

Gas: there will be enough for domestic markets – but at what price?

As at August 2011, Australia's east coast gas reserves were estimated to be 45,200PJ on a proved and probable basis (Figure 1).



Current gas demand on the east coast of Australia is running between 645PJ and 800PJ per annum, and consists of: gas-fired generation around 200PJ; and non-generation gas demand around 480PJ. Non-generation gas demand is forecast to grow at around 2 to 2.5 per cent, while gas supplied to gas-fired generation is expected to increase in light of a price on carbon, and the increased penetration of intermittent power generation sources*. For example, a 500MW OCGT plant running as base load will need around 45PJ per annum, while a 500MW CCGT plant running as base load will need around 35PJ per annum.

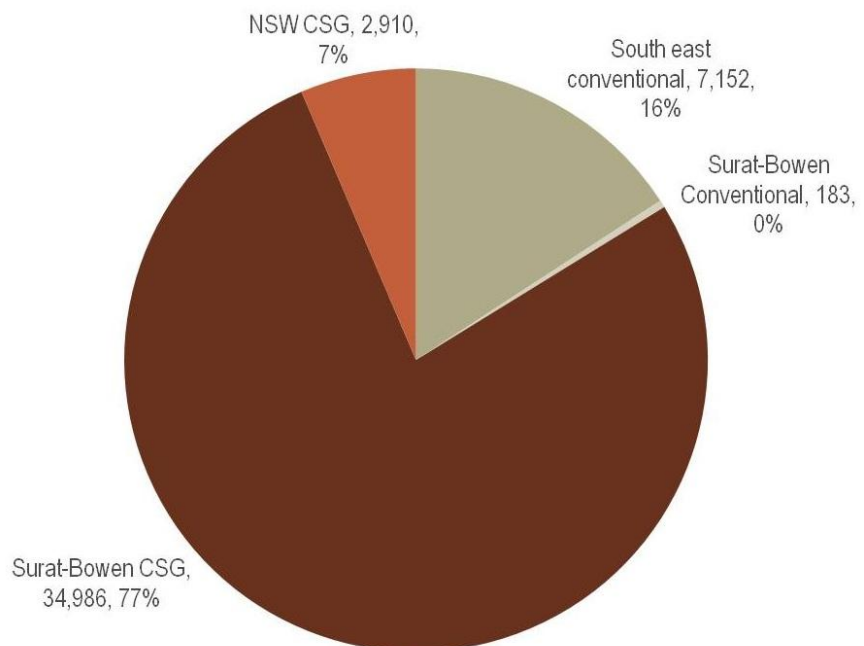


Figure 1: East coast gas reserves as at August 2011, courtesy of Energy Quest, supplemented by public sources

In contrast, the gas required to provide 1 million tonne of LNG is around 60PJ. Taking the minimum forecast capacity of all CSG to LNG proponents, this translates into a gas requirement of 1,650PJ per annum, and on a maximum CSG to LNG capacity, the gas requirement is 3,700PJ per annum. Given that LNG investments are underwritten by 20-year take or pay supply contracts, the Queensland CSG sector may not have enough gas at current prices to supply the minimum capacity plans of the CSG to LNG proponents.

Importantly, CSG gas reserves are proven on the expected gas price, which is derived from the price of oil. An implied price for CSG gas when oil prices are between \$80 and \$100 is somewhere between \$11/GJ and \$13/GJ. On these gas prices, the likely gas reserves would be significantly higher – providing substantial gas reserves for domestic consumption at the higher prices.

The current Queensland gas policy is to examine a form of gas reservation policy, similar to Western Australia, to ensure that there is affordable gas for domestic consumption, and to encourage the main CSG to LNG proponents to focus on domestic gas supply. One of the issues with current policy focus on availability of supply is that it is overlooking the expected rise in gas prices.

If the policy objective is to ensure gas for domestic purposes is consistent with historic gas prices, then a gas reservation policy without reference to an expected gas price level will be ineffective. In addition, a policy intervention that reserves gas and sets a price, runs contrary to current policy orthodoxy: to leave markets and commercial agents to determine resource allocation. Such a policy intervention is likely to distort the feedback loop between gas price and the setting of gas reserves, to the extent of lowering gas reserves.

Currently, the Queensland government has in place a production subsidy to the gas sector in the Queensland Gas Scheme (QGS). The requirement on Queensland retailers to source a percentage of electricity from gas fired generation, subsidises gas field development, and locks-in long term gas supply arrangements for domestic gas purposes.

The scheme was effective in underwriting the long-term contracts that created the CSG to LNG industry. Taking this further, the QGS (or an evolved QGS) could be extended to subsidise the domestic supply of gas at a price that our economy has become accustomed to. And this would be an outcome providing some balance to the competitive playing field for new power generation investment as currently, gas-fired generation receives limited to no subsidisation when compared to other fuel sources (such as renewables and coal).

* Gas-fired power generation systems represent the least cost, best technical solution to back-up intermittent generation.

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