

Dear Committee members,

I live in South Gippsland, one of the many beautiful natural environments in Victoria. I am a musician, teacher and artist. As a concerned Victorian resident, I do not support in any form, unconventional gas mining practices including coal seam gas, shale gas, tight gas and underground coal gasification.

As a South Gippsland resident I am a member of the CSG Free Poowong and surrounds group. Poowong has two Coal Seam Gas (CSG) exploration licences held by ECI Pty Ltd covering the entire township and beyond. Over 95% of residents want Poowong and surrounds to remain a Coal & CSG free area.

Poowong is a small dairy town located in South Gippsland. Beyond town boundaries are rolling green hills, rich high yield dairy country supporting many large dairy establishments. A major secondary industry for South Gippsland is tourism which attracts both Australian and international visitors. I submit this document to the committee and am prepared to present if required.

My response to your points of reference

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

The economy of Gippsland is predominantly based on primary production and secondary processing, although many tertiary sectors have been growing, notably retail trade and tourism-related industries.

South Gippsland's natural heritage comprises snow-fields, wilderness areas, rainforests, extensive lakes and beaches. Some of the state's land and marine parks are in the region such as the Alpine, Wilson's Promontory.

Major industries

The dairy industry in Gippsland is the highest value agribusiness industry in the region. In 2006 it produced 30% of Victoria's milk production and 20% of Australia's dairy production, making it one of Australia's leading dairy regions. Milk production comprises about half the total value of Gippsland's agricultural commodities and earns an estimated farmgate value of \$624 million. (Dairy Australia, 2006).

Australia's leading dairy manufacturers form a large dairy processing sector within the region producing fresh milk, milk powder, butter, cheese and other products for domestic and export markets. Several speciality dairy businesses also exist in Gippsland producing a wide range of high quality cheeses and other value-added dairy products.

Gippsland has a significant grazing and meat processing industry based predominantly on beef, but also wool and prime lamb production. Gippsland produces 25% of the total value of Victorian beef production and a significant proportion of the high value beef products are exported. The total 2006/07 value of all meat and wool production was \$361 million and \$146 million respectively.

The vegetable industry is also important in Gippsland. The trend for the industry is to market fresh vegetables; however there has been an increase in the quantity of value-added processing in

Gippsland that is supplied to both national and international markets. In 2003/04, vegetable industry production was valued at \$82.9 million.

Niche and emerging industries

The organic industry is rapidly growing in Gippsland. Organic dairy, horticulture and beef production are leading this development. An organic dairy co-operative based in West Gippsland processes approximately 80% of Australia's certified organic milk with products distributed throughout Australia and abroad. The only Victorian certified organic meat processor is situated in the region. Currently it supplies organic meat domestically and is in the process of building export capability.

The viticulture industry is also growing and produces a variety of typically cool climate wines. Other beverage production includes spring water and award winning boutique beer.

Aquaculture, grain production, fodder cropping, dairy and meat goats, conventional and medicinal herbs, poultry, seed production and horticultural preservatives are all growing industries within the region.

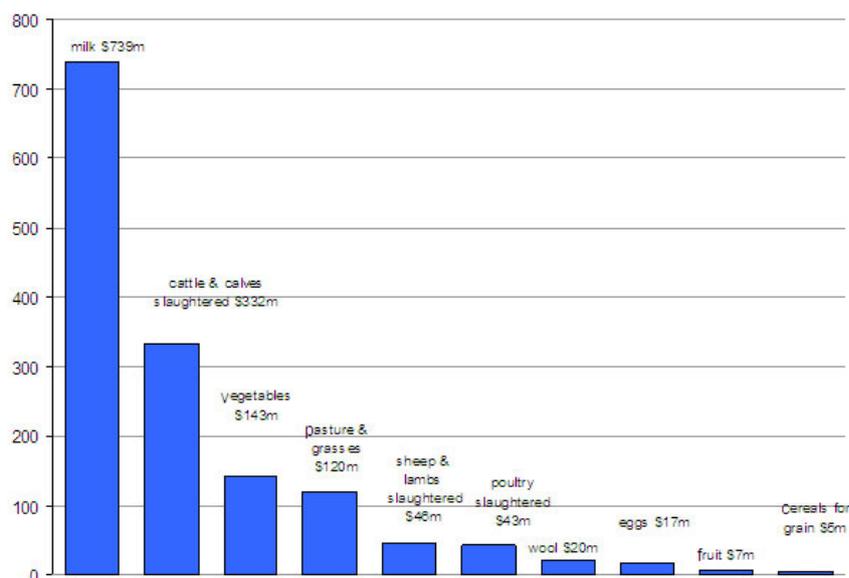
Regional agricultural statistics

Gippsland is approximately 4.3 million ha in size. It contains the largest area of public land in Victoria. Approximately 37% of the land is occupied by state owned forests, 31% is utilised as freehold land, 21% of the region is national parks and reserves and a further 9% is native freehold forests.

There are more than 6,500 farms in Gippsland, of which approximately 2000 are dairy farms. Together, farms in Gippsland produce approximately \$1.3 billion worth of agricultural produce.

The top ten commodities produced in the region by value are shown in the graph below

Selected Agricultural Commodities in the Region 2009/10



Source: ABS 7503.0, 2011

Tourism

The Gippsland region has a diverse tourism industry, both natural and cultural. Home to rivers, lakes, parks, mountains and coastline, Gippsland attracts beach lovers, bushwalkers, skiers, boating and fishing enthusiasts and day-trippers. **(1)**

The geographical and economic features of South Gippsland and Gippsland do not support in any way unconventional gas mining practices

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

Why would the Victorian Government put at risk water, farmland, community health, food security, environment and jobs in other sectors such as agriculture & tourism for a single outdated and dangerous industry producing a fossil fuel?

There are many documented issues and with the above in both Australia specifically Queensland and South Australia. This excerpt from a submission into unconventional gas mining demonstrates credible and accurate concerns

*Doctors for the Environment (Australia) is a non-profit, non-politically aligned, independent, national organisation of medical doctors which advocates on health issues due to environmental factors. The vital importance of a well-functioning natural environment, with its ecosystems and other biophysical processes, to sustaining human livelihoods and prosperity, complex industrial society and, ultimately, human health and wellbeing is increasingly being recognised. Consistent with this, in Australia, states evaluate the environmental impacts of developments under the Health Impact Assessment (HIA) Guidelines September 2001. In these guidelines it is recognised that health is determined by many factors including, amongst others, environmental factors such as air and water quality. It is from this viewpoint that members of DEA are deeply concerned by the serious threats posed to health by fracture stimulation (fracking) for unconventional (whether coal seam, shale, or tight) gas in the South East of South Australia. Our concerns are: 1. The risks of groundwater contamination. There are known, as well as currently unknowable, health problems that potentially follow the escape into local water sources of chemicals used for or released by fracking. As the Committee would be aware, to free gas trapped in shale deposits (and sometimes coal seams), large volumes of chemical-containing liquids under percussive pressure are forced, via drilled and cased wells, into the deposits. The South-East gas-bearing shales are said to be deep, so the fracking process itself is unlikely to directly impact shallow aquifers. However, risk exists mainly because the integrity of the wells per se cannot be guaranteed, and it is failure of well integrity at shallower depths that will permit release of chemical pollutants into local aquifers. It is accepted by toxicologists that many of the chemicals used in or released by fracking are unsafe for human health in high concentrations and their effects in low concentrations in underground aquifers are largely or entirely unknown. Few of the fracking chemicals have been assessed for safety by our national chemical regulator, NICNAS. In a perfect world, drilled wells and fracking pipes would not leak, and all chemicals injected would be returned to the surface to be contained [3] somehow (see section 2 below). Unfortunately, in the real world, the barrier or integrity failure rate of drilled wells is significant – estimated from recent international data at somewhere between 1 in every 50 to 1 in 16 wells drilled. The most favourable published figure for well failure is 1.88% with modern 21st century fracturing technology. Using the optimal failure rate of 1.88% and the potential for at least 250 wells in the South East of our state, the probability of failure can be calculated to be over 99% - that is, well failure can be regarded as a certainty. So, with the best regulated practices in the world, no-one would be able to guarantee a secure future for the aquifers or the communities or agriculture of the South East. **(2)***

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

2. *The impacts upon landscape. Surface release of chemicals risks ground water pollution and air pollution. The escape of chemicals used in the fracking process and the gases released from shale deposits, poses a risk to workers and people living nearby. Volatile organic compounds and hydrocarbons (including the carcinogen benzene) are released during unconventional gas operations, from venting, holding tanks, ponds, compressors and other infrastructure. Some of these also mix with nitrous oxides from diesel-fuelled machinery, creating ground-level ozone. In a recent report on the health of communities living around established gas wells in the USA (Colorado), there was an association between the density and proximity of gas wells near where mothers lived, and the prevalence of birth defects of the heart in children born in that region. There was a less prominent, but also concerning association with defects of the spinal cord. Other surveys of self-reported health symptoms indicate that upper respiratory (nose and throat) or skin complaints are also more frequent the nearer people live to gas wells. These findings are also supported by a health survey conducted in a Queensland gas field. Reaching gas in fossil deposits involves drilling, an activity that requires significant vehicular access and clearing of vegetation for well-pads, roads and pipes. Families depend on the use of prime agricultural land or treasured natural habitat, for livelihood and enjoyment. Thus, impacts on living environments are a certain consequence of unconventional gas exploration on landscape, with many people experiencing a reduced state of well-being known as solastalgia. Impacts on the landscape particularly affecting the quality of food production, critically important in the South East of South Australia, include loss of water that would otherwise be available to agriculture, and pollution of rivers, groundwater systems and aquifers secondarily polluting stock and crops. (3)*

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

Unconventional Gas is a fossil fuel. By definition, unconventional gases are harder to extract than conventional gas. Because they need to be fracked to release the gas from the coal seam or rock, the energy cost of the gas is high compared with conventional LNG. Additionally, with the government plans to export massive volumes of gas through ports in QLD, Victorian consumers will be competing with international energy prices in coming year. So UCG is unlikely to be an affordable energy source for consumers. A much better option is to look at ways we can reduce our need to use gas (for instance through ensuring better energy efficiency standards in new homes and a government funded energy efficiency retrofit program for existing houses.

I believe unconventional gas extraction, with its risks, is unnecessary in Victoria, where we have rich sources of clean, sustainable energy. A strong case can also be made that these renewable energy sources are not only healthier, but also economically more sustainable than gas. Victoria needs to commit to developing renewable and sustainable energy such as solar and wind power with much safer and more cost effective investment options (4) to support the state's progress in the future and lead the way in this area for Australia.

References:

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2. Doctors for the environment Australia 'Submission to the Inquiry into Unconventional Gas – South Australia:
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