

Submission to the Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia 2017

prepared by

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Introduction

The Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia 2017 has been asked to:

- Identify environmental, health, agricultural, heritage and community impacts associated with the process of hydraulic fracture stimulation in Western Australia, noting that impacts may vary in accordance with the location of the activity;
- Use credible scientific and historical evidence to assess the level of risk associated with identified impacts;
- Describe regulatory mechanisms that may be employed to mitigate or minimise risks to an acceptable level, where appropriate;
- Recommend a scientific approach to regulating hydraulic fracture stimulation; and ¹

The commencement of a new industry in Western Australia, the onshore gas fracking industry, could have significant negative impacts on the community as the assets involved may become rapidly stranded.

This industry is commencing at a time of global gas glut. Furthermore, the unconventional gas industry in Australia has been a financial failure with billions of dollars written off the values of both the LNG plants and the gas fields. Unconventional gas in Australia has consistently over promised and under delivered. Resources have not lived up to expectations and costs have consistently been much higher than originally forecast. Developing a substantial gas resource into a global glut of gas that extends out for a decade is extremely risky. It is likely to result in stranded assets and community dislocation as jobs in the industry evaporate.

1. The Global Gas Glut

The extent and longevity of the global gas glut has been outlined by IEEFA in the reports authored by myself in May 2016² and in the more comprehensive analysis in June 2017, “Australia’s export LNG plants at Gladstone – The Risks Mount”³. Both reports detailed the extent of global over supply and concluded that the global gas market would be oversupplied out to 2030.

Recently Macquarie Securities has released a report entitled “Global LNG – The power balance has shifted”. In this report they stated that:

“Looking ahead, **we see global oversupply from operating and under construction projects lasting until 2022, but including advanced projects, this extends until 2027**. Additionally, two factors could shift oversupply out further, export plants running above nameplate and the rise of renewables”

This new report has been written post a spike in LNG demand out of China. In spite of this Macquarie have concluded that the global gas glut is a long term (10 years plus) phenomena.

Global Liquefaction capacity as at January 2018 was 368 MTPA. Global imports were just 293 MTPA in 2017. The market closed 2017 26% oversupplied.⁴

¹ <https://frackinginquiry.wa.gov.au/>

² <http://ieefa.org/wp-content/uploads/2016/05/Pipe-Dream-A-Financial-Analysis-of-the-NEGI-MAY-2016.pdf>

³ <http://ieefa.org/wp-content/uploads/2017/06/Australias-Export-LNG-Plants-at-Gladstone-The-Risks-Mount- June-2017.pdf>

⁴ Source: GIIGNL Annual Report 2017 plus capacity additions from Shell over 2017

Into this over-supplied market global liquefaction capacity is expected to grow by an additional 24% between 2018 and 2020 with 88 MTPA under construction.

2. Contract Defaults/ "Renegotiations"

The major portion of LNG sold globally is under long term contracts linked to the oil price

The IEEFA report, "Australia's export LNG plants at Gladstone – The Risks Mount" detailed that the contracts for LNG are subject to renegotiation and that a number of contracts had defaulted. Buyers obtained lower levels of take or pay arrangements and significantly lower prices. In one case the price of the contract was halved.

Macquarie also see pricing risk in contracts under renegotiation:

"Adding an additional layer of risk are the volumes up for pricing reviews. There are 187MT of supply under long term SPA's that will come up for pricing review before 2020, and 146MT between 2021-2023. Though there is no standard form of a price review clause, publicly available arbitral decisions over the past few years have all been in favour of the buyers, with spot prices judged to be at least part of the market price."

Macquarie sites recent examples of pricing reviews which saw prices fall around 25% for long term contract gas. The financial sustainability of the high cost LNG plants at Gladstone will be severely challenged in such a low contract price environment.

The challenges faced by the high cost onshore gas increase the risks of Western Australian onshore gas industry being a stranded asset. It may be developed for a market that evaporates.

3. Shale gas in the USA is not producing economic returns to producers.

Shale gas production in the USA is not producing returns for investors.⁵ The shale gas "revolution" in the USA is often quoted as a model for the Australian market to follow. What is not clearly shown is that this industry has destroyed shareholder value. The Wall Street journal recently did an investigative piece on the Shale gas industry and found that \$280 billion of shareholder wealth had been destroyed.

"In the past decade, the shale-fracking revolution has [made the U.S. the world's largest oil-and-gas producer](#) and [reshaped markets](#). Yet shale has been a lousy bet for most investors. Since 2007, shares in an index of U.S. producers have fallen 31%, according to data provider FactSet, while the S&P 500 rose 80%. Energy companies in that time have spent \$280 billion more than they generated from operations on shale investments, according to advisory firm Evercore ISI."

One of the defining features of Shale gas is the constant need to drill more wells as production decline sets in quickly.

Global imports

/_jcr_content/par/textimage_864093748.stream/1519645795451/ Source: <https://www.shell.com/energy-and-innovation/natural-gas/liquefied-natural-gas-lng/lng-outlook>

⁵ <https://www.wsj.com/articles/wall-streets-fracking-frenzy-runs-dry-as-profits-fail-to-materialize-1512577420?mod=&mg=prod/accounts-wsj>

“Returns from individual wells can be good, but shale wells tend to pop online with a gush and then peter out fairly quickly. That has meant operators sink profits back into more new wells that can take another two years to become profitable, with shareholders told to hang on for a payday.

“The mañana never quite materializes,” Mr. McMahon says.”

Shareholders of Australian producers of unconventional Gas have suffered a similar experience to their US counterparts with billions of dollars of shareholder wealth destroyed through successive write offs and share price falls.

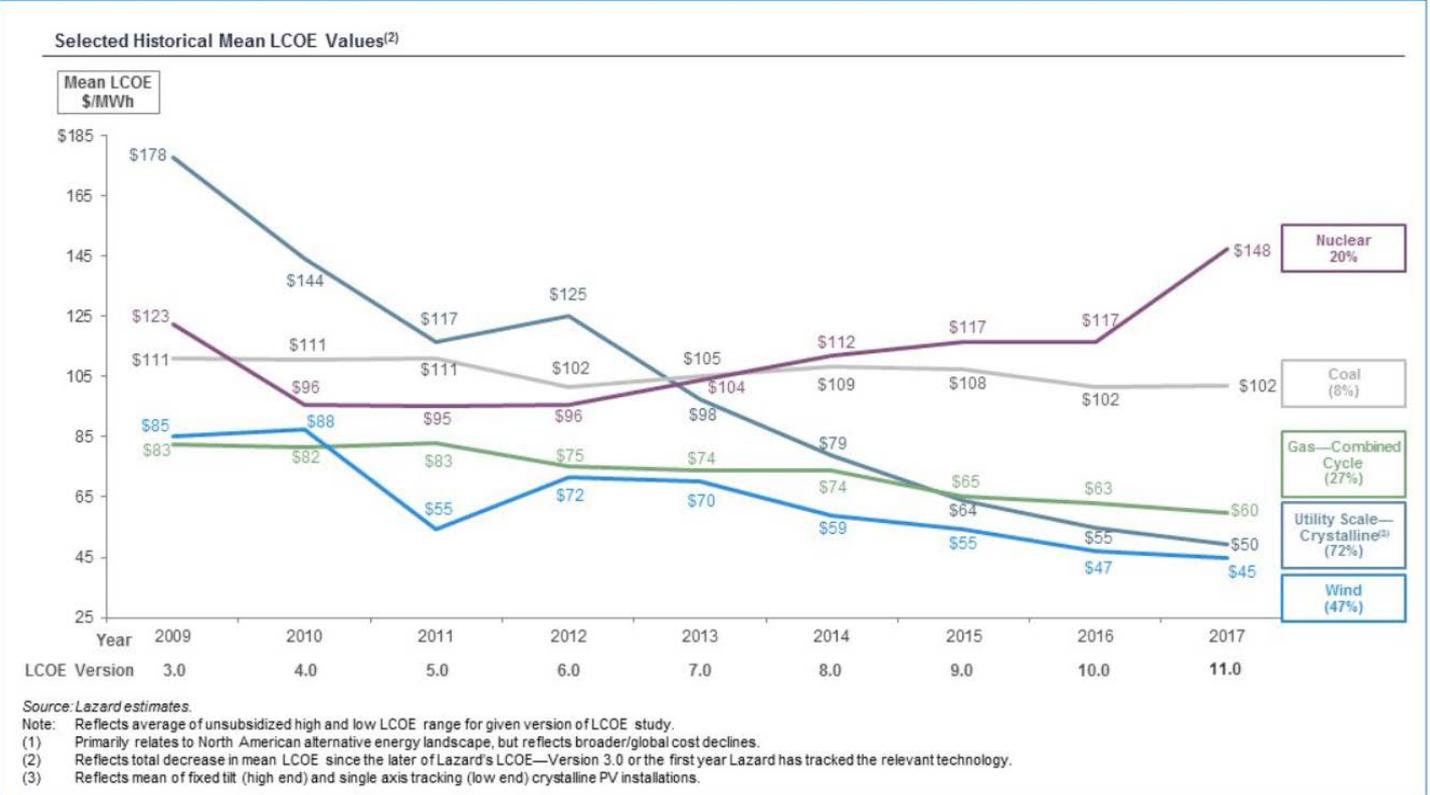
4. The rise of renewables will take market share away from more expensive fuels

Electricity production is the largest user of Natural gas. In the USA Electricity accounts for 36% of Natural gas use.⁶ A fundamental change has occurred globally in electricity production with the production of electricity transforming from a commodity produced mainly by fossil fuels, to a technology such as solar and wind. The one truism that we are all familiar with is that over time the costs of technologies fall. The fall in the cost of solar and wind have been marked. The cost of unsubsidised generation of electricity by solar and wind is now below those of fossil fuels according to Lazard⁷ and will continue to get cheaper. This analysis is done in the USA where natural gas is particularly cheap. In Australia and our LNG customers’ countries, gas is far more expensive. It is the increasing competition over time renewables present that will crimp demand for gas. The global LNG industry is relying on fast and continued growth in demand a scenario that is implausible given the competition.

⁶ https://www.eia.gov/energyexplained/index.cfm?page=natural_gas_use

⁷ <https://www.lazard.com/perspective/levelized-cost-of-energy-2017/>

Renewable Energy—Historical Cost Declines⁽¹⁾



Conclusion

It is the responsibility of the WA Independent Scientific Panel Inquiry to recommend the government not continue to support this industry with scarce government resources. Producing high cost gas in remote locations in the face of a lengthening global gas glut and depressed prices is no way to build wealth for West Australians. The reality is quite the reverse.

The government of Queensland rejected sound advice from its own public service when the CSG to LNG industry was approved, preferring to believe the industry when it stated that it would not affect the domestic supply of gas. The WA fracking inquiry must not blindly believe the gas and LNG industry, and their highly paid consultants, but rather assess the facts.

There are significant and real risks, if this inquiry recommend that the industry proceed, it will become a stranded asset as its export market evaporates.

This is not an industry of the future that can build wealth rather an industry of the past that will destroy it.

