

**Submission
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INQUIRY INTO COAL SEAM GAS

Name: Ms Leonie Blain
Organisation: Clarence Valley Conservation Coalition
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CLARENCE VALLEY CONSERVATION COALITION Inc.

POST OFFICE BOX 1015, GRAFTON N.S.W. 2460.



Legislative Council General Purpose Standing Committee No. 5

gpscno5@parliament.nsw.gov.au

INQUIRY INTO COAL SEAM GAS

The Clarence Valley Conservation Coalition (CVCC) is a Grafton-based community group which has been involved with conservation issues in the Clarence Valley and beyond since its formation in 1988.

The CVCC has been extremely concerned for some time about the expansion of the coal seam gas (CSG) mining industry in both New South Wales and Queensland.

In May this year, because of these concerns, the CVCC co-hosted an information seminar in Grafton on CSG mining. The seminar which was conducted by the Environmental Defenders Office (EDO), Lismore, was attended by about 80 people, many of them rural landowners worried about the industry's expansion in the Clarence Valley and its potential effect on their agricultural production, health, local environment and land values.

The concern expressed by local farmers and environmentalists has also been expressed by Clarence Valley Council which, at its July meeting, called for the NSW Government to implement a moratorium on CSG mining in the Clarence Valley Council Local Government Area "until extensive and independent environmental impact statements have been concluded on the effects on the environment."

The impacts of CSG mining which were identified as matters of concern in Council's resolution were:

- Protection of ground and surface water from pollution and environmental disturbance
- Community health and safety
- Ensuring no loss of biodiversity
- Respect for landowner rights
- Avoiding economic impacts on agriculture and tourism

The resolution was supported by all nine Clarence Valley Councillors.

Other NSW North Coast Councils have also called for a moratorium. The only Council to the north of the Clarence which has not called for a moratorium on CSG mining is Richmond Valley Council.

SOME SPECIFIC CONCERNS OF THE CVCC

1. Inadequacy of the Legal Framework for the Industry

The regulatory framework for gas mining in NSW is 20 years old but it is only now, with the booming interest

in developing the state's gas reserves, that its deficiencies are obvious. We can look at Queensland to see how bad things can get, with pollution of ground and surface waters, clearing of wildlife habitat, interference with farming activities, and leakages so severe that water bores can catch alight.

The current laws in NSW will not stop the same things happening here.

The law is particularly slack when it comes to assessing potential impacts in the exploratory phase. All stages of exploration, including pilot production wells, can be approved without public consultation. Local government is consulted but powerless to stop it.

Full production requires a publicly exhibited assessment of potential environmental impacts but, because these are likely to be of state significance, the decision again is taken out of the hands of local councils and there are limited grounds for appeal.

An appeal against the approval of 100 production wells around Gloucester, currently before the Land and Environment Court, is a test case.

A number of councils, including some on the north coast, are demanding law reform to tighten the regulatory framework for gas mining, and a moratorium on all mining until this occurs. This would be consistent with the precautionary principle, a fundamental tenet of sustainable development.

The NSW Government's introduction of a 60 day freeze on new exploration licences is unlikely to satisfy these demands, given that 75% of the state is already covered by licences.¹

The CVCC believes that the State Government must, as a matter of urgency, tighten the regulatory framework for gas mining. CSG mining should be subject to all relevant environmental laws including those applying to threatened species, native vegetation and water management. Furthermore, the community should be given full rights to challenge companies in the courts so that the environmental laws under which they operate are enforced.

Until this is done, there should be a moratorium on all mining exploration and mining.

2. Major Problems with Coal Seam Gas as an Interim Fuel

The gas mining industry is promoting gas as the interim fuel for power generation as Australia moves to a renewable energy future, claiming it is 60% cleaner than current coal-fired electricity, a 'line' which has been easy to sell to various Australian governments addicted to lucrative royalties.

It is widely acknowledged that the burning of gas for electricity produces far fewer emissions than coal. What gas mining companies are not promoting is the amount of polluting emissions that are created through the exploration, mining, transport and refining processes, not to mention methane released into the atmosphere from leaking pipes.

Until now, this has not been accurately quantified, but in March 2011, scientists from the Cornell University in the USA released the results of a comprehensive assessment² of the total emissions of various electricity generating fuels, including, coal, shale gas (referred to locally as coal seam gas), traditional gas, and diesel.

¹ The discussion above was published as "Coal seam gas mining and the law" in the CVCC's Voices of the Earth in *The Daily Examiner* on 13 June, 2011.

² This assessment is discussed in the paper at the web address:
<http://graphics8.nvtimes.com/images/blogs/greeninc/Howarth2011.pdf>

The collateral emissions from machinery used in coal seam operations are enormous. It requires trucking in millions of litres of water, tonnes of sand, and a 10,000 horsepower engine to drive the 'fracking' operation (fracturing of underground rock strata) for each well.

The scientists are at pains to explain that their calculations, based on US Mining Department statistics, are conservative, and show that when the emissions of all aspects of production are considered, coal seam gas burning causes by far the greatest amount of pollution than all other fuels.

One interesting statistic was that, over the life of the project, between 3.6% and 7.9% of all gas mined becomes "fugitive methane", either 'vented' or flared directly into the atmosphere. Venting is the release of methane that unavoidably leaks or overflows into the atmosphere during the process, much of it during drilling, where it accompanies 'flowback' waste or 'produced water'. Flaring is the deliberate burning of surplus gas, a process that is banned in some countries.

The study's conclusion was, that rather than reducing greenhouse impacts, *"developing gas from shale formations is likely to aggravate global warming"*.³

It is quite obvious that coal seam gas should not be seen as a "greenhouse friendly" replacement for coal for power generation. The whole-of-life impact of this proposed alternative must be considered rather than just the comparative advantage in the end of life electricity generation phase.

The CVCC believes that instead of promoting or even endorsing coal seam gas mining the State Government should be pushing for the rapid expansion of clean energy - renewable energy.

3. Coal Gas Mining as a Threat to Water Resources

Large volumes of water are used and produced in the mining process. There is a serious risk of damage to aquifers from the mining process, a risk which is of concern to farmers and which has been the subject of court action in Queensland.

Another problem relates to "produced" or waste water which results from the mining process and which has to be stored or disposed of in some other way. This water could contain salt, naturally occurring heavy metals, plus chemicals used in the drilling and fracking process – if fracking is used. Such contaminated water poses a threat to aquifers, streams and urban water catchments if it is not properly contained. We understand that in the Queensland floods earlier this year, "produced" water escaped from its holding ponds leading to contamination of extensive areas.

This is another major reason that there should be a moratorium on both CSG exploration and mining until there is a comprehensive assessment of the risks posed by this form of mining to the environment and the community and proper procedures have been implemented to protect the environment and the community from those risks.

³ The discussion above ("Coal seam gas as an interim fuel") was published in the CVCC's Voices for the Earth column in *The Daily Examiner* on 4 July, 2011.

4. Regulating and Monitoring Chemical Use

The CVCC believes that any chemicals used in the mining process must be properly assessed for use in mining and licenced by the chemical regulator. Furthermore that an effective monitoring system should be instituted to ensure compliance with regulations for chemical use in this industry.

In conclusion, the Clarence Valley Conservation Coalition urges the Committee to recommend strongly to the New South Wales Government that there be a moratorium on all coal seam gas exploration and mining until all of the problems associated with this type of development are properly assessed and effective regulations and procedures are implemented to protect the environment and community of this state.

Leonie Blain
Honorary Secretary
Clarence Valley Conservation Coalition Inc