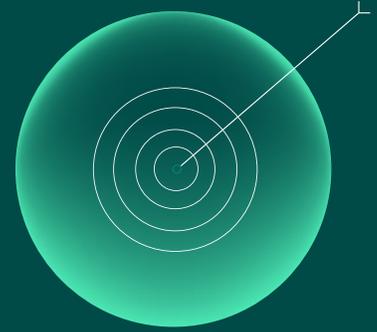


An Investor's Guide to Hitting the Mark: Improving the Credibility of Industry Methane Data



For more information see the full *Hitting the Mark* paper.

How can investors verify that oil and gas companies are credibly reducing methane emissions and meeting commitments?

Overview

Methane emissions from oil and gas operations are an urgent and material business risk. For oil and gas companies to play a role in the energy transition, credibly demonstrating progress towards near-zero methane emissions is an essential first step to participating in a decarbonizing world.

However, the oil and gas industry has a methane data problem. Despite increasing numbers of methane targets in industry, current standards for estimating and disclosing methane levels provide limited insights to stakeholders. Traditional estimates of methane from oil and gas production have been found to underestimate emissions by 60%, threatening to undermine any reported progress.

Hitting the Mark provides a roadmap with actionable recommendations that oil and gas companies should begin implementing in 2020 to more accurately measure and report methane emissions. The paper further establishes a data benchmark for stakeholders to differentiate between leaders and laggards.

Following is guidance to investors regarding data gathering and quality, and how to move from “tell” to “show” disclosure on reducing oil and gas methane emissions.

Key Recommendations to Companies

1 Integrate direct measurement into emissions estimates.

Increase direct measurement of methane emissions to improve data accuracy. This requires conducting **bottom-up measurements** and integrating these findings with **top-down**, site-level methane emissions measurements taken from a statistically representative sample of facilities to lower measurement uncertainty to an acceptable level.

Bottom-up emission factor approaches traditionally rely on desktop equations instead of measurement for estimating methane emissions.

Top-down approaches quantify total emissions by measuring all methane plume(s) in an area, reducing the chance that high-emitting sources are missed during a survey.



Why this matters to investors:

Direct measurement is critical to the accuracy of emissions data. Bottom-up emissions factors can help companies understand the general distribution of emissions – but they alone cannot deliver a comprehensive, accurate estimate of methane emissions. The range of uncertainty for some conventional emissions factors can be +/-1000%. Investors benefit from the continuous improvement in data integrity, making accurate numbers to credibly report on target progress essential to pursuing data-driven ESG investment decisions.

2 Increase the transparency and granularity of methane emissions reporting.

Disclosing the methods used for estimating methane emissions is critical to improving the credibility of reported data. Information such as methods applied for measurement and sampling plan design; emissions inventories broken out by region, country and/or basin; and the summary findings from third-party audits all contribute to the fidelity of methane disclosure.



Why this matters to investors:

Greater visibility into a company's methodology for estimating emissions allows investors to effectively differentiate between companies with confidence in the topline numbers. These recommendations build on existing best practices for corporate target setting established by the investment community, including the Task Force on Climate-related Financial Disclosures as well as voluntary efforts by industry, including the Oil and Gas Methane Partnership.

3 Validate reported methane data through a qualified and independent third-party audit.

External auditing by an established, independent firm can add value and improve confidence in methane emissions disclosure. Third-party auditors will need the technical expertise to rigorously assess both the accuracy of the data as well as the quality of the methods. There are existing standards that govern financial auditing, but have not yet extended to sustainability audits. To ensure trust, companies should publish the results of the audit and disclose the auditing methodology.



Why this matters to investors:

Where robust disclosure allows visibility into the measurement and estimation process, external audits provide additional assurance regarding emissions data accuracy. Auditing has been common practice in financial reporting for decades. As sustainability reporting grows, external auditing is widely viewed as the most significant value add to a company's reporting on sustainability metrics.

Investor engagement questions: Improving the credibility of industry methane data.

Investors play a critical role in galvanizing industry adoption of enhanced measurement and reporting of methane emissions data. Below are suggested questions for investors' company engagements to assure improved accuracy and transparency of industry methane data.



Measurement

- How does the company currently calculate methane emissions?
- How does the company incorporate direct measurements into its methane emissions estimates?
- How is the company integrating site-level emissions measurements into its overall emissions inventories?
- What plans does the company have to move from a bottom-up emissions factor-based approach to a direct measurement-based approach for calculating methane emissions?



Disclosure

- How does the company determine which sites should be included in the direct measurement sampling plan?
- How are the company's emissions broken out by state, basin and/or country?
- What are your company's methane emissions by [most granular geographic area from Question 2]?
- What are the summary findings from the third-party audit of the company's methane emissions data?
- When can investors expect to see the results of direct methane emissions measurements, and/or qualitative narrative about increased direct measurement, integrated into the company's annual reporting cycle?



Auditing

- Has the company hired an external auditor to verify its emissions estimates? If yes, who is the auditor?
- What criteria were used, or is the company considering using, to select an auditor?
- How is the company working with other oil and gas operators, academics and non-governmental organizations to define standards for methane data auditing?