Submission No 734

INQUIRY INTO COAL SEAM GAS

Name: Name suppressed

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To the General Purpose Standing Committee No. 5 - Inquiry into Coal Seam Gas Mining (CSG) in NSW

I am greatly concerned with the risks associated with CSG mining, especially in residential areas, in water catchment areas (such as the Illawarra), in national parks and reserves, in food producing lands. I believe our future water and food security, our health, and our biodiversity are all at risk due to CSG mining throughout NSW.

My partner and I live only a kilometre or so away from the proposed CSG drill site in St Peters. This site is in highly populated inner city Sydney, and is adjacent to or very near residential houses, businesses, Sydney Park, schools and churches; and underneath is the Botany Aquifer, Alexandria Canal, the de-salination pipeline; and it is in very close proximity to Sydney Airport. It is an entirely unsuitable location for a mine of any description.

There are also proposals for other residential areas such as Campbelltown, and regional towns around NSW. Other proposed sites (or current operational sites) include the highly important water catchment areas of Woronora Dam, the Illawarra, the Great Artesian Basin; areas of sensitive environmental significance such as the series of national parks, conservation areas , reserves and green corridors throughout the Illawarra, Wollemi, Pillaga etc; areas of great beauty and tourism such as the Hunter Valley; amongst other areas that are currently, or shortly proposed to be, undergoing CSG exploration and extraction.

Coal Seam Gas is not a renewable or clean energy source, and it is not suitable as a 'transition' energy. It is a fossil fuel in finite supply. Exploitation of this resource will only benefit the profits of the huge corporations who extract and sell it; at the expense of the health of the human population, the wellbeing of our environment, safety of our water sources, soil and air, and preservation and protection of native flora and fauna that will be disturbed by the devastation of their habitats.

There is a substantial and growing body of evidence that coal seam gas mining poses substantial risks. These risks, which are not fully understood or researched in NSW, include:

1. **<u>CSG mining contaminates water</u>**

- CSG mining always involves contaminated water and so poses unacceptable risks to water supply, the environment and human health.
- Water must be drawn out of the coal seam to access the methane gas. This 'produced water' is highly saline and can contain toxic and radioactive compounds, as well as heavy metals.
- CSG mining will be a major user of water. The CSG industry states that a single well takes approximately 13 million litres of water to fracture.
- Drilling and fracking involves a large number of toxic chemicals (over 750 identified) much of which is released into the environment
- Contaminated water is generally stored in ponds near wellheads.

2. Hydraulic Fracturing (fracking) is a dangerous and unsuitable technology to employ

- Hydraulic fracturing or 'fracking' is used to release CSG. It involves injecting large volumes of water, sand and toxic chemicals into the ground to fracture coal and release the methane gas
- Fracking brings contaminated water and geological disruption close to water catchments and aquifers, as well as above ground, posing unacceptable risks.
- CSG mining uses fracking to be viable and will be used in at least 80% of Australian CSG wells

3. CSG releases more methane gas in the environment

- Much of the previously trapped methane is not captured by CSG mining. Estimates of over 35% have been made by leading US universities.
- Therefore substantial fugitive methane escapes into the atmosphere from:
    - Produced water drawn from the coal seam, and
    - Leaking well heads and processing plants, and
    - un-captured gas that migrates through underground fissures.
- Both fugitive methane and methane storage pose explosion and fire risks, especially in bush land areas already prone to bush fires.
- Research from US universities shows the greenhouse house effect of methane to be 100+ times that of CO^2 over 20 years, as bad as, or far worse than, coal over its lifecycle.

4. CSG infrastructure has a large and damaging foot-print

- Production fields typically require drilling well pads every 400-900 metres,
- CSG well heads are connected by networks of pipelines and roads to get plant and equipment in and wastewater and gas out
- CSG exploration and mining requires extensive land clearing for well heads (100 sq m+), storage tanks, containment ponds, roads, pipelines and fire lines.

5. CSG and the Illawarra upper escarpment of the Northern Illawarra

- Fifteen exploration wells have been approved in PELs 442 & 444, with 140+ production wells likely
- 7 of the 15 are in Sydney Catchment Authority **'Special Areas'**, which have restrictions on land use and access to protect our water supply, the rest abut those Special Areas
- The approved wells are adjacent to upland swamps that feed and clean the adjacent water catchments, including the Georges and Hacking river systems
- Some of the 15 sites were 'high conservation' zones until 2009, protected from CSG mining
    - In 2009 the Wollongong City Council downgraded zoning against the advice the Department of Environment and Climate Change (DECC) and Sydney Catchment Authority (SCA)

- This occurred after The Department of Primary Industries (DPI)pressured the state government appointed WCC Administrators to do so, in order to assist CSG mining
- Shortly after the zoning changes were made, exploration approvals were granted to APEX

- This occurred under (the now discredited) Part 3A of the Environmental Planning and Assessment Act, under which the Minister for Planning was empowered to act, bypassing environmental and local planning controls – including community consultation – which is fundamentally wrong
- Consequently these approvals were granted before residents knew about the plans for CSG mining
- In allowing this to occur the **state has breached its obligations to protect drinking water supplies**
- The Northern Illawarra has already been extensively mined for coal and CSG mining which adds to the risk of methane emissions, distribution of contaminated water, and increased seismic activity.
- The coal seams of the upper escarpment are much shallower than those in Queensland's Surat Basin, which increases the risks outlined above.
- The Northern Illawarra is an area of recognised outstanding beauty and water supply consisting of many Special and protected areas, such as catchments and state parklands and protection areas.
- **Accidents happen** and 2011 has seen a number of reported CSG well blow outs and contamination incidents in NSW and Queensland eg discharge/blowout at Camden NSW, methane leaking and discharge of treated waste water into a creek in the Pilliga, deliberate discharge of saline water leading to pollution event near Broke, an exploding well at Dalby QLD.
- Any accidents such as above would be disastrous for the protected environments of the Northern Illawarra , threatening the integrity of water supply from the SCA Special Areas.

6. Government action to protect communities from CSG in NSW

NSW is not as advanced as Queensland in the production extraction of CSG and so the state has an opportunity to avoid the mistakes made in Queensland and the USA that are leading to substantial damage to environments and public health. I therefore call on the Inquiry to exercise a precautionary approach to CSG by advising the Premier to instigate:

- **A Royal Commission into all aspects of coal seam gas mining**
- **A ban on fracking and similar coal bed 'stimulation' technologies and techniques**
- **A full moratorium on all forms of coal seam gas drilling until the environmental, social and health impacts have been rigorously and independently assessed.**
- **Coal seam gas exploration and mining to be made subject to all relevant environmental legislation, including the native vegetation and water management laws.**
- **The provision of standing to ensure that the community has full legal rights to challenge and enforce environmental laws under which coal seam gas companies are operating.**

- **The provision of a right in the Petroleum (Onshore) Act to allow landholders to refuse consent for coal seam gas exploration or production on their land.**
- **A prohibition on coal seam gas exploration and mining in important bushland, valuable farmland, groundwater aquifers, residential areas and public lands.**
- **A requirement that all chemicals used in coal seam gas drilling or fracking must be assessed by the chemical regulator for use for that purpose before being approved for use.**

It is encumberant on this government and this committee, to protect the individuals of NSW, the environment, the biodiversity, the integrity and security of water catchments and aquifer systems, soil, air, native animals and habitat, national parks and reserves, against the depredations of CSG exploitation.

Yours sincerely