

FOR ISSUE IN THE UK AND EU  
FINANCIAL PROMOTION/MARKETING MATERIAL  
FOR PROFESSIONAL CLIENTS AND QUALIFIED INVESTORS ONLY  
NOT TO BE REPRODUCED WITHOUT PRIOR WRITTEN APPROVAL  
PLEASE REFER TO ALL RISK DISCLOSURES AT THE BACK OF THIS DOCUMENT



# UNDERSTANDING METHANE RISKS AND OPPORTUNITIES FOR FIXED INCOME INVESTORS

FEBRUARY 2025

# EXECUTIVE SUMMARY

- **The management of methane emissions has emerged as a critical focus for efforts to address climate change.** Methane is many times more potent than carbon dioxide in trapping heat within the atmosphere, with methane emissions from human activity originating mainly from the fossil fuels, agriculture and waste management sectors.
- **Regulatory support for reducing methane emissions has continued to grow in the past few years with most major countries now having methane on their agenda.** For oil and gas, EU and US rules regarding methane are setting the tone globally. For agriculture, the policy background is more complex and country-specific, but there has also been significant progress. A range of voluntary initiatives and pledges, at the country and company-specific level, offer evidence of ongoing efforts to reduce methane emissions at scale.
- **Methane emissions can be financially material for companies across relevant sectors.** Emissions from the oil and gas industry could be cut dramatically at no net cost, and even with potential for positive financial impact. Reducing agricultural methane emissions is far more complex, with varying methods of both measuring and reducing emissions.
- **In our view, analysing and assessing methane risks for companies involves two aspects.** These are to assess a company's standing in terms of its management, technology and disclosures; and tracking specific operational and performance metrics. Insight is formalising an approach to consider methane emissions from a financial materiality perspective, and to support clients focused on sustainability and with emissions-related goals or objectives.
- **There are two primary routes for investors seeking to reduce methane emissions: financing of projects and initiatives to reduce emissions directly, and engagement with issuers to encourage them to pursue such efforts.** There are a wide range of opportunities to finance emissions reductions, which largely focus on methane abatement technology and/or transition finance. With regard to engagement by bondholders, national oil companies (NOCs) in emerging markets, small independent fossil-fuel companies in developed markets, and food and agriculture companies offer some of the most significant opportunities.



# METHANE'S ROLE IN CLIMATE CHANGE

## INSIGHT'S MISSION

Methane (CH<sub>4</sub>) is a potent greenhouse gas (GHG) and the main component of natural gas. Methane's intense warming effect over a shorter timeframe has made it a key target of efforts to offset rising global temperatures: methane remains in the atmosphere for approximately nine years<sup>2</sup>, compared with centuries for carbon dioxide (CO<sub>2</sub>), but it has around 82 times more warming potential than CO<sub>2</sub> over 20 years<sup>1</sup>. Methane is responsible for approximately 0.5°C of observed warming<sup>3</sup>.

Recent atmospheric measurements show global methane concentrations reaching 1,892 parts per billion in 2023, more than double pre-industrial levels. This increase has accelerated in recent years. While reducing CO<sub>2</sub> emissions remains the main driver of global decarbonisation efforts, reducing methane emissions is widely deemed a low-to-no-cost route to delay global temperatures from rising.



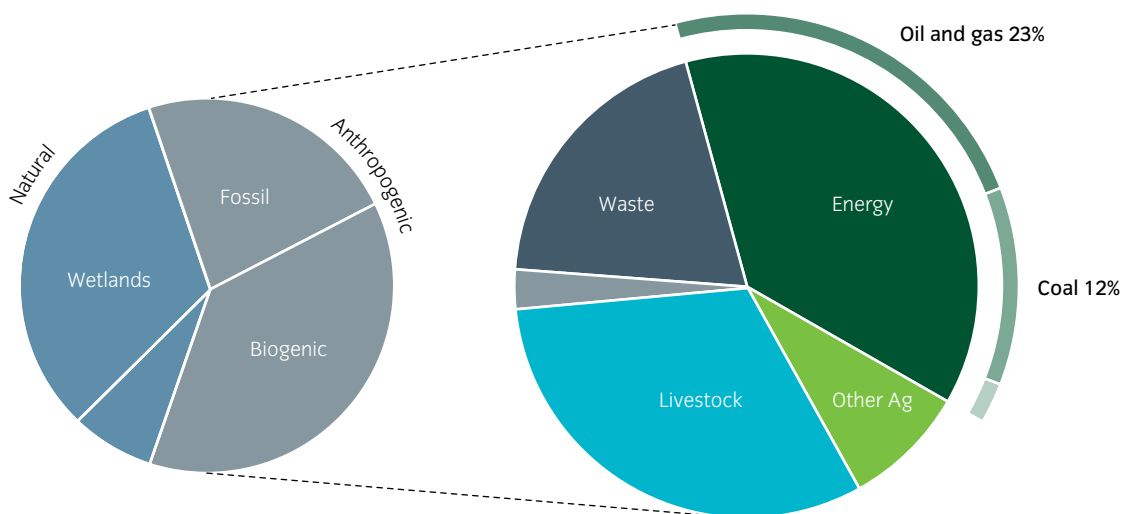
As methane has a short lifetime but is a potent GHG, strong, rapid and sustained reductions in methane emissions can limit near-term warming and improve air quality by reducing global surface ozone

IPCC

## KEY SOURCES OF METHANE EMISSIONS: ENERGY AND AGRICULTURE

The fossil fuels sector, particularly oil and gas and coal operations, represents approximately 35% of global methane emissions from human activity, of which the oil and gas represents more than half (see Figure 1). This makes it the second-largest anthropogenic source after agriculture, which represents around 40% of methane emissions.<sup>4</sup>

Figure 1: Sources of global methane emissions<sup>5</sup>



<sup>1</sup> Source: Table 6.2 (page 836), *Climate Change 2021: The Physical Science Basis (PDF)*, 2021, IPCC.

<sup>2</sup> Source: Table 7.15 (page 1017), *Climate Change 2021: The Physical Science Basis (PDF)*, 2021, IPCC.

<sup>3</sup> Source: page 7, *Climate Change 2021: The Physical Science Basis (PDF)*, 2021, IPCC.

<sup>4</sup> Source: *Methane Tracker*, IEA. Data as at 13 March 2024.

<sup>5</sup> Source: *Understanding methane emissions*, IEA.

**Fossil fuels:** The fossil fuels sector is responsible for approximately 35% of global methane emissions from human activities, broken down into oil and gas operations at 23% and coal mining at 12%. The International Energy Agency (IEA) estimates that methane emissions from fossil fuel operations must fall by more than 75% from current levels by 2030 to align with net-zero pathways<sup>6</sup>.

The intensity of methane and wider greenhouse gas emissions varies dramatically across producers. Natural gas producers in the highest quartile of methane emissions intensity have an average intensity over 32 times higher than that of producers in the lowest quartile; and for oil and gas producers, those in the highest quartile of greenhouse gas emissions intensity have an average intensity over 13 times higher than producers in the lowest quartile.

Emission sources, both of methane and GHG, from the energy sector include venting (the intentional and unintentional releases and leaks of gas), flaring (the combustion of captured gas) and other combustion, from the process and equipment, and venting and flaring, of associated gas.

Oil and gas producers in the US and Russia emit substantially more than other jurisdictions (see Figure 2); and coal producers in China emit many times more than any other jurisdiction (see Figure 3).

Figure 2: Oil and gas methane emissions by jurisdiction<sup>7</sup>

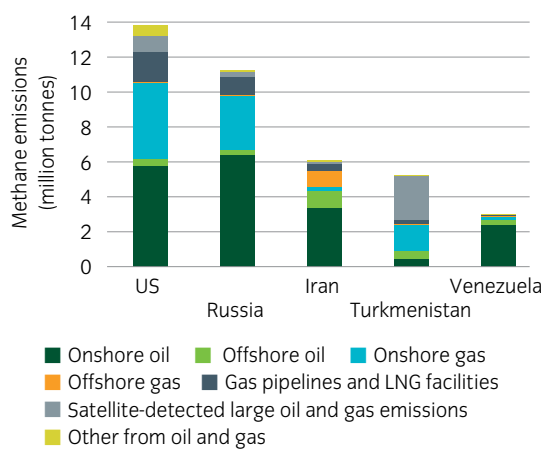
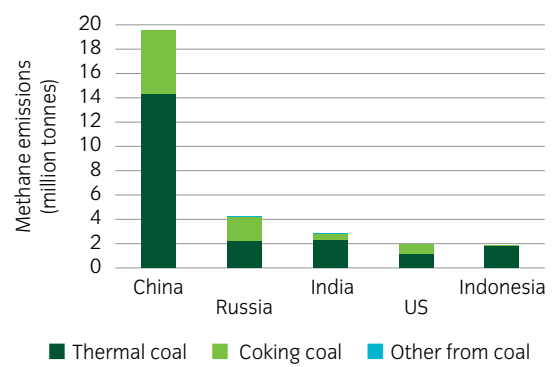


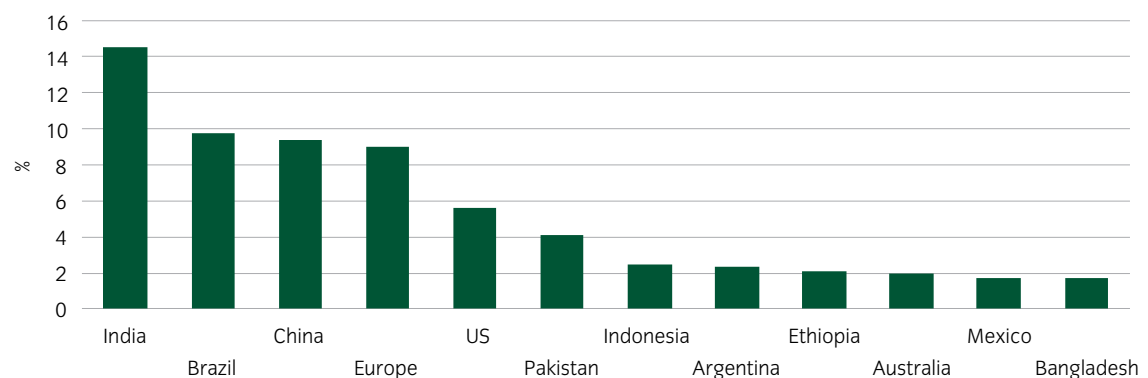
Figure 3: Coal methane emissions by jurisdiction<sup>7</sup>



**Agriculture:** Livestock accounts for c.32% of agricultural emissions. This includes enteric fermentation (cattle, sheep, goats) and manure management. Rice cultivation accounts for c.8%, as flooded fields prevent oxygen from penetrating the soil and allow methane-emitting microbes to thrive.

India, Brazil and China account for over half of methane emissions from agriculture while Europe and the US are also significant sources.

Figure 4: Methane emissions from agriculture by country<sup>8</sup>



<sup>7</sup> Source: Methane Tracker Database, as at 13 March 2024, IEA; Insight Investment.

<sup>8</sup> Methane emissions from agriculture, Our World in Data. Data as at 2021.

# HOW POLICYMAKERS AND REGULATORS ARE DRIVING REDUCTIONS IN METHANE EMISSIONS

- Regulatory support for reducing methane emissions has continued to grow in the past few years with most major countries now having methane on their agenda.
- For the oil and gas sector in particular, rules regarding methane in the EU and US are setting the tone globally. For agriculture, the policy background is more complex and country-specific, but there has also been significant progress.
- A range of voluntary initiatives and pledges, at the country and company-specific level, offer evidence of ongoing efforts to reduce methane emissions at scale.

## OIL AND GAS REGULATIONS ON METHANE: CLEAR THRESHOLDS HAVE BEEN SET IN THE EU AND US

---

### Overview of the EU rules

The most stringent and comprehensive regulatory requirements have been set out in EU methane legislation, which regulates methane emissions from the energy sector and establishes mandatory requirements across multiple sectors with global reach<sup>9</sup>. The implementation timeline is in three phases with progressively tighter standards.<sup>10</sup>

- **Phase 1 (2024-2025):** The focus is on measurement, reporting and verification (MRV) requirements, with companies having to establish continuous monitoring systems covering 95% of their operations by 2025.
- **Phase 2 (2025-2027):** Mandatory leak detection and repair (LDAR) programmes become effective, requiring quarterly surveys and repairs within 15 days of detection.
- **Phase 3 (2027 onwards):** Absolute emissions caps take effect, limiting methane intensity to 0.2% of throughput for upstream operations and 0.05% for midstream operations.

Penalty structures apply if methane is emitted above set thresholds, with these penalties increasing for repeated violations, coupled with market-access restrictions for non-compliant operators.

### Overview of US rules

**At the federal level**, the Environmental Protection Agency (EPA) has implemented stricter methane emissions rules for oil and gas operators, setting out standards for methane emissions measurement, disclosure and reduction for the sector<sup>11</sup>.

**At the state level**, there are significant differences in methane regulation.

**Under the new presidential administration, which has decided to withdraw from the Paris Agreement, the future of US climate-related rules including those related to methane emissions are under question.**

For the time being, small and mid-cap US oil and gas operators still face financial risks from implementation of new control systems, and will need to improve their management of methane emissions to avoid regulatory fines, lost production revenues, emergency repair costs and a potential medium to long-term impact on their market capitalisations.

---

<sup>9</sup> Source: [New EU Methane Regulation to reduce harmful emissions from fossil fuels in Europe and abroad](#), 27 May 2024, European Commission. For more information on the EU regulation and related information, see [Methane emissions](#), European Commission.

<sup>10</sup> [Analysing the EU Methane Regulation: what is changing, for whom and by when?](#), June 2024, The Oxford Institute for Energy Studies.

<sup>11</sup> For more information on the US regulation and related information, see: [EPA's Final Rule to Reduce Methane and Other Harmful Pollution from Oil and Natural Gas Operations and Related Actions](#), 2 December 2023, US EPA.

## RULES ON AGRICULTURAL EMISSIONS VARY WIDELY AROUND THE WORLD

For agricultural methane, most policies focus on monitoring, reporting and verification; target setting; emissions reduction; and financing. Food security, farmer livelihood and the ‘just transition’ drive most policy efforts focused on reducing methane emissions.

Incentivising improvements and technical assistance are more common than policies that explicitly limit emissions, with most national approaches focusing on incentives and targets:

- In the US, the agricultural methane emissions policy instrument is the 2018 Farm Bill, alongside the Environmental Quality Incentives Program and other conservation programmes. In addition, the 2022 Inflation Reduction Act included significant funding for so-called “climate-smart” practices including methane<sup>12</sup>.
- In the EU, the Common Agricultural Programme (CAP) includes methane-reduction goals, which vary in implementation given it is country-specific.

### The role of voluntary initiatives on methane emissions

There are many wide-ranging initiatives focused specifically on methane emissions. Some are focused specifically on oil and gas; few are focused purely on the agricultural sector. Such initiatives can drive countries and companies to action, set industry standards, and help act as a benchmark for peers. We highlight some notable examples here<sup>13</sup>.

- **Global Methane Pledge:** One of the most high-profile voluntary initiatives at the national level, the Pledge was launched at COP26 in 2021 by the EU and US. The Pledge had 159 participants as at January 2025. Participants joining the Pledge agree to work collectively to reduce global methane emissions by at least 30% from 2020 levels by 2030.
- **Oil and Gas Methane Partnership (OGMP) 2.0 framework:** This framework is widely deemed the gold standard for methane measurement and reporting. Launched by the UN Environment Programme (UNEP), it established a comprehensive five-level reporting structure that is being widely adopted by regulators and investors. Companies that join the OGMP 2.0 are required to achieve specified levels of reporting within set time periods, along with annual third-party verification of emissions data and public disclosure of improvement plans and progress. More information is available [here](#).
- **Oil & Gas Decarbonization Charter (OGDC):** This effort was launched at COP28 in 2023, looking to foster industry cooperation and knowledge sharing, aiming for net-zero operations by or before 2050. Signatories to the charter include companies representing over 43% of global oil and gas production. More information is available [here](#).
- **Global Flaring and Methane Reduction (GFMR) Partnership:** Launched in December 2023, the GFMR Partnership is a multi-donor trust fund composed of governments, oil companies, and multilateral organisations committed to ending routine gas at oil production sites across the world and reducing methane emissions from the oil and gas sector to near zero by 2030. More information is available [here](#). The GFMR Partnership was formerly the Global Gas Flaring Reduction (GGFR) Partnership.
- **Zero Routine Flaring (ZRF) by 2030:** Launched in 2015 by the World Bank, this programme aims to eliminate routine flaring of gas during oil production by 2030. It focuses on cooperation between governments, oil companies and development institutions to find solutions to gas flaring through regulation, technology and financial arrangements. More information is available [here](#).
- **Aiming for Zero Methane Emissions Initiative:** This initiative by the Oil and Gas Climate Initiative aims to eliminate methane emissions from the oil and gas industry by 2030. More information is available [here](#).
- **Methane Guiding Principles:** Founded by a coalition of eight energy companies, the organisation provides tools, guidance and resources on methane emissions. The initiative focuses on five priority areas: reducing emissions, advancing performance, improving data accuracy, advocating sound policy and increasing transparency. More information is available [here](#).
- **Dairy Methane Action Alliance:** Six companies and the Environmental Defence Fund launched the Alliance at COP28 in 2023 to drive accountability, transparency, and ambitious climate action within the dairy industry. More information is available [here](#).

<sup>12</sup> For example, see: [Accelerating Climate Solutions on Livestock Operations through the Inflation Reduction Act](#) (PDF), May 2024, Natural Resources Conservation Service.

<sup>13</sup> Source: [About the Global Methane Pledge](#), Climate and Clean Air Coalition.

# COSTS AND BENEFITS: THE PRACTICALITIES AND FINANCIAL IMPLICATIONS OF REDUCING METHANE EMISSIONS

- Methane emissions can be financially material for companies across relevant sectors.
- Methane emissions from the oil and gas industry could be cut dramatically at no net cost, and even with potential for positive financial impact. NOCs are particular laggards, and could present meaningful investment opportunities.
- Reducing agricultural methane emissions is far more complex, with varying methods of both measuring and reducing emissions.

## HOW METHANE EMISSIONS CAN BE FINANCIALLY MATERIAL

Methane emissions can be financially material for companies through loss of produced gas (through leaks and flaring), regulatory compliance costs, operational inefficiencies, reputational damage, potential stranded assets, market-access restrictions and ultimately a higher cost of capital. Such dynamics will often be very company-specific, but it is possible to identify some broad trends (see Table 1).

Table 1: Different sectors can face a range of potential costs as a result of methane emissions<sup>14</sup>

Potential cost category	Oil and gas exploration and production	Natural gas transmission and distribution	Agriculture	Waste management	Petrochemicals
Higher regulatory compliance costs	✓	✓			
Capex for capture, monitoring and abatement equipment	✓	✓	✓		✓
Infrastructure upgrade requirements		✓			✓
Lead detection and repair (LDAR) programme costs		✓			
Customer retention/ market-access risks (due to strict methane requirements)	✓	✓			
Biogas capture			✓	✓	
Landfill monitoring system				✓	

<sup>14</sup> Source: Environmental Defence Fund (EDF), 2024.

## LOW-HANGING FRUIT: REDUCING METHANE EMISSIONS FROM OIL AND GAS

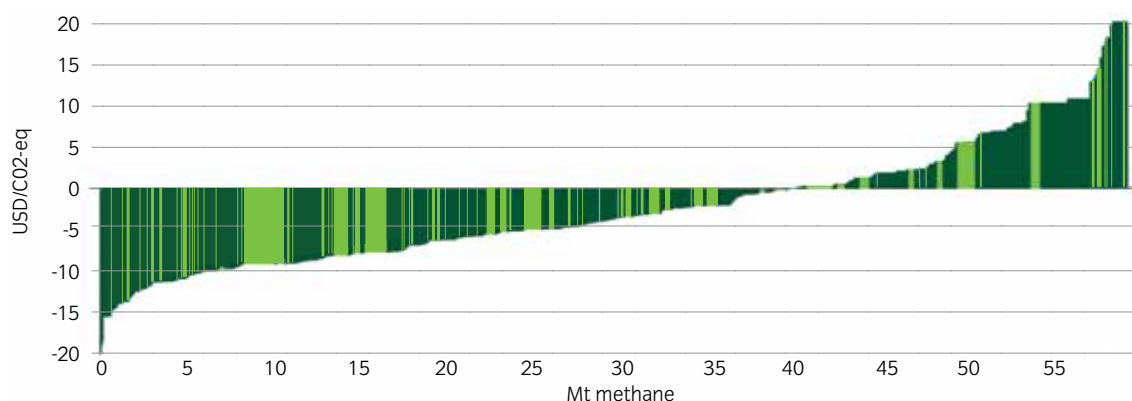
Reducing methane emissions from the fossil fuel industry could yield significant short-term temperature reductions globally and are therefore a focus of regulation and initiatives to reduce emissions. Notably, methane captured can be used and sold, helping to offset the cost of some emissions-reduction measures and potentially resulting in a net profit.

The financial impact of implementing such measures will depend on company-specific factors (as illustrated in Figure 5). But overall, reducing methane emissions in the oil and gas sector is one of the cheapest and most effective ways to limit near-term global warming, with around \$100bn in investment required by 2030 to deploy all methane emissions-reduction measures in the sector<sup>15</sup> – a fraction of the industry’s net income.

However, there could be additional costs to capture and use methane, as especially in emerging markets, this would need new infrastructure to use the gas recovered. The cost of building upstream infrastructure to bring recovered methane to existing pipelines or nearest gas demand centres is estimated at around \$120bn<sup>16</sup>.

“Based on average natural gas prices from 2017 to 2021, around half of the options to reduce emissions from oil and gas operations worldwide could be implemented at no net cost, and would cut oil and gas methane emissions by c.40%. Based on record global gas prices from 2022, around 80% of the options to reduce emissions from oil and gas operations worldwide could be implemented at no net cost; implementing these would cut oil and gas methane emissions by more than 60%.” IEA<sup>17</sup>

Figure 5: Marginal abatement cost curve for methane from oil and natural gas operations, 2023<sup>18</sup>



### National oil companies: lagging behind on methane – and an opportunity for investors?

National oil companies (NOCs), especially in emerging markets, are generally the most challenged when it comes to methane emissions. They report high methane emissions intensity, continued high routine flaring, outdated infrastructure leading to high leak rates, limited measurement infrastructure, limited transparency in emissions reporting and low investment in abatement technology.

The IEA estimates a funding gap of \$15bn-\$20bn for methane-reduction investments at NOCs in low- and middle-income countries, where methane-reduction policies and regulations are often insufficient.<sup>19</sup>

For investors seeking to reduce methane emissions, supporting such activity by NOCs could have a larger impact on emissions than other issuers; and for investors seeking an attractive risk/return opportunity in financial terms, there could be potential for a positive financial impact by effectively tackling methane emissions at such companies.

That said, many of these issuers operate against a backdrop of high geopolitical risk, and low investment grade or speculative grade ratings, with significant amounts of international debt.

<sup>15</sup> Source: [Global Methane Tracker 2024: Key findings](#), March 2024, IEA.

<sup>16</sup> Source: [The true cost of methane abatement: A crucial step in oil and gas decarbonization](#), 21 November 2024, McKinsey & Company.

<sup>17</sup> Source: [Strategies to reduce emissions from oil and gas operations](#), Global Methane Tracker 2023, IEA.

<sup>18</sup> Source: [Global Methane Tracker 2024](#), March 2024, IEA.

<sup>19</sup> Source: [Financing Reductions in Oil and Gas Methane Emissions \(PDF\)](#), June 2023, IEA.



## A GREATER CHALLENGE: REDUCING METHANE EMISSIONS FROM AGRICULTURAL ACTIVITY

---

There is little robust evidence on the financial costs and benefits of methane-emissions reduction in the agricultural sector, due in part due to the very wide range of agricultural practices and technologies in use globally.

Reducing agricultural emissions, as in other sectors, requires the ability to measure and track data extensively. This is complex for agricultural emissions, most of which are from livestock.

Methane emissions from livestock are measured using 'emissions factors', which estimate the methane produced in kilograms per animal. The factors used vary in terms of methodology and precision: tier one methods use simple default regional emissions factors, tier two methods can be more complex requiring detailed livestock population data to generate factors by livestock subcategories, and tier three methods use more sophisticated measurement and modelling.

Direct measurement tools can be used to improve agricultural emissions factors from livestock, though these are often operationally complex and their applicability and relevance may vary by operator. Ways to reduce methane emissions from livestock include animal and feed management practices, and diet formulation, which focus on adjusting the composition of livestock diet, improving resource intensiveness and productivity; and manipulation of the rumen (the first component of the stomach of a ruminant animal), targeting the microbial environment within rumen directly.

Such methods are at a nascent stage. Implementing such methods may result in an overall cost-benefit advantage in the long term, alongside reduced methane emissions. For these to be adopted more widely, greater collaboration across the agricultural sector, perhaps accompanied by regulation, will need to emerge.

## HOW TO ANALYSE METHANE RISKS

- In our view, analysing and assessing methane risks for companies involves two aspects: assessing the company's standing in terms of its management, technology and disclosures; and tracking specific operational and performance metrics.
- Insight is formalising an approach to consider methane emissions from a financial materiality perspective and to support clients focused on sustainability and emissions-related goals or objectives.

### UNDERSTANDING A COMPANY'S APPROACH TO METHANE EMISSIONS

---

We believe it is necessary to assess a company from three angles.

- **Management quality:** This includes assessment of the company's strategic priorities, resource allocation and performance incentives, all in the context of reducing methane emissions.
- **Technology leadership:** This includes an assessment of the company's investment in innovation and early adoption of technology for reducing methane emissions, and its collaboration on relevant technology within its industry. This assessment would cover both measurement and emissions-reduction technologies.
- **Disclosure quality:** This covers data quality and coverage, independent verification, real-time monitoring capabilities and comprehensiveness of the company's methane reporting, verification processes and credibility of methane reduction targets.

### MEASURING A COMPANY'S PERFORMANCE REGARDING METHANE EMISSIONS

---

It is important to track operational and performance metrics and assess these relative to benchmarks, and Insight is formalising an approach and framework to consider methane emissions from a financial materiality perspective and to support clients focused on sustainability and emissions-related goals or objectives. This framework will include a questionnaire and reported data, both qualitative and quantitative, to capture absolute methane emissions, methane intensity ratios, flaring volumes, and efficiency; and to track LDAR programme effectiveness, progress on emissions-reduction targets, technology adoption and implementation, regulatory compliance and preparedness, and capital allocated to emissions reduction. The framework is designed to assess commitment, targets and practice across fossil-fuel companies.

The metrics, along with the operational and financial performance benchmarks, outlined in Tables 2 and 3 are incorporated for enhanced due diligence, analysis and investment criteria and monitoring, especially for high-risk sectors. The outputs from the framework aim to provide a basis for engagement with companies on methane performance.

Table 2: Methane metrics

Quantitative metrics	Emissions intensity	Capital allocation	Operational efficiency
	Methane intensity	Abatement investment ratio	Gas capture rates
	Trend analysis	Technology adoption ratio	Leak detection (frequency/ LDAR coverage)
	Methane performance versus peers	Project IRR analysis	Repair response time
Qualitative metrics	Structural consideration	Peer comparative analysis	Credit impact assessment
	Covenant protection	Regulatory risk exposure	Regulatory compliance costs
	ESG-linked features	Technology adoption rate	Capital expenditure requirement
	Use of proceeds considerations	Investment requirements	Operating cost implications

Table 3: Methane benchmarks<sup>20</sup>

OPERATIONAL: Performance benchmarks			
Category	Leaders	Industry average	Laggards
Methane intensity	>0.2%	1.30%	>2.0%
LDAR coverage	>95%	75%	<60%
Repair response time	<5 days	15 days	>30 days
Monitoring coverage	>90%	65%	<40%
Data quality score	>90%	70%	<50%
Technology adoption benchmarks			
Category	Leaders	Industry average	Laggards
Continuous monitoring	>80%	40%	<20%
Satellite integration	>75%	40%	<15%
AI/ML integration	>70%	35%	<10%
Real-time analytics	>85%	50%	<25%
FINANCIAL: Capital allocation and cost benchmarks			
Category	Leaders	Industry average	Laggards
Capex allocation	>15%	8%	<5%
R&D investment	>12%	5%	<2%
Technology budget	>10%	6%	<3%
Training investment	>8%	4%	<1%
Abatement cost (\$/ton CH <sub>4</sub> )	\$250-\$500	\$750-\$1000	>\$1500
IRR on methane projects	25%-35%	15%-20%	<10%

<sup>20</sup> For illustrative purposes only. We are currently in the process of formalising a framework to consider methane emissions within our investment process which is still under development. This framework will be applied in alignment with our prevailing investment process where methane-related risks are deemed financially material. Please note that such framework is subject to change as it evolves. This communication (including any metrics and benchmarks) is for informational purposes only and should not be relied upon for making any investment decisions. For a comprehensive understanding of the guidelines and objectives of a financial products, please refer to the applicable product documentation and do not rely on this publication for the purposes of making any investment.

# HOW INVESTORS CAN DRIVE REDUCTIONS IN METHANE EMISSIONS

There are two primary routes for investors seeking to reduce methane emissions: financing of projects and initiatives to reduce emissions directly, and engagement with issuers to encourage them to pursue such efforts.

## INVESTMENT: HOW INVESTORS CAN FINANCE REDUCTIONS IN METHANE EMISSIONS

For investors looking to finance reductions in methane emissions, there are a wide range of opportunities to do so, which largely focus on technology or transition finance.

**Sustainability-linked bonds and loans, transition finance bonds and use-of-proceeds bonds lend themselves most naturally to methane emissions-reduction:** they can incorporate structural features focused on methane-specific KPIs, such as absolute emissions-reduction targets, intensity-based metrics, supply-chain coverage and technology adoption rates.

The parameters of such instruments could also include recommended reporting requirements with quarterly measurement updates, third-party verification, technology implementation progress, and overall impact assessment.

We outline the various sustainable debt formats and attempted financing solutions for reducing methane emissions in the fossil fuels and agriculture sectors in Table 4.

Financing instrument	Potential positive characteristics	Potential challenges
<b>Use of proceeds bonds (green, social and sustainability bonds)</b>	<ul style="list-style-type: none"> <li>• Financing eligible activities</li> <li>• Transparent disclosure and verification</li> <li>• Well developed commercial structure</li> </ul>	<ul style="list-style-type: none"> <li>• Institutional exclusions on fossil fuels</li> <li>• Defining and ringfencing methane abatement activity</li> <li>• Harder to deploy with smaller project pipelines</li> <li>• Do not require linkage to broader transformation strategy</li> </ul>
<b>Sustainability-linked bonds</b>	<ul style="list-style-type: none"> <li>• Flexible approach to methane abatement</li> <li>• Multiple clear KPIs to highlight progress</li> <li>• Issuance precedents with oil and gas companies</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of methane-focused KPIs to date</li> <li>• Meaningful ambition and penalties needed</li> <li>• Less visibility and transparency on methane abatement</li> </ul>
<b>Sustainability-linked loans</b>	<ul style="list-style-type: none"> <li>• Flexibility in loan size, structure and disclosures</li> <li>• Collaboration with NOCs/integrated oil companies (IOCs) and lenders</li> <li>• Issuance precedents with NOCs/IOCs</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of transparency on methane abatement activity</li> <li>• Do not require linkage to broader transformation strategy</li> </ul>
<b>Transition finance</b>	<ul style="list-style-type: none"> <li>• Requires credible transition plans and investments</li> <li>• Ability to blend use-of-proceeds/ sustainability-linked bond elements (restrictions on eligible activities, methane MRV, KPIs)</li> <li>• Suitable for NOCs and IOCs</li> </ul>	<ul style="list-style-type: none"> <li>• Transition finance frameworks still work in progress</li> <li>• NOCs may not have transition plans</li> <li>• Similar use-of-proceeds/ sustainability-linked bonds lack of ambition, definition, transparency</li> </ul>
<b>Blended finance</b>	<ul style="list-style-type: none"> <li>• Track record of structures and instruments</li> <li>• Conducive to emerging and public/private markets</li> </ul>	<ul style="list-style-type: none"> <li>• Complex to structure and time consuming</li> <li>• Typically originated by development finance institutions</li> </ul>
<b>Alternative and unlabelled debt</b>	<ul style="list-style-type: none"> <li>• Speed and flexibility in structuring</li> </ul>	<ul style="list-style-type: none"> <li>• Low-integrity approaches currently with few best practices</li> </ul>



## The need for progress in methane abatement financing

It remains difficult to measure the extent to which methane abatement is being financed, due to the lack of up-to-date and transparent data and standardised reporting frameworks.

It is also challenging to distinguish between investment focused on reducing methane emissions and business-as-usual operational expenditures across the sector. Financing structures can also be undermined by flaws in transaction design, including lack of alignment among involved parties and the exact use and application of the debt issuance, and weakness in accountability or transparency.

However, in our view, stakeholder alignment to develop and support changes to deal structures to improve deal integrity and transparency, both in labelled and unlabelled debt, could help achieve positive outcomes, support financial performance, and increase uptake for such issuance as robust and credible financing mechanism.

Notably, the Methane Abatement Financing Taskforce (MAFT) has developed methane-specific guidance aligned with the International Capital Market Association (ICMA) guidelines for green, sustainability, and sustainability-linked bonds and the Climate Transition Finance Handbook. Such efforts could drive further progress in this area.

## ENGAGEMENT: HOW INVESTORS CAN INFLUENCE COMPANIES TO REDUCE METHANE EMISSIONS

---

For bondholders, NOCs in emerging markets, small independent fossil-fuel companies in developed markets, and food and agriculture companies, offer some of the most significant opportunities for engagement.

Key topics for engagement could include any or all of the following.

### Key issues for direct engagements with fossil-fuel companies

- Engagements could include corporate governance framework discussions, such as board-level requirements to have a dedicated methane oversight committee with independent expert advisors and stakeholder engagement programmes, along with quarterly performance reviews on methane performance.
- In terms of measurement systems, verification and reporting, the engagement could cover integration with health, safety and environment management systems, real-time monitoring dashboards, incident response protocols, and training and certification programs. Companies could be encouraged to consider participation in OGMP 2.0, and to provide standardised disclosure with third party verification.
- Target-setting would be another focus, including a consideration of near-zero emissions intensity targets, and absolute emissions targets with clear interim milestones. Metrics disclosures could include intensity-based metrics, technology adoption rates, response time and/or other performance metrics.
- The company's technology adoption roadmap, capital allocation and emissions-reduction investments would be relevant points of discussion.
- In terms of engagement on new bond issuance, a prudent step would be to provide guidelines for conditions covering methane-emissions reductions that can be attached for rolling over the debt. Two possible approaches – neither of which have been implemented in any bond transaction thus far – could be to link methane abatement to conventional finance transactions.
- The other aspect for investors to consider is the interconnectedness of the IOCs with the NOCs through joint ventures. Although IOCs do not have direct control over the day-to-day operations of their national oil joint ventures, they typically form part of the joint venture's ownership group and have influence and contractual rights. Effective governance for future and existing joint ventures will be important for reducing methane footprints overall.

### Key issues for direct engagement with agriculture companies

- In addition to corporate governance considerations, engagement with agriculture companies could include measurement and reporting of report methane emissions associated with agricultural products. This could include, for example, disclosure of the methodology to calculate methane and describing future steps to improve inventories, namely:
  - disclosures on efforts to reduce methane emissions;
  - public disclosure of a methane-reduction plan, with details of the scale and nature of methane abatement investments;
  - disclosures of research and development spending associated with methane measurement and emissions reduction;
  - the development of incentive programmes to support on-farm adoption of methane solutions, including provision of finance;
  - descriptions of company policies to support farmers in the transition;
  - collaborations with banking partners to find fit-for-purpose financing solutions to support the adoption of methane technologies in the value chain; and
  - advocacy for national and local policies that promote methane measurement and emissions reduction.

## Collaborative engagement opportunities

There are industry initiatives for methane-related engagements including the OGMP 2.0 working groups, Climate Action 100+ and the Ceres Methane Coalition. Such engagements have included policy advocacy along with support for methane regulations, the development of industry standards and market-based mechanisms. Groups such as the Global Methane Initiative and the Dairy Methane Action Alliance have engaged in similar disclosure and policy advocacy activities.

### Emerging market national oil company

**Background:** Starting with very high methane emissions intensity with limited measurement and reporting, continued high routine flaring and minimal investment in abatement technology, this emerging market NOC was a key candidate for intensive engagement in methane emissions disclosure and reductions. In its analysis, Insight found that the flaring intensity was greater than double the average of the top 50 NOCs, and higher than direct peers. In addition, most NOCs have set more ambitious near-zero 2030 methane targets, and OGMP membership was pending as well.

Additional research with third-party providers estimated the emissions abatement potential for routine flaring (and venting) and methane emissions for a total of over 20 MMtCO<sub>2</sub>e/year. Hence Insight proceeded to engage with the company targeting a few key outcomes, namely target-setting and OGMP membership. The rationale here was that targeting both these outcomes would lead to a positive foundation for the company to decarbonise over the longer term.

**Engagement discussions and findings:** Insight discussed several deficiencies with the company's target setting, including not having established an overall intensity target, and no related emissions from products processed but not extracted.

**Outcomes and next steps:** The NOC established GHG emissions-reduction targets for each reporting segment and provided progress from the base year in its sustainability plan. Additionally, along with the plan, the company acknowledged that its methodology for calculating methane emissions introduces significant risk for underreporting due to the use of emissions factors, typically at the reporting segment level, to estimate methane emissions.

Insight continues to engage with the company on improving emissions factors and the overall quality of methane emissions reporting.

# METHANE: MORE AN INVESTOR OPPORTUNITY THAN A CHALLENGE

Methane emissions represent a climate challenge and a significant investment risk that warrant investor attention. Progress in technology and practice, growth in awareness, and wide-ranging efforts and initiatives present opportunities for investors, whether they are focused on financial risk and return only, or also wish to pursue emissions reductions in line with responsible investment goals.

Assessments of risks related to methane, and metrics on methane emissions, can be incorporated into company-level and portfolio-level investment analysis through developing methane performance thresholds and tracking technology adoption. Investors seeking to finance methane emissions reduction can use methane-linked financing structures with embedded methane targets and KPIs, and can also engage with issuers, both on a direct and collaborative basis.

Where methane emissions are financially material, we look to incorporate this in our analysis. As methane emissions are a key component in global warming, we expect to engage increasingly on encouraging companies to reduce methane emissions in the coming years.

## CONTRIBUTORS

---



**Chandra Gopinathan**  
Head of Responsible Investment  
Research  
Insight Investment



**Phil Craig**  
Co-Head of Investment Content  
Insight Investment

## IMPORTANT INFORMATION

---

### RISK DISCLOSURES

**Investment in any strategy involves a risk of loss which may partly be due to exchange rate fluctuations.**

Any target performance aims are not a guarantee, may not be achieved and a capital loss may occur. The scenarios presented are an estimate of future performance based on evidence from the past on how the value of this investment varies over time, and/or prevailing market conditions and are not an exact indicator. They are speculative in nature and are only an estimate. What you will get will vary depending on how the market performs and how long you keep the investment/product. Strategies which have a higher performance aim generally take more risk to achieve this and so have a greater potential for the returns to be significantly different than expected.

Any projections or forecasts contained herein are based upon certain assumptions considered reasonable. Projections are speculative in nature and some or all of the assumptions underlying the projections may not materialize or vary significantly from the actual results. Accordingly, the projections are only an estimate.

Portfolio holdings are subject to change, for information only and are not investment recommendations.

### ASSOCIATED INVESTMENT RISKS

#### ESG

- **Investment type:** The application and overall influence of ESG approaches may differ, potentially materially, across asset classes, geographies, sectors, specific investments or portfolios due to the nature of the specific securities and instruments available, the wide range of ESG factors which may be applied and ESG industry practices applicable in a particular investable universe.
- **Integration:** The integration of ESG factors refers to the inclusion of ESG risk factors alongside financial risk factors in investment analysis and research to judge the fair value of a particular investment and may also include the monitoring and reporting of such risks within a portfolio. Integrating ESG factors in this way will not typically restrict the potential investable universe, but rather aims to ensure that relevant and material ESG risks are taken into account by analysts and/or portfolio managers in their decision-making, alongside other relevant and material financial risks.
- **Ratings:** The use and influence of our ESG ratings in specific investment strategies will vary, potentially significantly, depending on a number of factors including the nature of the asset class and the structure of the investment mandate involved. For an investment portfolio with a financial objective, and without specific ESG or sustainability objectives, a high or low ESG rating may not automatically lead to a buy or sell decision: the rating will be one factor among others that may help a portfolio manager in evaluating potential investments consistently.
- **Engagement activity:** The applicability of Insight firm level ESG engagement activity and the outcomes of this activity relating to buy, hold and sell decisions made within specific investment strategies will vary, potentially significantly, depending on the nature of the asset class and the structure of the investment mandate involved.
- **Reporting:** The ESG approach shown is indicative and there is no guarantee that the specific approach will be applied across the whole portfolio.
- **Performance/quality:** The influence of ESG criteria on the overall risk and return characteristics of a portfolio is likely to vary over time depending on the investment universe, investment strategy and objective and the influence of ESG factors directly applicable on valuations which will vary over time.
- **Costs:** The costs described will have an impact on the amount of the investment and expected returns.
- **Forward looking commitments and related targets:** Where we are required to provide details of forward-looking targets in line with commitments to external organisations, e.g. Net Zero Asset Managers Initiative, these goals are aspirational and defined to the extent that we are able and in accordance with the third party guidance provided. As such we do not guarantee that we will meet them in whole or in part or that the guidance will not evolve over time. Assumptions will vary, but include whether the investable universe evolves to make suitable investments available to us over time and the approval of our clients to allow us to align their assets with goals in the context of the implications for their investments and issues such as their fiduciary duty to beneficiaries.

Insight applies a wide range of customised ESG criteria to mandates which are tailored to reflect individual client requirements. Individual investor experience will vary depending on the investment strategy, investment objectives and the specific ESG criteria applicable to a Fund or portfolio. Please refer to the investment management agreement or offering documents such as the prospectus, Key Investor Information Document (KIID) or the latest Report and Accounts which can be found at [www.insightinvestment.com](http://www.insightinvestment.com) and where applicable information in the following link for mandates in scope of certain EU sustainability regulations <https://www.insightinvestment.com/regulatory-home/sustainability-regulations/>; alternatively, speak to your main point of contact in order to obtain details of specific ESG parameters applicable to your investment.

## Fixed income

Investments in bonds are affected by interest rates and inflation trends which may affect the value of the portfolio.

A credit default swap (CDS) provides a measure of protection against defaults of debt issuers but there is no assurance their use will be effective or will have the desired result.

The issuer of a debt security may not pay income or repay capital to the bondholder when due. The return risk to a portfolio is higher where a portfolio is highly concentrated in such an issuer.

Derivatives may be used to generate returns as well as to reduce costs and/or the overall risk of the portfolio. Using derivatives can involve a higher level of risk. A small movement in the price of an underlying investment may result in a disproportionately large movement in the price of the derivative investment.

Investments in emerging markets can be less liquid and riskier than more developed markets and difficulties in accounting, dealing, settlement and custody may arise.

Where high yield instruments are held, their low credit rating indicates a greater risk of default, which would affect the value of the portfolio.

The investment manager may invest in instruments which can be difficult to sell when markets are stressed.

Leveraged funds: as a result of market conditions, the value of the assets held by a Fund may fall and result in a higher degree of leverage than is deemed appropriate by the Investment Manager. In order to reduce the degree of leverage, the Investment Manager may seek to reduce a Funds' total asset exposure. Investors would need to subscribe for additional Shares in order to maintain the level of sensitivity to market movements. Where such an event is unanticipated, this may result in the investors having less sensitivity to market movements than they might consider appropriate to their individual requirements until they have subscribed for additional Shares

## FIND OUT MORE

### Institutional Business Development

[businessdevelopment@insightinvestment.com](mailto:businessdevelopment@insightinvestment.com)

### European Business Development

[europe@insightinvestment.com](mailto:europe@insightinvestment.com)

### Consultant Relationship Management

[consultantrelations@insightinvestment.com](mailto:consultantrelations@insightinvestment.com)



[company/insight-investment](https://www.linkedin.com/company/insight-investment)



[www.insightinvestment.com](https://www.insightinvestment.com)

This document is a financial promotion/marketing communication and is not investment advice.

This document is not a contractually binding document and must not be used for the purpose of an offer or solicitation in any jurisdiction or in any circumstances in which such offer or solicitation is unlawful or otherwise not permitted. This document should not be duplicated, amended or forwarded to a third party without consent from Insight Investment.

Insight does not provide tax or legal advice to its clients and all investors are strongly urged to seek professional advice regarding any potential strategy or investment.

For a full list of applicable risks, investor rights, KIID/KID risk profile, financial and non-financial investment terms and before investing, where applicable, investors should refer to the Prospectus, other offering documents, and the KIID/KID which is available in English and an official language of the jurisdictions in which the fund(s) are registered for public sale. Do not base any final investment decision on this communication alone. Please go to [www.insightinvestment.com](https://www.insightinvestment.com)

Unless otherwise stated, the source of information and any views and opinions are those of Insight Investment.

Telephone conversations may be recorded in accordance with applicable laws.

**For clients and prospects of Insight Investment Management (Global) Limited:** Issued by Insight Investment Management (Global) Limited. Registered office 160 Queen Victoria Street, London EC4V 4LA. Registered in England and Wales. Registered number 00827982. Authorised and regulated by the Financial Conduct Authority. FCA Firm reference number 119308.

**For clients and prospects of Insight Investment Management (Europe) Limited:** Issued by Insight Investment Management (Europe) Limited. Registered office Riverside Two, 43-49 Sir John Rogerson's Quay, Dublin, D02 KV60. Registered in Ireland. Registered number 581405. Insight Investment Management (Europe) Limited is regulated by the Central Bank of Ireland. CBI reference number C154503.

© 2025 Insight Investment. All rights reserved.