



**Friends of
the Earth
Australia**

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MOBILISE – RESIST – TRANSFORM

Objection: Narrabri Gas project

Friends of the Earth Australia is a national, membership based environmental organisation which was established in 1974. We appreciate the opportunity to make a submission to the Independent Planning Commission about the Narrabri Gas Project.

Santos plans to develop 850 new gas wells over four phases across 95,000 hectares in the north eastern part of the Billiga/Pilliga Forest near Narrabri, clearing close to 1,000 hectares of the forest in small patches and connecting lines in the process. This will have a profound negative impact on the region, and fragment remaining forests and indigenous vegetation, and these impacts will last for many years after the project is completed and gas wells are closed. The sheer scale, and obvious impacts of, this project represents a major test for the Independent Planning Commission (IPC): **supporting it would represent a failure to act in the long term interests of the landscape, people, and local economy of the region.**

The Commission is already aware that this project is highly controversial and has struggled to achieve any form of social license to proceed. For instance, 22,721 submissions were made to the Environmental Impact Statement, of which 98% were objections. The majority (63%) of the 470 submissions from the immediate local area were also objections.

Our specific concerns include the following:

Climate change

Unchecked climate change poses an existential threat to human life and natural ecosystems on our planet. Climate science makes it abundantly clear that if we are to have a hope of holding average

global warming under 1.5°C we must keep the vast majority of coal, oil and gas reserves in the ground.

For instance, the United Nations Environment Program's Production Gap Report in 2019¹ found that, "with average lifetimes of 20 years or longer for pipelines, terminals, wells, and platforms, the time to begin planning for a wind-down of gas production is, as with other fossil fuels, already upon us."

The report found that to achieve the Paris Climate Agreement goal of keeping average global warming well below 2°C, global gas production needs to peak by 2030 and decline after that. To meet the safer 1.5°C warming limit, gas production needs to peak this year.

Clearly, if a government wants to act in line with its international obligations, the time to approve new fossil fuel projects is over. Australia is struggling to meet its commitments under the Paris Climate Agreement, thus it is essential that the state governments step up their level of action to reduce greenhouse gas emissions.

Thanks to ongoing developments in renewable energy, energy efficiency and storage, we are now at a point where we simply don't need new natural gas developments. Unconventional gas is an especially dirty form of gas and should be phased out as soon as possible.

Total greenhouse gas emissions produced by this project could be 127.8 million tonnes of carbon dioxide equivalent, or 5 million tonnes a year. The proposed Narrabri Gas Project would increase Australia's greenhouse gas (GHG) emissions by nearly 1% per year.

Each year it becomes more evident that capped gas wells are continuing to release methane into the atmosphere. The CSIRO² acknowledge that there is limited literature on gas well integrity post-abandonment and what evidence is out there indicates "some proportion of wells may leak methane." This is despite the claims of industry.

Sadly, the Department describes this addition of GHG to the atmosphere as "driving down NSW GHG emissions and working towards a low carbon future." This 'gas as a transition fuel' argument is outdated because of the developments in renewable energy technology mentioned above. 'Transition' now means transition from fossil fuels (oil, coal and gas) to renewables, storage and efficiency.

This proposal should be halted on climate considerations alone.

¹ <https://wedocs.unep.org/bitstream/handle/20.500.11822/30822/PGR19.pdf> (accessed 17 July 2020)

² <https://gisera.csiro.au/wp-content/uploads/2018/08/Social-9-Final-Report.pdf> (accessed 17 July 2020)

Water

There is still limited knowledge about groundwater in the region. It appears that Santos has used the most basic level of groundwater use because of how little is known about the deep aquifers they will dewater to extract gas.

According to the proposal, Santos will remove 37.5 billion litres of water from under the Billiga/Pilliga Forest over a 20 year period. Removing this water will cause depressurisation and loss of water in the Pilliga Sandstone, the southern recharge point of the Great Artesian Basin, which outcrops in the Billiga/Pilliga Forest.

The Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC)³ notes the risk of depressurisation and drawdown in aquifers potentially affecting agricultural groundwater users as well as groundwater dependent ecosystems. The IESC describes Santos groundwater impact modelling as having “limitations” which “introduce a level of uncertainty with the model outputs.” This means that Santos are not able to provide output at the scale and accuracy to assess the project’s impacts against the minimal impact considerations of the NSW Aquifer Interference Policy.

In agricultural areas, water is life. It is remarkable that a company feels it has the right to impact on the Great Artesian Basin (GAB) in this way. Given the amount of the continent that relies on the GAB for water, medium to long term the impacts of this scale of dewatering (and the potential for contamination) could potentially impact enormous areas of Australia. It is not clear how much deep aquifer dewatering for coal seam gas will disrupt recharge of the Lower Namoi Alluvium. It is not clear whether the presence of faults might accelerate movement of water or methane after drilling activity.

Waste

Unconventional gas drilling produces large volumes of waste water, which must be contained and treated. This project will result in up to 840,000 tonnes of solid salt waste, potentially contaminated with heavy metals, which will need to be disposed of.

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<http://www.iesc.environment.gov.au/system/files/resources/1849e5a1-01ed-4673-b351-be94b1df1e88/files/iesc-advice-narrabri-2017-086.pdf> (accessed 17 July 2020)

While Santos and the EPA claim this salt will be non-hazardous, it will have elements of any heavy metals which are trapped in the coal seam water that is removed. Santos will also need to find disposal area for 720,000 cubic metres of coal-based drill cuttings.

There remain questions about how all this waste will be managed. Simple application of the precautionary principle should rule out any approval of the gasfield without Santos providing a full strategy for reuse or disposal of this waste.

Chemical use

A range of chemicals are used in the production of unconventional gas. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS) conducted a National assessment of chemicals associated with coal seam gas extraction in Australia which found that

- 48 of 113 chemicals used in coal seam gas operations could harm the health of workers in the industry.
- 11 of 21 chemicals used for drilling were of a potential concern for public health following a bulk spill during transport.

In NICNAS' survey of companies in the CSG industry eight years ago companies reported 10 incidents of unintentional release of CSG chemicals including many of the types of incidents that the assessment found can be harmful to the health of CSG workers and the broader public. In some of these reported spills and incidents, the chemicals could not be recovered.

There have already been more than 20 leaks and spills from coal seam gas exploration activity in the Pilliga. At the headwaters of the ancient groundwater of the Great Artesian Basin, we can't accept the risk of chemical or salt leakage, accidents and spills.

Social impacts

Coal seam gas struggles to gain social license to operate because of its negative impacts on local communities and the potential for negative economic impacts (decline of property value, contamination of ground water, etc). Almost without exception, the industry has been strongly opposed by communities across Australia when it is proposed in a new area.

While gas drilling brings short term economic activity, often the benefit of the boom is not shared evenly in communities. Even Santos' own assessment found that there would be "almost certain" impacts on housing affordability for Narrabri residents, which will disproportionately affect low-income households and Indigenous people, who are far more likely to be renters.

In Queensland, where the industry has been entrenched for the most time, it is worth considering community attitudes to gas drilling. To take one example, in southern Queensland, a CSIRO survey in 2014⁴ found that only 6% of local people living in gasfield areas thought that the industry has improved their lives. In comparison, 42% said that they were “not coping” or “only just coping” with the changes the industry has made to their lives.

Aboriginal cultural heritage

The Billiga/Pilliga Forest is a hugely significant landscape for Gomeroi people. Santos' Aboriginal cultural heritage assessment identified 90 known Aboriginal cultural heritage sites in the area, as well as areas of potential cultural heritage sensitivity, which the company has committed to avoiding when it situates its drill pads and infrastructure, but this is based only on already-known areas.

No detailed new surveying of the area for Aboriginal cultural heritage has taken place yet.

Santos proposed to undertake detailed surveys after it gets approval and avoid newly found sites of high significance, but this is a highly risky strategy and once granted, the approval will not be able to be revoked.

Biodiversity

The Pilliga is the largest temperate woodland in eastern Australia and Santos proposes to industrialise 95,000 hectares of it, clearing close to a 1,000 hectares in small patches and connecting lines, including removal of several endangered ecological communities. This will lead to further significant fragmentation of this ecologically significant community.

Only limited surveys were done for the assessment of the gasfield, but these found 10 threatened plants and 35 threatened animals in the gasfield area, including pygmy possums, koalas and the Pilliga mouse.

Fire risk

There is no doubt that climate change is already making fire seasons longer and more intense. The Rural Fire Service (RFS) has repeatedly expressed serious concerns about the operation of a gasfield and the use of gas flaring in a highly flammable landscape like the Billiga/Pilliga Forest.

⁴ <https://gisera.csiro.au/wp-content/uploads/2018/12/GISERA-Social-10-Final-Report.pdf> (accessed 17 July 2020)

The assessment estimated the likelihood of a loss of containment in the gasfield creating a fire in the Billiga/Pilliga Forest was once in 70 years. That equates to a 35% chance during the life of the gasfield, or a 1.4% chance that this will happen in any year. Companies will always argue that their technology is safe, or that risks can be managed. However, fires do, and have, happened as a result of gas drilling, as happened during gas flaring in Seaspray in Victoria.

Economic impacts

The Department claims Narrabri Gas Project will bring “additional supplies” of gas, but the assessment material provided by Santos makes it clear that “it was assumed that the project did not add to total gas supply at a national level.”

Furthermore, Santos clarifies, “it was assumed that the project itself did not drive change to gas market prices.”

Claims of job creation are crucial to the project’s justification, with an anticipated average of 190 jobs created locally and 322 in the rest of the state, but this increase comes at other industries’ expense. The economic assessment found that there would be lost employment in agriculture, manufacturing and mining as a result of the project.

Summary

Given the obvious climate and biodiversity impacts of this project, the high probability of impacts on ground water and potential for chemical contamination, likely impacts on as yet unrecorded Indigenous sites, and limited economic benefits, we cannot see why this project should be approved.