

**Submission
Illawarra Coal Seam Gas,
Apex Gas Exploration Project Mod 2
14th September 2012**

Submission from
Doctors for the Environment Australia Inc.
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The following are members of our Scientific Committee and support the work of
Doctors for the Environment Australia

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Prof. David de Kretser AC; Prof. Stephen Leeder AO; Prof. Ian Lowe AO; Prof. Robyn McDermott;
Prof. Tony McMichael AO; Prof. Peter Newman; Prof. Emeritus Sir Gustav Nossal AC; Prof. Hugh Possingham;
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Professor David Yencken AO

Doctors for the Environment Australia is a voluntary organization of medical doctors in every state and territory working to minimise public health impacts from environmental damage. DEA has made submissions to both state and federal parliaments regarding coal seam gas mining citing significant risks to human health.

[www.parliament.nsw.gov.au/prod/parliament/committee.nsf/0/f96d076732225603ca25791b00102098/\\$FILE/Submission%200412.pdf](http://www.parliament.nsw.gov.au/prod/parliament/committee.nsf/0/f96d076732225603ca25791b00102098/$FILE/Submission%200412.pdf)

[www.dea.org.au/images/uploads/submissions/MDB CSG Senate submission June 2011.pdf](http://www.dea.org.au/images/uploads/submissions/MDB_CSG_Senate_submission_June_2011.pdf)

We would like to express our very strong objection on health grounds to the proposal by Apex Energy to modify their development approval to allow an additional 3 years to complete exploratory drilling. The current license just this week renewed by the state government allows Apex Energy to drill 16 exploratory boreholes in the Illawarra around Helensburgh, Darkes Forest and Maddens Plains.

We are aware of the full scale plans for over 150 wells across the Illawarra escarpment and Sydney Water Catchment from statements made by Apex Energy's own corporate development manager documented in newspaper reports. www.smh.com.au/environment/plan-to-drill-150-gas-wells-across-water-catchment-20120906-25h3v.html

Our objections are as follows:

1. The areas licensed for CSG mining by Apex Energy lie in part or wholly within water catchment areas of Woronora Dam and Lake Burragorang that together supply safe drinking water for approximately 5 million residents of Sydney and Wollongong.

Safe and sufficient water supplies are essential to health. NSW is already challenged to provide sufficient water into the future for the city of Sydney, which is projected to grow substantially over the next 20 years.

Whilst Apex Energy have made it clear no hydraulic fracturing is planned for the 16 exploratory wells, only 2 of which will be in undisturbed coal seams, this exploration is preliminary to developing a coal seam gas production field in these areas and this will inevitably necessitate hydraulic fracturing. 70% of the CSG wells in AGL's Camden gas field have been fracked.

The toxicological risks posed by the process of drilling for coal seam gas that put at risk the safety of the water supply are well known. Chemicals used in drilling and, when used, hydraulic fracturing, and contaminants released from the coal seam include carcinogens, mutagens, endocrine disruptors, irritants, sensitisers and substances that may cause organ damage. A variable proportion of

hydraulic fracturing fluids stay underground and the process of fracturing can create connectivity between coal seams and other groundwater systems. While less relevant where wells are already dewatered, this will become highly relevant should the planned expansion follow the exploration processes.

These areas already have subterranean damage from decades of long-wall coal mining, so any disturbance is likely to further damage groundwater and surface water systems. This poses an unacceptable risk to local communities and to the residents of Sydney who consume water from this catchment.

2. We remind the Department of Planning that there are no safe exposure levels of some of these chemicals for human health – and should there be an accident, as are well documented with unconventional gas extraction, the presence of carcinogens in Sydney's water supply would place millions of people at risk. You can be assured that there would be vigorous action to ensure that all those associated with the decisions allowing this to occur are held accountable.
3. Mental health is the second leading contributor to Australia's total burden of disease.

We are aware that residents of communities in Queensland where CSG mining has commenced, who share similarities with Helensburgh and Darkes Forest, experience anxiety, sadness and anger which enhance the risk of mental illness. Whether or not hydraulic fracturing is used immediately in the exploratory activities, negative impacts on mental health associated with this industry in affected areas are clear. Enhanced actual and perceived risk of fire, loss of property values, loss of landscape and inter-community conflict contribute to these emotions resulting in feelings of helplessness and hopelessness.

Social and emotional distress has been strongly linked to depression, anxiety, greater risk and progression of cardiovascular disease, diabetes and obesity, as well as drug and alcohol misuse. As detailed by Berry et al. (2008) in the *Garnaut Climate Change Review*, rural communities; and likely strong communities like Helensburgh, Otford, Stanwell Tops and Darkes Forest are intimately connected to their beautiful natural environment which is also enjoyed by thousands of Sydney residents seeking respite from the city.

4. Air pollution in the vicinity of unconventional gas extraction poses another threat to health for the local communities. Volatile organic compounds and aromatic hydrocarbons including benzene are released from venting, holding tanks and compressors. Methane combined with VOC's and vehicle emissions from the many truck movements required by the CSG industry create ground-level ozone, a potent inducer of respiratory disease.

In summary Doctors for the Environment Australia strongly objects to the modification of Apex Energy's development approval for coal seam gas extraction in the Illawarra on the grounds that it would be encouraging an industry to continue to develop plans for activities that risks the health of the millions of residents of Sydney and the Illawarra via contamination of our drinking water catchments. In addition, there are local risks to health via air pollution and, if the extension itself is approved, a significantly heightened risk to the mental health and well-being of the families and children living in the communities that will be closest to this development.

We call for the modification to be rejected and for the Petroleum Exploration Licenses in question to be suspended until a full assessment of the risks to public health is undertaken. This should be undertaken with full transparency to the public and include oversight by experts in the public health and medical profession that have no conflict of interest beyond their concern for the health and wellbeing of the people of NSW.

14th September 2012

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