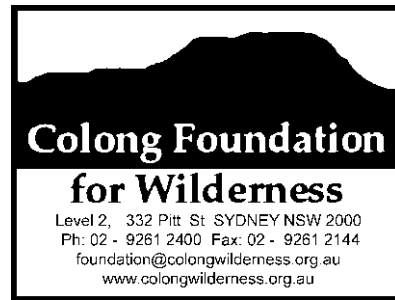


**Submission  
No 132**

## **INQUIRY INTO COAL SEAM GAS**

**Name:** Mr Keith Muir  
**Organisation:** The Colong Foundation for Wilderness Ltd  
**Date received:** 01/09/2011

---



Thursday 1 September, 2011

The Director  
General Purpose Standing Committee No 5  
Parliament House  
Macquarie Street  
SYDNEY NSW 2000

Dear Sir/Madam,

**Inquiry into Coal Seam Gas in New South Wales  
Submission to General Purpose Standing Committee No 5**

The Colong Foundation notes that the terms of reference for this inquiry seek to investigate the potential environmental, social and economic impacts of Coal Seam Gas (CSG) activities in NSW, and any legal and administrative ramifications of these activities. The Colong Foundation in this submission intends to focus on how these impacts may be avoided and mitigated, rather than to reiterate the litany of impacts that shall no doubt come forward in other submissions.

In February 2011 the Department of Planning released a coal and gas strategy paper for NSW. Shortly after this paper was launched, the Liberal and National Parties released their *Strategic Regional Land Use Policy (SRLUP)*. This policy sought to limit mining impacts on groundwater resources and protect agricultural and other sensitive areas from coal and gas extraction.

This inquiry should consider how the issue of titles under the NSW Petroleum (Onshore) Act 1991 and development consents under the Environmental Planning and Assessment Act 1979 can mitigate and avoid the negative impacts that the inquiry identifies. It should consider whether there are enough tools in the regulatory tool kit to protect the environment and ensure society can benefit from Coal Seam Gas development.

The inquiry should note the position of the NSW environment groups seeks a full moratorium of CSG activities until all adverse impacts are fully and rigorously assessed (as detailed in the section of this submission on Environmental and social protection criteria for CSG activities).

It is important to consider how the regulatory tools available to government may be used or adapted to prevent environmental degradation. If the inquiry fails to address this task then the current spate of gas proposals could establish, *de facto*, how the Government SRLUP will be applied with respect to groundwater, surface waters, sensitive areas and agricultural land.

In relation to sensitive areas, the proposed Coal Seam Gas extraction areas include the Pilliga State Forest, Pilliga East State Conservation Area, an enclave in the Goulburn River National Park, the Putty Valley adjoining Wollemi National Park and the drinking water catchment for Sydney and Wollongong. The peri-urban fringe of Sydney is being developed as a CSG field and there is a proposal by Dart Energy to explore for gas at St Peters. These CSG developments have intensified calls for the moratorium initiated by the Lock the Gate Alliance.

In response to the SRLUP proposed in February 2011 and increased public protest directed at the CSG industry, the NSW Minerals Council released a paper calling for accelerated mineral development. The paper threatened the loss of 6,721 jobs and the loss of \$0.9 billion in royalties if mining policies that limited development opportunities were adopted (ACIL Tasman, 2011, *Economic Contribution of NSW Mining Sector*). This industry paper is based on the false assumption that the coal and CSG regions of NSW are an undifferentiated cornucopia of energy and money which must be fully exploited in order to secure the greatest benefit to NSW. The paper ignores the significant potential costs of such development, which this Inquiry is to examine.

The community at large expects this Upper House Inquiry to assist with the development of measures that enable the avoidance and mitigation of environmental and social impacts, and not to be blinded by the Minerals Council promises of more energy, money and jobs.

### **A new paradigm is needed**

*"We can no longer continue to develop mining at all costs. We can no longer continue to allow these industries to self-regulate, no more than we would allow users of the roads to self-regulate. We can no longer allow coal mining to proceed without appropriate checks and balances. We can no longer pursue coal seam gas mining in light of the evidence and science that so clearly highlight the environmental and ecological disasters we now face. We can no longer sacrifice our water, our food and our environment to rapacious greed. We can no longer race after royalties as if that were the only thing that mattered. There is a better way forward.*

*"The goals of the Lock the Gate Alliance are simple. We need to restore balance. We need to reassert our obligations of custodianship of this country. We need to remember that what we do today affects the many generations yet to come. We need to restore priorities that put the land, the people and the environment of Australia first (the outgoing President of the Lock the Gate Alliance, John C Thomson, April, 2011).*

### **A way forward**

#### CSG resource mapping

The Department of Primary Industries should ensure that comprehensive and adequate data on the coal seam gas resource is provided to inform the Strategic Regional Land Use Policy (SRLUP) processes. To date only petroleum exploration licences, petroleum lease applications and petroleum lease title data have been provided to the SRLUP processes, which contains no information about the CSG resource.

The SRLUP processes should have available to it mapped data on the quality, quantity and yield rate of the CSG resources, and any contingent resource blight, such as the quantity and quality of produced water (see Attachment 1, a briefing provided to the Minister for Resources and Energy, the Hon Chris Hartcher, 24 August, 2011).

Without mapping of basic CSG resources data there can be no real SRLUP, only tacit acceptance that the CSG energy resources, of no matter what quality and quantity or how blighted, will be developed in almost all circumstances.

Ecologically sustainable development requires basic CSG energy resources data to ensure development only occurs where it would be of most benefit and does not pass on hazards and environmental degradation to future generations.

The SRLUP should not be just a matter of minimizing health, environment and land use impacts while CSG development is facilitated. The SRLUP should protect and conserve all land uses so that society and the natural environment can thrive into the future.

#### Climate Change and retaining CSG resources with the Crown

There is a broad political consensus that human-induced climate change is real and that carbon dioxide emissions must be reigned in to prevent a climate catastrophe. If effective abatement strategies are not applied, it is predicted that average global temperatures will exceed 5°C by 2100 (Australian Academy of Science, August 2010).

The political debate in Australia is about the how to achieve abatement of human-induced climate change and when to start doing so.

It would be an absolute certainty that life on earth, as we know it, would not survive into next century if every nation fully exploited its coal and gas reserves. Sometime before then humanity shall implement better alternatives than burning fossil fuel reserves and causing a climate catastrophe. In this context CSG is described as a transition fuel.

The process to achieve the transition needs to be addressed before CSG resources are alienated from the Crown, otherwise there will be no transition.

Given climate change is upon us, a large proportion of the CSG resources in NSW should never be mined, as elsewhere in the world. Humanity needs to keep carbon sequestered in untapped coal seam gas deposits to prevent unacceptable climate change well before even a fraction of NSW's considerable coal seam gas resources are consumed. So the question becomes how does this massive coal seam gas resource facilitate (rather than delay) our transition to renewable energy alternatives?

Society should identify those coal seam gas resources it wishes to 'sequester' for the survival of the planet, so why not start doing so through the SRLUP.

The NSW Government can achieve this end by vesting CSG resources with the Department of Primary Industries, so that parts of the CSG resource in NSW are withdrawn from immediate gas development and remain held by the Crown. This practice has been applied to coal resources in NSW to regulate the coal industry's

access to the resources. The Department could also issue the Crown with Petroleum Exploration Licences, Petroleum Assessment Leases or Production Leases under the *Petroleum (Onshore) Act, 1991* to sequester the carbon in the CSG resource.

The old saying that possession is 9/10ths of the law is true regarding possession of energy resources. Once industry owns the resource, industry will extract all the CSG it can economically extract. The Crown must restrain corporate access to CSG resources in order to allow transition to sustainable energy resources. If it does not, the CSG resource will probably be exploited to its economic limits of production with dire consequences for our climate, our society and the planet.

### Transitioning to sustainable energy resources, damage avoidance and mitigation

Effective and extensive environmental protection and social welfare measures should be applied to coal seam gas extraction. It is estimated that the CSG resources in Queensland and NSW to power a city of 5 million people for more than 100 years (Rick Wilkinson, SMH, 20/8/2011). There should always remain ample alternatives available regarding NSW gas deposits to make the trade-off between conservation and CSG development. Well before CSG development options narrow, society must transition to environmentally sustainable energy resources. Indeed, sterilising coal seam gas resources will assist with the transition to energy sustainability.

The vast majority of NSW's CSG resources should be permanently sequestered to protect the environment and ensure social welfare. These sequestered fossil fuels should never be required by future generations, as CSG production should terminate in the next 50 years to limit carbon dioxide levels in the atmosphere to safe levels.

It appears that the reverse strategy is being applied to these energy resources. There is an implicit assumption that ALL CSG resources are to be alienated within a very short time through the issue of petroleum titles. Once leases are issued there is also an expectation by industry that ALL (or as much as possible) of the CSG can be extracted.

If we allow gas companies to achieve maximum CSG resource alienation, with contingent maximum production and growth, then the chances of our survival in the future are slim. Such a scenario is the exact opposite of ecologically sustainable development. The old paradigm of maximizing gas extraction needs to be replaced with maximizing a transition to sustainable energy resources.

To meet the climate change challenge - the SRLUP must provide for a transition away from fossil fuels, whether it be implemented tomorrow or later this century.

The composition of CSG tenure under the Act must permit potential future flexibility in the pattern of fossil fuel development and to that end the alienation of the resource from the Crown must be limited.

Further, the SRLUP should take advantage of this potential flexibility arising from the "surplus of CSG resources" by identifying those resources that are least desirable to develop. These CSG resources can be permanently sequestered.

The flexibility of "surplus CSG fuel resources" arising from the transition to non-fossil fuel/sustainable energy resources creates far greater opportunities for environment and community protection than is currently perceived by decision-makers.

There are two aspects of the SRLUP that can best sequester carbon by:

- Avoidance of valuable resources that could be damaged by potential CSG development; and
- Damage mitigation by using lower intensity CSG extraction techniques.

Examples of the former sequestering technique are banning gas mining in places to protect key environmental values (e.g. National Parks) and other values as explained in the following section. The impact of CSG on wilderness is a particular concern as CSG exploration, drilling and development fragments intact natural areas destroying wilderness values in the process; see Attachments 2 and 3. Attachment 2 details the specific potential environmental impacts on wilderness values arising from CSG activities. Attachment 3 describes current exploration activities next to the declared Wollemi Wilderness Area.

The obvious sequestering example for damage mitigation in CSG production is a permanent ban on fracking of coal seams which limits gas yield. There are however other variables to consider in the avoidance and mitigation of damage to natural resources in relation to CSG which relate to the blight caused by CSG development.

#### Environmental and social protection criteria for CSG activities

The SRLUP needs to take full advantage of the resource management tool kit and the range of CSG mining options available. Industry strategies that seek maximum production and maximum growth in the CSG resource exploitation are recipes for needless community conflict and accelerated climate change. These strategies are also 'locking in' resource security before the resource and its contingent environmental hazards are known.

The Government's strategic regional land use policy needs to implement lower intensity CSG extraction options, avoid sensitive areas, including agricultural lands, heritage lands and settlements and issue of development consents incrementally.

The following policy criteria should to be applied to proposed CSG operations, including exploration:

- The Native Vegetation Act 2003 and Water Management Act 2000, plus all other relevant environmental legislation, must apply in full to CSG development (no regulatory or taxation holidays);
- A ban on CSG gas extraction extending 1500 metres upstream of reserves established under the National Parks and Wildlife Act, 1974 (similar to that proposed by NSW Labor during the recent state election), should be imposed to prevent damage to protected natural areas;
- Permanent exclusion zones for public bushland (including state forests, wilderness, Sydney's drinking water catchment and State Conservation Areas), scenic protection, significant vegetation, as well as for settlements and significant farmland;

- Aquifers must be fully protected by a CSG extraction ban for areas with aquifers to prevent adverse impacts on groundwater resources (the licensing of aquifer interference does not go far enough); and
- CSG activities must not lead to any reduction in surface water quality.

CSG activities must be carried out with fairness and equity to the land owners and public and managers, and laws (i.e. the Petroleum (Onshore) Act, 1991) changed to uphold their common law right of landholders and managers to prevent access for exploration or gas extraction.

Social impact statements must be conducted as part of the assessment process for any significant CSG proposal.

The ban on fracking chemicals should remain in place. The environmental risks of increasing CSG yield and flow rates using fracking chemicals are too great in the context of a climate changing world where higher risk gas resources should be kept sequestered in the ground.

Full public transparency from the beginning of the exploration activity until the rehabilitation phase, and full third party appeal rights with regard to petroleum titles, development consents and environmental laws.

Given growing community concern about CSG, there is an urgent need to upgrade the SRLUP process across NSW to protect all natural and cultural heritage and social welfare, with subsequent robust assessment and approval processes, strong regulation of water impacts and an effective post-approval monitoring/pollution control regime.

Until there is such a strategic planning process with development control, full community and independent scientific input in place to rigorously examine the environmental, social and health impacts for CSG development, a moratorium on all drilling and CSG extraction should be imposed.

#### Incremental Development Control to permit adaptive management

If any development approvals are to be issued for coal seam gas development in NSW, these should be of limited scope to assist the coal seam gas industry to adapt to new knowledge and regulate the CSG development boom. The conditions for CSG consent will need to evolve over time as knowledge improves.

To issue long-term resource security to an energy company would severely limit Government options subsequently. Gas production may need to be reigned in to protect natural resources, either in one locality or perhaps more generally across the state to achieve more sustainable outcomes. The Colong Foundation has already outlined the restriction of petroleum titles to achieve broad strategic control, there are, however, other tools that can be applied at the development control stage.

The Subsidence Management Plan (SMP) for underground coal mines offers a model for adaptive management. The model should be applied to the development control of the CSG resource.

To date, SMPs have been remarkably non-adaptive in response to environmental damages within each planning period. Successive SMPs issued for each colliery on the other hand do require adaptation of mining operations and curb damage, when the SMPs are associated with new planning development consents.

SMPs limit the area of coal that can be mined and these plans tend to run for periods ranging from one to seven years. Within that time monitoring and reporting is supposed to provide feedback to the community and decision-makers to prevent or at least report on damage and ensure any damaging processes are curbed. The reality is that only when a new development application comes forward at the end of an SMP is there mine plan adaptation and damage mitigation.

Regulation of mining by SMP is an improvement on the previous situation where development consents ran without revision for 21 years with almost no adaptation of coal mining operations, regardless of the damage caused.

Similar Management Plans should be applied to the CSG resource and ensure adaptive management though limiting development consent of no more than seven years. The review of incremental development by Planning Assessment Commissions would permit adaptation of CSG operations.

In the absence of adequate information regarding the CSG resource or its potential impacts, adaptive management is even more imperative. Future gas miners who are responsible for methane gas venting, damage to natural or cultural resources, unacceptable impacts on aquifers or surface waters should be refused further development consent. Those who are not irresponsible could be issued with new conditions that reduce pollution and make consent contingent on successful rehabilitation of any damaged area to the satisfaction of the community.

#### Day to day compliance to limit damage

Improved environmental protection will only be achieved with fines for pollution and development control infringements greater than the combined cost of compliance and remediation. Where there has been regulatory failure, pollution licensing requires Pollution Reduction Programs, but these programs only work where monitoring and the penalties for non-compliance are adequate.

The regulatory environment would also be improved by registration of environmental consultants. Publication of false and misleading information should lead to an independent review process that can result in environmental consultants being deregistered.

Thank you for the opportunity to make this submission.

Keith Muir  
Director  
Colong Foundation for Wilderness Ltd