

8 May 2013

Mr Rob Sturgiss  
Assistant Secretary  
National Inventory Systems and International Reporting Branch  
Land Division  
DIICCSRTE  
By email: nationalgreenhouseaccounts@climatechange.gov.au

Dear Mr Sturgiss,

**Submission on Proposals to amend the National Greenhouse and Energy Reporting  
(Measurement) Determination 2008**

Thank you for the opportunity to submit our views on proposals to amend the National Greenhouse and Energy Reporting (Measurement) Determination 2008 to the DIICCSRTE. This is a joint submission by Regnan Governance Research and Engagement (Regnan) and the Investor Group on Climate Change (IGCC), on behalf of their clients and members respectively.

**Summary Comments**

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

We are supportive of the amendments proposed in the technical discussion paper as a suitable response at this stage to some of the key unresolved issues hampering the investment case for CSG, including:

1. Development of Australian specific emissions factors for CSG well leakage, and
2. Mandating the direct measurement of vented fugitive emissions for well work overs and completions with fracing.

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](http://www.regnan.com)

We consider the proposals should be extended to all UG sources.

We also welcome the projects/studies outlined in the discussion paper aimed at improving estimation methodologies and the emission factors applied in Australia. We consider that the exclusion of fugitive emissions from the post-production phase is a gap that should be addressed with priority.

We consider a two-year transition period is the maximum that should be contemplated and would be supportive of an earlier transition.

We consider the proposals are likely to assist the UG industry to reduce long term risks and in this way benefit both the companies and their investors (both current and potential).

#### **Detailed Comments**

##### **Greenhouse Gas (GHG) Estimation Uncertainties**

Uncertainty surrounding future methane emission liabilities is an emerging area of risk for UG. Risks relate to two areas of uncertainty which would increase the overall GHG emission profile for UG developments:

1. Potential for direct measurement of fugitive methane emissions (venting, leakage, and diffuse) to result in significantly different emission values than those given by current estimation techniques; and
2. Potential adjustment of the global warming potential (GWP) for methane.

Only the first of these is addressed by the technical discussion paper, but both are relevant to understanding the investment risk associated with UG.

UG is sensitive to changes in GHG emissions measurement methodology, particularly methane due to its high global warming potential (GWP). Current estimates indicate that ~50% of direct CSG-LNG emissions occur at the extraction stage, which includes a significant quantity of methane emissions. By comparison, about 6% of direct emissions for conventional LNG occur at the extraction stage, of which only a small portion is fugitive methane.<sup>1</sup>

As noted in the discussion paper for this consultation, recent peer-reviewed studies in the USA indicate that both leakage from processing and production equipment as well as venting from well work overs, completions and dewatering, may be higher than previously thought.

---

<sup>1</sup> WorleyParsons, 2012, Lifecycle GHG emissions from electricity generation: A comparative analysis of Australian energy sources, accessed via energies open access.

Emerging research also indicates the greater potential for fugitive emissions to the surrounding atmosphere and water sources not just via CSG infrastructure but from more diffuse sources, such as directional drilling and depressurisation changes via cracks and fissures in the ground.<sup>2</sup>

An additional risk factor is the likely increase in the methane GWP value due to revision of assumptions relating to climate forcing. Academic research suggests the 100-year GWP for methane would increase to 33 from 21 (the value agreed in the Kyoto Protocol).<sup>3</sup> If a methane GWP of 33 was adopted, Australian corporate (and country) methane emissions would increase by ~60%.<sup>4</sup> Additionally, if calls to amend the time horizon of radiative forcing from 100 years to 20 years were accepted, industry methane emissions could increase by up to 500%.<sup>5</sup>

More generally, we expect greater scrutiny of industry claims regarding the GHG benefits of gas relative to coal, which may have flow-on effects to community acceptance of UG relative to alternative energy technologies, hence affecting project approvals.

Resolving these uncertainties is necessary to address potential risks faced by investors in this sector.

In the absence of sufficient evidence that risks are being adequately addressed, we note substantial concern globally among investors about UG GHG emissions:

- IGCC, in collaboration with 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.<sup>6</sup>
- A collaborative investor initiative in the US representing 55 major investment organisations and institutional investors with nearly \$1 trillion in assets under management produced in

---

<sup>2</sup> See <http://www.climatechange.gov.au/en/government/submissions/closed-consultations/~media/government/submissions/csg/CSG-20121109-CentreForCoastalBiogeochemistrySCU.pdf>

<sup>3</sup> Shindell DT, et. al., 2009, 'Improved attribution of climate forcing to emissions', *Science* 326: 716-718.

<sup>4</sup> See [http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/ch2s2-10-2.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html) and [http://unfccc.int/ghg\\_data/items/3825.php](http://unfccc.int/ghg_data/items/3825.php)

<sup>5</sup> Estimates of 20-year GWP range from 56 in the Kyoto Protocol to 72 in IPCC 4AR and more recent academic research (Shindell DT, et. al., 2009, 'Improved attribution of climate forcing to emissions', *Science* 326: 716-718) support 105, versus current Kyoto Protocol 100-year GWP of 21.

<sup>6</sup> <http://www.igcc.org.au/Resources/Documents/Controlling%20methane%20emissions%20in%20the%20oil%20and%20gas%20sector.pdf>

2011 a guide to addressing investor concerns related to hydraulic fracturing risk management, including risks associated with GHG emissions.<sup>7</sup>

- In Australia, members of the Principles for Responsible Investment (PRI) Australian Network, a UN supported initiative, have formed a working group to consider environmental, social and governance (ESG) investment risks associated with UG, including GHG emission uncertainties.
- Regnan will shortly be publicly releasing its UG best practice ESG risk management guidelines based on its engagement experience with UG companies. These guidelines call for UG companies to, amongst other things, publicly state estimation uncertainties, move up the GHG estimation hierarchy through the use of site specific emissions factors, and also to assist with research on diffuse emissions.

Improved scientific understanding of fugitive emissions and improved data would provide the constructive evidence needed to address fugitive emissions and reduce risks to the industry and its investors.

#### **Need for a Higher Order Estimation Method**

We strongly agree with the reasons put forward in the technical discussion paper for adopting a higher order emission estimation methodology for CSG fugitives. As outlined above, uncertainty about the emissions profile of UG is a key investment risk. From an investment perspective, uncertainty equates to risk that requires a higher return to compensate. Energy companies benefit from a reduction in such risks in the form of a wider pool of potential investors and lower cost of capital.

We consider that moving up the GHG estimation hierarchy is consistent with best practice. Further, a mandated approach is necessary, as there is a disincentive for individual companies to voluntarily use emissions factors that may result in unfavourable comparisons to peers.

We are of the view that these uncertainties should be addressed now, as the potential future consequences are sufficient that precaution is warranted. Given the nascence of this industry in Australia, we agree that acting now has potential to prevent greater future costs in compliance and transition.

We note that some submissions in the previous stage of consultation stated that current estimation methods likely resulted in overestimation of emissions and that they had internal information that

---

<sup>7</sup> 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>

validates the emission estimates. As this information is not publicly available, it does not assist in reducing uncertainty, which is the source of risk and higher cost of equity. Further, if correct, it implies additional benefits are likely from more accurate estimation methods in the form of carbon price savings.

### **Improving Estimation Methodologies through Ongoing Research**

We support research aimed at improving estimation methodologies and the emission factors applied in Australia to enhance the accuracy of UG's emissions estimation. We strongly encourage the public release of all new science and prompt incorporation in estimation methodology. In particular, we support the following studies noted in the discussion paper:

1. The joint project with CSIRO to collect field data from production facilities, which will inform the development of Australian-specific emissions factors.
2. The scoping study to inform the development of field methodologies for estimating diffuse emissions.

### **Transition Period**

We consider a two-year transition period is the maximum that should be contemplated and would be supportive of a shorter transition period.

For the many UG projects yet to commence, this timeframe provides sufficient certainty and proximity to support moving immediately to direct measurement.

We note however that there is a delay in disclosure of NGER data such that emission information based on method four will not be consistently publicly available until March 2017 under the proposed transition timetable. Until then, the information available to investors on emissions to inform their assessments of risk is undermined by a lack of comparability.

### **Post-Production Phase**

We consider that the exclusion of fugitive emissions from the post-production phase is a gap that should be addressed with priority. Without this information, the full impact and potential future liabilities associated with CSG developments cannot be accurately assessed, creating investment uncertainty. We seek a clear commitment and timetable to address this gap.

### **Other Unconventionals, including Shale**

We also note that the proposals appear to be limited to CSG. Given the proliferation of shale gas exploration wells nation-wide and the parallel issues that arise in relation to the GHG emissions profile of shale, we consider the proposals should be extended to all UG sources.

Should you have any queries in relation to this submission, please contact Katrina Myers of Regnan on 03 9982 6407 or [katrina.myers@regnan.com](mailto:katrina.myers@regnan.com), or Nathan Fabian of IGCC on 02 9255 0290 or [nathan.fabian@igcc.org.au](mailto:nathan.fabian@igcc.org.au).

Yours sincerely,



Amanda Wilson  
Managing Director  
Regnan Governance, Research & Engagement



Nathan Fabian  
Chief Executive  
Investor Group on Climate Change

### 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.

In its engagement, Regnan represents ten institutional investors: ACT Treasury, BT Investment Management; Catholic Super, Commonwealth Superannuation Corporation (formerly ARIA); Hermes (owned by and run for the British Telecom Pension Scheme; HESTA Super Fund; Local Government Super; NT Government and Public Authorities Superannuation Scheme, Vanguard (Australia); VicSuper; and the Victorian Funds Management Corporation.

### About IGCC

The Investor Group on Climate Change (IGCC) represents Australian and New Zealand institutional investors with over \$900 billion of funds under management and includes superannuation funds, retail and wholesale funds managers and property investment trusts. We are managers of retirement savings and pooled investments and are concerned with the long-term impacts of climate change on the stability of the economy. We invest in all sectors of the economy, emissions-intensive and low-emission alike, including the oil and gas industry in Australia and internationally.

[www.igcc.org.au](http://www.igcc.org.au)