

**Submission
No 568**

INQUIRY INTO COAL SEAM GAS

Name: Ms Rosalind Warden

Date received: 7/09/2011

6th September 2011.

Dear Standing Committee,

I would like to thank you for the opportunity to comment on Coal Seam Gas, as we see the rapid development of this industry as a dire risk to the environment, to our underground aquifers and to our capacity as farmers and graziers to continue to grow food. Future food and water security is increasingly being touted as a vital issue and Australia's agricultural sector must be allowed to continue to feed Australia and the world without interference from extractive industries - we can't eat or drink coal or gas, and despite assurances from the CSG sector, agricultural activities CANNOT continue unaffected by these industries operating on farmland, nor should farmers have to tolerate such profound interference in their business activities and equity.

I am writing on behalf of the MGPA, (Mullaley Gas and Pipeline Accord) a local group representing more than 60 landholders in the Mullaley District who have grave concerns in regard to CSG industry and its pipelines and other infrastructure on delicate, highly productive agricultural land.

Agriculture is under increasing pressure from mining and other extractive industries and we feel that the CSG industry in particular should be required to slow down until impacts are fully known. The precautionary principle should be adhered to in this instance, when repercussions may be so dire. At present there is no scientific evidence supporting the claims of the CSG industry and the issues are too critical to allow the proponents to continue to self-regulate. Independent research and verification is necessary for adequate legislative regulation of the industry. Decisions on the future of this industry should be based on independent scientific research and not on financial considerations in regard to the purchase of exploration leases by speculative companies etc.

I will address points of concern to us as listed in the 'Terms of Reference' for the Legislative Council Inquiry into Coal Seam Gas.

1a. The Effect on Groundwater and Surface Water Systems.

Effects on surface water systems include the release of toxic waste water into local streams (as has happened in the Pilliga when Eastern Star Gas operations have killed large areas of pristine native forest.) and concerns in regard to the fate of toxic extracted water currently stored in holding ponds, accessible by wildlife, as the industry has no solution for the problem of disposal of this

waste, nor for the tonnes of salt, heavy metals and other substances naturally found in these waters. Reverse osmosis technology will not remove many of these toxic substances from this 'produced water'.

Pipelines and other infrastructure laid through the highly erosive black soil of the Liverpool Slopes and Plains will alter water flow and cause erosion as evidenced by the problems associated with the Central Ranges Pipeline, already the site of numerous breaches and expensive repairs.

1b. Effects related to the use of Chemicals.

The CSG industry uses many toxic chemicals and proposes that these substances will not cause harm when injected into the deep aquifers which underlie our most precious resources - our agricultural land and its shallower aquifers. There is no proof to support their claims, how can they predict with such certainty what will happen deep underground? Aquifers have various degrees of interconnectivity which is difficult to assess, and which must be exacerbated by the 'fracking' process, therefore allowing leakage of chemicals between aquifers.

1c. Effects related to Hydraulic Fracturing.

Toxic chemicals associated with CSG and 'fracking' activities are already being detected in water bores in Qld - why should we take the risk that this may also happen in NSW? The companies are not permitted to use this chemical cocktail yet it has been repeatedly detected. Deliberate fracturing of rock strata deep below the earth surface cannot be predictable - the effects could be disastrous, and may not be apparent for many years. If aquifers are damaged they may never recover. Australia is the driest continent with unpredictable rainfall. Damage to aquifers could render valuable land sterile if water access is affected by fracking activities. How can dewatering deep aquifers fail to have an effect on those above? Pressure gradients and pH levels must change, with unknown and unknowable consequences. Why take the risk?

1d. Effects on Crown Lands and Travelling Stock Routes and State Forests.

All of the above problems will be present on travelling stock routes and Crown Land - these are areas owned by all Australians, and should not be exploited for the gain of Executives and shareholders of extraction companies. Travelling Stock Routes are a vital link for stock movements in times of drought - allowing them to be taken over and degraded by private companies is unconscionable. We have already seen the breaches and carelessness of ESG in relation to State Forests - the Pilliga sites are an absolute disgrace, - who will monitor activities in these areas? It is clear that self-regulation is ineffective and companies will take short cuts if they think their activities will go unnoticed. Staff numbers of qualified personnel are entirely inadequate to monitor this burgeoning industry.

1e. Nature and Effectiveness of Remediation.

How can damage to deep aquifers be remediated?. What value will remediation of surface land have after endangered species have moved out due to habitat destruction and how can agricultural land be useful if water quality and/or access has been affected?

1f. Effects on Greenhouse Gases and other Emissions.

It is becoming increasingly clear that CSG's claim to be a 'clean' fuel is dubious to say the least. Recent studies have found that the fugitive emissions (due to leaking wells) of methane at 1.5% of wells means that CSG has greenhouse gas implications similar to Coal, but that the likely figure of leakage could be more accurately estimated at around 4%, making the CSG industry actually much worse than coal. It is NOT clean and it is NOT green. It is just another finite fossil fuel, when we should be investing time and money into research and development of true renewable energy sources.

2a. Legal Rights of Property Owners, and Property Values.

At present, the legal rights of landholders are limited. The Pipelines Act (designed to deal with issues pertinent to petroleum) means that landholders have few legal rights, and CSG companies are making the most of this oversight by bullying and frightening landholders into signing access agreements with little or no meaningful compensation. Confidentiality clauses imposed by the proponents prevent landholders from finding out the level of compensation paid to others. Property values are set to plummet - already in Gunnedah estate agents are noticing that prospective buyers are enquiring about exploration licences and activities, and steering clear of properties affected by these.

""<http://www.nbntv.com.au/index.php/2011/09/02/property-prices-on-the-slide>

This will have far-reaching and unfair effects on landholders' equity, with disastrous consequences, as many agricultural enterprises rely on overdraft facilities based on equity to run their businesses due to the seasonal nature of income and expenditure. This will have profound and far-reaching social consequences as succession planning and the future of agriculture will be uncertain, and therefore less attractive. Who will stay to grow our food???

This will obviously impact 2b - Food security and Agricultural Activity.

Viable agricultural land - a very small part of the Australian landmass, should be protected from extractive industries as, despite industry assurances that agricultural land use can continue unaffected by CSG infrastructure, farmers and graziers know best the huge impact these activities would have on their businesses.

A mosaic of gravel roads, pipes, well pads with associated traffic, lights, dust and noise cannot fail to affect the way farmers manage their land. Food security is going to be one of the major challenges facing the world in the decades to

come - why would we risk our capacity to grow and export food to the world?

2d. Royalties payable to the State.

Petroleum activities are royalty-free for the first five years, then companies pay 6% in the sixth year, rising at 1% per year to ten years. CSG companies can extract from one well for five years and then shut the well, and go to the next well. They may never pay any royalties if production begins to wane within the five year period.

3b. Relative whole-of-life Emission intensity of CSG versus other stationary Energy sources.

Research from Cornell University in the US suggests that CSG emissions are conservatively estimated to be at 1.5% - 2.5%, and at 3% the advantage over coal is negated. Santos has stated in the past that they estimate their fugitive emissions to be around 5%.

As far as supplying NSW with gas is concerned, at present CSG companies in Australia seems to be gearing up to export most of this gas. ESG's proposed operation of 1,100 gas wells (550 'twin set wells') in the Pilliga will supply a paltry 7% to a power station at Wellington with the rest earmarked for export to China.

In conclusion, we have grave concerns in regard to our future water and land use in agricultural areas if the CSG industry is permitted to continue unabated, without pertinent legislative guidelines. The precautionary principle should be adhered to when so much is at stake. The industry must not continue to be permitted to externalise its true costs - to the landholders, to the environment and to the community.

Yours Faithfully,
Mrs Rosalind Warden,
Secretary,
MGPA