

Friday, July 3, 2015

Dear Committee members,

As a resident of Torquay and a professional in Public Health research, I am deeply concerned about the potential unconventional extraction of gas in our region. I live in the Surfcoast Shire because I am drawn to the natural beauty of this area, the healthy, coastal lifestyle and the vibrant community in the area. When I learned that the area 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. As a result of my findings I do not support any form of unconventional gas mining (including coal seam gas, tight gas, shale gas & underground coal gasification). I believe that as long as there are no satisfying answers to the points raised, there is no responsible justification for gas extraction of any kind. I listed my main points of concern below and thank you for taking the time to read them.

3. Environmental risks (water consumption and contamination), Public Health risks and land productivity and agricultural risks:

Public health impact:

- 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 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. Contamination and degradation of air and water have the potential to cause significant physical harm to the individual.

Water contamination:

- The large amount of water used in the process of unconventional gas exploration: water has been and will continue to be a limited resource and the vast amounts of water needed in the process of gas exploration and its irreversible pollution (which makes it unusable for recycling and reuse) is unacceptable in a drought stricken country.
- The process itself bears risks of spillage and disposal of contaminated "flowback" water. Long term management of "produced" water is unclear. Further unclear are the interference of the process with groundwater, water table, aquifers, e.g. a possible lowering of water tables and contamination with chemicals.
- 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 and devaluation of land and property prices.

Residential environment:

- 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.
- The increase usage of roads by trucks and the 24hr a day running of wells introduces additional air pollution and noise which pose health and environmental risks in itself.

Long term consequences of these risks, should they occur are unclear due to lack of independent research. A number of these risks have already occurred on sites in QLD. Management, mitigation, compensation and legal liability are not clarified as yet or openly shared with the public of areas concerned.

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

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 already existing and successful land uses are considered to be significantly affected, devalued and/or displaced with coexistence not seen as possible.

The legal rights of property owners and the impact on property values seem unfair and not in relation to the gain for the community but in favour of the financial gain of multinational cooperations. Concerns arise from the fact that minerals and gas are owned by the State on behalf of the whole community. 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 plummeting. 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.

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.

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. (Source: www.depi.vic.gov.au/agriculture-and-food/horticulture)

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). (Source: www.nff.org.au/farm-facts.html)

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. (Source: Matt Grudnoff: Fracking the future- Busting industry myths about coal seam gas; Institute Paper No. 16 March 2014, ISSN 1836-8948)

3. The lack of knowledge and policy and legal regulations that would be necessary to enable exploration and development of onshore unconventional gas resources in a safe and controlled manner

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 and outweigh the benefits. Onshore natural gas is a relatively new industry and research and experience is insufficient to predict the potential risks and activities and cost required to manage these risks.

Research is needed to inform the effective regulation of an onshore unconventional gas industry, including the role of industry, community and government, particularly in relation to rigorous monitoring and enforcement, and the effectiveness of impact mitigation responses. The following questions arise:

- Who will be the 'watchdog' for communities?
- Will they carry the necessary level of power?
- Will the government put up compensation in the case of an accident, loss of property value or health risks?

Further, we need the development of performance standards for managing environmental and health risks, including water quality, air quality, standards for the use of chemicals, waste disposal, land contamination and geotechnical stability. We need a performance development measurement system with pre-, during and post measures to be able to monitor and control risks. In this context it is necessary that baseline measures are taken before the industry arrives.

We also need clear legal contracts between the Government and the industry that highlight the liability of the industry and their legal responsibility in preservation and minimum impact.

The capacity of regulators to manage the development and operations of the industry is questionable. I am concerned about the 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.

In summary, there are too many unknown and potentially dreadful consequences that accompany this industry. Some communities in Queensland have already witnessed the devastating impact and destruction that follows almost immediately after the first trucks arrive. Unless an INDEPENDENT investigation can prove and guarantee based on data and sound research protocol that my concerns are unfounded I cannot support this industry to enter my backyard. One last note, gas is a limited and non-renewable resource. In this day and age we do have alternative and renewable resources available and technologies to harvest and store energy generated by the sun or wind are improving. Instead of investing in a dying industry I would prefer seeing adequate investment being made into advancing the renewable energy sector. Especially in a coastal area such as Geelong, Torquay and the Surf Coast this industry fits better with the community and lifestyle choices of the people, which is proven by the recent closure of the Alcoa Coal mine in Anglesea and broad support that this decision has received by the community.

Thank you for considering this submission.

Kind Regards,

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