

Dear Parliamentary Committee,

My name is Gary Milich and I live on a farm at [REDACTED]. The farm consists of 50% blue gum plantation and 50% native forest. I have lived on the farm for over thirty years so feel well qualified to speak about our natural environment. 56 species of birds have been identified on our farm along with a number of eastern grey kangaroos, black wallabies, echidnas, native bush rats, ring tail possums, sugar gliders and antechinus. It is an example of a natural environment that is dramatically declining in Australia. Industries such as coal seam gas are a direct threat not only to productive farmland but also to the birds and native animals that have no voice when their home and habitat is threatened.

I am opposed to tight gas and shale gas mining that is proposed for any area in Victoria and support a permanent ban.

Last week I assisted in the conducting of a survey of CSG mining opinions in Cashmore. All surveyors reported 98 to 100% opposition to CSG mining in Cashmore. Not only were community members against CSG mining but expressed anger at how any government could endanger our water supplies and agricultural land. One of the most valued features of the south western district of Victoria is the large aquifer that extends under much of the area and provides excellent water for both farms and urban communities. I note that 68 Victorian communities have declared themselves CSG mining free.

I attended the making of a beach sign declaring Portland gas field free. Being a long term resident of Portland with extensive community connections I was amazed not only at the number of community members that attended on a cold wet day but of the broad cross section of community represented. Participants ranged from the elderly to children and lifetime Liberal supporters to members of the Greens political party. It occurred to me that this issue was across all political parties and community members were prepared to support any party that would prevent CSG mining. The election of Greens candidates in the NSW election was an example of how voters will vote to protect their land, home, water, food production and health. I actually believe it is quite a powerful comment to see a farmer who has a reputation of cutting down every tree and eradicating all native animals on his farm, engaged in amicable conversation regarding opposition to CSG exploration with "greenies". I have no doubt that the political wash up of this committee's findings will have a harsh consequence if CSG mining is allowed in Victoria.

I do not believe that CSG mining can co-exist with agriculture, tourism or our native forests. The endangering of our water supply is my number one concern. The blue gum industry and farmers centre pivots for irrigation have all had restricted water use placed on them. Here is an industry being considered that uses vast amounts of water in a state where restriction on other industries are in place. The risk of contamination of aquifers is high with well failure evident in Queensland and America. How do you check that a leaking well 4 km deep has been fixed when cement has been used to seal the well? It may stop the escape of gases up the well but what about the side leaks that could be contaminating our drinking water aquifers? There is also plenty of evidence to show that holding ponds overflow and contaminate surrounding farmland, streams and rivers.

With climate change being recognised by scientists globally as manmade it seems irresponsible of any government to pursue an industry that will significantly add methane and carbon to our atmosphere. Many countries are leaving Australia behind by focussing on renewable industry as the best choice of energy. We have the opportunity with solar, wave and wind to be world leaders in renewable energy and provide a much needed boost to our manufacturing industries. Unfortunately many manufacturing industries who rely on gas for energy will close if gas pricing rises to international levels.

Terms of reference 1.

The areas proposed in Gippsland and South West Victoria are some of our state's most valuable farm land. It relies on clean water to produce a vast array of products for both the local and export markets. Water is vital for our food sustainability and should be protected from any industry where there is the remotest chance of contamination. CSG mining is a short term exploration of a resource whereas farming and the need to produce food has been around since man first tilled the earth and will be needed by future generations. The same cannot be said for CSG mining which has a very short time span when compared to farming. Once extracted that resource is used forever and can never be replaced. Farming and food production will be needed by all future generation who will no doubt be using renewable energies in a much cleaner, greener world.

As stated previously there is plenty of evidence to show that industries will close if gas prices go to international levels rather than the current domestic level. Already we have seen protests by industries who fear further price rises in gas will make them uncompetitive.

Terms of reference 2 and 3.

A key issue relating to whether we should allow this industry to become established in our state is the question of its likely impacts on agricultural production and hence both domestic and export economies.

Agriculture is a cornerstone of Victoria's economy, producing goods valued at around \$9 billion a year. Victorian farmers do this with only around 3 per cent of Australia's arable land. Our output has been growing in recent years, from \$6.56 billion in 2007-08 to around \$9 billion in 2010/11.

When the current exploration licenses for UCG are considered, it is clear that large sections of highly significant farmland is being considered for gas production.

Groundwater plays a vital role in sustaining agriculture in Victoria, and hence our economy and lifestyle. Mining coal and gas is a very water intensive process. With the prospect of an expanding mining sector, fossil fuels and agriculture can be expected to be in increasing conflict over limited water supplies in coming years.

It is likely that there will be localised economic competition for water between agricultural users and miners should gas production become commercialised. Many farmers already struggle with high production costs and downward pressure on farmgate prices for their product. If miners, in effect, drive up water prices, this will impact on farmers who need to buy water allocations. With the probable localised nature of any UCG production, this could cause pockets of hardship for agricultural producers unlucky enough to have gas production in their immediate area.

Apart from the question of industry accessing large volumes of water, there is also the matter of quality of ground water. Based on the experience in Queensland, concerns about contamination of aquifers or surface water from mining operations can be expected to become significant once operations become established.

Contamination is a problem with all forms of UCG drilling – not just CSG. The industry argues that there will be no problems with shale and tight gas. Experience overseas suggests otherwise. For instance, in the US state of Pennsylvania, where UCG is well established, the Department of Environmental Protection has catalogued 243 cases of contamination of private drinking wells from oil and gas drilling operations. There are many contamination incidents associated with CSG drilling in both NSW and QLD.

As industry often explains, the process of fracking involves pumping a mixture of water, sand and chemicals into coal seams in order to release methane gas. The mix is often referred to as being '98%' water.

The water used in the fracking process is generally very large. For instance, the Gippsland Water Atlas produced by Southern Rural Water says that CSG is likely to "use 100 ML per year of groundwater per well to release the gas from the coal"

Much of this water, known as "produced water", is then pumped back to the surface as the gas is sucked out, and requires some form of treatment or storage. It cannot be released back into the water cycle unless treated. If it is released untreated, it can cause major contamination of surface and ground water resources.

All forms of UCG use substantial quantities of water. Shale and Tight Gas, which exist at deeper levels will need to be fracked, which means substantial volumes of water, even if fewer chemicals are used in the frack mix compared with CSG.

One estimate of water use in shale gas frack operations was '20 ML per frack', with 'flowback rates of 10 to 70%'

Like the water that is pumped into the ground as part of the frack to carry the sand and chemicals, this water will be contaminated with salts, whatever chemicals are used in the frack, and potentially any chemicals found in the coal seam itself. In the case of Tight and shale gas, other potential contaminants include radioactive materials.

BTEX chemicals naturally occur in coal seams, and could be brought to the surface in drilling operations. BTEX refers to the chemicals benzene, toluene, ethylbenzene and xylene. Benzene is a known carcinogen. According to the National Toxics Network, "the fracking process itself can release BTEX from the natural-gas reservoirs, which may allow them to disperse into the groundwater aquifers or to volatilise into air. People may be exposed to BTEX chemicals by drinking."

It is also possible that any new drilling operations will come into competition with urban use. For example, towns such as Loch Sport may need to rely on groundwater in future. This area is being targeted for Tight Gas operations.

Based on the experience of farmers in Queensland where the coal seam gas (CSG) industry has already become entrenched and its problems are well documented, we do not accept the premise put forward by the industry that UCG operations can peacefully co-exist with farming. While any potential onshore gas industry is unlikely to be of a scale of what is already found in Queensland, we can expect that any impacts will be felt keenly given the relatively higher population density here in Victoria.

Terms of reference 5 and 6.

From the negative examples of UCG drilling elsewhere in Australia and around the world, I believe the best way to regulate this industry is to ban it. This is the simplest policy response. Many other jurisdictions have chosen to place an outright ban on UCG and/or the process of fracking. Some examples include:

## Outright Fracking Bans

### USA

- **New York** – December 2014 – this was implemented on the basis of health risks after expert investigation and the publication of a New York State Department of Health Report. [http://www.nytimes.com/2014/12/18/nyregion/cuomo-to-ban-fracking-in-new-york-state-citing-health-risks.html?\\_r=0](http://www.nytimes.com/2014/12/18/nyregion/cuomo-to-ban-fracking-in-new-york-state-citing-health-risks.html?_r=0)
- [https://www.health.ny.gov/press/reports/docs/high\\_volume\\_hydraulic\\_fracturing.pdf](https://www.health.ny.gov/press/reports/docs/high_volume_hydraulic_fracturing.pdf)
- **Secaucus, New Jersey** – 26<sup>th</sup> June, 2012 - The mayor and Town Council banned fracking and fracking waste water "in a resolution that states that the drilling process causes environmental hazards." [http://hudsonreporter.com/view/full\\_story/19312259/article-Secaucus-bans-%E2%80%98fracking%E2%80%99-Local-officials-also-call-for-statewide-and-national-ban-?instance=secondary\\_stories\\_left\\_column](http://hudsonreporter.com/view/full_story/19312259/article-Secaucus-bans-%E2%80%98fracking%E2%80%99-Local-officials-also-call-for-statewide-and-national-ban-?instance=secondary_stories_left_column)
- **Vermont** – 17th May 2012 – Vermont was the first US state to ban fracking. The Governor stated that protection of drinking water is more important than increased access to natural gas. [http://www.huffingtonpost.com/2012/05/17/vermont-fracking-ban-first\\_n\\_1522098.html](http://www.huffingtonpost.com/2012/05/17/vermont-fracking-ban-first_n_1522098.html)

### UK

- **Wales** - from February 2015 – "effectively making it impossible for shale gas developments to receive planning permits in Wales." <https://uk.finance.yahoo.com/news/wales-votes-against-shale-gas-190742367.html>
- **Northern Ireland** – July 2014 – the environment minister promised that there will be no fracking in Northern Ireland unless it can be proved "safe beyond doubt". <http://www.belfasttelegraph.co.uk/business/news/fracking-drilling-will-not-be-allowed-in-northern-ireland-unless-its-proven-safe-warns-environment-minister-mark-h-durkan-30469238.html>

### Europe

- **France** -30<sup>th</sup> June 2011 - Ban on hydraulic fracturing was voted in by parliament. The International Energy Agency claims that France has more plentiful reserves of shale gas than most of Europe, but

France's Constitutional council threw out a 2013 challenge to the law by US based Schuepbach Energy <http://www.dw.de/french-court-rejects-challenge-to-anti-fracking-legislation/a-17151744>

Current President François Hollande has promised the ban will be maintained for his five-year term. <http://www.bbc.com/news/business-23311963>

•**Luxembourg** – 13th November 2012 – the Luxembourg parliament voted against a motion to extract underground shale gas based on environmental concerns. <http://www.wort.lu/en/luxembourg/no-fracking-of-shale-gas-in-luxembourg-50a37ff8e4b0e83edf95f923>

•**Bulgaria** – 18<sup>th</sup> January 2012 - Bulgaria banned exploratory drilling for shale gas. On 14<sup>th</sup> June 2012 Bulgaria imposed an absolute ban on fracking and revoked Chevron's shale gas permit. <http://www.theguardian.com/world/2012/feb/14/bulgaria-bans-shale-gas-exploration>

•**Spain** – 30<sup>th</sup> January, 2014 – fracking was banned in Catalonia as part of the urban planning law. [http://ccaa.elpais.com/ccaa/2014/02/01/catalunya/1391210321\\_238105.html](http://ccaa.elpais.com/ccaa/2014/02/01/catalunya/1391210321_238105.html)

•**Canton of Fribourg, Switzerland** – April 2011. Decision not to renew exploration licence of Schuepbach Energy, and all other licences suspended “for an undetermined period.” <http://coalseamgasnews.org/news/world/switzerland-joins-worldwide-ban-on-gas-fracking/>

•**Austria** – March 2014 - a fracking ban was enshrined in the Vorarlberg State Constitution. <http://www.vol.at/fracking-verbot-wird-in-vorarlberger-landesverfassung-verankert/3907751>

•**Italy** – September 2014 – a ban introduced as part of the *Law of Stability 2014* in order to protect groundwater and soil and promote “efficient use of national water resources.” <http://www.ilfattoquotidiano.it/2014/09/04/fracking-commissione-ambiente-da-vietare-il-ministero-mai-autorizzato/1110626/>

Governments can never ensure that proper guidelines, rules and regulations are in place to protect communities and the environment. There are numerous examples of things going wrong and costing huge amounts of money to clean up pollution resulting from poor government regulations. The recent Yallourn coal mine fire is an example of this resulting in significant health risks to local residents. How is it possible for the government to insure all Victorian farmers and food producers for the next ten generations should their water become contaminated resulting in bans on food they produce?

I pray that our productive farming land will not be sacrificed for short term gain and greed. Ban fracking forever in Victoria.

Gary Milich