

## 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)<sup>1</sup>.

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

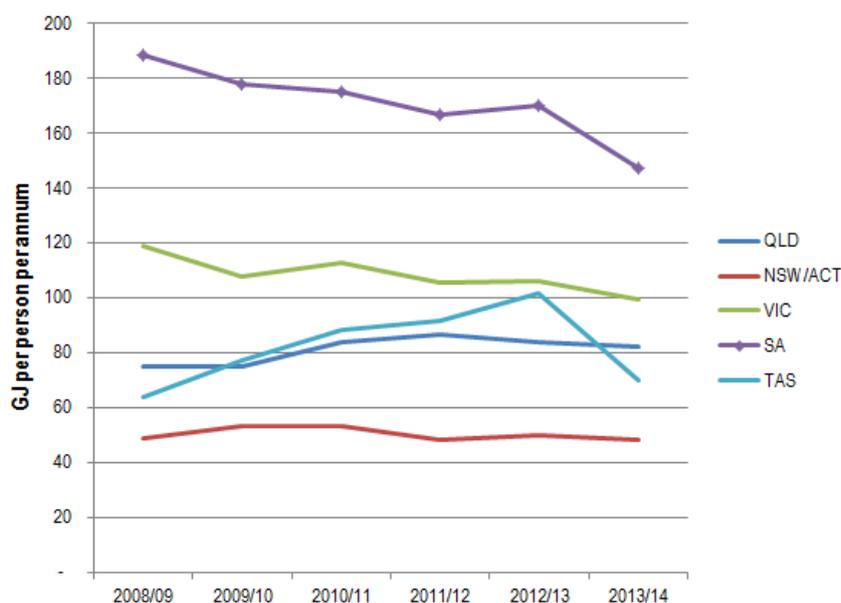
**Table 1:** Natural Gas use by economic sectors, South Australia 2012-13

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

<sup>1</sup> 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 annually<sup>2</sup>.

These customers are connected to the state’s gas distribution network that is owned by Envestra and regulated by the Australian Energy Regulator<sup>3</sup>. 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 \$200m<sup>4</sup>.

There are 5 gas retailers selling to small customers in South Australia<sup>5</sup> 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

<sup>2</sup> 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)

<sup>3</sup> [www.envestra.com.au](http://www.envestra.com.au) and [www.aer.gov.au](http://www.aer.gov.au)

<sup>4</sup> Source: AER Final Decision Envestra Access Arrangement 2011-16 [www.aer.gov.au/node/9845](http://www.aer.gov.au/node/9845)

<sup>5</sup> 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 AEMO<sup>6</sup>.

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 4.1  
Major gas pipelines—eastern Australia

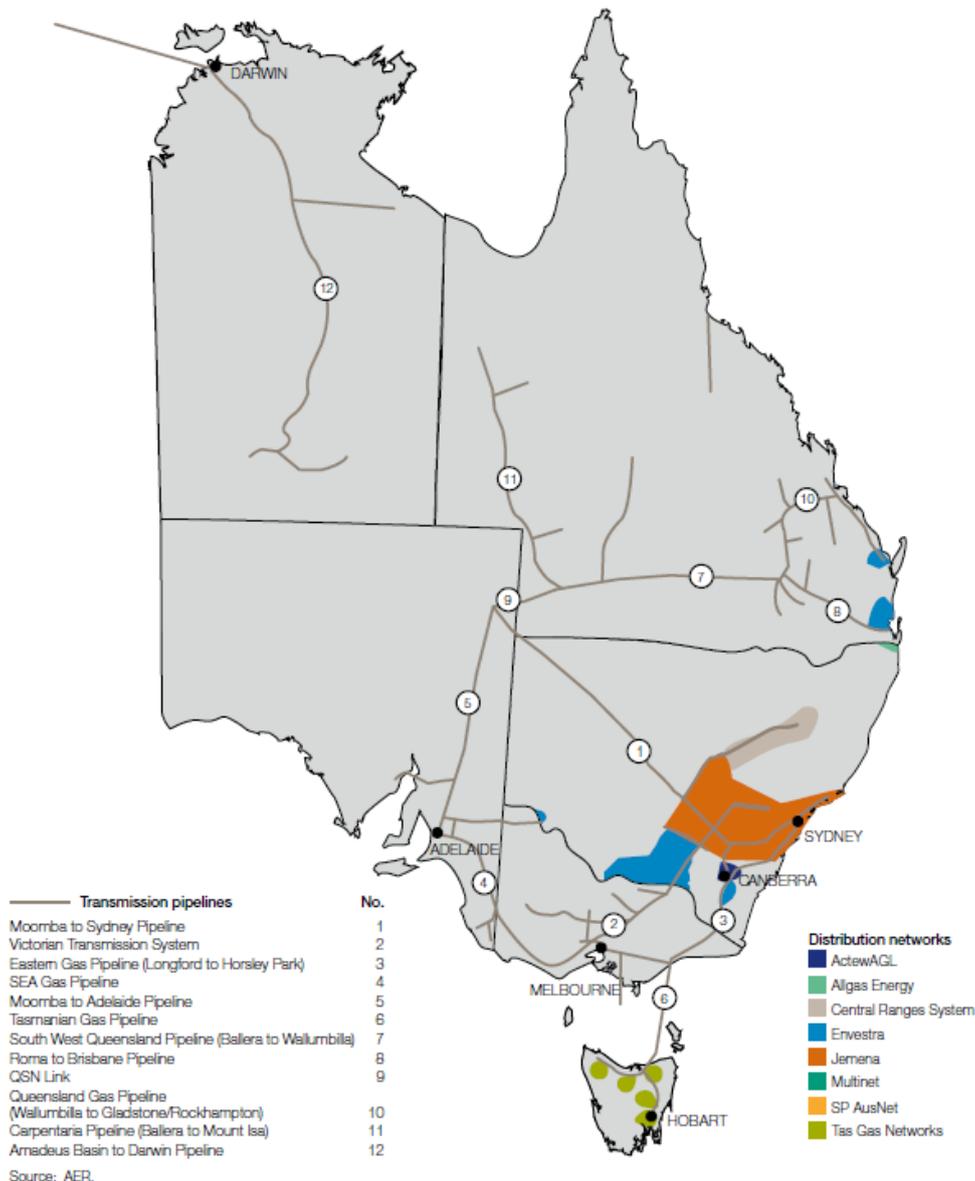


Figure 2: The Eastern Australia Natural Gas networks (Source: Australian Energy Regulator)<sup>7</sup>

The AER's State of the Market 2013 said this about SA's upstream gas markets<sup>8</sup>:

*"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*

<sup>6</sup> AEMC, 2014 Retail Competition Review, Final Report, 22 August 2014, Sydney p198 [www.aemc.gov.au/Markets-Reviews-Advice/2014-Retail-Competition-Review](http://www.aemc.gov.au/Markets-Reviews-Advice/2014-Retail-Competition-Review)

<sup>7</sup> Source: Australian Energy Regulator State of the Energy Market 2013 Chapter 4 p107

<sup>8</sup> 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 years<sup>9</sup>:

*‘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 EnergyAustralia<sup>10</sup>. It is understood however that Simply Energy / GDF Suez<sup>11</sup> 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 markets<sup>12</sup>.

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”<sup>13</sup>. The AER’s State of the Market 2013 said this about the Cooper Basin<sup>14</sup>:

*.. 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)<sup>15</sup>

“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

<sup>9</sup> 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](http://www.aemc.gov.au/Markets-Reviews-Advice/2014-Retail-Competition-Review)

<sup>10</sup> AEMC, 2014 Retail Competition Review, Final Report, 22 August 2014, Sydney p199, p200, p212

<sup>11</sup> 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\\_t1RpTNYNcj1qYFEI2CFcO](http://www.afr.com/p/opinion/french_giant_gdf_suez_asset_sale_t1RpTNYNcj1qYFEI2CFcO))

<sup>12</sup> AEMC, 2014 Retail Competition Review, Final Report, 22 August 2014, Sydney p212

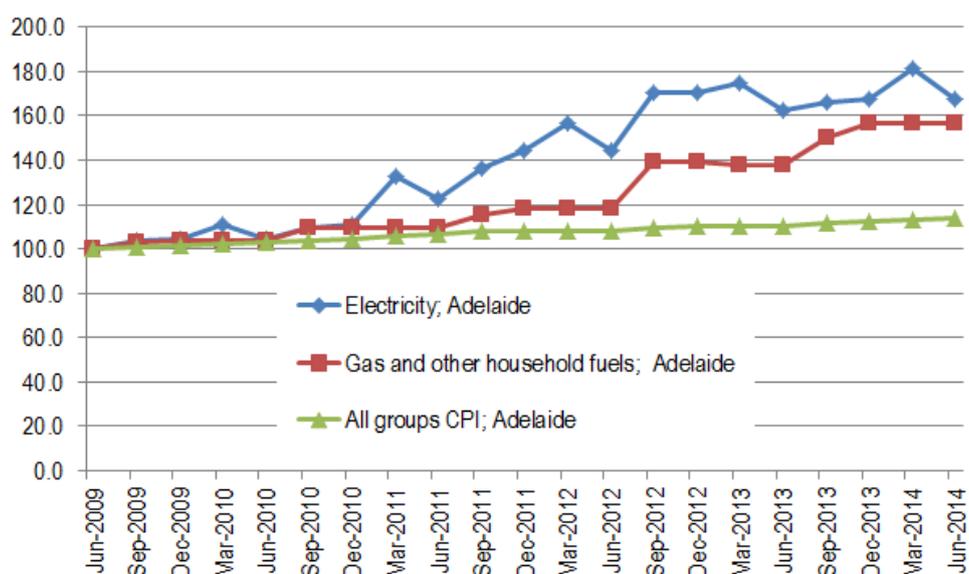
<sup>13</sup> [www.dmitre.sa.gov.au/mineral\\_and\\_energy\\_resources/roadmap\\_for\\_unconventional\\_gas\\_projects\\_in\\_sa](http://www.dmitre.sa.gov.au/mineral_and_energy_resources/roadmap_for_unconventional_gas_projects_in_sa)

<sup>14</sup> AER 2013 State of the Energy Market p86

<sup>15</sup> From [www.escosa.sa.gov.au](http://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 EnergyQuest<sup>16</sup>:

*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.*

<sup>16</sup> EnergyQuest *What happened to Australian wholesale gas prices in 2013?* 23 March 2014 available from [www.energyquest.com.au/insightsandanalysis.php?id=203](http://www.energyquest.com.au/insightsandanalysis.php?id=203)

Analysts are indicating that historic prices around \$4-5/GJ will double to around \$10/GJ<sup>17</sup> 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 2015-16<sup>18</sup>, adding 4-5% (in real terms) to the average household bill each year across the period.

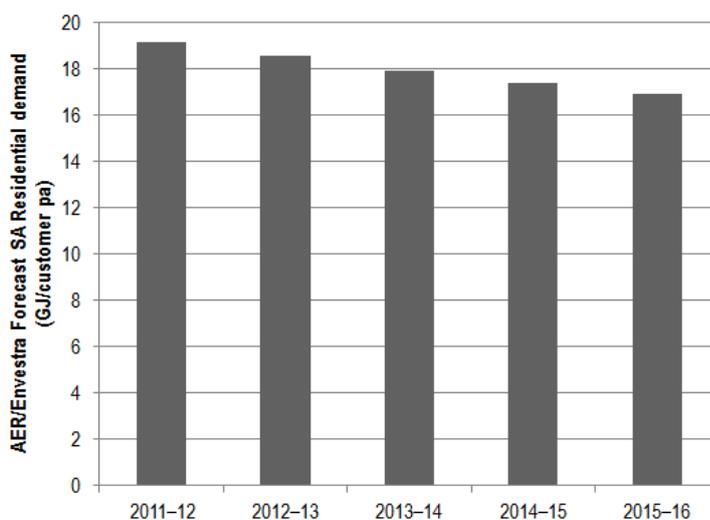
One of the reasons that networks prices are rising is that fixed costs have to be shared across declining volumes. This is illustrated in the AER's final decision on Envestra's Demand Forecasts for 2011-2016 (shown in the AER's Table 10.8 reproduced as Table 5) where volumes fall (see row titled Tariff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

<sup>17</sup> 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

<sup>18</sup> 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](http://www.bree.gov.au/publications/gas-market-report)

AEMC Gas Market Scoping Study ([www.aemc.gov.au](http://www.aemc.gov.au))

AER gas market data [www.aer.gov.au/Industry-information/industry-statistics/wholesale](http://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](http://www.sa.gov.au/topics/emergency-safety-and-infrastructure/infrastructure/utilities/sa-gas-industry)

Analysts: EnergyQuest ([www.energyquest.com.au](http://www.energyquest.com.au)) & Core Energy ([www.coreenergy.com.au](http://www.coreenergy.com.au))

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