

**From** Chris McPherson, EnergyXpert Advice  
**To** Mr Keir Delaney, Secretary  
 Environment and Planning Committee Parliament of Victoria,  
**Re** Inquiry into onshore unconventional gas in Victoria  
 Additional information on the Gas price impact of new onshore gas development.  
**Date** 15 sept 15

### Executive summary

The interim report into onshore gas development has identified the likely price impact as an area for further investigation. Chris McPherson is a leading Australian gas industry expert and has offered to provide an informed, plain English explanation of the likely price impact.

### Key points:

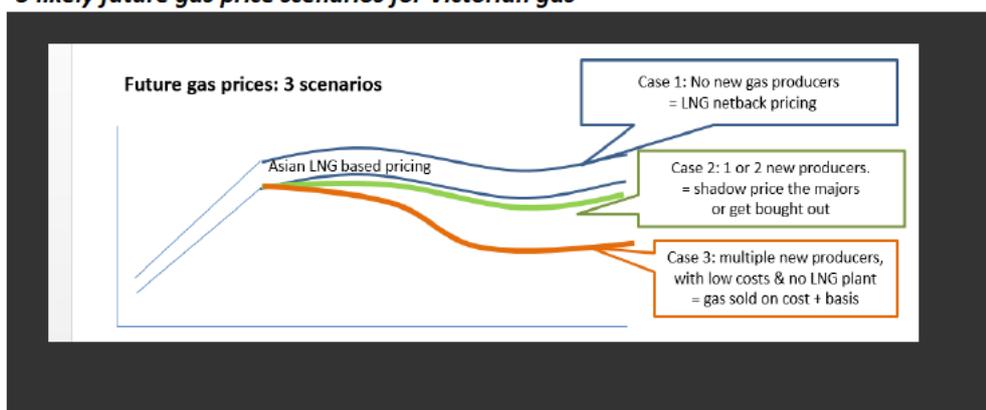
There are three likely future Victorian gas price scenarios based on how gas supply evolves:

- If there are no new gas producers, then future Victorian prices will be determined by world gas prices.
- If there is one new producer, they would logically shadow price the majors, selling gas just below world pricing. (= possible modest price reductions)
- If there is lots of new supply and lots of new producers, then we return to cost+ gas pricing, where producers are happy to sell gas at a reasonable profit (= lower gas prices)

The logical pathway to lower gas prices is to encourage lots of new supply, from lots of new producers. New gas sellers who have large volumes of gas and low extraction costs. A large increase in supply always leads to lower prices in a commodity market, this includes gas markets.

Encouraging new suppliers and supply competition, reduces the ability for a few sellers to hold back and ask for export parity prices. If we create more supply competition from lots of new suppliers, we would expect to return to a market where gas is sold on a cost + basis, ( ie a modest profit over production costs).

### 3 likely future gas price scenarios for Victorian gas



(extract of a future gas price presentation provide to large Brisbane gas users at the EUAA Qld gas conference in May 15)

### Additional information and details.

It is easy to understand why the committee found the information around current and future gas pricing confusing and contradictory. Gas prices are not transparent and often confidential, the reason for the current price increases is often poorly understood, and there are some strong opinions and strong commercial interests at stake.

### Chris McPherson's experience, insight and understanding.

#### *(ie does Chris know what he is talking about when it comes to future gas prices?)*

Chris McPherson is one of Australia's most experienced gas consultants and gas industry experts. Chris has been involved in Victorian gas trading since the very start of the gas market (Energy 21 gas trader). Chris has 25+ years' experience in the Australian energy markets as a gas trader, gas salesman, gas buyer, gas pricing manager and gas consultant. Chris has worked with many of the biggest players in the industry (Origin, Energy Australia, Westpac, Orica, County Energy). Nowadays Chris provides independent gas expert advice to the largest gas buyers and sellers, including Orora, CSR, Simplot, Brick works, Gippsland Gas and Lakes Oil. Chris has been instrumental in creating many of the new gas solutions such as the foundation gas deals between large gas consumers and new gas producers (eg Dow, Simplot)

### Understanding why gas prices are rising

The reason why gas prices are rising is often poorly understood and poorly explained. A clear understanding of why prices are rising, leads to a clear understanding of the likely future gas prices.

#### **Prices are rising because there is a new customer in town (LNG) who will pay much higher prices.**

Australian east coast gas was previously sold into the local market at local cost + prices. The big producers would extract gas out of the ground, sell it for \$3-\$4/GJ and make a good profit.

Asian gas prices were much higher than Australian prices, but there was no way to get the gas to them, so it was irrelevant to local pricing. Local sellers sold gas at a local price based on local supply and demand.

In order to access these higher world prices the main gas companies built LNG plants. This enabled them to sell gas at much higher world prices to Asian gas buyers. This created a new buyer who was prepared to pay much higher gas prices. The local producers lost their enthusiasm for selling gas cheaply to locals when this new buyer will pay much higher prices.

Because there is affectively only 3 producers and 3 gas sellers, they all had an interest in asking higher world pricing for local gas. This did not require collusion, they have all acted in their own commercial interest to maximise the price of their product. This is logical and sensible commercial behaviour by the existing gas companies.

#### **A large bargaining range between the cost of production and world pricing.**

The gas sources for Victorian and NSW gas haven't changed, they are the same fields that have been producing gas for years. We know that gas that was sold for \$3-\$4/GJ for many years, so logically these gas fields that have a cost of production below \$3.

When a gas seller and a gas buyer sit down to negotiate a new gas contract, there is now a large price range (bargaining range) between the cost+ gas price and the NBA (next best alternative ) gas price. This creates a large potential bargaining range for a gas price negotiations.

- Gas buyers want to pay the cost+ gas price (\$3-\$4).
- Gas sellers want to receive world pricing for the gas, (A\$7-10)



This creates a large bargaining range for local gas prices. Where the final price ends up is a function of who has the best bargaining position and the greater power in the price negotiation (Economics 101 in action).

Gas sellers have a strong NBA (Next Best Alternative [or BATNA]). If gas sellers cannot get world prices they are happy to lose the customer to another gas seller, leave the gas in the ground and sell it to LNG next year or the year after. They are happy to walk away.

Gas Buyers have no alternative but to buy gas from one of the three large gas sellers. There are no other sellers and no substitution alternative. Buyers have no ability to walk away, they must pay the price offered by one of the 3 large sellers.

What is clear at the moment is that the sellers have all of the power in the price negotiation. Because the sellers have all of the bargaining power, the price is rising to world gas prices. (Chris McPherson has worked for 10+ years as a gas price negotiator, both for large gas sellers and for large buyers. )

Gas pipelines play no direct role in this price negotiation. Many people confuse the role of limited pipeline capacity and pipeline transmission cost in this process. They play no direct role. They do not inhibit the ability for seller to ask world pricing for Vic, Tas and SA gas. This is often misunderstood and misrepresented, this is about power in a price negotiation, not about pipelines.

### The three logical future price scenarios

There are three logical future gas price scenarios and they depend on whether supply increases or remains the same.

#### **Base Case: no new supply = world gas pricing.**

There is currently very little in the way of new gas supply being developed largely due to the moratoriums on new gas development in NSW and Victoria. The current sellers have the incentive and the ability to ask world pricing (LNG netback) for local gas and they will continue to do so.

Oil prices have fallen and LNG netback is currently very low, but it still translates to around A\$8-\$10 for gas, around double past prices. When oil prices rise and Asian gas demand rises this price will also rise.

#### **Case 2: modest new supply**

If there was only 1 new gas producer then the sensible pricing strategy is for them to shadow price the majors and sell just below world prices. This is the smart commercial strategy for them to win business and maximise price and profits. This might lead to some small price reductions, but will not lead to significantly lower prices.

If there was only 1 or 2 new gas producers, they may also be bought out by the major gas companies. This would also not lead to lower gas prices.

#### **Case 3: A large increase in gas supply**

If there was a large increase in supply, from lots of new producers then we would return to cost plus pricing. New producers with large volumes of gas to sell and low cost structures will be happy to sell gas at a good profit to local buyers at local cost + prices.

If there were a number of new gas sellers, with aggressive prices, the incumbent retailers would start to lose business and be forced to match the lower pricing or lose their substantial (and expensive) retail businesses. They would logically respond by lowering local prices. They would still receive world pricing for their export gas (rewarding the investment in large LNG plants), but lower local pricing for their local gas.

This is the outcome that would be good for industry, households, jobs and all Victorians. This would lead to lower prices and increased security of supply. It would also logically secure existing jobs and encourage new jobs. This is the outcome that governments should be encouraging.

Logically, this is also an outcome that existing gas producers would prefer did not happen. Business theory suggest that an incumbent gas producer might actively discourage new competition, to protect their prices and profits. It is reasonable to expect that existing gas producers would do what they can, within reason, to discourage this outcome. That is perfectly sensible business protection.

### **3 sellers does not make for dynamic market competition**

The fact that the current gas sellers can ask higher world pricing for local gas is not necessarily evidence of a market that is broken, but rather a market with only 3 sellers working perfectly normally.

If there were more gas sellers in the market, and more gas suppliers that did not have LNG plants, then we would have more dynamic competition and the buyers would have more choice and more negotiation power.

If there were lots of new gas sellers, who have lots of gas supply, and are happy to sell it locally on a cost plus basis, then prices would logically fall back towards cost+ pricing. In an environment where the new onshore producers have a low cost of production (this appears to be the case) then cost + pricing will be much lower than world pricing.

### **Government encouraging market competition**

Encouraging new supply from new sellers is the logical solution to lower gas prices and increased gas security. It is a logical pathway to reducing energy costs for manufacturers in Victoria.

It is a logical way to encourage new hi tech energy based industries (eg fertiliser, plastics, etc)

There is a sensible role for government in encouraging the market to work better, by enabling new supply. This is not about regulating the market or imposing controls on the gas market. It is about encouraging a gas market to work better by enabling new suppliers and new supply. New suppliers would break the current 3 supply co-opetition and enable increased supply competition and reduced gas prices.

### **Why won't the new sellers just sell gas at world pricing?**

A question I often hear asked is "why won't the new sellers just sell gas at the higher world pricing (LNG netback pricing). Why will they sell it cheap"?

The answer lies in the enormous cost of building LNG plants and the current oversupplied LNG markets.

The new producers are small, new gas companies, they do not have the resources or inclination to build multi billion dollar LNG plants. They are happy to sell gas at a good profit to local buyers.

Some people assert that the new producers can just sell the gas to the LNG plants at high prices. This shows a misunderstanding of the market. The LNG plants have plenty of gas supply lined up (20-40 years of supply, they wouldn't have got funding if they didn't). They may well be willing to buy more gas opportunistically if it is available cheaper than extracting their own gas (\$2-\$4) but there is no commercial sense in paying much higher prices. These plants are fully committed and will run 24x7, there is no 'surplus capacity' for new players to buy. (this is another furphy).

## Lessons from the Victorian electricity market

The Victorian electricity market, like the gas market was created from scratch by the government of the day to enable new competition. In electricity they created a large number of suppliers (many more than 3) and the multiple suppliers created effective competition and low prices. Economic theory tells us that 5 or more sellers is usually required to create dynamic competition.

In the gas market we have consolidated to 3 supplier / 3 retailers. Economic theory shows us that 3 sellers is usually not enough to create dynamic supply competition. 3 sellers most often results in co-opetition, especially where they sell non-perishable, transportable goods (like gas). ie where they have a strong ability to hang back and sell tomorrow at the higher prices

## What is the current barrier to new supply and lower prices.

The barrier to new supply in Victoria has been the onshore gas moratorium. Were it not for the moratorium, there would likely be new Victorian gas producers, supplying new gas today.

Lakes Oil and Gippsland Gas are the two largest new gas companies, they both had gas development programs in place when the moratorium was initiated.

They both have large gas resources, and they have both had extracted gas to the surface and flared the gas. They both had drill programs organised and underway prior to the moratorium, with co-funding from large global gas companies. (These are a matter of public record, there is nothing confidential or new in these statements).

Had these onshore gas development programs continued to progressed two year ago it is probable that these new fields would be supplying gas today. There would be at least two new gas supplier in the Victorian market.

The logical pathway to lower gas prices and more secure gas supply lies in lots of new supply. The current moratorium, the current licencing process and the political environment are not enabling new supply. They are actively stopping new supply from new gas sources.

## Safe and sensible new gas development

The community clearly expects that any new gas producer must develop gas in a way that doesn't harm the environment, doesn't damage water or the land and doesn't force landholder to do things they don't want to. Where new onshore gas can be developed safely and sensibly within these principles, then it would be beneficial to gas prices and beneficial to the state and the public, for lots of new gas supply to be encouraged and enabled.

## Onshore gas appears to be much cheaper than offshore gas.

A key to lower gas prices is encouraging new producers with a low cost of extracting gas. If new producers can get gas out of the ground for \$2-\$3/GJ they will be happy to sell it for \$4-\$5 and make a good profit. If it costs them \$8-\$10 to extract the gas, then they can't.

Whilst the exact cost structures for the new onshore gas fields is not public information, it appears that their cost of production is very competitive. The public information released by them suggest a cost well below offshore gas production. By way of example, the cost to drill an onshore gas well to prove a new gas field is around \$1m to \$2m. The cost to drill an offshore well to prove a new gas field is around \$30m to \$50m. The costs and risks for onshore gas development appear to be much lower.

## Conclusion

Future gas prices are fairly simple to predict. There are 3 future supply scenarios and they lead the 3 logical price outcomes.

1. No new supply = world pricing for Victorian gas
2. One new small supplier = shadow pricing, possible modest price reductions

3. Lots of new supply from lots of new gas sellers = local gas pricing on a cost + basis = cheaper gas

When the reason for the current price rise is understood, the mechanism are understood, and the motives of the key parties are considered; the logical price outcome become simple and predictable.

Victorians would benefit in multiple ways from lower gas prices, all Victorians would benefit. Encouraging lots of new gas supply from lots of new producers (with cheap gas) is a logical way to deliver lower Victorian gas prices.

Thank you for the opportunity to explain the likely price impact of enabling (or limiting) new onshore gas supply. I would be very happy to talk through any aspects of this paper with the committee, if that was helpful.

Best Regards  
Chris McPherson.