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Copy: The Honourable Tim Nicholls MP, Treasurer and Minister for Trade.
Bruce McIver, President of the LNP.

19 February, 2013

Dear Mr Premier,

QUEENSLAND ENERGY RESERVATION POLICY (ERP)

I refer to recent press comments attributed to you and Treasurer Nicholls regarding this subject, and thought to offer my views as a retired senior resource professional. Within Queensland, population and economic growth are key drivers behind growing demand for energy.

1. Background

The cost of energy is one of the most important production inputs, together with labour and capital. As a basic input, the cost of energy has a significant compounding effect throughout our economy.

2. State Government Responsibility

Government is charged with providing essential services at viable costs to facilitate growth, employment and enjoyment within our society. The practice of covering budget deficits by selling essential service assets should be avoided where alternate strategies exist.

3. Power Costs

The cost of domestic electricity has increased 9.8%pa since 2006, well ahead of inflation, to the detriment of industry and the cost of living generally Ref-1 & 2. Figure 1 shows major annual charge increases have occurred since 2005.

Queensland is an energy rich State and this statistic shows fundamental problems exist in our power supply chain.

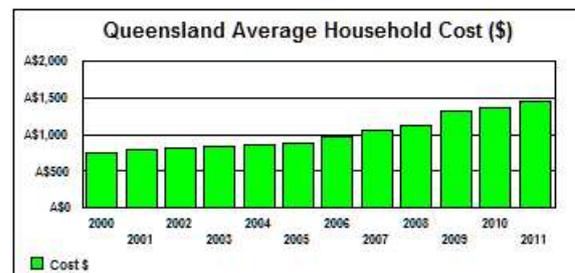


Figure 1.

4. Basic Queensland State Considerations

1. Queensland has access to low interest borrowing costs due to a positive financial rating, but has inherited a large debt.
2. Coal and gas are the two most practical base energy supply resources in Queensland. Both raw products are sold on to the generators and exporters in return for royalty payments.
3. The State owns the undeveloped coal and gas reserves which are leased to developers through *The Department of Natural Resources and Mines*.
4. Queensland currently owns the electrical distribution network and has a 65% equity in the generators (Ref-6).
5. Governments generally have a reputation for inefficiently running business.

5. Coal vs Gas Generated Power

Coal has traditionally formed the basis of our reliable power supply system due to its high quality, low feedstock cost, and the technical excellence of our generators. This enviable record has been besmirched by persistent environmental scaremongering to the point where it is impossible to expeditiously construct a new coal fired power plant, and there is growing social pressure to close existing coal plants.

Gas is a rapidly emerging fuel resource with better perceived environmental credits, but is regarded as a more expensive base load source of electricity. This presumption is worth analysing in more detail.

The current development of a large scale LNG industry in Queensland, based on coal seam gas (CSG), is resulting in increased gas prices domestically – Figure 2 is from a published analysis by ACIL Tasman, Oct. 2011 (Ref-8) showing the modelled increase in Brisbane gas prices compared to other Australian capital cities.

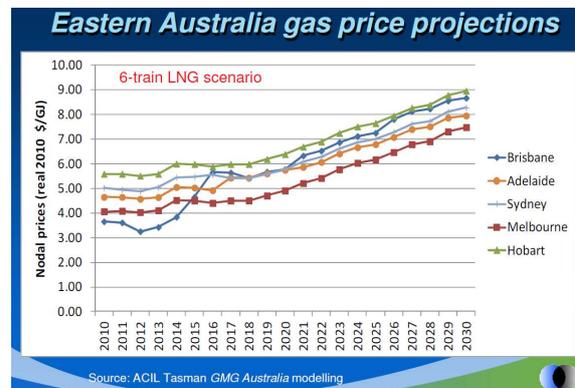


Figure 2.

Other published modelling (Ref-9) by Intelligent Energy Systems, Oct. 2011, forecasts modest growth in gas for power generation, and strong growth in LNG. At \$3/GJ gas is competitive with black coal for power generation; Figure 3 shows above \$6/GJ it is not.

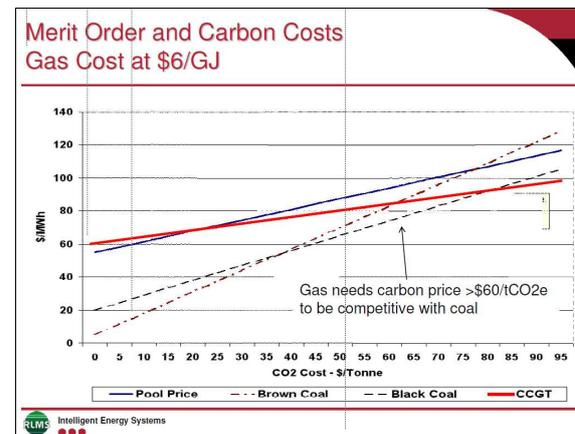


Figure 3.

Conclusions drawn by Intelligent Energy Systems from this modelling include:

- Gas prices in Queensland will likely approach LNG netback prices
- Electricity prices will rise due to increased gas and carbon costs
- Existing coal-fired generation will remain viable under projected carbon prices

These conclusions reflect free market projections and are complicated by the existing Carbon Tax with assumptions regarding the future level of this impost. Indeed, the current anticipation is that the tax will be repealed shortly for political, economic and scientific reasons.

Figures 2 and 3 illustrate the free market pricing for gas, which includes demand driven fuel price escalations with on costs such as royalties, carbon tax and profit margins. The basic cost of producing domestic fossil fuels is much lower, however these predictions are useful in highlighting the certainty of increasing electricity pricing in Queensland if we follow the “do nothing” path.

A well focussed **Energy Reservation Policy** will ensure base load fuel supply is available to the State for the lowest cost of extraction, generation, and transmission.

6. Fossil Fuel Cost of Electricity

An electric power plant produces around 7.2 GJ of usable energy for each tonne of coal burnt Ref-3.

Ref-4 shows a combined cycle (steam and gas) electric power generator has efficiency in the 55-60% range (say 57.5%), thus requiring the equivalent of 12.5 GJ of gas input to equal one tonne of coal.

These figures are summarised in Figure 4, and show coal available at a power station for say \$100/t generates the same cost power as gas priced at \$2.76/GJ, assuming no valuable liquid by products accrue from the gas extraction.

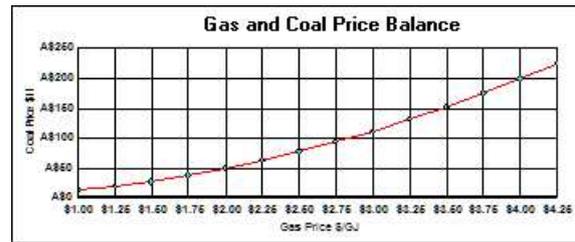


Figure 4.

Costs do not include capital, transmission, infrastructure, and other ancillaries which are site specific, but the graph gives a first cut comparison for the two base load fuel alternatives.

For example;

- A new gas power plant sited near a coal seam gas deposit and industrial complex, is likely to produce lower cost electricity than a coal power plant sited at the end of a coal rail line, with associated long power transmission lines. Particularly if hydrocarbon byproduct is available from the gas deposit.
- A new coal fired power station is likely to have a long approval process while a gas powered installation has a shorter approval period due to lower environmental impacts, and reduced infrastructure requirements, including cooling water, ash disposal, and possible carbon sequestration. These factors lead to a capital cost advantage for gas plants ranging from \$500 to \$1,000 per installed kilowatt, Ref-7.

Ref-5 states gas production costs in Australia are “ranging between A\$1.54 per GJ and A\$15.21 per GJ. The lower costs can include “other value added activities” including liquid hydrocarbon offsets.

Production costs also include a 10% rate of return over 30 years and “exploration costs; development; drilling and completion of wells to make them ready for production; gas processing; gas gathering systems; water handling; taxes and royalties; and general and administration costs”. State gas production would not include some of these costs, or at a lower rate.

Ref-8 - Figure 5 compares indicative costs of gas production, and comments:

– Close to lowest cost fuel source: currently Queensland CSG, but LNG developments may change that

The figure shows indicative low cost coal seam gas ranging between \$2.00 to \$2.50/GJ with the possibility that shale gas may be competitively priced - no doubt with valuable liquid by product.

This further highlights the importance of introducing an **Energy Reservation Policy** to isolate Queenslanders from export parity energy pricing, as projected in Figure 2.

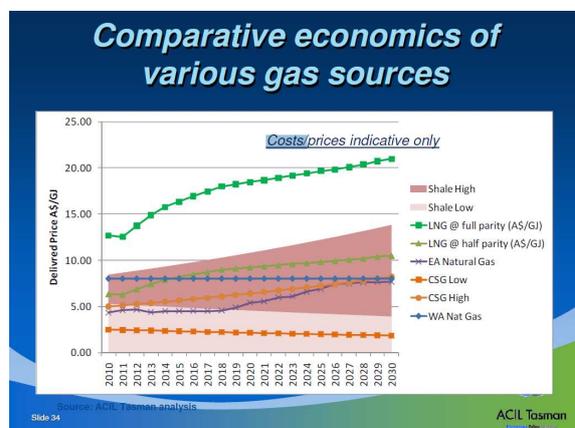


Figure 5.

7. Coal Cost of Electricity

Truck and shovel open cut is the most likely mining method for extraction of thermal coal.

Typical equivalent extraction costs are depth and coal thickness dependant as summarised in Figure 6 for 1m thick coal.

Figure 7 illustrates the difference with a 3m thick coal seam.

In summary, a pit 50m deep has a cost of extraction around \$4.50/GJ for a coal seam 1m thick and \$1.50/GJ for a 3m thick seam. The generated power cost equivalent for the 3m thick seam is less than 1 cent per kilowatt hour.

The depth and thickness of the coal deposit are fundamental considerations in achieving the lowest coal extraction unit cost. Coal treatment and surface transport costs are additional and site dependant, but the figures indicate there is good potential for base load power generation using gas or coal as the feedstock.



Figure 6.



Figure 7.

8. Strategic Considerations

Ideally, from a Queenslanders' point of view, power would be available for domestic and business use near to the cost of production. This effectively lowers the cost of living while improving the economic viability of local value adding industries.

Thermal coal mining and power generation is more suited to rural locations while gas powered generation is comparatively benign and should be feasible in semi-rural and some urban locations.

This wide range of options is particularly beneficial when formulating a Queensland focussed Energy Reservation Policy.

9. State Energy Reserve

To achieve lowest electricity charges, the cost of producing feedstock coal or gas must be kept as near as practical to the cost of production. State government needs to quarantine a portion of coal and gas basin reserves for domestic use and waiver resulting production from State royalties.

This can be achieved by reserving a percentage of basin surface area (say 10%, see Figure 8), rather than by reserving a portion of gas or coal discovered by free enterprise. The latter option fails the "fair go" test and builds animosity between government and enterprise. To secure 10% of the basin areas will require a long term plan with discussion involving all stake holders.

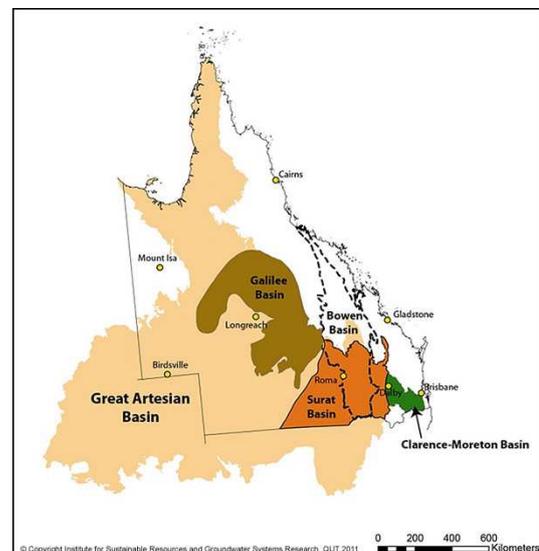


Figure 8.

Additional opportunity exists to utilise State park reservations depicted in Figure 9. Ref-10 advises reservations include 470 protected areas which amounts to 4.02% of the State (**69,572 sq km**). Many parks overlap geological basin surface regions and should be endorsed suitable for energy exploration under the State Energy Reservation Policy.

Newly collated data from The Queensland Resources Council shows the resources sector occupying just 0.09% of the state (**1,558 sq km**). Ref-11. This highlights how great wealth can be created from selected small areas when large areas are opened for exploration.

10. State Resource Extraction

To explore and mine for coal or gas requires technical endeavour which is most expeditiously carried out by private contractors. State government has access to low interest bearing capital which can be effectively invested by competitively hiring contractors capable of delivering the required results.

11. State Power Generation

Similarly, the most cost effective new power plants can be constructed with State government capital in conjunction with private industry constructors and operators. These installations should remain 100% State owned, but be privately operated.

12. Power Transmission

Power transmission lines need to remain in public ownership to avoid monopolistic cost impacts which inevitably follow the sale of such assets into private hands. Maintenance and upgrading can sensibly be left to contractors, but ownership of the lines and routes should always remain as public property.

13. Political Context

There has been recent discussion regarding the sale of Queensland coal power station assets and power lines. It is easy to consider these options given the dire state of the public purse. However any sale will increase consumer power costs - as happened with the sale of our water utility assets.

Sale of power lines should be resisted to avoid monopoly control of these irreplaceable assets, however there could be an opportunity to sell the power stations at an attractive price when the carbon tax is removed, as currently proposed by the Federal Opposition. This would reduce the State debt and provide an opportunity to exercise an option for developing a new series of State owned (but privately operated) power stations.



Figure 9.

14. Conclusions:

1. Queensland base load power can be generated from coal or gas and the best options are site specific.
2. Low power costs are critical to the economic prosperity of Queensland.
3. The State has adequate reserves of coal and gas suitable for use in low cost base power generation, but must reserve an areal portion of these assets for the population's beneficial ownership.
4. Maintaining public ownership of energy supply lines is critical to avoiding consumer cost increases.

15. Recommendations:

1. Reserve a 10% areal portion of coal and gas basin reserves for domestic power generation.
2. Open park reservations to energy exploration and utilisation.
3. Quarantine identified energy reserves against State royalties and future sale.
4. Prohibit the sale of State owned supply routes and power lines.
5. Review the sale of existing State owned power stations when the Carbon Tax is rescinded.
6. Study options available for low cost base load power supply in Queensland, and implement when projected power demand requires additional generating capacity.

I am available if you wish to discuss these proposals in further detail.

Yours sincerely,



Robert A. Beatty BE FausIMM(CP)

16. References.

- Ref-1 http://www.engineersaustralia.org.au/sites/default/files/shado/Infrastructure%20Report%20Cards/Queensland/part4_energy.pdf
- Ref-2 <http://www.brisbanetimes.com.au/queensland/power-prices-to-rise-in-queensland-20120531-1zkep.html>
- Ref-3 <http://hypertextbook.com/facts/2006/LunChen.shtml>
- Ref-4 http://en.wikipedia.org/wiki/Combined_cycle
- Ref-5 <http://www.aemo.com.au/Gas/Planning/Gas-Statement-of-Opportunities/Production-Costs>
- Ref-6 <http://www.business.qld.gov.au/industry/energy/electricity-industry/electricity-queensland/electricity-generation>
- Ref-7 <http://www.ipgsrl.com/r-d/Coal%20Fired%20Unit%20%20versus%20Natural%20Gas%20Combined%20Cycle.pdf>
- Ref-8 http://aie.org.au/StaticContent%5CImages%5CMEL111027_Presentation_6.pdf
- Ref-9 http://aie.org.au/StaticContent%5CImages%5CMEL111027_Presentation_5.pdf
- Ref-10 <http://fnpw.org.au/parks-and-reserves/queensland-national-parks>
- Ref-11 <http://www.queenslandeconomy.com.au/land-use-comparison>

22 February 2013

Mr Bob Beatty
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Dear Bob

I am pleased to note receipt of your letter and I wanted to let you know that I have passed the attached report onto our Policy Standing Committee Chair, Richard Williams and instructed him of your interests and knowledge.

Thank you for taking the time to write to me.

I look forward to seeing you again soon.

Kind regards



Bruce McIver
LNP President



Premier of Queensland

For reply please quote: EP/CdB – TF/13/3430 – DOC/13/46186

16 APR 2013

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Dear Mr Beatty

Thank you for your letter of 19 February 2013 providing detailed information regarding Queensland's energy policy, including the possibility of reserving some of our gas supply for Queensland customers and maintaining public ownership of energy supply lines. I apologise for the delay in responding.

Firstly, let me say that I appreciate you taking the time to write to me on this issue. I appreciate hearing from individuals like you with solutions for doing things better, particularly given your expertise in this area.

As you are aware, Queensland has moved rapidly in a very short period of time from possibly requiring imports of natural gas from Papua New Guinea to identifying an abundant domestic coal seam gas resource. This resource can sustain a liquefied natural gas (LNG) export industry, as well as supply large volumes of gas to the domestic market for manufacturing, chemical industries and electricity generation.

The rapid emergence of the LNG export opportunity has seen a massive increase in gas production from a base of approximately 240 petajoules per year, prior to LNG exports commencing, to in excess of 1750 petajoules per year. This is obviously a growing market for Queensland and one we are eager to take advantage of.

However, we are also aware of the price pressures facing LNG proponents and domestic customers, which you have raised in your letter. The Queensland Government is committed to assisting industry where it can as the domestic gas market goes through this period of adjustment, due to export pressures. We will continue to consider how best to take advantage of the opportunity for economic development from the export of gas, while also helping to grow a sustainable domestic gas industry.

My Cabinet colleague, the Honourable Mark McArdle MP, Minister for Energy and Water Supply has been tasked with continuing to monitor the domestic gas market. I have forwarded a copy of your letter to Minister McArdle so he is aware of the issues you have raised.

On the issue of privatisation of State assets, including energy distribution and transmission companies, you may be aware the recently released Commission of Audit final report executive summary suggests consideration will have to be given to reviewing ownership of the State's assets to achieve a rapid reduction in debt.

However, I emphasise the Government's commitment before the election to not engage in asset sales without seeking a mandate from the people. This commitment remains in place and that's why our immediate action will focus on reducing Government waste, rather than the sale of assets.

More broadly, I know we need fundamental reform across the energy sector, over the medium and long-term, to put downward pressure on electricity prices. That is why one of the first things I did as Premier was to establish an interdepartmental committee and an independent review panel to deliver expert advice to the Government on the best way to keep prices as low as possible for all Queenslanders and how best to improve the electricity sector. I am happy to say that the Government will soon announce major reforms from this process that will drive significant decreases in network costs.

The Government is also developing a 30-year plan for Queensland's energy sector. This long-term plan on energy will examine how we can best meet our future power needs. A detailed discussion paper will be released in the first half of this year, with a lengthy consultation period providing everyone with a chance to comment. The final 30-Year Electricity Strategy will be released later this year.

I appreciate you taking the time to raise your concerns with me.

Yours sincerely



CAMPBELL NEWMAN