

Submission for the Parliamentary inquiry into unconventional gas.

To the Environment and Planning Committee for Unconventional gas inquiry.

Thank you for taking the time to read through my submission for the unconventional gas inquiry. I currently live in an area which has an exploration licence for unconventional gas (tight and shale). I did not know a lot about unconventional gas (UG) and its impacts, so started to research for myself.

I have many points that I would like to make in regards to the terms of reference and they are below. But firstly, I would like to make it clear that I wish to see a ban on unconventional gas in Victoria. And basically it come down to one major point, why risks our livelihoods to an industry that has not yet proven its self to be 100% safe. Why not take the precautionary approach?

The terms of reference are in red and my concerns are in black.

**(1) the prospectivity of Victoria's geology for commercial sources of onshore unconventional gas;**

Regardless of Victoria's geology, The Daniel Andrews Labor government has invested big dollars in Agriculture, promising a \$200 million Future Industries Fund, awarding \$1 million grants to businesses specialising in the food and fibre sector, and in five other high-growth industries in which Victoria is poised to lead the world. Invest \$20 million in Food Source Victoria, a program to build alliances of producers. The regional alliances will focus on high-quality goods and collectively market their produce for export. *Reference- Back on the Land 2015*

Why would we risk our productive agricultural industry, which has injected 11 billion dollars into the Victorian economy?

**(a) an ability to provide a competitive source of energy and non energy inputs for Victorian industries;**

The export orientation of the market arrangements for natural gas in Australia is seen to expose the domestic market to international price movements with no expectation that onshore natural gas production will deliver lower prices in Victoria.

**(b) an affordable energy source for domestic consumers; and**

What percentage will be set for domestic users? When so many manufacturing industries are closing their doors, and existing companies are turning off the gas line, who will be 'buying' this unconventional gas?

The notion that onshore natural gas should be further developed is challenged on the basis that existing reserves are adequate for at least 30 years and this allows sufficient time for government to redirect resources to renewable energy sources, thus helping to mitigate climate change effects.

**(c) carbon dioxide emissions from these sources;**

There are concerns around air pollution in relation to UG activity, with fugitive emissions of methane and other gasses (e.g. benzene) around the well head, from holding ponds, and from escape through subsidence etc. The main gas produced by CSG is methane and the concern is that it has a higher greenhouse footprint and is more potent than CO<sub>2</sub> used in conventional gas extraction.

**(2) the environmental, land productivity and public health risks, risk mitigations and residual risks of onshore unconventional gas activities;**

The list of risks is long. Below you will find my list of concerns-

- Noise pollution of trucks, drilling rigs and construction.
- Air pollution
- Public health - Research by Doctors for the Environment Australia (DEA) has found that the current level of assessment, monitoring and regulation of CSG exploration and mining activities in Australia is inadequate to protect the health of current and future generations of Australians. DEA identified three key areas where there is the potential for adverse human health impacts: through contamination of water, air and soil; through diversion of water and land away from agricultural food production; from mental health impacts on communities who have had environmental changes imposed upon them'

The environmental health impacts of the contamination and degradation of air and water have the potential to cause significant physical harm. The Australian Medical Association (AMA) recently called for the blocking of CSG developments if any doubt exists that there could be serious or irreversible harm to health.

- water - Water consumption during drilling and processing . The risk of spillage and disposal of "flowback" water. Disposal of "produced" water, and interference to groundwater, the water table, aquifers, e.g. lowering of water tables and contamination with chemicals .

Contamination to ground water, issues around produced water and seepage and evaporation from evaporation pools may result in health impacts in livestock and wildlife, general environmental and soil degradation due to increases in salinity or toxic chemicals.

- People once attracted to a more rural existence may, with the development of an onshore natural gas industry, face a more industrialised environment that affects their way of life and their appreciation of their surroundings. The makeup of the community may change to reflect those attracted to the changed environment and those who choose to stay.

**(3) the coexistence of onshore unconventional gas activities with existing land and water uses, including —**

The onshore natural gas industry in other locations is seen as having a substantial and long lasting 'footprint' in its development, operational and redundancy phases. The industrial nature of onshore natural gas mining is in contrast to many current uses (e.g. agriculture, tourism, residential, biodiversity and amenity) and is seen as changing the landscape it occupies. Other land uses are considered to be significantly affected, devalued and/or displaced with coexistence not seen as possible.

**(a) agricultural production and domestic and export market requirements;**

How do farmers sign Nation Vendor Declaration in the case of unconventional gas on their property or a neighbours property?

**(b) the legal rights of property owners and the impact on property values; and**

As the system stands, there is a sense of unfairness. Concerns arise from the fact that minerals and gas are owned by the State on behalf of the whole community, and landholders cannot deny access to exploration companies. Some landholders believe they can be 'bullied' in negotiations

with industry and disadvantaged in the compensation for loss of production as well as risk inadequate restoration compensation.

Once a property is marked for unconventional gas, at exploration stage or production stage, property values would be devastating. For most people their home is their greatest asset and threats to this are threats to their overall financial security. In addition, those who make their living on the land, such as farmers, have both their home, their job – their entire financial security, based on their land. Therefore preserving its dollar-value and quality are paramount.

**(c) any implications for local and regional development, investment and jobs;**

The Australian Bureau of Statistics estimated that around 3,500 businesses in Victoria are involved in horticultural activities. Of those businesses, most are concerned with the production of fruit (particularly pome fruit, citrus, stone fruit and berries), almonds (and other nuts), grapes and vegetables.

*Stats from the Victorian DEPI- Victorian horticulture exports were valued at \$894 million in 2013-14, an increase of \$288 million (48 per cent) from 2012-13. Hong Kong was Victoria's largest market for horticultural exports, valued at \$141 million*

Stats from the National Farmers Federation-

*As of 2010-11, there are **307,000 people** employed in Australian agriculture. The complete agricultural supply chain, including the affiliated food and fibre industries, provide over **1.6 million jobs** to the Australian economy.*

*The agricultural sector, at farm-gate, contributes **3 percent** to **Australia's total gross domestic product (GDP)**. The gross value of Australian farm production in 2010-11 was **\$48.7 billion**.*

*Yet this is only part of the picture. When the vital value-adding processes that food and fibre go through once they leave the farm are added in, along with the value of all the economic activities supporting farm production through farm inputs, agriculture's contribution to the GDP averages out at around **12 percent (or \$155 billion)**.*

From the Australia Institute Matt Grundoff Fracking the Future report - The gas industry is relentless in its claims about job creation. It commissions modelling, creates dedicated websites and runs national multi-million dollar advertising campaigns that focus on the potential for the industry to create huge numbers of jobs. It is not surprising then that 39 per cent of the August survey respondents nominated more jobs as a benefit of CSG. While the industry is busy claiming it creates many jobs, the reality is that the gas industry is a relatively small employer. While figures for the CSG industry are not published by the ABS, job numbers for the oil and gas industry are, and the CSG industry is a part of this sector. In August 2013 the entire oil and gas industry employed 20,700 people, which is 0.2 per cent of the workforce. To put this figure into context, the hardware retail company Bunnings employs 33,000 people.

**(4) the ability of potential onshore unconventional gas resources contributing to the State's overall energy sources including —**

With the world now shifting its focus into renewables, it would make more sense to continue with the progress that has already been made. Wind legislation reform, Victorian RET and hydro station projects (\$500,000 to build a mini hydro station at Lal Lal Reservoir)

Minister for Industry, Lily D'Ambrosio, said Labor's \$200 million Future Industries Fund would also work with the renewable energy sector to boost the creation of jobs and investment. The establishment of a \$20 million New Energy Jobs Fund will also offer support to community groups and businesses developing renewable energy projects.

The onshore natural gas industry is seen as intrusive, using deep drilling, hydraulic fracturing and large volumes of water and often requiring access to private land. There is concern that

water sources will be diminished in quality and availability for other uses, with potential consequences to agricultural productivity and biodiversity. Deep drilling and fracking is considered to affect the structural integrity of the subsurface environment potentially leading to fugitive gas emissions, increased earthquake activity in areas of seismic instability, potential contamination of underground aquifers and loss of access to ground water for other uses.

(5) the resource knowledge requirements and policy and regulatory safeguards that would be necessary to enable exploration and development of onshore unconventional gas resources, including —

Much work is needed in filling in the knowledge gaps, and how risks can be mitigated. All industries come with risks, it is whether these risks are far too great? Onshore natural gas is seen as a relatively new industry and science, and experience is insufficient to predict with any certainty, the potential risks and their management. Some government agencies and scientific authorities are described as being compromised or lacking independence. There is a strong focus on the gaps in scientific knowledge rather than the extent of the existing knowledge.

(a) further scientific work to inform the effective regulation of an onshore unconventional gas industry, including the role of industry and government, particularly in relation to rigorous monitoring and enforcement, and the effectiveness of impact mitigation responses; and

Who will be the 'watchdog' for communities? Will they carry certain level of powers? Will the government put up compensation in the case of an accident?

(b) performance standards for managing environmental and health risks, including water quality, air quality, chemical use, waste disposal, land contamination and geotechnical stability;

I would like to think all the above performance standards would be measured long before the industry arrived and baseline studies conducted.

The capacity of regulators to manage the development and operations of the industry is questioned. Concerns are expressed about regulatory powers and their stability over time; inadequate and declining regulatory resources; poor industry track record; inadequate adherence to voluntary industry codes of practice; the international and sometimes 'footloose' nature of some private companies and the inability of regulators to enforce compliance in the advent of bankruptcy; the perceived inadequacy of restoration bonds given the lifetime of potential impacts; the possibility of risks and liabilities being transferred from the companies to landholders, the community or the State before their effects emerge and, the risk of unforeseen risks and liabilities emerging later.

(6) relevant domestic and international reviews and inquiries covering the management of risks for similar industries including, but not limited to, the Victorian Auditor-General Office's report *Unconventional Gas: Managing Risks and Impacts* (contingent upon this report being presented to Parliament) and other reports generated by the Victorian community and stakeholder engagement programs.

The Victorian Community and stakeholders engagement program and its community open days were poorly advertised. It was attended strongly by those opposing the industry (advertised by local Frack Free Groups), yet was only reflected in the interim report. The final report, which focused on the quantitative survey, only surveyed 950 people from Victoria. The three different groups (for/against/don't know) is quiet concerning. The large proportion of the community

which had not adopted a stance, merely didn't know who to trust. Independent research is the key to understanding the full impacts this industry may have. Until then, we will continue into the unknown.

When I write this submission, I find that there are many knowledge gaps and unknowns. BUT...can the gas companies prove and guarantee these risks are unfounded. That my concerns are unreal? If not, then why are we even considering this industry in Victoria?

Many towns over the state have now declared themselves Gasfield Free. These are mainly towns that will be affected if allowed to proceed. There is no social licence for this industry.

Why risk the beauty, agriculture, primary production, lifestyle and livelihoods of thousands of Victorians with an industry that has scientific evidence to prove it is unsafe?