

Submission  
No 339

## INQUIRY INTO COAL SEAM GAS

**Name:** Ms Monica Barone

**Organisation:** City of Sydney

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**City of Sydney**

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9 September 2011

Our Ref: 2011/262806-02

Coal Seam Gas Inquiry  
NSW Legislative Council  
General Purpose Standing Committee No. 5

Submitted via NSW Parliament website

To Whom It May Concern,

**NSW Coal seam gas inquiry**

The City of Sydney welcomes the opportunity to comment on the current NSW Legislative Council coal seam gas (CSG) inquiry by the General Purpose Standing Committee No. 5. The City broadly supports the terms of reference with the following recommendations:

- The Inquiry should ensure that there is independent investigation into the full environmental and social impacts of coal seam gas exploration and extraction. Transparent planning, approvals, and regulatory processes are called for to ensure that if NSW utilises the CSG resource it is not at the expense of water resources or communities.
- The Strategic Regional Land Use Policy and Regional Strategic Plans being developed by the NSW Government should mandate protection from mining in sensitive areas including important agricultural land, aquifers, national parks and Sydney and town catchment areas.
- The Inquiry should obtain and make public details of complaints and their outcomes from QLD and NSW.
- The Inquiry should ensure that the precautionary principle is applied and that sufficient regulations are in place to protect aquifers and groundwater.
- The Inquiry should request research into fugitive emissions from coal seam methane extraction so the effect of fugitive emissions on the Global Warming Potential of methane, and the need for regulation of fugitive emissions, can be assessed.

The City has commissioned the Institute of Sustainable Futures (ISF) at the University of Technology Sydney to develop a coal seam methane background paper to identify the drivers for, and the environmental and social impacts of CSG exploration and extraction, particularly in NSW. The City of Sydney **will submit a supplementary submission on 4 October 2011** together with a copy of the final ISF coal seam methane background paper to the NSW Legislative Council coal seam gas (CSG) inquiry.

If you have any questions regarding this or the pending supplementary submission, please do not hesitate to contact Chris Derksema, Sustainability Director on [redacted] or at [redacted].

Yours sincerely

**Monica Barone**  
Chief Executive Officer

A large, handwritten signature in blue ink, appearing to read 'Monica Barone', is written across the bottom of the page.

Submission on

## NSW Coal seam gas inquiry

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The City of Sydney welcomes the opportunity to comment on the current NSW Legislative Council coal seam gas (CSG) inquiry by the General Purpose Standing Committee No. 5.

The City of Sydney does not support the exploration of coal seam gas in built up areas and passed a resolution of Council on 6 December 2010 which highlights the risks to the environment that CSG extraction poses.

Gas exploration licences are issued by the State Government. We are pleased that the NSW Government has announced new environmental and community consultation conditions for coal and coal seam gas mining. The City believes that no new gas exploration licences should be issued until applications have been independently assessed by environmental experts and the community is fully consulted.

Through Sustainable Sydney 2030, the City of Sydney is committed to achieving ambitious environmental, economic and social outcomes. Our target is to reduce 2006 greenhouse gas emissions by 70% and for zero reliance on coal-fired electricity within our local government area by 2030. Gas is flagged to become an increasingly utilised fuel in the transition to a low-carbon economy.

The City of Sydney commends the NSW Government for its current inquiry into and report on the environmental, economic and social impacts of coal seam gas activities, and supports the terms of reference, noting the following issues and recommendations:

- Gas has generally been included as an important transition fuel in low carbon energy projections for Australia. The City of Sydney strategy for more efficient, low-carbon energy reflects this at a local scale. CSG accounts for nearly 80% of the currently proven and probable gas reserves in Eastern Australia, and all of the NSW proven and probable gas reserves<sup>1</sup>. CSG is at early stages of development in NSW, but could become a significant industry.
  - **RECOMMENDATION:** The Inquiry should ensure that there is independent investigation into the full environmental and social impacts of coal seam gas exploration and extraction. Transparent planning, approvals, and regulatory processes are called for to ensure that if NSW utilises the CSG resource it is not at the expense of water resources or communities.
- The State Government committed to a Strategic Regional Land Use policy for mining in New South Wales with Regional Strategic Plans for particular regions. Environment and community groups hope that the

policy and plans will identify areas that are not suitable for particular types of mining, creating exclusion zones.

- **RECOMMENDATION:** The Strategic Regional Land Use Policy and Regional Strategic Plans should mandate protection from mining in sensitive areas including important agricultural land, aquifers, national parks and Sydney and town catchment areas<sup>ii</sup>.
- Serious concerns have been raised about potential health and environmental impacts of coal seam methane extraction by communities and landholders where CSG extraction has been proposed or is operational<sup>iii</sup>. Complaints are not routinely published, nor the outcomes of such complaints made known.
  - **RECOMMENDATION:** The inquiry should obtain and make public details of complaints and their outcomes from QLD and NSW.
- Organisations such as the National Water Commission<sup>iv</sup> and Doctors for the Environment<sup>v</sup> have raised serious concerns about the potential health and environmental impacts of CSG. The National Water Commission position paper specifies a number of ways that aquifers and groundwater systems could be significantly adversely impacted, and states that specific management arrangements may be required for water impacts, and that these have not yet been developed. While water issues may be addressed under current State environmental approval processes and the *Commonwealth Environment Protection and Biodiversity Conservation Act*, these are not well integrated with water planning and management arrangements.
  - **RECOMMENDATION:** The Inquiry should ensure that the precautionary principle is applied and that sufficient regulations are in place to protect aquifers and groundwater.
- Concerns have been raised that fugitive emissions from coal seam gas extraction could outweigh their greenhouse benefit compared to coal<sup>vi</sup>, although a review of current evidence suggests that gas still has a considerable benefit<sup>vii</sup>. The National Greenhouse Accounts Scope 3 emissions factors<sup>viii</sup> do not currently distinguish between fugitive emissions from CSG and conventional natural gas.
  - **RECOMMENDATION:** The Inquiry should request research into fugitive emissions from coal seam methane extraction so the effect of fugitive emissions on the Global Warming Potential of methane, and the need for regulation of fugitive emissions, can be assessed.

The City has commissioned the Institute of Sustainable Futures (ISF) at the University of Technology Sydney to develop a coal seam methane background paper to identify the drivers for, and the environmental and social impacts of CSG exploration and extraction, particularly in NSW. This work is not yet complete.

The City of Sydney will submit a supplementary submission on 4 October 2011 together with a copy of the final ISF coal seam methane background paper to the NSW Legislative Council coal seam gas (CSG) inquiry.

If you have any questions regarding this or the pending supplementary submission, please do not hesitate to contact Chris Derksema, Sustainability Director on 9265 9733 or at [cderksema@cityofsydney.nsw.gov.au](mailto:cderksema@cityofsydney.nsw.gov.au)

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## About City of Sydney

The City of Sydney covers 26.15 square kilometres and takes in the commercial, financial and cultural hub of metropolitan Sydney. Our local government area comprises 180,000 residents and 385,000 jobs.

The City is committed to being an environmental leader. A number of guiding strategic plans and documents direct our sustainability and environmental initiatives, including our *Sustainable Sydney 2030 Vision* which has 10 targets and 186 actions under 10 strategic directions that we are progressively implementing towards a more sustainable future.

The City's ambitious targets for emissions reduction were adopted following widespread consultation and community support for a vision for a sustainable future for Sydney.

## Sustainable Sydney 2030

Sustainable Sydney 2030 committed the City to becoming a green, global and connected city. A key target is to reduce greenhouse gas emissions across the entire local government area (LGA) by 70% below 2006 levels and for zero reliance on coal fired electricity by 2030.

Energy efficiency and renewable energy are key priorities for achieving deep cuts in greenhouse gas emissions. We are also working to develop a network of local combined heat, cooling and power plants, known as trigeneration. Initially the trigeneration engines will run on mains gas, and with time, transition to renewable gases derived from waste.

An interim Trigeneration Master Plan has been developed for the City of Sydney by a consortium of Kinesis, Cogent, and Origin Energy. The interim plan identified that 360MW<sub>e</sub> of trigeneration in the City of Sydney is the second most cost effective way to reduce greenhouse gas emissions next to energy efficiency. It would provide between 46-69% of local electricity demand and reduce the greenhouse gas emissions of connected buildings by 39-56%.

The Origin Energy modelling shows that this plan is commercially competitive with other forms of energy generation. Our plans to provide low carbon and zero carbon energy locally will also benefit other areas of NSW by avoiding some of the network costs passed onto all energy users in the State to meet local peak demands.

## Scope of the ISF coal seam methane background paper

- Comparison of CSG and Conventional Natural Gas
- Relationship Between CSG, Coal Mining and Coal Mine Methane
- CSG Extraction Techniques
- Environmental Impacts Including Water Effects
- Potential Social and Health Impacts
- CSG Status in Australia's Eastern Gas Market
- NSW Active and Proposed Projects
- Proposed Pipelines, Injection Points And Processing Locations
- QLD Active and Proposed Projects
- Companies Actively Involved In CSG Exploration in Australia
- Political Developments and CSG Regulation
- Effects of CSG Industry in Australia to Date
- Detailed Comparison of Australian and US Regulation
- Examination of Produced Water
- Review Global Warming Potential of Methane

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<sup>i</sup> Australian Energy Regulator, 2010, State of the Energy Market 2010 p.71

<sup>ii</sup> Recent question in Parliament :

[www.parliament.nsw.gov.au/prod/parlment/hansart.nsf/V3Key/LA20110824019?open&refNavID=HA8\\_1](http://www.parliament.nsw.gov.au/prod/parlment/hansart.nsf/V3Key/LA20110824019?open&refNavID=HA8_1)

<sup>iii</sup> For example,

- the Lock the Gate Alliance has been set up to raise concerns about CSM extraction and coal mining.
- Theo Colborn, Carol Kwiatkowski, Kim Schultz, Mary Bachran, Natural Gas Operations from a Public Health Perspective, International Journal of Human and Ecological Risk Assessment, September 4, 2010.
- Lloyd-Smith, M. and Senjen, R. 2011. Hydraulic Fracturing in Coal Seam Gas Mining: The Risks to Our Health, Communities, Environment and Climate. Briefing paper, National Toxics Network.
- Chemicals in Natural Gas Operations, Health Effects Spreadsheet and Summary TEDX 2011, Available at [www.endocrinedisruption.com/chemicals.multistate.php](http://www.endocrinedisruption.com/chemicals.multistate.php)

<sup>iv</sup> National Water Commission, 2010, *Coal Seam Gas and water position statement*.

<sup>v</sup> Doctors for the Environment Australia. Submission to the Rural Affairs and Transport References Committee Inquiry into management of the Murray Darling Basin – impact of mining coal seam gas. 27 June 2011.

<sup>vi</sup> Howarth R.W. 2010. Preliminary Assessment of the Greenhouse Gas Emissions from Natural Gas obtained by Hydraulic Fracturing. Published Department of Ecology and Evolutionary Biology, Cornell University. Draft. [www.news.cornell.edu/stories/April11/GasDrillingDirtier.html](http://www.news.cornell.edu/stories/April11/GasDrillingDirtier.html)

<sup>vii</sup> Fulton, M., Mellquist, N. and Kitasei, S. 2011. Comparing Life cycle greenhouse gas emissions from natural gas and coal. Deutsche Bank Group and Worldwatch institute.

<sup>viii</sup> Department of Climate Change and Energy Efficiency. 2011. National Greenhouse Accounts Factors. Published Commonwealth of Australia.