



Correspondence to:
The Secretary
Blue Mountains Unions & Community
52-52A Great Western Hwy
MOUNT VICTORIA NSW 2786
bmucinc@gmail.com

SUBMISSION ON THE NARRABRI GAS PROJECT

**Prepared by a Blue Mountains Unions & Community Member
(Blue Mountains Unions Council Inc)**

Submitted by Debra Smith, Secretary

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About Blue Mountains Unions & Community

Blue Mountains Unions & Community was formed in the 1980s by Blue Mountains activists from different unions as a community organisation – the Blue Mountains Unions Council - to “advance unionism, living standards, social justice and employment” in the Blue Mountains.

In August 1997 the Blue Mountains Unions Council was incorporated in NSW under the Associations Incorporation Act 1984 (ref: Y26665505)

Objects and Aims:

- Act to advance unionism, living standards, social justice and employment.
- Organise regular "Politics in the Pub" sessions that invite speakers to address the Blue Mountains community on appropriate issues.
- Assist in the protection of rights for all wage and salary workers.
- In solidarity with other community groups formulate policy that protects the environment and community assets.
- Support the election of people at the local, state and national level who will serve the best interests of wage and salary earners and Blue Mountains Unions & Community.
- Publicise Blue Mountains Unions & Community activities and views in the media.
- Publish a newsletter for regular dissemination within the Blue Mountains community of Blue Mountains Unions & Community views.
- Act in concert with Unions for the purpose of recruitment.

Submitted to:
Independent Planning Commission NSW
Level 3, 201 Elizabeth St.
Sydney, NSW, 2001

From:
Blue Mountains Unions & Community
(Blue Mountains Unions Council Inc)
bmucinc@gmail.com

Blue Mountains Unions & Community wishes to register its strong objection to the proposed Narrabri Gas Project.

As a union body two of our main foci have been the creation and maintenance of jobs and a safe working environment for employees. However, after examination of this project, we have concluded that neither of these objectives will be met by this project's approval. Further, whatever small gains may flow to some sectors of the economy are far outweighed by the massive negative impacts this project will have on the economy of the immediate and surrounding areas as well as the environmental damage to those areas, the Pilliga Forest and the threatened species that inhabit it.

The gas industry is an extremely capital intensive industry and employs very few workers per \$ invested. The oil industry is the much larger employer of the two and thus the Australian Bureau of Statistics do not even see it necessary to separate oil and gas in their collected statistics. Collectively the numbers are still small. In 2018 both industries employed just 18,000 people across Australia. That number has decreased 25 per cent since 2014. By comparison employment in agriculture in the 2018/19 period was 377,000 and even the decimated manufacturing industry employs approximately 12 times more people than oil and gas at 216,000.¹ Indeed the capital investment of \$3.6 billion for the project, only 200 jobs will remain after the construction phase is completed.² Thus it is hard to accept that in the long term this project will provide much benefit to the region in terms of jobs.

However, an additional consideration should be the net effect on other jobs when the CSG industry comes to town. Fleming and Measham studied the positive and/or negative spillover effects of the CSG boom on local economies. Their methodology involved in part the comparison of two areas in Southern Queensland experiencing the growth of the CSG industry over different periods. Their results showed that for every new CSG job around 1.8 jobs were lost in agriculture either to the CSG industry or as the result of moving away from the area. They noted that the CSG industry appeared to be associated with a modest increased income in the regions but warned that the figures can be misleading as the workers are often not permanent residents and tend to take their incomes out of the area. They also noted that in terms of overall benefits, increased housing costs needed to be taken into account.³ Neither the EIS nor the Department of Planning's assessment make mention of the relative value to the larger community of the different jobs affected by this project but we would argue that the displacement of agricultural jobs and their impact on food production by the CSG industry should be taken into account.

It is likely that there will now be further loss of jobs in agriculture and further loss of production in that sector following the recent announcement that Insurance Australia Group's rural subsidiaries will no longer provide liability coverage to farmers with "unconventional gas" operations on their properties. Farmers are greatly concerned that they won't be covered for groundwater contamination and fear they may have to cease farming. Even now insurance is inadequate to cover risks posed by the CSG industry and the industry is under no legal obligation to compensate farmers.⁴

Another study examined the impact of the CSG industry on employment in Chinchilla in Queensland where the industry has been operating for some time. The University of Queensland study found that during the CSG construction period unemployment decreased in Chinchilla but at the end of that period there have been many more people looking for work and unemployment was expected to increase further in the near future. Similarly with income: incomes increased during the construction period but declined once operations began. Spending in town increased during the construction period but slowed during the operation period with some businesses closing down.

Some negative social consequence were also noted during the construction period, some of which related to a transient population.⁵

It is hard to see how the Narrabri project can differ significantly. It is most unlikely to provide a long term employment or economic boost to the region.

The issue of workplace safety is also a major priority for our organisation.

The Pilliga forest is very fire-prone and has experienced many fires over the years. In 1997 a major fire burned nearly 1,435 sq kilometres of forest. Following a dry winter and spring in 2006 a number of large fires developed, one of which burned 740 sq kilometres in just the first day. The Warrumbungles National Park adjoining the Pilliga forest experienced a catastrophic fire event in 2013. A fire in the Pilliga 2018 burnt out 580 sq kilometres. Global warming has delivered higher temperatures and years of drought and the forest has suffered major drying out of vegetation, adding to its flammability.⁶ The fact that ever-worsening fire conditions, and the possibility of catastrophic fire days, will only increase over time is now widely accepted.

Local residents are accustomed to complete fire bans but it is extraordinary in the extreme that CSG companies are allowed an exemption from such bans and continue to flare gas – even in catastrophic fire conditions. There are already about 30 exploratory wells with flares in the area, a small gas power station, pipelines and other gas infrastructure in the forest. Yet Santos proposes to build 850 wells with accompanying infrastructure. That means 850 flares spread throughout the forest.⁷

Peter Brookhouse is a volunteer firefighter with over 30 years experience and has worked on bushfire planning and prediction. He explained that debris could be blown through a flare and could ignite. He said “in extreme conditions under worst case scenario, within two hours you’d have fire running through those gasfields.”

He pointed out that “...fires in the area can be so fast and ferocious that in some weather conditions the project site would need to be evacuated, since if a fire did start there would likely not be enough time to evacuate workers.”⁸

We simply cannot assume that these extreme conditions will not occur and if they did that workers could be evacuated in time. The 2019-20 fire season was a taste of what is likely to come, if not much worse.

The very real risk to the lives of the Santos workers as well as those of the fire fighters and Narrabri residents seems to have been irresponsibly trivialised when the EIS rated the bush fire risk as ‘moderate’. The Santos bush fire management plan was described by the NSW Rural Fire Service in a 2017 submission as “short on detail”. Yet it has been given the Department of Planning’s stamp of approval. Fire fighters will be expected to put themselves in enormous danger trying to protect the gas field spanning such a large area in order to prevent this catastrophe from occurring. Santos also seems to have given no consideration as to how a fire which has ignited the gas field will ever be extinguished. Such an outcome would also bring with it loss of community infrastructure, property and commercial livelihoods, including agriculture. Surely with what is at stake, a very cautionary approach is called for.

Pilliga forest itself, although dismissed by Santos in a document produced for a pre-hearing meeting with the Independent Planning Commissioners as “largely dry scrub land that is currently used for industry like timber harvesting”⁹ has been described elsewhere as “a veritable Noah’s ark of

endangered species”,¹⁰ It will experience devastating impacts if this project proceeds, even without a flare-induced fire, once the forest is cleared for roadways, 850 well heads, pipelines and other infrastructure. A 10-day survey by Landmark Ecological Services found more than twice the number of key animal species in the project area than did Santos’ consultants in a four year period - putting the conclusions of Santos’ EIS into considerable doubt.¹¹ In the intervening period the forest has suffered severe drought, the drying out of vegetation, severe fires and species extinction. Late last year Rachael Nolan a researcher for the Hawkesbury Institute for the Environment found highly stressed trees that had shed their entire canopy and had started to re-sprout as if they had been burnt but even the new shoots were starting to die.¹² The NSW Office of Environment and Heritage lists 136 animal and plant threatened species in the Pilliga.¹³ It is a sad fact that a once thriving koala colony in the Pilliga has become extinct over the last decade due to the deteriorating climate induced forest conditions. By 2019 the NSW Parliamentary enquiry into koala populations and habitat was told that no Pilliga koalas could be found.¹⁴ This surely should be a wake-up call to protect the remaining threatened species residing in the Pilliga and not allow the destruction of any more of their habitat.

The other major consideration which should have prevented the project from reaching this stage is water. Santos plans to drill into the Great Artesian Basin (GOB) - most importantly into the areas that provide groundwater recharge to the GOB. The GOB has been described as one of the seven hydrogeological wonders of the world.¹⁵ It supports a diverse set of ground-water dependent ecosystems, in addition to thousands of farmers for which it is their only source of water.

The International Association of Hydrogeologists Australia describe the importance of the GOB’s system of springs:

“The hydrogeology of the Basin supports the world famous GAB Springs. There are more than 600 springs and spring groups mostly around the northern and western margins of the Basin where the water bearing aquifers and aquatards are nearer the surface. These springs range in size from small soaks to spring complexes with large pools and hundreds of individually flowing vents. Some springs provide base flows to rivers during the dry season. Natural discharge from the Basin through springs supports natural communities containing a wide variety of endemic species in isolated water dependent ecosystems surrounded by an otherwise largely waterless landscape.”¹⁶

A Water Advisory Consultant outlines the dangers of water extractions from the GOB:

“The greatest challenge in the management of the GAB is the maintenance of pressure to supply the GAB springs. Small changes in pressure near springs can cause springs to cease to flow or change flow patterns resulting in immediate or subtle changes to plant and animal populations that result in local extinctions of populations and ultimately species. These pressure changes can occur as a result of water extractions near the springs or as a result of decreases in potentiometric head caused by large water extractions from bores many kilometres from the springs.”¹⁷

As Santos has already several exploratory wells in the area, their presence may have already contributed to the population decline in the forest as noted above. With 850 wells it would be hard to believe that such interruption to springs would not occur.

Brian Stevens, a consultant geologist, further explains some of the inherent dangers associated with CSG activity and the lack of supporting information accompanying the proposal.

“Problems can occur through connectivity between the coal measures and the overlying aquifers (Pilliga Sandstone and alluvium). Anything that permits mixing of contained waters will degrade the water in the aquifers. That could conceivably occur through leakage around drill holes, by

opening of geological joints or by contamination from stored coal seam water at surface. Leakage around drill holes could include coal seam water or methane gas being introduced into the Pilliga Sandstone. Storage and disposal of coal seam water at surface is a major concern. We would need to know if the coal seam water will be treated by reverse osmosis to make it non-toxic? If so what will happen to the resultant brine? There is always the possibility of floods carrying the brine into the river system or into groundwater. Water in coal seams and probably in the whole coal measures section is typically saline and probably acidic and not much use for agriculture.

There is the possibility of the depressurisation of the coal seams leading to depressurisation of the Pilliga Sandstone. There is mention of springs and these rely on pressure in the sandstone. If there is connection between the Pilliga Sandstone and the coal seams, pulling water out of the coal seams could result in draw-down from the Pilliga Sandstone. In the report there are statements that no connectivity exists, or will exist after drilling and production. But there is no evidence provided.”¹⁸

The Department approved the project based on Santos’ reassurance in its EIS that it would have “minimal and manageable risk to the environment.”¹⁹ However, given what is at stake here, Santos’ ‘trust us’ assurance is nowhere good enough.

The direct impact on farming communities in Queensland’s Surat basin where CSG extraction has been occurring for several years should be considered as relevant to this enquiry. A Queensland government 2019 study, *Underground Water Impact Report for the Surat Cumulative Management Area*, looked at the impact of drawdown on bores as the CSG industry expanded in the area. The study estimated 574 bores would be drained after 2021.²⁰ In areas plagued by drought this loss of irrigation water is already having - and increasingly will have - a devastating impact on farming communities and the local economies which rely on them. The Narrabri region faces a similar outlook.

The Department’s approval of this application seems to rely on several ‘trust us’ assurances from Santos. As well as the very real possibility of groundwater contamination addressed above, the insurance problem faced by farmers, especially after recent insurance company pull outs, remains unresolved as does the disposal of 840,000 tonnes of salt waste which has no specified solution provided by Santos, just suggested possibilities. Safe disposal of such vast quantities of salt is a major unresolved problem for the industry as a whole and poses a constant threat to ground water, adjoining farmland and forest during flooding.

Santos’ past record on the first stage of this project should ring alarm bells as to whether they should indeed be trusted. They have had a series of spills, leaks and breaches. In 2011 a large spill, not reported at the time, destroyed approximately 2 hectares of vegetation. In 2012 the Environmental Protection Authority issued Santos with two fines for two separate discharges of polluted waste water into a local waterway. Santos was prosecuted in 2013 for sixteen spills of contaminated water from about 30 test wells on the Narrabri site and for failure to report them as required. The environmental damage was not known because records were not kept. In February 2014 Santos was found to have contaminated an aquifer with uranium at levels 20 times higher than is safe for drinking water. Then in March of that year it was fined again over the release of 500 litres of contaminated water.^{21 22 23}

Questions need to be raised as to how this project reached this current stage. Regulations should have been in place that would provide some measure of safety to CSG operations. In addition, it should be expected that projects requiring extra environmental oversight that do not meet the necessary requirements, would not get approval.

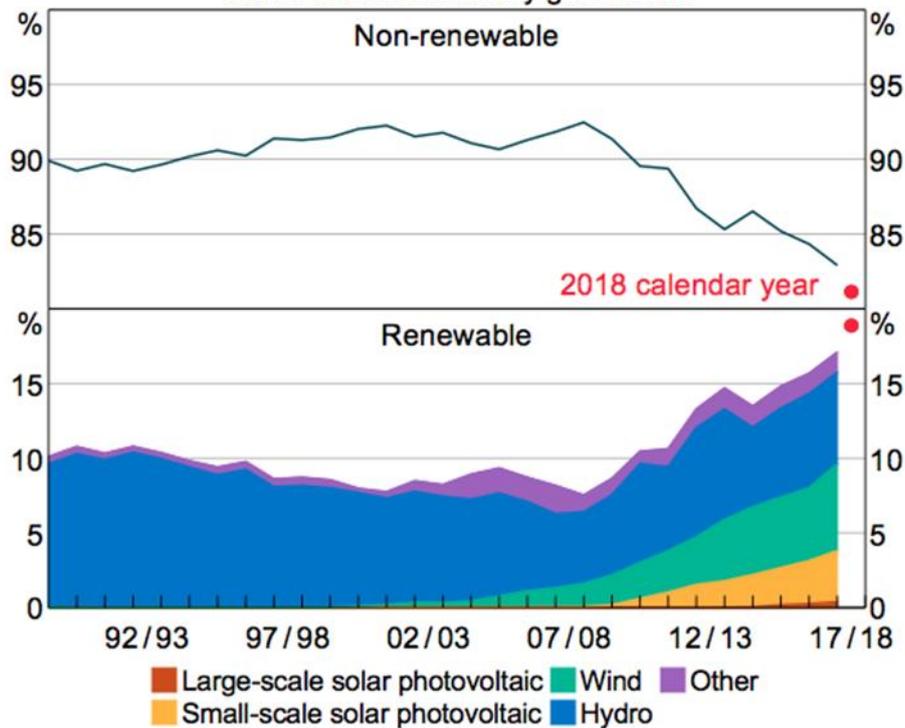
However, we have learned in recent weeks that 14 of the 16 recommendations from the Chief Scientist's 2014 report which would have imposed stricter regulations on the industry and protections for the environment and farming community have not been implemented.²⁴ The Department's report giving approval to the project notes that the NSW government has "introduced" these regulatory controls.²⁵ It doesn't mention that they have not been implemented five years after agreeing to do so.

Then in June we learn from a report by the Auditor General that projects referred to the Environment Department under the Environmental Protection, Biodiversity and Conservation Act were getting the stamp of approval from the federal body without merit. The report found that a full 79 per cent of approvals were non-compliant. The Narrabri project falls under this act due to its potential to impact threatened species and ecological communities, a water resource and Commonwealth land.²⁶

Clearly no approvals of CSG projects should be granted until all the Chief Scientists' recommendations have been fully implemented and a systematic review of the federal Environment Department is conducted and systems put in place to ensure that the department performs the function it was intended to.

Another important question that should be raised is why this project is being considered at all when it is clearly not financially viable now, let alone into the future. Santos anticipates earning \$8.70 per gigajoule for the gas produced from Narrabri²⁷ While they anticipate that the project will still be viable with price falls up to 30%, they do not envisage price falls any greater than this. Yet prices have been falling steeply during the last year and are already well below 50% of this break-even price. Clearly if this project is to proceed, it will require a heavy government subsidy. Surely investment in this outdated, polluting industry cannot be justified when the market has spoken on investment in future power generation. See graph below from a recent Reserve Bank of Australia Bulletin.

Graph 1
Australian Electricity Generation by Fuel Type
 Share of total electricity generation



Source: Department of the Environment and Energy

Graph provided by the Reserve Bank of Australia²⁸

In conclusion we find that this project has very little to recommend it on employment and economic grounds certainly after the construction phase is over and in fact has more negative consequences for other sectors of the economy. From the perspective of worker safety, we believe workers and fire fighters face enormous risks during the ever lengthening fire season due to the inherent danger of exposed flames in a gas field. Given that there is so little to gain from this project proceeding when safer, environmentally friendly, job creating options are currently available coupled with its current absence of economic viability, we simply cannot understand how the project has got to this point especially given the dire consequences for water and the ecology of the area that could arise from this project proceeding.

¹Australian Bureau of Statistics, Australian Industry 2018-19, Cat. No. 8155ODO002-201819

²New South Wales Department of Planning, Industry and Environment, Narrabri Gas Project, State Significant Development, June 2020, p. 22

³Fleming, D.A. and Measham, T.G., “Local Economic Impacts of an unconventional energy boom: the coal seam gas industry in Australia”, Australian Journal of Agricultural and Resource Economics, Vol. 59, Issue 1, 29 February, 2014

⁴Roberts, G., “Australian farmers’ insurance coverage to be pulled if CSG infrastructure is on properties”, ABC News, 10 October, 2020, <https://www.abc.net.au/news/2020-06-10/coal-seam-gas-farmers-queensland-insurance-pull-out-iag/12337156>

⁵Witt, K. Elias, S. and Hodson, A., Annual Report: Chinchilla: Social and Economic Changes in Queensland’s Gasfield Communities in 2018/19, University of Queensland, 10 June, 2019

⁶Vass, R., Adding Fuel to the Pilliga Forest Fire, Independent Australia, 5 February, 2018; “Bush Fire burns at Pilliga Forest between Coonabarabran and Narrabri”, Moree Champion, 20 January, 2018

⁷Vass, R. *ibid.*

⁸Slezac, M., “Narrabri Gas Project Unacceptable Fire Fighters Say,” *The Guardian*, 21 March 2018.

⁹Santos, Narrabri Gas Project, Pre-Hearing Meeting, Independent Planning Commission

¹⁰Naomi Hodgson quoted in L. Barker, “Santos ‘ignores Pilliga wildlife in CSG plans’”, *Independent Australia*, 8 December, 2015

¹¹L. Barker, “Santos ‘ignores Pilliga wildlife in CSG plans’”, *Independent Australia*, 31 July, 2018

¹²Hannam, P. *Sydney Morning Herald*, 14 September, 2019 <https://www.smh.com.au/environment/climate-change/an-ill-wind-fans-the-flames-20190912-p52qir.html>

¹³Office of Environment and Heritage, Threatened Species found in the Pilliga IBR Sub-region, NSW Government, <https://www.environment.nsw.gov.au/threatenedspeciesapp/cmaSearchResults.aspx?SubCmaId=260>

¹⁴Legislative Council, Portfolio Committee No. 7, Koala Populations and Habitat in New South Wales, Report 3, 2020, NSW Government, p. 30.

¹⁵International Association of Hydrogeologists, Seven Wonders of the Hydrogeological World in Australia, 2020, <https://www.iah.org.au/resources/38872-2/>

¹⁶*ibid*

¹⁷Brake, L., Water Advisory Consultant, South Australia Arid Lands Natural Resources Board in *ibid.*

¹⁸Stevens, B., private consultation with, 29/5/20.

¹⁹Santos, Environmental Impact Statement submitted 1 February, 2017

²⁰Queensland Government, Department of Natural Resources, Mines and Energy, Office of Groundwater Impact Assessment, Underground Water Impact Report for the Surat Cumulative Management Area, July 2019

²¹Milman, O., Santos investigated over another ‘toxic’ water spill at coal seam gas plant, *The Guardian*, 28 March 2014

²²Cubby, B., Pilliga contamination: Santos to be prosecuted, *Sydney Morning Herald*, 13 June, 2013 <https://www.smh.com.au/environment/weather/pilliga-contamination-santos-to-be-prosecuted-20130613-2o5rq.html>

²³Validakis, V., Santos fined \$52,000 for CSG water spill, *Australian Mining*, 10 January 2014

²⁴Davies, A., Scathing report into NSW coal seam gas could create new hurdles for Santos Narrabri project, *The Guardian*, 27 February, 2020

²⁵New South Wales Department of Planning, Industry and Environment, Narrabri Gas Project, State Significant Development, June 2020, p. ix

²⁶Santos, About Environmental Approvals, 2020, <https://narrabrigasproject.com.au/about/environment/>

²⁷G.H.D. (2016), Narrabri Gas Project – Environmental Impact Statement Economic Assessment, Appendix U1, Cost Benefit Analysis, Report for Santos Ltd., August 2016, Table 4-3, p. 19.

²⁸In Reserve Bank of Australia, March 2020 Bulletin, *Australian Economy, Renewable Energy Investment in Australia* <https://www.rba.gov.au/publications/bulletin/2020/mar/renewable-energy-investment-in-australia.html>