



History:

This message has been replied to and forwarded.

Dear Chief Scientist & Engineer,

I submit that before CSG extraction can safely take place, its impact on the environment must first be studied and understood. The Precautionary Principle must be used to prevent damage to our environment and harm to future generations. CSG mining will steal a mineral (or petroleum) resource for the current population at the expense of our children and future generations. This, my generation, can and should instead consume less and pay more for the energy we currently waste on gratuitous consumption. I submit extracting CSG and damaging clean air, clean water and clean land during the next twenty years because people currently alive wish to indulge in an unsustainable lifestyle, is stealing from our children.

I use the numbering of your terms of reference in my submission.

1 I submit compliance with pollution limits, regulations and outcomes that should be in place now, is what this review has to measure in order to legitimatise mining and CSG extraction in NSW. Unless regulations are in force and effectively ensure clean air, clean water and clean land, all CSG development is stealing a healthy future from generations yet to come. Laws, regulations and conditions currently imposed on CSG mining are not detailed, specific or stringent enough to detect damage to clean air, clean water and clean land.

AGL is often used as an example of poor CSG management in this submission as AGL claims it has

more experience extracting CSG in NSW than other companies.

The CSG industry in NSW is yet to be effectively regulated despite Mike Roy, AGL Head of Gas Operations at the Camden Gas Project, saying on 2012/11/10: "The NSW Coal Seam Gas industry is one of the most heavily regulated in the World". AGL's Mike Moraza is quoted in the SMH in January as saying: "While the CSG industry in NSW has the country's most stringent environmental and safety regulations, AGL will go beyond these in response to community concerns." I submit your Review will have to dismiss these statements as a fantasy of misinformation before you can start your work.

There are no limits requiring people and companies mining CSG to prevent gas escaping, so without limits compliance can not be measured.

Similarly, without limits more stringent than Occupational Health and Safety regulations to prevent explosive concentrations of methane above 5 300 parts per million [ppm] where people work, without limits on atmospheric methane concentrations above 1 850 ppm which is the current industrial background concentration (Note: the pre-industrial concentration used to be 600 to 700 ppm), and without any limits on atmospheric pollution, groundwater and aquifer contamination, soil contamination etc, compliance can not be measured.

Also, without limits on carbon dioxide and other greenhouse gas (GHG) emission, the global warming effect of emitting and burning yet another (CSG) fossil fuel is uncontrolled.

With inevitable time delays before action to decrease and counter global warming, with the inertia of global

warming already underway and its bad effects already predicted and measurable, Coal Seam Gas mining must not be allowed to proceed, adding to global warming. I submit measurements must be taken to understand how bad are the effects of releasing GHG by mining CSG.

I further submit limits must be set to control the GHG released by CSG.

There are no limits on fugitive gas emission. There is no requirement for continuous monitoring of atmospheric gas concentrations at each of AGL's existing wells in the Camden Gas Field. Without such continuous monitoring, fugitive CSG emission can occur without detection.

There may be an Environment Protection Licence limit on nitrous oxide and a condition requiring continuous monitoring of the exhaust gas emission from the three gas powered compressors, each of about 3 MW size, but these EPL conditions are hardly burdensome or important compared to potential fugitive gas emissions from 89 active CSG wells in AGL's existing operations. Despite the ease with which the already imposed EPL conditions can be met, AGL did not meet the condition that the monitoring be continuous for two years up to 2012 August. I hope you will ask how long has it taken AGL to implement continuous monitoring of its exhaust gasses since AGL was told about its noncompliance.

An example of AGL's dissemination of misinformation is Mike Moraza's media release suggesting "... the country's most stringent environmental and safety regulations, AGL will go beyond these in response to community concerns." Only in 2013 is AGL considering continuous atmospheric gas monitoring at each of its drilled and production gas wells.

Whether background gas concentrations have increased in the atmosphere since CSG production commenced, we do not know. Without background methane, nitrous oxide, ethylene and radon gas concentration measurements prior to the Camden gas field being developed, we do not know how much gas has already escaped. Without background gas concentration measurements and without pollution limits where leakage is occurring, compliance can not be measured. When this Review considers compliance, another way of assessing the difficulty and stringency of environmental regulations is to ask:

"How close has AGL come to just failing to comply with NSW Government imposed regulations?"

You and the NSW Department administering the Petroleum and Mining Acts should inspect the AGL gas operations. If the Chief Scientist's work will be informed by compliance audits undertaken by regulatory officers, such as the Environment Protection Authority and other government agencies, you will have to do more than relay on a desktop audit. Has a NSW Department of Mines Inspector visited an AGL gas well yet and taken their own measurements? That Department may once have had two Inspectors. The number of inspectors must increase if our understanding of CSG is ever going to be sufficient to enable us to ask the right questions.

Does the NSW Department of Mines have instruments to measure gas and water pollution? Will your Review use the NSW Department's instruments, or will you hire your own?

The two inspectors may only have time for desktop audits in the past. Will they have instruments and time after your Review is finished, to visit and measure pollution in person at all CSG wells, or just at a randomly selected sample of wells?

Has a NSW Department of Mines Inspector measured atmospheric gas concentrations, pollution concentrations in water, aquifer contamination anywhere in NSW? I suspect the answer is "No" because the NSW Department of Mines does not have the instruments or knowledge to take those measurements.

Why should we be reassured the NSW CSG regulations touted by our Government are so stringent that the people of NSW can look forward to healthy enjoyment of cheap gas?

We do not know it is healthy.

We do not know if it is polluting our environment.

We do not know why AGL has not asked Santos for a contract to continue to supply gas from the Cooper Basin in South Australia after 2016.

2. Identify and assess gaps in the identification and management of risk arising from coal seam gas exploration, assessment and production, particularly as they relate to human health, the environment and water catchments.

Deaths from adding to global warming have already happened. The epidemiological relationship between atmospheric temperature and deaths is already known, even to the detail of the Australian demographic. We

therefore know extra people died during the hot day in 2013 January from global warming. Your Review can do the calculations and attribute future deaths from global warming to the extra GHG added by CSG emissions. As well as extra people dropping dead from increased temperatures, there are less dramatic health effects on human psychology. I submit the alienation and loss of control felt by people who realise they can not stop CSG drilling on their property has a deleterious effect on the community.

Yours faithfully

David Eden

Stop Coal Seam Gas Wollondilly