



6 September 2013

Dr Malcolm Roberts
Chairman
Queensland Competition Authority
GPO Box 2257
Brisbane QLD 4001

Dear Dr Roberts

QCA INTERIM CONSULTATION PAPER: REGULATED RETAIL ELECTRICITY PRICES 2014-15

Origin Energy (Origin) appreciates the opportunity to respond to the Queensland Competition Authority's *Interim Consultation Paper on Regulated Retail Electricity Prices for 2014-15*.

Should you have any questions or wish to discuss this information further, please contact Keith Robertson (Manager, Retail Regulatory Policy) on (02) 9503 5674.

Yours sincerely,



Phil Moody
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**Submission to the
Queensland Competition Authority's
Interim Consultation Paper:
Regulated Retail Electricity Prices
2014-15**

September 2013

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1. Executive Summary

Origin Energy (Origin) appreciates the opportunity to respond to the Queensland Competition Authority's (QCA) Interim Consultation Paper: Regulated Retail Electricity Prices 2014-15.

Origin supported many of the findings of the QCA's final decision for 2013-14. Last year's determination represented a significant improvement upon the previous year by importantly recognising more reasonable allowances for retail operating costs, retail margin and prudential requirements.

Origin acknowledges that the QCA will seek to ensure a level of consistency in approach within the three year price determination period. However there are number of areas within the current framework which Origin believes could be improved while maintaining consistency of approach and regulatory certainty.

Competition

The terms of reference require that the QCA have regard to the effect of regulated retail prices upon competition. Hence, regulated retail tariffs should be set at a level that is sufficient to protect and promote competitive market offers.

Origin would expect that the inclusion of more cost reflective allowances for retail operating costs in QCA's FY13-14 determination will encourage retail competition in SE Queensland.

Carbon Uncertainty

The QCA's task in setting wholesale cost allowances under a market based approach will be particularly challenged this year by the uncertainty around carbon policy. This uncertainty has resulted in both reduced futures contract market liquidity and variability in the extent to which carbon costs are "priced in" to the futures market. This problem may well persist after the Federal election. Origin's strong recommendation is that the QCA use brokers' prices for carbon exclusive ('AFMA carbon clause') contracts as the benchmark for the market contract price. An adjustment for carbon costs can then be made to this baseline.

Wholesale energy cost

Origin accepts that the market-based approach is currently the QCA's preferred methodology and hence this submission does not reiterate our views on the need to reference long-run marginal cost. However Origin maintains that the market-based approach to setting the wholesale energy cost allowance could more accurately reflect retailers' actual costs of supply by recognising the supply contracts retailers actually enter into. The futures market provides an indication of the current market value of retailers' hedge contracts but not their actual cost. Origin believes there is a strong case for the inclusion of PPA's; indeed the only credible argument for their exclusion is that the contract details are not in the public domain. As Origin has previously observed regulators frequently use confidential information as one of their inputs in assessing costs e.g. the QCA currently relies upon confidential data (obtained by IPART) in determining the retail operating cost allowance.

Modelling

Origin believes a number of shortcomings in the modelling of the Qld system load and Energex NSLP in last year's determination led to an understatement of retailers' exposure to high pool prices. Origin's key concerns are that for FY14-15 adjustments are made to the modelling to ensure:

- Greater variability between maximum demands across the simulations.
- Issues in scaling to AMEO profiles are addressed to avoid reducing a 1 in 42 peak to a 1 in 10 peak.
- Input data is drawn from a wider range than the three most recent years
- Pool price modelling recognises likely future market conditions including transmission constraints and mothballing of generation capacity.

Large-scale Renewable Energy Target Scheme

Origin has previously outlined its view that the long-run marginal cost (LRMC) of renewable electricity is a more reliable basis for assessing the cost of meeting LRET obligations than the market price. Origin remains concerned that LGC trading volumes may not be sufficiently liquid to support the use of a market price. We note that IPART held similar concerns about liquidity and applied an LRMC approach to LGC cost estimates in making its final determination for 2013-2014.

Retail Operating Costs and Margin Allowance

Origin strongly supports QCA's benchmarking approach that applied IPART's recent assessment of operating costs and margin. Origin notes that in forming its view on costs IPART obtained confidential data from retailers, performed a bottom up analysis and assessed these costs for reasonableness against a range of public reference points and other regulators decisions.

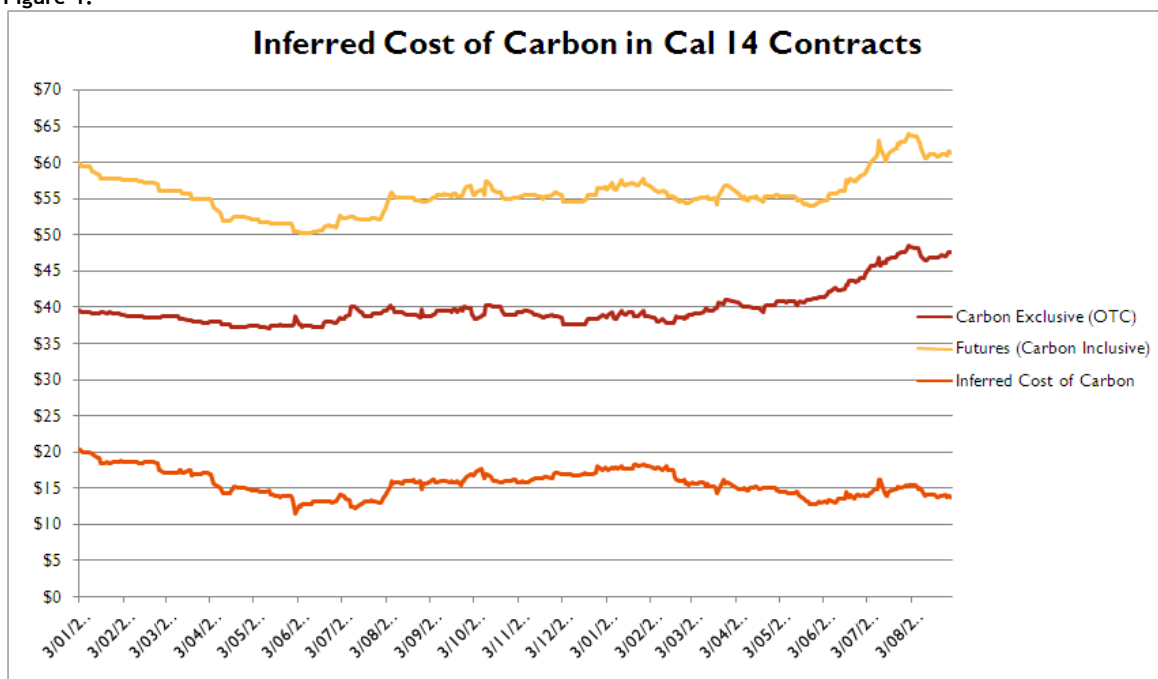
2. Approach to estimating wholesale energy cost

Origin has previously outlined its concerns with the QCA's approach to estimating wholesale energy cost in response to the QCA's reviews of retail prices in 2012/13 and 2013/14. While Origin maintains that its view that a methodology based on long run marginal cost is more appropriate than a fully market based approach we have not repeated these concerns in this submission except where the context has changed, to address the most recent findings of the QCA and its consultants, or where new evidence has become available.

Carbon

As highlighted by the QCA there is considerable uncertainty about outcomes with respect to carbon policy in financial year 2015. Recent over-the-counter trades for carbon exclusive contracts and futures contracts (carbon inclusive by nature) in base Qld for Cal 14 have been plotted below in Figure 1 using d-cypha and broker data. As the chart demonstrates the market has "priced in" varying amounts of carbon cost reflecting differing views on the likelihood of carbon repeal or early international linkage.

Figure 1.



Source: D-Cypha, Brokers.

Note Quarterly prices averaged to form Cal 14.

It is critical that regulated retail prices do not preclude retailers from recovering the cost of all carbon related costs from their customers.

The current policy context poses a number of problems, as:

- The outcome on carbon policy may not become clear until after the commencement of the next Senate in July 2015, by which time the QCA will need to have set retail prices; and
- Reflecting this uncertainty, futures prices will continue to price in some carbon element, making it more challenging to identify a cost of energy that is exclusive of carbon.

Of the approaches identified by the QCA for dealing with this uncertainty, Origin supports the use of brokers' prices that are exclusive of carbon. Additional carbon costs can then be added

to this price in response to any change to the carbon legislation (e.g. repeal or early linkage to the European carbon market).

Origin has consistently opposed the use of ACIL's price distribution approach on the basis that the suggested mean outcome of the proposed model did not resemble the approach of a prudent retailer nor would it reflect the actual cost of supplying energy in Queensland. At a fundamental level there is no theoretical basis for taking the mean, as retailers hedge load at the best available market prices and through various instruments according to its own risk policies to ensure the viability of the business.

The Price Distribution approach is a modelled outcome - based on assumed cost inputs and generator bidding behaviour - that forecasts contract prices based on predicted spot outcomes, when in practice the two are not closely linked. Origin considers that the risk premium inherent in contracts prices and hedge portfolios are materially larger than the difference between the median and the mean of the price distribution methodology.

A prudent retailer must possess sufficient balance sheet capacity and liquidity to withstand extreme events or limit their impact through hedging. Hedging profiles are typically designed to cover a 1 in 20 year extreme event. The contract premium evident both historically and in the forward markets reflects the asymmetrical impact of extreme events and their potentially disastrous impact on a retail business. The use of one historical demand year pattern under the Price Distribution approach does not adequately reflect this volatility over multiple years. As a result the level of retailer risk implied by the Price Distribution approach would be higher than a prudent retailer would accept without a concomitant increase in overall margin. This additional risk is not currently reflected in QCA's proposed margin.

A further drawback of the price distribution approach is that is based on "black box" modelling, meaning the reasonableness of the assumptions used to create the outcome cannot be readily assessed.

Exclusion of Power Purchase Agreements

If regulated retail prices are to reflect retailers' actual costs they must in Origin's view include references to power purchase agreements and direct investments in generation as these represent the majority of the cost for retailers to supply electricity to customers on notified tariffs. In its Final Determination on Prices for 2013-2014 the QCA found that "at times market-based prices may be below the actual costs faced by retailers (including the costs of PPAs) [and] the reverse may equally be true in other years."¹ Origin maintains that since the QCA is required to estimate actual cost it must select indicators that are closest to actual costs ahead of indicators that are merely correlated with actual cost to some degree.

Origin notes that in ACIL's most recent advice to the QCA provided in support of the QCA's Final Determination on prices for 2013-2014 ACIL found that PPAs were an unreliable basis for estimating wholesale cost since:

- PPAs reflect a sunk cost and this not relevant to the market value of a PPA;
- PPAs reflect expectations about the value of the asset at the time the PPA was signed, whereas the value of the underlying asset will fluctuate depending on a wide variety of market and policy factors, and therefore PPAs do not reflect the cost of buying the energy only; and
- PPAs include benefits that are additional to benefits associated with hedging energy costs.

Origin questions whether these factors should be considered reasons for rejecting PPA costs. Firstly, all investments in energy-based derivatives are to some extent sunk cost for the investor, including both PPAs and short term market derivatives. Secondly, while the value of

¹ QCA, Final Determination Regulated Retail Electricity Prices 2013-14 May 2013, p.25

generation from a plant contracted under a long term PPA may fluctuate based on market conditions, the cost of purchasing electricity from that plant under the PPA does not. The cost of purchasing under the contract is the actual cost faced by the contracted retailer. PPAs and direct investment account for a significant share of the electricity sold to small customers in the NEM, meaning the cost of these investments is the most appropriate indicator of actual cost.

Thirdly, the additional benefits identified by ACIL relating to PPAs represent in the majority of cases both benefits and risks, since changes in market conditions can increase or decrease the implicit value of the PPA. Both upside and downside risk are features of the long term nature of PPAs, arrangements which by virtue of their longer term nature have become integral to the provision of energy to large retail customer bases in the NEM and hence reflect a genuine cost for retailers supplying electricity at the current time.

Lastly, to the extent that the factors identified by ACIL lead to a divergence between the cost of PPAs and market-based hedging instruments this is further evidence that market-based costs and PPAs are not basically equivalent (as previously stated by ACIL). The extra cost and risks (both upside and downside) associated with PPAs cannot be divorced from the cost of the energy in practice and so should not be separated in QCA's estimations. Instead, the cost of PPAs should be considered as a direct representation of the costs retailers actually face in supplying electricity.

Origin has previously provided the QCA with its PPA contract details on a confidential basis. Origin is confident that the QCA would be able to calculate the underlying cost for the energy supplied by the PPA taking account of the features of the contracts. This task is far simpler and prone to far less error than modeling pool prices.

Variability and volatility of load

Origin continues to have concerns that the demand data incorporated in to ACIL's modelling does not adequately capture likely variability in future years, for a number of reasons such as the use of only three years of demand data, an inappropriate scaling to AEMO load data and the use of least squares matching in relation to temperature data.

Use of three year demand record

We maintain that using only three years of demand data is likely to understate variability in demand and the cost of hedging to meet this demand, as these years are insufficiently representative to be the basis for a modelling over a 42 year temperature record.

Origin notes the explanations provided by ACIL as to why it selected only three years of data as the basis for projecting demand variability across 42 years of demand data, which were that prior to 2009-2010 the record of the net system load profile (NSLP) is incomplete and that there is insufficient wind data. Firstly, Origin queries why there is not a complete record of the NSLP prior to three years ago, since AEMO collects this data to settle the market. Secondly, it is unclear why wind data is pertinent to demand profiles, since wind output is on the supply side and so is incorporated into ACIL's pool forecast along with all other generated output.

Fitting 42 years to three years

Origin understands that to devise a load profile for each day in the 39 years of temperature data ('the historical data'), ACIL selects the day from the three years of underlying demand data when temperatures in the NEM regions were closest to the relevant day in the historical data, through a process of regression.

As highlighted by EnergyAustralia in its submission to the QCA's consultation on prices for 2013-2014, this regression process appears to give equal weight to temperatures across all NEM regions, that is, it seeks to find a day where the temperatures are the best match for each

region. However, weather in Adelaide and Melbourne are less relevant to demand outcomes in Queensland than weather in Sydney and Brisbane. This can be seen in Table 1a, below, which shows correlation in temperature over the period 2009-2013. Equally, while demand in Queensland is closely correlated with temperatures in Brisbane it is not well correlated with peak temperatures in the four largest NEM capitals, as shown in Table 1b.

1a. Correlation with Brisbane temperature			
Brisbane temp.	Sydney temp.	Melbourne temp.	Adelaide temp.
1.00	0.86	0.71	0.68
1b. Correlation with Queensland peak state demand			
Brisbane temperature		Brisbane, Sydney, Melbourne, Adelaide	
0.80		0.32	

Source: NEM demand/temperature records and Origin analysis

Based on the data in Table 1, it seems logical to give temperatures in the northern states a heavier weighting than those in the southern states, since this should provide a more accurate picture of demand outcomes.

In addition to the potential over-representation of weather in the southern states, ACIL's modelling of variability also sets the peak in 42 years of simulated demand data to be at the level of AEMO's 10% probability of exceedence (POE). This means that a demand peak that should be a one in 42 year event is reduced to be a one in ten year event. Origin notes ACIL's finding that this is a limitation in the modelling. ACIL question whether correcting for this under representation of variability would in any event increase overall retailer cost and therefore whether there is a need to correct for this. Origin suggests that if this approach is maintained then ACIL should demonstrate the limited impact.

Price outcomes

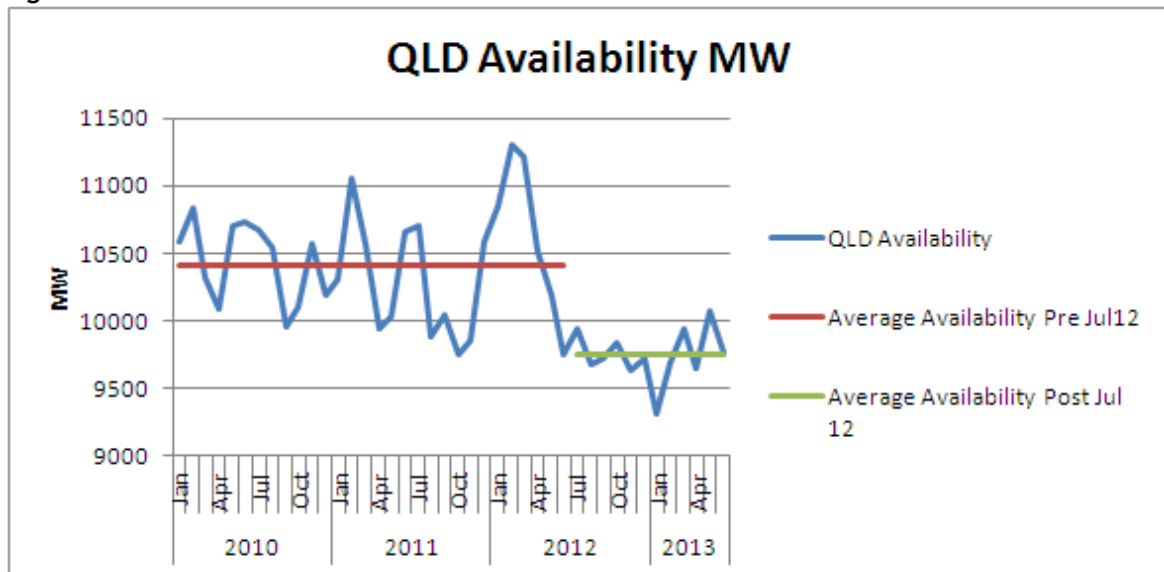
Origin has concerns about the limited incidence of events above \$300/MWh in ACIL's 95 POE outcome for 2013/14, which when combined with limited variability in the modelled NSLP (which is unrepresentative in our view), delivers unrealistically low energy cost outcomes. Origin notes ACIL's finding in relation to its modelled pool prices for 2013-2014 that of the 462 simulations prices the incidence of prices above \$300/MWh was consistent with historical data from 2001 to 2012. While PowerMark may have delivered individual simulations with more than 90 hours with prices above \$300/MWh, the 95 POE outcome for 2013/2014 was only 14 half hours. This is fewer than in all but 3 years in the period 2001 to 2012. This is not consistent with a 50% POE scenario and looks more consistent with a 90% POE scenario. Given that was the outcome for 2013/2014 it could be expected that there would be a higher incidence of half hours above \$300/MWh in the modelling for 2014/15, to be consistent with the distribution of these hours across the last decade. Origin reiterates that a more realistic incidence of events above \$300/MWh will only lead to more cost-reflective energy cost outcomes if the shortcomings in the modelled NSLP are also addressed.

Impact of constraints on prices

Origin notes ACIL's findings with respect to transmission constraints, that this will be alleviated when Powerlink completes the Calvale to Stanwell 275kV line augmentation. However, we draw ACIL's attention to other factors that may need to be considered in addition, namely reduced generation from Darling Downs power station, the summer shutdown of the Tarong and Collinsville power stations and constraints on the QNI. We are unclear as to the extent to which these were accommodated in ACILs modelling for FY13-14. It is particularly difficult to

determine the plant availability and derating assumptions applied e.g. the information provided in ACIL's planned outages summary (Appendix C2 of ACIL's report on Estimated energy costs for 2013-14 retail tariffs) only notes that Tarong had a planned outage for 1 month in every four years rather than that it was mothballed for much of the year. To improve transparency we suggest that to the extent that the modeling inputs do not reflect AEMO's medium term PASA at the time then deviations are explained in the consultant's report. In Figure 2 Origin graphs availability in Queensland in the period 2010 to 2013, which shows that from mid 2012 onwards average availability has been up to 700 megawatts below the average prior to that point.

Figure 2.



Green schemes

Small scale renewable energy scheme

Origin supports the approach to estimating SRES costs at the clearing house price of \$40 per certificate. The market cost of these SRES certificates were approaching \$40 in August 2013.

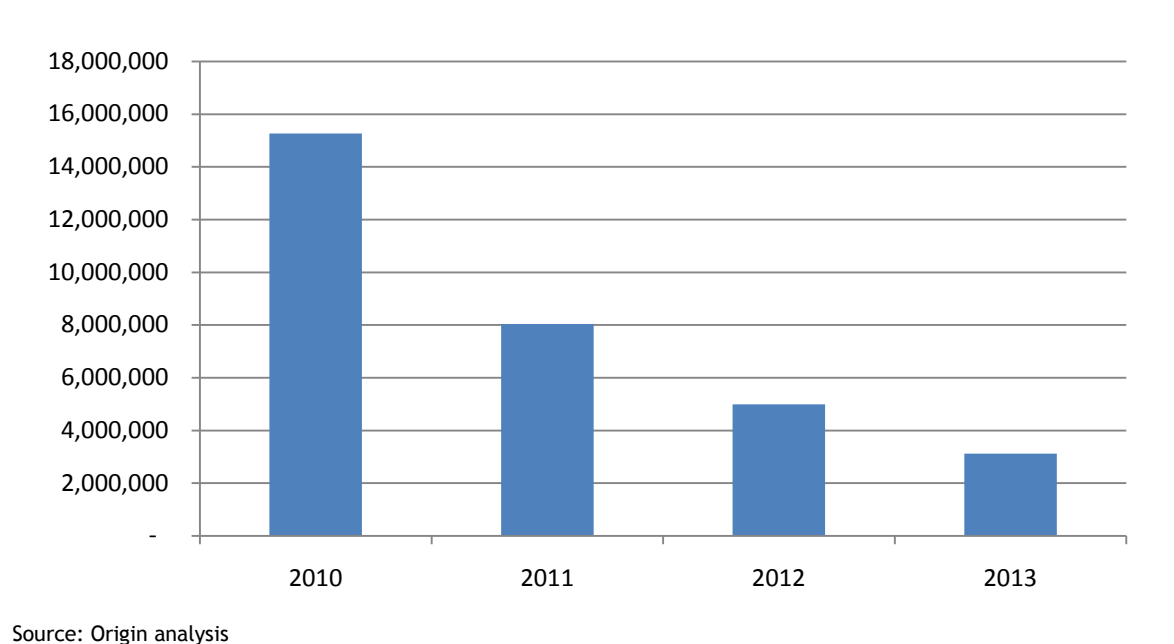
Large scale renewable energy target

Origin has previously outlined its view that the long-run marginal cost (LRMC) of renewable electricity is a more reliable basis for assessing the cost of the LRET than the Large Scale Certificate (LGC) costs. This is the case in large part due to a lack of liquidity in the market for LGCs. We note that IPART formed the same view in making its final determination for 2013-2014.² Origin remains concerned that LGC trading volumes remain insufficiently liquid to support the use of a market price. There is currently a significant discrepancy between the LRMC of generating a LGC (estimated by IPART at \$50.75/MWh³) and the market cost of an LGC (currently approaching \$40/MWh). Figure 3 represents Origin analysis showing the number of LGCs traded in the period 2010 to 2013, excluding trades where a bank was a counterparty. This shows the falling liquidity in the market as the overall target has increased.

² IPART, IPART's Final Determination, *Review of Regulated Electricity Prices 2013-2016 - Final Report*, June 2013, p.77

³ Based on IPART's Final Determination, IPART, op cit

Figure 3. Large scale certificates traded, 2010-2013



Prudential capital allowance, energy losses, NEM Fees

Origin continues to support the QCA's approach to the prudential capital allowance and to energy losses.

Origin has previously noted that ACIL's estimates of NEM fees appear to exclude FRC fees and National Transmission Planner fees. These are fees that should be included in the QCA's assessment of NEM fees.

3. Retail cost, margins, headroom allowance, pass through

Origin continues to support the approach adopted by the QCA with respect to retail cost and margin.

Retail cost

Origin supports the QCA retaining IPART's benchmark of retail cost with a CPI increase, since it is likely to be as reliable as any alternative and was established in the first year of the QCA's three year methodology. We note that while this estimate is in line with IPART's assessment of Standard Retailers costs, several second tier retailers' reported operating costs per customer higher than this level.

Retail margin

Origin supports the QCA retaining IPART's approach to retail margin, which is based on a robust process adopted by IPART that Origin broadly supported. Origin concurs with that a retail margin which is not sufficient to compensate investors for their capital investment and exposure to systematic risks will lead to under-investment by existing retailers, deter entry into the market by new retailers and stall the development of effective competition. Origin believes a margin of 5.7 percent is currently sufficient to meet these goals. Origin also supports the retail margin being calculated on total costs including network.

Headroom allowance - Competition

Origin supports the QCA maintaining an explicit allowance for headroom in prices in 2014-2015 at a level no lower than in the current determination. Origin believes that all the conditions for effective competition in Queensland are favourable, with the exception of the requirement to set a regulated price. In light of this, it is imperative that the QCA set tariffs at a level that will support competition, following the announcement of the Queensland Government that it intends to deregulate prices in 2015.

Under the less cost-reflective 2012-13 determination, competition in Queensland fell to its lowest levels in several years. The level reported by AEMO would be lower if restricted to in-situ churn. Since then, the churn level has rebounded somewhat, reaching 13 percent in July 2013 (Figure 4).

Figure 4. Historical annualised transfer rate



Pass through

Origin supports maintaining the QCA's current approach to cost pass through.

4. Network costs

Maintaining alignment of network and retail costs

Origin notes that the misalignment of timelines for setting network and retail prices adds to risk and cost. To this end Origin has supported IPART's proposed amendment to the rules to require the release of network prices further in advance of setting retail prices. Origin notes however that the AEMC has recently advised that assessment of this rule change has been delayed and so any future rule change will not assist with aligning prices for FY14-15.

Origin supports the use of the pass through arrangement to recover network costs where these fall short of the assumed outcome.