

SANTOS NARRABRI/PILLIGA COAL SEAM GAS PROJECT
BRIEFING PAPER
APRIL 2022

‘Everything toxic about Australian climate inaction [is] contained with the Narrabri Gas Project’¹



1. What is the Santos Pilliga/Narrabri Project?

The Pilliga Forest, in northwest NSW, is the largest inland forest in eastern Australia. Home to the Gomeroi (Gamilaraay) people, the forest is an important recharge zone for the Great Artesian Basin; it acts as a massive filtration system for water to recharge one of the largest freshwater resources on earth.²

In 2011, fossil fuel giant Santos proposed building 850 unconventional coal seam gas well pads and associated infrastructure across a 95,000 hectare site in the Pilliga Forest, the largest project ever proposed in NSW.³

In 2017, the NSW Department of the Environment requested feedback on Santos' Environmental Impact Statement. More than 23,000 individuals and organisations responded, the most of any project in NSW history; 98% of respondents strongly opposed the project. In spite of this outcry, in 2020 the project proceeded to the Independent Planning Commission. Opposition to the project was so strong the IPC had to schedule an unprecedented *seven days* of hearings; over 400 people spoke before the Commission, with additional written submissions, which generated the largest array of scientific evidence ever submitted against a fossil fuel project in NSW.⁴

¹Journalist Ketan Joshi, 2020. See: <https://medium.com/lobbywatch/everything-toxic-about-australian-climate-inaction-contained-with-the-narrabri-gas-project-41c3860c48ae>

² <https://www.awe.gov.au/water/policy/national/great-artesian-basin>.

³ 'Unconventional' refers to the means of drilling the gas. 'The extraction of unconventional gas typically requires more wells and more access roads and pipelines. This means more land is needed than for conventional gas developments. Significant volumes of water are also produced through the CSG extraction process. This water contains salts and other contaminants that need to be treated at the surface and used or disposed of appropriately.'

https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook45p/UnconventionalGas.

⁴ To see the extent of scientific opposition to the gas project, see: <https://www.ipcn.nsw.gov.au/projects/2020/03/narrabri-gas-project>.

In Sept 2020, the IPC approved the project. A group of local farmers appealed this decision through judicial review,⁵ but the Land and Environment Court found in favour of the IPC and Santos in Oct 2021.⁶

Santos has already constructed more than 70 ‘exploration’ wells in the Pilliga, 50 of which are within State Forests.⁷ The company has already been fined for contaminating an aquifer in the Pilliga with uranium and heavy metals, and for a 10,000 litre toxic waste spill that caused a ‘dead zone’ in the forest that they have still not been able to remediate, in spite of repeated attempts to get plants to grow in the area affected by the spill.⁸



Toxic wastewater spill and tree dieback.

<https://www.flickr.com/photos/lockthegatealliance/14048152608/in/album-72157644814078323/>.

⁵ Current environmental law prohibits appeals based on the merits of a planning decision. See <https://epbcactreview.environment.gov.au/resources/final-report> for more information on essential judicial reform needed to Australia’s environmental laws.

⁶ See <https://www.afr.com/companies/energy/the-battle-over-narrabri-gas-explained-20200923-p55yid> for a timeline.

⁷ See e.g. <https://commonground.nsw.gov.au/#/> for maps of mining activity across the state. Map <https://commonground.nsw.gov.au/#!/title-map/Petroleum%20and%20Gas/Show%20All%20Stages/Satellite%3Fz=10&lat=-30.56285220344179&lng=149.60014343261722?z=9&lat=-30.510216587229984&lng=149.38659667968753> shows coal seam gas wells in the Pilliga, including those that were originally built by an earlier mining company, Eastern Star, which has been acquired by Santos.

⁸ <https://www.theguardian.com/world/2014/mar/08/santos-fined-coal-seam-gas-contaminates-aquifer-uranium>.

2. What are some of the problems/issues with the Narrabri gas project?⁹

- a. **Wasting/polluting precious water from the Great Artesian Basin.** Up to 37.5 billion litres of water from the coal seams will be extracted from the Great Artesian Basin over the life of the project, averaging around 4 ML a day.¹⁰ This will draw down the water table, and greatly reduce farmers' access to clean, essential water.
- a. Once this water comes to the surface, the mining process contaminates it with salt and heavy metals. The project will generate up to 840,000 tonnes of toxic waste salts, for which the company *still does not have a disposal plan*.¹¹
- b. **CSG is not a clean transition fuel.**
- a. The CO₂ content of the gas is significantly higher than Santos claimed in their EIS. They also grossly underestimated fugitive methane emissions that leak from the wells, which means total greenhouse gas emissions from the project *rival that of coal*.¹²
 - b. The Narrabri gasfield would *add* about 5 million tonnes of greenhouse gas emissions annually to Australia and New South Wales' direct emissions at a time when Australia needs to achieve about 7.5 million tonnes emissions *reduction* every year to meet its 2030 goal.¹³
 - c. Much of this greenhouse gas is in the form of methane, which is 80 times more potent at warming the atmosphere than carbon dioxide, just at the time the global community has agreed on the need to drastically cut methane emissions to limit global warming.¹⁴
- c. **Renewable energy would create far more jobs than the Narrabri gas project.**
- a. Santos admits that construction of the gasfields might bring 1300 jobs, but only 100-200 full-time jobs would remain once the project is running¹⁵. Any gains in jobs would be more than offset by job losses in other industries, particularly agriculture.^{16, 17}
 - b. A recent UTS report found that the Narrabri region has a stable and sustainable future in renewable energy development, which can coexist with the region's

⁹ For an outline of the many issues involved in this project, see: <https://nwprotectionadvocacy.com/narrabri-gas/ngp-about/>.

¹⁰ See e.g., <https://www.lockthegate.org.au/bribery-and-betrayal-nsw-gas-deal-could-drain-groundwater-and-worsen-climate-change>.

¹¹ ¹¹ <https://independentaustralia.net/business/business-display/still-no-solution-for-santos-toxic-waste,14155>.

¹² https://nwprotectionadvocacy.com/wp-content/uploads/2020/03/NARRABRI-GAS-PROJECT-GHG-claims-refuted-April-2020_web.pdf

¹³ <https://www.climatecouncil.org.au/resources/path-zero-how-nsw-can-kick-the-gas-habit/>

¹⁴ <https://www.theguardian.com/environment/2021/sep/17/us-and-eu-pledge-30-cut-in-methane-emissions-to-limit-global-heating>.

¹⁵ <https://narrabrigasproject.com.au/uploads/2018/02/FACT-SHEET-EIS-Website.pdf>

¹⁶ Fleming, D & Measham, T (2015a) "Local economic impacts of an unconventional energy boom; The coal seam gas industry in Australia", *The Australian Journal of Agricultural and Resource Economics* 59(1) pp 78-94. <http://onlinelibrary.wiley.com/doi/10.1111/1467-8489.12043/full>

¹⁷ Studies from Queensland, which has extensive CSG development, indicate that job gains have been uneven at best and frequently show job losses after CSG construction is complete: https://www.industry.gov.au/sites/default/files/June%202018/document/pdf/review_of_the_socioeconomic_impacts_of_coal_seam_gas_in_queensland.pdf?acsf_files_redirect.

rural industries. Solar and wind could provide *hundreds or thousands of jobs*, use *no* water and far less land, and employ locals (not FIFO workers), while exporting energy to the grid.¹⁸

d. Narrabri project will NOT provide cheaper energy

- a. A Pegasus Economics report on the Santos project notes:
 - i. Santos *caused* the gas price crisis when it built two gas processing trains at its Gladstone export terminal when it only had enough gas to fully support one. To meet this shortfall, Santos has diverted substantial volumes of gas from domestic users to satisfy their export contracts.
 - ii. Santos wrongly claimed in its EIS that its Queensland export terminal would not impact Australia's domestic gas supply or price, when it has in fact driven the gas crisis.¹⁹
- b. IEEFA financial analysis found that Narrabri gas will be so expensive to produce and move, that it will raise energy costs, not lower them.²⁰
- c. Although Santos says it will sell the gas domestically, there is still no guarantee any gas produced will be sold in Australia; *rising international prices may ship the resulting gas offshore*; researchers also find that *domestic prices follow international prices*.
 - i. Santos admits that its gas developments are intended for the export market.²¹
- d. As global fossil fuel prices rise, the cost of renewables has remained stable, and will continue to be significantly cheaper than gas. The business case for new CSG developments in NSW does not exist, nor is there any evidence of a 'gas led recovery' from Covid. The Australia Institute recently noted that 'the gas industry effectively made no contribution to the economic recovery'.²²
- e. There is concern that the Narrabri project will only be commercially viable if extensive further CSG development occurs across north-western NSW, extending from the Pilliga into the Liverpool Plains. See Section 3 below.

e. NSW does NOT need CSG from the Pilliga.

- a. The gas due to be imported into the new Port Kembla gas terminal will render any CSG from the Pilliga obsolete.²³
- b. The Climate Council-commissioned report by energy analysts Northmore Gordon found that measures to reduce gas demand in New South Wales could cut annual demand in the state over the next 10-15 years by around 70 petajoules per year, the same amount that the Narrabri Gas Project would produce.²⁴

¹⁸ https://www.lockthegate.org.au/narrabri_renewables_report.

¹⁹ https://www.lockthegate.org.au/pegasus_economics_report_on_the_narrabri_gas.

²⁰ <https://ieefa.org/ieefa-australia-gas-and-electricity-prices-will-rise-if-narrabri-gas-fields-approved/>

²¹ <https://reneweconomy.com.au/santos-admits-australias-gas-expansion-has-always-been-about-offshore-customers/>.

²² <https://australiainstitute.org.au/report/too-little-too-late/>.

²³ <https://www.abc.net.au/news/2020-04-21/controversial-narrabri-gas-project-may-no-longer-be-necessary/12168130>.

²⁴ <https://www.climatecouncil.org.au/resources/path-zero-how-nsw-can-kick-the-gas-habit/>

- c. With the right policy support, this report shows NSW gas consumption could be reduced by around one quarter between today and 2025; by more than two-thirds as soon as 2030; and entirely eliminated by 2050.²⁵
- d. The report found: 'There is no shortage of gas anywhere in Australia, with the growing demands of a swollen gas export industry driving domestic supply issues, higher energy bills and worsening climate change...**this project will drive up greenhouse gas emissions, worsen climate change and do nothing to reduce power prices.** Now we also know the project is completely unnecessary when it comes to meeting the state's energy needs'.²⁶

f. CSG threatens biodiversity in the Pilliga.

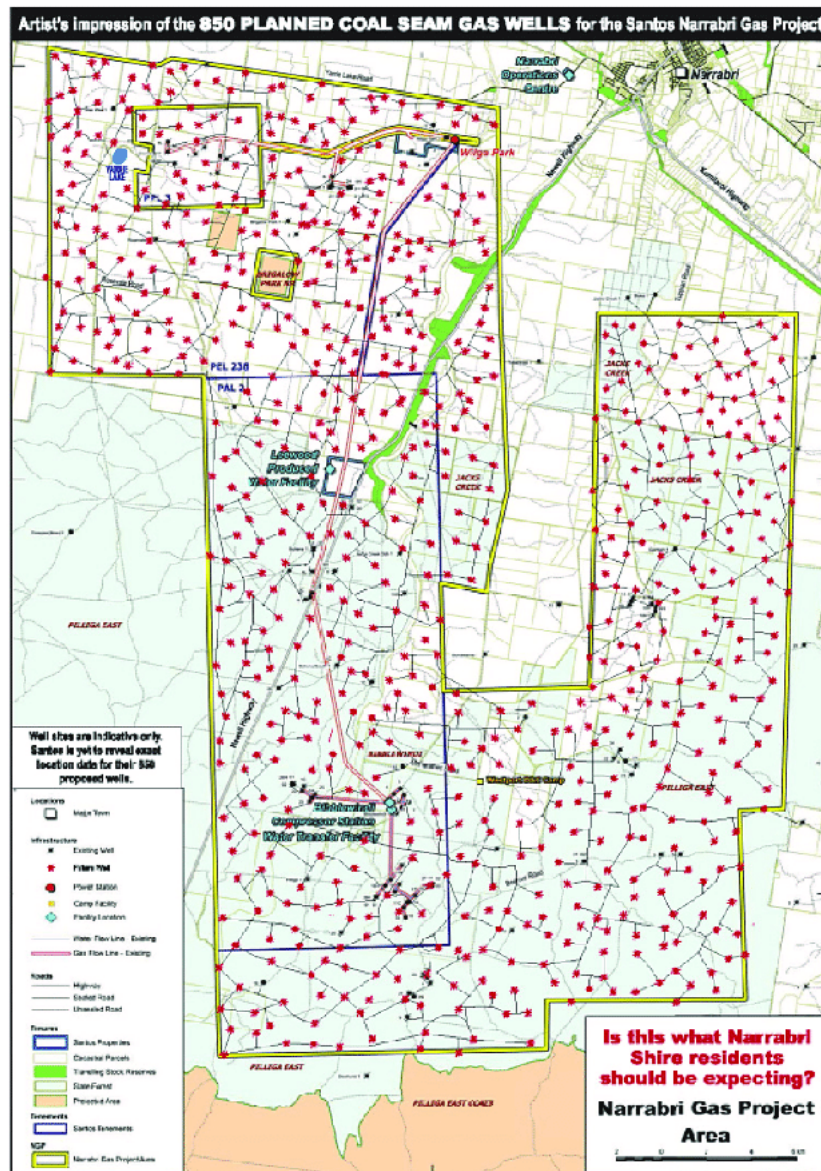
The Pilliga Forest is a National Biodiversity Hotspot and a **globally listed Key Biodiversity Area**, with over 230 recorded bird species. There are over 900 plant species with 10 threatened plant species, 27 threatened animal species, and 3 endangered ecological communities. All of these biodiversity values are at risk from the Santos project.²⁷

- a. **Forest fragmentation** is a Key Threatening Process. Santos CSG operations cause forest fragmentation from roads, well pads, pipelines and clearing for coal mine methane vents.
- b. There is increased fire risk from gas flares burning 24 hours per day, even during total fire-ban periods. They have and can continue to flare during 'catastrophic' fire rated days.
- c. Gas flares also cause light sky pollution. This has negative impacts on the behaviour and survival of some animal species, especially birds; and affects Sidings Springs Observatory astronomy and tourism, vital for Coonabarabran.

²⁵ Ibid; see also <https://www.theaustralian.com.au/business/mining-energy/cheaper-renewables-make-narrabri-gas-project-obsolete/news-story/5eb3054d09f6fa0e0e25ba7edc02c26a?btr=37a523e2f764866bba1f856077e24757>

²⁶ <https://www.climatecouncil.org.au/resources/path-zero-how-nsw-can-kick-the-gas-habit/>.

²⁷ <https://npansw.org.au/2020/08/31/the-pilliga-protect-or-plunder/>.



Artist rendering of possible Pilliga Forest fragmentation if the project proceeds.

3. What happens next

Before Santos can begin construction on the final project, they must first do the following:

- Extinguish Native Title:** On 24 March 2022 the Gomeroi people, the traditional owners of the Pilliga, voted overwhelmingly to reject an offer from Santos in exchange for their consent to proceed with the project. Because the Gomeroi people hold a 'right to negotiate' under the Native Title Act, Santos plans to go to the Native Title Tribunal in April to force an agreement. This would override Gomeroi rights to their traditional lands and extinguish their Title claims.²⁸

²⁸ See: <https://www.solidarity.net.au/highlights/gomeroi-reject-agreement-with-santos-step-up-the-fight-against-the-pilliga-coal-seam-gas-project/>.

- b. **Build a pipeline:** Before proceeding with the project, Santos must receive approval for a pipeline to move the gas to the coast. Two pipelines have been proposed: the 820-km Queensland-Hunter Gas Pipeline, and the 461-km Western Slopes Pipeline. Crossing productive farmland, both pipeline projects have been tremendously controversial and face significant opposition. According to Global Energy Monitor, these pipelines threaten NSW and Australia's climate goals, and risk becoming \$18 billion of stranded assets as renewables become increasingly less expensive than gas.²⁹

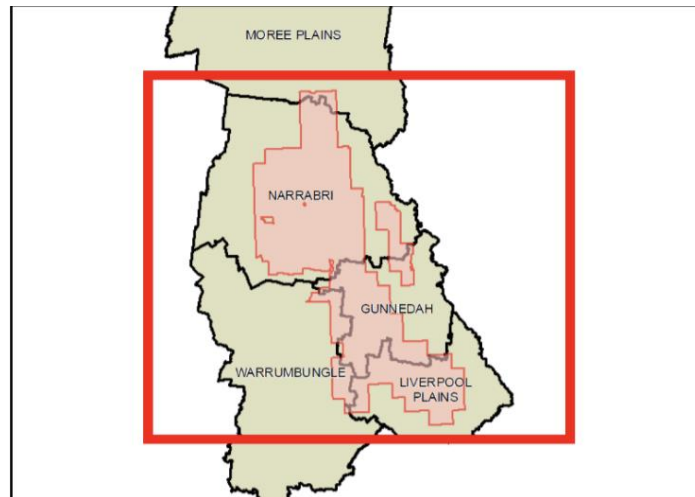


Map of existing and proposed gas pipelines in NSW.
Source: <https://gasgabtours.com/maps/proposed-pipelines/>

- c. **Reactivate 'zombie' PELs:** Although the Narrabri project has been approved, it may not be commercially viable unless Santos and partner fossil fuel companies are able to expand CSG mining across much of northwestern NSW. The NSW government is currently debating re-activating several expired Petroleum Exploration Licenses (so-called 'zombie PELs') that would allow for CSG mining across some of the most productive farmland in the nation, including the Liverpool Plains and the Gunnedah Basin. These dormant exploration licenses cover 1.2 million hectares of land. If re-activated, the PELs under consideration would allow for CSG exploration and drilling in 422,000 hectares of 'biophysical strategic agricultural land', which the government has designated as the state's most valuable farmland.³⁰

²⁹ https://globalenergymonitor.org/wp-content/uploads/2022/02/GEM_GasPipelineReport2022_r7.pdf.

³⁰ See: <https://www.northerndailyleader.com.au/story/7026805/zombie-gas-licences-could-rise-from-the-dead-deputy-premier/>.



Potential CSG development area (shaded in red) overlaid on Local Government Areas.
Source: Lock the Gate

- d. **Finalise outstanding management plans:** Santos still does not have mandatory plans in place to manage noise, biodiversity, waste (including salt disposal), and rehabilitation.³¹

4. What can the federal government do to stop this project?

- a. According to the NSW EDO, a future Environment Minister can play a *key role* in stopping this destructive project by revoking Federal approval for Santos' project.
 - 1. Approval can be revoked if any of the conditions attached to the approval are breached, including any actions by Santos that have a significant impact on a federally protected matter (including groundwater resources), or if the Santos project may impact on a protected matter that was not taken into account for the initial approval.
 - 2. There ARE currently provisions in the EPBC Act that give leeway to the Environment Minister to potentially revoke these state approvals; the EDO can advise on the specific conditions after breaches occur.
- b. Current federal environmental guidelines, spelled out in the EPBC Act, **must be reformed**. The recent Samuel review includes multiple recommendations that the government has not yet acted upon,³² while many environmental organisations recommend strengthening Australia's federal environmental laws even beyond those in the Samuel review.³³

³¹ For a discussion of the management plan conditions imposed on the project, see: <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-6456-PA-12%2120210422T201128.774%20GMT>.

³² <https://epbcactreview.environment.gov.au/resources/final-report>.

³³ See <http://www.placesyoulove.org/>.