

Energy White Paper Taskforce
(Department of Industry)
For submission online at www.ewp.industry.gov.au



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RE: Energy White Paper Green Paper

Marjorie Black House
47 King William Road
Unley SA 5061

P. 08 8305 4222
F. 08 8272 9500
E. sacoss@sacoss.org.au
www.sacoss.org.au

ABN 93 197 662 296

Dear Taskforce,

Thank you for the opportunity to make a further submission to this important process¹. As the peak body for the community services sector in South Australia, SACOSS has a long-standing interest in the delivery of essential services. Our research shows that the cost of basic necessities like energy and water impacts greatly and disproportionately on vulnerable and disadvantaged people. Our advocacy is informed by our members; organisations and individuals who witness these impacts in our community.

The focus of our submission is the markets for household electricity and gas in South Australia. These markets are seen by some as the pinnacle of energy reform: disaggregated and fully privatised, with price regulation removed and the National Energy Customer Framework adopted. However, ongoing success relies on effective competition and this is where our concerns lie. Highly concentrated and highly vertically integrated, it is our view that the small customer energy markets in South Australia exhibit only weak levels of competition. We agree with the Green Paper's goal of more competition but have serious concerns about how to make it appear.

In relation to the electricity market, please find attached a SACOSS Energy Market Briefing Paper "*Power Market Power in South Australia*" that outlines in some detail why we have concluded that:

- The South Australian electricity market is an oligopoly and should be regulated in clear recognition of this in order to maximise the extent of competition that is possible.
- The market is so vertically integrated that retail market shares are linked to generation capacity: AGL Energy, for example, retains over half of the small customer market over 10 years after they were first exposed to competition and they can be expected to continue to do so since they own around half of the state's generation capacity at peak times.

Based on market data (from AEMO, ESCOSA and the AER), SACOSS estimates that 98% of retail electricity customers (households and small businesses consuming less than 160 MWh of electricity per annum) are supplied by 6 vertically integrated energy businesses: AGL Energy (including subsidiary retailer Powerdirect), Origin Energy, Energy Australia,

¹ The SACOSS submission to the Issues Paper is listed as submission EWPIP034

GDF Suez Australia (Simply Energy), SnowyHydro (Red Energy and Lumo) and Alinta Energy. Five of the six (except SnowyHydro) have 100% of the gas customers. We also understand that the owners of Alinta and Simply are looking to sell some or all of their assets and customers – leaving open the potential for further concentration.

In relation to the gas markets, please find attached our recent “*South Australian Gas Market Consumer Factsheet*” that outlines key issues for gas consumers in South Australia:

- Gas prices are rising as a result of the emerging export market for Liquefied Natural Gas (LNG)
- Pipeline capacity constraints limit alternative supply options
- Competition in the small customer market is weak
- The Residential Gas Market could be experiencing its own ‘death spiral’

In our view, market structure issues are as important as tariff reform in the energy markets.

We view the goal of transparency in gas markets as absolutely critical and support this as it is applied to all gas operations, including Wallumbilla.

On the subject of tariff reform, SACOSS accepts that the structure of tariffs differs significantly from underlying costs and that tariff reform is inevitable. However, since peak demand drives a majority of underlying network and generation costs and peak demand is driven by heatwaves, *cost-reflective* electricity pricing in South Australia means significantly increasing the price of electricity in summer. This presents some complex policy challenges that require careful implementation.

Finally, SACOSS supports the Green Paper’s goal to improve the efficiency of electricity use. In our view, the energy efficiency schemes discussed (such as SA’s Retailer Energy Efficiency Scheme) should be a constant feature of our energy markets. SACOSS would support a NEM-wide scheme that took best practice from existing schemes.

We thank you in advance for your consideration of our comments. If you have any questions relating to the above, please contact SACOSS Senior Policy Officer, Jo De Silva on 8305 4211 or via jo@sacoss.org.au.

Yours sincerely,



Ross Womersley
Executive Director

Attachment 1: SACOSS Energy Market Briefing Paper “*Power Market Power in South Australia*”

Attachment 2: SACOSS “*South Australian Gas Market Consumer Factsheet 2014*”

SACOSS Energy Market Briefing Paper

Power Market Power in South Australia

Executive Summary

South Australian households spend over a billion dollars each year on electricity. Following the 'deregulation' of electricity prices in 2013, consumers now rely on the effects of competition between energy businesses to keep a lid on the price.

But just how competitive is the South Australian electricity market? Should consumers be concerned about market power?

The Australian Energy Regulator (AER) recently stated¹:

High levels of market concentration and greater vertical integration between generators and retailers give rise to a market structure that may, in certain conditions, provide opportunities for the exercise of market power In April 2013 the AEMC [Australian Energy Markets Commission] found potential for substantial market power to exist or be exercised in future in the NEM, particularly in South Australia.

This briefing paper challenges our confidence in relying on competition to put downward pressure on prices by highlighting that the market is:

- Highly integrated: The 'Gentailer' model of vertically integrated generator and retailer is the overwhelmingly dominant business model; and
- Highly concentrated: a small number of major players dominate the wholesale/retail market (5 businesses share 98% of small customers).

This briefing paper explains that the South Australian electricity market has unique characteristics that create opportunities for energy businesses to exercise market power – resulting in higher prices than would be the case if there was more competition.

The concept of the pivotal generator highlights the structural inclination of the South Australian market to the formation of market power. The Torrens Island Power Station (TIPS) is the largest capacity generator in the South Australian electricity market. Under certain conditions, TIPS must be called up to meet demand and it becomes the price-setting or pivotal generator in the region more often than in any other case in the NEM. Only forcing AGL to divest some or part of its ownership of TIPS would change this structural issue.

The Australian Energy Markets Commission (AEMC) recently considered market power in the analysis of a rule change proposal from energy users. The AEMC was quick to distinguish undesirable 'sustained' market power from normal and expected 'transient' market power as well as distinguish between the potential for market power from evidence that it has, in fact, been exercised. The end result was vague recognition of a problem in South Australia and ambiguous recommendations about what to do about it.

The AEMC's stated that the case for intervention required that both:

- Consumers faced ongoing high prices (judged against notional efficient costs), and

¹ AER, State of the Energy Market 2013, p33.

- Competitors were unable to enter the market and ‘compete away’ any excess profits.

This briefing paper highlights that a real barrier to entry for competitors is the illiquid hedge market in SA as a result of high levels of vertical integration (and, to a lesser extent, high levels of market concentration).

Further, this briefing paper highlights that profit maximisation for gentailers seems to occur at a customer market share that matches generation capacity – not (linear) economies of scale.

The wholesale/retail market concentration is such that, with the vast amount of detailed data available on the operation of the NEM, participants are sufficiently able to predict bidding and pricing behaviour based on past actions. Such interdependence is a key characteristic of an *oligopoly*.

The AEMC has tackled market power from a presumption of innocence for the market participants in question – and sought out compelling evidence of a tricky to define ‘sustained market power’. From a consumer perspective, if market participants such as generators and retailers have such demonstrable opportunity to exercise market power then they probably have and consumers are justified in seeking to be convinced that these opportunities haven’t been taken. This implies a change in the presumption of innocence in this context.

On this basis, the AEMC’s assessment of Market Power in the SA electricity market should be revisited.

Further, the South Australian electricity market is sufficiently unique to be singled out for special treatment as an oligopoly and should be regulated as such. SACOSS is of the view that it is time to question whether the current wholesale market model is still the best long term option for consumers in SA.

Introduction

SACOSS provides ongoing scrutiny of the effectiveness of competition for the supply of energy to South Australia's households and small business. This briefing paper is the first in a series from SACOSS that will examine the health of effective competition in the South Australian electricity market.

In summary, this briefing paper will demonstrate that the:

- The wholesale and retail electricity markets in SA should no longer be analysed separately – the Gentsailer model is the norm
- The role of Torrens Island Power Station as the pivotal generator for the region means the South Australian electricity market is structurally inclined to the formation of market power
- The dominance of the retail market by those dominating the wholesale market represents a material barrier to entry/expansion in the market
- Retail market shares are expected to gravitate to proportions related to generation capacity – with Simply and Lumo being open to offers as at June 2014

And conclude that:

- The South Australian electricity market is an oligopoly and should be regulated in clear recognition of this in order to maximise the extent of competition that is possible

This paper will demonstrate that the South Australian Electricity Market is not only structurally inclined to the formation of market power but that wholesale and retail market indicators have been analysed and they indicate:

- behaviours consistent with the exercise of market power, and;
- the likely presence of barriers to entry for potential competitors.

Indicators of market power behaviour can be found in the variation of wholesale prices. The wholesale market spot price can vary in a range from -\$1,000/MWh to \$13,100/MWh with \$300/MWh being a traditional marker of 'high' spot prices. A key risk facing a retailer is that they will be exposed to wholesale price spikes. They can take out insurance from generators through 'cap' contracts that limit their exposure to price spikes by capping an effective price of \$300/MWh. If market power was in fact being exercised into the wholesale market, it is reasonable to expect to see this manifest as price spikes above the \$300/MWh threshold.

This report demonstrates that these key generator-retailers are able to capture the vast majority of market turnover when prices climb above the \$300/MWh threshold. It is therefore clear that any new retailer seeking to buy 'cap' contracts as insurance against price spikes would often have to go to one of these generator-retailers to buy it. In effect, the price of a key part of competing in the market is set by your retail competitors.

Finally, we arrive at the view that retail market shares are likely to gravitate around the (dispatchable) generation capacity of these gentailers. Incentives will be limited for expanding market share beyond those proportions. Generation asset purchases would likely need to precede any marketing push when seeking to significantly expand customer numbers. Given the lack of demand growth this would most likely be via the acquisition of existing assets rather than new capacity. In the South Australian context this would most logically be one of the smaller peaking plants. As at June 2014, it is understood that Simply Energy / GDF Suez² and Lumo/Infratil³ are open to offers for assets and / or customers. Any acquisitions by larger gentailers would warrant scrutiny.

² The Australian Financial Review has reported (06JUN2014) that GDF Suez is contemplating selling assets (http://www.afr.com/p/opinion/french_giant_gdf_suez_asset_sale_t1RpTNYNcjq1qYFEi2CFcO)

³ It is understood that the Lumo gentailer (customers and generation assets) is on the market: See Annex A.

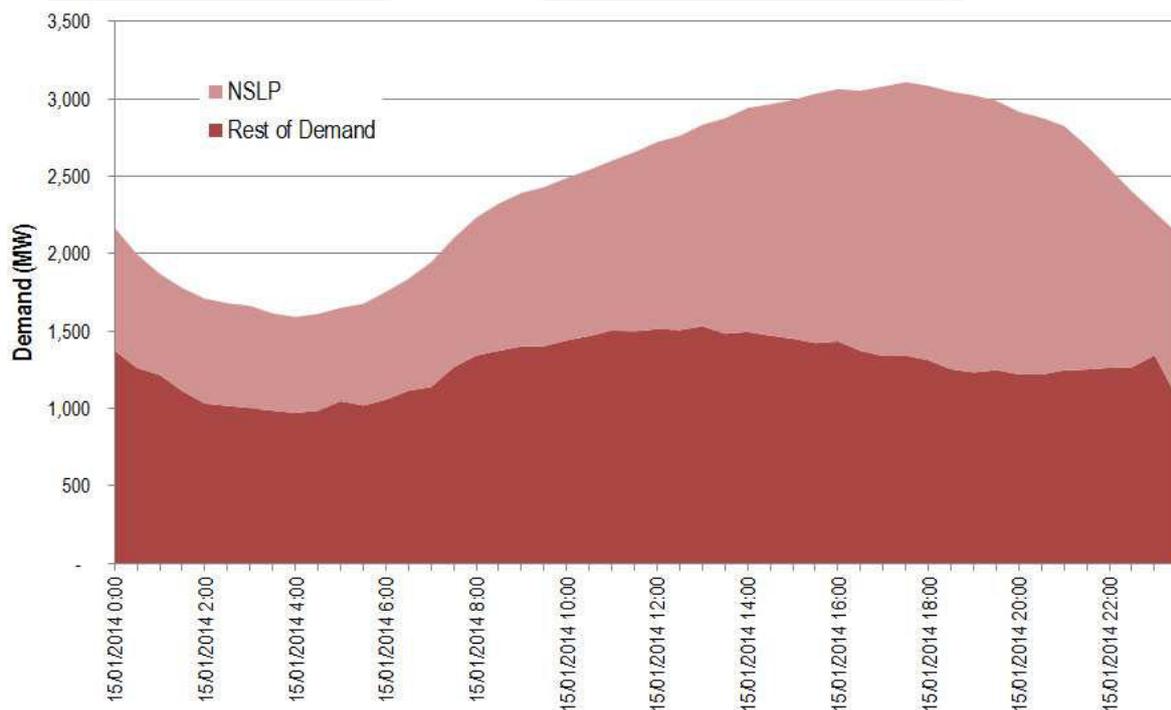
Introduction to the 'small customer' electricity market in SA

The South Australian 'small customer' electricity market serves over 820,000 individual connections (at end 2013) generating \$1.4bn in retail sales from 5.2GWh of electricity. Of this;

- around 720,000 residential providing revenue of around \$1,100m pa from around 4GWh of electricity, and
- 90,000 small business providing revenue of around \$330m pa from around 1.3GWh of electricity

These figures contrast the 'large customer market' where around 7,000 customers provide around \$1bn in revenue from 7.6 GWh of electricity. This 100-fold difference in the number of customers explains why the small customer cohort is often just referred to as "the mass market."

Further, the small customer market is settled against a single Net System Load Profile – in effect retailers must buy in the wholesale market for a single, aggregated load profile that is only finalised weeks after its costs have been incurred. Large customers are settled against their individual metering data. This 'peaky' load profile of small customers is significantly more costly to serve than the more stable demands of large customers. This is illustrated by comparing the NSLP and the 'rest of demand' for January 15th 2014 – part of a recent heatwave and a day when prices stayed above \$300/MWh from around 9AM to 7PM.



Consequences of Past Decisions

The South Australian privatisation of electricity assets has been (and continues to be) widely commented on. Without offering an opinion on whether or not consumers are better off with or without privatisation, SACOSS would like to draw attention to the legacy impacts of the way privatisation was handled in South Australia.

The South Australian government sold the Electricity Trust of South Australia (ETSA) businesses to Cheung Kong Infrastructure Holdings Ltd (CKI) and Hongkong Electric Holdings Ltd (HEH) via a tender process concluding in December 1999. When CKI and HEH

were awarded the ETSA Utilities (the network business) & ETSA Power (the retail business) tender at A\$3.4 billion, it was agreed between the South Australian Government and CKI/HEH that should ETSA Power be sold within two years after the tender was awarded, any amount generated above A\$150 million is to belong to the South Australian government⁴. In January 2000 AGL paid CKI/HEH \$175m for the business and added approximately 734,000 customers to their books⁵.

The awarding of the entire franchise to one entity has shaped the small customer market since inception. As the South Australian regulator noted in 2002⁶:

“The South Australian market is unique, and this can be highlighted by the domination of the single retailer (AGL) at commencement of the competitive market in January 2003. In no other market in the UK, NSW or Victoria has there been only one dominant retailer at market commencement with 100% of the new market. This situation calls for unique measures for protecting consumers and encouraging other retailers to join AGL in supplying the domestic and small business market. The Government’s approach is unique and squarely puts the responsibility back with the retail industry to demonstrate the prices they seek to apply in South Australia are justified.”

Over a decade later, AGL Energy continues to hold contracts with over 50% of small customers in South Australia⁷. Through needing to hedge such large exposure to the NSLP, AGL also now owns significant generation assets in South Australia including – since July 2007 - the state’s largest, Torrens Island Power Station (TIPS) – a 1280MW gas-fired powered station in a market whose demand only occasionally exceeds 3000 MW⁸.

Supporting this view, the Case Study prepared by KPMG for the AEMC to celebrate 15 years of the National Electricity Market (NEM) found that⁹:

“Getting industry structures right was key for effective competition” and that “... there is an explicit trade-off between the benefits of a competitive industry structure and maximising sales proceeds from privatisation. The gains for the economy of a competitive industry structure needs to take precedence over the fiscal impacts of privatisation. To do otherwise poses a risk to the benefits of the reform being sustained.”

SACOSS is of the view that these comments were a thinly veiled reference to the South Australian situation and that the market power issues in SA are largely structural and relate to the monopoly of AGL at market start. SACOSS is of the view that this is particularly relevant to the way that competition is judged in the South Australian market.

The pivotal generator

The AER has recently elaborated on the concept of the ‘pivotal generator’ – the situation where a generator is of sufficient size that under certain conditions must be called upon to meet demand. This occurs in each NEM region but is most acute in the South Australian situation with AGL’s Torrens Island. From the AER State of the Market 2013 (p43):

⁴ CKI Media release January 2000 available from www.cki.com.hk/english/whatsNew/2000/20000114.htm

⁵ Refer to Australian Stock Exchange archive for AGL 24th August 2000 “Preliminary Final Report & Press Release Part A” available from: <http://www.asx.com.au/asx/statistics/displayAnnouncement.do?display=text&issuerId=40&announcementId=199820>

⁶ South Australian Independent Industry Regulator Reviewing and Approving Electricity Retail Prices in a Competitive Market, Initial Thoughts April 2002, page 29 www.escosa.sa.gov.au/library/020408-Review_ApprRetailPrices.pdf

⁷ Source: ESCOSA, AER reports and AEMO Switching data indicate the AGL and subsidiary Powerdirect continued to hold around 55% of small customer contracts at the end of 2013 – 11 years after the commencement of full retail contestability in the SA electricity market

⁸ Information on the AGL acquisition of TIPS is summarised in a supplementary AGL Submission to the AEMC review of the Effectiveness of Competition in the Electricity and Gas Retail Markets in South Australia September 2008 available from <http://www.aemc.gov.au/Media/docs/AGL%20Supplementary-760a4c20-1864-4bf1-adda-19a697969a7c-0.pdf>

⁹ “15 Years of the National Electricity Market: the book”, AEMC 13 December 2013 <http://www.aemc.gov.au/news/whats-new/15-years-of-the-national-electricity-market-the-book.html>

Illustration of the pivotal generator concept:

The AER published a detailed report on the South Australian market during April–May 2013. It did not find evidence of generators engaging in significant short term strategic bidding to capitalise on market conditions during this period. Instead, a general withdrawal of capacity created tight conditions that left AGL Energy’s Torrens Island plant strongly positioned to materially influence spot prices.

During this period, it was the key generator available to meet demand when the interconnectors were importing at limit and/or wind output was low.

This is further illustrated by the AER’s ‘barometers of competition in the NEM’ and the following table illustrating the percentage of time that a region’s largest generator is pivotal. This is most acute in SA¹⁰:

Table 1.9 Percentage of time when the largest generator is pivotal, 2012–13

	QLD	NSW	VIC	SA
	17	18	20	29

Source: AER.

In its 2012 State of the Energy Market report, the AER observed:

“AGL Energy’s strategic withholding of generation capacity contributed to average spot prices in South Australia being significantly above those in other NEM regions between 2007-08 and 2009-10.”

SACOSS notes that AGL (and it’s wholly owned subsidiary Powerdirect) managed to stabilise market share at around 55% since the time when these assertions relate. This is illustrated in Figure 1 (noting that since December 2012, the AER has been responsible for reporting retail statistics but does not include separate reporting of Powerdirect making it impossible to provide up-to-date market share information). Clearly AGL’s purchase of Torrens Island Power Station in July 2007 coincides with the stabilisation of its market share.

¹⁰ AER State of the Energy Market 2013, page 51.

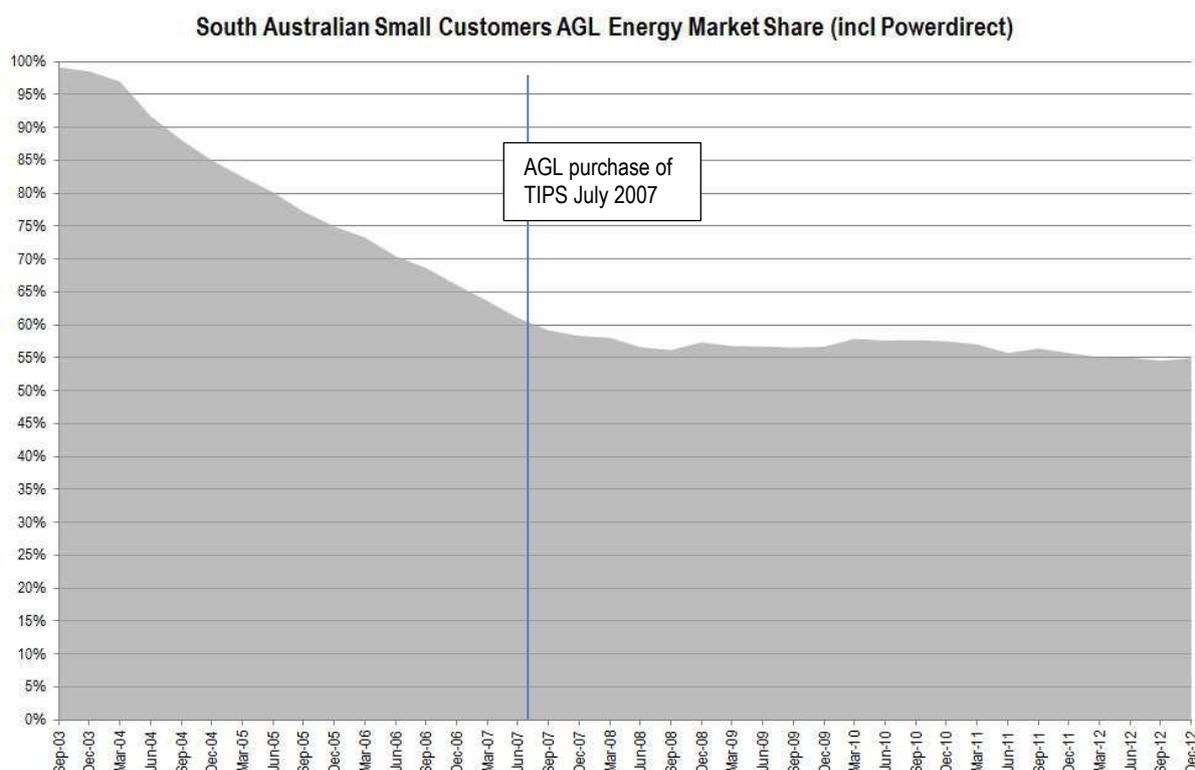


Figure 1: AGL Energy electricity small customer market share 2003-12. Source: ESCOSA

The recent Australian Competition and Consumer Commission (ACCC) decision to block AGL Energy’s proposed acquisition of the NSW Government’s Macquarie Generation portfolio – the largest Generator in the NSW region of the NEM - has also resonated with South Australian consumers¹¹. It is now a matter of speculation as to whether South Australian consumers would be so concerned about issues of Market Power had the ACCC made a similar determination in relation to AGL Energy’s purchase of Torrens Island Power Station in 2007¹².

Combining the above information and arguments, SACOSS concludes that the South Australian electricity market is structurally inclined to market power.

The gentailer model takes over in SA

The NEM was designed based on assumptions around clearly separate wholesale and retail markets. The initial focus for NEM implementation was on wholesale competition but the expansion of competition in the small customer market has seen a different direction in participant behaviour. A NEM wide trend of vertical integration between retailers and generators emerged. Competition between retailers has apparently revealed the most cost-effective way of ‘hedging’ the volatility of wholesale prices for a more expensive to supply load shape: buy your own generators.

Table 1 illustrates the relationship between small customer market shares and generation ownership. The data is based on market shares published by the Essential Services Commission of SA (ESCOSA) at December 2012. The AER is now responsible for publishing retail statistics as part of the National Energy Customer Framework (NECF) but does not publish market shares for small retailers (i.e. not Powerdirect, Lumo or Alinta).

¹¹ <http://registers.accc.gov.au/content/index.phtml/itemId/1147200/fromItemId/751046>

¹² <http://registers.accc.gov.au/content/index.phtml/itemId/784137/fromItemId/751043>

Retailer	Small Customer Base (Dec 2012)		Conventional Generation	MW	Wind Power	MW
AGL (incl Powerdirect)	455,324	55%	Torrens Island	1280	Hallett1, Hallett 2, Wattle Point, North Brown Hill, The Bluff	309
Origin	146,113	18%	Quarantine, Ladbroke Grove, Osborne	484	-	
Simply Energy	76,474	9%	GDF Suez: Pelican Point, Synergen Peaking stations	860.5	Canunda	46
Energy Australia	84,724	10%	Hallett	228.3	Waterloo, Cathedral Rocks	177
Lumo	48,891	6%	Infratil: Angaston, Pt Stanvac and Lonsdale	128	Snowtown	98.7
Alinta	9,531	1%	Pt Augusta Power Stations	770	-	
		99%		3,751		631

Table 1: Relationship between retail market shares and generation ownership in South Australia as at end December 2012. Sources: AEMO, AER, ESCOSA

Focussing in on the ‘big 3’, the most recent reporting of small customer numbers by the AER for AGL, Origin and Energy Australia shows AGL at 49%, Origin at 20% and Energy Australia at 10% (as at December 2013). Including some further customers via AGL’s ownership of retailer PowerDirect, these 3 businesses serve over 80% of all households and small businesses.

Figure 2 illustrates the close match between small customer market share and electricity generation capacity for the big 3 gentailers.

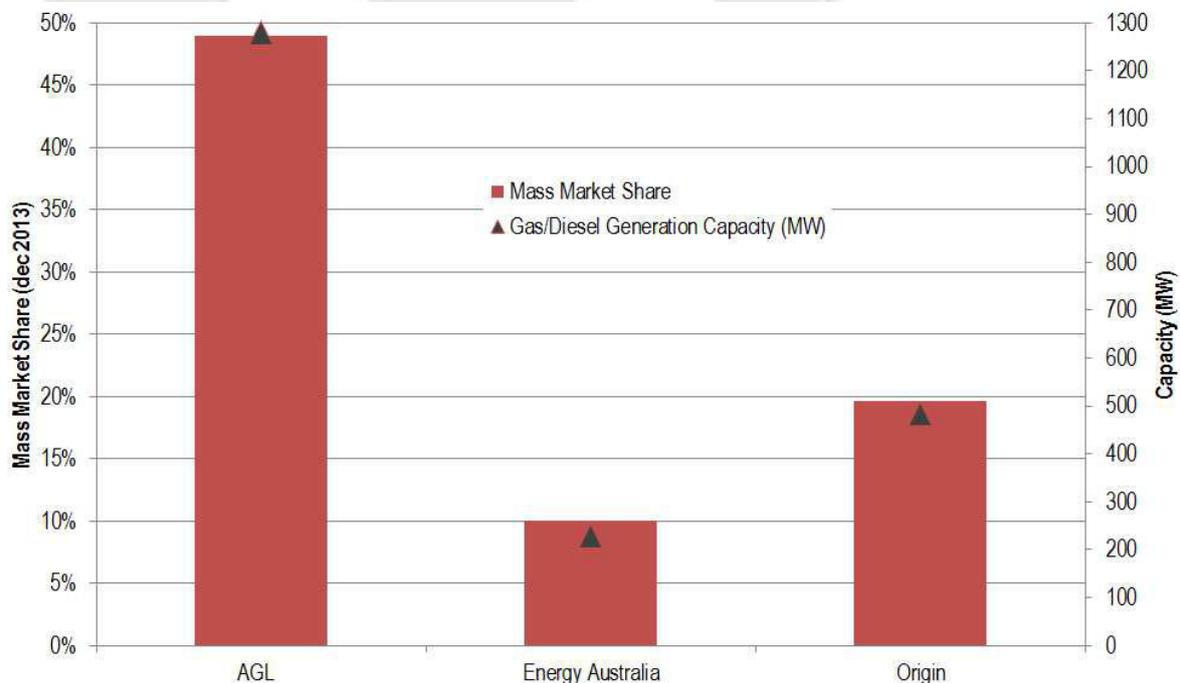


Figure 2: Comparing small customer market share and (non-wind) generation capacity of AGL, Origin and Energy Australia in 2013. Source: AER, AEMO

As can be seen, each of the three has customer numbers and generation capacity in very similar proportions (around 3kW of generation capacity for each small customer. Based on December 2012 customer numbers, Lumo had around 2.6kW per customer – a similar

proportion). The NSLP peaks at around 2000MW– around 2.4kW each for 820,000 small customers¹³.

The other two main gentailers – Alinta and Simply Energy are much more ‘overweight’ with generation. Alinta owns the Northern Power Stations but these coal fired baseload plants are a poor match for the peaky and variable small customer load shape. Simply is the retail arm of generator GDF Suez and has almost 10% of the small customer market – very similar to Energy Australia, but backed with over three times the generation capacity. The GDF Suez portfolio includes Pelican Point Power station (478MW, CCGT) the ‘Synergen’ peaking plants at Dry Creek (156MW, OCGT), Mintaro (90MW, OCGT), Port Lincoln (73.5MW, diesel) and Snuggery (63MW, diesel). Recent media reports indicate that GDF Suez is in fact considering selling off part of its electricity assets in Victoria and SA¹⁴.

It is also true that these businesses have large customers that must be supplied. However, the aggregate load shape of large customers is sufficiently flat and predictable that the merchant retail business model could still apply. Instead, it is the volatility and risk of the small customer demand that has driven the retailers to expand their generation capacity. It is therefore unlikely that a gentailer would match generation capacity to large customer demand instead of seeking to minimise costs through trading.

There is no evidence of substantial market share being achieved in South Australia without vertical integration – only Lumo has been seen to substantially grow its market share since the allegations of the exercise of market power in 2007-08 and this has been enabled by the portfolio of generators by Lumo’s owners Infratil¹⁵. It is also noted that many of the other smaller retailers operating the SA small customer market also have generation backing. This includes Red Energy as the retail arm of publicly owned generator Snowy Hydro and Momentum as the retail arm of Hydro Tasmania¹⁶.

In summary, small customer market shares have gravitated to match the generation capacity of the key retailers. Under these circumstances, these businesses are perhaps more interested in maintaining their customer numbers rather than trying to grow their market share. It is conceivable that this results in higher prices than would be the case if these businesses had more open-ended ambitions for their market share.

SACOSS is strongly of the view that that the extent of vertical integration in the South Australian electricity market means that consideration of ‘retail’ in isolation from ‘generation’ is no longer tenable. The South Australian small customer market is a market for *gentailers*.

In recognising the legitimacy of the gentailer model as the market’s response to the rules and regulation of the NEM’s first 15 years and 10 years of retail competition, some questions remain:

- is it now appropriate to be asking if the wholesale market design is appropriate for SA?
- what alternatives could be tested that might also pursue the consumer interest in the long term?

¹³ Australian Bureau of Statistics data indicates that 620,000 out of 720,000 dwellings were occupied at the time of the 2011 census (Census *QuickStats* for SA from abs.gov.au). On this basis, the NSLP equates to 2.8kW per customer – very close to that sustained by the gentailers.

¹⁴ Australian Financial Review 06JUN2014 (http://www.afr.com/p/opinion/french_giant_gdf_suez_asset_sale_t1RpTNYNcjq1qYFEi2CFcO) and Business Spectator 07JUN2014 (www.businessspectator.com.au/news/2014/6/6/energy-markets/gdf-suez-mulls-power-assets-sell)

¹⁵ It is understood that the Lumo gentailer (customers and generation assets) is on the market: See Annex A.

¹⁶ Refer to AER State of the Energy Market 2013, p. 33.

Price Deregulation

Recent reports by the AEMC¹⁷ and the Victorian Essential Services Commission (ESCV)¹⁸ highlight that households in South Australia continue to both pay the nation's highest electricity prices and have the nation's highest rates of electricity disconnections for failing to pay bills on time.

In an effort to encourage more competition while enhancing consumer protections, the South Australian Government removed energy price regulation and adopted the National Energy Customer Framework (NECF) on February 1st, 2013. This made South Australia the only state or territory to have both deregulated prices and adopted the NECF.

The removal of price regulation represents a very significant stage in the energy market reform process – a process that has been underway since the 1990's. Back then a single, government owned organisation did everything from mine the coal to read your meter and send you your electricity bill. Competition was introduced into the wholesale and retail electricity markets progressively over a number of years from the late 1990's to the early 2000's. In January 2003, the customer tranche known as the South Australian small consumers or the 'below 160' customers (in reference to the group of households and small businesses being formally defined by their annual consumption being below 160MWh - around \$30,000 in annual bills) was opened for retail competition.

Prices for these customers were regulated by the Essential Services Commission of South Australia (ESCOSA). ESCOSA would set a regulated price for the standing offer contract available from incumbent retailer AGL Energy. The regulated price included some 'headroom' to allow for AGL's competitor retailers to undercut the 'standing offer' and gain some market share. Ten years later in 2013, the South Australian Government was convinced that it was the right time to let competition replace regulation as the instrument for setting prices for all small customers. The deal struck at the time with incumbent retailer AGL Energy (and their natural gas counterpart Origin Energy), was for effectively a two year transition period. Over this time, AGL Energy agreed to a relatively fixed price for the 20% of customers that remained on the 'standing offer' contract.

SACOSS cautiously welcomed the move away from the price regulation model but acknowledged risks in relying on competition to ensure consumer's can be ensured of access to electricity at efficient prices in the long-run.

Behavioural Indicators of Market Power: The \$300/MWh threshold

The wholesale market spot price can vary in a range from -\$1,000/MWh to \$13,100/MWh with \$300/MWh being a recognised marker of 'high' spot prices. A key risk facing a retailer is that they will be exposed to price spikes. Retailers can take out insurance from generators through 'cap' contracts that limit their exposure to price spikes by capping an effective price of \$300/MWh¹⁹. By analysing the behaviour of the key generator-retailers when prices climb above the \$300/MWh threshold, it is clear that any new retailer seeking to buy 'cap' contracts would often have to go to one of these generator-retailers to buy it. In effect, the price of managing risk - a critical part of participating in the market - is set by your competitors in the retail market.

In 2013 SACOSS partnered with Carnegie Mellon University (Australia) to investigate the impact of wholesale market power on South Australian electricity prices. The project investigated price spikes of April and May 2013 and complemented the Special Report

¹⁷ AEMC 2013 Residential Electricity Price Trends www.aemc.gov.au/market-reviews/completed/retail-electricity-price-trends-2013.html

¹⁸ ESCV Energy retailers comparative performance report – Customer service 2012-13 Table 3.2, p31 available from www.esc.vic.gov.au/Energy/Energy-retail-performance-reports

¹⁹ https://asxenergy.com.au/products/electricity_futures/quarterly_300_caps

published by the AER²⁰. The project recommended SACOSS monitor the prevalence of wholesale prices in excess of \$300/MWh – the market price used as basis for “cap” hedge contracts in the NEM in order to quantify the potential scale of the issue.

SACOSS subsequently purchased a license for the NEMReview²¹ software package and analysed the trading intervals (i.e. the half-hourly intervals) where the average price exceeded \$300/MWh for the 5-year period from the Apr-June Quarter of 2009 to that of 2014. It was observed that the nature of the events seem to be changing. In figure 3, it is shown that the frequency of events seem to have increased while the average turnover in each event has fallen. This suggests a change in market dynamics over time – possibly a reflection of the softening supply-demand balance in recent years.

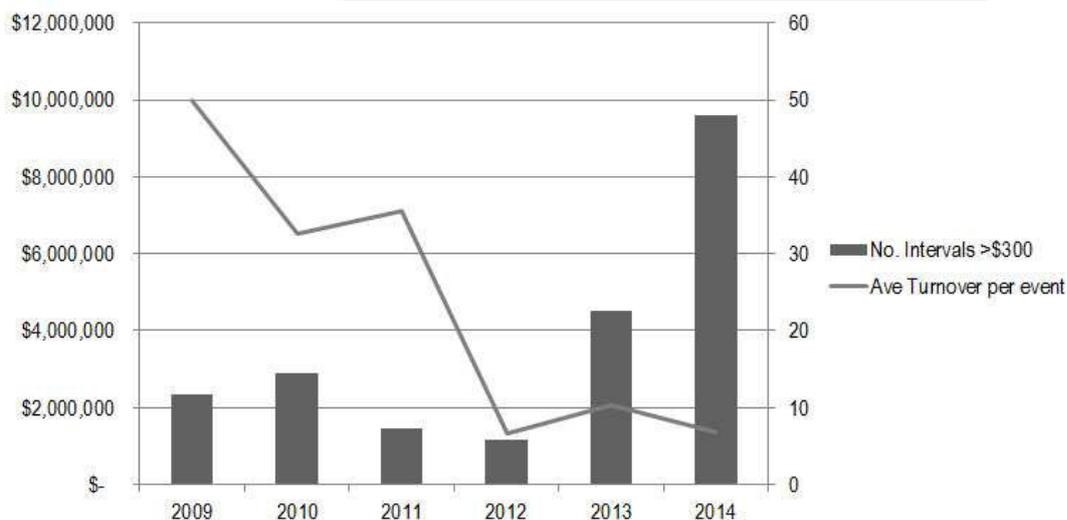


Figure 3: Trading Intervals in excess of \$300/MWh, South Australian NEM Region. Source: AEMO via NEM-Review.

To focus attention on more contemporary market dynamics, we analysed the 12 months of wholesale activity to the end of March 2014. Understanding which generators are operating during these pricing events can give further insight into the market strength of the key players. By analysing the 12 months from April 2013 to March 2014 it was possible to identify:

- 124 Trading Intervals with a price greater than \$300/MWh (0.7% of intervals)
- 21.2% of \$1020m total turnover occurred during these intervals
- AGL, Origin and Energy Australia generators captured 53% of turnover when prices exceeded \$300/MWh (and 45% of total annual turnover)
- The 5 gentailers combined captured 73% of turnover when $p > \$300$ (and 64% of total annual turnover)

Such behaviour has implications for the liquidity of the contract market for \$300 caps and hence can represent a barrier to entry for competitors - consistent with the concerns raised by ACCC against AGL’s proposed acquisition of Macquarie Generation in NSW and comments from the AER²²:

1.4.2 Vertical integration

While governments structurally separated the energy supply industry in the 1990s, the trend has been for vertical re-integration of retailers and generators to form ‘gentailer’ structures. Vertical integration provides a means for generators and

²⁰ [Special report - Market outcomes in South Australia during April and May 2013 www.aer.gov.au/node/21350](http://www.aer.gov.au/node/21350)

²¹ More information is available here: <http://v6.nem-review.info/what/index.aspx>

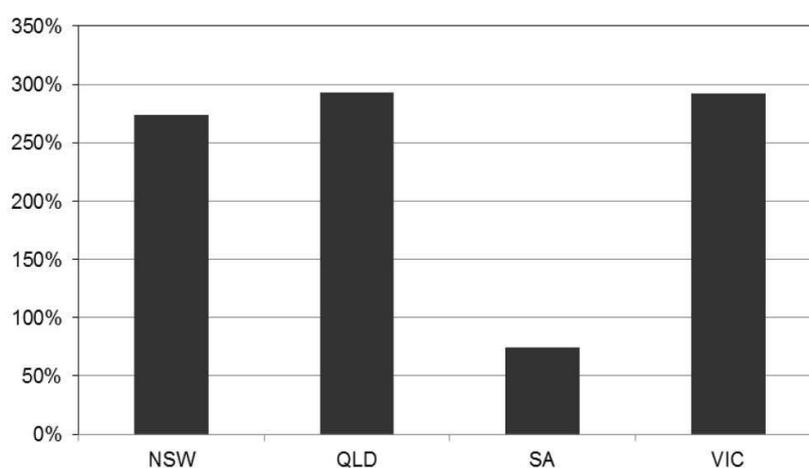
²² AER State of the Market 2013, p. 29.

retailers to internally manage price volatility in the electricity spot market, reducing their need to participate in hedge (contract) markets (section 1.8). Less need for hedge contracts can reduce liquidity in contract markets, posing a potential barrier to entry and expansion for generators and retailers that are not vertically integrated.

Similar concerns were also raised by the Productivity Commission's 2012-13 review of Electricity Network Regulation²³:

“A high level of vertical integration is seemingly one of the reasons why the South Australian market has a lower trading level than other regions of the NEM (figure C.6). A lack of liquidity can be problematic for a derivative market.”

Figure C.6 Liquidity ratios in different regions of the NEM



Data sources: AFMA (2011b), AEMO (2012k).

Combining the above information and arguments, SACOSS concludes that the South Australian electricity market is structurally inclined to market power and that material barriers to entry exist for independent retailers.

Summary and Conclusions

In summary, this briefing paper demonstrates that the:

- The wholesale and retail electricity markets in SA should no longer be analysed separately – the *Gentailer* model is the norm
- The role of Torrens Island Power Station as the pivotal generator for the region means the South Australian electricity market is structurally inclined to the formation of market power
- The dominance of the retail market by those dominating the wholesale market represents a material barrier to entry/expansion in the market.
- Retail market shares are expected to gravitate to proportions related to generation capacity – with Simply and Lumo being open to offers as at June 2014

And concludes that:

- The South Australian electricity market is an oligopoly and should be regulated in clear recognition of this in order to maximise the extent of competition that is possible.

²³ Inquiry Report Appendix C “Hedging in the electricity market” <http://pc.gov.au/projects/inquiry/electricity>

In our view, issues of market power have been tackled from a presumption of innocence for the market participants in question – and sought out compelling evidence of a tricky to define ‘sustained market power’. In our view, the South Australian electricity market is sufficiently unique to be singled out for special treatment as an oligopoly and should be regulated as such. This implies a change in the presumption of innocence in this context.



ANNEX A:

From Business Spectator

<http://www.businessspectator.com.au/news/2014/6/19/mergers-acquisitions/infratil-moves-energy-sales>

Infratil moves on energy sales

Dow Jones newswires

19 June 2014

Infratil, a New Zealand-based infrastructure and utilities investor, is moving forward with the sale of its two Australian energy businesses.

The company said in a statement today it had provided confidential information to selected parties on the two Australian energy businesses it proposes selling and expects indicative proposals by mid-July.

The sale could fetch more than \$300 million.

Infratil said in May it has begun a strategic review of Lumo Energy and Direct Connect Australia, which it expects to last up to six months.

Lumo Energy is a power generator and retailer of gas and electricity, while Direct Connect Australia hooks up households and businesses to utilities.

Infratil seeks to sell Lumo Energy, Direct Connect

Brett Cole

14 May 2014, 5:47 AM

Infratil, a New Zealand-based infrastructure investor, is using its investment management firm **H.R.L Morrison & Co** and boutique adviser **AquAsia** to conduct a strategic review of its Australian assets, Lumo Energy and Direct Connect Australia.

Both businesses generate earnings before interest, tax, depreciation and amortisation of \$54 million, Marko Bogoevski, Infratil's chief executive, told Data Room in an interview. He declined to estimate what those businesses are worth.

Mr Bogoevski expects a sale, merger or any other option, including the partial divestment of both businesses, to be completed within six months.

"I think these two assets are significant to the future structure of the electricity market in Australia," the Infratil CEO said.

Lumo Energy, which was created 10 years ago, generates 165 megawatts of electricity and has 515,285 customers in Australia. Direct Connect provides utility connections, includes electricity and telecommunications, to about 110,000 customers per annum in Australia.

Infratil owns a 51 per cent stake in New Zealand's Trust Power, a stake in Z Energy, two-thirds of an Auckland and Wellington bus operator and a 19.9 per cent shareholding in aged care provider, Metlifecare.

French giant GDF Suez asset sale may fetch over \$500m

http://www.afr.com/p/opinion/french_giant_gdf_suez_asset_sale_t1RpTNYNcjg1qYFEi2CFc
[O](#)

PUBLISHED: 06 Jun 2014 03:59:05 | UPDATED: 06 Jun 2014 04:32:22

Edited by Sarah Thompson, Anthony Macdonald and Gretchen Friemann

Heavily indebted French electricity giant GDF Suez is considering selling another stake in its Australian subsidiary in a deal expected to top \$500 million.

Last year the company offloaded a 28 per cent stake in four power stations across Victoria and South Australia to the Japanese trading house, Mitsui & Co.

The investment in the gas, coal and wind power generators totalled around \$480 million.

It's understood an even greater slice may now be shopped around in the same assets, as GDF Suez, which is 36.7 per cent owned by the French government and ranks as the world's largest power producer by output, grapples with a debt burden of close to \$34 billion.

The hefty sum arose from its 2012 acquisition of Britain's International Power, which owned assets throughout South America, the Middle East, South-East Asia as well as Australia.

Deutsche Bank has been drafted in to sell the stake, which is likely to be structured in a similar manner to the Mitsui transaction.

According to sources negotiations with potential bidders have been under way for some time.

RATCH-Australia, a joint venture between Thailand's Ratchaburi Electricity Generating Holding and Transfield Services, is viewed as a logical contender. Chinese companies have also circled a number of power plants in Australia recently.

However some argue GDF Suez faces an uphill battle given the systemic problems in the electricity market as excess capacity continues to weigh on wholesale prices.

In the Mitsui deal, the Japanese firm gained a portion of a bundle of power plants, including the coal-fired generator in Victoria, along with GDF Suez's power and gas retail business, which has over 350,000 customers.

Under the deal GDF Suez and Mitsui formed a fresh subsidiary vehicle, giving the Japanese firm an equity interest in all of the French giant's power businesses in Australia.

News of this latest prospective deal comes as the market awaits a ruling on AGL's disputed \$1.5 billion purchase of the Macquarie Generation assets - country's largest power producer.

It is understood the high level of borrowings forced GDF Suez out of the MacGen race as it pursues a selective sell-down of assets post the International Power deal.

Earlier this year, Commonwealth Bank sold its 8.16 per cent share in Hazelwood. The brown-coal fired station provides about a quarter of Victoria's power.

GDF Suez mulls power assets sell-off

<http://www.businessspectator.com.au/news/2014/6/6/energy-markets/gdf-suez-mulls-power-assets-sell>

John Conroy

6 Jun 2014, 10:30 AM

GDF Suez has hired Deutsche Bank to look at offloading up to \$500 million of its Australian electricity assets – both generation and retail – in Victoria and South Australia, *The Australian Financial Review* reports.

According to the newspaper, its French parent has a debt burden of \$34 billion and is looking to sell the stake in a similar way as its \$480 million deal with Japan's Mitsui last year, which saw it offload a 28 per cent stake in four power stations across the two states.

RATCH Australia, a joint venture between Thailand's Ratchaburi and Australia's Transfield, is a likely contender, *The AFR* reports, with negotiations with bidders having been under way for "some time".

Analysts say GDF Suez may struggle to find a buyer, the newspaper adds, considering the excess generation capacity in Australia's electricity market.

The South Australian Gas Market Consumer Factsheet 2014

Key Issues

- Gas prices are rising as a result of the emerging export market for Liquefied Natural Gas (LNG)
- Pipeline capacity constraints limit alternative supply options
- Competition in the small customer market is weak
- The Residential Gas Market could be experiencing its own 'death spiral'

The Market

Overall, Natural Gas use in South Australia is dominated by its role in electricity generation as illustrated in the following table (2012-13)¹.

	PJ	% of total
Commercial	6.2	5%
Residential	11.8	10%
Industrial	40.9	34%
Electricity	67.6	56%
TOTAL	120.3	

Table 1: Natural Gas use by economic sectors, South Australia 2012-13

Per head of population, South Australia uses more Natural Gas than any of the eastern states as shown in Table 2 and Figure 1 combining gas volumes from the AER and AEMO with population figures from the ABS:

GJ/person	QLD	NSW/ACT	VIC	SA	TAS
2008/09	75	49	119	188	64
2009/10	75	53	108	178	77
2010/11	84	53	112	175	88
2011/12	87	48	106	67	92
2012/13	84	50	106	170	101
2013/14	82	48	99	147	70

Table 2: Natural Gas use per head of population, Eastern Australia

¹ Bureau of Resources and Energy Economics 2014 Australian energy statistical data Table F <http://bree.gov.au/publications/australian-energy-statistics/2014-australian-energy-statistics-data> Note that the volume attributed to residential is around 4PJ higher than other sources such as ESCOSA, the AER and Envestra.

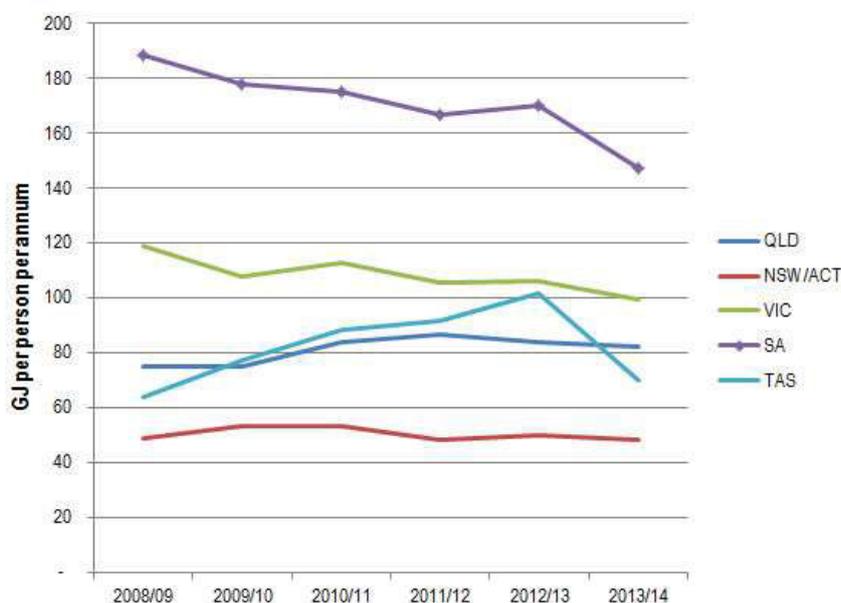


Figure 1: Natural Gas use per head of population, Eastern Australia

The small customer Market

The South Australian *small customer* Gas market comprises around 400,000 households and 10,000 small businesses, represents 10% of the state’s total annual gas consumption and is worth around \$300m annually².

These customers are connected to the state’s gas distribution network that is owned by Envestra and regulated by the Australian Energy Regulator³. The current Access Arrangement applies for the period 2011-16. The AER has approved a capital expenditure program of around \$100m annually. The network has a Regulatory Asset Base (RAB) valuation of just over \$1,300m (2013-14) and annual regulated revenue of around \$200m⁴.

There are 5 gas retailers selling to small customers in South Australia⁵ but Origin and AGL hold over 75% of customers as shown in Table 3. Alinta Energy entered the gas market in 2012 and is the only retailer of the 5 that does not also own gas-fired electricity generation.

Retailer	Market shares at 30Jun	
	2013	2014
AGL	31%	31%
Alinta Energy	1%	2%
EnergyAustralia	15%	13%
Origin Energy	47%	46%
Simply Energy	7%	8%

Table 3: Natural gas small customer market shares, South Australia

² Source: ESCOSA Annual Market Performance Reports, Bureau of Resources and Energy Economics 2014 Australian energy statistical data (there is a mismatch in the volume attributed to the residential sector between these sources)

³ www.envestra.com.au and www.aer.gov.au

⁴ Source: AER Final Decision Envestra Access Arrangement 2011-16 www.aer.gov.au/node/9845

⁵ Source: ESCOSA’s 2014 Ministerial Pricing Report

The Supply Chain

In order to retail gas to small customers in South Australia, a retailer must enter into wholesale and transport contracts and participate in what is known as the Adelaide Short Term Trading Market (STTM) operated by AEMO⁶.

The South Australian Gas Market is supplied by two transmission pipelines: the Moomba to Adelaide Pipeline (MAP) from the Cooper Basin and the SEAGas pipeline from the Otway Basin in Victoria as shown in Figure 2 (numbered 5 and 4 respectively). As shown, these two pipelines also connect to other parts of the Eastern Australian gas network.

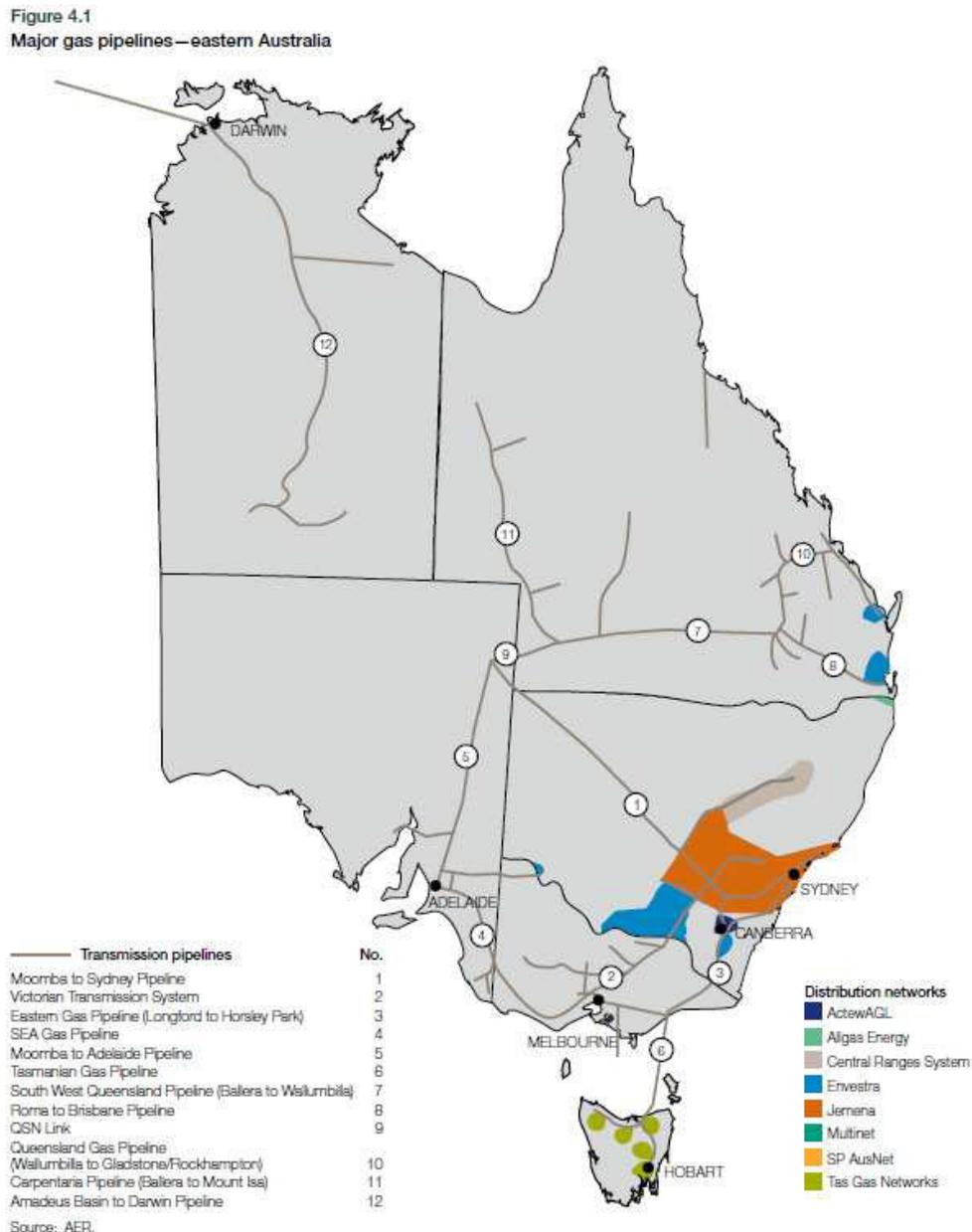


Figure 2: The Eastern Australia Natural Gas networks (Source: Australian Energy Regulator)⁷

The AER's State of the Market 2013 said this about SA's upstream gas markets⁸:

"Gas production in eastern Australia is forecast to treble over the next three to five years to satisfy a rapid expansion in liquefied natural gas (LNG) export demand. The

⁶ AEMC, 2014 Retail Competition Review, Final Report, 22 August 2014, Sydney p198 www.aemc.gov.au/Markets-Reviews-Advice/2014-Retail-Competition-Review

⁷ Source: Australian Energy Regulator State of the Energy Market 2013 Chapter 4 p107

⁸ AER 2013 State of the Energy Market p86

development of three projects in Queensland to supply LNG exports is placing significant pressures on the domestic market. Conditions will further tighten when the projects ramp up to full capacity from 2015–18.

In recent interviews for the Australian Energy Markets Commission (AEMC), energy retailers commented that over the next five years⁹:

‘Everything else in the market will be dwarfed by increases in the wholesale price brought about by the LNG developments ...’

Further, it was stated that SA would be one of the most affected regions given the historic reliance on Cooper Basin supplies (and the Bowen/Surat basins in Queensland), most of which is being “pulled north” to the LNG markets. The impact on competition is compounded by the fact that the alternative supply option, the SEA Gas pipeline, is fully contracted until 2018 by Origin Energy, GDF Suez (Simply Energy), AGL and EnergyAustralia¹⁰. It is understood however that Simply Energy / GDF Suez¹¹ is up for sale.

This combination of factors has led to a very downbeat assessment by the AEMC on the development of competition in South Australia’s gas markets¹².

It is also noted that gas production from the Cooper Basin the state’s North-East is increasing and could potentially increase substantially using ‘unconventional’ production techniques. The South Australian Government has produced a Roadmap for Unconventional Gas Projects in SA that outlines how production can “... provide a new lease on life to the Cooper Basin in particular”¹³. The AER’s State of the Market 2013 said this about the Cooper Basin¹⁴:

.. After several years of decline, Cooper Basin reserves in central Australia rose in the past three years, and were up 14 per cent in the year to June 2013. Production in the basin may continue to rise, with new activity focused on the development of shale gas. Santos commenced production, from its shale gas well in the Cooper Basin in 2012.”

The key issue for gas consumers in South Australia is the price at which these resources are made available for domestic consumption compared to export as LNG.

The Price of Gas

Australia will soon be exporting Liquefied Natural Gas (LNG) from Gladstone in Queensland. The result for gas users in Australia’s eastern states is that wholesale gas prices are rising to levels closer to that achieved for exports.

According to ESCOSA’s 2014 Ministerial Pricing Report (31 August 2014)¹⁵

“Average price offerings available to gas residential and small business customers increased by 14% and 12% respectively, substantially greater than the rate of inflation in South Australia of 3.1%. There are two drivers of that rise: gas distribution

⁹ Retailer Interviews as part of the AEMC’s 2014 Retail Competition Review (K Lowe Consulting and Farrier Swier Consulting for AEMC) p92-93 www.aemc.gov.au/Markets-Reviews-Advice/2014-Retail-Competition-Review

¹⁰ AEMC, 2014 Retail Competition Review, Final Report, 22 August 2014, Sydney p199, p200, p212

¹¹ The Australian Financial Review has reported (06JUN2014) that GDF Suez is contemplating selling assets (http://www.afr.com/p/opinion/french_giant_gdf_suez_asset_sale_t1RpTNYNcjq1qYFEI2CFcO)

¹² AEMC, 2014 Retail Competition Review, Final Report, 22 August 2014, Sydney p212

¹³ www.dmitre.sa.gov.au/mineral_and_energy_resources/roadmap_for_unconventional_gas_projects_in_sa

¹⁴ AER 2013 State of the Energy Market p86

¹⁵ From www.escosa.sa.gov.au The Ministerial Pricing Report discusses electricity and gas prices that were generally available to small customers on 30 June 2013 and 30 June 2014

prices increased on 1 July 2013, adding around 8% to residential gas bills, and the wholesale cost of gas has increased.”

The removal of retail price regulation in February 2013 means that households and small businesses now rely on competitive pressure to contain prices in this market. Increases in wholesale gas costs combined with increases in the cost of gas distribution mean we can expect the recent trend of price rises to continue at well above the rate of general inflation (as shown below for the past 5 years):

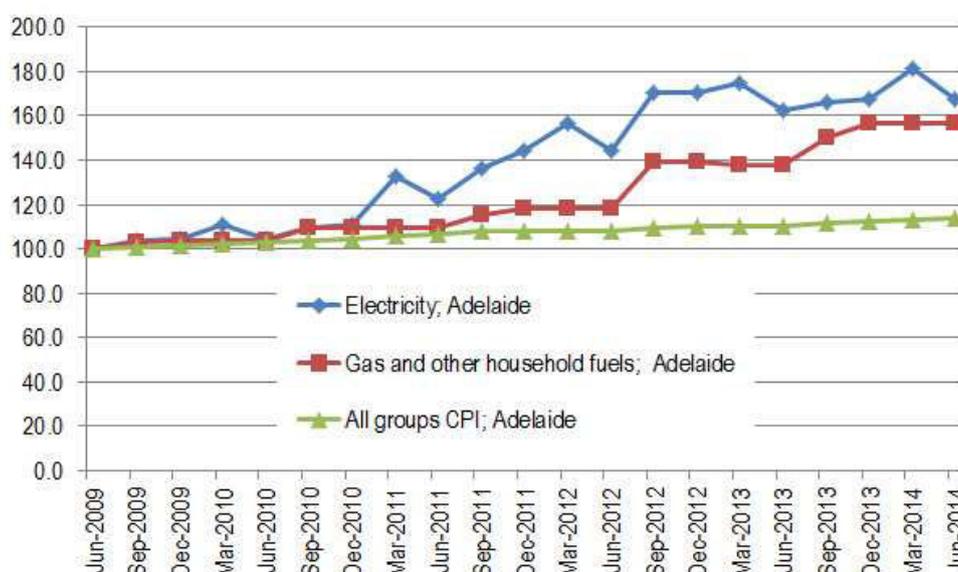


Figure 3: 5-year residential gas price inflation trend, South Australia (Source: ABS CPI 6401.0 Table 11)

Based on market prices from Energy Made Easy and Envestra’s published distribution pricing for 2014, Table 4 illustrates that over half of a typical household gas bill is made up of distribution charges. The ‘retailer’ component includes the wholesale cost of gas, transmission pipeline charges as well as the retailers operating costs (marketing, billing, call centre etc). For a typical household consuming 18GJ pa, the retail component averages around \$27/GJ while a larger household consuming 45GJ pa pays a retail component averaging around \$21/GJ.

	Retail Cost	Distribution	Net to Retailer	Retailer \$/GJ
18 GJ pa	\$ 1,093	\$ 611	\$ 482	\$ 27
45 GJ pa	\$ 1,690	\$ 759	\$ 932	\$ 21

Table 4: Indicative composition of natural gas prices for households, South Australia 2014

According to respected gas market analysts EnergyQuest¹⁶:

While there is no doubt that Australian wholesale gas prices are increasing significantly, particularly on the east coast, most gas is still being sold under historic contracts at relatively low prices. Based on gas prices realised by major producers on east and west coasts we estimate that the average Australian 2013 wholesale gas price was \$4.23/GJ, up 4.9% from \$4.02/GJ in 2012.

¹⁶ EnergyQuest *What happened to Australian wholesale gas prices in 2013?* 23 March 2014 available from www.energyquest.com.au/insightsandanalysis.php?id=203

Analysts are indicating that historic prices around \$4-5/GJ will double to around \$10/GJ¹⁷ as a result of the LNG export market. Such an increase (of around \$5/GJ) would increase retailer's costs by 20-25% and therefore represent around a 10% increase in overall bills.

Envestra's regulated revenue requirement is for an average CPI+8% for the five years from 2011-12 to 2015-16¹⁸, adding 4-5% (in real terms) to the average household bill each year across the period.

One of the reasons that networks prices are rising is that fixed costs have to be shared across declining volumes. This is illustrated in the AER's final decision on Envestra's Demand Forecasts for 2011-2016 (shown in the AER's Table 10.8 reproduced as Table 5) where volumes fall (see row titled Tariff R consumption) even though the number of household customers is expected to rise (see row titled Tariff R customer numbers).

Table 10.8: AER final decision on Envestra's demand forecasts

30 June end	2011-12	2012-13	2013-14	2014-15	2015-16
Tariff R consumption (TJ)	7675	7565	7442	7348	7282
Tariff R customer numbers	400952	407857	415073	422642	430824
Tariff C consumption (TJ)	3197	3291	3280	3308	3366
Tariff C customer numbers	10098	10329	10561	10641	10772
Tariff D MDQ demand (GJ)	68766	68528	67174	67455	68327
Tariff D customer numbers	149	151	150	151	153

Table 5: AER's final decision on demand forecast by customer category 2011-16

The per-customer trend is shown in Figure 4.

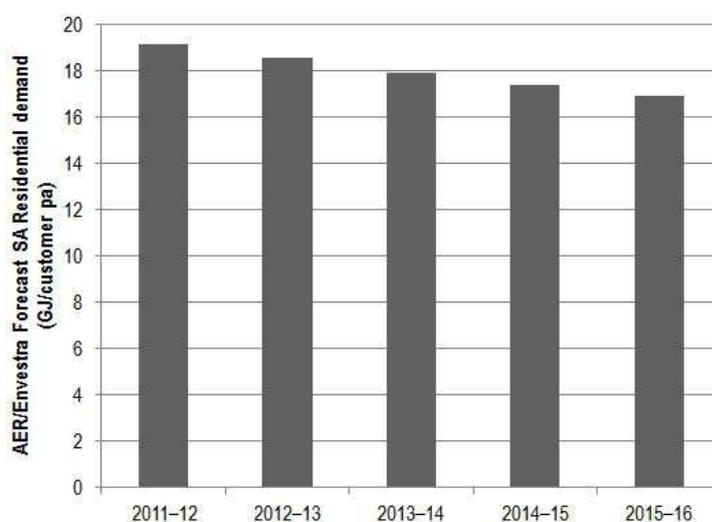


Figure 4: Per customer residential gas consumption forecasts, South Australia

¹⁷ See, as examples, the Grattan Institute (<http://grattan.edu.au/report/getting-gas-right-australias-energy-challenge/>) or the work by NERA Economic Consulting for the AEMC

¹⁸ AER Final Decision Envestra 2011-16 p94

Implications for consumers

The above illustrates the Death Spiral concept where rising prices result in declining demand which results in rising prices (as fixed costs are recovered from declining sales). The unknown question is how far this goes. The strongest competitive force on the gas market is the fact that, at the residential level at least, all-electric living is entirely possible. Historically, the prices of electricity and of gas are linked in SA by virtue of over half of our electricity being made from gas – providing a buffer against an exodus from the gas market to the electricity market when gas prices rise.

However, the advent of new technologies such as solar and batteries may see that electricity prices become more linked to the price of these technologies rather than the price of gas and leave the door open to two possibilities: a death-spiral in the gas market or a resurgence of interest for gas for heating and hot water from those wishing to exit the electricity grid.

Links

AEMO Gas Statement of Opportunities (GSOO) 2014

<http://www.aemo.com.au/Gas/Planning/Gas-Statement-of-Opportunities>

BREE Gas Market Report: www.bree.gov.au/publications/gas-market-report

AEMC Gas Market Scoping Study (www.aemc.gov.au)

AER gas market data www.aer.gov.au/Industry-information/industry-statistics/wholesale

SA Government Gas Industry overview www.sa.gov.au/topics/emergency-safety-and-infrastructure/infrastructure/utilities/sa-gas-industry

Analysts: EnergyQuest (www.energyquest.com.au) & Core Energy (www.coreenergy.com.au)

*For further information regarding this fact sheet please contact
Jo De Silva, SACOSS Senior Policy Officer on
8305 4211 or email jo@sacoss.org.au*