

ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION AMENDMENT

(INDEPENDENT EXPERT SCIENTIFIC COMMITTEE ON COAL SEAM GAS

AND LARGE COAL MINING DEVELOPMENT) BILL 2012

SUBMISSION TO THE SENATE INQUIRY

BY

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There has been a tremendous upwelling of protest against the increasing amount of exploration licences granted to coal seam gas and coal mining companies in Australia, particularly in New South Wales and Queensland. The majority of these licences are on agricultural land which has been used for that purpose by the present owners of the land and for generations before them too.

If you study any map of eastern New South Wales you will see that the Great Dividing Range has a huge number of watersheds which run down its eastern and western sides. These watersheds provide, as you will be aware, the headwaters of many rivers which make their way eventually down to the sea on the eastern side and further inland into the Murray Darling river system on the western side. Water from them also percolates into the Great Artesian Basin.

The protests by extremely concerned Australians against the mining onslaught, which is literally tearing huge parts of Australia apart, is driven by the desire to see that the life of this country and its most precious resource - water - are cared for in the best possible way.

The establishment of an Independent Expert Scientific Committee which will, in Minister Burke's words written in a letter dated 22nd March 2012 to Rob Oakeshott in response to a question from me, "provide scientific advice to governments in relation to relevant coal seam gas and large coal mining proposals that are likely to have significant impacts on water resources" could be a major step forward in ensuring our water is kept as pure as possible.

However, Minister Burke's speech on 22nd March at the second reading of the amendment to the Bill gives cause for concern as to whether the water will be cared for adequately. Minister Burke said at the end of his speech, "The work of the committee will provide industry greater guidance on sustainable management of water resources in areas where coal seam gas and coalmining exploration and developments are proposed. An independent assessment process will help build community confidence in coal seam gas and coalmining developments in

sensitive areas. These arrangements will provide Australians with greater confidence that projects will be subject to the most rigorous and objective scientific assessment.”

It is obvious from Minister Burke’s speech that there will be no possibility of the Scientific Committee advising that a particular proposal should not proceed. The Committee will have only two months in order to make their assessment of a referred proposal. This cannot possibly be adequate time for them to reach a properly informed and objective opinion. In many cases there is no adequate INDEPENDENT water study undertaken other than that which is done by the mining company. Who will provide the information to the Committee for them to make a decision? I do not think that two months is sufficient time for their own scientific evidence to be gathered. They will be forced to rely upon the one-sided information and reports provided by the industry. This is one reason why the terms of reference for the Scientific Committee are flawed.

It is imperative that the Government understands that community confidence in the decision-making process has been shattered because of a failure by Governments to ensure that there is adequate INDEPENDENT scientific evidence that the underground aquifers and river systems will not be compromised and that, if they are, there will stringent penalties applied to any company and its directors who pollute our water. There is no reference, as far as I am aware, to any sanctions against those companies which fail to abide by the recommendations of the Scientific Committee. I am not convinced that the Minister has ultimately to take notice of any recommendation made by the Committee. The Bill MUST provide that he is bound so to do.

A way of ensuring that the Scientific Committee is as independent as possible would be to allow community groups to put forward their own member of the committee. He or she would be someone who has knowledge of the hydrogeology of the particular area under consideration.

Taking any risks with anything but the poorest agricultural land is foolish. We can live without gas. We can live without coal. We cannot live without clean water and food.

We are told that coal seam gas (CSG) could power Australia for 1000 years, but that is not the plan. The plan is to extract as much of it as possible in the next 30 years and sell the bulk of it abroad.

CSG is said to be a transitional fuel to tide us over until more clean energy is available. There is no guarantee that the money made by selling the gas will be invested in clean energy. There is not even a law to secure that mining companies must give sufficient funds from their profits to the government to ensure such investment. If this is not done, in 30 years we will have no gas

and we will have no more clean energy than we have now, and the water may have been ruined if it has not all been used and lost in the mining and extraction processes.

Left as it is, the farmland will continue, with good husbandry and with good water, to produce food some of which can be exported forever, not just for 30 years.

There is no guarantee that any of the land devoted to open-cut mining or to CSG extraction can ever be rehabilitated to its previous agricultural glory. The record of the failure of mining companies to comply with rehabilitation laws or planning conditions so far is deplorable. There are \$3.6 billion worth of completely ignored rehabilitation works required in Queensland alone, and the total increases every day (Jim Leggate, Mining Whistleblower featured in Quentin Dempster's book "the Whistleblowers").

No-one can be sure what the long-term effects of the gas extraction may be on the underground strata. Fracturing the coal seams must affect their geological stability and ability to support the superior strata. Withdrawing the gas must reduce the density of the coal seam like wringing water out of a sponge. The government and the mining companies need to give landowners and householders a 100% guarantee that if there is any subsidence they will be fully compensated.

Whilst it may be that the sale of the coal and the gas may be worth billions of dollars, money is not the be all and end all of existence (though trashing the water and the food producing areas may be). Quality of life is more important than standard of living, a truth which the government should try to teach, not bury under mining slag heaps.

The NSW Strategic Regional Land Use Policy makes a case for scientific accreditation of valuable or prime or strategic agricultural land. At first glance this seems admirable, but mature consideration shows that it is just an expensive bureaucratic gimmick intended to persuade those who oppose Australia becoming one big quarry that the government proposes to exercise some control over mining interests. If the Federal Government's similar plan for a scientific committee, the subject of this Bill, does not oblige the Minister to abide by the recommendations of the Committee it will be equally pointless, unless its purpose is to be another bureaucratic gimmick. Its purpose should be to protect the water at ALL COSTS.

How is the scientific committee going to decide how much pain and suffering is going to be inflicted on those communities who may lose their water and where the land may not be prime agricultural land? Presumably such communities count for nothing and are as expendable as Chinese peasants are to the Communist government of China.

Sulphate –reducing bacteria is present in the underground water supply. Kept underground it is not much of a problem but when released through coal seam drilling, it multiplies. Once

released and allowed to feed on the steel pipes of the Coal Seam Gas Well, it just loves them and the Cement that is supposed to last forever.

The bacteria is found in places where Petroleum is found; in Shale Beds and in the coal seams where methane is located. It is also found on the ocean floor. In certain conditions it produces a type of methane which attacks iron based material, whether natural or man-made. The methane produced is not as pure as that produced by the decaying of vegetation, but is still methane.

Biocides must be added to the extracted water because it contains live bacteria (it does not need sunlight or oxygen to survive), and it is this bacteria that is the enemy of the CSG and petroleum industry because it will corrode all the protection infrastructure that they put in place. Either the Bacteria has to be killed or it will kill the CSG and Petroleum Industries. That leads on to the question as to the length of time that the abandoned wells will survive in an environment where this bacteria enters.

We have heard that there is evidence of polluted ground water caused by sulphate-reducing bacteria. There are “floaties” in large quantities now appearing in the extracted water. This raises the question whether there has been a massive bacteria population explosion due to the CSG industry releasing them from the prison of the coal seam. Literature indicates bacteria can survive in the soil on the surface and be picked up by pump gear and thus deposited down wells. It seems that drilling has the effect of moving the bacteria from one place to another, one site to another and assisting the spread of the bacteria on the surface each time a drill string is lifted. The bacteria located on the surface is then drawn down through the soils by rain or other surface waters soaking into the soil and in the same way that water enters and recharges the aquifers so it brings the bacteria with it: hence the population explosion. Water escaping from drill ponds and deposited waters in unlined ponds all allow the transmission of this bacteria extracted from the coal seam.

Re-injection of the coal seam gas water back into the aquifers will only transfer the sulphate-reducing bacteria back to the aquifers faster than what is being done with that water now.

This is really a very vicious circle and once started is going to be next to impossible to stop . We understand that it has started in Queensland and around Gloucester.

There is the possibility that the biocides added to the drill chemicals have leached into the aquifers and exterminated large amounts of bacteria, hence the “floaties”, and this is apparently now reaching bores.

Apparently water containing sulphate-reducing bacteria can be TOXIC, and at 2400 ppm it is unsafe for domestic purposes, not just drinking but all domestic purposes.

Where this bacteria is found the only thing that is supposed to kill it off is the biocide that the industry put into the waters. Bacteria is good at adapting to situations, so how long it will be before the biocide is no longer effective in controlling nature's bug is only guesswork. One only needs to think of the success of bacteria in hospitals overcoming anti-biotics to become MRSA. There are many implications to what is happening with the spread of this Bacteria, from health, to livelihoods to quality of life after retirement and land values.

This must be a problem that the CSG industry dreads coming out. It would be the duty of the Scientific Committee to make this public, and should be the duty of the Minister to prevent all such pollution, even if by doing so he kills the industry stone dead.

This submission deliberately fails to address what might be considered important environmental and technical matters such as details of water flow and the nature of soil because the government intends to reserve the right to grant licences anywhere and everywhere, no matter what the merits. In other words, it reserves the right to ignore the advice it receives. Bearing mind the government's record (whether Labor or Lib/Nat) of prostrating itself before the mining industry, the advice will be ignored.

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