Submission
No 528

INQUIRY INTO COAL SEAM GAS

Name: Name Suppressed

Date received: 7/09/2011

Dear Committee Members

I am especially concerned by the proposal to explore for coal bed methane (coal seam gas, or CSG), black or brown coal and mineral sands. Given the very limited details that are available on the DPI and Mecrus websites, I am assuming that any exploration that then leads to production of CSG would involve hydraulic fracturing (fracking).

I note that under section 2A of the Act the Minister is obliged to consider environmental consequences of a decision regarding applications. The principles of sustainable development, which are outlined in the Act (available here) set out a compelling case for taking a precautionary approach to possible future impacts of mining and drilling operations. I firmly believe there will be major impacts from any CSG, coal or mineral sands operations.

I object to the applications on the following grounds.

COAL BED METHANE (COAL SEAM GAS)

Ground water impacts

The Public Notice pertaining to these applications says that the following activities may be approved: 'soil and rock sampling and drilling to establish presence of minerals'.

I understand this to mean that the company may drill exploratory holes to take samples.

Test wells would be drilled into the coal seam. These initial wells are unlikely to produce much gas until the coal seam has been stimulated by hydraulic fracturing (fracking). This is achieved by pumping a fracturing fluid into the coal seam at pressures sufficient to crack open the rock. This enables the gas to flow to the well more easily.

Gas companies are very reluctant to reveal what they use in the fracking process and yet continually imply they are quite safe. Fracturing fluids are primarily water but contain other chemicals, often including acids, solvents, surfactants, biocides, and hydrocarbons. Sand is often added as a propping agent to hold the fractures open and allow the gas to flow freely to the well bore. Some of this toxic fracturing fluid, known as 'flowback water', resurfaces but much may remain underground.

Concerns about CSG operations:

- Extracting coal seam gas (CSG) requires the removal of large volumes of generally saline "associated water" from the coal seam.
- The extraction of associated water can lower water levels in adjoining aquifers or in shallower, alluvial systems.
- In many areas, we do not fully understand the degree of connectivity between different aquifers, nor the extent to which groundwater sources are connected to surface waters. In some places groundwater provides the base-flow to creeks and rivers; in others, creeks recharge groundwater aquifers.
- Hydraulic fracturing (fracking) causes micro-seismic events or little earthquakes intended to open up pathways for fluids or gases to flow. If these fractures intercept fissures or faults, the fracking fluids, contaminated water or gas can move into other geologic layers, contaminating the groundwater.

Salt and other contaminants

- Coal seam gas (CSG) water (also known as 'associated', 'produced' or 'formation' water) is regarded as a waste by-product. Large volumes must be removed from coal seams to allow gas to flow.
- CSG water is generally high in sodium and contains many other contaminants. In the case of Queensland, where the industry is relatively far more advanced in its development, each megalitre (one million litres) of associated water generally brings up 5 - 8 tonnes of salt previously stored safely underground.

· CSG water may also contain heavy metals, carcinogens such as benzene, toluene, ethylbenzene and xylene, and radioactive chemicals that are naturally present in coal seams. Some of these highly toxic substances bio-accumulate - that is, they are concentrated as they move up the food chain.

Climate impacts

The production, burning and export of CSG for energy may be little or no better for our climate future than coal.

· Coal seam gas (CSG) is a fossil fuel - a dirty energy source that adds to greenhouse pollution.
· The gas industry claims gas-fired power stations produce 70% less CO2 than existing coal-fired power stations. This figure only refers to the emissions released when the gas is burnt. It does not include the emissions involved in producing the gas - the drilling, fracking, compressing, pumping, liquefying and transporting the gas.
· Liquefying natural gas consumes at least 20% of its energy value and cancels almost 30% of its "clean" character.
· Monitoring of methane leakage in the oil and gas industry is limited, but conservative estimates suggest that during the life cycle of an average coal seam gas well, 3.6 - 7.9% of total production is emitted to the atmosphere as methane. This is at least 30% and perhaps more than twice as great as the life cycle methane emissions for conventional (natural) gas which range from 1.7 - 6%.

CSG may be cleaner than coal, but it is not clean, nor green.

The information used in my submission largely comes from the Lock the Gate Alliance. Full references are available on their website. http://lockthegate.org.au/csg-facts/

BROWN AND BLACK COAL

Victoria currently relies heavily on coal to meet our energy needs.

With what we know about climate change, we know that the world must transition rapidly to a low carbon future. This will mean that we must adopt renewable energy sources to meet our energy needs.

Victoria is blessed with a range of renewable and low emissions energy options, including wind and solar, geothermal and wave energy.

The time for further investment in coal, especially broad acre open cuts, is long over. Coal mining in the region will have a massive negative impact on local people, local economies, landscapes and waterways. It would add huge greenhouse emissions to the atmosphere. Because coal mining is a single-use option for land where it occurs, this would threaten on-going production in what is a significant food producing region.

Summary

For the reasons outlined above, I urge you to reject the proposal for exploration permits untill a total there is total explanation and full understanding of this process.

I am the married mother of 4 children. My husband and I are a part of two family business's which directly rely on the land to maintain viability and production, we are all very concerned as small business people and as parents how much free reign mining companies are having without the public having been educated and not being given choices.

Yours sincerely,