Submission to the Independent Pricing and Regulatory Tribunal of New South Wales

Review of regulated retail tariffs and charges for electricity 2010-13 Draft Methodology Paper, August 2009

22 September 2009

Contents

Executive Summary

Origin appreciates the opportunity to respond to the recent Electricity Draft Methodology Paper issued by the Independent Pricing and Regulatory Tribunal (IPART), and to the two accompanying expert reports by Frontier Economics (Frontier) and the Strategic Finance Group (SFG).

The Draft Methodology paper is the second report issued by IPART as part of its review of regulated retail electricity tariffs and charges for 2010-2013. Origin's submission to this Draft Methodology review should be read in the context of our response to the previous Issues Paper, which covered discussions on broader framework issues such as the use of the Weighted Average Price Cap (WAPC) and the effective pass through of network costs in retail prices.

The objectives and regulatory context of the review

The 2010-2013 Retail Pricing Determination (Determination) is arguably one of the most important and most complex that IPART has undertaken in the last 10 years. Origin recognises that IPART has sought to carefully consider the regulatory context and Terms of Reference (ToR) of the 2010 Determination that were set by the Minister for Energy (the Minister) pursuant to section 43EA(1) of the *Electricity Supply Act 1995* (the Act).

However, the Minister's direction to IPART that the review should consider the efficient costs of a Standard Retailer is a significant change from the previous 2007 Determination and creates a number of conceptual difficulties for the 2010 Determination.

There is a real risk, for instance, that in endeavouring to find specific cost metrics for an efficient Standard Retailer from the range of feasible options provided by their consultants, energy and retail costs and the retail margin will be set at levels that will further reduce competitive activities in the NSW electricity market.

Such an outcome would in turn be contrary to the general objectives of Part 3 of the Act, and the specific obligations under Section 43EB of the Act for IPART to have regard to the effects of its decision on competition. It would also undermine the Commonwealth reform processes (as set out for instance in the Australian Energy Market Agreement, or AEMA) and the recently announced NSW reform process.

Origin therefore considers that the impacts on competition and upstream investment form an important and legitimate part of IPART's considerations in the 2010 Determination. Further, we continue to urge IPART to review critically the reasons why retail competition has declined and the number of customers reliant on standard contracts has increased in New South Wales, contrary to the stated intentions of the 2007 (and the 2010) Determination processes.

The changing environment

The Determination will cover a period of unprecedented change in the NSW electricity industry, encompassing such major events as the:

- restructure and privatisation of the NSW electricity generation and retail industry, the broad framework of which has only been recently confirmed;
- progressive phase out of the Electricity Tariff Equalisation Fund (ETEF) over the first year of the Determination, 2010-2011;
- expansion of the Mandatory Renewable Energy Scheme (MRET) and various energy efficiency programs;

- progressive introduction of a Carbon Pollution Reduction Scheme (CPRS), with full carbon trading expected in the last year of the Determination, 2012-13; and

- potential for more extreme weather events and associated load and price volatility.

While the Draft Methodology and expert papers address the MRET and CPRS changes, there is little consideration given to the impact of the other events listed above.

Commitment to stakeholder consultation and greater transparency

There are still many policy and operational uncertainties concerning these external events and their (largely unknown) interactions, which will impose significant risks on retailers and consumers alike. Origin therefore strongly supports IPART's commitment to stakeholder consultation and to increasing the transparency of the decision making process.

Nevertheless, as IPART has acknowledged, the timetable allowed to IPART for undertaking such a major project is quite limited, in turn restricting the options available for stakeholder involvement and creating additional risks for all parties.

Origin also supports IPART's proposal to reduce stakeholder uncertainty by using a modelling framework that builds on the previous 2007 Determination and is, therefore, reasonably mature, robust and well understood by the market.

However, at this point in time, there are many important aspects of the Determination, including the treatment of the CPRS and the proposed periodic review process, that are still not developed. Notwithstanding the timetable constraints, Origin considers that there is scope for more stakeholder consultation on these critical matters prior to the Draft Determination in December 2009.

Regulatory risk

IPART has indicated a number of areas where it proposes to use its own discretion rather than to rely solely on modelled inputs and outputs. These include such key areas as the:

- use of a carbon inclusive or carbon exclusive electricity forward price curve;

- selection of the appropriate contract portfolio position on the "efficient frontier" as generated by the Frontier analysis and the related volatility allowance;

- appropriate WACC(s) to be used in various elements of the modelling framework;

- selection of the retail operating cost allowance within the range of outputs provided by the benchmarking and bottom-up approaches;

- selection of the retail margin percentage given the ranges of outputs provided by the three SFG modelling approaches.

Origin accepts that it is essential for the pricing regulatory approach to have such flexibility in a period of significant change. However, it is important that there is maximum transparency in these regulatory decisions and that the risks involved in providing such a level of regulatory flexibility are recognised and addressed in the overall regulatory package.

Capturing non-systematic risk in the regulatory package

IPART proposes that the retail margin will be assessed on the basis of systematic risk only, with all non-systematic risk captured in other elements of the regulatory package.

As noted above, however, increasing the level of regulatory discretion also increases the risk of regulatory error, particularly given IPART's timetable constraints. In addition, Frontier Economics uses complex gaming and optimisation algorithms that can potentially generate multiple solutions and may be sensitive to relatively small changes in inputs.

Whether all the non-systematic risks are adequately captured in practice will only be revealed when stakeholders have the opportunity to assess the inputs and the outputs of the model, and the relationships between them.

For this reason, Origin cannot be confident at this stage whether IPART has adequately captured all the non-systematic risks across the regulatory package. Nor can we fully comment on the proposed risk allocation principles set out (for example) in Table 2.1 of the IPART Report (pages 8 -10).

Risk mitigation and the periodic review process

IPART suggests that regulatory risk may be addressed in part by the periodic pricing review process. It is difficult to assess this claim in full, given the limited amount of information provided on the proposed regulatory review process. The proposal to broaden the scope of the review is useful, but does not resolve all the inherent modelling risks.

Moreover, the proposed review process is forward looking and does not "correct" for previous errors. Origin would highlight, for instance, that the previous annual review process failed to adjust retail prices adequately in response to market events in 2007-08 and 2008-09. While price adjustments were made for 2009-10, they had no retrospective effect.

In the absence of an ETEF scheme, a Standard Retailer with no flexibility to manage their load exposure would have incurred significant and perhaps unsustainable losses that were unrelated to economic events during the period.

The need for a critical review of the 2007 Determination

Therefore, as in our submission to the Issues Paper, Origin requests that IPART conduct a critical review of the 2007 Determination, including the annual review process, to ensure that the limitations of the 2007 process are addressed in the current approach.

That said, Origin is pleased to see IPART's commitment to greater use of publicly available and verifiable information, to the publication of load and price trace outputs of the pricing models and to the assessment of the modelled outputs against various "real world" measures. These commitments represent important steps toward reducing regulatory and modelling risks.

However, even with these additional steps, Origin considers that the regulatory and modelling risks may not be fully captured in the regulatory package and, therefore, they should be considered when assessing the retail margin allowance.

Calculating the energy purchase costs

Origin is generally supportive of the approach to calculating energy purchase cost using the Frontier models. However, there are a number of issues that we raise in this submission.

- *Mark-to-market approach*: Perhaps the key issue for Origin is the proposal to calculate the energy contract purchase costs on a "mark-to-market" basis. While

Origin understands the rationale provided by Frontier for this approach, we believe the mark-to-market approach will result in more uncertainty and volatility in outcomes than a traditional "prudent retailer" approach.

As a result, we support the proposal by Frontier and IPART also to calculate an energy purchase cost using an average time series of forward contracts, at least as a check to the mark-to-market outcomes. Importantly, it should be clear in advance how discrepancies between the two outputs might be assessed.

- *Load shape and load forecast*: Although load shape is one of the main determinants of the various energy cost elements, it is not clear how load volatility is captured. For instance, while Frontier uses two peak day demand points at 10 per cent POE to capture extreme events, the volatility of all other points appears to be restricted by the use of a single set of 30 demand points. This may not be sufficient to capture retail risk.

  In addition, the approach to forecasting peak demand and load volatility in the regulated load has not been clarified, even though the regulated load is the basis for establishing the final energy purchase cost range (in *STRIKE*) and is likely to be more sensitive to extreme events.

  As these regulated load forecasts are being provided to IPART in confidence by the incumbent retailers, Origin would request IPART appoint an independent reviewer to consider the consistency and validity in approach and the reasonableness of the forecast loads and load shapes.

Other relevant costs

- *Retail operating costs (ROC)*: The retail operating cost assessment does not appear to capture the full range of retail operating cost items or adequately reflect the potential changes in these costs over time due to exogenous events like the CPRS or the roll-out of interval and "smart" meters. Wholesale trading operational costs, depreciation and debt management costs are some of the areas which do not appear to be adequately captured.

  In addition, we seek further clarity on how IPART will exercise its discretion in selecting a ROC from the range of outcomes that will arise from the different approaches.

- *Customer Acquisition & Replacement Costs (CARC)*: Origin agrees that the regulatory framework requires a calculation of CARC based on retaining scale for the Standard Retailer and that this is also consistent with other aspects of the Determination (e.g. the expected value calculation). However, we are concerned that the detailed analysis proposed by IPART will rely on cost data that may not be accurate at that level of disaggregation.

- *Retail Margin Analysis*: Origin considers that a focus on systematic risk only, when assessing the retailer margin, will result in retail margins that are not commensurate with the regulatory risks and will further serve to discourage new retail market entrants and retail competition.

  Moreover, as noted previously, it is not yet clear to Origin that the other aspects of the regulatory package adequately measure all areas of non-systematic risk. Origin would highlight the fact that relatively small errors (below the so-called materiality threshold that initiates a change in the price-path), may well exceed the absolute value of the retail margin allowance over the course of the year, threatening the viability of the Standard Retailer.

Also missing in the current analysis is consideration of the particular risk position facing a Standard Retailer which (unlike a new entrant retailer) cannot adjust their volume exposure to match unfavourable events in the market.

Concluding comments

In making the 2010 Determination, IPART will be faced with many policy and operational uncertainties and will need to adopt a flexible and transparent approach.

Ensuring that the Final Determination satisfies the Minister's commitments under the AEMA to allowing a full pass through of the costs of the CPRS will be a central challenge for IPART, and one that is not yet resolved in the Draft Methodology paper. Similarly, the impacts of the New South Wales electricity market reform are not considered at all in the current Draft Methodology paper.

Origin considers that this determination process will benefit from greater discussion with stakeholders on these and other key issues such as the periodic review process prior to the release of the Draft Determination.

Origin understands that the ToR, with its focus on the efficient costs of a Standard Retailer, may act as an additional constraint on IPART facilitating an outcome that promotes further retail competition.

However, it is also apparent that IPART will have some degree of discretion to choose between a range of reasonable outcomes for each of the cost items.

Origin urges IPART to exercise its discretion bearing in mind the considerable risks and uncertainties facing the electricity retail market and the significant impact of regulatory error on the viability of competition and sustainability of the Standard Retailer.

Origin will carefully review the Draft Determination in December 2009, to understand how IPART has attempted to resolve these matters to enable competition to develop effectively in New South Wales while ensuring the ongoing security of supply.

1. Introduction

Origin welcomes the opportunity to respond to the *Electricity - Draft Methodology Paper* issued by IPART in August 2009 which follows on from IPART's Issues Paper published in July 2009. Origin understands that the purpose of the Draft Methodology Paper is to:

- set out IPART's more detailed thinking on analysing the major retail costs an efficient Standard Retailer will incur in supplying small retail customers on regulated tariffs over the 2010 determination period, and

- consider specific elements of the regulatory package including the periodic review mechanism.

IPART has also provided two reports prepared by their expert consultants for consideration by stakeholders. They are:

1. Frontier Economics, *Modelling methodology and assumptions, a report for IPART,* August 2009; and

2. SFG Consulting: *Estimation of the regulated profit margin for electricity retailers in New South Wales, Methodology and assumptions,* 14 August 2009.

The 2010 Determination will be one of the most important and, arguably, complex retail price determinations that IPART has undertaken. The Determination will be covering a period of unprecedented change in the energy markets generally, and in the structure of the electricity industry in New South Wales in particular.

Understanding the risks arising from these changes and incorporating the appropriate allowances for risk within the regulatory pricing framework will be, for IPART, a key challenge and responsibility as the Determination outcomes will affect the direction and sustainability of the electricity market in New South Wales.

Origin therefore appreciates IPART's consultative approach to the review of regulated retail prices and charges for electricity in the period 2010-13, and its commitment to introducing a greater level of transparency in the regulatory price setting pricing.

In this submission, Origin will be addressing a number of matters raised in IPART's Draft Methodology report and in the two more technical papers provided by IPART's expert consultants. Origin's response has been formulated bearing in mind the following:

- the overall regulatory context for this Review under Division 5 of Part 4 of the *Electricity Supply Act 1995*;

- the Terms of Reference (ToR) provided to IPART by the Minister for Energy in June 2009 and the broader statutory and regulatory context in which the Determination is made;

- the commitments made by the NSW Government in the AEMA to the promotion of competitive markets, retail price deregulation and (in the absence of price deregulation), a commitment to the full pass through of the CPRS costs; and

- Origin's experience as an incumbent and new entrant retailer in electricity and gas markets subject to retail price regulation and where prices have been deregulated. Origin also has the largest portfolio of voluntary green customers in Australia.

In stating this, however, we believe that IPART's responsibilities have been made more complex by the potential conflict between the requirement to consider the "efficient" costs of a Standard Retailer and the more general obligation to move towards a competitive retail market and ultimately, price deregulation.

Origin notes, for instance, under Part 3 of the Act's objectives, the first provision is:

> …to establish a competitive retail market in electricity so as to promote efficient and environmentally responsible production and use of electricity to deliver a safe and reliable supply of electricity.

Origin is also concerned that the Draft Methodology paper does not address the recent announcements by the NSW Government on the Energy Reform Transaction Strategy.

While noting that the Transaction Strategy was published after IPART issued its Draft Methodology, nevertheless it provides essential details that must be considered in the lead up to the Draft Determination.

Origin's detailed views on the regulatory framework and the individual aspects of the Draft Methodology and Consultants' papers are set out in the following sections of this submission.

2. The regulatory framework and policy context

2.1 The regulatory framework

The Minister has requested, pursuant to Section 43EA(1) of the New South Wales *Electricity Supply Act 1995* (the Act), that IPART undertake an investigation and report on the determination of regulated retail tariffs and charges in New South Wales for the period from 1 July 2010 to 30 June 2013.

Relevantly, section 43EB(2) of the Act then states that:

> Before determining regulated retail tariffs or the regulated retail charges, the Tribunal must have regard:
> (a) to any matter it is required by the reference to consider, and
> (b) to the effect of the determination on competition in the retail electricity market.

The Terms of Reference (ToR) provided by the Minister and highlighted below provide the matters under 43EB(2)(a) that IPART must consider in its Determination.

However, when making a determination under Division 5 Part 4 of the Act, IPART must also have regard for section 43EB(2)(b), that is, the effect of the Determination on competition in the retail electricity market.

2.2 The Terms of Reference for the review

The Minister's ToR direct IPART to conduct an investigation and report under section 43EB of the Act. As noted above, section 43EB of the Act requires IPART to have regard for both the impact of its determination on retail market competition and the specific requirements of the Ministerial directions under the ToR.

These specific requirements reflect the New South Wales Government's view that the reliable provision of electricity is an essential service, and include:

- Preservation of the financial viability of Standard Retail Suppliers in order to ensure they are able to continue to provide electricity to NSW customers.
- Preservation of the 2007 determination aims, that regulated retail tariff should fully reflect the market-based costs of meeting each SRS obligations to their regulated customers.
- Reducing customers' reliance on regulated prices.
- Result in retail prices that recover the efficient costs of supplying small retail customers.
- In relation to specific cost components of the Retail costs:
    - *Energy Costs*: recovery of the efficient costs of managing the risks associated with purchasing electricity from the NEM (including CPRS) and efficient costs of complying with greenhouse and energy efficiency schemes;
    - *Retail Costs*: efficient costs of supplying electricity customers, including customer acquisition costs; and
    - *Retail Margin*: appropriate retail margin giving consideration of any risks not compensated elsewhere arising from supplying regulated customers.

2.3 The Australian Energy Market Agreement (the AEMA)

The AEMA came into being following commitment by all members of the Council of Australian Governments (COAG) to an ongoing process of reform of the national and jurisdictional energy markets. It was signed by all jurisdictional energy ministers in 2006 and amended in 2009 to recognise the impact of the CPRS.

Relevantly, the AEMA represents a commitment by jurisdictional ministers to pursuing competitive retail markets and to implementing retail price deregulation once a competitive market has been established.

The AEMA also represents a commitment by jurisdictional ministers to allow the full pass through of the costs associated with the CPRS. It is essential that IPART's methodology and regulatory package enable this to happen.

2.4 Origin's experience in energy markets

Origin has some 3 million electricity, natural gas and LPG customers across Australia and as a consequence has substantial experience with operating in highly competitive markets, with retail price regulation and its counterpoint, price deregulation.

Our experience suggests that the largest barrier to the development of a healthy competitive energy retail market is the regulatory framework, including (although not limited to) the regulatory framework for setting retail prices prior to deregulation. In the alternate, it is also clear that the right regulatory and pricing frameworks can serve to:

- promote vigorous retail price competition and consumer choice;
- provide a sustainable return to retailers;
- enable retailers to actively promote green products and energy efficiency;
- enable retailers to implement a comprehensive and practical suite of hardship programs that directly support government's social welfare policies and payments.

Origin's experience also indicates that in the right regulatory environment, the majority of customers will take up market offers and thereby achieve the aim of reducing reliance on regulated prices.

2.5 Establishing competitive retail markets

Research across many markets by the AEMC and jurisdictional regulators points to the fact that under the right regulatory framework, competitive market offers are available to, and accepted by, a broad spectrum of consumers with minimal differences in uptake between low and high income households, renters and owners, younger and older customers.[1]

The evidence therefore clearly suggests that competitive markets are most properly considered an outcome of an effective regulatory framework, not an input into the shape of the regulatory framework.

This is contrary to the presumption made in some jurisdictions that tight retail price regulation must be maintained until there is evidence of a competitive market. It is only when there is a commitment to establishing the right competitive framework that the circularity of retail price regulation and market competition/deregulation is resolved.

[1] This has been identified by the AEMC in their various retail market competition reviews, by ESCOSA, ESC and IPART (in their previous determination).

Origin has taken some comfort from IPART's acknowledgement at the recent industry workshop that the long term interests of consumers, which in turn are at the heart of the National Electricity Law objectives, are best served by a competitive market and price deregulation.

The most recent public statements by the Honourable Joe Tripodi provide further evidence of the view that a competitive wholesale and retail energy market is a fundamental objective of reform:

> As the Government exits the energy trading and retailing sectors, the delivery of a robust and competitive electricity market is a key objective of our reforms. … The NSW Government is determined to achieve increased competition in the areas that are key to electricity customers' interests – products and services and pricing.[2]

We strongly encourage IPART to bring these considerations more explicitly into account as they progress through the current Determination process.

[2] Hon. J Tripodi MP, Media Release, *NSW Government releases Energy Reform Transaction Strategy*, 10 September, 2009. Page 2.

3. Assessment of wholesale energy costs

IPART is seeking to establish a wholesale energy cost (WEC) allowance that covers the costs an efficient Standard Retailer would incur in:

- purchasing energy to supply its regulated customers; and
- meeting its obligations under greenhouse and energy efficiency schemes over the determination period.

IPART's proposed approaches are drawn largely from the report by Frontier Economics. Origin makes comment on both these matters in the sections below.

3.1 Energy Purchase Costs

In considering the energy purchase costs allowance for a Standard Retailer, IPART has proposed to use the methodology set out by Frontier Economics and used in the previous 2007 Determination process. This methodology will:

- Estimate a theoretical stand-alone LRMC of generation based on supplying a retailer's regulated load and including the impact of CPRS. The output of this calculation provides a floor to the market based calculation of energy costs.
- Estimate a market-based energy purchase costs for each retailer's regulated load, based on a multi-stage process as set out below:
    - Estimate a LRMC for the total system (inclusive of CPRS) in order to determine the least cost pattern of investment and operation of generation plant in the NEM;
    - Estimate a distribution of plant output and spot market prices;
    - Estimate an optimal portfolio for retailer for a given level of risk (the "efficient frontier"); and
    - Calculate an additional "volatility" allowance reflecting the working capital costs of the un-hedged component of the load.

The efficient frontier approach generates a range of possible "efficient" energy purchase cost outcomes, the level of the cost depending on the retailer's trade off between risk and cost. It is then IPART's responsibility to determine this risk/cost trade off for the Standard Retailer, given the range of possible efficient prices along this frontier.

In the 2007 Determination, IPART chose the conservative position on the frontier, effectively accepting the highest level of hedging and lowest risk (as calculated by Frontier). The corollary of this, however, was that the additional volatility allowance was reduced and wholesale risk did not form part of the retail margin allowance. This was consistent with IPART's position that risk should be looked at holistically, across the total regulatory package.

However, IPART has not yet made a commitment on the appropriate point on the efficient frontier for the 2010 determination.

Origin recognises that considerable work has been undertaken by IPART and its consultants to establish a comprehensive methodology that is flexible enough to address the challenges of the next three year determination period. Origin supports many aspects of the chosen

approach, most particularly the recognition of the need for a "floor" in the cost allowance based on the LRMC and the very real trade-off facing each retailer between risks and costs.

However, there remain some key concerns with the proposed approach. These are discussed further in the sections below.

3.1.1 Modification of WEC models for national climate change initiatives

As noted, the Frontier methodology calculates two versions of the LRMC: (a) a stand-alone LRMC to service the regulated load which is used in setting a floor price for energy purchase costs and (b) an incremental LRMC to service the NEM load which is used as an input into the calculation of the energy purchase costs.

Origin accepts that from a modelling perspective, it is relatively straight forward to incorporate the impact of the various climate change measures, including CPRS and MRETs into the two LRMC models. Origin also acknowledges that the Frontier methodology can potentially allow for the interaction between the CPRS and MRETs.

The critical element, however, are Frontier's assumptions regarding the CPRS. At this stage, Frontier has provided only limited information on the key assumptions that will define the effectiveness of the CPRS pass through, and therefore, the realisation in practice of the AEMA commitments to a full pass through of CPRS costs.

In particular, Origin highlights the following:

- *The price of carbon*: Frontier has proposed that the cost of carbon is captured in the model using the price of carbon in the Treasury's CPRS5 forecasts (adjusted for announcements in May 2009). Origin believes this is a reasonable approach in the initial setting of the price path given the lack of market information to benchmark a carbon cost.

  However, it leaves open the issue of what information will replace this forecast when undertaking the annual (or biannual) reviews for 2011/12 and 2012/13.

- *The pass-through of carbon costs*: The extent to which generators will pass through their carbon costs serves as an input into the calculation of the energy purchase costs in the *SPARK* model.

  IPART and Frontier have correctly recognised this as a key issue and one that will depend on a number of exogenous factors in addition to the emissions intensity of the marginal plant. However, there is little detail provided on how this matter will be resolved in the Determination.

- *Impact of carbon policy on volatility*: Load and price volatility are essential elements of various aspects of Frontier's modelling and have a significant impact on the final energy purchase cost price (more particularly, the shape of the efficient portfolio frontier derived by the *STRIKE* model.

  Price volatility also has an impact on the potential premium of contract prices to spot prices (currently 5 per cent in Frontier's model) and on the size of the residual volatility allowance. Assumptions therefore about the impact of carbon on market volatility are critical elements of the final determination.

  Frontier have presented arguments for both an increase in volatility and a decrease in volatility as a result of any CPRS and, again, it is not clear to Origin on what basis Frontier will come to a final view on both the direction and quantum of change in volatility as a result of CPRS.

3.1.2 Should the energy purchase cost allowance be carbon inclusive or exclusive?

Frontier has proposed to incorporate the carbon costs into the SRMC of thermal generation plant, and (using assumptions as noted above on the "pass through of carbon in the bidding strategies), generate an efficient frontier of energy purchase costs based on a carbon inclusive spot and contract price.

There are difficulties in all approaches, however, and IPART has indicated it will further consider the merits of a carbon inclusive versus carbon exclusive approach to estimating the energy purchase price allowance.

Origin has previously indicated our support for generating a carbon inclusive price, notwithstanding the acknowledged lack of forward market data and the uncertainties of the pass through amount of the generators or the impact on bidding strategies.

We continue to hold this view, for both theoretical and practical reasons:

- A carbon inclusive spot price is closest to the way the spot market will operate; generators will develop their bidding strategies with the cost of carbon embedded within their bidding structures.

- The lack of either a forward carbon inclusive market or a forward carbon only market and the general uncertainties about the pass through amount of carbon are problems that face either approach.

- The carbon inclusive contract market is likely to develop more quickly and have greater liquidity than a carbon only market.

- It is not clear how the *WHIRLYGIG, SPARK* and *STRIKE* models will work as an integrated package if they are each required to generate outputs based on a separate (and artificial) "black" and "carbon only" markets.

  Alternatively, if the models are limited to generating "black" market outputs with a fixed carbon cost overlay in the final price, it is not clear how key elements such as volatility and risk created by carbon will be captured in a systematic way.

  In either case, we would be concerned that the relevant modelling parameters are both unrealistic and un-testable. It would, for instance, make the operation of the annual review process more problematic.

Nevertheless, Origin recognises the significant challenges of this key task, and supports a full investigation of the options as proposed by IPART.

Origin notes, however, that as the annual review process is a key element proposed for managing the risk of carbon, it is most important that IPART's considerations in this matter take full account of the interaction between their decision and the matters raised by Origin above, including the proper accounting for risk/volatility and the integrity of the subsequent review process.

3.1.3 Should a standalone or incremental approach be used to estimate the LRMC of generation?

Origin supports the proposals put forward by Frontier, namely:

- For the purposes of the LRMC that is used as a floor for the energy purchase costs, it is correct to use the stand-alone LRMC approach and apply this to the regulated load shape.

As stated by Frontier, the stand-alone model is more consistent with the ToR and avoids the necessity of allocating incremental plant to the regulated load. The use of the regulated load is necessitated in order to be consistent with the calculation of the energy purchase costs which are based on this load.

- Origin agrees that for the LRMC that is used in the energy purchase cost modelling (as an input into the *SPARK* model) it is appropriate to use an incremental approach and apply the LRMC calculations to the relevant regional NEM load. This is because, as highlighted by Frontier, the LRMC used in this context is input into the simulation of spot market prices that occur across the relevant NEM region.

3.1.4 How should the costs of complying with the NSW GGAS, ESS and the expanded RET be estimated?

Origin supports IPART's proposal to add explicit allowances for these other costs to the energy purchase costs allowance.

We understand that Frontier's LRMC modelling will account for the GGAS and RET obligations as constraints within the models, and separately, calculate a LRMC for meeting the GGAS and RET targets.

If this is a correct interpretation, then Origin accepts the general principles behind such an approach, and acknowledges that the Frontier approach may allow for the interaction of the various schemes (including carbon and RET schemes) in the LRMC calculation.

However, it is not clear to Origin which of the two LRMC models used by Frontier will be the source for the calculation of the LRMC for GGAS and RET (ie on the basis of the stand-alone LRMC model, or the incremental LRMC model). It is quite possible that the LRMC calculated for RET and GGAS might be quite different in the two models.

Origin would therefore request that Frontier clarify this and explain the reasons for their selection of the relevant load for the LRMC calculation. Origin would also request that consideration be given to the potential price volatility of these renewable markets, particularly the RET market.

Our experience to date is that the RET market is quite volatile, and this can only be exacerbated by the relatively steep growth in the RET scheme target beyond 2009. Careful consideration needs to be given, for instance, to commitments already made to provision of renewable energy for desalination plants, and the extent to which these commitments will impact on the supply/demand of RECs to cover the remainder of the retail market.

The ESS obligation, while commencing at a relatively low level of 0.4 per cent of total electricity sales (for the half year), rapidly escalates during the course of the Determination period. There are also several important features of the ESS that are not identified in the Frontier or IPART reports. These are: [3]

- Because of the exemptions under the ESS, electricity retailer obligations under the ESS are greater than the overall percentage figures referred to by IPART indicate. Retailer compliance obligations commence at approximately 1 percent for 2009 (on an annualised basis) to 4.5 per cent for calendar 2013 and 5 per cent for the period 2014 to 2020.

[3] See: http://www.dwe.nsw.gov.au/energy/pdf/sustain_renew_neet_ess_fact_sheet.pdf

- The ESS imposes additional operating costs on retailers in terms of administration and reporting requirements of the Scheme. These additional costs need to be considered when reviewing the efficient retail operating costs.

- There is little information available to either regulators or participants in the Scheme about the direct costs of compliance with the Scheme targets, and on how these costs might change over time as the marginal abatement activity becomes more difficult over time. In addition, Origin's experience is that the abatement space is already becoming very crowded with many other schemes available to households and businesses to encourage energy savings.

  In the absence of information from the market, the pre-tax equivalent shortfall of the penalty rate should be used in the analysis.

- The impact of the ESS scheme on demand should also be considered in the various components of the retailer cost calculations, including the forecast of demand in the energy purchase cost modelling and in the assumptions that underpin the forecast cash flow in the SFG analysis of retail margin.

  The NSW Government for instance has publically stated that the Scheme is expected to save 8.5 million MWh of electricity over the first 4 years of the Scheme, and on average save $45 to $50 per year in household electricity bills compared to BAU.

  However, it is not clear from the information provided, whether the Scheme will have a commensurate impact on peak demand (relative to energy demand). To the extent, for instance, the activities relate to lighting, refrigeration, shower heads and the like, it is possible for the load factor of demand to deteriorate rather than improve even if overall demand reduces.

  Origin believes that further analysis of the impact of the Scheme on load and the load factor should be conducted, perhaps in the context of a broader analysis of price elasticity and demand.

3.1.5 Should the methodology for estimating energy purchase cost allowance have more regard for publicly available data?

Origin appreciates IPART's recognition of the particular importance of transparency in this Determination given the "*higher than usual level of risk and uncertainty*" (IPART, page 18).

We would add that it is also important because so much of the output of Frontier's modelling depends not only on the input assumptions, but on the complex game theory and optimisation algorithms within the "black box" of the models. Origin would suggest that both game theory and optimisation can have multi-solutions that "fit" the paradigm, and it is only by careful examination of the outputs that stakeholders can reassure themselves of the conclusions.

Origin therefore also welcomes IPART's proposal to release Frontier's spot and contract price forecasts on a half-hour basis for each year of the 2010 to 2013 determination. Origin assumes this spreadsheet will be released initially, and in conjunction with the relevant load traces, as part of the Draft Determination so that all stakeholders have the opportunity to review and respond before the Final Determination.

Origin also accepts the use by Frontier of well established sources such as the ACIL 2009 report on fuel and generation costs [4] as input into the calculations of the LRMC and SRMC of electricity generation.

[4] ACIL Tasman, *Final Report, fuel resource, new entry and generation costs in the NEM,* April 2009

We would, however, seek clarification as to whether the data used from sources such as ACIL, includes the more indirect impacts of RET and CPRS on the various input costs such as the cost of gas and coal (as opposed to the direct carbon cost).

It is not clear from the evidence provided, for instance, whether the delivered gas price forecast (see Frontier, page 35), includes or excludes a potential effect of CPRS[5] and, if so, which CPRS scenario (in the 5 per cent to 25 per cent reduction target range etc) this is based on.

This needs to be consistent with assumptions in other areas of the modelling analysis regarding treatment of the CPRS.

In addition to above, there are a number of specific elements of Frontier's assumptions that Origin believes should be reviewed. They are itemised in Section 3.2.2.

The use of publicly available data on market prices

Within the broad issue of transparency and maximising the use of publicly available data, there is a one very important element that is of considerable concern to Origin.

This relates to the use of publicly available forward price curves such as AFMA Curve and d-cypha data. Frontier, and to some extent IPART, have argued that such data is limited in its value as a guide to future contract prices as trading volumes can be low, and traded prices can be quite volatile – "*Typically, observable market data is variable, and can reflect changes in market sentiment rather than market arrangements or information*" (IPART, page 20).

For these reasons, IPART has indicated its preference to rely primarily on the simulated spot and contract market outcomes produced by Frontier's energy purchase cost modelling.

As noted in the IPART report, a number of submissions have recognised the issue of volatility in forward contract prices but have argued that this can be adequately addressed by using measures such as a rolling 24 month forward price curve.

Origin is concerned that both Frontier and IPART have rejected this "prudent retailer" approach on the basis that such an approach "*may be inconsistent with the principle that retailers should mark their wholesale book to market*" (IPART, page 20).

Origin considers that the mark-to-market approach for selecting forward contract prices falls foul of the same problems identified for observable market data.

That is, there is a distinct danger that the prices in the market at a point in time are not representative of actual purchase costs for the type and size of load of a Standard Retailer. The allowed prices will not therefore provide compensation to retailers for acting efficiently and prudently by purchasing forward contracts over a period of time.

The mark-to-market concept is a requirement for financial reporting of the value of the business or its assets, but it is not a reflection of the costs of the assets. The efficient retailer's book of contracts for the purposes of setting prices must reflect reasonable costs of acquiring that book over time, and in accordance with prudent commercial practices and risk limits.

To illustrate further, once there is some certainty over the CPRS Scheme, retailers with significant, and to a large extent uncontrolled loads (such as a Standard Retailer with an obligation to offer), will need to commence progressively covering their retail book for

[5] For instance, CPRS may cause a shift in the supply/demand curve for gas, and therefore the cost of gas as an input to the LRMC and SRMC. Gas transmission costs are also likely to change.

2012-13. Prudent risk limits will require this. Yet the Frontier methodology implies that this is not an efficient strategy and the costs of adopting a prudent approach to purchasing contracts over time should not be recognised; Origin rejects this proposition.

At the industry workshop, Frontier's views on this were explained by analogy to selling a house, the house is worth what it is sold for on that day. But Origin considers this a poor analogy for the actions of an efficient and prudent retailer. A Standard Retailer is in a very different position than most sellers of property. For example, a Standard Retailer cannot choose when to sell its "house", or how much to sell at a particular point in time. In a practical sense, the purchased portfolio of contracts cannot be liquidated on the day (when Frontier assesses the market price) or replaced on that day, without affecting the price itself.

If Frontier mark-to-market the book (at the commencement of the price path, or in any subsequent review), to determine the value of the forward curve, then there is a responsibility to demonstrate that the price is representative of buying or selling the whole book at a single point in time; or is it the price of a 5 MW contract and therefore not appropriate to a Standard Retailer. This must be made very clear to stakeholders.

The subjective nature in the application of the mark-to-market approach is also illustrated in the previous 2007 Determination.

The 2007 Final Determination was made during a period when the severe drought conditions of 2007 – 2008 had caused dramatic increases in the wholesale market spot and contract prices. Although IPART requested Frontier to investigate this, the decision was made not to amend the energy purchase cost component of the price path. As part of its reasoning on this, IPART stated the following:

> The Tribunal also considered Frontier Economic's view that new entrant retailers are likely to hold hedged position for the next year that would protect them from current market movements[6].

In this instance, it appears that the mark-to-market approach (which would have resulted in much higher purchase price allowance) did not apply because the retailer was assumed to have purchased their hedging contracts over prior periods[7].

In our view, it is also essential that the mark-to-market, simulation spot price outputs and the contract prices generated from them (see below) are carefully compared with the approach preferred by many stakeholders including Origin of a 24 month rolling average contract window[8]. If there are discrepancies, then further industry consultation and investigation should be undertaken.

Contract premiums to spot price

Frontier's model generates simulated spot prices for a given load. It does not directly calculate contract prices, but uses the modelled spot prices to determine contract prices by adding a premium to the spot.

In 2007, Frontier set this premium at 5 per cent of the spot price forecast for all years. Origin believes this 5 per cent premium was inadequate in the 2007 Determination, and did

[6] IPART, *Promoting Retail Competition & Investment in the NSW Electricity Industry,* June 2007, p 82.
[7] It was also stated that the Standard Retailers were not exposed because of ETEF. This appears to be inconsistent with the obligation in that Determination to consider the costs for a new entrant retailer (who would not have ETEF protection). In any event, this type of rationale would not be available in the 2010 Determination.
[8] Origin recognises the practical difficulties of using a rolling 24 month approach with respect to establishing market based prices for 2012-13. However, the difficulties apply to all approaches to some degree, and will need to be addressed by the same annual (or biannual) review process.

not reflect the level of volatility caused largely by the drought and evidenced in the months prior to the 2007 Final Determination.

Uncertainty around the CPRS is also expected to lead to both greater volatility and, more generally, a premium in contracts over spot as the risk of future carbon costs are incorporated into the generator (and Gentrader) contracts.

Origin acknowledges the commitment by Frontier to further examine the impact of carbon prices on risks and the implications for the assessment of the contract premium in the 2010 Determination. We will respond accordingly to the additional detail on this important matter that is expected in the Draft Determination

Variations in contract cover

Frontier develops an efficient frontier for the retail portfolio by quarterly period. An examination of the previous data has indicated that the retailer's portfolio of swaps, caps and pool exposure varies significantly from quarter to quarter over the three years.

Origin would contend that such an outcome is unrealistic. It is not clear that the market is robust enough to allow retailers to significantly switch between a capped, swapped, and pool exposed position from quarter to quarter, given the current generation mix. Baseload generators, for instance, do not usually sell caps or large volumes of swaps just for a quarter.

Most retailers would also have risk limits that would not allow significant pool exposure to meet their forward demand obligations, whatever the current market conditions. In particular, a Standard Retailer with a large volume and an obligation simply does not have the flexibility to recreate its portfolio on a quarterly basis.

Origin requests further investigation of this matter, such that the overall portfolio for a year reflects more closely the reality and limitations of the market and of the contracting requirements of a Standard Retailer with an obligation to offer.

As part of this, we request some further sensitivity analysis, to be applied to the minimum risk portfolio. For instance, Origin requests some sensitivity analysis be done on the impact of the maximum 2 day loss (7.5 hours at VoLL at 1% POE) for the volumes held by a Standard Retailer?

3.2 Key assumptions involved in applying the WEC approach

In addition to the matters identified in section 3.1, which largely arise from the discussion of the methodological issues, there are a number of other important assumptions in the Frontier modelling that Origin will address.

3.2.1 Forecast demand for electricity over the Determination period

Frontier's report has identified that that forecasts of demand (including demand shape) are one of the more material inputs into the modelling of LRMC (in both forms) and the energy purchase costs.

The two key forecasts are the forecast of the system load and the forecast of the regulated load.

System load

For the forecast of the system load, Frontier has relied on the regional demand forecasts for native energy and maximum demand on the 2009 Annual Planning Review (APR)

released in July 2009. These forecasts, as noted by Frontier, will ultimately serve as input into the AEMO 2009 SOO forecasts and serve as an industry standard forecast.

Origin believes this is the appropriate publicly available reference point for system load forecasts and peak demand, and we also accept Frontier's recommendation with respect to the demand growth in the final year (2019/20) of their LRMC modelling.

Origin, would, however, like to understand more about the construction of the representative load duration curve, and how variability in this demand curve is assessed.

In particular, we note that the representative demand curve (defined by 30 representative levels of demand, weighted to the full 8,760 hours of the year), includes two additional demand points to establish the reserve constraints. These two points (each representing a single half hour), are the 100% co-incident, 10% POE maximum demand levels for winter and summer.

While we agree with this approach, Origin is concerned that this may not give adequate weight to a correlated series of extreme events (such as the 5 day period of above 40 degree days that occurred in February 2009). Equally, the overall shape of the load duration curve is important and there is an issue of whether there are an adequate number of half hours assigned to very high points just under the extreme.

Regulated load

More so than the system load, the forecast of the regulated load will be a key determinant of the retailer's energy purchase costs. Yet this is perhaps the most difficult and subjective area of the load forecasting process as acknowledged by IPART and Frontier.

In the previous Determination, the regulated load forecasts were provided by the standard retailers. Origin considers that while the incumbent retailers may be the ones most able to forecast this load, previous experience indicates that there were significant variations in the underlying approaches, data quality and assumptions regarding changes in the regulated load over the three year forecast period. However, stakeholders had limited visibility of the forecast details because of the concerns for confidentiality of data.

To some extent, ETEF - which is effectively a load following hedge – provided protection to incumbent retailers for any errors in the forecast that affected energy purchase costs. There is no such protection in the next determination period.

The very importance of the regulated load forecasts in the current determination means that at a minimum the forecast of load growth and shape change provided by the incumbent retailers should be supplemented with other forecasts. To this extent, we support Frontier's proposal to also refer to a forecast derived from the net system load (NSLP) data, which is publicly available data and can be reviewed by stakeholders.

However, we would also encourage an independent review of the forecast methodologies, the relative growth rates and the load shapes prepared by the incumbent retailers.

Origin also seeks further clarification regarding the variation in load shape for the regulated load and the estimation of the extreme events. For instance, it is not clear how/what equivalent of the 100% co-incident, 10% POE maximum demand level (from the APR) are adapted for use in the forecasts of the regulated load.

Origin suggests therefore that in addition to above, the NSLP data could be used to better understand the variability of small customer load to weather and economic conditions.

Such variability would then feed into the energy purchase cost calculations, the volatility allowance and the retail margin[9].

3.2.2 Other assumptions in the Frontier modelling

As most of the assumptions in the Frontier model are derived from sources such as ACIL Tasman, Origin believes they are on the whole, appropriate for the purpose at hand. We put forward the following comments, however, for IPART's consideration:

- The LRMC is calculated on a 10 year period. Ideally, LRMC should be calculated on the basis of the life of the plant. However, Origin acknowledges that given the uncertainties in the various forecasts and policy assumptions, a more conservative approach may be appropriate in this instance.

- Consideration should also be given to the impact in the modelling of LRMC, spot and contract prices to the proposal by the New South Wales Government to write Gentrader contracts for the technical life of the power station they cover, as well as the nature of the payments the Gentrader will make to the government and their obligation to meet all CPRS costs associated with the plant emissions.[10]

- Origin understands that Colongra plant has limited gas availability, so its availability to run under $90/MWh is limited. Their alternative fuel is distillate which Origin estimates has a SRMC of $370/MWh.

- Snowy Hydro is modelled at 14 per cent capacity factor. Snowy's capacity factor over the last five years is slightly more than 12 per cent and the last three years is only 10 per cent. It is probable that drought conditions in South East Australia are not over and Origin considers Snowy may not be in a position to generate the 4.5TWh p.a. assumed in the model for some time.

- ACIL's forecast fuel prices are relatively flat and do not show the links to international parity proposed by other modellers for LNG and for coal (via the removal of the bottle neck) in the back end of the 10 years modelled period. These links of domestic energy prices to world prices lifts both coal and gas prices above the ACIL forecast.

- For the incremental LRMC approach, Frontier assumes that Ultra Critical (USC) and IGCC generation technologies are available in mid 2013. While Origin accepts that this may have limited on the energy purchase cost for 2012-13, nevertheless, Origin believes this is an unrealistic assumption for the LRMC calculation.

- The discount rate in Table 8 (7.3 per cent real pre-tax) is inconsistent with the discount rate in Section 3.3.2 of 8.2 per cent - the latter figure aligning with the discount rate for electricity generation put forward by IPART in Appendix A (page 55) of the Draft Methodology.

- The forced outage rate used by Frontier for gas peaking plant is 0 (zero) per cent which assumes that the plant runs so little that all maintenance is planned. Origin does not believe this assumption is appropriate for this type of plant.

[9] The expected return calculations used b y SFG in the calculation of retail margin relies on variations in cash flows arising from the fluctuations in economic conditions.
[10] See for instance, Gentrader Fact Sheet, issued September 2009.

3.3 Key risks and uncertainties associated with forecasting energy purchase costs

3.3.1 Risks associated with normal variation in retailer's regulated load profile

Origin has discussed above the difficulty in assessing variation in the regulated load, and proposed that further analysis of the sensitivity of the NSLP to weather and the economy (i.e. non-systematic and systematic risk) be undertaken for each distribution area.

However, we are less inclined to agree (at this stage) with IPART's comment that the non-systematic risk of load variation is captured by selecting the most conservative point on the efficient frontier (IPART, page 26).

Frontier states in their report that the *STRIKE* model "*determines the efficient mix of hedging products to meet a particular load profile, and then the cost of that mix of hedging products*" (Frontier, page 70).

Frontier goes on to say that the "*key input into STRIKE is the forecast of forward prices*" (page 71) for different classes of "*assets*" (caps, swaps, market exposure). For any given demand point, there is a trade off between the mix of hedge products, their costs and the quantity of energy exposed to the spot market.

It is the variation in the asset mix that appears to drive the cost/risk trade-offs along the the efficient frontier. While the frontier itself will, inter alia, reflect load volatility, the chosen position on the frontier (such as the conservative position), is a reflection of the regulator's view on the appropriate asset mix, including appropriate level of spot market exposure.

It is difficult to see from the report how non-systemic load volatility (as opposed to price volatility) is incorporated into the calculation of the efficient frontier. As previously noted, Origin would seek further clarification of this matter before accepting that non-systematic load risk is fully captured by the selection of the conservative point on the efficient frontier.

The selection of the efficient frontier point

While IPART selected the most conservative point on the efficient frontier in the 2007 Determination, it has left open its decision on the most appropriate position in the 2010 Determination.

Origin strongly encourages IPART to continue to select the conservative point on the efficient frontier.

Our views on this relate in part to the fact that the 2010 Determination is based on the efficient costs of a Standard Retailer. The Standard Retailer has a number of unique risks:

- The Standard Retailer has an obligation to offer all customers irrespective of their demand and credit characteristics..
- Customers have the right to revert to the standard offer at any time, and (as demonstrated by the recent market data), do so when market conditions are poor.
- The Standard Retailer cannot withdraw from the market to manage the price/volume risk[11], or restrict its exposure in any way – there are no termination clauses in a standard contract.

[11] In 2007/08 and 2008/09, new entrant retailers managed their price/volume risk by progressively withdrawing from the market, leaving the Standard Retailer with a larger supply obligation.

- The Standard Retailer's load is therefore non-controllable and in that sense, the Standard Retailer is a price taker at least when demand is high (and prices are high).

- The Standard Retailer has restricted ability to change prices in response to external events, i.e., the Standard Retailer is constrained by the IPART processes for pass-through events etc.

More generally, as the Standard Retailer is effectively the retailer of last resort, Origin considers that the regulator would expect such a retailer to adopt a conservative hedging strategy to maximise the security of supply and minimise the risks of financial collapse which would have a contagion effect on the market as a whole.

3.3.2 Risks associated with normal variation in wholesale electricity spot and contract prices

Origin notes that IPART intends to give further consideration to whether a volatility allowance "*continues to be an efficient and reasonable means of addressing risk of normal variation in wholesale electricity prices*" (IPART, page 27).

We are somewhat concerned at this statement as IPART has provided no particular explanation as to why it considers the volatility allowance may not be appropriate, nor has IPART indicated what alternatives it might put place.

While we believe that the volatility allowance in the 2007 Determination did not adequately capture the residual risks facing a retailer Origin would be most concerned if this component of the regulatory package is removed. This is particularly the case when the retail margin calculation is limited to economic risk.

3.3.3 Risks associated with a step change

IPART does not expect a step change in demand for the mass market. Origin has already suggested that there are a number of factors that might make for significant changes in mass market demand compared to historical trends including the EES scheme, price elasticity, rate of reversion to regulated tariffs and even weather trends.

Nevertheless, we propose that such factors are better modelled within the standard load forecast rather than being treated as a step change in mass market demand.

IPART has also indicated, and Origin would agree, that there is the potential for significant step changes in energy purchase costs and in the volatility of prices, both of which are critical to the setting of the wholesale energy purchase cost allowance.

It is proposed by IPART that this risk is best managed through the proposed periodic review process. IPART considers, and Origin again agrees, that the design of this should be modified to provide sufficient regulatory flexibility to address the greater risks of the next period. Origin believes these include the following:

- the introduction of the CPRS and the policy uncertainty around this, including international actions;

- the privatisation and industry restructure program;

- the removal of ETEF;

- the potential for more extreme weather events; and

- the reliability of the transmission system and its capacity to meet increased renewable energy generation requirements.

The scope of the review

Origin supports the revised list of matters that could be opened for review by IPART in the course of a periodic review process.

It is not clear whether each periodic review would open all these matters for examination. Origin recommends that it does as the structure of the Frontier models are such that all these factors are inter-related. For instance, the LRMC serves as a "floor" to the energy purchase costs so would need to be run in parallel. Similarly, CPRS pricing should not be considered in the Frontier modelling framework without a parallel review of the volatility allowance.

It is important to highlight that while the scope of the review can and should be expanded, as suggested by IPART, there may need to be limits on the extent to which basic assumptions in the approach are changed. For instance, if the initial price path is set on the basis of simulated forward price curve, it may be inappropriate to change during the review process so as to model the energy forecast on publicly available market data even if more robust data has become available (in particular re 2012-13).

Origin will review this matter further when additional details of IPART's proposed approach to the periodic review are set out in the Draft Determination.

Frequency and timing of periodic reviews

Origin continues to be of the view that at least in the last year of the determination period, (2012-13) there should be two reviews, at six monthly intervals.

It will be important that the first of these reviews for the 2012-13 year is conducted well in advance of the commencement of that year, so that some certainty can be provided to consumers and retailers alike of IPART's view of carbon inclusive prices and can adjust their portfolios and market positions relative to the risk this decision creates.

The second of the two reviews will allow for further adjustment of prices based, inter alia, on information provided in the monthly auction processes and greater clarity on level of international trading in carbon permits.

From a more general perspective, we believe that the two periodic reviews will, potentially, ensure that prices are retained at cost reflective levels, so that competition and market activity is sufficient to give confidence in moving towards price deregulation in accordance with the AEMA commitments.

3.3.4 Risks associated with industry structure changes

Origin notes that the NSW Government has now released its energy reform strategy.[12] Given this, Origin considers that the impact of the proposed structure should be considered in the Draft Determination, in particular:

- The proposed allocation of risk between generators and Gentraders – and how this might impact on the bidding strategies of a Gentrader, including the Gentrader's liability to meet all CPRS costs associated with the plant's emissions (offset by any Commonwealth compensation – the policy for which is not yet determined).

[12] New South Wales Energy Reform Strategy; Delivering the Strategy: approaches to transactions and market structure. September 2009

- The payments by the Gentrader, including a capacity payment and fuel cost payment (effectively defining the SRMC of the plants) and the "Value Payments" that are paid to the State for the trading rights. The Gentrader will seek a return on these payments through their trading activities.

- The requirements for new generation as set out by the NSW Government in the sale of these developments sites. For instance, the NSW Government states that the proposed power stations "*will use the cleanest, greenest commercially available technology for their fuel type*".[13]

- The proposed treatment of ETEF, which is extended to 30 June 2011, includes a gradual phase out (20 per cent per quarter) over the preceding financial year 2010-2011. It is recognised that this may have a direct impact on volatility in that year.

[13] NSW Government: *Development Sites Fact Sheet*, September, 2009.

4. Retail cost allowance

4.1 Proposed approach

IPART has set out a definition of the NSW Standard Retailer. Origin supports this approach of providing clarity around this fundamental construct within the regulatory framework.

4.1.1 Assumptions about the Standard Retailer

In particular, Origin supports the majority of the assumptions IPART has made about the Standard Retailer. We comment on each one below:

- *The incumbent has achieved economies of scale in retailing*. While not specifically stated, this appears to mean that the incumbent is of such a size that a marginal increase in customer numbers leads to no significant change in average costs.

- *Is not vertically integrated into distribution in NSW*: Origin agrees with this assumption which we consider is essential in terms of the principle of "competitive neutrality" and in practice, given the probable restructure of the electricity industry in 2010.

  Origin also seeks confirmation of the assumption that the retailer operates as a stand-alone retailer, with no upstream physical assets (that is, reliant on financial risk management tools). This assumption has indirect effects on the retail cost allowance.

- *Serves retail customers, including small retail customers, in NSW and potentially in other jurisdictions across the NEM*: Origin accepts that this is the reality of a typical Standard Retailer. However, it is not clear how this assumption is built into the other elements of the regulatory package as the risks of market customers and, in particular, interstate competitive operations are different and may vary by jurisdictions.

- *Can offer retail customers standard form and/or negotiated customer supply contracts*: Again, Origin believes the inclusion of negotiated customer supply contracts raises questions regarding the overall regulatory package.

- *Has an existing customer base to defend*: Origin considers this a reasonable assumption in so far as it relates to the logic of sustaining economies of scale and cash flow of the business (as assumed in the retail margin analysis – see section 5).

IPART has also made the claim that:

> ...the nature of retail business activities for regulated customers is relatively well understood. The associated costs are generally considered to be sufficiently generic and stable for retail operating costs to be assessed through a combination of benchmarking and sourcing data from other jurisdictions and industries.

Origin disputes this as a basic assumption. The retail industry, even for a Standard Retailer has become considerably more complex and efficiency gains are undermined by increasing complexity and changes to regulation and operating conditions. The next three years of the determination period will encompass even more changes that will have significant impacts on operational costs and system investments.

A major change will be the potential restructure of the energy businesses in New South Wales. The impact of the structural change on retail operating costs is difficult to determine at this time. However, IPART should provide flexibility to address this matter once the industry has time to identify the materiality of these costs.

Other important changes which Origin believes IPART should consider carefully include:

- The increasing cost of administration and reporting for the various mandatory energy efficiency and renewable energy schemes, including the NSW Feed-in Tariff Scheme to meet the retailer's obligations.

- The costs of administration and reporting obligations under the CPRS from 2011-12, noting systems and processes will have to be established during 2010-11.

- The costs associated with the progressive roll-out by distributors in New South Wales to interval meter arrangements, with consequent changes required in retailers systems and processes, and customer management and support. In addition, over the course of the period, AEMO is expected to make a number of important Rule changes that will require changes to a retailer's systems and processes.

- The implementation of the National Energy Consumer Framework (NECF) during the period of the Determination. The NECF will create "*a national framework for the regulation of the sale and supply of energy, including retailer licensing, customer/retailer relationships, marketing, billing and payment plans for customers experiencing financial difficulties*".[14]

  In addition, the NECF will potentially change the retailer/distribution business relationships and various B2B processes.

- Other changes in the regulatory environment in the 2010-2013 period may also impact on a retailer's billing and credit arrangements in ways that increase costs. For instance, the New South Wales Government has recently released a Draft Customer Assistance Policy (CAP). The CAP applies for a period of five years and the Government intends to commence implementing the Scheme from late 2009.

  The CAP is a very comprehensive package of services to assist customers in financial difficulties with their energy bills. Specifically, it includes "*a strengthened framework for retailers' hardship charters and payment plans*".[15]

  While Origin supports such programs in principle, to the extent they impose obligations and costs on retailers, there should be opportunities for reasonable recovery of those costs in the regulatory pricing framework.

Overall, therefore, there are likely to be significant costs to a retailer arising from changes in the structural and regulatory environment and compliance obligations. The regulatory package should capture these additional costs in the retail operating costs, particularly given the restricted definition of retail margin which does not allow for regulatory change risk.

Moreover, the various industry changes listed above have, in turn, implications for both the proposed bottom-up cost approach and the benchmarking approach (see section 4.1.2). It is most unlikely that these future retail operating costs are adequately reflected in the

[14] NSW Government; *New South Wales Energy Reform Strategy. Delivering the Strategy: approach to transactions and market structure*. September 2009, page 43.
[15] NSW Government, Department of Water & Energy, *Customer Assistance Policy – Have your say*, 3 July 2009, page 1.

current cost data available from the Standard Retailers, nor will they be reflected in previous benchmarking determinations whether in Australia or overseas.

Origin considers that IPART should explicitly identify and consider the impact of future regulatory and market developments and make appropriate allowance in the retail operating costs for changes retailers have to make in systems and processes as a result and ongoing management and reporting of the schemes.

4.1.2 Bottom-up and benchmarking approaches

As in the 2007 Determination, IPART is proposing to use two approaches to assessing retail costs reflecting the uncertainties in both sets of costs estimates. They are:

- *Bottom-up approach*: Builds up an estimate of costs from the separate component of these costs. The data for this approach includes historical and forecast data on costs and customer numbers provided by the Standard Retailers. IPART then subjects these numbers to a "reasonableness test", and assesses the outcomes against publicly available data.

- *Benchmarking approach*: Estimates total costs based on allowances for electricity retail costs from regulatory decisions in other jurisdictions and other relevant information.

IPART does not provide any indication of the weighting of these two approaches. At this stage, IPART is proposing to compare the results and then exercise its judgement to determine an appropriate and efficient estimate of costs.

Origin has already highlighted some of the changes in the energy market that will make comparisons with previous data or jurisdictional determinations more problematic.

In addition, the data from existing Standard Retailers may vary in quality and comprehensiveness. Origin has previously been most concerned with some of the data provided by the incumbent retailers and has not been able to reconcile this data with other market data and with its own experience in the costs of operating in a contestable market either as an incumbent or as a new entrant retailer.

On the other hand, benchmarking approaches also have their own difficulties. These have been very clearly identified in earlier submissions by various stakeholders to the Issues Paper and by IPART itself.

Irrespective of whether the costs are based on a bottom-up approach or benchmarking, Origin reiterates the importance of a critical review of revealed costs in the context of the assumption of a stand-alone Standard Retailer. Historically, Standard Retailers in New South Wales have operated within a framework of shared services and systems. Such assumptions cannot be applied to a future Standard Retailer, and careful analysis of the incumbent data must be made to adjust for this factor.

It is clear from this analysis that IPART will, at the end of the day, have to exercise some subjective judgement on the reasonableness of the data and forecasts and on what factors need to be adjusted for future developments; albeit IPART's judgement is one formed on the basis of their understanding and experience of the retail business.

We appreciate that IPART must maintain confidentiality on commercial data. However, we believe that more information could be provided to stakeholders in the Draft Determination regarding the detailed reasoning behind IPART's judgements.

For instance, to what extent are the different approaches weighted and/or considered reliable by IPART? This disclosure should preferably also include illustration of the range of

the data points by cost category by retail area, so that other retailers can provide more useful commentary and assessment.

Origin requests that IPART provides the utmost transparency to stakeholders regarding the basis of their judgement, particularly around their assessment of the bottom-up data. Given this is a three year review process, it may be appropriate to consider an independent verification of the different data sets provided to ensure consistency and appropriate cost allocation

4.2 Estimating retail operating costs

IPART proposes to consider retail costs in two separate categories, namely:

- *Retail Operating Costs (ROC)*: The operating costs of an efficient Standard Retailer incurs in performing the retail functions required to serve its small customer base; and

- *Customer Acquisition and Retention Costs (CARC):* The marketing costs involved with acquiring new customers and retaining existing customers. The costs also include the costs of transferring customers.

While Origin agrees that there is value in separating ROC and CARC, it does create conceptual difficulties. How are the various costs accounted for in the bottom-up data provided to IPART, and more significantly, how does this separation of the cost components affect the validity of the benchmarking approach? A critical review of the comparability of data supplied by incumbent retailers and by benchmark data is required.

4.2.1 Cost categories included in the retail operating costs (ROC)

IPART has provided a list of categories of retail expenditure that were used in the 2007 Determination of retail operating costs. IPART has confirmed in the Draft Methodology paper that it will continue with these categories with the exception that that marketing and transfer costs will now be included in a separate category, customer acquisition costs.

The discussion below will focus on the ROC expenditure.

Are the proposed categories of costs adequate?

Origin is most concerned that the categories of expenditure do not appear to be comprehensive enough to reflect a retailer's costs for operating in the increasingly complex energy environment.

We therefore seek clarification of the following retail cost items:

- *How are wholesale trading costs accounted for in the ROC?* The analysis of wholesale energy costs illustrate the many purchasing and risk management tasks that must be undertaken by a Standard Retailer, along with sophisticated control and reporting mechanisms. Origin's experience is that this can add some 10 per cent to retail costs.

- *How are back-office management functions such as reconciliation and settlement of network, AEMO and other wholesale charges accounted for in the ROC?* These are essential activities for a prudent retailer of any size and can be significant, depending in part on the quality and timeliness of data from networks.

- *Where is depreciation cost captured in the cost stack (or retail margin)?* Retailer billing, settlement, risk management, data management and reporting systems come at a significant cost, and in current environments legacy systems must be

constantly upgraded and eventually replaced. Costs may be in excess of $100M for a modern billing system, with a 2-3 year development and implementation cycle. Origin's experience is that depreciation costs can add more than 10 per cent to the total retail costs.

- *What allowance will be made for the commitments made by the New South Wales Government as part of the Reform and privatisation process?* This includes the proposed expansion of the Customer Assistance Policy and the proposed Transitional Service Agreement which may apply for "up to three years" after the sale process[16]?

- *How are the costs of bad debt dealt with in the cost build up, and what assumptions are made about changes in bad and doubtful debt in line with the economic cycle, rising electricity and other utility prices and changes in the consumer protection framework?* Origin, for instance, has observed significant increases in bad and doubtful debt in conjunction with the Global Financial Crisis (GFC).

  Origin notes that in addition to bad and doubtful debts increasing in response to the GFC, the economic cycle may have an impact on debtor days and working capital more generally.

  In considering the cost of bad and doubtful debts, it is also relevant to review the particular issues facing a Standard Retailer. For instance, the Standard Retailer customer base may not be representative of the population in general, it is probably more diverse than a new entrant retailer customer base, and reflects the general obligation to offer including to customers who revert back from a market contract.

  These impacts of the economic cycle do not appear to be captured adequately, if at all in the retail margin.

Origin acknowledges that IPART proposes to consider any new retail business activities and changes to existing activities since the 2007 Determination. From Origin's perspective the items listed above do not represent new activities, but equally we are not clear how they might have been captured (or otherwise) in the 2007 Determination.

Origin therefore requests that IPART review these matters carefully to ensure they are appropriately captured in the data represented in the relevant benchmarks. If they were not previously captured then we believe that they are appropriate in the current Determination.

<u>Are the costs in each component adequate?</u>

Origin has already indicated in section 4.1 that a review of the quantum of these costs, particularly, but not exclusively, the regulatory compliance costs, should be undertaken in the light of the extensive regulatory changes that will be emerging over the next three years.

As noted, for instance, the introduction of the CPRS will incur significant up-front costs for establishing the billing, monitoring and reporting frameworks as well as ongoing expenditure.

The progressive adoption of interval meters and time-of-use tariffs (at network and retail level), will impact on all of these cost elements.

[16] For instance, see NSW Government: *Customer and Employee Protection Fact Sheet*. September 2009.

Origin notes here the recent announcements by Energy Australia with respect to their proposed roll-out of interval meters and introduction/expansion of time-of-use and related network charges. It is not clear how the consequential impact on a retailer's cash flow, network cost recovery and retail operating costs will be ensured, and/or whether the regulatory framework will inhibit the pass through of these charges to customers.

More generally, as noted, we encourage IPART to provide more transparency around the judgements that they will inevitably have to make in assessing both cost based approaches and evaluating the changes in this over time.

4.3 Estimating Customer Acquisition and Retention Costs (CARC)

Origin agrees with IPART that the CARC should include consideration of both retention and acquisition costs given that the Determination is based on the costs facing a Standard Retailer.

Moreover, given the very real practical difficulties in the calculation of CARC, Origin accepts the proposal by IPART to assign customers between existing and new customers such that:

- *Acquisition costs*: All marketing and transfer costs relating to new customers; and
- *Retention costs*: All marketing and transfer costs associated with existing customers.

While Table 4.1 in IPART's Draft Methodology report (page 43) provides a useful paradigm for conceptualising costs by type and by marketing and transfer costs, there are a number of questions about the detail of the proposal.

For instance, Origin would not agree that the "transfer" costs associated with the Standard Retailer's existing costs are necessarily "negligible". There are definite costs associated with the loss of customers to other retailers and with the internal transfer of customers from a standing contract to a market contract including the various notification requirements, system processes etc. Similarly, reversion costs need to be recognised.

Origin notes the analytic and data complexity of IPART's proposed approach and is concerned that the relevant data may not be available and/or may not be adequate for this level of detailed analysis. Certainly it represents a level of disaggregation that a retailer would not normally have available at an accurate level implied by the IPART approach.

It appears to Origin, therefore, that IPART will be required to make many judgements over these costs and the way these costs might change over time.

One of the more difficult but relevant questions (because it is used to amortise the cost of acquiring a customer) facing IPART will be assessing the "life" of the customers on a regulated tariff and, separately, on a market offer. IPART's previous assessment of the "life" of a customer on a negotiated contract was too long. This needs to be shortened, at least if IPART also expects the level of competition to develop in the market.

Assessing the "life" of a standard contract customer is even more problematic. From a policy perspective, the intention of the government is to reduce reliance on regulated tariffs so one would expect higher rates of "churn" away from standard tariffs if the Determination satisfies its objectives. On the other hand, churn will not occur if IPART understates the costs of maintaining the customer base as new entrant activity will quickly drop away, and incumbent retailers will not offer market contracts.

5. Establishing the retail margin

The ToR require IPART to set a retail margin allowance on the basis of the margin requirements for an efficient New South Wales Standard Retailer taking into account any risks arising from supplying regulated customers that are not compensated for elsewhere in the regulatory package.

IPART proposes to meet this criteria by establishing a retail margin that is based on the assessment of the systematic risks (economic cycle risks) facing the Standard Retailer. This is based on the assumption that all other risks (the non-systematic risks) are captured in the other components of the regulatory package.

5.1 Retail margin and risk allocation

Table 2.1 (pages 8 to 10) in the IPART report provides a useful summary of IPART's proposed allocation of these risks across the regulatory package.

Origin generally agrees with the principles of the risk allocations set out in the table. However, there are a number of areas where the risks themselves do not appear to be appropriately and/or fully captured. We have identified these in the body of our submission above and summarise below.

In particular, we have highlighted in our comments below, the potential role of the annual (or biannual) review process) in mitigating risk. Origin considers that there is still insufficient information on how this review process will work to assess its effectiveness in capturing non-systematic risk.

Bearing this primary issue in mind, areas of risk allocation that Origin believes require further consideration or clarification are repeated (for convenience) below:

- *Normal variation in load profile*: Origin is not clear how normal variation in load profile is captured in the various components of the energy purchase costs methodology. We seek further evidence of the sensitivity of the outputs to variations in this approach.

- *Step change in the load profile of the regulated base*: Whether or not this risk is adequately addressed through the periodic review process will depend on the nature of the periodic review as well as the modelling framework itself.

- *Step change in wholesale electricity spot and/or contract price*: Origin does not believe this risk is fully captured in the wholesale energy cost calculation and periodic review processes.

  Our reasons have been set out previously. In brief, the mark-to-market approach for assessing costs, and the periodic review processes (which itself will use the mark-to-market approach) are always forward looking.

  For example, the mark-to-market approach does not recognise historical and prudent investment by the retailer in forward contracts. Thus, the purchase cost allowance does not necessarily reflect the efficient costs of acquiring the contracts (noting a Standard Retailer cannot readily sell its contract position into the wholesale market).

  In addition, and compounding this effect, the periodic review process is always forward looking and does not correct for historical forecast errors.
  Of course, the Determination could also work against consumers. However, this would be less likely given the focus on efficient costs, and the fact that consumers

can switch retailers and/or to market contracts. In contrast, a Standard Retailer cannot "switch" customers, but is a market taker.

- *Step increase in customer defaults and bad debts*: IPART has stated that the cost of bad debt and any step changes in this is dealt with in the retail operating allowance. Origin is not clear, however, in what way this is dealt with in the retail operating costs and, in particular, how step changes in customer defaults and bad debts is catered for.

  Origin considers that this risk should have both a systematic and non-systematic component, in part related to economic cycles, in part to pricing and regulatory arrangements.

  Similarly, the complex issue of counterparty credit risk should be considered in the retail margin assessment, if not taken into account in the wholesale energy cost component of the regulatory package.

- *Change in industry structure compared to that assumed*: IPART is assuming current ownership and structure for the first year of the Determination and proposes that structural changes will be addressed in the regulatory review process.

  However, Origin believes IPART needs to take account the recent announcements by the New South Wales Government at the commencement of the Determination period as they introduce a unique set of risks at the wholesale and retail level. To the extent the structural changes change some of the deeper assumptions of the Frontier and SFG models for instance, it is doubtful if the periodic review process can adequately capture them without undermining the overall integrity of the approach.

5.2 Retail margin and proposed methodology by SFG

IPART, on the recommendation of SFG, proposes to estimate the retail margin using three alternative approaches; namely:

- *Expected returns approach*: based on the expected cashflows that a retailer will earn and the risks associated with these cashflows, and determines a retail margin to compensate investors for systematic risk associated with these cashflows.

- *Bottom-up approach*: starts from an assumed investment base and cost estimates and determines the earnings and revenue which would allow the retailer to earn an expected return equal to its estimated costs of capital.

- *Benchmarking approach*: examines retail margins of listed energy utilities in Australian and other countries, as well as benchmarks from similar businesses.

IPART and SFG correctly acknowledge that each of these approaches has some difficulties. As a result, they propose to "triangulate" the outcomes to provide a "feasible" range for the retail margin (IPART, page 48). IPART has then indicated it will use its discretion to select from the resulting range of possible retail margins.

However, such an approach requires that each of the three approaches is reasonably soundly based. Triangulating unsound data will not lead to a reasonable outcome overall.

Origin recognises the extensive consideration that SFG has given to each of the three elements and accepts that ultimately, some choice has to be made taking into account the limitations of each of the elements.

Nevertheless, we believe it is useful to comment on at least a number of issues facing each of the three approaches. For the purposes of this discussion, Origin takes at face value the argument that the retail margin should reflect the systematic risk only.[17]

Before looking at each component, however, Origin seeks clarification on part of SFG's introductory commentary. SFG states that:

> To the extent that [carbon inclusive] energy costs are estimated within a range, and that range becomes wider due to uncertainty over carbon cost, the range for the estimated margin will also increase[18].

Origin seeks confirmation that this statement means that IPART intends to provide a range of energy cost outcomes for each year of the 3 year period, and that this range will in turn feed into the calculation of the range of feasible retail margins by SFG.

Origin considers this would be an appropriate approach as it means the retail margin range will indirectly reflect the regulatory uncertainty of the estimation of wholesale energy costs. In our view, IPART should also take this range – reflecting general uncertainty over outcomes - into account when selecting the final allowed retail margin percentage.

5.2.1 Expected returns approach

The expected return calculation requires a number of assumptions that need to be made transparent in the Draft Determination papers such that stakeholders can assess their reasonableness.

There are three specific matters however, which Origin would raise at this time. They are:

- The WACC appears to be an important input into calculations including the terminal value calculation. This WACC, however, will be determined exogenously by IPART (see also section 5.3.3 below).

  It is important that the assumptions in other parts of the expected returns calculations correspond with the assumptions used by IPART in their assessment of the WACC, if the desired "internal consistency" is to be meaningful.

- SFG needs to ensure that the Bond maturity of the risk free rate matches the life of the "asset". For instance, if 10 years is the proposed life of the customer, so the 10 year bond should be used to ensure mathematical and internal consistency[19].

- The expected returns analysis requires the assumption that growth equates to the assumed long-term inflation rate, however, this assumption is only valid if "*the cash flow assumption allows sufficient reinvestment to ensure that assets are maintained in their existing productive capacity and that customers are retained*" (SFG, page 14).

  There are a number of difficulties with this assumption. At the minimum, the regulatory package should allow recovery of retail costs that includes sufficient investment in acquiring and retaining to ensure the assumed outcome is viable.

[17] This is not to imply that Origin accepts that all the non-systematic risk has been adequately captured elsewhere in the regulatory package – we do not believe this to be so and, in particular, would argue that such a judgment cannot be made until there is clarity over the periodic review process.
[18] Strategic Finance Consulting; *Estimation of the regulated profit margin for electricity retailers in New South Wales, Methodology and Assumptions.* August 2009. page 1.
[19] The Australian Competition Tribunal recently made a similar observation, when critiquing the decision of the ACCC to Setting Allowed Returns for Regulated Firms.

However, Origin has elsewhere indicated there are other challenges to this assumption of continued growth in line with the long-term inflation rate. For example, Governments expect their energy efficiency programs to result in a reduction in overall electricity consumption per household.

In addition, higher prices under the CPRS and potential changes in demand from interval metering[20] and time of use pricing may all impact on future retail cash flows.

Origin therefore, seeks assurance that there will be consistency between the assumptions in the retail margin calculation and other external events including the announced policies of the NSW Government.

5.2.2 Benchmarking the retail margin

SFG considers benchmarking retail margins will provide an external validity for the calculation undertaken through the expected returns approach. SFG intends to consider returns evidenced in the public statements of listed Australian energy retailers, listed retailers from Australia, the United States and the United Kingdom, and listed energy utilities from these three regions.

The difficulties with benchmarking have been well documented in Origin's previous submissions to IPART and the submissions of other stakeholders. These difficulties include, but are not limited to, the difficulties of ensuring that "apples are compared with apples", that there are sufficient data points to provide reliable benchmarks and that the period of time over which these other benchmarks are taken is comparable with the forecast period for the Determination on key variables.

These limitations are also acknowledged by SFG and IPART. In particular, SFG correctly identified that other regulatory decisions, while superficially appealing, "*do not necessarily reflect the same assumptions as our analysis – especially with regard to the allocation of risk premiums and costs in arriving at the regulated price – and they were* ***made with lower uncertainty over future energy costs***" (SFG page 14, Origin's emphasis).

Origin would also highlight that even when comparing the limited set of listed energy retailers, the most similar of all the reference sets to the Standard Retailer; it is difficult to make direct comparisons of EBIT margins. For instance, both Origin and AGL comply with all statutory reporting requirements yet there is no direct one-for-one comparison between the retail margins presented in public reports.

5.2.3 Bottom-up analysis

The bottom-up analysis provides an alternative assessment of margin based on achieving an expected rate of return that matches a regulated rate of return. Again, this approach faces a number of difficulties, which SFG has alluded to. In particular:

- The approach relies on a calculation of the value of the asset base, for a retailer this is largely the value of the customer base. Origin believes that there is only a very limited set of reference points for this, as the price paid in more recent transactions represents complex valuations that include the "fit" of the portfolio of customers with the overall business structure and objectives of the purchaser.

  Using historical purchase prices as the base (SFG proposes to use later data to "augment" the 2007 values, not replace them), requires careful assessment about the relevance of earlier data to the value of the customer base. However, it is not

[20] For example, Energy Australia has indicated that 70 per cent of households with a smart meter could save over $60 per year in their energy bills. *Source*: The Daily Telegraph, *NSW residents will pay more in peak0hour periods for power, if they do not change their lifestyles*. 19 September, 2009.

yet possible to assess the relevance of earlier data until SFG has provided a full list of the purchasers that form part of the assessment of the asset base.

Moreover, using the revealed value of the customer (that is, the apparent purchase price) as an input into the retail margin also risks circularity in that the purchase price paid for the customer will include expectations about the future cash flow, the period of that cash flow and the likely retail margin. If retail margins were expected to be small, then purchase prices would reflect that expectation.

- It is not clear from the SFG report if WACC formula presented on page 16 of their report is the same calculation as that used by IPART. Origin assumes that notwithstanding the description on page 16, SFG will have reliance on the IPART figure (currently 8.7 per cent real pre-tax – see section 5.3.3 below), rather than an independent calculation.

5.3 Other matters regarding the proposed margin methodology

5.3.1 Is the margin based on EBIT or EBITDA?

IPART also states that this margin is to be expressed as a percentage of a retailer's total electricity sales (or "EBITDA" – see IPART page 48).

In the first instance, Origin seeks some clarification of this. The SFG report refers to the calculation of retail margin on an EBIT basis, i.e. the retail margin is calculated after an allowance for depreciation costs – which in this instance, would then need to be included in the retail operating costs.

Origin understands that there is (typically) at least a 1 per cent difference in the two measures. For instance, if EBIT is 6 per cent return on revenue, then the EBITDA used by IPART should be at least 7 per cent (this is an example only). The Draft Determination needs to clarify this situation, and to explicitly identify and allocate reasonable depreciation costs either to retail operating costs or as part of a higher retail margin allowance.

5.3.2 What is the appropriate relationship between changes in economic conditions and electricity sales volumes?

In the previous determination IPART assumed a one-for-one relationship between economic conditions and total energy sales. IPART proposes that for the 2010 Determination, SFG will undertake further analysis of the relationships between economic conditions and electricity sales to *small customers*.

Origin considers that this is an appropriate step for the current Determination, on the proviso that the regulated package in total, takes account of commensurate changes in bad debt and additional working capital requirements for servicing small customers in various stages of the economic cycle.

In addition, small customer sales are particularly sensitive to weather effects. Origin would seek to understand how the SFG approach will differentiate between economic factors and other exogenous events such as weather.

5.3.3 What is the appropriate discount rate to be used in applying the expected returns approach?

IPART has indicated that it will determine the appropriate rate by "*considering the real pre-tax WACC, based on an analysis of the relative risk of a retail business and prevailing market conditions* (IPART, page 51*).*

In the Draft Methodology, IPART has advised that its preliminary view of the discount rate to apply to retail margin calculation is a real pre-tax discount rate of 8.7 per cent, compared to the discount rate for generation of 8.2 per cent.

Origin agrees that the discount rate to apply to a retailer should be higher than the discount rate for generation reflecting their different risk profile. However, IPART has provided only limited explanation of the percentage rate itself. The difference between the generation and the retail WACC advised by IPART appears to be based only on the different assumptions about the percentage of debt to equity (50 per cent debt funding for generation, 40 per cent debt funding for retail due to its "*lower asset base and higher revenue volatility*" (IPART, page 51)).

The limited explanation of IPART's proposed WACC means that Origin has found it difficult to compare this figure with other regulatory decisions. For instance, the AER has recently determined to use a nominal vanilla post-tax discount rate of 8.82 per cent for transmission and distribution businesses[21] – businesses that investors would generally regard as lower risk than energy retailing.

Moreover, we highlight that in making this Final Determination, the AER has concluded that the market risk premium (MRP) should be increased from 6.0 per cent to 6.5 per cent, which is above the premium put forward by IPART of 6.0 per cent. The AER, after extensive investigation of economic data and expert opinion states that the MRP will be increased in 2009 because:

> Based on the weight of evidence, the AER considers an MRP of 6.5 per cent is reasonable, at this time, and is an estimate of a forward looking MRP commensurate with the conditions in the market for funds and is likely to prevail at the time of the reset determination to which this review applies[22].

Origin considers that the electricity retail business should have a MRP greater than the distribution businesses that have (inter alia), clear regulatory mechanisms to re-capture in future years any "under-recovery" in their revenue streams.

As a result, Origin requests IPART to review its interim decision on the WACC to ensure consistency with other regulatory decisions after taking into account the particular conditions facing retailers in the electricity market. If IPART holds a different (risk adjusted) view to other regulators, then Origin believes the reasons for this different view need to be fully explained to stakeholders.

[21] Australian Energy Regulator, *Final Determination for Electricity Transmission & Distribution network service providers. Review of the Weighted Average Cost of Capital (WACC) Parameters.* May 2009.
[22] AER Final Determination, ibid, page 238.