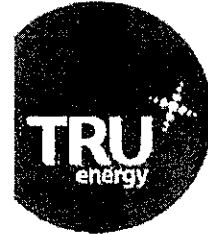


**Submission
No 370**

INQUIRY INTO COAL SEAM GAS

Name: Mr Mark Frewin
Organisation: TRUenergy
Date received: 08/09/2011



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Level 33
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The Director
General Purpose Standing Committee No. 5
Parliament House
Macquarie St
Sydney NSW 2000

7 September 2011

Dear Director,

Re: Inquiry into Coal Seam Gas

TRUenergy operates an electricity and gas retail business supplying around 2.8 million customer accounts. Our retail business is supported by a range of assets that span the gas, electricity and renewable markets across eastern Australia. Our electricity asset mix includes coal power stations, gas-fired stations, as well as a number of investments in renewable energy assets (wind and geothermal). In addition we operate a significant electricity and gas trading business to optimise the operations of these assets. With the recent NSW government privatisation program, our NSW-based business expanded significantly with the addition of the Energy Australia customer base, and the Delta Western generation portfolio.

As one of the major retailers of gas in NSW, as the operator of the gas-fired Tallawarra Power Station located on Lake Illawarra, and as an active developer of other gas-fired power plants in NSW, we have significant ongoing requirements to source competitively priced gas on behalf of NSW gas and electricity consumers.

In connection with our long term gas supply needs, we are seeking to acquire an interest in the assets of Eastern Star Gas, with a particular focus on Coal Seam Gas (CSG) reserves in NSW. We are making this investment to manage our ongoing gas requirements. Santos is proposed to be the operator of the assets.

We are not expert in the physical operations or development of CSG fields (Santos will play that role should our investment in Eastern Star proceed). Therefore we will

limit our comments on the inquiry to selected items relating to the role of CSG in meeting NSW's future energy requirements which relate to section 3 of the inquiry terms of reference.

3(a). Nature and extent of CSG demand and supply

NSW sources of gas supply

Historically, NSW obtained most of its gas from the Cooper basin in Central Australia. This was the sole source of gas supply until the development of the Eastern gas pipeline (EGP), which linked NSW gas customers to the gas producers in Bass Strait off the Gippsland Coast.

While adding the EGP supply did improve the security and competitiveness of wholesale gas supplies into NSW, Cooper basin fields have matured and are now in decline. Once the conventional gas supplies from the Cooper basin have been exhausted, absent further gas discoveries, NSW will be reliant on CSG supplies from Queensland or NSW to place competitive pressure on the conventional gas producers in Victoria.

As such CSG will be a critical factor in maintaining competitive pricing and diversity (and hence security) of gas supplies for NSW industrial, domestic, and power generation customers in the future.

Export gas markets

A further pressure on NSW gas supplies comes from the development of Liquefied Natural Gas (LNG) export terminals in central Queensland. These facilities provide a link to international gas markets, which have historically traded at multiples of the historical Eastern Australian domestic gas market price.

LNG export facilities require large quantities of gas, and the significant investment in the development of the CSG sector over recent years has largely been focused on securing reserves for these export markets. Once the LNG facilities are in place, there is a strong risk that domestic gas pricing will start to reflect the opportunity cost of not exporting the gas. As such, there is a reasonable risk that pricing in the east coast domestic market, may rise towards export parity levels –which will significantly impact on gas pricing to domestic consumers.

It is worth noting that large segments of the currently identified CSG resource (particularly in Queensland), have already been committed in forward sales to the export market. So while there are large amounts of CSG being proven up (ie. supply has been increasing), much of this has already been committed in sales to international markets. Consequently, further exploration and proving up of CSG acreage in NSW would be beneficial in firming up domestic supply options for the state going forward.

In this context, attempts to restrict CSG production, would exacerbate these pricing drivers, and increase the likelihood of high price shocks to NSW consumers of gas, and also of electricity (to the extent gas-fired electricity generation increases).

Demand outlook for gas in NSW

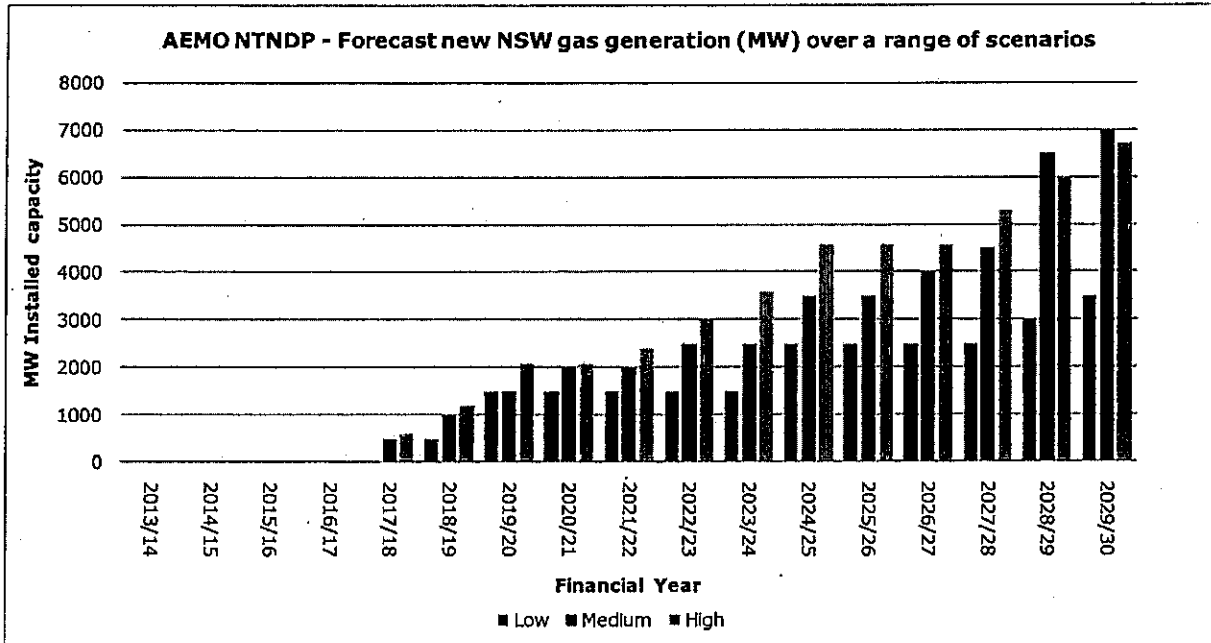
Several uncertain elements are likely to impact gas demand in NSW over coming years. These factors include:

- Carbon pricing;
- Gas pricing;
- Coal pricing; and,
- General economic development.

While some uncertainty remains over the form and timing of a potential Carbon pricing scheme in Australia, a detailed proposal is currently being progressed through the Commonwealth decision making process, and there is a reasonable prospect of a scheme being in place by mid-2012. Depending on the final detail of the carbon scheme, the level of carbon pricing is likely to strongly interact with international carbon prices, and the prices of key fuel inputs into the electricity sector including the costs of gas and coal. Strong international demand for coal and gas from Australia, may continue to provide upward pressures on the pricing of these commodities. Significant uncertainty remains on most of these parameters in the short term.

While uncertainty in carbon and energy market pricing remains, in the event of price rises in these commodities, more subdued demand growth would be expected. In particular, gas-fired power generation development is likely to be strongly dependant on the pricing outcomes in these markets, and could experience strong growth under some scenarios, or weaker growth in others. More general economic conditions are often strongly correlated to energy demand growth, and can be expected to play a role in future gas demand in NSW.

The Australian Energy Market Operator, in its role as independent National Transmission Planner, has published the National Transmission Network Development Plan (NTNDP), which contains a range of scenarios for possible generation development in future. The following graph outlines the forecast requirements for *new* gas fired power generation in NSW over a range of credible policy and economic scenarios. In all cases significant investment in gas fired power generation is forecast to be required to maintain secure and economic electricity supply for NSW from later this decade.



Notes for Graph

1. Data sourced from AEMO 2010 NTNDP
2. Gas generation = sum of CCGT, CCS CCGT and OCGT
3. Low scenario = Slow Rate of Change - Low carbon price, weak economic growth, low population growth
4. Medium scenario = Decentralised World - Medium carbon price, medium economic and population growth
5. High scenario = Fast Rate of Change - High carbon price, High sustained economic growth
6. AEMO modelled 10 scenarios, 3 have been selected for clarity and intended to provide a range of potential gas generation requirements

In any event, TRUenergy sees CSG as an important source of gas to supply existing and future demand for NSW. CSG has the potential to improve security of supply (by increasing supply diversity), as well as maintaining competitive pressure on remaining conventional gas suppliers to NSW going forward.

3(b) Relative whole-of-lifecycle emission intensity of CSG versus other energy sources

TRUenergy will restrict its comments in this area to power generation, an area in which it has significant expertise.

CSG is well placed to provide fuel for current and future gas fired power generation in NSW. From a generators point of view, CSG is just as appropriate as conventional natural gas as a fuel source.

While the carbon intensity¹ of existing coal power stations in NSW is typically 0.94-1 T/MWh, modern combined cycle gas plants like Tallawarra, emit around 0.45-0.5 T/MWh. As such gas fired power generation is significantly less greenhouse intensive than coal-fired generation.

¹ More detail on relative carbon intensity can be found on the AEMO website at <http://www.aemo.com.au/electricityops/cdeii.html>

We note that some intensity benchmarks may not consider emissions at the gas field and in gas transmission. If this form of measurement is used, it is important to also compare coal power plant emissions on the same basis (ie. by excluding any fugitive emissions in mining the coal, and transport emissions in moving it to the power plant etc.).

3(e) Proportion of NSW energy needs which should be base-load or peaking supply and the extent to which CSG is needed for that purpose.

The appropriate power generation mix for the future of NSW will depend on the relative costs of carbon, gas and coal, and may be somewhat influenced by the mandatory requirement for renewable energy under the Commonwealth's Renewable Energy Target (RET) scheme.

TRUenergy and other generation developers are actively developing gas-fired power generation sites within NSW. The timing of deployment, and technology used in these developments, will be a function of how the various commodity markets play out over time. We note that it would be very difficult to develop coal based power plants given the long pay-back periods of such plants, and the outlook of an increasing carbon price going forward. TRUenergy does not see green-field coal generator developments as a viable option in this environment.

On this basis, the current preferred technology for base-load investment would be combined cycle gas plants, and for peaking operation would be open cycle gas plants. Both base-load and peaking plants will therefore require access to reliable and cost effective gas supplies. That said, a base-load station would tend to use significantly more gas than a peaking station which would impact the volume of fuel required.

With this outlook, it will be important for NSW to have access to secure gas supplies to ensure that its power generation requirements can be met. While the relative volume of gas requirement could vary depending on actual market dynamics going forward (and therefore technology mix selected), CSG will be important to ensuring competitive gas supplies are available whichever future unfolds.

3(f) Contribution of CSG to energy security and as a transport fuel

As outlined above, CSG will be an important gas supply option for NSW to ensure that wholesale gas buyers (like TRUenergy), can source their gas from a number of sources. Supply diversity of this type allows greater security of supply, as in the event that one supply source experiences a shutdown, an alternate can continue to supply customers.

In the medium term, if conventional gas supplies from Central Australia are exhausted as expected, CSG will be the replacement energy source (either CSG developed in Queensland and supplied along existing pipelines via Moomba, or NSW developed CSG). This combined with the existing conventional supplies from Victoria, will ensure that there will continue to be at least two supply sources for gas to NSW.

The development of a CSG industry within NSW will further increase supply options and reduce risks, as this source would reduce the distances over which gas would need to be transported, compared to bringing the gas in from Queensland. Shorter transmission distances, result in less exposure to the risk of transmission failure. The availability of locally sourced gas is also likely to enhance the business case for new gas-fired power station development.

In addition, much of the currently developed reserve base in Queensland has been committed for export, and therefore it will not be available for NSW consumption. In contrast, development within NSW will be more attractive for domestic consumption because the costs of exporting the gas to Queensland would be expected to make it less competitive for export markets compared to locally developed Queensland options.

TRUenergy views the development of a CSG sector in NSW as an important step toward ensuring ongoing gas supply security for NSW gas consumers, gas-fired power generators, and ultimately, electricity consumers alike.

Please feel free to contact me via () should you wish to further discuss this submission, or our views on the NSW CSG sector.

Yours Sincerely,

Mark Collette
Director, Portfolio Management and Development
TRUenergy