Narrabri Gasfield Project:

Submission to Independent Planning Commission

Author: Barry Firth July 2020

Summary

This submission makes three assertions, as below:

- The vision of Australia's future as a renewable energy super-power, making use of this country's natural advantages, as put forward by Ross Garnaut and others, is important to the future of this country and must not be compromised unnecessarily;
- The assertion that the Narrabri Gasfield project is "essential" to address a projected shortage of gas domestically by 2024 would be better addressed by diverting gas from the export market by regulating the industry and creating a national reserve;
- Greenhouse gas emissions from the production and handling of natural gas are substantial and should be avoided wherever possible.

I urge the Commissioners to read my reasoning and to come to the conclusion that the Narrabri Gasfield Project should not go ahead.

About the Author

Barry Firth is a retired person with a background in Biotech science, now living in Murwillumbah, Northern Rivers region, NSW. The Northern Rivers is famously and proudly a gasfields-free zone.

Realising the Renewable Energy Super-power

I have read and been inspired by Ross Garnaut's book, "Super Power" (LaTrobe University Press in conjuction with Black Inc., 2019). It is a broad vision, encompassing opportunities for becoming "the world's main trading source of metals, other energy intensive goods and carbon chemical manufactures in tomorrow's zero-net-emissions world, and a major contributor to the world's efforts to absorb excessive carbon into land and plants" (p 165). Hydrogen is seen in this book as an important enabling technology. Gas is seen as a transitory technology, a source of fugitive emissions and in need of regulation (p105-6).

I am also in possession of "Australian National Hydrogen Strategy" (https://www.industry.gov.au/data-and-publications/australias-national-hydrogen-strategy). It aims to position our industry as a major player in domestic use and export of clean hydrogen by 2030 (Note: That is a very short time frame!).

The Australian Renewable Energy Agency (ARENA) is running a "hydrogen funding round" of $70M, with seven shortlisted applicants, and project proposals worth $500M. They report that the Clean Energy Finance Corporation has a $300M "advancing hydrogen fund". They say that there is an Australian Government goal, to produce hydrogen for less than $2 per kg. The gas industry itself is saying that hydrogen will play a major role in decarbonising Australia's natural gas networks.

These investment numbers are puny compared to the proposed capital expenditure of $3.6B in the Narrabri Gasfield project, but they are substantial enough to signify a purposeful beginning.

We have been waiting for a technological breakthrough that would enable us to realise a low-emissions future, and hydrogen will likely be a large part of that. Ten years ago it was going to be concentrated solar thermal power, but this technology has not attracted the required investment.

The realisation of the vision of Australia as a "renewable energy super-power" can be impeded by the development of new gas production infrastructure in at least three ways:

- **Competition for investment capital:** Funds invested in gas production now or in the near future will not be available for investment in renewable energy and "green hydrogen" infrastructure in the same time frame;
- **Market competition:** Production and marketing of gas from any new gas field can be expected to continue for several decades, in competition with any new renewable energy resources;
- **Competition for land use allocation:** Large areas of land allocated to gas production would not be readily available for other desirable uses including agriculture, carbon absorption and renewable energy production.

To plan for a new gasfield while working to implement the renewable energy super-power and the hydrogen economy is to plan to proceed in two opposite directions.

Domestic Gas Supply in NSW

There is no guarantee that gas produced at Narrabri will be supplied to the domestic market in NSW. In recent decades the gas market has never operated in this way.

The Climate Council declares that gas is bad for climate change (a global issue) and energy prices (a domestic issue); see https://www.climatecouncil.org.au/resources/why-is-gas-bad-for-climate-change-and-energy-prices/

Referring to the "gas-led recovery" concept, the Insitute for Energy Economics and Financial Analysis (IEEFA Australia) has recently declared, "It is unbelievable how silly this proposal is from the COVID Commission"; see https://ieefa.org/ieefa-australia-with-the-world-swimming-in-cheap-lng-gas-and-the-gas-industry-unable-to-find-capital-to-restart-projects-a-gas-led-strategy-is-a-poor-investment-for-australias-economic-rec/

Consider the following:

- Domestic gas has tripled in price since the opening up of the Queensland coal seam gas fields;
- Meanwhile, a glut of exported gas has developed and is said to be likely to persist to the end of the current decade (IEEFA);
- It has become cheaper to re-import gas, and port infrastructure is being developed to enable this to happen;
- All shortages of domestic gas are artificial;
- The cost of production of gas has been tragically under-estimated (IEEFA);
- Dramatically increased supply of gas over the past several years has only been matched by increasing domestic power prices. If increased supply was the answer to this strange dilemma, the problem would have been solved long ago.

In summary, the Australian gas industry is afflicted with an installed capacity for high-priced gas at a time of extremely low international trading prices. Adding more installed production capacity would not be rational.

The industry is in need of regulation, and a national gas reserve should be established to ensure domestic supply.

Greenhouse gas emissions

In year 2019, Australia's domestic greenhouse gas emissions amounted to about 532 MtCO2e ("mega-tonnes carbon dioxide equivalent"), said to be about 1.1% of worldwide greenhouse gas emissions.

Included in the Australian total is 56.7 MtCO2e which is accounted as fugitive emissions, of which about 60% is directly related to production and handling of gas.

These numbers do not include emissions that would result from consumption of our exported coal and gas. About 70% of Australian gas is exported, but Australia is responsible for the fugitive emissions from all of its gas production.

Liquefaction of gas for export is an energy-intensive process, which contributes additionally to Australia's emissions.

I have drawn these figures from the latest Australian Greenhouse Gas Inventory Quarterly Update, https://www.industry.gov.au/sites/default/files/2020-05/nggi-quarterly-update-dec-2019.pdf

By way of keeping the Narrabri Gasfield project in perspective, the project would produce about 5 MtCO2e per year as gas to be burned plus estimated fugitive emissions.

Fugitive emissions related to gas include:

- **Venting:** Direct release of gas into the atmosphere;
- **Flaring:** Burning of gas to reduce workplace hazards and other risks;
- **Leaks:** Uncontrolled release of gas from faulty equipment and pipes (said to be omitted from Federal Government data);
- **Migratory emissions:** Gas released through fissures, often far from the wellhead (said to be poorly understood).

The extent to which this matters depends on one's attitude to the issue of global warming and the need to achieve reductions in emissions over and above the rather lax targets set nationally and the more ambitious targets set in New South Wales, which include "net zero by 2050". The "gas-led recovery" proposal by the COVID commission is contradicted by the Climate Council, who state emphatically, "New gas is an unnecessary and dangerous step in Australia's efforts to tackle climate change"; see https://www.climatecouncil.org.au/resources/why-is-gas-bad-for-climate-change-and-energy-prices/

Can the NSW "net zero by 2050 plan" still be achieved, even after adding the new gas production from Narrabri? It would certainly be easier without. We should avoid those emissions as much as possible.