



10 July 2015

Standing committee on environment and planning
Attn: Mr Keir Delaney
Secretary, Environment & Planning Committee
Parliament House, Spring Street,
Melbourne VIC 3002

By email: epc@parliament.vic.gov.au

Inquiry into Unconventional Gas in Victoria

Thank you for the opportunity to submit our views on the implications of unconventional gas exploration and development for Victoria to the Standing Committee on Environment and Planning ('the Committee'). Our submission is made on behalf of the institutional investors Regnan represents – investors with more than \$61 billion invested in S&P/ASX200 companies at 30 June 2014 (~4.3% of this index). These institutions include Advance Asset Management; Commonwealth Superannuation Corporation; BT Investment Management; Catholic Super; HESTA Super Fund; NTGPASS; Vanguard Investments Australia; VicSuper; and the Victorian Funds Management Corporation.

Summary comments

We recognise the significant investment potential for unconventional gas (UG), and note that rapid growth elevates environmental, social and governance (ESG) risks given the numerous unresolved technical, regulatory and stakeholder issues. It is in the interests of investors that the risks and issues associated with UG are addressed early to limit potentially negative investment impacts.

There is significant investor concern about ESG risks for UG. In Australia, concern led to the formation of an investor working group to consider ESG investment risks associated with UG, in which Regnan participates. The working group is comprised of members of the Principles for Responsible Investment (PRI) Australian Network, a UN-supported initiative.

In light of these concerns, as well as concerns about oil and liquids, Regnan developed a paper, *Unconventional oil and gas best practice ESG risk management principles and recommendations* ('UOG principles and recommendations'), which we commend to the Committee's attention.

Regnan Governance Research
& Engagement Pty Ltd
ABN 93 125 320 041
AFSL 316351

Level 9, 387 George Street
Sydney NSW 2000
Australia

Phone +61 2 9299 6999
Fax +61 2 9299 6799
www.regnan.com



While this document focuses on UOG company practices, it offers important insights into the key risks relevant to the investment case for UOG, possible risk mitigants, residual risks, and the potential role for government. Specifically Regnan makes the following recommendations:

- Extend the Inquiry's scope to include oil and liquids.
- Differentiate between UOG sources and extraction processes when considering policy and regulatory safeguards.
- Set minimum performance standards at a level to maintain the reputation of the industry.
- Mandate the Government to take the lead in assessing cumulative and regional risks.
- Use precaution in developing industry standards and setting scientific research agendas, particularly on the issues of aquifer connectivity and fugitive methane emissions.
- Include best practice methane emissions measurement and mitigation within performance standards.
- Consider the potential for older wells, inactive wells (shut-in and unplugged/incorrectly plugged) and drinking water bores to contribute to water and greenhouse gas impacts.
- Resource regulators to ensure sufficient skill and capacity to effectively oversee the UOG industry.

The majority of our comments relate to the terms of reference **(5) Resource knowledge requirements and policy and regulatory safeguards**. We draw out these insights below.

Regnan's UOG best practice ESG risk management principles and recommendations

We have attached a confidential copy of Regnan's UOG principles and recommendations for the Committee's consideration. We have also attached our *Unconventional gas best practice ESG risk management principles and recommendations: Explanatory document May 2013* for public use.

Our UOG principles and recommendations are based on Regnan's analysis of current research, investor initiatives both in Australia and overseas, and dialogue with companies involved in UOG activities in Australia - including on a draft of these guidelines published in May 2013. The attached confidential guidelines were updated in July 2015 taking into account learnings from dialogue.

Our UOG documents were developed to be read alongside IEHN / ICCR's *Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations* (available at <http://www.iehn.org/publications.reports.frackguidance.php>), which we also commend to the Committee's attention.

Scope of Inquiry

We congratulate the Committee for considering all sources of unconventional gas (coal seam gas (CSG), shale, tight etc.). However, we recommend that the scope of this inquiry be extended to include both oil and liquids. We note the increasing focus on tight oil in other areas of Australia. With respect to gas, we note that, in practice, products produced are often a mixture of liquids and

gas. Environmental requirements would be more effective if developed with these operating realities in view.

Differentiate between UOG source and process risks

We strongly encourage the Committee to differentiate between UOG sources and processes when considering policy and regulatory safeguards. We note shale gas and CSG have different extraction processes and therefore have similar, but distinct, environmental and social risks (as outlined in our explanatory document). Regnan has observed the industry's frustration that all UOG has been 'tarded by the same brush'. For example, community comments on CSG often focus on the water impacts that may occur from hydraulic fracturing (fracking) - a process which is mainly used in shale gas wells, rather than CSG dewatering - dewatering has different but equally significant potential water impacts. Regnan anticipates the distinction between gas sources and process risk within the Inquiry will likely contribute to stakeholder understanding of risks and lead to more efficient risk-targeted regulation.

Levelling the playing field and raising the bar

UOG companies we engage sometimes note difficulty in adopting higher standards than their peers without regulatory prescription. We recommend the Committee give due consideration to the role regulation plays in enabling better practices to be adopted by maintaining a level playing field.

Historical incidents are typically explained by the UOG companies we engage as being due to 'rogue' operators, whose practices are not reflective of the industry as a whole. In setting and evolving minimum standards (to prevent them falling too far behind industry leaders), Government helps maintain the reputation of the industry, benefitting all operators and increasing investment certainty.

Cumulative and regional impacts

Some UOG impacts are best considered on a cumulative or regional basis. Corporate level practices, however good, may be incapable of fully addressing such risks. From our discussion with companies, it is apparent that Government taking a lead role could more easily and more effectively address a number of our UOG principles and recommendations.

For example, in relation to impacts on surface and groundwater and greenhouse gas emissions, the following recommendations (excerpted from Regnan's UOG principles and recommendations - attached) would be best pursued through active Government involvement:

- Measure both a) pre-drilling baseline, and b) ongoing:
 - Atmospheric emissions (including methane), and
 - Water quality and quantity data for surface and groundwater resources in the affected area, including neighbouring aquifers.
- Contribute to regional risk assessment by providing water models for key water resources, which predict anticipated cumulative impacts due to dewatering/fracking.

State uncertainties that may influence model outcomes. Update water modelling when material new information arises affecting modelling outcomes.¹

- Conduct geological characterisation of sites/region that includes identifying faults, abandoned mines and wells, confining zones above targeted production zones, and other potential risk factors for potable water contamination such as drinking water bores.²
- Collaborate with academic, government and regulatory body research into key UOG knowledge gaps, e.g. aquifer connectivity and methane emissions.

Apply precaution

In our view, the precautionary principle embedded in ecological sustainable development (ESD) is highly relevant to UOG, given the emergent nature of the practices involved and incomplete understanding of impacts, particularly aquifer connectivity and fugitive methane emissions. We further note that experience from other locations may be limited in relevance due to differences in geologies and evolving technology. Regnan's recommendation to UOG companies to apply precaution in risk management is equally applicable to government in developing industry standards and expectations, as well as setting scientific research agendas. From a long-term investor perspective, precaution is a useful way to reduce uncertainty, which is the source of risk and higher cost of equity.

Methane emissions

One of UOG's claims on community support is its role in a transition to a lower-carbon economy. Regnan considers uncertainty surrounding methane emission, however, to be an emerging area of risk to community support.

We note substantial concern globally among investors about UOG greenhouse gas emissions:

- A collaboration between IGCC (Australia), IIGCC (Europe) and INCR (North America), representing over 200 investors and \$20tr, identified fugitive methane emissions from the oil and gas industry, including unconventional sources, as a key area of current concern and called for clearer measurement and fugitive emissions control techniques by gas companies.³
- A collaborative investor initiative in the US, representing 55 major investment organisations and institutional investors with nearly \$1 trillion in assets under management, produced a guide in 2011 to addressing investor concerns related to fracking risk management, including risks associated with greenhouse gas emissions.⁴

¹ <http://www.environment.gov.au/system/files/resources/ee38b672-6faa-452e-979f-d97b7d425333/files/csg-modelling-groundwater-impacts.pdf>

² <http://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=244651>

³

<http://www.igcc.org.au/Resources/Documents/Controlling%20methane%20emissions%20in%20the%20oil%20and%20gas%20sector.pdf>

⁴ Investor Environmental Health Network and Interfaith Centre on Corporate Responsibility, 2011, Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations', <http://www.iehn.org/publications.reports.frackguidance.php>

As the Committee would be aware, methane is a highly potent greenhouse gas. Reliable estimation of methane emissions is nascent, due to recent developments in methane flux measurement technology.⁵ The potential of oil and gas fugitive methane emissions reduction is, however, well understood to be an efficient GHG abatement method. Therefore, we recommend the inclusion of best practice methane emissions measurement and mitigation within performance standards as a cost effective response to a critical uncertainty.⁶

Older or inactive wells and drinking water bores

Regnan draws your attention to the recent USA EPA report⁷ on the potential impacts of fracking on drinking water, which documented cases where hydraulic fracture networks have connected to water supply by intersecting existing pathways such as faults, fissures and nearby wells that may not have been designed to withstand frac pressure– wells that included older and inactive wells and drinking water wells. Regnan recommends the Committee consider the potential for older wells, inactive wells (shut-in and unplugged/incorrectly plugged) and drinking water bores to contribute to water and greenhouse gas impacts.

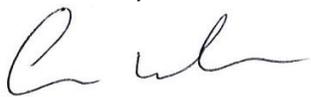
Sufficiently resource regulators

Regnan recommends the consideration of the adequacy of regulator skill and capacity to effectively oversee the UOG industry. The continuous adherence of operators and contractors to best practice ESG risk management is critical to the long-term viability of the UOG industry. Many of the UOG companies that we have engaged with have commented that public interest of UOG is so high that even a minor contamination event can have significant reputational consequences. Regnan considers sufficiently resourced regulators to be an important element in supporting company day-to-day operational integrity.

Concluding remarks

Regnan's submission may be made public as advised. We would be pleased to receive a copy of the Committee's report when available. Should you have any queries in relation to this submission, please contact Katrina Myers on 03 9982 6407 or katrina.myers@regnan.com, or myself on 02 9299 6998 or amanda.wilson@regnan.com.

Yours sincerely,



Amanda Wilson
Managing Director
Regnan – Governance Research & Engagement

⁵ <http://www.csiro.au/en/Research/EF/Areas/Oil-gas-and-fuels/Onshore-gas/Coal-seam-gas-fugitives>

⁶ http://www.igcc.org.au/Resources/Documents/CCAC_Investor_statement_on_methane_emissions.pdf

⁷ <http://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=244651>



Att:

Unconventional gas best practice ESG risk management principles and recommendations, Regnan, July 2015 (confidential); and

Unconventional gas best practice ESG risk management principles and recommendations: Explanatory document, Regnan, May 2013 (public)

About Regnan

Regnan – Governance Research & Engagement Pty Ltd was established to investigate and address environmental, social, and corporate governance related sources of risk and value for long term shareholders in Australian companies.

Its research is used by institutional investors making investment decisions, and also used in directing the company engagement and advocacy it undertakes on behalf of long term investors with \$61 billion invested in S&P/ASX200 companies (at 30 June 2014). This approximates 4.3% of this index.

These institutions include Advance Asset Management; Commonwealth Superannuation Corporation; BT Investment Management; Catholic Super; HESTA Super Fund; NTGPASS; Vanguard Investments Australia; VicSuper; and the Victorian Funds Management Corporation.