**Submission to: The NSW Independent Planning Commission**
**From: the Bayside Climate Crisis Action Group and Associates**
**July 2020**

## Who we are

*This submission is being made by the Bayside Climate Crisis Action Group in Victoria, in association with:*

- *Bayside Seniors Action Group,*
- *Beaumaris Conservation Society Inc,*
- *Black Rock & Sandringham Conservation Association Inc,*
- *Brighton Residents for Urban Protection,*
- *Elsternwick Park Association*
- *Intrepid Landcare Bayside,*
- *Marine Care Ricketts Point,*
- *Sandringham Foreshore Association,*
- *The Wilderness Society Bayside.*

*Amongst us are professionals, business owners, parents, students, teachers and academics who all share a vision of, 'A Safe Climate for All'.*

## What this is about

The NSW Independent Planning Commission has invited the public to comment on the merits of the proposed Narrabri Gas Project. We are of the opinion that the assessment carried out by NSW Department of Planning, Industry and Environment is flawed on many counts and are voicing our objection to this Project.

We are confident that others from NSW will elaborate on the unacceptable regional risks to the environment and water resources as well as health risks associated with fracking. In this submission, we concentrate on the flaws in the Department's assessment that have implications transcending beyond the borders of NSW.

This submission presents evidence of those flaws and asserts that The Project presents unacceptable risks, not only to the NSW emissions reduction goals, but to Australia's international reputation and our capacity to capitalise on Australia's natural advantages to become an energy-efficient renewable energy super-power.

## The Departmental Assessment of The Project

In its assessment of the merits of the Narrabri Gas Project, the NSW Department of Planning, Industry and Environment has concluded in essence, that the project:

- is critical for energy security and reliability in NSW,
- would put downward pressure on gas prices, and
- would deliver significant economic benefits to NSW and the region.[1]

Remarkably, the Department's assessment, seems to brush aside a major concern, namely, the impact of the project on the State Government's plan *"to fast-track emissions*

*reduction over the next decade",* as the first step towards its goal of net zero emissions by 2050.[2]

The assessment implies, without evidence, that by supporting the development of gas powered generation (GPG), the emissions profile of the state will be reduced. By omitting to properly investigate the consequences of this long-term investment in gas, the Department has failed in its duty of care. [3]

**Relying on Gas for Energy Security and Reliability**

Future energy security and reliability can be provided to NSW in either of two ways. One is by the high cost, emissions intensive extraction of gas from the Pilliga coal seams.

The Narrabri Gas Project is a relatively high cost project with an estimated production cost of $7.40/GJ before allowing for the cost of a new pipeline to connect to the Eastern Gas Region market. This compares to the average production cost across that market of $2.91/GJ. In a comprehensive report compiled by Pegasus Economics, they conclude that Narrabri gas is 'unlikely to influence, let alone reduce gas prices', a conclusion reached by the NSW Parliament Select Committee on the Supply of Gas and Liquid Fuels in 2015. [4] [5]

To assert this supply will put downward pressure on gas prices is to ignore the minor contribution that Narrabri gas will contribute to total gas supply across the Eastern Gas Region and the much higher production and supply costs associated with Narrabri Gas compared to the average cost across that region. But, with the current global oversupply in the gas market hitting Australian exports, and with no end in sight, we may well find Australian gas prices dropping without Narrabri. [6]

Importantly, there is the inevitable carbon footprint of gas extraction and processing of this resource that merits examination. Based on available data from wells in and around the Santos licences, we now know that the average carbon dioxide content in gas across the Narrabri project is 25-30%, with some wells displaying 90% of $CO_2$. This compares to (up to)10% claimed by Santos in its Environmental Impacts Statement.

Methane emissions from coal seam gas extraction, processing and distribution are poorly monitored and reported. They are mostly uncontrolled and unmonitored with leakage not only at the well-head, as one controversial study suggested, but across the entire infrastructure of pumps, separators, control valves, pipelines, venting points, processing facilities, supply mains and the reticulation network. Numerous studies have indicated that emissions levels are far higher than generally acknowledged, with some studies showing emissions are underestimated by as much as 60%, and conceivably more. [7] [8] [9] [10] [11]

Thus, the carbon footprint of this production process will approach that of coal, assuming the higher $CO_2$ content and only 'acknowledged' methane emissions are factored, in and contradicting Santos' claims that Narrabri gas is a clean transitional fuel.[12]

Government figures from September 2019, showed national fugitive emissions alone increased by 6.1 per cent over the year, driven by the expansion of the gas industry and continuing a trend of recent years. Fugitive emissions now account for 10.8% of total national emissions. This increase, which does not account for the full carbon footprint of gas production and processing, belies the claim that gas can be considered a transition fuel to a low emissions economy.[13]

## The Alternative Way to Energy Security and Reliability

In November 2019, NSW Energy Minister Matt Kean announced the state's new Electricity Strategy. The Strategy will unlock a significant pipeline of large-scale renewable energy and storage projects in the run-up to the planned retirement of its aging thermal-generation fleet, starting with a 3,000 MW pilot Renewable Energy Zone (REZ) in the State's Central-West. The plan acknowledges that firmed wind and solar are the cheapest type of new reliable generation. Kean said that it would attract investment in emerging technologies, create new jobs and diversify energy supply whilst putting downward pressure on electricity prices.[14]

Businesses and investors are seeing this opportunity. "As at October 2019, NSW has more than 100 private sector proposals to build large renewable generators. If built, these generators would total 17,700 MW of generation capacity within the State, and inject $24 billion of investment into regional NSW," the strategy says.[15]

The Australian Energy Market Operator and CSIRO have determined that the cheapest way to "firm" such huge amounts of renewable energy is a relatively modest mix of better interconnections with neighbouring states, batteries and pumped hydro.[16] [17]

This assessment is reflected in AEMO demand forecasts, which see the declining trend in gas powered generation (GPG) of recent years continuing till 2030. Whilst acknowledging GPG will continue to provide a reliability and security role to complement renewable generation, though shrinking with further electricity transmission upgrades, means GPG is relied on less as a source of firm supply.[18]

What happens beyond 2030 depends on how well we plan today for the renewable energy future. The REZs will open up opportunities for energy intensive industry. Flexible demand, such as with hydrogen production, can help balance the grid. This complements plans by Tomago Aluminium to convert Australia's largest smelter to low carbon aluminium production with a flexible operational mode designed to balance supply and demand during times of volatility.[19]

Simon Holmes a Court, senior advisor to the Climate and Energy College at Melbourne University, says, "On economic grounds alone, fossil gas is unlikely to play an increased role". "Instead of fracking the Pilliga forest to produce fertiliser with a huge carbon footprint, business could build a zero-carbon factory in the New England region, making fertiliser from renewable energy," he says.[20]

## Residential and Industrial Gas Demand

In considering the forecast shortfall in gas supply around mid-decade, the Department of Planning has focused entirely on boosting supply and avoided an examination of the demand side. In so doing, the Department has missed the opportunity of discovering cleaner and more cost-effective solutions for space and water heating, capable of significantly reducing gas demand. Improved insulation alone has the capacity to significantly reduce heating costs. [21] [22] [23]

The Federal Government's Technology Investment Roadmap Discussion Paper highlights the abatement potential of heat pump technologies and also of thermal storage. It states

that “encouraging household-level thermal storage could reduce the cost of firming the grid for all households and businesses”. [24]

It seems that few householders are literate about the savings and other benefits that can be achieved through good thermal insulation and the adoption of heat pump technology, both for space and water heating. Whilst at least one energy provider is encouraging its customers to switch from gas to electricity, others are failing to promote wise and efficient energy use. Surely the government has a role in advising consumers of the most cost effective, energy efficient and sustainable energy choices. [25]

As pure economics favours renewable energy more and more over gas and coal as energy sources, many energy intensive industries are starting to look at electrifying their heat processes. Tomago Aluminium, mentioned above is one example and the Whyalla Steel works is another. [26]

A recent study by ARENA has found that opportunities for renewable substitution of fossil fired heat are already economic for 12% of total industrial gas use for heat. The study found there are renewable options for all current industrial uses. Given the goal of net zero emissions by 2050, ARENA must be tasked with improving the competitiveness of efficient and flexible use of renewable energy in all industrial heat processing applications. [27]

**Conclusion.**

The Department of Planning appears to have accepted Santos’ claims without independent verification. The available evidence, cited above, suggests that there are alternative ways, other than Narrabri Gas to ensure energy security and reliability for NSW. The alternatives are more cost effective than gas and enhance the new NSW Electricity Strategy, rather than countering it. Furthermore, by enhancing the Electricity Strategy, they will open up new opportunities for investment in emerging technologies, creating new jobs and opportunities for zero emissions and energy intensive production for export.

Clearly the Department of Planning needs to return to the drawing board and develop plans to fast-track emissions reduction over the next decade, towards a clean, efficient and sustainable renewable energy future.

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