26 February 2013

Ms Kristen Palmer
SCER Secretariat Manager
SCER Secretariat
Department of Resources, Energy and Tourism
By email: scer@ret.gov.au

Dear Ms Palmer,

Regnan Submission to Standing Council on Energy Resources:
Draft National Harmonised Regulatory Framework

Thank you for the opportunity to submit our views on the Draft National Harmonised Regulatory Framework (the 'Framework') to the Standing Council on Energy Resources. Our submission is made on the basis that the attached *Draft Unconventional Oil and Gas best practice ESG risk management guidelines* remain confidential as it is in draft form ahead of public release by Regnan at a future date.

About Regnan

Regnan – Governance Engagement & Research 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 for investment decision-making, and also used in directing the company engagement and advocacy it undertakes on behalf of long term investors with $47 billion invested in S&P/ASX200 companies (at December 2012). This approximates 4% of outstanding shares at any given time.

Regnan is owned by eight institutional investors: Commonwealth Superannuation Corporation (formerly ARIA); BT Investment Management; Hermes (UK); HESTA Super Fund; Local Government Super; Vanguard Australia; VicSuper; and the Victorian Funds Management Corporation.

Our submission reflects our experience in researching and engaging with Australian listed companies on behalf of these investors. We respond only to those parts of the discussion paper for which we are in a position to have formed a view.

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Overall Regnan is supportive of a national regulatory framework on CSG to provide a consistent approach to CSG risk management; enhance environmental, social and economic outcomes; improve community trust, and aid industry accountability. We have the following suggestions to enhance the effectiveness of the Framework.

Chapter 1 – towards Sustainability and Co-existence

Uncertainties

We agree that many of the environmental and social impacts of CSG production can be managed through the application of the leading practices within the Framework. However we consider it important for building community trust that the Framework explicitly recognise the uncertainties involved in CSG extraction. Further, in our view confidence in regulatory processes could be improved by incorporating a precautionary approach within the leading practices in addition to adaptive management, particularly when it comes to addressing uncertainties.

Regnan considers two important areas of uncertainty to have arisen from the rapid development of CSG extraction: aquifer inter-connectivity and fugitive methane emissions. Regnan considers that the inclusion within the Framework of leading practices to improve knowledge in these areas would promote acting with precaution and protecting the long-term sustainability of investment in CSG. We address these in more detail below.

Leading practice 4 – Undertake a comprehensive environmental impact assessment, including but not limited to, rigorous chemical, health and safety and water risk assessments

As the Framework notes, the successful evaluation of CSG impact assessments and monitoring of compliance relies on adequate regulator skill and capacity to oversee the industry. Based on our conversations with stakeholders, which include regulators, Regnan is concerned about the resourcing of state and national bodies, such as the IIESC, to oversee the magnitude of projects/wells currently under development.

Chapter 2 – Applying Leading Practices

Standard vs. leading practice

We agree that the consistent application of leading practice nationally will build public confidence in the industry. However in order to achieve this, leading practice must be demonstrably of a higher standard than existing practice. Our research indicates S&P/ASX 200 companies with CSG operations would already comply with “leading practices” in many areas. Regnan is concerned that the leading practices are not sufficiently challenging to promote continued improvement and adequate levels of community confidence.

We have attached our draft best practice guidelines, which we consider to be international leading practice (Appendix A – Confidential Draft Unconventional Oil and Gas best practice ESG risk management guidelines). Our plans for 2013 include familiarising the unconventional oil and gas industry with these in consultation with investors, industry and other stakeholders.

Further, we note that NSW Legislative Council Inquiry into Coal Seam Gas (the 'Inquiry') made 35 recommendations to improve the environmental, health, economic and social impacts of CSG activities after substantive consultation with stakeholders. The integration of the Inquiry recommendations within the Framework, where applicable, would assist in strengthening leading practice.

Limited public disclosure

Of most concern is the minimal reference to public disclosure within the leading practices. Gaining public trust requires improved transparency from industry, for the benefit of all stakeholders. Leading practice includes, at a minimum, co-produced water volumes and reuse; baseline and ongoing assessments of key impacts (e.g. water quality and quantity); and details of hydraulic fracturing (fraccing) operations and fraccing fluid ingredients.

Leading practice 4 – Verify key system elements, including well design, water management and hydraulic fracturing processes, by a suitably qualified and authorised person

We note that a qualified and authorised person may be a suitable senior in-house representative or independent third-party professional. Given the primary objective of this leading practice is improving accountability we question whether an in-house representative would provide sufficient assurances to stakeholders, including investors and the community – Our research experience suggest that for potentially contentious issues, the use of an independent third-party would provide greater comfort.

Chapter 4 – Water Management and Monitoring

Aquifer integrity

It is noted several times within the Framework that there is potential for the connection of previously unconnected aquifers to impact water quality and flow. The Framework also notes that the Namoi Catchment Water Study suggests that more monitoring is required to enable more accurate analysis of hydraulic connections between water systems to examine potential impacts to water quality. Given this uncertainty, Regnan is concerned the leading practice guidance focusses on adaptive management responses rather than a precautionary approach to addressing key knowledge gaps.

While we acknowledge that baseline studies, ongoing monitoring and adaptive management processes should limit impacts if unintended connectivity occur, Regnan question whether this will

be sufficient to instil or maintain community confidence on the long-term sustainability of the industry. In our view, a more precautionary approach would be to state material uncertainties within the water model and outline plans, including timelines and funding, for either the company or academic/regulatory bodies to address these knowledge gaps within a reasonable time.

Leading practice 8: Require the implementation of baseline and ongoing monitoring for all vulnerable water resources

We welcome the advice within the Framework that in the case of widespread evidence of gas in adjacent groundwater, the regulator might consider the future viability of operations. We wonder why this recommendation does not include surface water and atmospheric methane migration, given all could indicate a significant technical/process failure?

Leading practice 9: Manage cumulative impacts on water through regional-scale assessments

The Framework suggests that modelling audits should be undertaken on a regular basis, every two to three years. Given the IIESC has been tasked with improving understanding on aquifer integrity, including developing water modelling guidelines,[1] Regnan recommends the reassessment of models when material new information arises or two to three years, whichever is earlier. Given the heightened stakeholder concern over water impacts, it would be reasonable to expect the environmental representative of an organisation to keep abreast of research on interconnectivity of aquifers in particular.

Leading practice 11: Maximise the recycling of co-produced water for beneficial use, including managed aquifer recharge and virtual reinjection

Given both QLD and NSW regulators have banned evaporation ponds, Regnan questions why the Framework does not also phase out evaporation ponds.

Chapter 5 – Hydraulic Fracturing

Leading practice 13: Require process monitoring and quality control during hydraulic fracturing activity

Our experience with research of S&P/ASX200 companies suggests that, in addition to the Framework recommendations, the supervision by the CSG operator of fraccing operations performed by the fraccing contractor would be leading practice in ensuring quality control and contractor compliance.

[1] http://www.environment.gov.au/coal-seam-gas-mining/research-projects/aquifers.html

Other issues

Fugitive methane emissions

One of CSG's claims on community support is its role in a transition to a lower-carbon economy. Regnan considers uncertainty surrounding fugitive methane emission to be an emerging area of risk to community support however. This risk relates to two areas of uncertainty including 1) changing assumptions based on the direct measurement of methane emissions (fugitive, venting and leakage)[2,3] and 2) emerging research on increased atmospheric methane concentrations within CSG fields.[4]

Recent direct measurement of shale gas emissions in the USA, has led to a Commonwealth government commissioned review into the methodology used to measure greenhouse (GHG) emissions from CSG drilling, particularly fugitive, venting and leakage assumptions. The outcomes of this review will be included within Australian National Greenhouse Accounts Factors (NGA) 2013.[5] We note however, that with no incentive for Australian CSG companies to use site-specific emissions factors, verification of GHG intensity claims appear to be years away, which creates long term investment uncertainty on the sustainability of the industry as well as future GHG liabilities under the carbon pricing mechanism (CPM).

Emerging research also indicates the greater potential for fugitive emissions not just via CSG infrastructure but also from the induced migration of methane to the surrounding atmosphere and water sources. Preliminary research conducted by Southern Cross University shows methane concentrations collected around the Tara gas fields in Southern QLD are ~3.5 times higher than surrounding areas where there is no CSG infrastructure.[6]

Given the importance of greenhouse gas (GHG) benefits to community support, Regnan consider it imperative that the Framework address leading practice on fugitive methane emissions estimation, as outlined in Appendix A.

Shale gas

We also note that the Framework does not cover shale gas. Given the proliferation of shale gas exploration wells nation-wide we consider the inclusion of shale gas within the Framework to be beneficial in proactively managing potential stakeholder concerns regarding shale gas development. The majority of leading practices are equally applicable to shale gas development and, in our view,

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[2] See SWIP, 2012, *Sustainability Research Series:* Shale gas: the fugitive methane problem and IIGCC, IGCC and INCR, 2012, *Controlling fugitive methane emissions in the oil and gas sector*, accessed at http://www.igcc.org.au/Resources/Documents/Fugitive%20Methane-Consultation-Draft.pdf

[3] WorleyParsons, 2012, Lifecycle GHG emissions from electricity generation: A comparative analysis of Australian energy sources, accessed via energies open access.

[4] http://www.scu.edu.au/coastal-biogeochemistry/index.php/69

[5] http://www.climatechange.gov.au/government/submissions/~/media/government/submissions/nger/coal-seam-gas-methods-review-2012.pdf

[6] http://www.scu.edu.au/coastal-biogeochemistry/index.php/69

shale gas could be easily incorporated within the Framework, as we have done in our guidelines - see Appendix A.

Community agreements

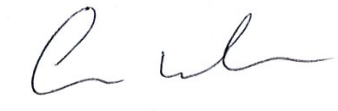
We acknowledge that community agreement is outside the scope of this Framework and will be covered in the national Multiple Land Use Framework under development. Regnan has developed leading practice on community agreement – see Appendix A.

Summary

Regnan considers that the inclusion within the Framework of leading practices to improve knowledge on aquifer integrity and fugitive greenhouse gas emissions would promote acting with precaution and protecting the long-term sustainability of investment in CSG. Further, extending the leading practices to those that are of a demonstrably higher standard, including greater inclusion of public disclosure, would improve public trust and industry accountability. Finally, Regnan considers the inclusion of shale gas within the Framework would be beneficial in proactively managing potential stakeholder concerns regarding shale gas development.

Should you have any queries in relation to this submission, please contact Katrina Myers, in the first instance, on 03 9982 6407 or katrina.myers@regnan.com.

Yours sincerely,



Amanda Wilson
Managing Director