

**Submission  
No 39**

## **DOWNSTREAM GAS SUPPLY AND AVAILABILITY IN NSW**

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The Committee Manager  
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To the Committee

### **Inquiry into downstream gas supply and availability in NSW**

EnergyAustralia welcomes the opportunity to make a submission to the Committee's inquiry into downstream gas supply and availability in NSW.

EnergyAustralia is one of Australia's largest energy companies, providing gas and electricity to over 2.7 million residential and business customers, around 1.3 million in NSW. EnergyAustralia owns and operates a multi-billion dollar portfolio of energy generation and storage facilities across Australia including coal, gas and wind assets with control of over 5,600 MW of generation in the National Electricity Market, nearly 3000 MW of which is in NSW.

#### **Key messages**

- Gas is important to the NSW economy. It also provides energy for more than one million households today, with a further million households having gas available, but not yet connected.
- Gas prices have not risen as fast as electricity prices in recent years. However, this is now reversing, with new cost pressures seeing gas prices rising faster than electricity.
- NSW is highly reliant on gas imports from interstate. It consumes 21 per cent of the gas in the eastern Australian market, but produces less than 1 per cent.
- The long term commercial contracts that underpin NSW gas supply are rolling off through the middle of this decade. At the same time the export LNG industry is linking the eastern Australian domestic market to the global market for gas, which will greatly change the dynamics of the domestic market.
- These two factors mean it is unclear where NSW will get its future gas supplies from, and whether it will pay more than other states for it. Resolving the question of NSW's future gas supply is one of the critical questions facing the energy market in eastern Australia.
- According to the NSW Government and most other commentators, without further action, NSW is at risk of gas shortages from the middle of the decade.
- Gas supply security in NSW could be boosted if the state's significant gas resources are developed.
- Achieving an environment conducive to supporting the investment needed to develop gas resources requires a partnership between government, industry and the community.

## A pivotal time in the development of the NSW gas market

This inquiry comes at a pivotal time in the development of the NSW gas sector. The eastern Australian gas market is facing a period of major transformation due to changing domestic and, especially, international factors. Reflecting this, at present multiple jurisdictions, departments, agencies, associations and interested parties are undertaking a range of reviews exploring the eastern Australia gas market. EnergyAustralia supports these reviews.

NSW is affected by broader eastern Australia factors, but also has its own unique dynamics reflecting its supply and demand situation and its evolving regulatory framework. While the primary focus of this inquiry is the downstream domestic gas market, given the linkages between upstream and downstream, the downstream situation should not be considered in isolation. This is not least because gas supply and availability for the downstream sector depends on gas inputs from the upstream sector.

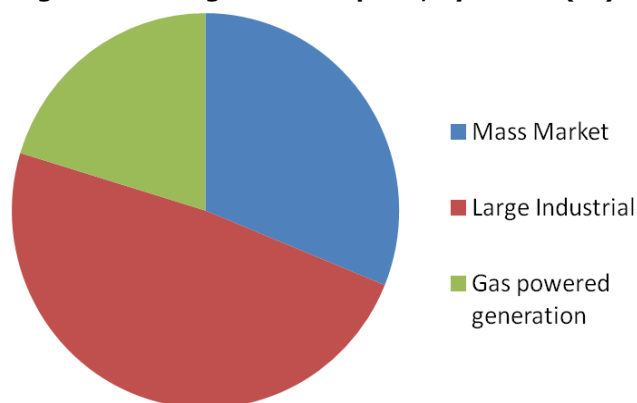
EnergyAustralia is a significant long-term player in the NSW gas market and eastern Australia more generally. Our role is primarily as a retailer – we buy wholesale gas and on sell to NSW households and businesses. We are also a direct user of gas in NSW, owning and operating the 435 MW gas-fired Tallawarra power station, and have a 20 per cent stake in the (upstream) Narrabri coal seam gas project.

The following submission outlines our views on the high level issues facing the NSW gas sector. From the perspective of a large retailer and consumer of gas, the key question is: how does NSW ensure a continued supply of gas to its downstream market at competitive prices to support its economy and households? In our view, resolving the question of NSW's future gas supply is one of the critical questions facing the energy market in eastern Australia.

## Gas supply in NSW is important to the NSW economy and households

Gas supply is important to NSW, supporting both its economy and households. As shown in Figure 1, consumption by the downstream sector in NSW is split across large industrial users (~50%), gas-fired power stations (~20%) and mass market customers (~30%, household and business).

**Figure 1: NSW gas consumption, by sector (PJ)<sup>1</sup>**

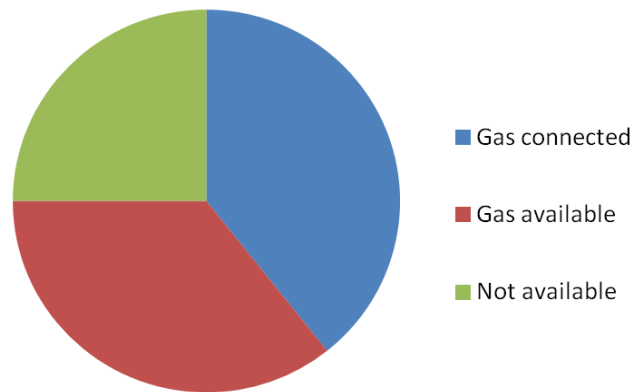


Gas provides many NSW households with heating, cooking and hot water services. As Figure 2 shows, of the approximately 2.9 million households in NSW<sup>2</sup>, around 1.1 million currently use gas, with a further 1.1 million households with access to gas, but not yet connected.

<sup>1</sup> Source: Australian Energy Market Operator, Gas Statement of Opportunities, 2012. Figure A.26.

<sup>2</sup> Australian Bureau of Statistics, Census 2011

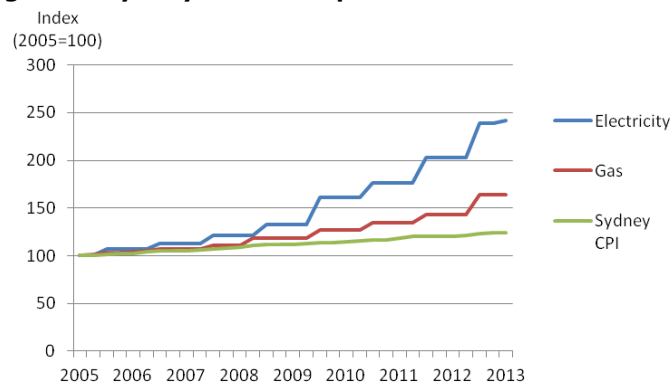
**Figure 2: NSW gas household connections<sup>3</sup>**



Gas prices have risen for consumers in NSW over the last decade faster than inflation. As shown in Figure 3, gas prices have risen significantly since 2005 – around 60 per cent. However, this rise is less than the increase in electricity prices.

However, this trend is beginning to reverse, with new cost pressures seeing gas prices rising faster than electricity. For instance, the Independent Pricing and Regulatory Tribunal’s latest regulatory determination sees electricity prices rise 1.7 per cent, compared to 8.5 per cent for gas.<sup>4</sup>

**Figure 3: Sydney consumer prices: Gas versus Electricity<sup>5</sup>**



### NSW gas consumption and production

Gas is important to NSW, although less prominent than in the other east coast mainland states (Victoria, South Australia and Queensland). For instance, while NSW has 38 per cent of the population<sup>6</sup> and 39 per cent of the economic activity<sup>7</sup> of the four states, as Figure 4 below shows, it only consumed 21 per cent of the gas in eastern Australia in 2010-11.

<sup>3</sup> Jemena website; internal EA data.

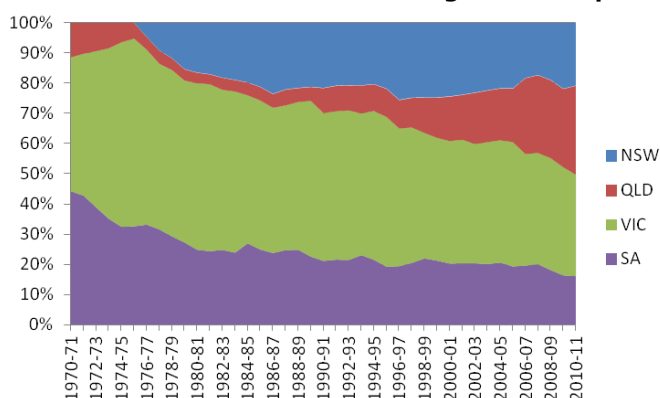
<sup>4</sup> IPART final decisions for regulated gas and electricity charges, 2013-14.

<sup>5</sup> ABS Cat. No. 6401.0, Consumer Price Index, Table 11.

<sup>6</sup> ABS Cat. No. 3101.0 - Australian Demographic Statistics, Sep 2012

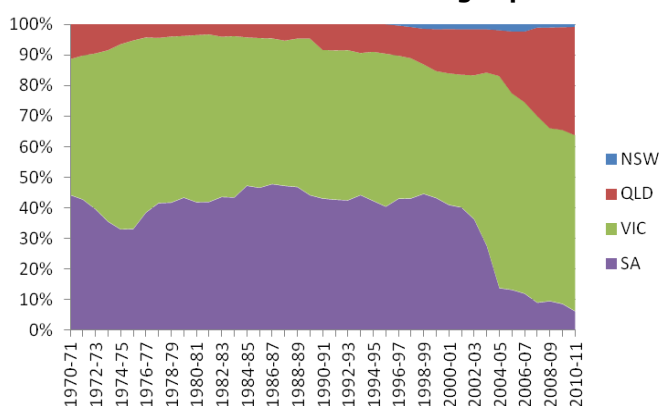
<sup>7</sup> ABS Cat. No. 5220.0 Australian National Accounts: State Accounts

**Figure 4: Breakdown of Eastern Australian gas consumption by state<sup>8</sup>**



While NSW's share of gas consumption is smaller than its population and economic size, its gas production is significantly smaller again. As shown in Figure 5, NSW gas production only commenced relatively recently and makes up a tiny share of eastern Australian production (less than 1 per cent). The majority of eastern Australian gas production in the second half of last century was from South Australia and Victoria, with the focus of production now shifting to Victoria and Queensland.

**Figure 6: Breakdown of Eastern Australian gas production by state<sup>9</sup>**



### NSW relies on gas imports from other states

With NSW consuming 21 per cent of eastern Australian gas, but producing less than 1 per cent, the net effect is a significant imbalance in NSW's gas production and consumption.

This imbalance is possible because NSW is a significant importer of gas from the other states. Gas is imported through the east coast gas pipeline network, including the Moomba to Sydney Pipeline, the Eastern Gas Pipeline and the Victoria-NSW interconnector.

In 2010-11, for instance, NSW produced only about 5 per cent of the gas it consumed. The remaining 95 per cent was imported from Victoria, Queensland and South Australia. South Australia has traditionally been the main source of gas for NSW.

This gas is imported into NSW under long-term commercial contracts between gas producers in Victoria, South Australia and Queensland and gas customers and retailers in NSW, including EnergyAustralia.

<sup>8</sup> Source: Bureau of Resource and Energy Economics, Australian Energy Statistics, 2012.

<sup>9</sup> Source: Bureau of Resource and Energy Economics, Australian Energy Statistics, 2012.

## Challenges facing NSW gas supply

The eastern Australian gas market has traditionally been a relatively stable, closed system, with no links to international gas markets.

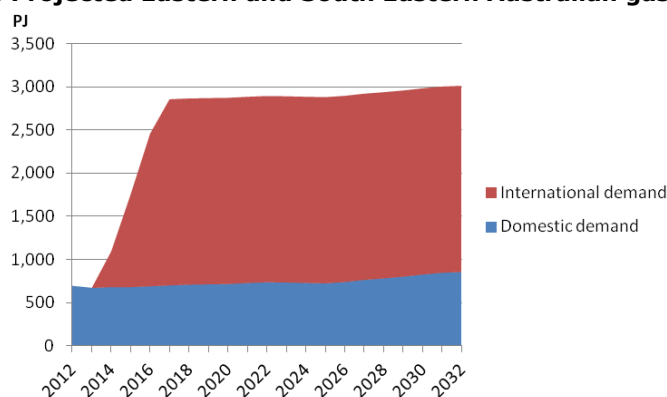
While NSW historically relied on Cooper Basin gas shipped on the Moomba to Sydney Pipeline<sup>10</sup>, the prospect of declining reserves from the Cooper Basin saw gas retailers and users seek out alternatives, including the possibility of piping gas from Papua New Guinea and the development of a coal seam gas industry in Queensland. Following the successful development of a coal seam gas industry in Queensland, NSW reliance was expected to shift from South Australia to Queensland with pipeline expansions planned and committed between Queensland and NSW.

However, the dynamics of the eastern Australian gas market are now fundamentally changing.

Most critical to this is the development of an eastern Australian coal seam gas to export LNG industry based in Gladstone, Queensland in response to global demand for gas. This means that, as now occurs in Western Australia, Australia's eastern gas market will soon physically link into international markets.

The emergence of the export LNG industry will transform the size and nature of the gas sector. It will dramatically increase the magnitude and composition of demand for Australian gas. For instance, as Figure 6 shows, over 2012 to 2018, demand for eastern Australian gas is projected to increase three fold. By 2018, 75 per cent of demand for eastern Australian gas will come from international markets, with only 25 per cent from the domestic market.

**Figure 6: Projected Eastern and South Eastern Australian gas demand<sup>11</sup>**



International demand from the Australian export projects will largely be met by the development of new coal seam gas resources in Queensland. However, the large volumes of gas mean the export LNG industry will change the dynamics of the eastern Australian domestic gas market.<sup>12</sup>

Of particular relevance to NSW is that the export LNG industry will be establishing itself at the same time as the long-term contracts that currently underpin NSW gas supply roll off throughout the rest of this decade.

This means that, after decades of stability, it is currently unclear where the NSW economy and households will source gas from in the second half of this decade, and at what price. As noted by the

<sup>10</sup> AER State of the Energy Market, 2012, page 100

<sup>11</sup> Source: Australian Energy Market Operator, Gas Statement of Opportunities, 2012. Figure 1.

<sup>12</sup> Wood, T. Carter, L., and Mullerworth, D., 2013, Getting gas right: Australia's energy challenge, Grattan Institute, page 28

NSW Government and many other commentators, NSW could become short on gas from as early as 2014-15 unless new supply is negotiated.<sup>13</sup>

### Securing NSW future gas supplies

Meeting NSW's future gas demands will likely require significant volumes of gas to continue to be imported from interstate, although this may require pipeline expansions.<sup>14</sup> However, with rapidly increasing demand from the export LNG industry changing the dynamics of the domestic gas market, there will be greater uncertainty regarding the price and availability of interstate supply to NSW. As noted by the Australian Government:

"While the LNG industry is helping to expand Australia's gas market by bringing on new gas supplies and greater pipeline infrastructure, the timing of these activities and the increasing exposure to international markets is creating considerable uncertainty in relation to the availability and cost of domestic gas.

Specific uncertainties include the extent, duration and significance of any potential tightness in gas supply in the eastern market in the critical period between 2015 and 2020 and how any tightness will manifest itself, in particular the degree of contracting risk faced by consumers."<sup>15</sup>

Secondly, gas production in NSW could be greatly expanded from its current very low levels. This would enhance the State's energy security through reducing reliance on interstate supplies, especially at times of peak demand. It would also improve the bargaining position of customers/retailers in the state in negotiating supply terms and prices with interstate gas suppliers, reducing the chance that NSW customers pay more for gas than interstate customers.

While current gas production is low – meeting only 5 per cent of the State's needs – NSW does have significant resources of gas that have not been developed.

According to the Australian Energy Market Operator, NSW currently has nearly 3000 PJ of 2P<sup>16</sup> gas reserves (compared to annual consumption of about 140 PJ). As a point of reference, Figure 7 shows the sum of forecast NSW gas demand for the next 20 years compared to estimated 2P gas reserves today. It shows that NSW has a substantial indigenous gas resource. Further, with new exploration and appraisal activity, estimated gas reserves tend to increase over time.<sup>17</sup> Due to its geology, NSW's gas resources are primarily located in coal seams. Coal seam gas currently provides around 30 per cent of eastern Australia's gas consumption.<sup>18</sup>

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<sup>13</sup> See <http://www.csg.NEW SOUTH WALES.gov.au/the-facts/energy-supply-and-community-benefit>

<sup>14</sup> Wood, T. Carter, L., and Mullerworth, D., 2013, Getting gas right: Australia's energy challenge, Grattan Institute, page 31

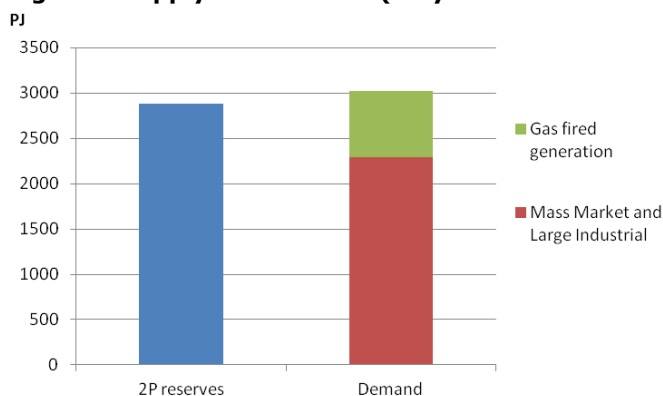
<sup>15</sup> Australian Government, terms of reference for Study on the Eastern Australian Domestic Gas Market

<sup>16</sup> 2P is defined as proven and probable reserves.

<sup>17</sup> Grattan Institute, 2013, page 26

<sup>18</sup> See <http://www.csg.NEW SOUTH WALES.gov.au/the-facts/energy-supply-and-community-benefit>

**Figure 7: NSW long term supply and demand (20 year demand versus 2P reserves)<sup>19</sup>**



### Challenges to developing gas resources

Gas fields have long lead times for development and require significant capital expenditure. This means that for NSW to make a contribution to supplying its own gas needs through this critical transition, projects will need to be developed in the near term. As noted by the Federal Government's Bureau of Resources and Energy Economics:

"...slow or complicated approval processes may result in delays to the development of CSG resources as is currently the case in the Gunnedah and Gloucester basins of NSW. Production from these basins would be important to supply gas to NSW consumers from the middle of this decade. Delays to the start of significant production from these fields could limit gas availability which, in turn, could put upward pressure on prices."<sup>20</sup>

However, the current situation in NSW does not support the expansion of the coal seam gas industry. For NSW to expand its gas production, a greater collaboration across industry, Government and the community is needed.

The challenge for industry – including gas suppliers, gas retailers and gas users – and government is to communicate both the importance of gas supply to the State and the nature of the State's gas supply issues. This must be accompanied (or closely followed) by a clear demonstration that gas (in NSW's case, specifically coal seam gas) can be developed and supplied in an environmentally, socially and economically responsible way.

For Government, the right policy and regulatory framework needs to be in place so that the market can respond to signals to meet NSW's future gas needs and companies can develop projects with confidence. This requires effective and efficient regulations and processes based on sound science and transparent and efficient planning decision-making.

Most importantly, industry and Government must engage with the community – particularly in areas where gas development operations occur, but also across the broader State – to communicate the gas supply challenges facing the State, meaningfully engage, consult and respond, share the benefits and ensure that balanced and workable outcomes are achieved.

It is critical that government demonstrates to the community its resolve to both appropriately monitor and support industry in the exploitation of the State's gas resources for the benefit of all citizens, including the vocal minority that will inevitably remain opposed.

<sup>19</sup> Source: Australian Energy Market Operator, Gas Statement of Opportunities, 2012, Figures 3.3, 3.5, 4.2c.

<sup>20</sup> Bureau of Resource and Energy Economics, Gas Market Report, July 2012, page 56.



## Downstream impacts

While the primary challenges facing NSW gas sector relate to upstream markets, a range of reforms to the downstream market will support the overall efficiency of the gas sector.

In particular, the Australian Energy Market Commission is currently reviewing the state of competition in the downstream gas market. Its draft report found that the levels of competition support the removal of the retail price regulation arrangements that are overseen by the Independent Pricing and Regulatory Tribunal. The AEMC is scheduled to make its final report to the Standing Council on Energy and Resources at the end of September 2013.

A second important reform is the transition to the National Energy Customer Framework. This is scheduled to occur on 1 July 2013. This will bring consumer protections in NSW into a nationally harmonized scheme, and together with price deregulation, will support the downstream gas market transition through this decade with the necessary flexibility and consumer protections to achieve efficient outcomes.

## Summary

To support the competitiveness of the NSW economy and prevent unnecessary cost of living pressures for households, NSW needs to ensure continued supply and availability of competitively priced gas for its downstream sector.

With the long term contracts that supply NSW rolling off over the next few years at the same time as the eastern Australian gas market is undergoing a fundamental transformation, NSW is facing a critical transition period.

Managing the transition from NSW's existing gas supply contracts to its future supply sources is one of the most critical challenges facing the State today.

There are options for the gas supply capability in NSW to be expanded, which would improve the State's energy resilience through this transition period and beyond. By working together, the NSW community, Government and industry can achieve this.

Please feel free to contact me if you require any further information on [REDACTED] or [REDACTED]

Yours Sincerely,

Signed for email

**Temay Rigzin**  
Policy and Advocacy Manager