

**Submission
No 866**

INQUIRY INTO COAL SEAM GAS

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Inquiry into Coal Seam Gas
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Introduction

As a resident of St Peters like many other locals I was astonished to discover that a mining company had a licence to explore for gas for commercial exploitation in a mixed residential and industrial area. Given that mining does not normally take place in residential precincts, we all wondered why here, and then, why us? Every step we as residents have taken to find out what was involved with coal seam gas discovery and exploitation has been marked by stonewalling by the corporations involved, misinformation, including from government, lack of consultation by all authorities and failure to provide simple, accurate information about what is proposed, what effects it would have, what its dangers and risks are, and what rights we have as residents likely to be affected by the industry. Not surprisingly this has created fear and hostility. Even if any of us thought that there might be general community utility or personal gain from this industry there would be a huge barrier to overcome before there would be community acceptance.

However what we have learnt about the industry and the people who are promoting it has reinforced all of our fears and sharpened our understanding that this is not an industry we want in our backyards or anyone else's.

Three primary points for opposing the development of the coal seam gas industry:

1. This is a fossil fuel exploitation industry which will increase carbon dioxide emissions and should not therefore be developed when our civilisation needs to reduce CO2 emissions and reduce dependency on fossil fuel-based energy supplies.
2. It is a poorly-regulated industry managing a dangerous substance with the use of additional toxic chemicals all of which have catastrophic effects if the risks are realised and things go wrong.
3. It is not an industry which is compatible with land use for farming and food production or for residential use. Given the explosive nature of methane/coal seam gas, it seems a high risk industry for co-location with other industry. However in a time of changing climate caused by global warming, preservation of food production land and water supplies from all competing use, let alone use with a high risk of land and water contamination, should be given priority by government.

Please see statements and references supporting these three points attached. I make no apology for calling on the Inquiry to find that this is not an industry which the NSW government should proceed to license or support. This is not what we need at this time.

Fossil fuel exploitation industry and carbon dioxide emissions.

The coal seam gas extraction industry has come into fashion because burning gas, even methane, is calculated as cleaner than burning coal for energy production and consequently it is touted as a "transitional" fuel for generating energy into the future until somehow, renewable sources replace it. As a strategy this seems illogical because beginning an extractive industry condemns us to a minimum of 30 years of using methane in gas installations which will compete against emerging carbon-free technologies almost certainly more expensive than burning gas. Closing down the industry when CO₂ emissions are no longer accepted at all by the public will expose governments to compensation costs.

The sense of starting an industry which still emits significant quantities of CO₂ and risks methane leakage (a worse greenhouse gas) escapes me. Given that the NSW government has promised a royalty-free holiday of 5 years to the industry I cannot see the logic of subsidising an industry which will have to close within three decades instead of providing seeding funds to renewable energy industries as a foundation for the low-carbon, industrial base of the future. Burning gas is only cleaner than burning coal, it is not a clean technology. When the emission loads of manufacturing and establishing the gas drilling machinery, and of the refining, storage and transport of the gas are added the CO₂ footprint is comparable to coal.

The safety costs of handling coal seam gas are significant, the risks of contamination by toxic chemicals are high and the effects of accidents can be catastrophic. If safety in the management of production is not a high priority then accidents not only threaten life and limb but also leaking methane into the atmosphere, which adds a greenhouse gas worse than CO₂. Yet supposedly the point of the industry is reduction of greenhouse gas emissions. I can add that hardly a day goes by without a report of a well somewhere in Queensland leaking, exploding or otherwise malfunctioning.

I want to assume that the state government accepts the science of climate change and the necessity of phasing out the fossil fuel industries but its responses to the solar energy and other renewable energy industries so far suggest that it is in the camp of the denialists. The figures from ABARE quoted by the NSW Farmers' submission (p.34 Figure 5) showing production outstripping domestic consumption by 70+% over the next 2 decades, strongly suggest that the real intention is extraction for export. This has nothing to do with providing a transitional energy source for NSW or Australia and everything to do with profits at the expense of community and indeed, global interests.

2. Regulation and management of hazards and risks.

Experience with the coal seam gas industry in Queensland and overseas warns of frequent accidents with escaping methane emissions and high risks of contamination with toxic chemicals, both those which are naturally occurring in the coal seams and those used by the extraction processes, especially the technique called "fracking". In addition the process releases significant quantities of water, contaminated by salt or the chemicals used in the extraction process, which must be carefully managed in well protected storage facilities. At the very least this suggests that gas extraction wells should not be sited anywhere in areas subject to flooding or sea surges. Queensland is experiencing the aftermath of contaminated water damage after the most severe wet season flooding on record. Given climate change is not going to be reversed quickly we can expect more severe weather events and increased dangers

of floods and sea surges and must therefore restrict the location of toxic industries to areas not at risk from such events.

The CSG industries claim that so-called directional drilling and hydraulic fracking does not cause groundwater contamination, yet methane contamination of drinking water (sourced from ground water) accompanying gas-well drilling and hydraulic fracturing has been reported in Pennsylvania (Duke 2011). The US Environmental Protection Authority from its studies has linked the techniques of fracking and directional drilling to contamination of groundwater noting especially the risks attached to old wells. This is of great concern because in the one St Peters community meeting with the company, Dart Energy, the representatives were at pains to talk only of exploration wells, not production, which implies they would close down after a period of time. What controls are there in existing regulation in NSW or anywhere for inspection and monitoring of old wells no longer in use?

The priority of mining inspection regimes is active operations, not closed wells and yet we were informed at the same meeting that exploration can involve dozens of well sites in relatively close proximity which are abandoned if production is judged not viable. In the case of the active operations, anecdotal evidence from Queensland refers to accidents occurring and not even noticed let alone reported for days at a time. How many inspectors for monitoring these very widely spread operations can we anticipate regulating this industry in this state? Clearly the Queensland mining regulators struggle to supervise the rapidly expanding industry in that state, what steps are being taken by the NSW regulators to provide for adequate monitoring and supervision of the industry the state government wants to encourage here? I support the call by the NSW Farmers in Recommendation 11:

The NSW Government immediately increase the number of enforcement and compliance staff within the Division of Mineral Resources to enable more timely responses to reported breaches of licence conditions, including those pertaining to chemicals.

Methane explodes and burns. Leaving aside the greenhouse gas and global warming impacts, whether these operations are located in industrial areas, close to residential areas, in agricultural and pastoral production areas or in the remaining parcels of uncleared bush, the hazards of explosions and fire must be adequately managed. I was living in St Peters when the Boral natural gas installation near the Sydney airport exploded and burned 20 or so years ago. There was no evacuation plan then and is still none known to residents. Before the NSW government embarks on licensing the expansion of extractive industries with known risks, a risk assessment of possible accidents and responses – disaster management plans – must be developed in consultation with the relevant communities and put into place. Given that there are schools in the area close to the proposed drill sites, this must be given priority and the disaster preparedness plan well publicised in the event of accidents before any drilling takes place.

In relation to this concern, I support the NW Farmers' call in Recommendation 29, that: *That community benchmarking be introduced as part of the planning process for regions affected by, or earmarked for, CSG development.*

Not an industry compatible with agriculture or pastoral land use

I quote from the NSW Farmers submission:

"The physical infrastructure associated with coal seam gas exploration and extraction is incompatible with modern farming practices. Farmers use a range of precision cropping techniques, including strict bio-security protocols, controlled traffic to reduce soil compaction, GPS guidance and variable seed and fertiliser rates – all of which cannot operate productively within the tight network of access roads, pipelines, signs, well heads, water treatment ponds, compressor stations and reverse osmosis units necessary for CSG extraction. Confining farming to the "holes in the spider's web" would drastically reduce the productivity and profitability of the enterprise and potentially make cropping on that land unviable. For this reason NSW Farmers submits that using current CSG practices and technology, the industry cannot co-exist with cropping. While the industry claims that the cumulative footprint of this infrastructure compares favourably to open cut mining, the real footprint is the entirety of the land which can no longer be used effectively for cropping." (p.28).

That submission goes on to point out the dangers to pastoral production from contamination by toxic chemicals or loss of safe water. Essentially they make the point that agricultural production – food production – is not compatible with this industry. One or other has to have priority. All the evidence of global warming point to the necessity of giving priority to food production and preservation of water supplies in a world where these things will be threatened by climate change. Instead the lobbyists for coal seam gas put the short-term gains of profits from the last fossil-fuel industry over the protection of the necessities of life.

Australia's dry continent has forced its farmers to produce with significant water efficiency. This will stand us in good stead as global warming increases. In the medium term agriculture will be worth far more than any fossil fuel industry – as the more prescient investment advisors are already signalling. I support the NSW farmers' 31st recommendation:

That the NSW Government identify and spatially define strategic agricultural land and prohibit mining and coal seam gas on those areas. (p. 32)

Conclusion

I would think that not opening up a "new" fossil fuel industry and instead, preserving and protecting water supplies and food production is common sense and good risk management where there is no global agreement enforcing reduction of greenhouse gas emissions. NSW has a great deal to lose from global warming, as its recent history of severe and extensive drought, followed by severe floods, causing food prices to rise, amongst other impacts, has demonstrated. If we cannot stop climate change, then we had better adapt. Encouraging the coal seam gas industry is literally putting fuel on the fire. It should be opposed.

Anne Picot

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<https://www.parliament.nsw.gov.au/prod/web/submissions.nsf/Submission?OpenForm&ParentUNID=3FE299721A425659CA2578E3001C1B61&House=LC>

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