

Essential Services Commission of South Australia  
GPO Box 2605  
Adelaide SA 5001

[escosa@escosa.sa.gov.au](mailto:escosa@escosa.sa.gov.au)

Dear Commissioners

## SOUTH AUSTRALIAN ELECTRICITY STANDING CONTRACT

Macquarie Generation welcomes the opportunity to comment on the Essential Service Commission's *Electricity Standing Contract – Wholesale Electricity Cost Investigation, Discussion Paper, 20 June 2012*.

Macquarie Generation owns and operates Bayswater and Liddell Power Stations, two of Australia's largest capacity thermal power stations, with a combined generating capacity of 4,640 MW. The Corporation supplies approximately 12% of the electricity consumed in the National Electricity Market.

### Forward cost of wholesale electricity

ESCOSA's Final Determination in 2010 observed that some 28% of the small customer market remained on AGL SA's regulated standing contract. NSW and Queensland regulators have reported similar figures. For whatever reason, possibly the difficulty of comparing market offers or some distrust of a competitive utility market, a significant proportion of customers continue to rely on independent regulators to set the price they pay for electricity.

Macquarie Generation supports ESCOSA's stated objective when setting tariffs: "ensuring that standing contract prices reflect the efficient costs of a retailer with the standing obligation in SA, including reasonable profit allowance so as not to stifle competition in the retail market".

Setting the regulated wholesale electricity allowance in regulated retail tariffs is a difficult balancing act. Set too low, investment and activity in the retail market can be stopped almost overnight. Setting the energy allowance too high is likely to err in favour of encouraging retail competition, but it can mean that many small customers are paying substantially more than they should, with the standing retailer the primary beneficiary.

Macquarie Generation supports ESCOSA's preferred approach of setting the regulated wholesale energy allowance using market data on forward contract prices.

Essential Services Commission of South Australia

We note that this is not a simple exercise, given that small retail customers, predominately households, have a poor load factor in South Australia. Assembling and calculating the cost of a portfolio of contract products to replicate the wholesale price that a retailer would offer under a negotiated contract is not straight forward.

Nevertheless, we believe that the current long run marginal cost (LRMC) approach applied in South Australia is substantially over-charging customers who remain on the standing retail contract.

ESCOSA's Discussion Paper for this investigation, includes recent spot and futures contract data. Macquarie Generation recognises that there is less turnover in the futures market in South Australia relative to other regions. As noted by ESCOSA, depth and liquidity have improved over the past 12 months, particularly as the Federal carbon pricing scheme has been implemented and taken effect.

Macquarie Generation does not propose any specific threshold for assessing whether there is sufficient SA contract information to set a revised regulated wholesale electricity allowance from 1 January 2013, but we note that:

- futures contract turnover relative to physical turnover of 90% is substantially greater than in recent years;
- it is possible to construct a South Australia contract price using Victorian contract prices supported by Vic-SA inter-regional settlement residues; and
- weather derivative contract data is potentially a useful supplement to futures contract data.

#### Long run marginal cost methodology

There is a range of ways of calculating the long run marginal cost (LRMC) of meeting an incremental increase of system demand. Broadly, these approaches can be categorised based on how existing generation plant is treated:

- 'Greenfields' LRMC assumes that there is currently no plant available to meet demand, and that demand must be met using an entirely new generation system that is least cost.
- 'Brownfields' LRMC assumes that the existing mix of generation plant in the system is in place, and that demand can be met using both existing and new generating plant. This approach focuses on the least cost expansion path for the system as it stands today.

The choice of approach will lead to very different modelling estimates of LRMC. Using a 'greenfields' methodology would typically involve estimating the forward looking costs of a particular standalone technology or mix of new plant to meet a specific load shape. This approach invariably results in LRMC estimates at the upper end of forecasts, particularly if it based on a 'peaky' customer load.

Essential Services Commission of South Australia

A 'brownfields' approach will look at multi-period system optimisation across a predefined planning horizon. While there are various methods for calculating LRM within this broad approach, the 'with' and 'without' capacity expansions will factor in available capacity of the existing generation fleet. This generally results in lower LRM estimates, particularly for smaller load increments where there is an excess of existing capacity.

#### ESCOSA LRM methodology

In its Final Inquiry Report 2010, ESCOSA accepted that there was insufficient public contract price data to form a reasonable estimate of wholesale energy costs for AGL's standing contract offer. ESCOSA agreed with its consultants and AGL that an LRM approach "which 'looks through' the contract market to determine the underlying costs of generation is considered a more robust methodology under current circumstances".

ESCOSA did not fully explain why it chose a greenfields LRM approach over other methodologies, other than noting that AGL, consultants and other regulators had used such an approach. The LRM calculation incorporated a number of key assumptions which were likely to result in a wholesale energy cost allowance at the very upper end of any modelled estimates:

- ESCOSA used the load shape of small customers based on the net system load profile (for accumulation meter customers) with escalation factors;
- assumed that load growth would be met with a combination of open-cycle and combined cycle gas turbines, with a 100 MW and 250 MW cap on the scale of plant, respectively; and
- gas prices starting at \$5.50/GJ increasing through time with a 25% premium on gas for open cycle plant.

ESCOSA accepted AGL's argument that LRM forms a proxy for the cost that a generator will seek to recover over the long-term. AGL further argued that a regulated retail price that uses an LRM price floor will support new generation investment.

#### South Australian demand forecasts

Macquarie Generation questions the basis for the assertion that an LRM based on standalone new plant build is necessary to encourage new generation investment. Should there be a tightening of demand and supply fundamentals in the physical market, NEM experience has shown the spot market volatility and the level of forward contract prices will rise through time. Such price signals have led to new generation investment when and where it has been needed.

## Essential Services Commission of South Australia

Macquarie Generation considers there is a weak link, at best, between the setting of regulated retail tariffs and generation investment. If a standard retailer is unable to recover regulated wholesale energy costs, they may face solvency problems and may not be in a position to fund a new power station project. But that is not to say other investors will not take the opportunity if wholesale prices are sufficient to bank a particular investment.

Macquarie Generation is not arguing that the wholesale energy allowance should be set at a low level. We do observe, however, that the current standing contract determination, which provides an LRMC estimate for the regulated energy allowance of some \$120/MWh is appreciably above forward contract prices over the next few years, albeit a contract price not as heavily traded in South Australia as other regions.

AEMO's Electricity Statement of Opportunities (ESOO) 2011 forecast that South Australia would face a supply shortfall of 46 MW in 2014-15. AEMO's most recent National Electricity Forecasting Report (NEFR) has made some considerable improvements to the process and information used for forecasting future demand levels. AEMO has substantially revised down the likely annual and peak electricity demand in all regions, including South Australia (see charts below).

*Chart 1: South Australian actual and forecast annual electricity demand*

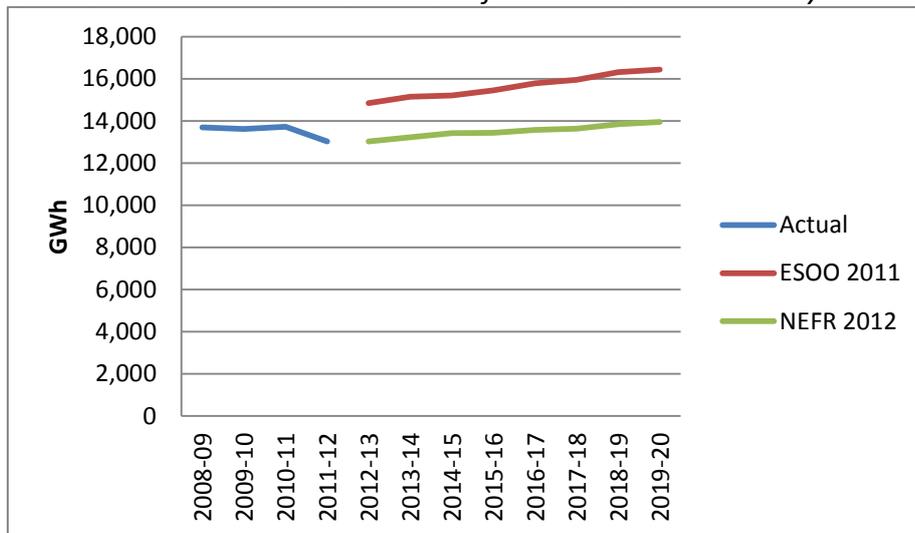
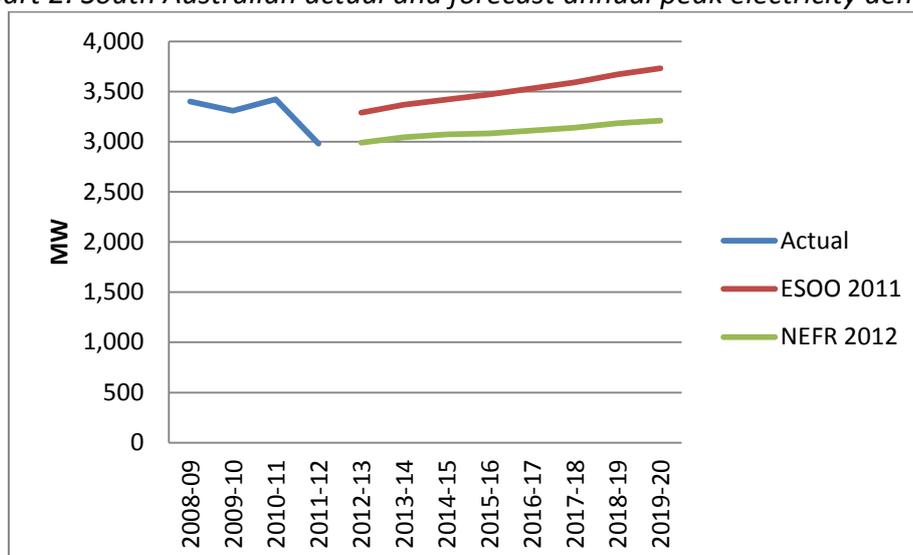


Chart 2: South Australian actual and forecast annual peak electricity demand



AEMO's revised forecasts are likely to substantially postpone the timing of AEMO's estimate of when any new generation investment is needed in South Australia, possibly until late in the current decade. Under the current ESCOSA LRM methodology, small customers on standing contracts would continue to pay a wholesale energy cost allowance reflecting the full cost of building new gas-fired plant. Given likely lead times of three to four years for planning and commissioning such plant, Macquarie Generation questions whether a 'greenfields'-based LRM approach is appropriate for the current determination period.

#### Making the regulated wholesale electricity allowance contestable

Macquarie Generation proposes that ESCOSA considers the option of a competitive tender for the regulated wholesale electricity supply obligation as an alternative way of delivering a market-based energy allowance to standing contract customers.

The key features of a tender process would include:

- ESCOSA or another independent party would publish historical load data (profile and volume) for customers taking supply under regulated standing contracts, going back as far as data is available;
- Tenderers would bid for a supply contract in which only the price varied – a \$/MWh price to supply a 'regulated load-following hedge' to any small customer on the regulated standing contract offer for the period of the contract, which could be for part or all of the remaining determination period;
- Tenderers would take the risk on both volume (customer numbers) and load (customer energy and shape);
- The successful tenderer would be required to provide an up-front security in some form so as to minimise the risk of contract default (tenderers could be generators or any other pre-qualified player in electricity derivatives); and

Essential Services Commission of South Australia

- Thorough auditing requirements would verify and confirm actual regulated customer load supplied by AGL throughout the contract period.

This is a competitive market-based approach that avoids the need for the regulator to second guess likely contract prices or derive artificial approximations of an LRMC methodology. Tenderers would base their offer of a load-following hedge price on their expectation of actual market prices of supplying regulated customers over the period of the contract.

Under this model, AGL is guaranteed to recover its retail operating costs and retail operating margin of supplying small regulated retail customers. Most importantly, it removes the risk of under or over recovery of wholesale energy costs. By providing a market solution, this approach sidelines the debate about the level of regulated wholesale costs needed to facilitate new generation investment.

This concept could be applied quite flexibly:

- the standing contract customers could be divided into tranches to increase the number of contracts offered;
- AGL would be eligible to compete in the tender process; and
- the tender could be extended to cover other wholesale costs, such as LRET and SRET costs and ancillary service fees.

This option would require the development of contracts, tender rules, IT systems and auditing processes. Nevertheless, given that there is still two years remaining of the current determination period, and the prospect that standing contracts will be extended beyond that time, establishing a contestable service would ensure that regulated customers are paying no more or less than the market cost of supplying customers with those particular demand characteristics.

#### Scope of potential savings for regulated customers

Macquarie Generation estimates that savings of at least \$33.75 million per annum could be delivered under a tender process, the equivalent of \$225 for every customer receiving supply under the standing contract. We base this calculation on the following high level, conservative assumptions:

- 20% of the roughly 750,000 small retail customers in South Australia remain on the standing retail contract – 150,000 customers;
- each customer consumes an average 7.5 MWh of electricity per annum;
- wholesale electricity allowance in the order of \$120/MWh (LRMC estimate of \$93.93 in 2010, plus SA average carbon intensity carbon price pass through, plus 2 years of price increases within the upper threshold);

Essential Services Commission of South Australia

- maximum market contract price for a load following hedge of \$90/MWh (carbon inclusive) – \$30/MWh saving.

### Summary

Macquarie Generation considers that the regulated wholesale electricity allowance in South Australian standing contracts is high when assessed against any current market measure. In our view, applying the existing LRMC 'greenfields' approach, limited by assumptions about technologies and fuel costs, has resulted in modelled estimates well above those necessary to support a competitive retail market in South Australia.

Those South Australian households not prepared to research and negotiate an electricity supply contract are paying a substantial regulated margin to AGL. Macquarie Generation has proposed a model whereby a contestable market is developed to determine the market price of supplying customers, rather than a regulated estimate that will almost inevitably be wrong.

Macquarie Generation would welcome the opportunity to participate in an auction of the right to provide a wholesale energy price for regulated customers in South Australia. We believe that we could substantially undercut the current regulated wholesale allowance.

Yours faithfully



LEISL BAUMGARTNER  
GENERAL MANAGER CORPORATE AFFAIRS

24 July 2012

---

---