

**I object to this project for the following reasons:**

**The Spatial Intensity of CSG extraction amplifies all risks to water, air and soils.**

It is difficult to get gas from coal seams, shale and tight sandstone - it can only be achieved through unconventional gas extraction technologies which drive spatially intensive, spreading gasfields. All forms of unconventional gas extraction require a dense network of wells, pipes, vents, compressors, holding ponds and treatment facilities. Unlike conventional gas, the productivity of these wells diminishes relatively quickly. To deal with declining productivity, more and more wells must be drilled, so that infrastructure spreads across landscapes – hence aerial photos of CSG, shale and tight gas fields show the same pattern of gas infrastructure spreading relentlessly across the land. This spatial intensity entails multiple points for contamination and leakage. It therefore amplifies all risks to water, soil, air, farming operations and communities.

**There is now a large body of evidence that shows harm from unconventional gasfields.** In 2016 Hays and Shonkoff published a review of 685 peer-reviewed papers on unconventional gasfields.<sup>1</sup> The growth of the literature has been exponential – more than 80% of these papers were published since January 2013, many after the report by the NSW Chief Scientist in 2014:

- 84% of studies on health contained findings that indicate public health hazards, elevated risks or adverse health outcomes
- 69% of studies on water contained findings that indicate potential, positive association or actual evidence of water contamination
- 87% of studies on air quality contain findings that indicate elevated air pollutant emissions and/or atmospheric concentration.

This review of evidence alone should be sufficient reason to halt the Santos Narrabri project.

**Santos has already demonstrated that they cannot prevent spills and leaks.** There have already been 20 known instances of leakage and environmental incidents, including the Bibblewindi dead zone and contamination of an aquifer with uranium. If Santos cannot prevent spills during exploration, the failure rate will grow along with the gasfield.

**Santos have no safe way to dispose of tens of thousands of tonnes of salt.** Given their high spillage rate noted above, Santos cannot be trusted to manage tens of thousands of tonnes of salt generated by their proposed wastewater treatment. There is no safe disposal plan for this salt, which is toxic for plant life.

**Northwest farming communities reject coal seam gasfields.**

A total of 101 Northwest communities have undertaken a grass-roots democracy process, visiting every house in their district to ask *“Do you want your road and lands Gasfield Free?”* To this question, a massive 96% of respondents answered YES. Having achieved this extraordinary result, these communities have expressed their resolve by declaring their districts Gasfield Free. They unequivocally reject the CSG industry. They have a right to live and farm without the threat of invasive gasfields. For this reason alone, the Narrabri project should not go ahead.

**The Santos Narrabri project is high cost and high risk.** This month, a Wood Mackenzie financial analyst has stated that Queensland’s coal seam gasfields have high costs because, unlike

---

<sup>1</sup> Hays and Shonkoff, ‘Towards an Understanding of the Environmental and Public Health Impacts of Unconventional

conventional gas, they “have to keep drilling hundreds of CSG wells each year to maintain gas supplies”.<sup>2</sup> Coal seam gas is expensive to get out of the ground, and the Narrabri CSG project has the highest costs of all. A recent report by Melbourne University’s Climate and Energy College identified that the Santos Narrabri project would cost over \$9 per gigajoule to extract and deliver.<sup>3</sup> It does not make sense to develop a gasfield whose costs are so high, the project bears massive financial risks, not to mention investor risks due to organised and determined resistance in the region.

**Gasfields and gas power are a climate risk.** The window for gas as a ‘transition fuel’ has passed.

- A Melbourne Energy Institute *The Risk of Migratory Emissions* found there is a significant risk of methane migrating to the surface as a result of coal seam dewatering and depressurisation for CSG production, and that the presence of free methane in water bores can be the direct consequence of depressurisation of the coal seams.<sup>4</sup>
- Tim Forcey’s report *Infrared Video Recording Methane Emissions in Qld CSG Fields* documents the release of methane into the atmosphere from CSG wells, vents and associated infrastructure near Chinchilla, Queensland. In addition to this Australian evidence, in the US the Four Corners region is the largest source of coal seam gas. Satellite observations have revealed a hot spot – a large volume of methane being admitted into Earth’s atmosphere from this region.<sup>5</sup> Methane is a greenhouse gas 86 times more potent than CO<sub>2</sub> over 20 years. With significant impacts already from climate disruption, we cannot afford to emit methane from large spreading gasfield. To allow it to proceed would be irresponsible and unconscionable.
- A report by the Climate Council *Pollution and Price: the Cost of Investing in Gas* shows that in Australia, old gas plants are as polluting as coal fired power stations. When the entire supply chain is considered, new gas power plants are not significantly less polluting than coal.<sup>6</sup>

**Cost-competitive renewable energy is available to provide reliable and clean energy.**

The cost of renewable energy is not just falling, it’s plummeting.<sup>7</sup> Not only this, but new technologies such as battery storage and concentrated solar thermal can stabilise the grid and provide power on demand. In this context it should be noted that the Australian Energy Market Operator revealed that during the NSW heatwave in February 2017, fossil fuel generators failed in the extreme heat.<sup>8</sup>

With renewable energy now cheaper than new gas, the Narrabri gas project makes no sense in environmental, power generation, and economic terms. To proceed would be reckless.

---

<sup>2</sup> <http://www.afr.com/business/energy/gas/queensland-lng-exporters-at-risk-in-looming-lng-wars-20170514-gw4kvx>

<sup>3</sup> [http://www.lockthegate.org.au/shortlived\\_shortfall](http://www.lockthegate.org.au/shortlived_shortfall)

<sup>4</sup> <http://tai.org.au/content/risk-migratory-methane-emissions-resulting-development-queensland-coal-seam-gas>

<sup>5</sup> [http://www.lockthegate.org.au/flir\\_camera](http://www.lockthegate.org.au/flir_camera)

<sup>6</sup> <http://www.climatecouncil.org.au/solar-report>

<sup>7</sup> Climate Council State of Solar 2016: globally and in Australia <http://www.climatecouncil.org.au/solar-report>

<sup>8</sup> <http://www.afr.com/news/politics/gas-and-coal-failures-were-behind-nsws-power-scare-aemo-20170221-guiesi>