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Submission to the Enquiry 'Should there be an onshore unconventional gas industry in Victoria'?

From:
 Sharyn Munro



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For my book, 'Rich Land, Wasteland' (Pan Macmillan /Exisle, 2012) I did a great deal of research on both the coal and unconventional gas industries.

The chapter, 'Methane on the march', became the largest in the book. I attach the text of that whole chapter as part of this submission.

AGL have now admitted what I was quoting BHP Petroleum as saying several years ago; there's enough conventional LPG in the Bass Strait reserves to avoid gas shortages in the eastern states. There goes the doomsday scenario justification for rushing to open up more risky unconventional gas fields for LNG. We don't need to poison or dewater Gloucester or Gippsland, or anywhere.

My favourite bumper sticker says 'Coal costs the earth'. But so does the supposed interim saviour, methane gas. The industry calls it a 'cleaner' energy source than coal, but we now know that when you include the whole lifecycle, with leaks, 'fugitive emissions' and processing, and the fact that methane warms the atmosphere up to 70 times faster than CO₂, its immediate impact is worse, in these decades when we most need to slow global warming. It doesn't last as long, but we don't have long.

From the book, from keeping informed of progress of the industries to date, and from close association with the Gloucester folk investigating AGL's approved CSG project there, I consider the choice is clear.

Aquifers can't be fixed: water or unconventional gas?

I like to quote the late Bryce Courtenay: 'It's not about being a greenie; it's about not being stupid.'

Victoria is fortunate to have avoided the mad rush into this industry that has afflicted QLD, despite all the warnings from government departments about the long term water risks.

I urge you to be smarter than NSW, which lurched after QLD, handing out licences anywhere, and is now struggling to deal with the clear impacts and the huge backlash of public opposition. Last state election National Party seats in CSG-threatened areas were lost or dropped to marginal status for the first time in many many years.

The number of CSG-free surveyed and declared communities here is huge and I know is growing in Victoria.

Sites and geological make-up vary, but whether fracking or lateral drilling is used, the interference with clean water aquifers is a huge issue. Indeed the industry itself has 'conceded that extraction will inevitably contaminate aquifers' and that 'good management could minimise the risks of water contamination, but never eliminate them' .(SMH , Ben Cubby, 3 August 2011)

From what we have seen at Gloucester, as recently as end 2014/early 2015, either good management is not what AGL has used in their first four pilot wells – or the process itself is not controllable.

It also highlights the huge unresolved problem of what to do with the contaminated waste water.

In the US and in the UK, reinjecting deep underground has been proved to cause greatly increased seismic activity. The salt can be removed from CSG water but what to do with that? The heavy metals and toxins are seriously not meant for crops or cattle or dairy! It would be very expensive to treat to remove these as much as possible but they cannot 'treat' to remove all radioactive elements.

Fonterra in New Zealand won't accept milk from cows grazing on CSG-watered pastures.

What price Gippsland? I spoke there on invitation, in Inverloch, Mirboo North and Sale in 2012, and the level of concern even then was deep. It seemed crazy to them and to me that anyone would contemplate risking that lush Dairy Kingdom for a gas industry the people don't need. Only the companies do.

Very quickly at Gloucester came the proof of what the industry boasts is 'world class regulation':

1) During the fracking, it was discovered that AGL was using a radioactive element, Caesium-137, to measure the density of fracturing fluid. This had not been part of the approval process.

2) AGL had never said how the toxic fracking wastewater would be dealt with, yet the fracking had been

approved. One of the protectors followed the tankers to Newcastle, which led to exposure that their contractor was releasing it into Newcastle's sewer system despite directives to AGL from Hunter Water not to transport CSG water to the Hunter. BTEX was found to be present in that water before and after 'treatment'.

Their new contractor took it to South Windsor; but that facility has now rejected all AGL wastewater. Now they are trucking it to Queensland. Hardly cost-effective.

3) Then two fracking chemicals, tolclide and monoethanolamine, for which AGL's licence requires zero presence in groundwater, were found there. AGL knew that zero limit was exceeded in November, yet they kept fracking and didn't tell the EPA until Jan 15.

Dr Philip Pells has said all along that at Gloucester there is a high risk of an environmental disaster. He considered it likely that fracking would connect the coal seam's polluted water with the beneficial shallow aquifers. 'Adaptive management' is what AGL was approved to use, which always meant it would be too late to do anything after the disaster occurs, as it has.

4) Then AGL admitted large fluctuations of groundwater levels at its monitoring bores; they don't admit fracking is the fault but levels at one bore varied as much as 7.8 metres during the fracking and 3.5 metres after it.

5) Next they found toxic BTEX chemicals –benzene, toluene, ethylbenzene and xylenes– in fracking wastewater at two of the wells and an above-ground storage tank. Benzene is a known carcinogen. Yes those chemicals can occur naturally but fracking is likely to be the cause of their release. AGL discovered the chemicals on January 15, but only reported them almost two weeks later.

After this avalanche of bad PR, AGL suspended the Waukivory Pilot Project, then the government did so too. Just two months of world class management of four wells. Imagine 110, and then 330 wells? The 'robust' investigation into it simply found that AGL did not inject the BTEX and they have resumed trying to deal with the water issues.

Although I did not come across examples in Australia of current shale and tight gas extraction operations, it was being promoted as the next big thing in some states, especially S.A., despite the adverse impacts of decades of these industries in the U.S. now being very evident, and known here.

Shale and tight gas do not require dewatering as does CSG but do require fracking. They all share the serious negative impacts of fugitive emissions, uncontrolled migration of gases and contaminants into groundwater and ground and air, and attendant health impacts on people and animals.

In NSW investment in CSG is locking us in for decades, delaying the urgent move to renewable zero emissions energy. The government is now buying back licences in areas where it conflicts with established industry clusters like viticulture. They should ban it and get on with the transition to clean energy.

Public and medical groups' concerns and media about health impacts in Sydney suburbs from AGL expansion plans caused it to be politically expedient for Barry O'Farrell to throw a 2km buffer zone around towns, yet it was not applied to the hastily approved project at Gloucester. Are the people there immune, or unimportant?

Around Tara gas fields in QLD there are children with rashes all over their bodies, from the borewater, with headaches, nausea and bleeding from nose and ears— from what's in the air? Flaring? Fugitive emissions? Families are suffering and being ignored; their lives are in ruins. Dr Gerylann McCarron's report notes her particular concern about the apparent neurotoxic effects on children there.

The industry's solution is to deny or to disparage adverse results. As they did with the Southern Cross Uni researchers' findings that the air over Tara's gasfields contains more than 3 times the levels of methane as in non gas field areas.

And there've been enough 'accidents' in Qld and now NSW for us to know that the 'risks' are more probable than possible – wells and fittings leaking, creeks and rivers like the Condamine bubbling, and ground oozing with highly flammable methane, like the Nepean in flood, or buried gas pipes bursting in floods, as near Bundaberg, or uninjected carcinogenic chemicals turning up in water sources; the odd blowout, as at Camden and Dalby, or escaped gas as at Camden, be it 10,000 or 100,000 c.feet, AGL can't decide; bore levels dropping from depressurisation, CSG water spills or dumps killing everything they touch, as in the Pilliga. That area is still dead years later.

Disasters with Underground Coal Gasification (UCG) trial projects and water contamination in Queensland have been ongoing. It seems the least controllable.

In 2011 there was a Senate CSG inquiry. Its chair was Senator Heffernan, who said that "committee members 'were just blown away with the absolute despair of the people we met and their sense of helplessness' during the Queensland hearings."

That Committee's interim report 'recommended the suspension of all coal seam gas projects in the area of southern Queensland and northern New South Wales where the Murray-Darling Basin and the Great Artesian Basin overlap, pending new research into water pollution and the effects of "fracking" '. In what dark drawer is that report languishing, un-acted upon, while the industry powers ahead – or tries to– in those areas??

I urge the Enquiry to read my chapter as well as this submission.

I hope that wisdom will prevail for Victoria's sake, and that you recommend, not just an extended moratorium, but that Victoria ban all unconventional gas industries for good.

Thank you.

Sharyn Munro