



# AGL submission to Australian Energy Market Commission

Review of Effectiveness of Competition in the Electricity and Gas  
Retail Markets in South Australia

Date: September 2008



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## Introduction

AGL has made a submission to the Commission in support of the Commission's finding in its Draft Report<sup>1</sup> that the gas and electricity markets in South Australia are demonstrating effective competition. In that submission we said that:

- AGL concurs with the Commission's findings that the South Australian energy markets are competitive;
- The high prices for the first quarter of 2008 reflected the structure of the South Australian market and the extreme summer that had occurred; and
- Market churn was not directly related to high prices.

Since making that submission, AGL has becoming increasingly concerned about a number of comments made by an interested party in submissions to the Commission's Issues Paper and the Draft Report that claim there is a lack of competition in the wholesale electricity market in South Australia.

AGL believes that the facts do not support these contrary submissions and the arguments made in them cannot be supported. We are therefore providing additional information to the Commission to more fully discuss pricing issues in South Australia and to counter these claims.

AGL notes that similar claims of market failure and generator profiteering were made in the aftermath of the extreme summer of 2000/01. The South Australian Government established a task force to investigate the matter and found that the market was sound and that the outcomes of the summer were not due to generator gouging. This report can be made available to the Commission if required.

### **The bottom line**

AGL believes that the South Australian wholesale electricity market is one of the most competitive markets in the National Electricity Market (*NEM*). Aggressive marketing by retailers has maintained a health level of churn and retailers are still active despite reduced margins caused by rising wholesale costs.

The key issue for active retail competition is margins which allow headroom for competition. There is pressure on pricing due to:

- supply and demand issues;
- likely price increases for gas and coal; and
- federal policy initiatives in relation to climate change.

The pressure on margins is likely to increase, making retailing more difficult where a cap is placed on pricing. AGL therefore considers that removal of price cap is essential to maintain retail competition in South Australia.

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<sup>1</sup> AEMC; "Review of the Effectiveness of Competition in Electricity and Gas Retail Markets in South Australia: First Draft Report".

# The South Australian Wholesale Market

## Background

South Australia has historically been the most expensive NEM state for the supply of electricity. This has been due to its load factor, tight supply demand balance at times of extreme demand and the state's inherent generation cost structure.

These issues were recognised before the commencement of the NEM and led to South Australia seeking to include a capacity market in the design of the NEM. The response from the National Grid Management Council noted the issue but recommended a tighter reserve monitoring framework which, inter alia, led to the formation of the Reliability Panel.

During the extreme weather events in the summer of 2000/01 South Australia experienced high spot prices. This caused significant concern to many customers in SA since all customers except households and businesses were to become contestable from 1 July 2001. There was widespread concern with the NEM design and allegations of generator market power and price gouging.

The South Australian Government convened a task force to examine the issue. That task force determined<sup>2</sup> that the issues were in fact:

- The structure of generation and interconnection in the South Australian region;
- The extreme weather conditions; and
- The nature of the South Australian load.

While the task force recommendations were pursued by the South Australian Government, notably work on increasing demand side response, the key structural features of the SA region remain. This means that South Australia is a riskier region for retail operations.

## South Australia is serviced by relatively high cost generators

The cost to generate electricity in South Australia is higher than other NEM regions, for example Victoria. This is because South Australia relies on higher cost fuels to generate electricity – predominantly gas, distillate and low grade coal.

The coal in South Australia is sourced from Leigh Creek and is railed to Port Augusta. It has a high ash and moisture content. This means that the Northern power station has to use a very large boiler, which, in turn, is difficult to convert to alternate firing (eg gas).

The coal supply at Leigh Creek is limited by the design of the mine (box cut) which lowers mining costs. Further sources at Lock, Lochiel or Arkaringa will be more expensive.

Gas supplies to South Australia are provided by two sources, the Moomba to Adelaide Pipeline and the SEAGas Pipeline. Gas is available from the upstream sources but the cost of generating with gas is higher than both Victorian brown coal and Queensland or NSW black coal.

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<sup>2</sup> "The State Government Electricity Task Force: Final Report", 2001. Usually referred to as the SA NEM Task force.

The relatively high cost of South Australian generation can be illustrated by comparing the two charts below. As shown in Chart 1 (overleaf), South Australia is serviced by a relatively small amount of coal and is dominated by gas fired generation. Victoria on the other hand is dominated by cheaper brown coal generation.

### **South Australia has the peakiest load in the NEM**

South Australia has the peakiest load in the NEM. As shown in Chart 1, one third of South Australian generation capacity was used for less than 10% of the financial year 2007/2008. This was similar to that observed in the 2000/2001 financial year in South Australia, where about 25% of installed capacity was required for only 5% of the time<sup>3</sup>.

This means that generators that service the peak load, and who remain un-hedged, need to obtain their annual income in just a few weeks over the peak period. This results in high peak prices.

TIPS has historically been an intermediate to peak generator. Accordingly, when it is not hedged, it has always been necessary for TIPS to earn its revenue during peak periods. This has not changed since AGL acquired the plant.

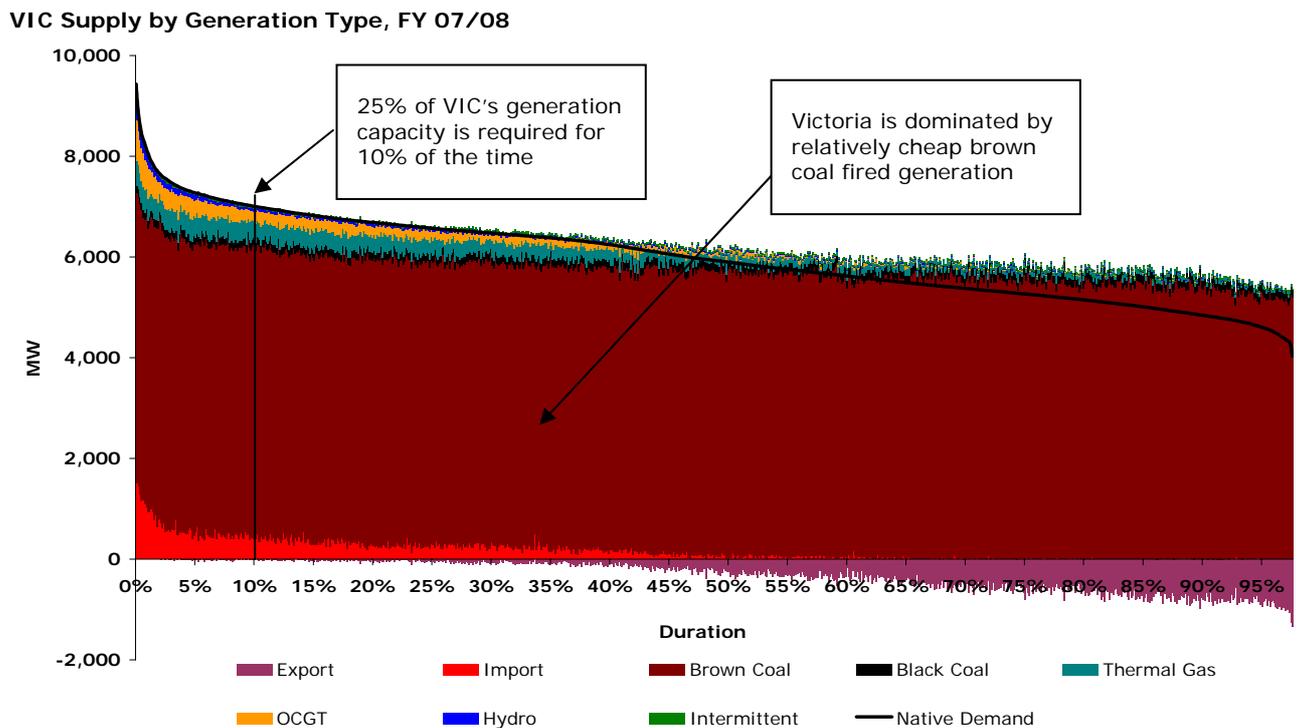
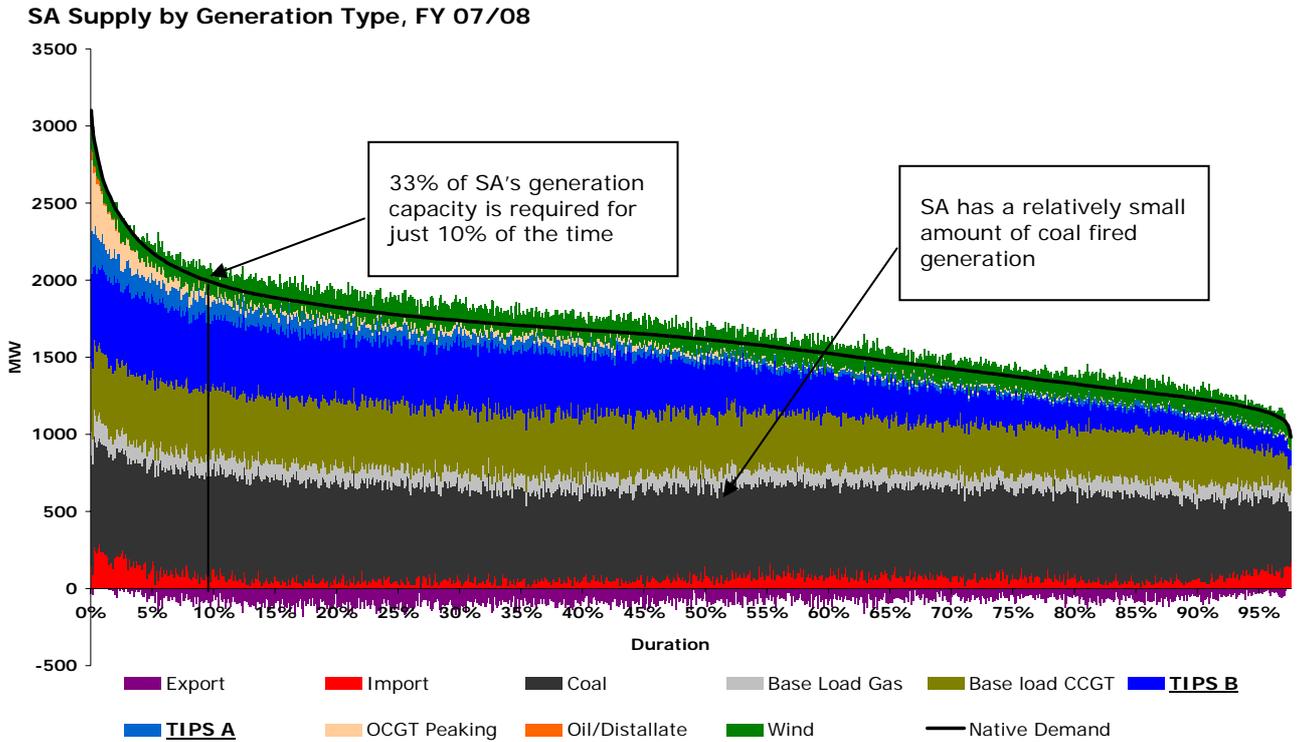
As wind and other newer gas and wind plants are commissioned in South Australia, TIPS will be pushed further up the demand curve giving it fewer opportunities to recover its costs from the pool.

The peaky load in South Australia creates significant risk for retailers. Chart 2 (below) shows the sensitivity of the SA demand to temperature. In fact, at the higher temperatures, a 1 degree rise in the temperature results in an increase of about 100MW of demand. This correlation is, however, not perfect and there are times when the temperature rises and demand in fact falls. It is the unpredictability of the load which creates significant risks for retailers and customers.

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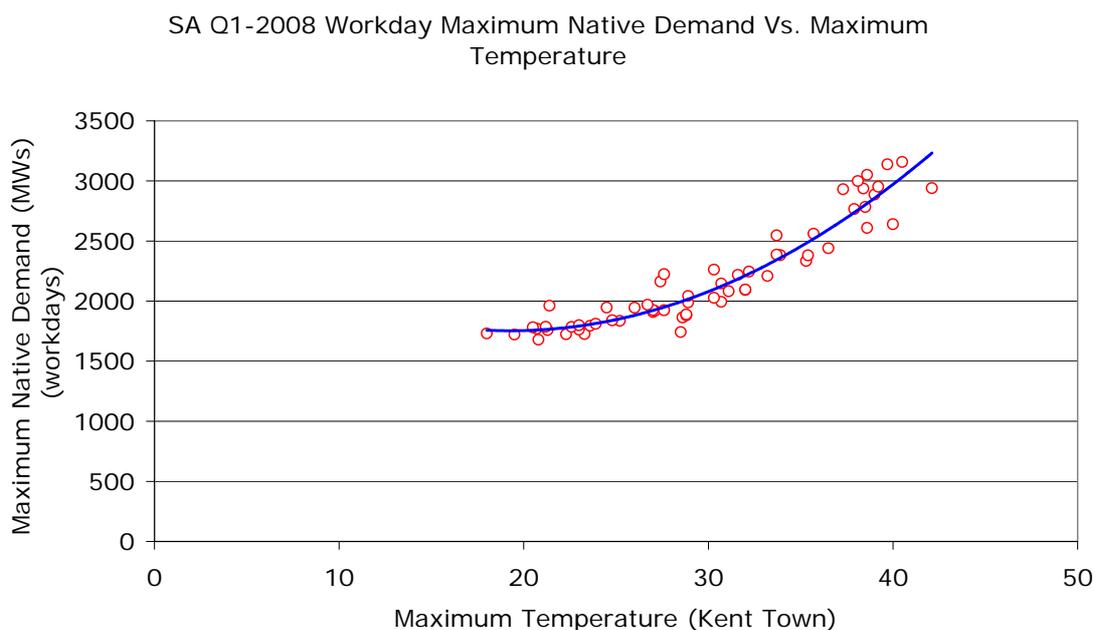
<sup>3</sup> See page 7 "The State Government Electricity Task Force: Final Report", 2001.

Chart 1. Comparison of Supply curves and generation types between SA and Victoria<sup>4</sup>



<sup>4</sup> Source: NEMMCO data and AGL internal analysis

**Chart 2<sup>5</sup>: Relationship between temperature and demand**



### Wholesale Electricity Costs

Prudent retailers establish a raft of contracts to allow them to manage the wholesale price risks. The South Australian market is particularly risky and therefore a prudent retailer will carry a higher level of contracts as an insurance against sudden high prices.

Energy costs incurred by retailers in a competitive market are a combination of the hedge contract prices paid to generators (swap, cap and other derivative costs) and the pool price for energy purchases not covered by hedge contracts including pool prices below the cap strike prices. That is, for a \$300 cap product, the retailer pays the cost of the contract plus the difference between the pool price and \$300/MWh.

Wholesale prices reflect the costs and returns for existing generating assets, the supply/demand balance, the peakiness of the load in a particular market and the volatility of demand. Hedge contracts mitigate the extremes of pricing (both high and low) but inevitably include a risk premium covering such volatility, reflecting the necessity to provide an incentive for generators to provide hedge contracts to retailers.

Prudent generators (see discussion on Torrens Island) also seek to be contracted to minimise their exposure to the pool and its risks. Therefore, while there is some truth to the claim by the UnitingCare Wesley (**UCW**) submission<sup>6</sup> that the energy price is independent of the pool price, it is generally not perfect. In any case, if it were true and generator were indifferent to pool prices because of perfect hedging they would compete for dispatch based on marginal prices. This would actually serve to stabilise prices and support retail competition in SA, contrary to the view in the UCW submission.

<sup>5</sup> Source: AGL information

<sup>6</sup> See page 28 of the UnitingCare Wesley submission "AEMC Review South Australia Energy Retail Price Caps: Is There Effective Competition?"

# The Torrens Island Power Station

## Background

On 2 July 2007 AGL entered into agreements with TRUenergy to purchase Torrens Island Power Station (TIPS), and sell its Hallett power station, resulting in a net payment to TRUenergy of \$300m. The transaction also involved AGL and TRUenergy entering into a number of electricity derivative contracts, a gas storage agreement, a long-term gas supply agreement and a long-term gas haulage agreement.

## TIPS contract position

TIPS is an intermediate to peaking generator (refer chart 1). Accordingly, it earns most of its revenue over the peak periods, if it is not contracted to provide hedges to retailers.

When AGL acquired the plant from TRU Energy, AGL was already substantially hedged in the South Australian market as would be expected from a prudent retailer. Accordingly, after purchasing TIPS its hedge contract portfolio together with its increased generation capacity exceeded its estimated retail customer demand in the South Australian region (ie: AGL was "long").

Because of its long position, TIPS was exposed to the spot market and was forced to earn revenue during the peak periods when its capacity was in demand. AGL, as a prudent retailer and generator, would have in fact preferred to have the TIPS capacity hedged rather than be exposed to the risk of the NEM pool.

AGL had made it known to all major Australian electricity brokers that it was a likely seller of South Australian electricity contracts, and would welcome approaches<sup>7</sup>.

Using publicly available information it can be seen that if TIPS was hedged the flat Q1 2008 forward contract price that was prevailing on 27 December 2007 (\$115.83) the station would have earned revenue of \$242.9 million<sup>8</sup> for Q1 2008 rather than the approximate actual<sup>9</sup> TIPS pool revenue of \$148,179,538.

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<sup>7</sup> A number of those brokers have indicated that they would be willing to confirm in writing their understanding that AGL was willing to offer contracts in South Australia from January 2008 onwards.

<sup>8</sup> The actual calculation is based on an N-1 basis (ie 75% of the plant was contracted) for both the TIPS A and TIPS B stations (i.e. 960MW)  $960\text{MW} \times 2184 \text{ hours} \times \$115.83 = \$242,853,811$ .

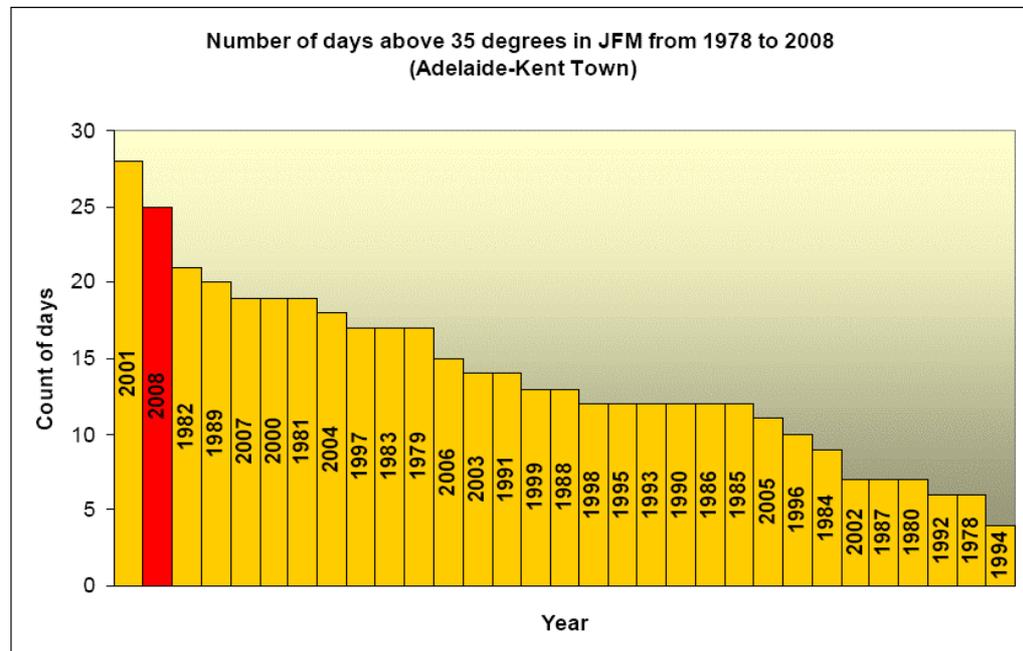
<sup>9</sup> Based on publicly available data from NEMMCO.

# Summer 2007/2008

## The second hottest summer for 20 years

The 2007/2008 summer was the second hottest summer since 1978, as shown in Chart 5 below. In the period January – March, there were 25 days above 35 degrees, which is representative of a 1 in 15 year event.

**Chart 5: Incidence of hot days in South Australia**



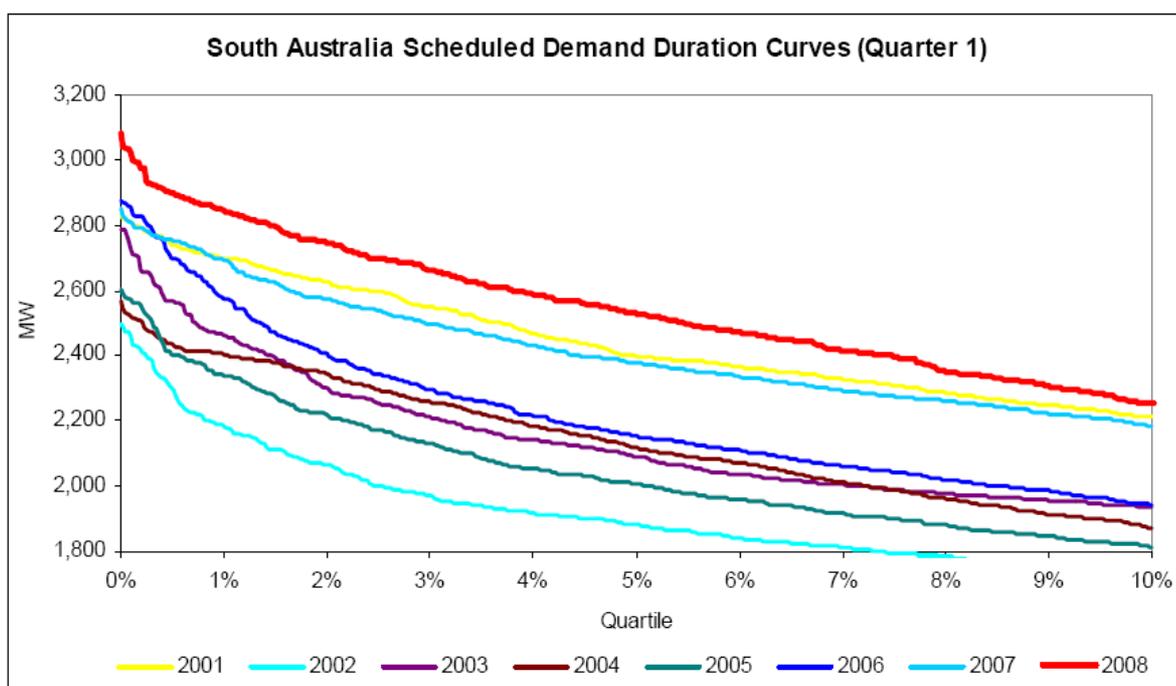
In a published report on the high price events<sup>10</sup> the AER stated:

“In January and February, extreme temperatures in South Australia saw high levels of demand in the region on a number of days, including a record demand on 10 January.”

In addition, as illustrated in Chart 6 overleaf, the peak South Australian demand in quarter 1 2008 was more than 200MW higher than any other historically recorded demand - a 7% increase. On average, the top 10% of summer demand levels were 300 MW higher than in the period 2001 to 2007.

<sup>10</sup> AER report: Spot Prices Greater Than \$5,000/MWh: SA 4 & 10 January, 18 & 19 February 2008.

**Chart 6. Demand Duration Curve for SA – top 10% of demand<sup>11</sup>**



AGL was, like most other retailers, somewhat surprised by the extreme weather patterns and high demand over the recent summer. While a retailer can expect South Australian summers to be hot, this summer was considered to be a one-in-15 year summer.

The variability of the South Australian demand due to weather has already been discussed. This means, however, that a prudent retailer should be seeking coverage to their expected demand assuming hot weather.

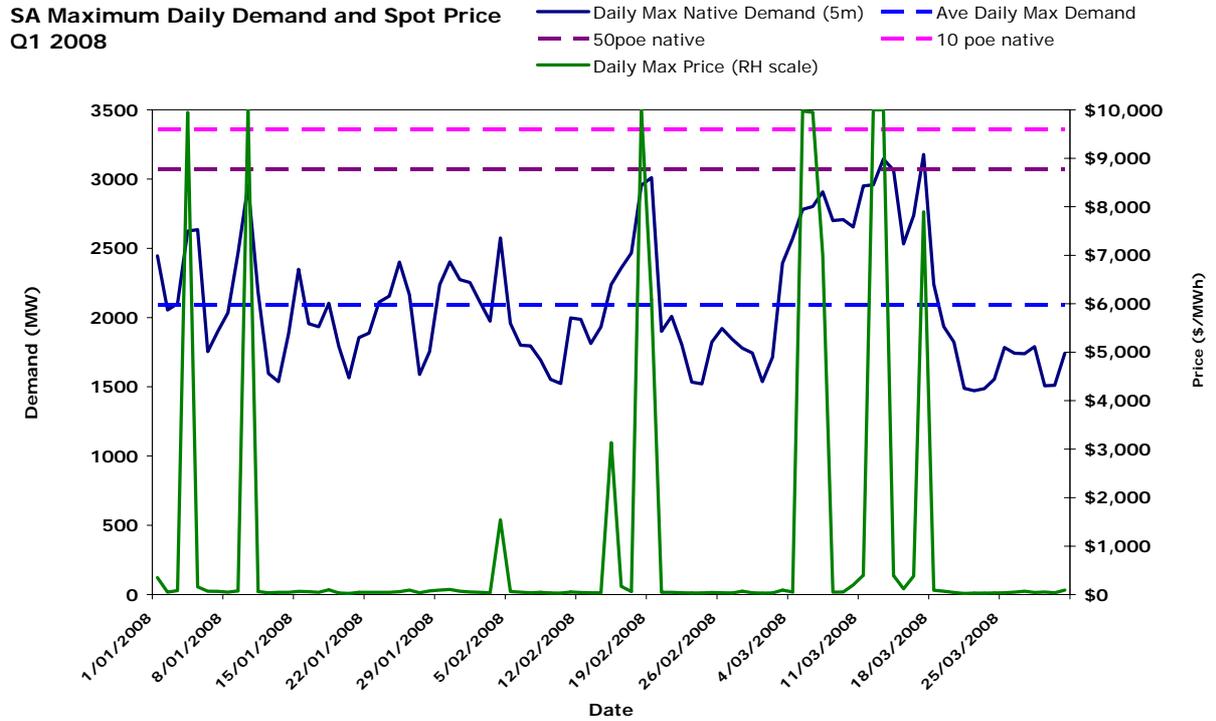
AGL believes that many retailers in South Australia were under contracted going into summer. We believe some were unduly confident that pool prices in South Australia would be low due to generally lower pool prices in recent years, due in part to mild summers since 2001, and summers in which the hottest weather occurred on weekends or public holidays;

Chart 7 (overleaf) shows the forecast summer demand and the actual summer demand for 2007/2008. As shown, the extreme weather conditions caused substantial peak demand. The demand level was not, however, unexpected and were in fact being forecast<sup>12</sup> by the Electricity Supply Industry Planning Council as is shown by the 50% POE line on Chart 7.

<sup>11</sup> Source: NEMMCO

<sup>12</sup> Historically, SA demand had been overstated, which would further have lead to a belief that the forecast demand would not be achieved. The NEMMCO SOO for 2007 used data from ESIPC that used a new methodology. The forecast maxima were lower than previously forecast and proved to be more accurate for this year.

**Chart 7. SA demand and prices for quarter 1, 2008<sup>13</sup>**



### Supply demand imbalance

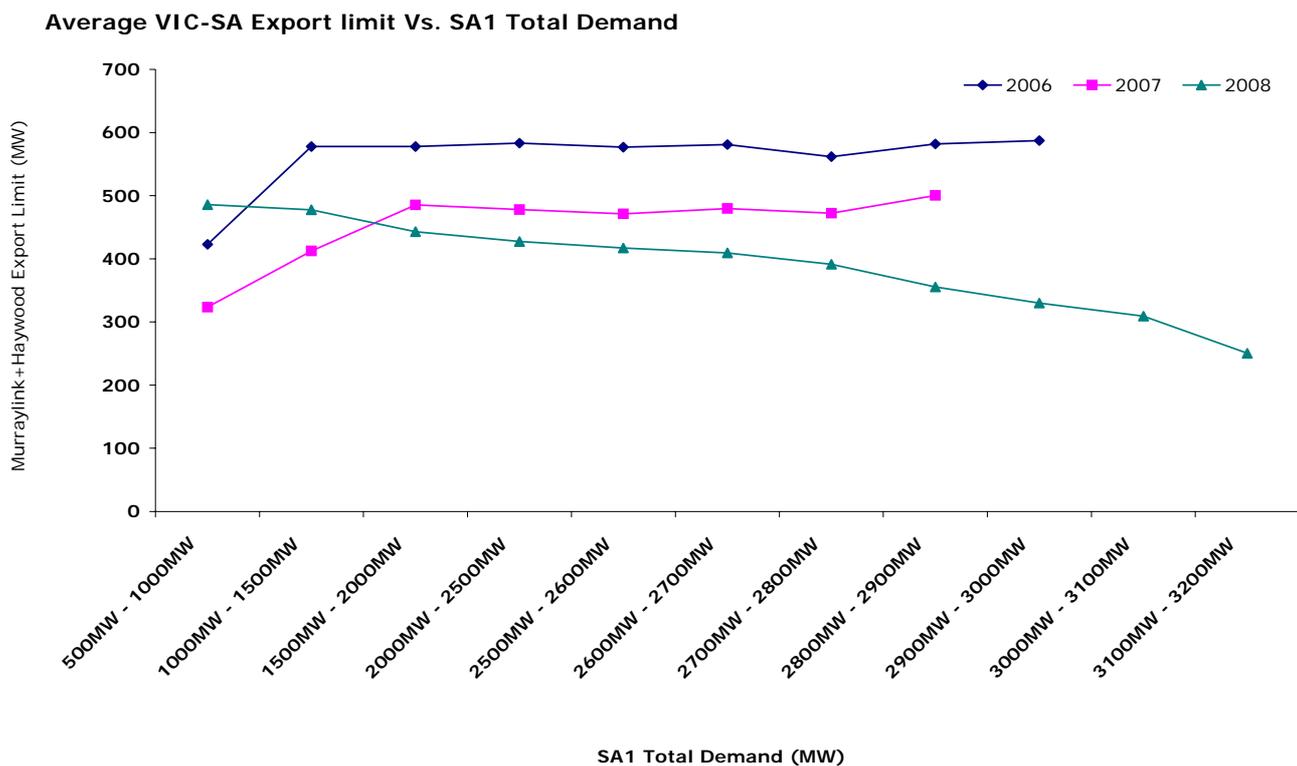
At times of high demand, South Australia relies on its incumbent generation capacity and the Heywood and Murraylink interconnectors.

Variations to the limitation to flows across the Heywood and Murraylink interconnectors from Victoria to South Australia as determined by NEMMCO are increasingly resulting in a reduction in this capacity. This is especially evident during periods of high demand.

Chart 8 (overleaf) illustrates this reduction in capacity to transport energy from Victoria into South Australia during the Summer months (January, February and March) at different levels of demand in South Australia over 2006, 2007 and 2008. This means that there is a greater requirement for the dispatch of relatively high cost South Australian generation to meet South Australia demand requirements.

<sup>13</sup> Source: NEMMCO

**Chart 8. Combined Murraylink and Heywood interconnection export limits (flows into SA) for various SA demand levels<sup>14</sup>**



The marked reduction in capacity for imports into South Australia was cited<sup>15</sup> by the AER as one of the reasons for the higher prices in South Australia:

“Electranet, the South Australian transmission network service provider, revised down the import limits on Heywood in November and again in December. The two revisions reduced maximum flows from around 460 MW to around 360 MW.

The changes followed reductions in import limits from around 500 MW to 460 MW by the Victorian transmission network service provider (SPAusnet) in 2003. When combined Electranet’s and SPAusnet’s revisions have reduced import limits into South Australia by around 140 MW, or 28 per cent.

The AER is investigating the causes of the reductions to import limits on Heywood.

The import limit for Murraylink was generally lower than forecast immediately prior to dispatch by around 100 MW. The average combined Heywood and Murraylink limit during the high priced periods was 395 MW compared to the 700 units sold through the settlement residue auction process.”

<sup>14</sup> Source: NEMMCO

<sup>15</sup> AER Op cit.

# Outlook for prices in South Australia

## **South Australian prices are higher than other NEM jurisdictions**

South Australia is a difficult region to forecast pool prices. Previous reports<sup>16</sup> have variously determined the solution to be greater interconnection and increased demand side response. Both of these solutions have been implemented to some extent.

New generation of significant size runs the risk of depressing the pool price since the market is so small and the load so peaky. This means that most generation investment is developed later rather than earlier.

Currently South Australia is a favoured site for wind generation investment. This investment is not supported by the market and hedge contracts but rather by the federal government's Mandatory Renewable Energy Target (**MRET**) policy (in the short term and emissions trading in the longer term). This generation is, however, intermittent and tends to be less available during high price periods<sup>17</sup>. This means that the load to be met by scheduled generation becomes even peakier. Pool and contract prices in South Australia can therefore be expected to rise.

## **Fuel costs are rising**

Gas prices are on the increase in parallel with oil prices and, if the Australian market in gas moves to parity with international prices, then the price for gas will likely double. South Australian generation is heavily dependant on gas.

Coal prices are also rising, again due to linkages between Australian coal prices and international prices. This has limited direct impact on South Australia, but will affect the overall NEM, due to higher costs of energy in New South Wales and Queensland. Leigh Creek coal is also limited. Alternate brown coal resources in South Australia are either unsuitable or significantly more expensive.

## **There will be an impact from Federal government policies**

The higher MRET level will provide incentives for more wind farms in South Australia. While the MRET certificate costs from the generators will be shared across the market, the retailers are required to contract a higher level to meet their own loads. This means that the cost of energy in South Australia will increase.

In addition, it is clear that new transmission investment will be required. While it is not clear how this is to be funded, under current rules the costs will either fall on the generators, which will increase MRET prices, or on customers directly. In either case costs to the customers will rise.

The impact of emissions trading on South Australia will also be high. Even a low carbon price will raise prices. The Federal government has estimated a start price of \$20 per tonne of CO<sub>2</sub>e. AGL believes, however, that to achieve significant abatement the carbon price will need to increase, with increased pressure on prices.

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<sup>16</sup> SA NEM Task Force report, Op cit. and NGMC Market Working Group (unpub).

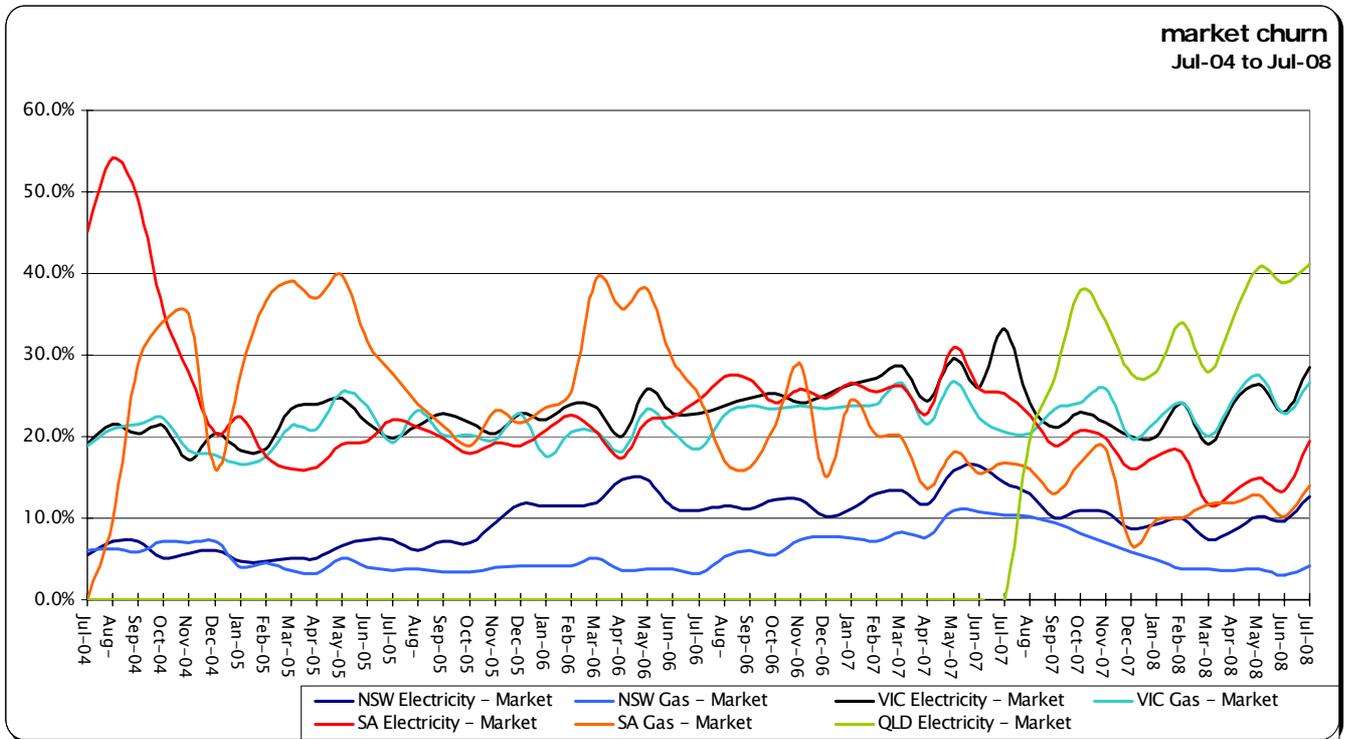
<sup>17</sup> Historically, wind generation has reduced in warmer weather.

### The need to retain retail margins

Effective retail competition requires a reasonable margin between the wholesale costs and the retail price. AGL believes that the wholesale price in South Australia will be under pressure from many sources. The only way to be assured of retail competition is to allow retailers to freely price their products, that is remove the cap on prices.

As shown in Chart 9 below, in markets where retailer margins are low (ie: Queensland and NSW), market churn has been low. In markets like Victoria and South Australia where governments have allowed reasonable retail margins, churn is higher.

Chart 9: Market churn<sup>18</sup>



<sup>18</sup> Source: NEMMCO

# Comments on the UnitingCare Wesley Submissions

## Background

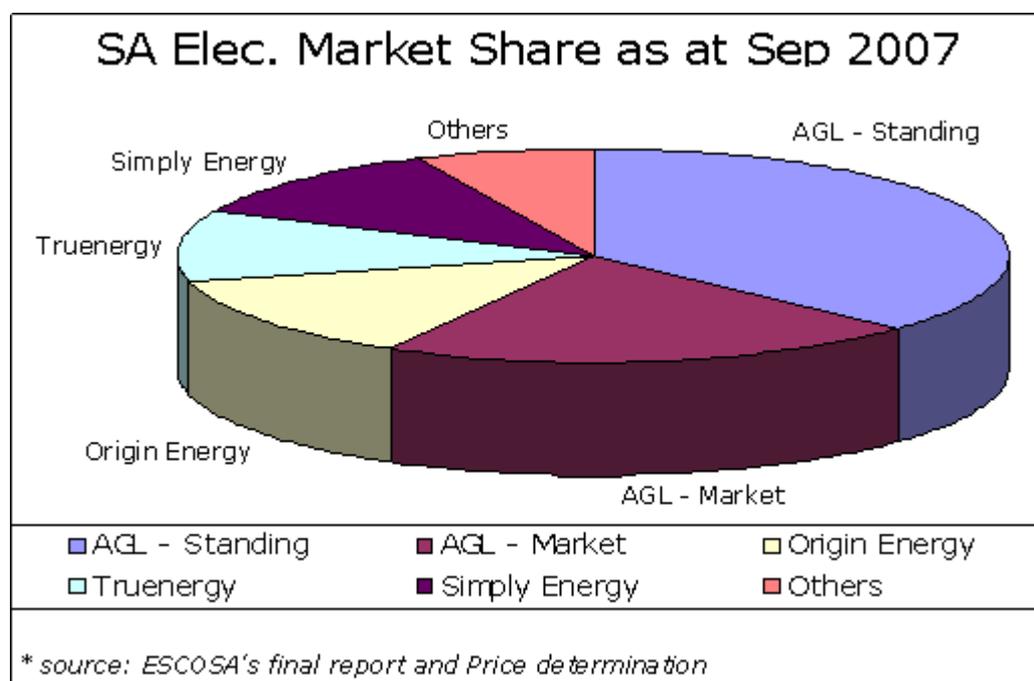
UCW has made two submissions to the Commission in relation to their review of competition in South Australia.

AGL has a number of concerns about the statements and conclusions made in UCW's submissions. AGL believes that a number of its conclusions were made on the basis of incorrect assumptions and in general show some misconceptions about the market.

### Misconception No. 1 – AGL has 70% of the retail market

Since the market opened to competition in 2003, AGL has fought aggressive competition from a large number of retailers. Chart 10 below shows the relevant market shares of each of the retailers. As illustrated, AGL competes against a number of retailers with significant market shares.

**Chart 10: SA Electricity Market Shares**



### Misconception No. 2 - AGL/TIPS has market power

AGL does not agree that TIPS, either as a stand alone generator, or combined with AGL as a retailer, has market power.

TIPS is an intermediate to peaking plant, and as shown in Chart 1, its full capacity is only required for a relatively small proportion of the time. Hence, if TIPS is unhedged, there are limited opportunities to earn a return.

AGL's market share has declined significantly since the market opened and AGL continues to lose customers. This is indicative of the strong competition which exists in the market and the absence of any market power by AGL.

### Misconception No. 3: Retailers and large customers are unable to get hedge cover

AGL does not accept that retailers or large customers are unable to get hedge contracts or retail contracts.

As shown in Chart 11 below, liquidity in the South Australian wholesale market is at a high. Hedge contracts are available and are being traded in the market.

As shown below, contract volumes traded increased 63% on the volume traded for the same period in 2007, and quadrupled since the same period in 2006. This is evidence of the strong availability of hedge contracts.

In addition, as stated earlier, AGL made it known to all major Australian electricity brokers that it was a seller of South Australian electricity contracts, and would welcome approaches.

**Chart 11**

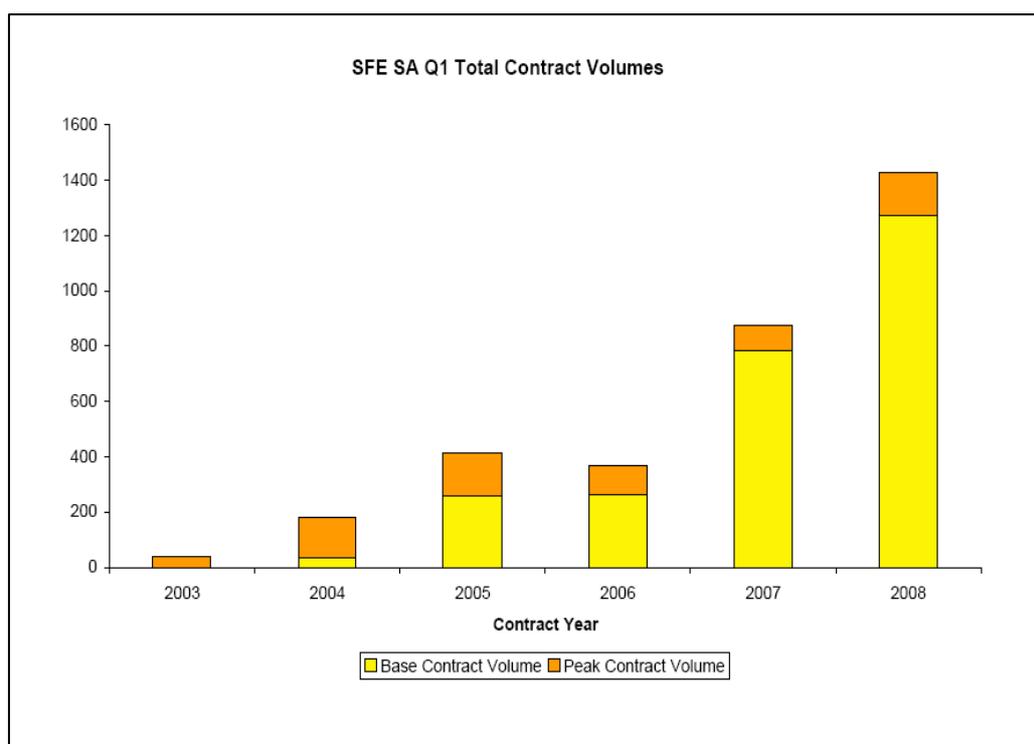


Chart 11 above shows the contract volume (in MWh) traded through the Sydney Futures Exchange (SFE) for Quarter 1, 2008 (January to March)<sup>19</sup>.

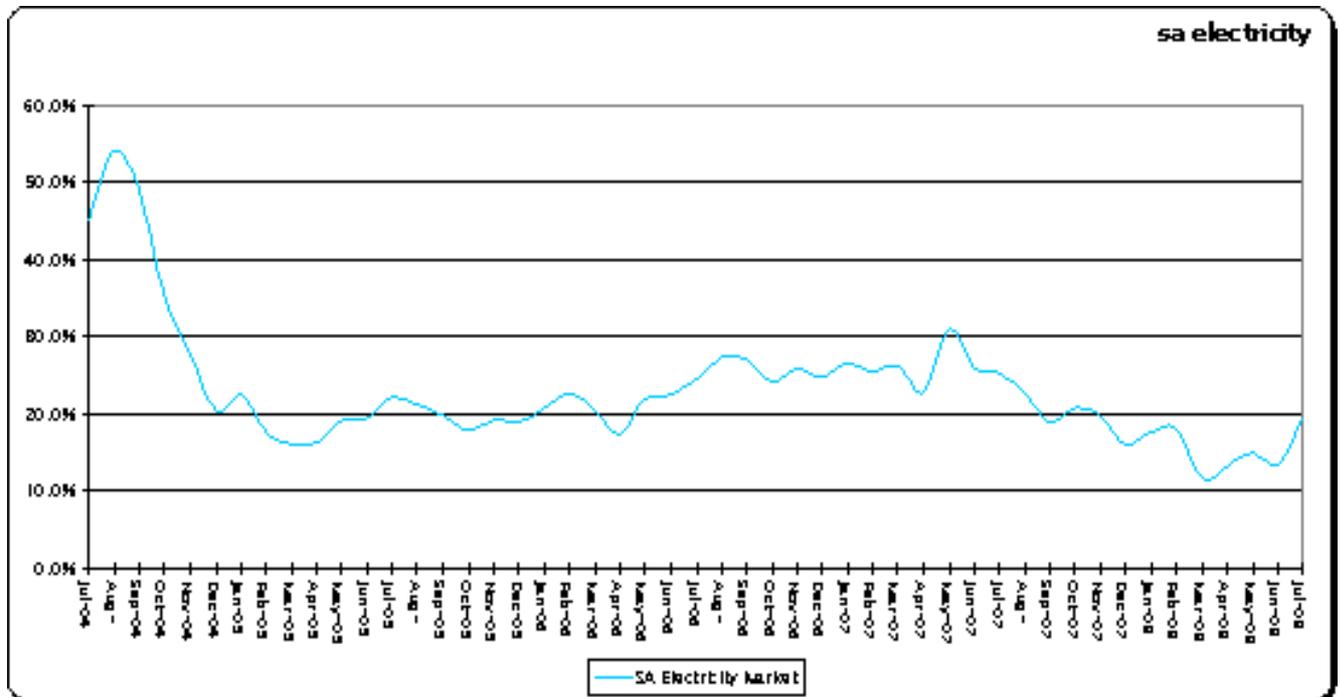
In terms of retail contracts being offered to large customers, AGL can confirm that it always makes competitive market offers available to large customers. However, in an environment of rising and (in the long term) unpredictable wholesale costs, not all large customers are satisfied with the prices being offered. This does not mean that the market is uncompetitive.

**Misconception No. 4: Retailers are exiting the market**

AGL has not seen any evidence of retailers exiting the South Australian market. As shown in Chart 12 below, while the level of churn recently declined following the shift in wholesale electricity prices (caused by rising fuel costs and the drought), churn has increased dramatically over the past 2 months and currently sits at a very healthy 20%.

Churn can be expected to decrease as a market matures but the levelling of the churn in SA at the 20% mark indicates a fully competitive retail sector.

**Chart 12: Electricity market Churn in SA**



Some retailers *may* have reduced their marketing activities in 2007 when wholesale prices first rose significantly. The uncertainty of rising costs in an environment of regulated price

<sup>19</sup> Source – D-Cypha Trade

caps creates significant risk. However, evidence<sup>20</sup> shows that even in such an environment retailers continue to actively market to customers and the level of churn shows that they are able to make offers that cause customers to change retailers.

The risk faced by retailers is exacerbated when retailers chose not to hedge their forecast load. It is quite clear from AGL's experience in competitive retail markets that customer numbers and therefore retail load is directly related to marketing activity. Retailers should have been able to predict their load for a period of multiple years into the future with some reliability, and hedge these loads through the contract market.

The fact that some retailers had not hedged their exposure for the summer periods of 2008 and 2009, means that they believed the contract prices would fall, or that the risk premium (described above) was greater than the likely spot outcomes. To the extent that this has not been borne out, AGL cannot be held responsible for the risks taken by other retailers.

#### **Misconception No. 5: The experience of large customers is indicative of the experience of small customers**

AGL notes that UCW's consultants - Headberry Partners and Bob Lim & Co – do a lot of work for the very large customer market in South Australia and are therefore familiar with the issues that confront such customers. AGL does not believe it is possible to take the large customer experience and infer from that the small customer experience.

AGL is aware that at least two very large customers in South Australia chose to take pool exposure during the recent summer<sup>21</sup>.

AGL does not believe it is at all appropriate to compare the risks, and therefore experiences, taken on by large customers to that of small customers. Small customers are fully hedged and are therefore not exposed to the risks of the wholesale market.

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<sup>20</sup> Analysis of customer transfer data (confidential)

<sup>21</sup> Michael Williams from Adelaide Brighton Cement stated at the "National Power Australia", September 2008, that Adelaide Brighton Cement uses pool price exposure and demand side management as a means of managing their electricity price risk. Mr Williams noted that Adelaide Brighton Cement did have recent contract offers which they declined.