

Submission to the Inquiry for Unconventional Gas

Dear Committee Members,

My name is Martin Demosthenous. I am a primary school teacher and I currently live in Hoppers Crossing. I am passionately and wholeheartedly against any form of Unconventional Gas Mining including Coal Seam Gas, Tight Gas and Shale Gas. I find it morally inept that Australia continues to support industries that will further ruin the environment and contribute to the climate catastrophe. Being a teacher, I feel somewhat contradictory to constantly reinforce sustainable living (which is intertwined in the Australian curriculum) yet mining companies are allowed to further eradicate what little natural landscape we have left. There are renewable alternatives and particularly with the decision of the G7 summit, 'that deep cuts in global greenhouse gas emissions are required with a decarbonisation of the global economy over the course of this century,'¹ surely these forms of damaging extraction must be halted.

This next section will entail Terms of Reference put forward by the Inquiry and the various impacts on the environment, and citizens of Australia.

1. The prospectivity of Victoria's geology for commercial sources of onshore unconventional gas:

Banning Unconventional Gas (UCG) drilling will ensure current industries can thrive and have prosperous futures within our state. Tourism is a massive contributor towards our Gross Domestic Product (GDP), and if we continue to take our environment for granted, this will eventually be a distant memory. In 2011-12 this industry was worth \$19.1 billion, 5% of the

¹ "Leaders' Declaration: G7 Summit 2015." 2015. 6 Jul. 2015
<<http://www.g8.utoronto.ca/summit/2015elmau/2015-G7-declaration-en.html>>

state's Gross Product.² The unique wildlife and environment is a fundamental component of people travelling from abroad and domestically. Also the agricultural industry which is pivotal for the welfare of every Victorian will also be an area that will suffer from allowing UCG to operate. A report by the National Resources Defence Council stated that "the currently available options for Fracking are inadequate to protect human health and the environment."³ If the water-table is continually drained to perpetuate the fracking machine, not to mention the millions of litres of toxic, non-biodegradable chemicals used in the process,⁴ the livelihood and welfare of our citizens will be at stake. The financial gain will not be shared amongst our society, it will be shared amongst the hands of a few mining oligarchs for example Gina Rinehart being worth \$11.4 Billion (US).⁵ Accruing an amount of wealth this large is not only preposterous, it ensures the gap between the rich and poor continues to widen, making it increasingly difficult to implement change. The amount of subsidies towards fossil fuel extraction in Australia is massive, "in 2014 the government hands over \$11.5 billion a year in industry subsidies that incentivise pollution."⁶ These industries need to be taxed at a far higher rate and their subsidies should be invested into the production and implementation of renewable energy alternatives. Therefore we will be able to produce an energy source that is both efficient and not as damaging to the planet.

² "Economic significance - Tourism Victoria." 2013. 9 Jul. 2015 <<http://www.tourism.vic.gov.au/research/economic-significance.html>>

³ Hammer, R. "In Fracking's Wake - Natural Resources Defense Council." 2012. <<http://www.nrdc.org/energy/files/fracking-wastewater-fullreport.pdf>> p 1.

⁴ 1 T. Hayes, Gas Technology Institute, Sampling and Analysis of Water Streams Associated with the Development of Marcellus Shale Gas, report prepared for Marcellus Shale Coalition, December 2009, <http://www.bucknell.edu/script/environmentalcenter/marcellus/default.aspx?articleid=14>; E.L. Rowan et al., Radium Content of Oil- and Gas-Field Produced Waters in the Northern Appalachian Basin (USA): Summary and Discussion of Data, 2011, 31, <http://pubs.usgs.gov/sir/2011/5135/pdf/sir2011-5135.pdf>.

⁵ "Gina Rinehart - Forbes." 2014. 6 Jul. 2015 <<http://www.forbes.com/profile/gina-rinehart/>>

⁶ "GetUp! - Clampdown on Tax Dodging by the 1%." 2015. 6 Jul. 2015 <<https://www.getup.org.au/campaigns/the-buffett-rule/buffett-rule/clampdown-on-tax-dodging-by-the-1>>

2. The environmental, land productivity and public health risks, risk mitigations and residual risks of onshore unconventional gas activities

Where to begin? Mining in all forms is damaging to the natural environment and in turn human beings, as we are part of that environment. UCG drilling greatly enhances the risk to public health due to the copious amounts of chemicals involved in the process. The Environmental Protection Agency (US) has analysed the chemicals involved and brought to the surface during the Fracking process by stating that

“The air and climate pollutants that oil and gas companies bring to the surface include: methane and other VOCs, such as the BTEX hydrocarbons and other “aromatic” hydrocarbons, including PAHs; hydrogen sulfide; radon derived from radium present in targeted rock formations; and any chemicals from fracking suspended in the air as vapor or aerosol, such as glutaraldehyde, ethylene glycol and methanol.”⁷

Therefore, not only is the environment being damaged by the physical removal of the fossil fuels, the toxic remnants of non-biodegradable carcinogens remain for decades thereafter. Some of the specific effects of the harmful chemicals are, “greenhouse gas emissions (methane), respiratory and nervous system complications (BTEX air toxics), and various types of toxic chemicals that are detrimental to human health such as Hydrogen Sulfide.”⁸ The motivation of the mining companies is profit; this is indicated by their complete disregard for the welfare of the citizens whose land they decide to establish UCG wells. There needs to be a value shift where the emphasis is humanitarianism, not exploiting the masses for the sake of profit. The energy is created for the people, therefore it should not be detrimental to their existence.

⁷ U.S. EPA OIG. February 2013 at 2 and 3; Adgate et al. 2014 at 8308

⁸ "The Urgent Case for a Ban on Fracking - Food & Water Watch." 2014. 6 Jul. 2015
<http://documents.foodandwaterwatch.org/doc/urgent_case_for_ban_on_fracking.pdf

3. The coexistence of onshore unconventional gas activities with existing land and water uses

The notion of citizens (particularly in rural communities) only owning the surface of their land, whilst mining licences allow extraction companies to literally drill wherever they decide is erroneous in a supposed democratic society. It is not only an invasion of privacy on purchased land, it is also an attack on basic human rights. A person and their family's health is put at risk for generations with the chemicals that fracking releases into the environment. The potential poisoning of the water supply and landscape is inevitable. The *National Toxics Network* describes through independent research that, "Produced water from both CSG and shale gas is contaminated with heavy metals, NORMs, fracking or drilling chemicals, volatile and semi volatile organic compounds and high concentrations of salts."⁹ This is due to the improper removal of dangerous substances and the technology to adequately remove these chemicals from the wastewater has not been created. Therefore how this is legal is truly beyond my comprehension. The companies are surely aware of this as they constructed the mixture to be used in the fracking process. There are many negative implications if the UCG industry is supported within Victoria, and especially in the area of job creation. The agricultural industry creates significantly higher job opportunities for Victorian citizens, currently 60,000¹⁰ The more that I research the topic, the more I become infuriated that there is even a debate taking place, energy should not be given prevalence over the livelihood of Victorians. Therefore despite the temporary increase of jobs associated with Fracking, the agricultural industry (which employs far more than mining) will be destroyed. This will be due to the landscape being untenable and unfit to grow, either because the fruit yield will be rife with toxic substances, or the soil will become

⁹ Fields, QG. "Toxic Chemicals in the Exploration and Production of Gas ..." 2013.
<http://www.ntn.org.au/wp/wp-content/uploads/2013/04/UCgas_report-April-2013.pdf>

¹⁰ Energy and Earth Resources 'Trends in Australian Agriculture' 2012
<http://www.energyandresources.vic.gov.au/about-us/publications/economics-and-policy-research/2006-publications/trends-in-victorian-agriculture>

too damaged to even support life. The risk is far too great just for the sake of energy. There are alternatives such as Solar farms in the desert,¹¹ wind farms, tidal energy and geothermal.

Increasing funding towards these industries will not only create jobs in both the short and long term, we will also be compassionate stewards of our land for future generations.

4. The ability of potential onshore unconventional gas resources contributing to the state's overall energy sources including a) an ability to provide competitive source of energy and non-energy inputs for Victorian industries and an affordable energy source for domestic consumers

The first issue is that Unconventional Gas extraction is a fossil fuel. Therefore despite global awareness of these contributing to climate change, new industries are being proposed throughout the state. This industry should be viewed as untenable if we want to stay below the 2°C mark and avoid the many negative implications associated with the temperature increase (famine, drought, extreme weather costing economies billions if not trillions of dollars).¹² There should not be a focus on expanding an industry that is unfavourable to the progression of our society. Instead the focus should be shifted on ecologically friendly alternatives that do not emit harmful pollutants.

Also the actual process of Fracking, is much more energy intensive than conventional mining. The input energy, drilling and unprecedented amounts of water are clear indicators that this current process is not in the best interests of the Victorian people. It simply is not sustainable to impose UCG drilling throughout regional Victoria, when there are alternatives that will create more jobs and have a much less harmful effect on the environment.

¹¹ "Australia's biggest solar farm opens at Nyngan, western ..." 2015. 9 Jul. 2015
<<http://www.abc.net.au/news/2015-04-18/nyngan-largest-solar-plant-in-australia/6402112>>

¹² if Global, WWP. "NRDC: The Cost of Climate Change." 2008.
<<http://www.nrdc.org/globalwarming/cost/contents.asp>>

5. The resource knowledge requirements and policy and regulatory safeguards that would be necessary to enable exploration and development of onshore unconventional gas resources

UCG drilling has incurred nationwide bans in France, Germany, Ireland and Spain and many others,¹³ for the simple reason that that the government's' objectively analysed the data and realised the risk far outweighed the gain. The main advocates are of course the United States, England and Australia. It is up to the government to determine whether this process is damaging to the environment and the inhabitants within. We are a developed nation with educated, kind people; therefore I hope the state government will make the right decision. Thus far, this has not been the case, and if this is damaging to our people, the idea should not be entertained. Entire nations deciding that UCG is dangerous to citizens and wildlife should be enough evidence for our own government to make an informed decision. The time for reckless mining without any consideration towards the environmental impacts have passed. In order to salvage what little natural environment we have left, there must be strict regulations preventing UCG permanently throughout Victoria, and then hopefully Australia.

Conclusion:

I am strongly recommending that Victoria does not continue to ignore the stark reality of climate change. Unconventional gas drilling should be banned permanently and the focus should be on energies that do not ruin our environment. We are a country that has tremendous potential to be a leader in minimising carbon emissions. Our natural resources and minimal population compared to land mass will ease the transition to renewables. We are at a crossroads where we have to choose; enhancing the wealth of a few, or saving the lives of millions. To any logical

¹³ "List of Bans Worldwide | Keep Tap Water Safe." 2012. 9 Jul. 2015
<<http://keptapwatersafe.org/global-bans-on-fracking/>>

person who believes in humanity, the answer is simple, yet still there is a persistence to serve the elite, without any consideration to the damaging effects towards the majority of the populace. Choosing between the futures of our children and the welfare of our current citizens should not be decided by companies that extract fossil fuels. I believe in the democratic process, and I hope that our government will make the right decision for its people.
