

07/07/2015

Inquiry into Unconventional Gas in Victoria - Kate Wattchow

I am making this submission in regards to the Victorian State Government's Inquiry into unconventional gas.

I oppose all forms of unconventional gas mining, including coal seam gas, tight gas, shale gas and underground coal gasification. I recommend that the State Government defend Victoria's environmental, agricultural and economical growth and sustainability by proactively ban all unconventional gas drilling.

My name is Kate Wattchow. I am 21 and am a current resident of the [REDACTED] in Victoria. I am deeply concerned about unconventional gas due to the significant environmental damage associated with drilling and fracking and the unavoidable contribution towards increasing climate change that using this gas would cause. The State Government has a responsibility to ensure the long term sustainability of Victoria's water sources, agricultural industry and vital environmental services, and the extraction and use of unconventional gas is not compatible with these responsibilities.

Comments on Terms of Reference:

1. The prospectively of Victoria's geology for commercial sources of onshore unconventional gas;

The sourcing of unconventional gas (UCG) for the State's economic gain is an untenable justification as the economic harm UCG would cause to the State would most likely exceed any potential benefit. The processes of drilling and fracking that are used to extract unconventional gas involve injecting significant amounts of water and hazardous chemicals (including cancer-causing carcinogens) into the ground, meaning that there is a high risk of negative impacts on human and environmental health. Significant financial gain is not guaranteed from UCG, but the amount of damage to water sources, agriculture, the tourism industry, and human health would most likely be substantial. Much of this damage is also likely to be irreparable, such as the pollution of essential groundwater resources, and so the cost of developing a viable, long term replacement, including complete infrastructure and servicing, would be extensive.

The State would then be in the position to provide sufficient economic compensation, which could exceed any economic gain that came from UCG extraction, or fail its moral and legal responsibilities to Victorian citizens.

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

The mining and fracking of UCG poses a major risk to the environment, land productivity and public health. As outlined in section 1 the process of fracking has a high risk of polluting surface and groundwater resources, both through the use of water and chemicals during the fracking and the unsafe disposal of toxic wastewater. The damage that mining and fracking could cause to Victoria's water resources would be magnified as it impacted Victoria's environment, agriculture and public health.

Australia is the driest inhabited continent on Earth and droughts and water scarcity are common occurrences. The Australian Government's Department of the Environment information page regarding climate change impacts on Victoria (available here: <http://www.environment.gov.au/climate-change/climate-science/impacts/vic>) outlines that water scarcity is going to be a major and increasing issue in the state. Mining and fracking are water-intensive practises, which would significantly reduce the amount of water available

from Victorian citizens and the agricultural sector. The high potential for the contamination of surface water and aquifers puts further strain on Victoria's clean water sources.

Water is the resource of highest priority. Without reliable freshwater resources Victoria's agricultural industry may not be able to productively continue, and the cost of providing adequate amounts of drinking water for local populations would be very high.

There is already competition for Victoria's water sources between different populations and sectors, which is only going to increase with National and State population growth. When an industry such as UCG mining has already caused water scarcity and contamination in the past, and cannot by any reasonable means guarantee that this will not happen again, the threat to Victoria's already vulnerable water resources cannot be justified.

In addition to the risk posed to the environment and local productive land by water scarcity or contaminated water resources, UCG mining also threatens the health of the surrounding ecosystems and agriculture with the use of toxic chemicals and massive amounts of by-product salt which mining companies do not know how to dispose of. If these contaminants enter the soil and water systems in the nearby area it would have a significant negative impact on the environment and environmental services, and could make the land unable to support the agricultural industry.

All of the above mentioned impacts threaten public health. Public health is also at risk from air pollution. The communities of the Tara residential estate in Queensland and the Hunter Valley in New South Wales have both been exposed to airborne pollutants created by UCG mining and are experiencing chronic health problems. These problems include nosebleeds, skin rashes and nausea, as well as lung cancer and respiratory diseases. Exposing Victorian citizens to such severe health risks, from airborne pollutants as well as contaminated water and local environmental processes, would be very unethical and irresponsible.

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

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

The incompatibility of UCG mining with agricultural production and other water resource uses has been outlined in section 2.

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

However UCG mining would adversely impact local properties and property values, and unjustifiably infringe upon property owners' rights. For the UCG mining to occur there would be an inevitable shift in the nature of the landscape. UCG mining necessitates access roads and new, heavy traffic to move and service drilling equipment, drilling and fracking sites and waste infrastructure. The visual and noise pollution in combination with the real environmental and health impacts will discourage people from moving into the area and likely cause a drop in property values. The likely contamination of the local area with chemicals, heavy metals and wastage salt will impact the rights of property owners by its severe impacts for the agricultural industry. Possible contamination would decrease the productivity of the land, and possibly make it unable to sustain commercially viable crops. This would degrade local property owners' abilities to make a livelihood off land that previously supported them.

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

UCG mining and fracking is unlikely to provide substantial benefit to local development, investment and employment. The personnel required to conduct the mining and fracking will have needed specialised training and the companies conducting the extractions will most likely move them in from other areas. As outlined in section 3b UCG mining is likely to cause a drop in property values, which will provide a disincentive for development and investment in the region. Significantly, UCG mining would also undermine any development of the renewable industry in the area. The renewable industry has the potential to be a huge growth industry and cause environmental benefits and economic gain to areas that invest. However, establishing UCG mining would inhibit investment in renewable technologies, which could

then be invested in and develop in other areas and decrease the national value of Victoria's energy sector. Renewable technology is highly competitive and in many global markets produces cheaper electricity than fossil fuels such as UCG. In combination with the continued pressure to develop CO2 emissions reduction policies on an international, national and state scale the cost of using fossil fuels to produce energy is set to escalate at the same time as that of renewable energy decreases.

4. The ability of potential onshore unconventional gas resources contributing to the State's overall energy sources including —

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

An outline of UCG's detrimental impact on Victoria's energy sector and its national competitiveness is available in section 3c.

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

The cost of mining and fracking UCG is comparatively high and will get passed on to the consumer. Additionally the government's intention to export gas and sell it on the international market will make local consumers compete with international consumers, further decreasing UCG as a realistic option for an affordable energy source for domestic consumers.

(c) carbon dioxide emissions from these sources;

One of the factors that I find most concerning about UCG is its undeniable role in contributing to climate change and inhibiting measures taken to mitigate and adapt to climate change.

UCG is a fossil fuel. Burning fossil fuels releases CO2 and other gases stored in the ground into the atmosphere, where it then increases the quantity of greenhouse gases to cause the advanced greenhouse effect. The advanced greenhouse effect then fuels climate change, which is already impacting societies in Australia and the world through rising sea levels, changing weather patterns that inhibit food production and ecosystem services that produce freshwater, and extreme weather events such as worsening droughts and catastrophic bushfires.

The UCG industry increases climate change directly through the release of CO2 and other greenhouse gases, including very potent methane. The UCG industry also increases climate change indirectly, as investment in the UCG industry competes with renewable energy and creates a political and social climate where continued inaction towards climate change is acceptable.

If the Victorian State Government endorses the UCG industry it will be doing so despite the global community's growing commitment to ending fossil fuel use. Beneath a government that is hostile to the renewable industry sector and acting in complete conflict with scientific recommendations Australia has been labelled a 'free-rider' on climate change. What Australia needs now is for the State governments to show leadership by acknowledging the science and taking the appropriate, responsible action. Victoria is in an ideal position to become an Australian leader on climate change action by banning UCG mining and fracking before the industry can become established.

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 —

(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

Current examples of the onshore UCG industry both in Australia and around the world illustrate the unavoidable health risks, environmental damage and CO2 emissions that are inherent to the process. These risks and impacts are unavoidable, and therefore the only effective form of regulation would be a complete ban on UCG mining and fracking. Anything less than a complete ban would be a failure of the State government to protect the rights of Victorians and the best interests of the State.

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

Due to the reasons outlined in section 5a even the highest standards of risk management will be unable to negate many of the negative impacts of UCG, including excessive water use, environmental damage via fracking, degradation of land quality, decrease in regional investment and property values, and increased climate change due to CO2 emissions.

Conclusion:

UCG mining is fundamentally incompatible with Victoria's best interests.

With a growing population that is competing for a finite resource, a finite resource that is threatened by increasing trends of water scarcity and threat, of drought, preserving Victoria's sources of freshwater and regulating their use to protect their long-term sustainability should be the State's highest priority. UCG mining and fracking are not only highly water intensive processes, but they have a high risk of surface and aquifer contamination that may prove impossible to rectify. UCG also poses a high risk to land quality and the agricultural industry through its spread of toxic material and airborne pollutants. The agricultural industry is a massive employer in the region and its product is critically important to supporting the local and wider population. UCG is unjustifiable as it is an unnecessary industry that poses an undeniable threat to Victoria's essential water and food supplies.

UCG also contributes to climate change, which is a current and increasing pressure on Victoria through increasing droughts, bushfires, weather unpredictability, sea level rise, and more. Victoria will be increasingly affected by climate change, and so any effective plan to protect Victoria's long-term interests must address the necessary transition away from fossil fuels, including UCG.

The Victorian State government has been presented with a valuable opportunity to step up as an Australian leader in climate change action. As the UCG industry is not yet established in Victoria the State government can show wisdom and foresight by banning it before the damage that has happened to communities in other states by UCG mining and fracking occurs here. Banning the UCG industry will empower the renewable industry, which has the potential to provide a large source of employment and economic benefits to the State.