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Public Submission to ACCC East Coast Gas Inquiry by CSR Limited

CSR Limited welcomes the opportunity to make a submission in response to the Inquiry. There are a number of issues that will have major implications for not just our business but all manufacturing industry and consumers.

In our view, a properly functioning gas market is core to the productivity and growth of the Australian economy.

Our major concern relates to the current structures in the gas market and the urgent need to commence reform.

Yours sincerely,

Rob Sindel

Rob Sindel
Managing Director
CSR Limited

1. Executive Summary

Headquartered in Sydney, CSR Limited is an ASX Listed Top 100 company with operations in Australia and New Zealand. The company has over 70 manufacturing and distribution facilities throughout Australia producing high quality innovative building products for use in the construction industry. The company employs approximately 3,500 people in Australia and made a significant contribution to the Australian economy of over $2000m in 2015 in the form of taxes and royalties, wages, contractors, suppliers, capital investment and corporate social investment programs. The Company was recently rated 38 out of the top 100 manufacturing companies by Manufacturers Monthly.

CSR is both a major consumer of energy and also a contributor to innovative energy efficiency solutions within Australia. The development of the gas industry on the east coast has a direct impact on our business and underpins our confidence to continue to invest in Australia. The supply and pricing of gas over the medium to long term is the major energy challenge facing CSR's business.

To this end, CSR has commissioned external research and conducted internal research and analysis to understand and quantify the potential impact on its future should the business as usual situation in the current gas market place continue.

Overall, the research confirms CSR's view that there is a high likelihood of a shortfall in gas supply, and that this will not be resolved under the current market structure and regulatory arrangements. The right reform-driven competitive market model to facilitate transparently priced, dependable supply, transport and distribution of gas into the domestic market well into the future in co-existence with LNG is yet to be implemented in Australia.

2. Introduction

As a leading manufacturer of building products, the Company is committed to ongoing innovation in the built environment. In 2013 BRW rated CSR 18th out of 50 most innovative Australian companies. CSR has received 20 patents in the last twelve months and has 48 patents pending. Many of these relate to improvements in energy efficiency in the construction and use of buildings. The company is organised by divisions:

- Lightweight Systems which manufactures Gyprock™ Plasterboard, Cemintel™ Cement sheeting and Hebel products.
- Viridian™ Glass. This business manufactures float glass and has a downstream business fabricating and heat treating glass and producing integrated glazing units for double glazed windows.
- Bradford which produces Bradford™ Gold glass wool insulation, Edmonds™ Ventilation, and has a growing presence in energy efficiency businesses.
- A 60% interest in a bricks and roofing business which manufactures PGH™ and Boral Bricks and Pavers.
- Roofing, manufacturing Monier™ and Wunderlich™ Roof Tiles.

The businesses vary from Bradford™ Insulation and Viridian™ upstream glass and terracotta tiles being trade exposed and energy intensive, to energy intensive products such as bricks which while, less directly trade exposed, remain subject to product substitution. One characteristic of these manufacturing processes is that they are gas dependent and not easily shutdown intermittently or for short periods. Failure to supply energy, mainly gas, to a glass furnace would cause it to be destroyed.

While energy is a smaller component of product cost for light-weight systems (eg plasterboard and cement sheeting), these businesses are increasingly trade exposed and global competition in the sector is increasing.

CSR's expectation is that during this decade, gas prices for Australian businesses will more than double. Based on the AEMO outlook there would be insufficient gas to reliably supply the Australian domestic market in the absence of significant closure of Australian industry. Private industry analysis commissioned by CSR shows that from 2018 a growing domestic shortfall will emerge against 2P reserves which could be as much as a 30% shortfall by 2025.

3. Changes affecting the domestic gas industry

Q1 Changes to the gas market

The onset of the LNG market for Australian gas radically changed the Australian market for gas. The domestic Australian market is a tiny portion of a world market, and accounts for a small portion of domestic production.

These changes have rendered the historical domestic market structure unworkable for buy side participants, and poorly suited to developing transparent, open markets, with benchmark priced gas and related services (transport, distribution, etc). The current unsophisticated regime, established many decades ago in circumstances where gas was more typically co-produced with oil, served buyers and suppliers adequately under the circumstances that then prevailed.

In today's situation, a handful of economic interests control almost three quarters of current reserves, while a small group of six control almost 90% of Australian gas production (CSR commissioned research). Only a small fraction of available reserves is accessible to the Australian domestic market. The highly concentrated market has seen a level of integration from resource to consumer/ gas user that is arguably substantially higher than seen in healthy, functioning markets. Despite the opening of the LNG markets, joint marketing to the domestic market is still permitted.

This should be considered in the context of the proposed Shell acquisition of BG. As demonstrated in the ACCC's "East Coast Gas Inquiry Issues Paper June 2015" (Figure 1), if this merger were to proceed:

- 90% of the gas production out of the Surat-Bowen basin would be controlled by entities with a focus on LNG;
- 98% of gas production out of the Cooper Basin would be similarly focused (including Beach Energy's reserves given the contractual commitment to Santos);
- This acquisition would see a material reduction in potential diversity of wholesale supply into the Australian market, particularly in the context that information on pipeline contracts and available capacity is opaque and capacity is not traded, noting:
    - There is only one major supplier to the domestic market from both the Gippsland Basin and Otway Basin given the enabling of joint venture marketing
    - LNG interests control around 50% of Otway Basin production, effectively focused on satisfying LNG contracts market.

While the Arrow production is a little under 10% of Surat Bowen production, it has the potential to be much greater given the size of Arrow reserves. It has the potential to change supply, and accordingly, is highly material. In an operation where the focus is on LNG and the logistics of securing supply to the LNG terminal, these reserves effectively go "off the table" for domestic use at any price.

Domestic demand requires only a small portion of total Australian production, and without supply competition from imports, is a rump or residual market. The economics of filling LNG plants to capacity to maximise scale benefits and avoid high contractual penalties of failure to supply are likely to drive behaviour for some time to come. Without supply and market opening reforms, the domestic market will function only as a residual market, at best tenuously connected to international parity (net back) pricing. **Without the market equalising benefits of two way trade in gas ie potential imports as well as exports (as seen in the USA), the domestic market price will be inflexible, and reflective of neither Asian spot prices (as we see currently) nor domestic demand.**

The market place asymmetry is compounded by contractual and ownership integration through the supply and value chain.

At the present time, confidence in market outcomes and supply security is low because of the background outlined above. Transparency and opening of the domestic market to competitive operations is crucial to restoring confidence in the market.

Many of the necessary requirements regarding markets are a matter for the States and the Federal Government, as well as the ACCC.

In our view, the Objectives of market reform should be:

Open, fair, competitive & transparent markets in all aspects of the gas value chain to:

- Facilitate a thriving contestable market in all possible points of the value chain and provide a surrogate for competition where there are natural monopolies or structural barriers to entry
- Reduce historical concentration and barriers to entry at all possible points
- Yield transparent pricing set by competitive and contestable markets
- Provide and underpin a competitive, accessible, transport market
- Recognise and mitigate the impact of market power and industry concentration
- Prevent discriminatory or selective service in key areas of infrastructure
- Inhibit the exercise of excessive market power
- Promote availability of hedging instruments to enable the management of risk
- Protect customers with little choice
- Promote the development of secure, high-quality, environmentally sound energy infrastructure

"The natural gas industry is well known for its tendency to behave as a natural monopoly, since the high cost of infrastructure investments prohibit the development of parallel infrastructures to supply the same customers (especially at retail level). It is widely recognised that these vertically integrated supply systems need to be broken up." according to the International Energy Agency[1].

Because of the natural monopolies inherent in this type of market, addressing impediments to competition and facilitating market development is key. Surrogates for an open market to mitigate against the excessive market power delivered via natural monopolies and high concentration of supply side resources should be established.

It is critical that institutional arrangements to support and sustain a liquid and competitive domestic gas market while improving the availability and quality of market information to improve and promote transparency and competition are implemented.

Although current arrangements include some elements of short term markets, issues to be addressed in reform include:

- A patchwork of market conventions, protocols, jurisdictions, and access arrangements across markets and States
- Non-tradable and opaque long term contract carriage arrangements which can form a significant barrier to entry for new suppliers and to access for gas users
- Contracted “locked up” carriage arrangements which do not facilitate the liberation of unused capacity into a short term market
- Inadequate information and poor transparency on all aspects from resources to pricing; information flow contrasts very poorly with other markets such as the UK market which provides real time information on all gas movements.

Development of a truly competitive market requires a larger number of suppliers of size, ease of access to infrastructure, and confidence of gas consumers in a trading platform and hub, among other things.

Q 2. Adequacy of supplies for the domestic market and LNG Markets

Based on the emerging shortfall of 2P reserves, more supplies of gas are required to meet domestic and LNG demand.

Credit Suisse[2] in their recent assessment of Santos clearly makes the point that Santos will have a significant shortfall in their own reserves and a much higher dependence on third party supplies to meet their international LNG contract obligations. This will occur at a time when domestic contracts are reaching their conclusion. In this case, more supplies may not be sufficient to provide for the domestic market.

What is even more important to a functioning market is to have more suppliers.

While necessary, market reforms are not sufficient for a fully functioning market when the market is lopsided with multiple buyers and few sellers.

More supply from existing suppliers under the current market structure means more of the same – a lack of transparency and confidence for domestic buyers. The Governments of Victoria and New South Wales in particular, seem to be unable or unwilling to deal with issues to bring on increased supply. It would appear that there is adequate knowledge and experience from a scientific and technical perspective to develop unconventional reserves. The issue is rebuilding and gaining the confidence of communities and this will not happen overnight.

Although some assessments, such as AEMO’s, have discounted shortages, this is because of the assumption that Australian industry will substantially and permanently reduce its gas utilisation, implying major permanent closures of manufacturing sites. We find it surprising and concerning that a paper from a government instrumentality would present demand destruction through closure of Australian industry as a foregone conclusion and a way of resolving the market shortfall issue.

If these circumstances were to transpire, it would result in significant job losses, and a substantial reduction in Australia's capacity to host integrated manufacturing – and it would largely be the direct result of inaction by State and Federal governments and related instrumentalities, from a failure to establish an appropriate regulatory regime governing the development and availability of gas resources, gas infrastructure, and competitive and transparent gas markets.

Q7. Upstream participation [What factors dictate whether it is commercially viable for gas users to employ strategies (such as vertical integration or sponsorship of new entry) to respond to the changing environment?]

Investment in gas because of market failure is not a natural solution for industrial gas users.

Gas users face the same significant obstacles to participation in the gas industry as are faced by the independent ie smaller explorers and up and coming producers, including open access to transport and processing facilities, and lack of a viable public market.

Public company shareholders in industrial gas users would be, in our view, reticent to support direct gas investment, which by definition is outside of the strategic mandate unless the market failure is such that it threatens the viability of the company.

In addition to lack of shareholder sanction, another absent but important factor critical to longer term success is a portfolio of investments to balance risk. While expertise could potentially be acquired, a one off speculative investment would not fulfil overriding requirement for certainty in supply of gas. Even if the investment opportunity were in a producing field, one would question why such an opportunity would be given up to another (particularly non-industry) investor unless there is a significant question mark over the viability of opportunity.

In summary, such opportunities are only likely to be taken because of market failure leading to insurmountable supply problems, which in our view, would be better resolved by government dealing with the fundamental market and supply issues.

Q8. Fuel Switching

The choice of fuel is made at the point of investment. Alternative fuels for these furnaces, coal or fuel oil, are either not economically viable, create undesirable environmental outcomes, or lead to issues with product characteristics or quality and in-service product failures.

Substantial engineering and investment would be required to modify furnaces to use alternative fuels in most of CSR's facilities. This is likely to make the factories unviable or internationally uncompetitive. An example is that a large number of float glass factories in China source their energy from coal gas. To do so in Australia would involve establishing a large supply of coal, construction of a gasification unit, replacement burners, adjusted control systems and an unknown investment in environmental clean-up with penalties for emissions.

4. Questions on domestic gas prices

Q22 Information

Improve the availability and quality of market information to improve market transparency and competition.

Information availability is a pre-requisite to the development of a deep and liquid market. Institutional arrangements and regulatory support structures should cover information transparency and ready availability in all aspects, including reserves, pipeline availability, distribution, and demand offtake and supply injections. The more information that is made publicly available, the better informed the market will be. This will be more effective if there is a national view of the market.

Establish Institutional arrangements to support and ultimately sustain a liquid and competitive domestic gas market

Evidence from other markets shows that increasing competition in the natural gas market is a process set in motion by government. Government must establish a market structure and regulatory regime that promotes competition. If done appropriately, the market competition will ultimately become self-sustaining, allowing government to step back to a market supervisory role.

A competitive market in gas must cover all links in the value chain, particularly transport, processing, & distribution. Mechanisms to cover performance accountability are required for protected entities, such as distributors, where market mechanisms cannot enforce service standards.

Q23 East coast reference pricing

Market structure – Creating a Natural Gas Hub

- To provide a "meeting place" for supply & demand, a platform or hub for exchange is needed with ownership exchange at the hub. A physical hub is a geographical point in the network where a price is set for natural gas delivered on that specific location.[1] To be viable, the hub must represent the most logical place for ownership to change hands: the most centrally located and sufficiently interconnected point for the exchange to take place.
- The hub should facilitate efficient and transparent price discovery, and provide the building blocks for long term exchange & OTC contracted pricing. It also offers the incidental benefit of supporting Sydney's role as a financial centre in the region.
- With the key role of price discovery, the hub pricing should facilitate the development of a forward curve with associated hedging instruments. It is critical to the proper functioning of the market that pricing provides market clearing and that hedging/futures pricing converges with the physical market to ensure the correct price signals are provided to both buyers and producers supplying the domestic market. Prices linked to totally unrelated indices, such as oil, have no relationship to the domestic market, and do not serve the purpose of matching supply and demand, and in particular, incentivising further production.

- A domestic hub should be as close as possible to relevant gas fields and multi-directional intersecting pipelines. We note that Wallumbilla has been promoted as a hub, but it provides little to the domestic market and is very distant from the natural exchange point for domestic markets.

- Even if Wallumbilla continues to be anointed by government, if it does not have the characteristics of a successful market hub, it is unlikely to develop, regardless of the desire to make it so. We note that the highly successful Henry Hub market place was selected by the New York Mercantile Exchange (NYMEX), not regulators or suppliers.
- Some markets use e “virtual hubs”, but the delivery characteristics of the product are fundamental, and must be transparent but not overly complex ie related to the place of ownership exchange and considering transport costs to that point.

Establishment of a relevant east coast hub is a necessary condition to remedy some of the information gap. It is necessary to provide a basis for the development of a deep and liquid market, which can offer forward pricing over multiple future time frames, with futures contracts as well as substantial spot trading.

5. Other factors for a deep and liquid market

Implement other gas market development priorities to expedite gas market reform.

CSR strongly supports measures to have an efficiently operating market and the bulk of our submission deals with our views on how that can be achieved. As discussed below, development of a truly competitive market requires a larger number of suppliers of size, ease of access to infrastructure, and confidence of consumers in the trading platform and hub. Work needs to start immediately so that investors and businesses have confidence in making future investment in Australia.

Market structure

- Unbundle the value chain from resource ownership/control and production through to consumption, & ensure ownership is diverse, competitive, and separated at each point of the value chain
- Lower barriers to entry in all segments of the value chain
- Restrict the capacity of any one entity, joint venture, or partnership to control a large or dominating share of reserves, while promoting entry of new competitors from the point of resource control and extraction
- Actively facilitate the entry of new competitors; ease impacts of existing concentration through limits on control of supply, removing joint marketing rights, and other market reforms
- Ensure there is sufficient network capacity in existence and in development, with non-discriminatory market based access to promote confidence and competition
- Achieve transparency of information (volume, utilisation) & pricing, in markets at each point along the chain
- Provide access by third parties to processing facilities
- Regulation of all pipelines participating in a market for the supply of gas to the Australian market to promote a competitive framework within constraints of the natural monopoly

- The establishment of a gas hub and a gas price exchange with spot and futures markets that facilitate price discovery and provides a reliable price signal is a key attribute of a competitive natural gas market.[1]
  - Development of the most liquid and competitive gas hub market with hub pricing, to facilitate price discovery through the designation of the most viable and potentially competitive hub reflecting supply and demand of gas in the domestic market.
  - Facilitate development of traded gas price futures on a Sydney or Melbourne exchange based on physical hub pricing to provide long term pricing, and the potential for price risk management by suppliers and consumers. Existing instruments are ineffective because the preconditions to a successful market are not present.
  - Involve financial institutions as providers of liquidity and trading services.

- Promote competitive and deeper public markets at each point along the chain by:
  - Mandating clear separate ownership of resources, pipelines, distribution, & retailing
  - Resource "owners" should be separated from ownership of storage, pipelines and end market distribution & sales – only transport to designated pipeline hubs via open access arrangements.
  - Resource explorers and owners should be subject to use it or lose it provisions – return of unexplored acreage after 3 years and undeveloped acreage after a further 3 years. Too frequently permitted entities sit on potential gas fields that others may wish to develop, preventing the development of a competitive market. It is necessary and desirable to ensure gas fields are developed to meet unsatisfied demand in the domestic market. Permitted entities sitting on acreage will artificially suppress supply and constrain the number of potential suppliers.
  - Charging fees for sitting on undeveloped acreage where there is no current development approval in train – effectively a storage cost – supported by a 'use it or lose it regime' to encourage economic development and the entrance of new resource developers and suppliers. Australia has been attractive to some parties who can hold their Australian assets while developing those in other economies where there is a risk of losing their acreage.
  - Requiring gas to be delivered, priced and traded at the designated hub closest to the well head priced using the published traded price. There must be open access non-discriminatory markets for buyers to bid. This may require the establishment of additional hubs.
  - Preclude resource owners or retailers from in any way restricting the re-sale of unused / no longer required gas by purchasers, whether in the 'wholesale' or 'retail' markets.
  - Pipeline owners precluded from integration, either back into resources, nor forward into market distribution
  - Where gas is sold by a retailer, the transport component must be identified and priced separately, with customers able to negotiate their own network and pipeline access if preferred

- Gas end-users with sufficient volumes and willingness to invest in the logistics & risk management should be freely able to price each point in the value chain based on their requirements
- Storage facilities should be owned independently to prevent gaming of the market by gas owners. Storage capacity should entail biddable transparent access to avoid 'cornering' or manipulation of the wider market.
- Transporter pipelines
  - Pipelines and networks should be designated assets of national importance as a key step to equality of access. Independence of pipelines from supply and network is essential, as is a clear and unbiased investment regime based on a well-developed and regulated code of conduct.
  - Fair and non-discriminatory access to pipeline transport, open trading market promoted and available – market liquidity improved by facilitating wide access to the pipeline, in standardised marketable parcels; traded pricing determined using a published benchmark price with minimums and maximums for the injection and withdrawal points; return of excess capacity to the open market with open access via electronic markets provided to all market participants; participants requiring shipping can price and book transport off the electronic market
  - Genuine shippers of gas who are holding spare capacity to have full rights to trade pipeline capacity among other shippers
  - No capacity "sitting" – ie no 'buy & hold' capacity purchasing by non-shippers, although broking or short term warehousing may be acceptable if it promotes liquidity
  - End-users / Customers who wish to arrange own access to pipelines should be freely and readily able to do so – pipeline owners should provide open & non-discriminatory access
- Distribution networks
  - Non-discriminatory and open access to networks, and sufficient network capacity available to all market participants will inhibit the development of 'islands' that ignore the wider dynamics within the network.
  - As a natural monopoly, service standards and accountabilities must apply, with penalties for non-performance.
  - Retailers & gas users must be able to book capacity via an open access regime as desired.
  - Pricing set via regulated maximums and minimums
- Retail competition – potential new participants must have real options to enter the retail market at every level, from consumer to large commercial
  - The preferred model is for consumers to have a range of choice of retail supplier – essentially they organise the logistics of supply, enter into long term contracts for gas, transport, & local distribution, with pricing for each leg separately provided

- Reporting & disclosure requirements, daily/monthly/quarterly/ annual obligations
  - Sales volumes & prices at the hub daily
  - Facilities - quarterly
  - Large contracts – quarterly
  - Reserves – annually

- Full retail choice programme – natural gas customers should be able to purchase their gas from a choice of retailer, which will have open access to the local distribution network. While this occurs in Victoria to some extent, in NSW the choice is very limited.
- A published and regulated code of conduct
- Promote the involvement of financial institutions as financiers and investors, providers of cash flow liquidity for market participants in addition to liquidity providers and promoters of hub pricing.
- The ingredients for a competitive and functioning market need to be instigated and guaranteed by the market regulator.

Notes

1. International Energy Agency, Developing a Natural Gas Trading Hub in Asia, Obstacles & Opportunities 2013

2. Equity Research 14 Mar 2015 Santos