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Encana International (Australia) Pty Ltd (“**Encana Australia**”), a wholly owned subsidiary of Canadian based Encana Corporation (“**Encana**”), welcomes the opportunity to respond to the Examination of the current test for the regulation of gas pipelines consultation paper issued by Dr. Michael Vertigan AC dated 4 October 2016 (the “**Paper**”). Encana was created in 2002 through the merger of PanCanadian Energy Corporation and the Alberta Energy Company (AECO). The history of Encana and its predecessors spans over 125 years of Canadian based oil and gas operations. A pioneer in the development and production of unconventional resources, Encana has been a leading developer of unconventional oil and gas in North America for several decades. As a leading North American gas producer, Encana has been a major shipper or facility user on gas pipelines across Canada and the U.S., has owned and operated one of the largest gas trading hubs in North America (the AECO hub in Alberta) and has owned and operated the largest independent gas storage business in North America. Encana is currently Canada’s second largest gas producer and among the top 5 gas producers in the lower 48 states of the U.S.; all from unconventional gas resources, namely tight gas, shale gas and coal bed methane. In 2002 Encana divested much of its North American midstream assets for several billion dollars. These assets including Encana’s Oct 2016 Submission to the COAG Regarding Current Pipeline Regulation Test

150 PJ's of underground gas storage working gas capacity with 3.0 PJ/d and 3.8 PJ/d of maximum injection and deliverability capacity respectively, large gas plants, and gas pipelines. Encana Australia is constantly evaluating acquisition opportunities in Australia's petroleum industry generally and in its gas industry in particular. Encana Australia and its predecessor AEC International have owned ATP's in Australia since the 1990's. Encana welcomes the opportunity to participate in this process. Please note that we addressed this issue to some extent in our October 2015 public submission to the AEMO.

Our General View & Comments Regarding East Coast Gas Pipelines

Access to low cost pipeline infrastructure on a non-discriminatory basis and fees for service that reflect the value of that service is the hallmark of an efficient, competitive, vibrant domestic gas industry. Encana has experienced this for decades in North America and as a leading gas producer has been influential in the many gas pipeline debates and public hearings held across North America during and since the de-regulation and commoditisation of the North American gas industry. Gas is held hostage to gas pipelines and the vast majority of gas pipelines globally remain natural monopolies. All high pressure gas transmission pipelines in Australia are natural monopolies and their economic regulation, service charges (tariffs) and access principles do not in any way resemble the point to point gas pipeline contract carriage model that was pioneered in North America many decades ago and remains in effect today.

The gas pipeline sector in the east coast of Australia has not served the gas industry very well to date in terms of providing good services at fair and reasonable tariffs on a non-discriminatory basis to all market participants and prospective users. This has resulted in inflated delivered gas costs, a lessening of competition, inefficiencies throughout the value chain, and an extremely slow development of underground gas storage facilities and a meaningful short term trading market. This model is out dated and needs to be drastically altered in order to accommodate the future ongoing needs

of the much larger east coast gas industry that involves large gas exports at Gladstone and the production of higher cost unconventional gas resources. The challenges facing eastern Australia's gas industry at the moment are unprecedented and successfully meeting those challenges will require the adoption of much more efficient models and practices from overseas, including those pertaining to the gas pipeline sector.

The current test for and the economic regulation of gas pipelines in Australia is, in our view, ineffective in many ways and has directly led to excessive tariffs, excessive profits to pipeline infrastructure owner/operators, discrimination, and pipeline services that are not customer oriented. The so called "Light Handed" gas pipeline regulatory model invented by Australian regulators has protected gas pipeline investments at the expense of the overall gas industry and Australia's economy. Gas tariffs here contain market power premiums as demonstrated by benchmarking to other OECD countries in general but to Europe and North America in particular. The unintended indirect consequences of the gas pipeline economic regulation model adopted in Australia has resulted in a stifling of upstream gas supply competition, artificially inflated delivered gas prices to consumers, a scarcity of open access underground gas storage facilities and a short term trading market for gas that is so small that it is of no consequence to the gas industry.

Mr. Rod Sims, Chairman of the ACCC has recently presented the following query: "How did the light handed regulation of monopolies become no regulation?" Another excellent question might be: "Why did it take 20 years for the ACCC to wake up to the fact that gas pipelines in Australia essentially have a licence to print money?" or "Why did COAG and the initial gas reform pioneers in early 1990 believe that gas pipelines in Australia do not have market power when the rest of OECD countries appear convinced that they do?" or "Why was it determined that privately owned gas pipelines should be excused from market power abuse conduct?"

The very few gas pipelines that are subject to what is referred to in Australia as "Full Regulation" is another matter of grave concern. The rules and level of scrutiny imposed

by the regulators of full regulation in Australia when compared to what is acceptable in other OECD countries that have a reputation for free economies and markets are at best dismal. The meaning of “full regulation” in Australia is another major concern as it seems to be characterised by very little intervention and very poor outcomes for everyone but gas pipeline owners and perhaps foundation shipper customers.

Our Response to Consultation Paper Questions

Q1 Do you agree with the ACCC’s finding that the majority of existing transmission pipelines on the east coast have market power and are using this power to engage in monopoly pricing? Why/Why not? Please provide evidence to support your argument.

Encana believes that not only the majority but indeed all of the existing gas transmission pipelines serving the east coast of Australia’s gas market are natural monopoly infrastructure assets that the domestic gas industry has no choice but to use and therefore have tremendous market power. Point to point high pressure gas pipelines have long been recognised as natural monopolies since the most efficient number of pipelines connecting a gas supply basin with a gas reticulation system or gas demand region is one. We are confident that any generally accepted market power test applied to any high pressure gas transmission pipeline in the east coast will result in that conclusion. Cheryl Cartwright, Chief Executive of the Australian Pipelines and Gas Association (the APGA), appears to generally agree with this view as she has recently stated the following: “Australia’s gas market operates as much like a free market as it can, given our market is small, with pipelines often in a monopoly position.”¹

Natural monopolies have high-entry barriers. Such industries are typically capital intensive and require significant investments in long-lived, sunk capital assets. At the same time, the economies of scale in some industries such as water distribution or electricity or gas are so great that the largest firm with the lowest costs could drive all other competitors out of the market. Gas Pipelines are classic natural monopolies by this definition.

According to Richard Posner, Associate Professor of Law at Stanford University: “A firm that is the only seller of a product or service having no close substitutes is said to enjoy a monopoly. If the entire demand within a relevant market can be satisfied at lowest cost by one firm rather than by two or more, the market is a natural monopoly, whatever the actual number of firms in it.”

The pipeline transportation sector is believed by most experts to be naturally monopolistic due to subadditivity. Subadditivity in the case of gas pipelines is the fact that fewer firms can provide service more cheaply than many firms. Indivisibilities in production technology resulting in scale and scope economies. Doubling the diameter of the pipe increases volume by a factor of 4 and surface area by a factor of 2. While output is proportional to volume and in this case increases by a factor of four, cost is proportional to surface area, and it increases by a factor of 2. Large common costs and cost complementarities yield economies of scope as in the use of compressors and pipe in transmission of service. Since expansions are also capital intensive, minimizing costs requires gas pipeline expansions to be large and infrequent. The economies associated with the use of a “right-of-way” or easement which permits a gas pipeline company to legally install a pipeline over lands they do not own is another factor. There is no doubt that all gas pipelines in the east coast qualify as a natural monopoly.

“In the US, the Federal Energy Regulatory Commission (FERC) defines market power as ‘the ability to profitably increase prices above costs without attracting entry to the market’. This is a practical definition of market power, which relies on an assessment of the potential for anticompetitive behaviour. In such cases it is appropriate to apply pipeline access price regulation as long as the marginal benefit of regulation is greater than the marginal cost to society.”² The east coast gas pipeline operators have been permitted to set pipeline tariffs for existing and new gas pipeline services that far exceed what would be considered fair and reasonable by

¹ The Australian Pipeliner, October 2016, page 30.

² BHP Billiton, Response to the Productivity Commission’s Draft Report – Review of the Gas Code, Page 8

a competent regulator. This statement is supported by extensive benchmarking data comparing predominantly point to point Australia gas pipelines to gas pipelines located in North America and normalised to a \$/GJ/100km of pipeline transport basis.

We are in total agreement with the following BHP Billiton statement:

“The typical characteristics of Australian gas pipelines are:

- a) Monopoly (no direct, or parallel, pipeline competitors) or at best, duopoly;**
- b) High barriers to entry;**
- c) High economies of scale relative to size of market;**
- d) High sunk costs.**

The key to the market power of pipelines in Australia is the lack of parallel pipeline competition. In the presence of sunk costs, given the pressures of alternative energy sources and competing sellers, the gas price at the market will be determined by market forces. However, the distribution of revenue between the shippers and the pipeline will depend on the market power of the pipeline relative to shippers. If there is no competing pipeline from the source of gas supplies, there will be no alternative for the shippers (whether gas producers, retailers or end users) but to absorb higher transport costs.”³

The Herfindahl-Hirschman Index (HHI) is a widely accepted measure of market concentration, which is used by anti-trust and economic regulators to aid in the analysis of market power. Markets in which the HHI is between 1000 and 1800 points are considered moderately concentrated, and those in which the HHI is in excess of 1800 points are considered to be highly concentrated.

The HHI serves as a first screen to measure market power. If the HHI indicates market power, then a second screen is applied to see if the market participant is in a position to

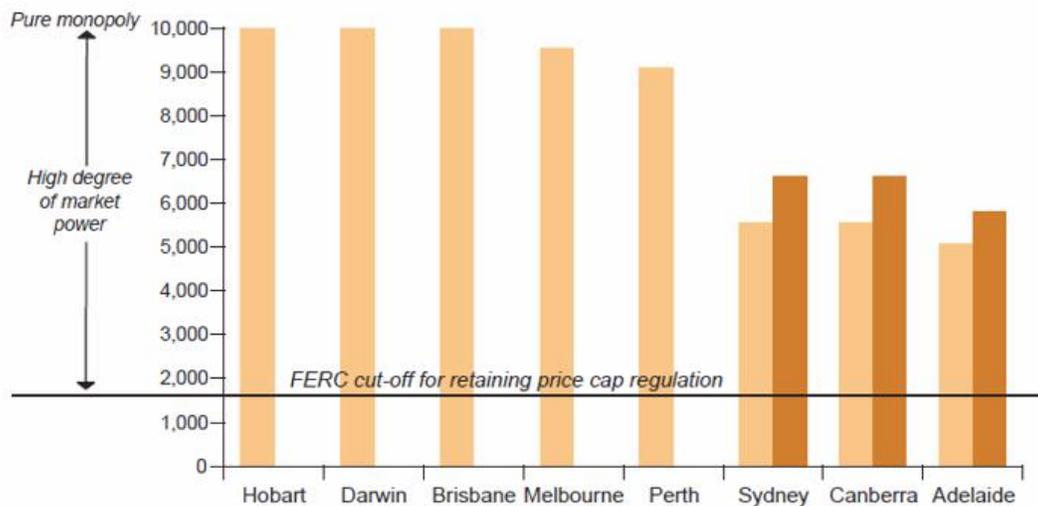
³ BHP Billiton, Response to the Productivity Commission’s Draft Report – Review of the Gas Code, Page 9.

exercise market power. The market power framework employed by the FERC and often adopted by the NEB in Canada consists of the following five steps:

- 1) product market definition;
- 2) geographic market definition;
 - a) identify facilities and services;
 - b) identify the geographic market;
 - c) identify good alternatives;
- 3) market concentration analysis;
- 4) identify potential competition ; and
- 5) Identify other factors.

The first and second steps lay the foundation for the market concentration analysis by defining what the product is and who is in the market. The third step examines measures of the market participant’s market power. The fourth and fifth steps examine factors that might alter interpretation of the concentration measures. A market power test such as this generally accepted one to the east coast gas pipeline reveals that they are all natural monopolies with substantial market power (see figure below).

HHI TRANSMISSION PIPELINE AND NETWORK MARKET POWER INDEX



Source: PC Draft Report, ACCC. For Sydney, Canberra and Adelaide, the dual columns represent maximum and minimum HHI based on capacity vs estimated throughput.

The lower 48 states of the US have a much higher concentration of gas transmission pipelines than Australia's east coast and yet all of them are deemed to be natural monopolies with sufficient market power that strict government intervention in the form of economic regulation utilising the cost of service model is in place for both old and new pipelines. The lower 48 US has in excess of 350,000 km of interstate gas pipelines and the tariffs and services are all diligently regulated by the FERC pursuant to the cost of service model. In contrast, Australia has less than 4,000 km of interstate gas pipelines and is questioning whether or not they are natural monopolies and if so whether or not they require economic regulation. Furthermore, Canada's National Energy Board regulates 70,000 km of petroleum related pipelines of which at least 20,000 km are inter-provincial gas pipelines pursuant to the very strict cost of service model; approximately 10% of Canada's total pipeline infrastructure. The remaining 90% of Canada's pipelines are economically regulated by that same model by various provincial regulatory bodies. Canada and the US have 5 and 88 times the amount of inter-regional gas transmission pipeline connections than Australia has respectively. Perhaps the US number is skewed slightly because of the much smaller states in the lower 48 US but Canadian provinces and Australian states & territories are fairly similar in size. The fact remains that Australia's gas industry is not well connected via gas pipelines.

Pipeline services are not available on a competitive basis; both existing and prospective customers of gas pipeline services normally have no choice among alternative suppliers of pipeline services. Gas pipeline market power is extremely entrenched in Australia and steps should be taken to address this fact. The US has been applying economic regulation to gas pipelines since 1938 and the NEB was formed in Canada in 1959. Very few gas transmission pipelines located in Canada and the lower 48 US states, if any, have proven that they do not have sufficient market power to warrant economic regulated tariffs and services.

FERC Order 637 was issued in February 2000. It provides pipelines with the ability to make a submission to FERC to demonstrate that their market is subject to sufficient competitive pressures to justify the relaxation of regulatory oversight from explicit tariff rate making to one of market monitoring. The distinguishing features of this approach are:

- a) A competitive market structure has to be demonstrated – the major criteria for pipelines to demonstrate that market power is not present are:
 - Concentration in the relevant market using the Herfindahl-Hirschman Index (HHI).
 - An HHI cut-off above 1800 indicates significant market power is present.
 - The HHI is calculated based on non-contracted market share.
- b) A cautious approach was adopted – the ability to set market based rates was initially restricted to shorter-term contracts (under 2 years) and would be reviewed by FERC over a two year period.
- c) The information requirement was increased – rather than lightening the information requirement of companies being allowed to set market transmission rates, the information reporting requirement for such companies was increased.

BHP Billiton appears to agree with us as indicated by the following recent statement:

“In fact, the Australian gas transportation market is highly immature compared with the more than 130 pipeline companies in the US market, where maximum price caps are applied. The US regulator, FERC, allows companies to apply for exemption from the price cap subject to meeting a competition test centred on the Herfindahl-Hirschman Index (HHI) of market concentration. Based on a cut-off score of 1,800 and above indicating significant market power, no applicant in the US has had the transmission price cap removed. In Australia all the major capital city markets are in the range of 5,000 to 10,000 (the maximum, indicating pure monopoly) on a generous interpretation of this scale.”⁴

⁴ BHP Billiton, Response to the Productivity Commission’s Draft Report – Review of the Gas Code, Page 2 & 3.

Furthermore, a market power test is applied to all new underground gas storage facilities in the US in order to determine if they are allowed to set market based tariffs as opposed to tariffs established each year by a regulator based on the cost of service model. Most of the existing 400 gas storage facilities located in the lower 48 US are indeed subject to economic regulation pursuant to this model. Approximately 50% of Canada's underground gas storage facilities by capacity are also subject to economic regulation pursuant to the cost of service model.

Natural monopolies (including gas transmission pipelines) are uncontestable therefore have no real competition. Gas cannot be transported economically across land by any other means than gas transmission pipelines. Therefore, absent adequate government intervention, gas pipelines owned by the private sector will most definitely abuse their market power. This abuse can and does take many forms in the east coast, not the least of which is much higher tariffs for service than would otherwise be the case. The most relevant potential market failure in relation to gas pipelines is market power. The costs to a gas industry and the economy of market power abuse are well known and are substantial. We believe that Australia's gas industry has, since its genesis in the 1960's, suffered significant unnecessary wealth transfer to gas pipeline owners. While perhaps that result was acceptable when, prior to the mid 1990's, government ownership of gas pipelines was high this situation should not be acceptable under the current pipeline ownership regime. Markets with natural monopoly characteristics are thought to lead to a variety of economic performance problems: excessive prices, production inefficiencies, costly duplication of facilities, poor service quality, and to have potentially undesirable distributional impacts. Most, if not all, of these performance problems appear to be widespread in the east coast gas pipeline industry.

Price and entry regulation supported by natural monopoly arguments began to be introduced in the US in the late 19th century. Rate of return (cost-based) or price cap (price-based) are the two most common models used for the economic regulation of assets or companies with excessive market power.

As previously mentioned, Encana and its predecessors have used gas pipelines across North America for many decades. Encana's current major gas production operations are concentrated in Alberta, Canada and Texas, US. Both of these large gas producing regions are located remote to most of the gas markets that they serve. Easy access to low cost gas pipelines has always been and remains a key performance indicator of North America's gas industry as well as a level playing field in the form of common tariffs to all for the same type of pipeline service on any given pipeline. Given our extensive experience in North America's gas industry as well as our experience with international operations in many other countries, we do not begin to understand why gas pipeline tariffs are so high in Australia in general given the age, cost, historical contracted levels, historical revenues and historical throughput. Furthermore, it is very difficult to understand how pipeline operators have been allowed to develop such an arrogant and untouchable attitude. The self-serving rhetoric that constantly flows from the major gas pipeline operators and the pipeline association on behalf of its members would not be left unchallenged in many, if any, other OECD countries. Rhetoric espoused by gas pipeline owners and their industry association often substitutes for analytical rigour and benchmarking to world's best practice.

Encana has owned a major gas pipeline business in the past and we have been a major shipper of gas in North America as well as in South America and Europe. We are well aware of what 'best in class' pipeline operators charge for services. There exists a significant gap between what we would consider to be fair and reasonable tariffs to those in place at the moment in the east coast which to us is an indication of market failure and/or regulatory failure, as the case may be. The economic regulation of gas pipelines is a surrogate for competition and it should balance the need for an economically viable gas pipeline industry and the need for low cost tariffs on a customer driven menu of pipeline services. This balance has not been found to date in the east coast. The current situation in the east coast does not differ greatly from the time when most of the gas pipelines were government owned and customers were essentially taxed over and above what was fair and reasonable to use this infrastructure. Of course re-capitalising most of the gas pipelines during the 1990's is another interesting

topic that seems to be largely ignored but has significant relevance to the genesis of the current quagmire. The most glaring behaviour with respect to tariff levels is associated with the gas pipelines that has been owned by the private sector since its construction in 1969, namely the Roma to Brisbane Pipeline.

Essentially we believe that the findings of the ACCC with respect to unchecked market power in the gas pipeline industry are true and we believe that the abuse of such power exceeds simply the issue of excessive prices for transportation services. Claims by the ACCC that the gas pipeline companies operating on the east coast are engaging in monopoly pricing and that this conduct is not in contravention of Australia's Competition and Consumer Act raises grave concerns to us regarding investing in the upstream gas exploration and production region served by these gas pipelines. As a possible new entrant to east coast Australia, we will not tolerate this conduct for it significantly distorts pricing signals and it substantially deteriorates the value of new upstream gas production operations. One of the reasons for Encana's survival and success for over a century is that we understand how vital good gas pipeline practice is to gas production operations that require access to and services from those pipelines.

Naturally the gas pipeline owners maintain that while they clearly own and operate natural monopoly assets they do not abuse this market power. "APIA seriously questions the apparent perception that monopoly power conferred by the natural monopoly characteristics of gas transmission necessarily equates to monopoly abuse. In fact APIA strongly believes that the characteristics of the gas transmission sector make it a strong candidate for a substantial "rolling back" of the current regulatory regime to a more light handed framework."⁵ APIA has apparently successfully persuaded the Productivity Commission and the various regulatory bodies across Australia that gas pipelines in Australia are unique for their features are vastly different than gas pipelines located on other continents. In a submission to the PC in 2003 APIA stated:

⁵ Australia Pipeline Industry Association, Submission to the Productivity Commission's Review of National Gas Access Regime, September 2003, page 2.

“Gas transmission infrastructure exhibits several characteristics that affect regulatory design, including:

- **sunk costs and scale economies;**
- **typically small numbers of large, commercially sophisticated customers with countervailing market power;**
- **contestability in the development of new pipelines;**
- **an increasingly interconnected network; and**
- **limited market power.”⁶**

The owners of east coast gas pipelines and the APGA have stipulated many times that economic regulation will have the unintended consequence of reducing new pipeline investment and thereby exacerbate the tight gas supply/demand situation that currently exists in the east coast. This statement appears to be a threat for it is not supported by decades of experience from Europe and North America. For example, according to the US Department of Energy (DOE), in the US alone there has been significant investment in new interstate pipeline capacity over the last 18 years for which data are available, with more than 133 PJ/d of capacity additions and US\$ 65 billion in capital expenditures (1998 to 2015). The US\$ 5.6 Billion Rockies Express Pipeline built in 2008 is the largest gas pipeline ever built in the US (2,700 km of mostly 42” pipeline). We have yet to hear of a problem getting gas pipelines built or expanded in North America when the requirement for such capacity has been demonstrated. According to the DOE, from 1998 to 2007, the US has added an average gas pipeline addition of over 9 PJ/d of capacity and 3,000 km of new high pressure large diameter gas pipelines per year.

BHP Billiton has recently stated the following in a submission to Australia’s Productivity Commission (PC):

“It is difficult to understand the PC’s approach given that the Australian industry is so much less developed than the US Natural Gas Supply industry. In the US where all pipeline services are subject to price caps

and no applicant has met the competition test required in order to be allowed to independently set market prices. ... The PC's recommendations represent a significant change of direction for the Code, from being focused on promoting open access to pipeline services and preventing the abuse of market power, to promoting "efficiency" and investment in pipelines and distribution networks. The PC asserts that investment in pipelines has been distorted and curtailed, without providing any evidence in support."⁷

For some unknown reason the PC's review of the Gas Code in 2004 resulted in recommendations to further grant concessions and freedom to gas pipeline operators. "One of the key recommendations in the report is the introduction of a second tier of regulation that is less intrusive than the current approach of setting reference tariffs."

According to the APA Group, the pipeline business in Australia have invested over A\$ 2.2 billion of new capital into gas pipelines over the last decade. That is a relatively small amount of capital compared to many other OECD countries. This reflects the very undeveloped and immature gas pipeline network in Australia. Australia has yet to even connect its three regional gas pipeline grids into a single continental grid. While some claim that this would be impractical given the huge distances involved, the fact of the matter is that the distances across Australia are relatively small compared to the distances that gas and oil pipelines have span from Alberta, Canada to distant markets and refineries.

Natural monopolies such as gas pipelines will inevitably generate market failure in the absence of government interventions in the form of economic and conduct regulation. Natural monopolies, when identified as such, are standard rationales for government intervention into a market economy. It is important to appreciate that economic regulation is a surrogate for competition and therefore must attempt to diligently mimic the same result. Thus the outcomes of economic regulation are vitally important. We

⁶ Ibid, page 14.

⁷BHP Billiton, Response to the Productivity Commission's Draft Report – Review of the Gas Code, Page 1

suggest that a good measure of whether or not the outcomes are effective is via benchmarking to those in other OECD countries. When we compare Australia's gas pipeline industry to that of North America, the tariffs, conduct, services, rates of return, etc. in Australia are very disappointing from the perspective of a potential shipper or facility user. Encana International has also operated as a gas producer on numerous continents and it is our observation that Australia's gas pipeline industry is extremely inefficient and in many ways does not comply with the stated NGL objective.

Good economic regulation vis-à-vis a natural monopoly asset (gas pipelines) is supposed to:

- Constrain entry so that the economies of a single point to point pipeline can be achieved (this was most certainly not achieved regarding the four gas pipelines to Gladstone);
- Constrain tariffs or prices for services so that the gas pipeline owner earns neither excess nor insufficient profits (most certainly not achieved on any gas pipelines in the east coast); and
- Regulate the structure of rates and services according to a model so that the tariffs are efficient, namely fair and reasonable while giving consideration to the business costs, etc. (many OECD countries have adopted the 'cost of service' model; Australia appears to have adopted the "she'll be right, mate" model)

The underlying reason for regulation is to balance investor and consumer interests in promoting economic efficiency. BHP Billiton's submission to the PC stated:

Whilst appealing against the Canadian National Energy Board's (NEB) ROE determinations, Mr. Hal Kvisle, CEO of the largest Canadian pipeline company, TransCanada recently (May 5, 2003) had this to say about the characteristics of the ideal regulatory environment:

- **Decreases regulatory uncertainty and minimises business risk;**
- **Attracts low risk, low cost capital;**
- **Minimises life-cycle costs to shippers; and,**

- **Provides a reasonable opportunity for recovery of and on capital.**

This indicates a broad approach to the gas supply industry, which takes account of the legitimate interests of both investors and shippers.⁸

It is important to note that TransCanada owns and operates 90,300 km of high pressure gas transmission pipelines which supply over 25% of the gas consumed daily across North America. This balancing of legitimate interests is what we are still searching for in Australia.

APA recently accused the AEMC of the following: “APA does not believe that the AEMC has established a case for regulatory intervention in pipeline capacity markets, as it has not firmly identified the problem it is trying to solve, and the sources of that problem.”⁹ We trust that Australia will make a case for regulatory intervention and that it will soon identify the source of the current very problematic situation as the pipeline owner’s conduct. Australia is one of the last, if not the last, OECD country to arrive at such a conclusion.

Q2 Is the ACCC’s characterisation of why monopoly pricing is a problem accurate? Why/why not?

It is Encana’s position that not some but all prices charged (tariffs) in the east coast for all gas pipeline services are excessive and neither fair nor reasonable given the age, cost, historical contracted levels, historical revenues and historical throughput levels of any given pipeline since it was constructed and placed into service. We do agree that some of these prices are so excessive and unreasonable that they defy any logic or economic justification. Backhaul services priced at firm forward haul tariffs is a concept that would be rare to find in any developed country for it defies all common sense and knowledge about how a gas pipeline works and the win/win nature of backhauls that are typically priced at a nominal fee of a couple of cents/GJ. We suggest that while forward

⁸ BHP Billiton, Response to the Productivity Commission’s Draft Report – Review of the Gas Code, Page 16.

⁹ APA Submission to AEMC Pipeline Regulation and Capacity Trading Discussion Paper, 23 Oct 2015, page 2.

haul tariffs in the east coast, as supported by extensive benchmarking work that we have done, are in the order of 5 times what one would expect them to be, the backhaul tariffs in Australia are in the order of 75 times what one would expect given the obvious benefit of backhaul transactions to both pipeline owner and customers alike!

Under competition, the price of a good to the consumer tends to be bid down by the sellers to its cost (including in cost such profit as is required to attract capital into the industry). Consumers, as a result, obtain many goods at prices that are appreciably lower than the actual value of the goods to them. Conversely, monopolies enables the seller to capture much of the extra value that would otherwise accrue to consumers (in this case shippers or users of the gas pipelines). Monopoly prices are widely considered to be socially undesirable because of their alleged effects on income distribution, overall economic stability, the allocation of economic resources, and proper business incentives.

The pipeline companies operating in the east coast continuously express how the returns that they enjoy are justified and how they are not the problem due to the low percentage of pipeline costs in the total delivered price of gas to consumers. This is, in our view, complete and utter nonsense. They fail to concede that the rest of the pipeline industry operating in other OECD countries do not requires such excessive returns. While the commodity price for gas in a free gas market will be very volatile, the cost of gas transportation services downstream of the gas processing plant should reflect only the cost of service and not market forces. Hence the percentage of the transportation cost to the total prevailing gas price at any given time is rather volatile in a truly competitive and open gas market. The pipeline companies and their association also claim that the proof of how that industry is working well in Australia is indicated by the vast pipeline expansions that have occurred since the gas reforms and pipeline privatisation of the 1990's. They claim that they are indeed the solution and not part of the current high gas price environment in Australia. Again this self-serving rhetoric does not contribute to the market power abuse debate in a helpful manner.

The level of arrogance commonly displayed by the APGA and the gas pipeline operators in Australia is telling and reflects an attitude of expected exemption from market power scrutiny. For example, the president of APGA recently wrote: “I’m confident that this review will conclude that more intrusive regulation of pipelines will not bring about the necessary changes to ensure Australia has affordable, secure and clean energy. Nor will it stimulate and encourage new projects and ventures. It will only make it more difficult to connect additional supplies to market, ultimately reducing competition and choice for gas users.”¹⁰

While the Chief Executive Office of the APA Group, Mr. McCormack, has recently acknowledged that “Pipeline infrastructure is critical to increasing gas supply”¹¹ he in the same article boasts about the accomplishment of his company “**Over the past decade under Australia’s current regulatory regime, APA Group has spent \$12 billion on infrastructure, systems and technology to provide more pipeline capacity and flexible services to meet the needs of customers. All of this investment and innovation has occurred without a cent of Government financial support, or regulatory oversight – the free market well and truly at work here.**”¹² Mr. McCormack appears to sincerely believe that the free market is working well in Australia’s gas industry where natural monopoly pipelines are free to offer any services they wish and to charge whatever the market will bear for those services. We submit that the small cost of government intervention in the form of efficient and effective economic regulation would result in a much more competitive, larger, deeper and dynamic gas market than what has occurred over the past decade. Australia’s east coast gas industry does not exhibit many, if any, of the well documented characteristics of a freely traded and efficient gas market and the ineffective thwarting of market power abuse in the gas pipeline sector is, in our view, a major contributor to this lack of market maturity in Australia.

¹⁰ The Australian Pipeliner, October 2016, page 8.

¹¹ The Australian Pipeliner, October 2016, page 14

¹² The Australian Pipeliner, October 2016, page 14.

The APA Group has also made the following claim: “APA is not vertically integrated with any of the principal upstream or downstream functions in the gas sector. As such, it has a strong economic incentive to create and sell as many gas transmission services as feasible in a manner that best meets customers’ requirements, irrespective of who those customers may be.”¹³ While on the surface this seems to deliver some comfort, it is delusional to pretend to know what is best for all existing and potential customers, particularly when Australia’s gas industry operates in a fashion that is decades behind the gas industries of Europe and North America. Furthermore, even if APA had the ability to know what was best for everyone who might wish to become a customer of their pipelines, the prices that they charge for those services is one of the big issues in the market power abuse debate and the level of fair and reasonableness associated with those prices.

In July 2015 APA claimed that “APA has a history of growing unitholder returns while maintaining a low risk business model, typical for infrastructure companies”.¹⁴ After the release of the Inquiry Report by the ACCC, Mr. McCormack stated: “the ACCC’s benchmark of what an appropriate return should be, is questionable. There is certainly much room for debate around appropriate metrics and methodology – for example, asset base valuations, cost allocation methodologies and appropriate rate of return hurdles to compensate for project risk.”¹⁵ We all know that gas pipelines in Australia are underpinned by long term contracts that generate monthly revenues to the pipeline owner whether or not gas flows on the pipeline. The only real risk is credit risk and this has never been an issue to date in Australia given the large companies who are pipeline customers.

Perhaps one of the most revealing statements about the level of influence expected by the gas pipeline is the following: “Mr. McCormack lamented that the ACCC’s inquiry

¹³ APA Group submission responding to the ACCC issues paper, 2 July 2015, page 4.

¹⁴ APA Group submission responding to the ACCC issues paper, 2 July 2015, page 4.

¹⁵ The Australian Pipeliner, October 2016, page 14.

process did not provide an opportunity for industry to comment on a draft report, and that the wider industry will consider the ACCC's recommendations as reliable 'which is definitely not the case, and in my view is not the way sound public policy should be developed'.¹⁶ It is interesting that the pipeline owners expected to make comments on the ACCC findings regarding their 2015 domestic gas market review prior to the release of a final version of the ACCC position on this matter. Apparently Mr. McCormack believes that he should be able to modify and apparently correct the ACCC's opinion so that it is in alignment with his. Apparently the submission process was not sufficient opportunity for APA to influence the ACCC. This entitlement attitude reveals much about how the gas pipeline industry has controlled and managed the economic regulation of east coast gas pipelines to date. Also revealing is the confidence displayed by Mr. McCormack that he knows that the 'wider industry' is against the opinions and findings of the ACCC and that it is in agreement with APA's position in this matter.

APGA and the east coast pipeline owners have repeatedly claimed that they should not be under scrutiny over the pricing level of gas pipeline services because "gas transmission is between 5 and 15 percent of the delivered cost of gas". This statement, is very misleading since it overlooks the large gas end users which is the majority of Australia's domestic gas demand. As in all domestic gas markets, the economic health of the large end users dictate whether or not a domestic gas market is built in the first place and whether or not it survives longer term. For example the CGP serves only a few large gas end users and the gas transportation component of the delivered price to those sites has historically ranged from 30 to 50% depending whether they source their gas in SW Qld or from the Roma region.

Q3 Are there any additional effects of monopoly pricing on gas market participants that the ACCC did not identify?

¹⁶ The Australian Pipeliner, October 2016, page 14

We believe that the problem of excessively high gas pipeline tariffs is perhaps underestimated by the ACCC. It clearly results in inefficiency and is a major deterrent to any evolution of the east coast gas market into a freely traded competitive commodity market as is the case in North America and increasingly so in Europe. We would add a few items to the list contained on page 6 in the Paper. These include the following:

- Discourages gas storage development which compounds the inefficiency of the gas industry since deliverability from storage greatly assists both the gas supply and the gas consumption to be more cost efficient;
- Destroys the ability of a gas grid to develop sufficiently liquid gas trading hubs due to the fact that physical gas must have economic access to that hub from a variety of gas supply sources and have economic access to a variety of gas markets;
- Prohibits the free inter-regional flow of gas to regions of the gas grid that require additional gas supplies from time to time. The linear 'one supply to one market' concept that Australia is stuck on is very inefficient and will continue as long as long haul tariffs and backhauls are overpriced; and
- Prohibits the extension of the east coast gas grid into the Northern Territories and Western Australia. In 2000, we estimated that the average gas molecule produced in Canada travelled approximately 2,200 km on a high pressure gas transmission pipeline. The average gas molecule in the east coast in 2000 would have travelled less than half that distance on a high pressure gas transmission pipeline and the cost of that much shorter journey was much higher on a \$/GJ than the longer journey for Canadian gas. This gap of value for distance piped has only increased since that time. The high tariffs in the east coast discourage investment in the exploration and development of remote gas resources to the existing gas pipeline grid. Central Petroleum has recently brought this issue to the attention of the ACCC and the COAG. This is a large reason that the prospective Galilee and Adavale Basins in Queensland have yet to be explored to any meaningful degree and the same is true for the many geological basins located within the Northern Territories.

Q4. What do you believe is the objective of the existing coverage test?

We believe that the stated objective of the existing coverage test is vastly different from the results of its implementation to date.

The National Gas Objective (NGO) in the National Gas Law (NGL) states:

"promote efficient investment in, and efficient operation and use of natural gas services for the long term interest of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas."

The effectiveness of the "coverage test" under the national gas regime (comprising the NGL and National Gas Rules (NGR)) is questionable by any measure. This test is the threshold for assessing whether price regulation and associated measures should be applied to – or removed from – a gas pipeline. It is also the threshold that is applied to test whether a 15 year "regulatory holiday" should be applied to a prospective green field pipeline. Once coverage is applied, there is a choice of the level of regulation of either formal price control (referred to as "full regulation"), or a price monitoring regime (referred to as "light regulation"). The coverage test in the national gas regime is not focussed specifically upon whether the pipeline in question has market power. Rather, its key criterion is directed to whether access will promote competition in a related market. For some reason only related markets matter and not the gas industry!

Less than 20% of transmission pipelines are currently subject to economic regulation of any kind under the National Gas Regime and these are subject to what could only be classified as a very minimal degree of economic regulation compared to gas pipelines in Europe and North America. Essentially no economic regulation or government intervention applies to over 80% of the gas pipelines operating in the east coast and "light handed" economic regulation applies to the rest. The light handed approach has focussed on capacity trading. That is akin to building a high rise office tower without first designing the foundation! The ACCC found what it considers to be a number of 'gaps' in the regulatory framework as it relates to covered pipelines. We claim that this

is a gross understatement for in our opinion the ‘gaps’ are much more common than the substance. The outcome of economic regulation applied to gas pipelines in the east coast has been substantially in favour of gas pipeline owners and has not met the stated objectives of the NGL.

In contrast the objective used in the US is as follows:

BOX 5.1: OBJECTIVES OF THE US TRANSMISSION PIPELINES REGULATORY FRAMEWORK

“Protect captive customers from pipeline market power”

Overall Objective:

To ensure that pipeline rates are “just and reasonable and not unduly discriminatory”

Natural Gas Act Sec 4, 15 U.S.C. 7171(d)

Two Principal Objectives:

- Promote competitive and efficient markets, while mitigating market power and preventing undue discrimination, especially for the Commission’s “prime constituency, captive customers vulnerable to pipelines’ market power”.
- Foster an efficient market that provides good alternatives to as many shippers as possible while at the same time creating a regulatory framework that is fair and protects captive customers without good alternatives.

Subsidiary Objectives:

- Ensure that reliable information is available to better enable shippers to make informed choices in the market and to permit shippers and the Commission to monitor for undue discrimination and the exercise of market power.
- To the extent adequate competition does not exist, regulation needs to mitigate residual market power and protect captive customers.
- Regulation needs to be fair and administratively efficient, so that the regulation itself does not impose undue or unnecessary costs on the industry.

It is our view that that Australia could learn much from the regulatory framework in place in not only the US but also in Canada and various countries in Europe.

Q5 To what extent does the current interpretation of the existing coverage test fulfil the objective?

It is our opinion that the current interpretation of the existing coverage test falls miserably at fulfilling the stated objective of the NGL, namely: "**promote efficient investment in, and efficient operation and use of natural gas services for the long term interest of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.**" It is difficult to understand how such a vast gap could be created, particularly given that Australia was very late in introducing the economic regulation (government intervention to prevent market power abuse) of gas pipelines relative to other OECD countries. The decision to ignore world's best practice in this regard in the early 1990's during gas reform was a very poor one as is evidenced by the current situation in the east coast.

Q6 Is the existing coverage test an effective constraint on pipeline operators' behaviour? Why/why not?

The reoccurring conclusion throughout this submission is that the existing National Gas Regime has little effect on the behaviour of gas pipeline operators vis-à-vis market power abuse. The ACCC's **Inquiry into the east coast gas market report** (the 'Inquiry') released in April 2016 states "there is evidence that a large number of existing pipelines have been engaging in monopoly pricing". The evidence is undeniable and has been prevalent in the gas pipeline sector since the first pipelines were built in the 1960's. The costs to Australia's gas industry and its economy from this level of market power abuse has been substantial. Australia has known no other scenario and so appears to be, until recently, relatively indifferent about the situation. While Australia has a great endowment of gas resources the domestic gas industry has been and continues to be held hostage by the gas pipeline sector.

Benchmarking to other OECD countries, who have a comparable endowment of indigenous gas resources (i.e. are either self-sufficient in gas or are net exporters of gas), is a good way to expose the impact to date of largely unchecked market power in Australia's gas pipeline industry. The ACCC concluded in the Inquiry that "there is also evidence on some pipelines of excessive as available and interruptible charges and forward haul charges that are 2–5 times higher than they would be if the pipeline was regulated." We believe that this estimate of over pricing gas pipeline services in the east coast is very conservative, particularly if one considers the actual historical costs of building the pipelines and the historical revenues received from the gas industry against actual operating, financing and construction costs. For example, the existing tariffs on the Roma to Brisbane gas pipeline are estimated by us to be approximately 10 times higher than they would be if that pipeline was economically regulated since its commissioning in 1969 pursuant to the rigorous levels applied in Europe and North America. This is a rather interesting particularly given the fact that the Roma to Brisbane pipeline is classified as fully regulated and it has had no government ownership since it was built.

The re-capitalisation of both young (<15 years old) and mature (>15 years old) gas pipelines to levels that are often far exceeding their replacement cost is one of many common practices in Australia that is unique to this country and will be addressed later in this submission.

Q7 Do you agree with the ACCC that the existing coverage criteria, and in particular criterion (a), establishes a hurdle for regulation that is unlikely to be met by the majority of transmission pipelines on the east coast? Why/why not?

Criterion (a), that access would promote a material increase in competition in upstream or downstream markets, has proved most difficult to satisfy in pipeline coverage and revocation decisions. The ACCC stated in the Inquiry that "Not only are few transmission pipelines regulated, but the threat of regulation is also failing to impose an effective constraint on the behaviour of a number of unregulated pipelines. This is

because the current test for regulation under the NGL (the ‘coverage criteria’), which largely mirrors the declaration criteria in Part IIIA of the CCA , is unlikely to be met by the majority of transmission pipelines given the characteristics of the market.”

The coverage criteria contained in section 15 of the NGL are as follows:

- a) that access (or increased access) to pipeline services provided by means of the pipeline would promote a material increase in competition in at least 1 market (whether or not in Australia), other than the market for the pipeline services provided by means of the pipeline (criterion (a));
- b) that it would be uneconomic for anyone to develop another pipeline to provide the pipeline services provided by means of the pipeline (criterion (b));
- c) that access (or increased access) to the pipeline services provided by means of the pipeline can be provided without undue risk to human health or safety (criterion (c));
- d) that access (or increased access) to the pipeline services provided by means of the pipeline would not be contrary to the public interest (criterion (d)).

The wording of this criteria is, in our view, at best vague. Furthermore, for some unknown reason, the impact of gas pipeline operator’s behaviour on the gas market does not seem to be of concern only on some other market whatever that might be.

A recent review by Incenta Economic Consulting of the coverage criteria resulted in the following conclusion:

“From the discussion above, we conclude that under the current coverage test:

- **There is little risk of over-regulating gas pipelines – this follows from the fact that all relevant authorities have accepted that the facility that is the target of the declaration or coverage application must have market power in order for access to promote competition in a related market; however**

- **There is a prospect that gas pipelines that have market power and engage in monopoly pricing – but do nothing else – may not be regulated.”¹⁷**

While it is difficult to comment on why gas pipeline operators in Australia act as they do, there is little doubt that they act as if they are immune from any truly restrictive government intervention in the form of economic regulation. One can only imagine that they are behaving in a manner that they believe is in the best interest of their shareholders. If the economic regulation of gas pipelines in the east coast was performed adequately then it would not matter if all of the gas pipelines were owned by a single owner and it would not matter if they were assets within a vertically integrated company or not. The restriction on vertical integration and ring fencing of operations and assets in Australia has done little to mitigate market power abuse by gas pipeline operators. Gas pipeline owners indeed have an incentive to maximise profits and that has not as yet translated into open, non-discriminatory access to capacity and fair and reasonable tariff for all services offerings. What exists today is the protection of entrenched gas suppliers who hold foundation contracts for long term firm forward haul capacity on gas pipelines. New entrant gas suppliers, gas traders and large end users of gas are discriminated against and either ignored or offered services at unreasonably high prices by the gas pipeline operators. This is a strategy of protecting and maximising profits by catering to a few original customers who essentially enjoy additional gas supply market power as a result. Anyone attempting to upset or disturb this very cozy arrangement is chastised or bullied.

The Productivity Commission recently cautioned the enforcement of non-discriminatory open access principles on east coast gas pipelines:

“Gas market stakeholders have proposed changes to the way capacity is allocated under the contract carriage model. There have been proposals to extend the open access principles that apply under the market carriage

¹⁷ Assessment of the coverage criteria for the gas pipeline access regime report, September 2015, page 23

model, and calls for the introduction of mandatory pipeline capacity trading provisions that apply in other countries.

In the Commission's view extending elements of the market carriage model could put at risk the investments needed to efficiently respond to current and future market developments. There would also be significant risks from adopting mandatory pipeline capacity trading provisions that apply in other countries, especially if such provisions involve the over-riding of private property rights."¹⁸

This statement further illustrates again how different Australia's gas pipelines and associated conduct of contracting and operating is compared to other OECD countries.

Q8 Can the current coverage criteria address the market failure identified by the ACCC - monopoly pricing that gives rise to economic inefficiencies with little or no effect on the level of competition in dependent markets? Why/why not?

The current application of the current test for economic regulation and the current degree of economic regulation applied by a regulator to a gas pipeline should it be determined by the test that regulation is required, has not to date addressed the market failure that the ACCC has only begun to discover concerning gas pipelines. It is our opinion that the market failure involves a much larger degree than the ACCC has discovered so far. One should not be surprised when companies driven by creating shareholder value engage in market power abuse when they own a natural monopoly asset that is not subject to meaningful economic regulation.

The exemption or 15 year holiday for new gas pipelines also contributes to market power and abuse related thereto. Section 151(1) of the NGL states that the service provider of a Greenfield pipeline project may, once a pipeline project has been proposed or commenced but before the pipeline has been commissioned, apply for a 15 year no-coverage determination. An application for a 15 year no-coverage determination must be made in writing to the NCC. In recommending whether the

¹⁸ Productivity Commission, Examining Barriers to More Efficient Gas Markets, March 2015, page 105.

pipeline be either exempt or not exempt from being a covered pipeline for a period of 15 years, the NCC, in accordance with s154(1): (a) must give effect to the pipeline coverage criteria; and (b) in deciding whether or not the pipeline coverage criteria are satisfied must have regard to the national gas objective. Pipeline coverage criterion (b) states: (b) that it would be uneconomic for anyone to develop another pipeline to provide the pipeline services provided by means of the pipeline. While criterion (b) appears at first glance to be a standard natural monopoly test, its wording indicates that it is not. Specifically, the phrase “by means of the pipeline” references criterion (b) to the pipeline as proposed in the Greenfields exemption application. A standard natural monopoly test with respect to a natural gas pipeline would seek to determine, given all feasible pipeline technologies, whether it is socially efficient to build only one pipeline to meet expected demand. A standard natural monopoly test is “unconstrained” in this sense – the least-cost option over all possible alternatives is considered and tested. In contrast, criterion (b)’s reference to the pipeline the subject of a Greenfield exemption application implies that the appropriate test is whether, given the existence of this pipeline, it is socially efficient to build only this pipeline (along with any augmentations to that pipeline) to meet expected demand. This test is thus constrained by the existence of the pipeline proposed in the exemption application!

All of the gas pipelines built in the east coast since the introduction of gas reform in 1990 with the exception of one have received the 15 year initial exemption. This is rather naïve since it would be unusual for additional services and additional low cost expansions by compression to occur during the first 15 years of a gas pipeline’s operations. One would normally expect the original tariffs to decrease in that situation as additional unexpected revenue is generated by the pipeline and/or the unit cost of capacity has decreased substantially. The impact of simply adding compression is illustrated by the following table which pertains to 380 km 42” pipeline recently acquired by APA from QGC in southeast Qld:

Pipeline configuration	Daily maximum throughput (TJ/day)
Free flow	1,510
Single compression	2,213
Max compression	2,916

Source: Frontier Economics, July 2010.

Gas pipelines are classic natural monopolies in that they have large initial fixed costs and they have low marginal capacity expansion costs throughout the life of the pipeline by the addition of compression and staged looping of the pipeline. Setting tariffs for services for 15 years while ignoring this feature has the potential to result in extremely unfair and unreasonable tariffs over time.

The National Gas Code also allows pipeline operators to apply to the Council for revocation of coverage. On receipt of an application, the Council assesses whether the coverage criteria continue to apply to the relevant pipeline. Pipeline operators in the east coast have also taken liberty to request coverage revocation via this mechanism and the Council assessments in this regard have been, in our view, very liberal.

A central feature of the regulatory framework is a requirement that the owner/operator of a covered pipeline submit an access arrangement to an independent regulator (the ACCC in the case of gas transmission pipelines) within 90 days of a pipeline being covered. As explained in more detail later in this submission, this is a rather meaningless feature given the “capacity ownership” practice in Australia by what are referred to as foundation long term firm customers of any particular pipeline.

In reality, whether or not an east coast gas pipeline is covered (subject to economic regulation) or not is of little consequence to the gas industry at the moment. Furthermore, whether or not the economic regulation applied to a covered pipeline is

“light” or “full” is of little consequence. The entire regulatory framework applicable to the economic and conduct regulation of east coast gas pipelines is ineffective.

“In the US the response to asymmetry is not deregulation of price caps to expose captive customers to pipeline market power. Rather, the asymmetry that exists has been addressed by sharing of upside and downside performance with customers, and appropriate adjustments to the rate of return. Asymmetry has not been promoted as a reason for ceasing full regulation of tariffs.”¹⁹

Q9 Could the coverage criteria be satisfied in the case of a non-vertically integrated pipeline? Why/why not?

“Vertical ownership structures are the antithesis of a competitive market structure as they enhance market power and distort pricing, consumption and investment.”²⁰ Vertical integration increases the potential abuse of market power generally. The negative consequences of market power abuse are compounded where vertical relationships are present. In these cases, companies possess an added incentive to increase prices to inhibit competition in markets upstream and downstream of the gas pipeline or they may deny access altogether in order to favour their vertical associates. We would argue that the current special treatment of foundation shippers on east coast gas pipelines by pipeline owners is paramount to vertical integration concerns as third party access to capacity is often denied or tariffs for that service set to unreasonable levels in order to protect the commercial interests of the foundation shippers in upstream and downstream markets. Thus the potential outcomes of vertical integration can be obtained through discriminatory practices on pipelines that are not held in vertically integrated companies. We believe that there is much evidence of this in Australia today.

Regarding gas pipeline assets held in vertically integrated companies, the large gas transmission pipelines recently built by the three Gladstone LNG export projects were

¹⁹ BHP Billiton, Response to the Productivity Commission’s Draft Report – Review of the Gas Code, Page 20.

²⁰ BHP Billiton, Response to the Productivity Commission’s Draft Report – Review of the Gas Code, Page 12.

somehow exempt from any economic regulation. Furthermore, QGC has, since building its gas pipeline system, sold that asset to the APA Group at a price that reflected a purported \$2.5 billion profit to QGC. These assets are obviously gas pipelines whose capacity may in the future be required by third parties and yet not only are they closed for business but the value of the asset has doubled beyond the historical cost which will no doubt be permitted as the new cost on which to base any future tariffs.

The sale of gas pipeline assets at prices that far exceed their depreciated historical cost is a common practice across Australia. This practice commenced during the gas pipeline privatisation process in the 1990's and has continued. Such practices are not permitted overseas in most, if not all, other OECD countries for it inflates tariffs to unfair and unreasonable levels which in turn extracts unnecessary value from the gas industry. Re-capitalising gas pipeline assets above their depreciated historical value places an undue burden on the gas industry as it then has to pay for these pipeline as if they were newly constructed ones over and over again. Such a formula discourages the use of gas, as is demonstrated by Australia's small domestic gas market, and it discourages the development of new gas supplies. In comparison, Alberta, Canada with a fraction of the population of Australia consumes more gas than the total Australian domestic gas demand.

A good example of the differences in this regard between Australia and North America is demonstrated by the recent acquisition of Spectra Energy by Enbridge. Recently Enbridge paid US\$ 37 Billion for Spectra whose assets include several high pressure gas transmission pipelines with an aggregate of 34,000 km of large diameter gas pipelines (36" to 48") and several underground gas storage facilities with an aggregate of 300 PJ's of working gas capacity. Based on the A\$ 12 million per km sale price of the recently sold QGC Curtis Island feedstock gas pipeline and the A\$ 85 million per PJ of working gas capacity associated with the recent Iona gas storage sale the equivalent market price for the same asset bundle in Australia would be A\$ 434 Billion – a substantial premium!

The rule for acquiring gas transmission pipelines in North America is that any purchase price over and above the depreciated historical cost of that pipeline (what is referred to as the current rate base value for tariff generation) must be classified as good will and more importantly cannot ever influence the level of future tariffs on that pipeline. Gas pipelines are sold at very high values in Australia because new owners are free to charge tariffs that will recover the significant premium paid for that asset over the depreciated historical value.

While it may appear on the surface that it is sufficient to simply ring fence gas pipeline assets from other operations within a company or to prohibit gas pipeline owners from participating in activities upstream or downstream of its gas pipeline, this does not eliminate discrimination nor unreasonable levels of pricing for services.

Q10 What is the relationship between the gas pipeline capacity trading reforms and the gas access regime?

While the issue of gas pipeline capacity trading, or lack thereof, across Australia has been identified and a reform process initiated in that regard to improve the situation, reforms to date have, in our view, only addressed symptoms and not the root cause of this issue. While electronic bulletin boards and greater transparency of pipeline capacity information is ultimately important, these tools are ineffective as long as pipeline customers with long term firm service contracts are allowed to effectively control the use of that capacity whether or not they elect to use it on any given day. Furthermore, the long term firm forward haul contracts which are commonly referred to as foundation user contracts stipulate such anti-competitive notions as what the pipeline operator must charge third parties for the use of various pipeline services such as interruptible and backhaul services. These foundation contracts essentially grant control of gas pipelines to a relatively few companies across the east coast of Australia who then use that control to exhibit market power vis-à-vis the movement of gas around the gas pipeline grid. This seems to apply to all point to point gas pipelines in the east

coast and is not consistent with how common carriage gas pipelines operate in either Europe or North America.

The gas access regime in Australia is purported to be one based on, among other things, the principle of open access and non-discriminatory service and yet in reality this is not the case. “Provision for non-discriminatory open access, is a crucial part of the current regulatory framework under the Gas Code. Open access, combined with appropriate regulation of monopoly pipeline profits is the basis for competition in the industry.”²¹

Australian uses many of the same gas pipeline related terms as does North America and Europe but the meaning of these terms is far different in Australia. For example, common carriage gas pipelines in Europe and North America embrace the principle that firm customers have the right of first refusal to use the pipeline capacity so reserved but to the extent that on any given day they elect not to use it, that capacity is available to third parties who want to move gas on an interruptible basis until such time as the firm customer elects to use that capacity pursuant to normal nominating practises. Firm customers do not own the pipeline capacity but simply have the right of first refusal to use it. This is a fundamental principle that defines what a common carriage pipeline is. Most of the gas pipelines in the east coast operate at very low utilisation rates the majority of the time and yet third parties cannot access that capacity without the approval of the parties who hold foundation firm forward haul contracts on that pipeline.

This concept of ownership by contract as opposed to having a right of first refusal which is the widely accepted contract carriage model is illustrated by the following quote from the Chief Executive of the APGA: “The APGA secretariat and the owner members are already in discussion with the AEMC about proposal for pipeline capacity trading and auctions. We argue that this will increase competition. It will force the shippers, the companies that actually own capacity, to make spare available.”²² Trading platforms

²¹ BHP Billiton, Response to the Productivity Commission’s Draft Report – Review of the Gas Code, Page 11.

²² The Australian Pipeliner, October 2016, page 32.

will not force anyone to do anything. The fact that a very few companies in Australia are allowed to own and control the commercial affairs of a gas pipeline leads to market power and market power abuse. Hoarding contracted for but unused pipeline capacity is a common strategy in the east coast employed by incumbent gas suppliers to discourage competition from new gas supplies. This does not happen overseas since third parties have immediate access to all contracted for but unused firm capacity on an interruptible basis.

Another major flaw in the gas access regime is the lack of fair and reasonable tariffs. The market power intrinsic to natural monopolies such as gas pipelines has never been truly and effectively addressed in Australia. Pipeline ownership has transferred from various governments to the private sector and yet pipeline tariff levels are established at essentially the sole discretion of the pipeline owner/operator which is a strong and clear natural monopoly. Section 46 of the Competition and Consumer Act 2010 appears to not apply to gas pipelines and their operation in Australia. This is very difficult to understand.

Q11 What are the implications of any changes to the LMR regime in the context of this examination?

Australia's gas and electricity industries have a long list of apparent "decision makers" who are purported to have significant roles and responsibilities to ensure that these industries are efficient and competitive. These include the AEMC, the AEMO, the AER, the ACCC, the ERA, the NCC, the Energy Council, the COAG, the Australian Competition Tribunal and jurisdictional energy ministers and yet major issues and anti-competitive conduct appear to go unnoticed and unchecked. There has been countless reviews since the early 1990's in Australia regarding the evaluation of its performance and yet very little has been accomplished to rectify the situation. Perhaps one informed energy infrastructure entity such as the NEB in Canada or the FERC in the US might be a better solution!

The purpose of the ACCC and AER is clearly stated in our legislation (the Competition and Consumer Act 2010) and that is to enhance the welfare of consumers through the promotion of competition, fair trading and consumer protection.

The ACCC and AER state that they have translated this into their strategic plans with the following objectives:

- to maintain and promote competition and remedy market failure
- to protect the interests and safety of consumers so that they can be confident in their dealings with businesses, and
- to promote the efficient operation of, and investment in, infrastructure in the long term interests of users.

Yet the ACCC has largely ignored Australia's gas industry until such time as two Commonwealth Ministers requested a thorough inquiry into the east coast gas market. That review has taken some time and the ACCC released a report stating among other things that the existing regulatory regime under the NGL does not appear to be working and a new regulatory test is required in order to obtain fair and reasonable tariffs and pipeline services/conduct. It has been fairly obvious for two decades that this is indeed the case and yet only now is this issue exposed.

The following six fundamental performance measures for the east coast gas pipeline sector are, in our view, rated very low for all point to point gas pipelines in operation:

- Efficiency – that is fair and reasonable tariffs
- Transparency
- Open Access
- Non-discriminatory
- Customer oriented
- Contract Carriage Model principles

It is unlikely that a review of the Limited Merits Review (LMR) is going to repair this rather longstanding issue. It seems that the proverbial 'blame game' is surfacing as opposed to simply finding and executing on what has to be done to repair the situation.

Most of the long list of aforementioned decision makers are involved and the long tedious process appears to be unnecessarily complicated. Submissions to several agencies running parallel investigations about the same topic seems to be rather ridiculous.

A limited merits review regime was introduced into both the National Electricity Law (NEL) and the National Gas Law (NGL) in 2008. The regime allows parties affected by prescribed decisions to have those decisions reviewed by the Australian Competition Tribunal where it can be established that there is a serious issue and grounds for review. The principle of checks and balances on decision-makers, through appeal rights, is a cornerstone of our legal system. It ought also to be a feature of our regulatory systems. Whether or not this is the most important issue to be addressed at this time is questionable.

The LMR regime was amended in 2013 to allow the Australian Competition Tribunal to make timely cost effective decisions on gas and electricity infrastructure issues. These 2013 reforms were intended to ensure that regulatory decisions promote efficient investment, operation and use of energy infrastructure in ways that best serve the long-term interests of consumers. This has not materialised as it pertains to the gas pipeline sector as duly noted by the ACCC in their recent comments and position on this topic. The gap between Australia and world's best practice in this regard appears to be rather large.

Q12 Absent this examination and any decision by Energy Ministers, once implemented, the amendments to the declaration criteria will see the coverage criteria differ from the CCA. Should the coverage criteria continue to be consistent with the declaration criteria or is an industry-specific test warranted? Why/why not?

It is difficult to imagine why the gas pipeline industry should be judged based on more lenient misuse of market power criteria than the rest of industry operating in Australia. The so called Light Handed Regulation of gas pipelines introduced in Australia during

the 1990's following the privatisation of gas pipelines is not consistent with section 46 of the CCA.

Section 151(1) of the NGL states that the service provider of a Greenfield pipeline project may, once a pipeline project has been proposed or commenced but before the pipeline has been commissioned, apply for a 15 year no-coverage determination and most pipelines achieve this status. The conduct of so called 'fully regulated' or covered gas pipelines is not very restrictive in Australia for all that is required is a filing of access principles and related tariffs. These access principles are window dressing for they do not contain fair and reasonable tariffs nor do they grant open access rights to unused capacity to third parties on a non-discriminatory basis.

The recent Harper Review and related recommendations serve to tighten up the language contained in Section 46 of the CCA. We understand the amendment proposed by the Harper Review is to capture all conduct engaged in by firms with substantial market power, subject only to a 'substantial lessening of competition' test. While the conduct of companies in general with significant market power operating in Australia will be scrutinised more thoroughly, the owners of what is commonly accepted as the most natural monopolies in modern society, namely high pressure point to point gas transmission pipelines, remain isolated from Section 46 of the CCA. In short, we do not support any difference between the 'Coverage' criteria of gas pipelines operating in Australia to the declaration criteria contained in the CCA. Exceptions and excuses for Australian gas pipeline owners/operators has occurred over the past 2 decades since Governments have exited the gas pipeline industry in terms of ownership and it is time for the market power associated with that critical infrastructure to be fully addressed. To not do so in a thorough manner results in a continuation of a very immature and inefficient gas supply and delivery system within Australia. This gap between Australia and other OECD countries has widen significantly during the past two decades and has resulted in significant unintended adverse consequences to Australia's gas industry and the nation's economy.

Q13 What impact, if any, is the amendment to section 46 of the CCA likely to have on pipeline operators who operate in a manner consistent with that identified by the ACCC as engaging in monopoly pricing?

It is difficult, if not impossible, to predict the outcome of any amendments to S46 of the CCA on gas pipeline operators in the future. Given the very pro-gas pipeline operator decisions in the past since the introduction of COAG Energy Council's Gas Market Reform Package during the early 1990's regarding conduct, the value of assets, service offerings, tariffs and open access policies it is difficult to imagine much, if any, improvement without overhauling the entire regulatory process as it pertains to the economic regulation of gas pipelines in Australia and acceptable conduct.

The economic regulation of gas pipelines is a relatively new concept in Australia and for some reason Australia has attempted to deal with gas pipelines in a manner that is not consistent with generally accepted practices in other OECD countries who have experienced a much longer period of non-government ownership in this industry and consequently have regulated gas pipelines in an economic sense successfully for many decades. It is perhaps time for Australian regulators to begin to understand how these countries successfully manage this important infrastructure sector since without gas pipelines there is no other manner in which to move gas supplies to domestic markets.

Conclusion

In conclusion, we encourage you to review our comprehensive public submission that was made in October 2015 in response to the East Coast Wholesale Gas Market and Pipeline Frameworks Review, Pipeline and Capacity Trading Discussion Paper Dated 18 September 2015. Our submission primarily deals with the very poor performance of the east coast gas pipeline sector and the need to mitigate market power abuse related to these assets. The state of affairs in Australia's gas pipeline sector is a major concern to Encana.

Encana has been developing unconventional gas since the 1970's and is a global leader in that regard. While we rate Australia's unconventional gas resources promising and attractive to Encana from a technical and geological perspective, the widespread evidence of market power abuse evident in Australia's gas pipeline sector is sufficient to discourage us from investing in Australia until that conduct is terminated by suitable government intervention in the form of meaningful economic regulation. It is our position that gas related E&P activity is only commercial if any associated gas production has access to non-discriminatory customer oriented gas transmission services at fair and reasonable prices. This is, in our view, far from the case in Australia's east coast at this time.

The lack of open access underground gas storage capacity and the absence of a meaningful short term trading market for gas and a gas futures market in Australia is also a concern to us. It has been our experience that all of these missing ingredients lead to much greater inefficiencies in the entire gas supply chain. Such inefficiencies discourage unconventional gas exploration, development and production operations regardless of how attractive the geology and the prospective in-situ resources may be.

Encana International (Australia) Pty Ltd.



Glen W. Gill
Director and Public Officer