covering a 3 year price period is entirely dependent on the final policy settings, yet unknown, that will be put in place for the carbon trading system. In contrast, a model based around forecasting a retailer's energy purchase costs can be established that will have some relevance (albeit restricted) for the next few years. Even here, however, there is a proviso, and that is that any modelling of purchase costs must acknowledge that the 2012-13 market prices (inclusive of carbon) cannot be reasonably forecast at this time. Flexibility must be included in the framework to allow subsequent adjustments for the 2012-13 year[8].

The first and most important matters that need to be determined in setting a framework around energy purchase costs include:

- Clearly define the relevant retailer characteristics that the price path is being calculated for. A most important starting assumption is that the retailer is a "stand-alone" retailer who must negotiate its hedging contracts with independent generators, purchase and/or sell residual load on the spot market and is subject to the discipline of financial markets with respect to the return/risk equation. Other considerations relate to whether the pricing framework and models refer to a first tier retailer or a "new entrant retailer" and if the latter, the size of retailer, and the diversity of its customer base,

- Clearly define the relevant market for whom the price path is being applied (this replicates the way a retailer will act when pricing to its customers in a competitive market as it removes cross subsidies in the costing between market segments – an essential requirement for pricing in a competitive market) – in this case it is the "non-market" customer market;

- Provide an appropriate load trace forecast for that market (only) including annual load, peak load, load shape and load sensitivity. This usually requires simulation over multiple shapes to achieve a forecast "normalised" load shape (pricing over a 3 year period *must* be linked to a normalised load shape, not the shape of any one year). Appropriate statistical parameters (measuring the variability around this load and its sensitivity to different assumptions) are also required to understand risk and forecast error and to test alternative models;

- Determine the relevant hedging strategy and mix of hedging instruments used by a prudent stand-alone retailer, subject to appropriate commercial risk parameters of set by its Board and shareholders; and

- Develop a multi-part price trace forecast that includes both contact price forecasts and spot market forecasts. The correlation between the price and load traces must then be determined to provide the final price forecast matrix. Sensitivity to different price trace forecasts, and load/price correlations, should be calculated and, as appropriate, weighted in the outcome (for instance, using Monte Carlo simulation techniques).

[8] This flexibility will need to allow for the prudent retailer purchasing hedging cover for 2012-13 prior to full knowledge of the scheme parameters. This is a complex topic and should be subject to further consideration than can be given in this submission.

Again there are multiple approaches to determining each one of these fundamental components of a market based energy purchase cost allowance. Further, Origin notes that a deterministic type forecast will be difficult in the current circumstances of market uncertainty and lack of information. As suggested above, under this type of circumstances probabilistic/scenario modelling approaches are preferred as these can provide a clearer picture of the impact of each of the many "assumptions" about the future on the forecast outcomes.

For Queensland, an initial decision will also have to be made about the treatment of the large customers (over 100MWh) that remain on retail non-market tariffs. Will the policy continue with respect to inclusion of these customers in the regulated tariff framework, and if not, what is the impact of removal of these customers (small in number but large in load) from the profile of regulated customers.

Other decisions will need to be about forecast growth in load. Over which period should the data be relevant, and is historical demand data relevant to forecast demand given the multiple state government policies (eg on solar water heating and solar PV) and the Federal Government energy efficiency and carbon policies.

Even more difficulties relate to the selection of hedging strategies and price forecasts for each year of a 3 year period that covers the transition to a fundamentally different market under a carbon trading scheme and progressively expanded eRET scheme.

Extreme volatility in the wholesale market, as predicted by most pundits at the period of transition to a CPRS, will require a more conservative hedging strategy by a prudent retailer, at additional costs. In parallel, however, uncertainty will also drive higher hedging costs as a retailer's counterparties attempt to manage and price in their perceived risks. A retailer seeking a sustainable commercial position must choose prudently between these two competing forces.

The pricing regulator will similarly have to come to a view on the cost/risk trade-off in a period of uncertainty that replicates the strategies that would be employed by a prudent retailer. It should be highlighted, however, that at any one point in time it is possible that the wholesale energy costs arising from these prudent risk management strategies will not necessarily be the lowest cost in the short term. There might be lower costs strategies in the short term adopted by a retailer willing to take on a higher level of risk, but this necessarily means also a higher level of risk of failure. Origin considers that to satisfy the objectives of long term interests of consumers and a reliable supply, the regulator should focus on the costs of a conservative risk management strategy for the retail business.

Similarly, in calculating a wholesale energy purchase costs for the period that covers the transition to CPRS assumptions will need to be made about (inter alia):

- The type and depth of the financial hedging market for carbon costs;
- The price volatility around the monthly carbon permit auction process (from 2012-13);
- The extent to which generators will bid in carbon costs;
- Changing mix of generators; and
- Changes to the dispatch order (and the marginal price) reflecting both greater renewable generation and greater use of gas;

Again, these are issues that necessarily face all pricing regulators seeking to put in place a 3 year pricing path, and all of them will be uncertain and require some level of subjective judgement at the time the price path is established.

However, they are very particular issues at this point in time (2nd half of 2009), because the policy settings for the CPRS are not yet finalised, there is limited liquidity and market data for 2011-12 and almost no liquidity/market data for 2012-13.

Thus, a regulator setting a market based price at this particular point in time will have no guidance from the market. These risks are evidenced by the great range of forecasts provided into the CPRS Framework papers on the potential impact of the CPRS/eRET on the wholesale energy costs. In this instance, the QCA is being called upon to make judgements about forecast market events at a time when the industry itself is demonstrably reluctant to do so.

In clear contrast to the situation facing the QCA in completing the Review process over the next few months, by July 2010, the policy parameters of the CPRS and its operational details are most likely to be finalised (along with all the supplementary efficiency and jurisdictional programs). The market for 2012 contracts will be emerging, both inclusive of carbon in the energy cost and (in all probability) a separate wholesale market in carbon permits will also have emerged, stimulated by the auction process.

Origin has concluded that the development of a new wholesale energy cost framework for a 3 year price path <u>over the next few months</u> is an extremely high risk requirement, particularly when combined with the requirement to reform tariffs and adjust prices to new network charges.

4. If a Price Path Approach Is Adopted

If the QCA recommends and the Minister accepts the imposition of a 3 year cost build up price path from 2010-11 then Origin recommends the following (to be read in addition to the recommendations in our original submission):

- There is a clear definition of the both the relevant retailer and the relevant market for whom the price path is being applied and what are the objectives of the price-path;

- The modelling of wholesale energy costs (and other inputs) is conducted with the utmost transparency and rigour, with all input assumptions, modelling parameters, and connections to the outputs clearly stated with opportunity for review by experts and industry generally as well as consumers.

  A "black box" approach to modelling a 3 year price path is not acceptable when so much is at stake for retailers and consumers alike.

- The forecasts for demand reflect the appropriate policy settings of government and price elasticity;

- The wholesale energy costs be based on a market purchase cost forecast for each of the three years, with any LRMC calculation used only as a guide to illustrate the "floor" (or not used at all preferably, in terms of the next 3-4 years.) of forecast energy prices each year of the price path;

- The structure of the energy cost modelling is carefully aligned with the purpose of the model (whether based on energy purchase costs or LRMC), and in particular, be calculated on the basis of the load characteristics of the population of customers eligible for notified pricing;

- The purchase costs are modelled using a probabilistic/scenario based approach (for forecasts & price) such that a range of outcomes is considered, and the impact of different assumptions are also clearly understood;

- The risk requirements of retailers, including market, credit and counterparty risk, during this period are clearly identified and recognised within the energy costs and retail margin;

- The price path is formally revisited at a minimum on an annual basis, including review of and opportunity to update all key input assumptions including an update of the framework itself if sufficient change occurs;

- The price path can also be revisited within a 12 month periods (including initiated by the retailers) if substantial events occur in the market or in the policy settings that affect the assumptions in the modelling; and

- An independent investigation is undertaken of the separate and intersecting impacts of the CPRS, eRET and Government policy decisions on wholesale prices and price volatility. Similarly, investigation of the impacts of the Schemes on the transmission constraints and augmentations such that the impacts of these on regional prices over the period of the price-path is clearly understood;