Submission to,
The Victorian Government Inquiry into the Unconventional Gas mining industry

Ian Onley, [redacted]

Summary

Extracting gas is a once of opportunity. After a short boom the land and underground water would be left polluted and worthless. Already we are experiencing difficulties producing food as climate change takes hold. Gippsland and Victoria which traditionally gets more rain than most of Australia is becoming more important as a food producing area.

This industry not only releases, potentially huge, unaccountable greenhouse gas emissions and pollution but risks loss of very important food productivity due to its infrastructure. There are alternatives to unconventional gas but not so for food. In Australia we have never experienced food shortages and have never had to import bulk food commodities. During the fifteen year drought however, we did, for the first time ever, import grain, this should have resinated as a warning bell to all of what is to come from global warming.

To risk our highly productive farms, so that mining companies can export gas for short term profit can only be seen as short sighted and counter-productive, definitely not in the best interests of our country.

I respectfully request the opportunity to address the panel when and if an opportunity arises.

Ian Onley

[redacted]

Overview

Natural Gas has been seen as a transition fuel, with lower CO2 emissions on combustion than brown coal. It was thought that Gas could fill a gap while 100 % renewable energy sources were developing, that power stations like Hazelwood could be converted to run on gas. We now see however, that extracting coal seam gas, entails uncontrolled release of fugitive methane (natural) gas, this may not be accountable right now but it certainly should be. In practice, mining Coal Seam Gas is greatly contributing to global warming through increased emission of the greenhouse gas, methane.

We have also learnt that the gas that could be harnessed from coal seam beds onshore is not needed for domestic purposes but would augment export. The Bass Straight fields still hold 30 years of domestic supply. Plenty of time to develop renewable energy in the right political environment. Much has been said of the impact of opening Australia's gas reserves to the world market and many are far better placed to comment on those impacts. It is clear however, that export will push up the domestic price of gas and create shortages if not properly managed. Management of these issues is possible but could not be left entirely to market forces without Australian industry suffering increased costs and being forced to pass on those costs to consumers. These are all manageable to a large degree but totally undesirable. The duplicity of the industry tells us we need more gas to maintain domestic supply and keep prices down, at the same time exporting gas, creating the shortage and higher prices. We are told, when the gas is gone we'll develop renewable energy.

Would it not be better to develop renewable energy now and avoid the pollution and disruption?

Terms of reference

The terms of reference only mentions carbon dioxide emissions from combustion of gas and does not call for any consideration of fugitive methane gas emissions. Methane is a far more potent greenhouse gas than carbon dioxide, failure of the panel to consider fugitive gas would render any report to parliament incomplete. This could be seen as a failing of the community consultation process that failed to report in its findings that this was a major concern among people taking the time to attend the poorly advertised community consultation meetings that informed the *'Report on community and stakeholder attitudes to onshore natural gas in Victoria'.*

Sustained Casing Pressure, (SCP) see attachment, *Wellbore Integrity: Failure Mechanisms, Historical Record, and Rate Analysis*

Industry tells us that things only go wrong if it's managed badly, this seems however, to be a case of saying whatever it takes to get a foothold. The technology is fundamentally flawed because of SCP. Summary points:

(1) Loss of wellbore integrity a well-understood and chronic problem

(4) Pressing need for scientific investigation of possible links between leaking gas wells and water well contamination.

The seemingly insurmountable problem is that a hole must be drilled through layers of sediment that make up the geological profile to get to the coal/gas beds, this act effectively joins all the layers together and they are now only separated by the well bore casing. Casings consist of concrete, which readily cracks and allows material, including natural gas to escape from the well into the geological profile, (including aquifers) surface water and atmosphere.

Under pressure, contaminants escape into aquifers and in the case of methane gas, travel very freely all the way to the surface and can be seen in many places, bubbling profusely through rivers and

puddles around well heads. This is well documented and evidenced by people being able to 'light' well water that has become undrinkable. Profusions of bubbles coming out of rivers were they have never been before. In the case of gas bubbling up through the Condamine River (Qld), industry has attempted to explain this as recent flooding causing gravel to shift. Well, flooding will shift gravel but it does not cause continual, unrelenting release of bubbles. Clearly this is an attempt by industry to distance itself from its impacts and could not possibly be taken seriously. This type of behaviour only proves the industry to be untrustworthy.

As water and gas is extracted, underground pressures change and subsidence occurs, this increases the sheer forces on casings and the potential for leakage, in any gas field, there are many wells and many opportunities for leakage.

United States of America EPA figures in the attached report are stating 6% of casings fail immediately and all fail with age, therefore, it is reasonable to assume and is evidenced that contamination is impossible to avoid and the problem would get worse.

Pollutants can never be contained inside the well bores.

This panel is charged with the responsibility of informing, through a report, the government on a very important question. Should the unconventional gas industry be allowed to operate in Victoria? From my point of view I see the question from the perspective of, does the government have grounds to ban CSG mining in Victoria? On the evidence I have seen I would have to say YES a responsible government would ban this industry from operating in Victoria, because of the reasons outlined above.

Does the unconventional gas industry have the right to displace agriculture and people and make the land unsaleable, to cause farmers to walk off their land leaving it and its underground water polluted and unproductive?

Report on community and stake holder attitudes to onshore natural gas in Victoria

Page 1, dot point 3 Typical viewpoints:

The wording used here tells a lot about the compiling of this report, the 'support' cohort is portrayed as in touch, capable, has their finger on the pulse, they know what's happening, were as the 'do not support' are conveyed as fearful, suggesting a lack of knowledge or a superstitious opposition. Issues are not conveyed correctly, for instance, the report states, that people fear aquifers will be depleted and surface water will be polluted. The reality of what was conveyed to the consultation was that we know aquifers become polluted. We know that coal seam beds naturally contain toxic and radioactive elements, and that these enter aquifers along with fracking fluids and methane gas. I find it hard to believe that this was an unintentional omission, given the number of people I know to have delivered these concerns at those consultation meetings. The language used and presentation of this report I believe is skewed in favour of industry and denigrates or omits the real issues that people are rightly concerned about. Again, if the report had conveyed concerns about fugitive methane emissions, the issue may have appeared in the terms of reference but terms of reference only mention carbon dioxide. The report seriously underplays the level of knowledge and opposition to the industry among communities in affected areas. Every affected area that has been surveyed comes up at well over 85% opposed to the operation of the industry in their area. One would have to seriously doubt the validity of this report and question the motives behind it. When I attending a consultation, I asked why my concerns weren't being written down? I was told, oh, it's just a qualitative survey.

Another interesting thing about this report is, that it is compiled by, 'an independent facilitator' it seems no one is prepared to put their name to it, please excuse my cynicism.

Many questions come to mind,

How much will the state of Victoria gain in royalties weighed against how much it will lose through clean ups and loss of productive agriculture?

How much would agriculture be worth if farmers had unfettered access to ground water that mining is given?

Farmers are restricted so that the aquifers are managed sustainably and will be available to future generations. Mining is given unlimited rights to pollute, so it would never be useful again and totally dewater an aquifer in the pursuit of a few years supply of gas. There is not a level playing field here.

Confidentiality contracts

I would also like to comment on confidentiality clauses in contracts, people are forced to sign if they are to receive compensation from mining companies, when their water has become unusable or other impacts. People are under threat of lawsuit if they divulge the circumstances of their compensation. It should be enough to not divulge a figure of settlement, nothing else. This is clearly a design of the mining company to keep the damage they do secret. Does the panel know how many confidentiality contracts have been signed here and in the US?

Industry will say it can do better, that they can engineer their way around these problems. Experience and science tells us they can't and once the damage is done there is no going back. There is also indication that unconventional gas mining causes earthquakes, which will only increase the rate of well leakage and risks.

See attachment 2, *Earthquakes and Coal Seam Gas, Technology.org*

Federal EPBC Act

One could say there is a trigger to the Federal EPBC Act here because the damage to aquifers would be permanent and irreversible but that is entirely up to the discretion of the Federal Minister for Environment at the time. The present federal government's desire to blindly pursue fossil fuels as the energy of the future could seriously jeopardise the minister's judgement of impacts.

Bio-dynamic and organic agriculture

This is a fast growing and beneficial sector of agriculture, which has the potential for increased and ongoing, high value export. Almost certainly bio-dynamic and organic farmers would lose certification and future conversions prevented, if their water/land became contaminated. There is also the risk of contamination through airborne poisons and spills/overflow from containment dams. In the case of an earthquake, spills could be widespread and uncontrollable, contaminating vast tracts of land.