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Advancing Australia with natural gas abundance

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Some Problems

- Negative investment climate for infrastructure
- Threat to pipeline company balance sheets
- Flight of capital
- Reduction of profits / rent transfer
- Sub-optimal development of pipelines
- Failure of competition reform in gas supply



Steps To Take

- Return to vision of competition reform
- Implement wellhead competition
- Revamp regulatory architecture and governance
- Remove impediments to markets



Complexity

- Timing of contract renewals
- Security of supply
- Shortfall imminent
- Supply problems emerging



Coal Seam Methane Emerging?

- CH₄ to supply Townsville
- We await bankable contracts
- CSM needs a mature gas market



Supply Competition

- Any reductions not due producer (except WA)
- De-regulation has not produced competition
- Transmission investment has - rent shift
- We need additional sources
- Supply shortfall = increased prices
- They want shortage: we want abundance



Disadvantages Shortage

- Increasing gas price will cause demand to fall
 - Fuel switching
 - Less market reach
- What is “the world gas price”?



Advantages of Abundance

- Downward energy price pressure
- Genuine fuel of choice
- No “world gas price”
- Energy price stability - predictability
- Pressure on electricity prices as well



Need For A National Gas Strategy

- Continuing dependence on coal power
- Gas dedicated to domestic consumption
- Self sufficient PNG/East Timor or all
- State government initiatives
- Cleaner air



We Have The Opportunity

- To develop a thriving market
- To develop true competition
- To offer choice
- To get environmental benefits
- To maintain our competitiveness



Conclusion

- The future of gas requires political vision
- We need to know that natural gas has a valued and important part to play in the energy mix and the future of this country
- We need regulation when market failure occurs



A scenic landscape featuring a wide, reddish-brown dirt road that curves through the foreground. The road is flanked by sparse, yellowish-green trees and shrubs. In the background, a large, rounded hill or mountain rises, covered in dense, reddish-brown vegetation. The sky is a clear, bright blue. The overall scene is a natural, outdoor setting.

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Advancing Australia – natural gas abundance and its role in our nation's prosperity

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1.0 INTRODUCTION:

Australia is a lucky country. Amongst our good fortunes are our vast reserves of natural gas: reserves which should be accessible to businesses and communities across the nation, and delivered via a sophisticated, innovative market that promotes real choice between gas supplies and alternative energies. Because of the importance of energy to the Australian economy, a thriving, competitive energy market providing consumers with choice, security of supply, and price competition, would bring substantial national benefits.

Right now, the opportunity to realise such a vision is before the Federal Government.

The market paradigm in Australia is changing, impacting the very future of natural gas. To ensure that Australians benefit from this abundant resource, government direction is necessary. A national strategy promoting natural gas usage, encouraging market and industry innovation, and resulting in the construction of a transnational pipeline grid and the development of a robust market for gas, would be a great legacy for any government.

The problem in 2002 is that natural gas is running out of time: alarming words, but not without foundation. Specifically to the natural gas transmission pipeline industry, a number of problems have converged to create a situation that requires attention.

These problems are:

- The creation of a negative investment climate within Australia where major international investors are either withdrawing from the Australian marketplace, or electing to preferentially invest their capital in other countries for superior returns with pro-infrastructure and development minded governments.
- A growing threat to the balance sheets of pipeline companies whose investors include Australian superannuation funds and other institutional investors.
- The withdrawal of Australian and foreign capital from the gas transmission industry.
- The reduction of asset value and shareholder returns in gas transmission companies, substantially limiting private investment in new projects while at the same time offering no cost benefit to end consumers.
- Sub-optimal plans for natural gas infrastructure that will prevent the development of a truly national network of gas transmission pipelines
- The failure of competition reform in natural gas supply.

- In effect the removal of any prospect for a genuinely competitive pipeline industry and gas industry by removing the tantalising possibility of transcontinental gas pipeline network, and a flexible national gas market.

Our most immediate opportunity for development of a national vision and redirection in energy reform and regulation lies with the current CoAG Energy Market Review led by Mr Warwick Parer.

To refocus policy and create the best outcome for Australia, there are a number of steps that need to be taken. Firstly, there is a need to return to the original vision of competition reform and implement true wellhead competition. The regulatory architecture and regulatory governance arrangements also need revamping. We can't have regulators as policy makers on the run and storm troopers on business, unless they are subjected to rules of behaviour and accountability. Finally, governments need to work together to remove, to the extent possible, impediments to markets, and alleviate community concerns.

2.0 THE MARKET IN 2002: DEMAND AND SUPPLY COMPLEXITIES

ABARE forecasts that by 2015 natural gas will occupy 28 percent of Australia's primary energy market¹. Industry observers maintain that these targets will not be achieved in the absence of supply links to the major new gas fields of Papua New Guinea and/ or the Timor Sea. Plans are on the table to connect these new fields with the markets of South Eastern Australia.

It would appear to be a problem with a simple solution.

However, in 2002 a number of factors have converged to make the natural gas supply and demand equation a complex one.

2.1. Timing – supply contracts falling due

Firstly, time is an important consideration. Contracts in New South Wales, Victoria and South Australia are due for renewal from 2003-2006. If an alternative gas supply from PNG or Timor is to be established it must be completed before new contracts are written. Sufficiently high volumes of gas will need to be secured for new gas supply infrastructure in order to contain unit prices for larger industrial and electricity generation customers². Presently, the volumes are still doubtful.

2.2 Security of supply

Secondly, we do not have a robust delivery system for natural gas in South Eastern Australia. The catastrophic fire at Longford, Victoria in September 1998 demonstrated the vulnerability of a state with a limited number of supply sources.

¹ Bush S, Dickson A, Harman J & Anderson J: "Market Developments and Projections to 2014-15", ABARE Research Report 99.4, April 1999.

² National Institute of Economic and Industry Research: "Natural gas consumption in Australia to 2015 – prospects by state, industry and sector", A Report for the Australian Gas Association, August 1999.

Further evidence of system weakness was seen over the past three winters with mechanical failures in the Cooper Basin resulting in near supply failures in New South Wales and South Australia. Improvements are underway mostly due to transmission pipeline companies investing in connections. The Interconnect pipeline linking the New South Wales and Victorian systems fulfilled its role by supplying essential services throughout the Longford crisis and keeping the system pressurised: important assistance given that an air ingress could have created a catastrophic explosion. LNG storage facilities built by the Victorian government at the Dandenong city gate and the underground storage at Iona in Western Victoria, the Yolla and Otway Basin supplies and the Eastern Gas pipeline, plus the large capacity in the Moomba Sydney pipeline all add reliability. The call for additional supplies is also a call for supply security, at a time of different contractual paths for gas.

The issue of Australia's security of supply, as part of the long-term needs of consumers, has been forgotten. South Australia, Queensland and the Northern Territory all have real imperatives to source additional gas supplies and have taken initiatives to do so. For New South Wales, connection with Victorian supplies provides temporary relief. Tasmania, about to be connected to the Gippsland Basin, may need to be very careful that it contracts enough gas to amortise the distribution systems, although as I understand it, no gas distributor has yet come forward as interested in constructing or owning or operating such a system. That in itself is a warning bell.

Industry stakeholders have also encountered supply problems. One example is Duke Energy announcing that they will not build a power station at Maryvale because of their inability to secure adequate gas supply contracts. It is reported that Gippsland gas is not available or marketed for sale in South Australia. This is one of many anecdotes beginning to surface regarding the shortening of contract lengths; interruption in peak demand periods and automatic and regular price openers from gas producers.

South-Eastern Australia needs an alternative source of gas or the consumers of the five Eastern States and the ACT may find themselves bidding for rights to gas in some form of Dutch auction; a perverse outcome of the liberalisation and competition reform initiatives of the past decade, in a country with abundance in gas.

2.2.1 Coal Seam Methane

The Queensland government's decision to supply the new power station at Townsville with coal seam methane from CH₄ is interesting. I wish CH₄ and the Queensland government well as they bring that project to financial close. However, it is a bold assumption that coal seam methane can be produced in the quantities and in the time necessary to be a cost-effective fuel for the life of the project. Let alone be a reliable and abundant future supplier of gas.

The efforts of coal seam licence owners are welcome, but we await fully bankable contracts as proof. Frankly, it is in the interests of the coal seam operators to talk up its potential, and stop any pipeline bringing new supplies of natural gas into the market. It is difficult to imagine how coal seam methane will become economic at

present prices. However, while coal seam methane can *potentially* supply the market, investors could be interested, and we await IPO prospectuses with interest.

It is my view that the interests of coal seam methane producers is best served by a full grid of pipelines in South East Australia running by their leases and providing a very flexible and considerate access to an expanding gas market place. This will provide them access to such as spot markets, save them millions and reduce their contractual risks.

2.2.2 Supply side competition

In the business of competition reform we have forgotten to reform natural gas marketing at the wellhead.



Generally speaking, it is interesting to note that several major users of natural gas have achieved fairly significant reductions in the delivered price of gas since deregulation occurred. However, those reductions have not resulted from falls in wellhead prices other than Western Australia. In NSW, price reductions came at the expense of domestic consumers through the unwinding of a government inspired cross subsidy in existence prior to deregulation and some rationalisation of tariff structures in distribution piping. There is now every indication that well head prices will continue to rise, not fall: deregulation of the gas industry has not delivered seriously competitive well head pricing, quite the contrary.

The presence of the Interconnect, the Eastern Gas Pipeline, the pipeline from Geelong to Portland, the imminent pipeline from Portland to Adelaide, and a fresh supply of natural gas from the Timor Sea or PNG provide the opportunity for true gas on gas competition. Ironically if upstream competition eventuates it will be the pipeline

companies, having risked their capital in long term investments, that created the catalyst. We fight regulators, wellhead prices rise to accept the rent shift, and rise again.

The presence of either Timor Sea and/ or PNG gas in the Australian marketplace as truly competitive gas supplies would create a much more effective market with true supply side competition. In that scenario ABARE's forecasts may well be realised, and natural gas would be priced to enable it to produce competitive electricity. Further, that pricing would enable it to extend its reach and, as a fuel of choice, be selected by a great number of consumers who would not make that choice if it was delivered at the same cost as electricity in their home, business or factory.

The supply competition that was the missing element in 1990 at the commencement of competition reform remains unaddressed in 2002.

2.3 Marketplace 'noise' – designed to confuse

Finally, the issues of urgency and supply security are obscured by the competing interests of marketplace competitors, all of whom seek to maximise shareholder return: objectives which do not necessarily align with the national interest.

The market alone will not decide whether a transnational pipeline is built. It can be argued that the threat of natural gas supply from the Timor Sea or PNG has accelerated certain developments within the marketplace. Examples include new onshore and offshore fields; Otway, Minerva, and the acceleration of Yolla and Patricia-Baleen fields; the expediting of coal seam development and exploration, Bass Strait seismic work and Santos deep well technology. These “developments” are all seen to mitigate the need for a transnational pipeline, and hence the need for a new injection of natural gas supplies into the SouthEastern Australian markets. Such an injection would of course, adversely affect the price of competing fuels, the viability of alternative supplies of natural gas such as coal seam methane, and the price of gas from existing onshore fields. Certainly, the incumbent producers of Australian natural gas have little interest in the price stability that would result in the marketplace following the arrival of a large new gas supplies. Indeed their interest lies in supply shortfall, as shortfall will lead to increased prices for remaining reserves.

3.0 ADVANTAGES OF ABUNDANCE – THE IMPACT ON ENERGY PRICES

One of the great ironies of the political/ economic debate of the past decade is that we may lose the opportunity to develop a truly competitive market for natural gas. A significant loss, as natural gas is the only fuel that has the ability to provide sustained downward pressure on energy prices.

Representing our industry a couple of weeks ago in front of a small committee established to advise the Prime Minister, we were asked to consider the following:

“What if I put it to you that others claim there is adequate gas in South Eastern Australia, that all demand forecasts are optimistic, and that a relatively small increase in natural gas prices will result in significant quantities of presently uneconomic gas being brought to market.”

That is a self-fulfilling prophecy. If you raise the price of natural gas you will force it to compete with electricity, LPG and other portable fuels. As a result demand will fall, because natural gas is a fuel of choice.

If you raise the price, presently uneconomic gas may be brought to market as present economic reserves decline. This can only be done at the expense of consumers who are denied access to cheaper gas (in the case of Timor and PNG gas) associated with oil production, which must find a market.

If the price is raised, the reach of natural gas is reduced and demand from an expanding market reach will not be realised.

We argue for abundance and increased opportunity for competitively priced natural gas delivered to as many homes and commercial premises as possible, as a genuine fuel of choice.

Others argue for scarcity and rising prices towards something now being identified as the “world price for gas”.

I absolutely respect their right to do so, but this country needs to reject the argument and use resources to the benefit of all.

It is important to note that the arrival of a new gas supply from either the Timor Sea field or PNG was never anticipated to lower gas prices. Any expectation that natural gas delivered from 700km offshore or from the highlands of PNG to Moomba/ Queensland at the then prevailing \$2.70/ \$2.80 well head price was very optimistic. The advantage of new gas to Moomba, lies not in its pricing, as it would probably be initially higher than existing contracts, but in the stability that would result, which would be maintained for a longer period of time based on long-term foundation contracts.

There is no similar influence in the existing gas supplies of South Eastern Australia and prices will surely rise.

The Parer energy market review provides some hope, provided the Committee maintains a broad view and a focus on the national interest. One of the fears held by our side of the natural gas industry is that the issues of the electricity industry will dominate the agenda and that our concerns will be lost. It is ironic that with just a hint of an electricity price rise in Victoria there is urgent talk of capping prices. However, when the government is told that natural gas prices will rise if new gas is not introduced into the system, there is no reaction and certainly no attempt to avoid such an outcome. What is more interesting is that a competitively priced alternative fuel such as natural gas would ensure downward price pressure on electricity!

For advocates of a transnational pipeline, calls for more gas into the SouthEastern Australian markets are not purely based on threats of supply shortfalls. Again, such statements oversimplify the market dynamics. Calls for additional supplies to the market become another self-fulfilling prophecy, because if optimistic views of market demand are taken as correct and pipelines are built on this basis and contracts signed to justify at risk capacity, then pipeliners will have an incentive to *ensure* that demand projections for natural gas are achieved. When connected, pricing for natural gas at the well head will come under pressure, and once large quantities of gas flow through, the system will see a downward price pressure, and price stability.

On the other hand, if additional gas supply is deemed unnecessary and transnational pipelines are not built, there will be upward pressure on gas prices to the point where gas becomes competitive with electricity and LPG. If this happens, incentives to change to natural gas or to select it as a fuel will be removed. Without gas, prices will rise. In this scenario the long term interests of consumers are not met, as they will pay a higher price for their energy.

4.0 A NEW VISION FOR AUSTRALIA – A NATIONAL NATURAL GAS STRATEGY

The bigger question is what does Australia want as its fuel mix in twenty years time? What value does Australia place on developing and making available our vast supplies for Australian industry and consumers? The Hon. Rex Connor, former resources minister in the Whitlam administration, envisioned a gas-fired future for Australia with a government owned transnational pipeline network. It was a vision way ahead of its time given the immaturity of the industry in the 1970s.

However, while the vision was inappropriate at the time, directionally, Connor was right.

Today an extensive pipeline network exists spurred by private capital. Notable features of Australia's pipeline network include the connection of Victoria and New South Wales through the Interconnect, and the Eastern Gas Pipeline. Two interfaces now exist in Queensland between the Surat and Cooper Basin fields, extensive mining operations at Mt Isa have access to natural gas, and the reach of gas has been extended to Gladstone and nearby cities. New South Wales in the 1990s saw gas extended to the central west region with a pipeline to Dubbo. Gas fired power is in it's infancy, but alive and well in South Australia, Victoria, Queensland and the Northern Territory.

Tasmania is about to receive supplies of natural gas for the first time and the Otway Basin is being developed. Adelaide is about to be connected to the Victorian system, and plans are on the table to connect Esperance, Albany and Telfer in Western Australia. More gas is planned for the Mt Newman mining operations and a pipeline to Gove in the Northern Territory to replace existing high-sulphur fuel oil.

A new vision is needed to support the systems' evolution into a national grid, and Australian politics has not seen a visionary focussed on Australia's energy future. We

need a new champion in the government in 2002. We need a visionary with a 50-year horizon.

Aside from the issues of timing, supply security and the natural tendency for competitive interests to obscure the best supply solution, there are a number of compelling considerations pointing to the need for a national vision for energy and a natural gas strategy. The list includes:

- The impact on the environment of Australia's continued dependency upon coal in power generation.
- The portion of natural gas reserves, if any, that should be reserved for domestic consumption.
- Questioning whether we support PNG and/ or East Timor in its efforts to develop oil and gas reserves and earn self-sufficiency and pride, or continue Australian paternalistic aid.
- The state governments, which are either directly or indirectly supporting a growth in natural gas usage.
 - New South Wales: in May the Premier announced a \$15 per tonne carbon tax. Although unrealistic in terms of its real impact (a cynic would argue that the measure is just a revenue raising exercise, because to have effect, the tax should be around \$35 per tonne), it is nonetheless an encouraging step.
 - Queensland is moving towards a goal of 13 percent of its electricity sourced from gas fired power generation, or renewables.
 - In Victoria, the Bracks' state government is responding to calls to extend the natural gas network into regional and rural areas to mitigate the impact of high bottled gas prices.
 - South Australia enjoys the lowest per capita emissions of all Australian states, as a result of using natural gas in over 40 per cent of power generation.
 - Western Australia with its large natural gas deposits, especially in the North West Shelf is experiencing strong growth based on its export performance and mining sector growth, now gas powered.
 - The Northern Territory is working hard to secure additional natural gas supplies.
- Who is championing cleaner air? Natural Gas Vehicles, with their low emission levels should be part of that solution, especially given that Australia is now importing liquid fuel and diesel. What of micro generation – distributed generation? Gas fired air conditioning?

We have large natural gas reserves that should benefit the Australian economy and Australian consumers.

The Northern Territory government and its new Chief Minister, Clare Martin is fighting to bring natural gas to shore in Darwin. The Chief Minister is lobbying the Federal Government to provide incentives to pipe the gas into the domestic market. The greater question remains, however, as to whether a strategy of revenue gain through the sale of Australian gas as LNG is in Australia's best long term interests, at a time when additional supplies are needed for the natural gas network to develop into a truly national system, and fuel this nation.

5.0 POLITICAL WILL

In announcing competition reform in 1991, the then Federal Resources Minister, Alan Griffiths, advocated, “a National Gas Strategy to ensure our gas resources contribute to Australia’s future energy needs in an efficient and timely manner.” He earlier stated in 1990: “Governments can play an important role in the development future pipeline links by ensuring there is co-ordination of any regulatory requirements between States, Territories and the Commonwealth to simplify procedures for developers” and “contracts freely negotiated between gas producers, transporters and distributors are an appropriate mechanism for dealing with the issue of continuity of gas supply”.

The vision of the architects of reform has been lost, and the government needs to revisit the original objectives of competition reform and contrast those intentions with the state of the market and the industry in 2002.

I want to relate an example of the determination of governments to pursue an outcome, despite evidence to the contrary.

I remember sitting in a meeting in the offices of the Victorian Government listening to a dissertation by an American consultant on the theoretical behaviour of a gas market and the wisdom of a market management system; all driven by the anticipated behaviour of monopolist pipelines, this in a state with a single gas supply.

His thesis was that a pipeline monopolist was driven by a desire to create or engineer constraint in his system. The monopolist would then take advantage of that constraint. To reduce or eliminate that perceived threat it would be necessary to remove the serious system decisions from the owner of the pipeline system and vest them in an “independent system operator.” This Independent System Operator would be the repository of knowledge and wisdom and, supported by an ally known as market signals, would be totally equipped to make all decisions regarding the operation of the system and its expansion.

It was gently suggested to him that the real problem for natural gas pricing was that the production leases and licences for the entire nation east of the West Australian border were in the hands of a couple of partnerships, and that true reform begged the break up of those consortia, re-allocation of future opportunities for production and the urgent introduction of true wellhead competition.

It was further suggested that the only explanation as to why “reasonable” wellhead prices exist is because of the strength of counter-parties to the supply contracts such as agencies of the Victorian and South Australian governments and effective, if crude, arbitration provisions in long term, large volume contracts. “Gorillas at play”.

It was politely predicted that serious upward pressure on wellhead prices would result from the proposed reduction in the power of the purchaser if not accompanied by a corresponding reduction in the power of the suppliers.

It was suggested that we needed an “Australian solution to the Australian problem” and that we needed to identify the issues before us, before we jumped to conclusions, and certainly before efforts were underway to recast the marketplace.

It all fell on deaf ears.

Victoria was intent on maximising the sale price of their assets, and the consultant was focussed on fees. The government lost sight of what was best for the state: its industries and its consumers. Victoria now faces serious price increases and I have heard the Bracks government is also considering capping retail gas prices – Hello!

6.0 THE FUTURE FOR NATURAL GAS IN AUSTRALIA

With government support for growth in natural gas usage, management of our major offshore natural gas fields to ensure Australian domestic markets benefits fully from this rich resource, and a business-friendly and informed regulatory environment, Australia could develop an efficient, thriving natural gas market.

Investment in major new pipelines, and enhancements to existing infrastructure to remove bottlenecks would see the market open up to competition between gas suppliers, alternative energy sources and intra- and inter-basin competition. Pipelines would become elements of an integrated network. Other pipelines would take on the role of interconnectors, with significant variations in flow as a result of seasonal fluctuations in demand, and value beyond their pure transportation capacity³. With a sophisticated, confident transmission pipeline industry, world’s best supply in terms of cost and reliability could be achieved. The power of consumers would be strong, where they have the choice of innovative new products and trading services. Finally strong retail competition would emerge, and deep and liquid financial markets would offer the players support.

These developments automatically lead to the establishment of secondary markets and the emergence of a range of new tools to manage supply risk. Some of those tools are already emerging with capacity trades, swaps and delivery and receipt point switching, but are still largely in their infancy⁴.

With the promotion of natural gas, innovative applications and its increased use in electricity generation, co-generation and natural gas for vehicles, real environmental benefits would be derived Australia to reduce greenhouse gas emissions. Further flow-on, macroeconomic benefits include improved international competitiveness of our industries, improved overall economic performance and higher standards of living for Australians⁵.

³ Smart, A & Balfe, P: “Natural Gas Pipelines: Emerging Market Challenges”, The Australian Gas Journal, March 2001.

⁴ Smart, A & Balfe, P: “Natural Gas Pipelines: Emerging Market Challenges”, The Australian Gas Journal, March 2001.

⁵ Energex, “Submission to Council of the Australian Governments Energy markets Review”, April 2002.

3.0 CONCLUSION:

The question over the future of natural gas in Australia is one of political will. It is also a question that cannot be ignored and left for future governments. Many factors are converging to create a multifaceted problem requiring an intelligent resolution. The transmission industry needs to know that the construction of pipeline infrastructure is valued and supported by government, and that natural gas has an important part to play in the future of this country. We need a champion of our industry in government.

The market for natural gas needs price determination according to the competitive forces of supply and demand (but it needs more supply), and return on investment proportionate to the risks taken. Regulatory intervention must be balanced and occur only when market failure takes place. With proper direction, the market will evolve to deliver a range of innovative services and best practice supply, creating new sources of value for consumers, and the nation.

As an industry we look forward to the outcomes of the Parer energy market review in which we hope to see the development of a national energy strategy with natural gas ascribed a clear and increased role in Australia's energy future. In the meantime, the industry makes an undertaking to the Northern Territory and Queensland governments that we are doing everything possible to ensure that Timor gas is piped onshore and that PNG natural gas also reaches the Australian marketplace. One, if not both, of these pipelines must be supported to ensure that South Eastern Australian markets access secure, cost effective supplies of natural gas.