

# Oil and gas sector methane leakage and venting avoidance - best practice disclosure framework

Consultation draft



Investor Group on  
Climate Change

**IIGCC**  
Institutional Investors Group on Climate Change



Investor Network on  
**CLIMATE RISK**  
a project of **Ceres**

# Oil and gas sector methane leakage and venting avoidance – best practice disclosure framework

## Consultation draft

**On 14th June 2012, the Institutional Investors Group on Climate Change (IIGCC), the Investor Network on Climate Risk (INCR) and the Investors Group on Climate Change (IGCC) issued a joint statement on Controlling fugitive methane emissions from the oil and gas sector.<sup>1</sup> This reflects investor concern about the impact of fugitive methane emissions in the oil and gas sector; and calls for action by companies and governments to reduce fugitive methane emissions.**

There is currently relatively little disclosure of company policy and performance on the control of fugitive methane emissions in the oil and gas sector. It is therefore difficult for investors to assess the quality of companies' approach to this issue. In order to address this further disclosure may be helpful.

Based on information provided by Natural Gas STAR and other experts, investors have prepared a draft disclosure framework for consultation with the industry. This provides an indication of the kind of disclosures that would be useful to enable investors to assess whether oil and gas companies are implementing best practice methane emission controls. These disclosures are aligned with best practices identified by the US EPA Natural Gas STAR program.<sup>2</sup> It is possible that assessment of some forms of unconventional gas production may require alternative indicators of good practice.

Investors will be consulting with companies during the summer of 2012 to determine what constitutes best practice in the various relevant contexts, whether the proposed disclosures are the most effective way to enable how investors can best evaluate company policy and performance on this issue, and to identify the improvements that should be made to this draft framework. This consultation is aligned with the work being undertaken by the Technical Working Group for the Carbon Disclosure Project Oil and Gas Sector reporting module, and may be incorporated into that module.

It is intended that the final version of the framework will be used as the basis for investor analysis on the industry's progress toward methane emissions control.

Oil and gas companies and other experts are invited to make comments and recommendations. Please send comments to [MLaManna@theclimategroup.org](mailto:MLaManna@theclimategroup.org) by 31 August, 2012.

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<sup>1</sup> <http://www.iigcc.org/publications/corporate-frameworks/>

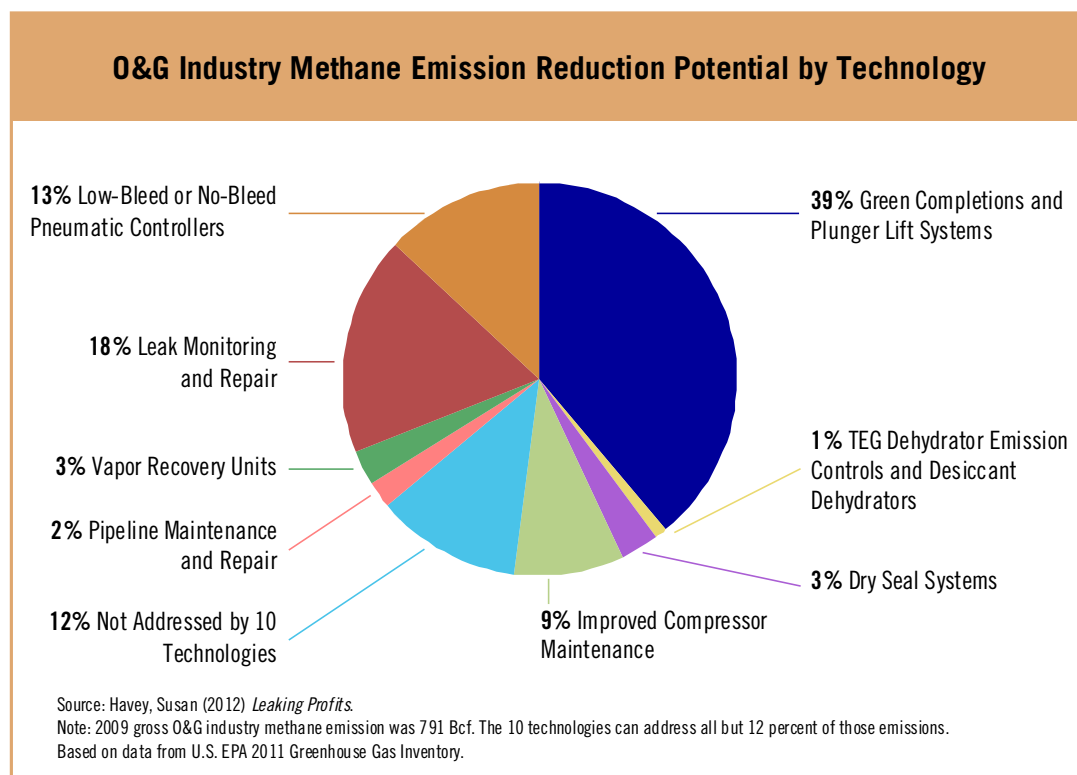
<sup>2</sup> <http://www.epa.gov/gasstar/>

## Section 1. Methane emissions governance

1. **Policy.** Has the company published a policy on reducing methane leakage and venting from its operations?
2. **Goals.** Has the company set quantitative or qualitative goals for reducing methane leakage?
3. **Review.** Does the company board review progress against this policy?
4. **Reporting.** Does the company publish estimates of their fugitive methane emission, and progress in implementing best practice methane emissions reductions?
5. **Public policy:**
  - Has the company published its policy position on methane regulation? Is the company committed to taking a constructive approach to effective regulation of methane emissions?
  - Does the board review lobbying activity to ensure it is consistent with the company's stated position?

## Section 2. Methane control best practice implementation

This part of the framework relates to specific aspects of oil and gas operations. It focuses on the main fugitive emissions abatement technologies.



## 1. Gas well operations

## 2. Reduced emission well completions

The REC approach, also known as ‘Green Completions’ eliminates venting during hydraulically fractured gas well completion and work-overs, by introducing a closed loop system. The API estimates it is only being used in around 20% of cases at present.

- Does the company have a policy to implement reduced emission well completions for new and work-over hydraulically fractured gas wells?
- What proportion of completions in the reporting year used closed-loop reduced emission technology for these wells?

## 3. Using plunger-lift or other artificial lift systems for de-liquification of gas wells

Over time many gas wells accumulate water and condensate, reducing productivity. Blowing down wells to remove this liquid build up results in venting methane. Plunger lifts and other artificial lift systems avoid this venting by lifting liquids to the surface without opening the well to atmosphere.

- Does the company have a policy of utilizing plunger lifts or other artificial lift technology?
  - for new wells?
  - for existing wells?
- What proportion of the company’s wells with liquids loading have plunger lift systems fitted?
- What proportion of the company’s gas production is from wells with plunger lift systems fitted?

## 4. Low-bleed/no-bleed pneumatic controllers

Pneumatic devices are used to control gas and liquid pressures and flows. They are designed to vent methane under certain circumstances. These controllers can be replaced by low-bleed rate controllers or instrument air controls.

- Do you have a program for identifying and replacing or retrofitting high-bleed rate controllers (i.e. controllers that vent more than 6 standard cubic feet per hour)?
- How many high-bleed rate controllers have been replaced with low-emission alternatives in the reporting year?
- What proportion of the company’s controllers have been replaced with low-emission alternatives?

## 5. Improved compressor maintenance

Reciprocating compressors used widely in the gas sector leak methane from a component called a rod packing case. Regular inspection and replacement of rod packing equipment can greatly reduce methane leakage from compressors.

- Do you have a program to inspect reciprocating compressors for methane leakage on a regular basis?
- What proportion of your compressors have been inspected for methane leakage in the last year?

## **6. Leak monitoring and repair**

Methane can leak from a wide variety of locations in oil and gas installations. Leakage can often go unnoticed, particularly when leakage is occurring in the open air. Companies can reduce leakage by instituting a regular monitoring program together with leak sensors in the most leak-prone areas.

- Does the company have a formal leak monitoring and repair program?
- How frequently are inspections implemented?
- Does the company track results of its leak monitoring and repair program and corresponding repair activity?

## **7. Venting during pipeline maintenance and repair**

Methane is vented during the maintenance, extension and repair of gas pipelines. This can often be avoided using a range of appropriate technologies.

- Does the company have a policy of using methane emission-reduction technologies for pipeline maintenance work?

## **8. Other technologies**

The above technologies and techniques account for nearly 80% of the methane leakage in the gas sector. There are some other technologies which if implemented can capture much of the rest.

- Does the company use emission controls to capture emissions from tri-ethylene glycol (TEG) dehydrators?
- Does the company employ desiccant dehydrators to capture emissions from dehydrators?
- Does the company fit dry seal systems to reduce emissions from centrifugal compressor seals?
- Has the company installed vapour recovery units used to reduce emissions from storage tanks?

## **9. Venting of associated gas**

Many oil wells also result in production of associated gas. In some parts of the world this gas is vented or flared.

- What is the company's policy for dealing with associated gas?
- Does the company routinely vent associated gas at any of its oil wells?
- What steps is the company taking to capture and make beneficial use of associated gas?

## **10. Production sharing agreements**

Many oil and gas companies have production sharing agreements for which they may not have operational control.

- What is the company's policy with regard to fugitive methane control at wells in which it has production sharing agreements?
- What proportion of its total production is associated with production sharing agreements?

# About

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## About IGCC

The IGCC represents institutional investors, with total funds under management of approximately \$700 billion, and others in the investment community interested in the impact of climate change on investments. The IGCC aims to encourage government policies and investment practices that address the risks and opportunities of climate change, for the ultimate benefit of superannuants and unit holders.

Contact: Nathan Fabian at [secretariat@igcc.org.au](mailto:secretariat@igcc.org.au) Web: [www.igcc.org.au](http://www.igcc.org.au)

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## About IIGCC

The Institutional Investors Group on Climate Change (IIGCC) is a forum for collaboration on climate change for investors. IIGCC brings together European investors to engage with policymakers, companies and investors on addressing long-term risks and opportunities associated with climate change. The group currently has over 70 members, including many of the largest pension funds and asset managers in Europe, representing assets of around \$10 trillion.

Contact: Stephanie Pfeifer at [spfeifer@theclimategroup.org](mailto:spfeifer@theclimategroup.org) Web: [www.iigcc.org](http://www.iigcc.org)

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## About INCR

The Investor Network on Climate Risk (INCR) is a North American network of institutional investors focused on addressing the financial risks and investment opportunities posed by climate change. INCR currently has 100 members with more than \$10 trillion in assets. INCR is a project of Ceres, a coalition of investors and environmental groups working to integrate sustainability into the capital markets.

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