

Gas & Energy Transition

| FINANCING REDUCTIONS IN OIL AND GAS METHANE EMISSIONS



Policy Recommendations

- 1** There is a need for strong policies and regulatory reforms, as well as an implementation body in Nigeria's oil and gas sector.
- 2** Nigeria needs to adopt an effective system of monitoring, quantifying, and tracking emissions in the sector.
- 3** Enlightenment systems for stakeholders on emission credits and trading and support for oil companies in leveraging these credits must be in place.
- 4** The government needs to set up gas delivery infrastructure to encourage producers not to flare or vent but to channel gas for domestic use.
- 5** Investors and funding organisations like the African Development Bank should adopt policy restrictions on financing oil and gas projects that boycott flaring and methane reduction.

Introduction

Today, oil and gas operations generate 80 million tonnes (mt) of methane emissions. This accounts for about 30% of global warming. Reducing methane is needed to limit the global temperature rise to 1.5 °C. The pathway to delivering net zero emissions (NZE) with oil and gas has become cheaper and more visible with methane abatement. Methane abatement is about reducing emissions by utilising equipment and operational techniques in oil and gas production chains. It is one of the cheapest options to reduce greenhouse gases in the economy at no cost. About USD 45 billion in revenue can be generated from the sales of captured methane. The market value of captured gas sold is greater than the capital and operational costs of abatement measures, reflecting the profitability of the solution.

Emission reduction measures and techniques to attain 17mt of methane by 2030 include ending non-emergency flaring and venting, adopting leak detection and repair (LDAR) programmes, reduced emissions completions, vapour recovery units, blowdown capture, and routing tank vents to recovery systems. Other low emissions equipment includes instruments air systems, and electric pumps. According to the Normative scenario on the pathway

to NZE, the total methane emissions from oil and gas operations will reduce by more than 15% by 2030. Methane emissions require over USD 75 billion in investments to be actualised based on the oil and gas supply and prices in the IEA NZE Scenario estimates. This investment will cover capital expenditures on new equipment and operational costs in the ratio of 70:30. The abatement cost further spreads across high-income (USD 34 billion), upper-middle-income (USD 27 billion), lower middle-income (USD 13 billion) and low-income (USD 3 billion) countries. Low labour costs account for the meagre abatement cost in low-income countries.

The necessary financing to drive methane abatement actions can be sourced from oil and gas companies, commercial banks, private capital funds, development finance initiatives, philanthropic initiatives, and governments. These different sources of funding need to adopt or develop policies that support emissions abatement and channel funds to oil and gas projects that support the same. Oil and gas companies must set GHG emission reduction targets in their operations and effectively implement them because, aside from the environmental and reputational benefits, it has a commercial advantage for the firms.

Project developers, petroleum service providers and equipment suppliers need to adopt business models that position them as investors. The report included case studies and lessons learnt from The World Bank's Pilot Auction Facility for Methane and Climate Change Mitigation (PAF), The Alberta Emission Offset System, Transition Bonds and Sustainability-linked Financing and Canada's Emissions Reduction Fund. Below are highlights from each case scenario.

1 The Pilot Auction Facility (PAF) for Methane and Climate Change Mitigation was an initiative of the World Bank to support projects on methane reduction. The focus was on wastewater sites, landfills, and animal waste. This scheme was de-risked, allowing companies to sell their bonds when they failed to attain reductions in emissions. As part of the lessons learned from the PAF, The World Bank highlighted that future facilities should consider a range of factors, including the ability to attract more investors and the size and scale of the project. The World Bank highlighted that suitable, replicable methane abatement projects include LDAR programmes and equipment investments.

2 The Alberta Emission Offset System is an incentive system combining economic instruments and regulatory requirements. This scheme allows companies to generate credits under the Alberta Emission Offset System (AEOS) based on compliance with setout regulations. These regulations cover flaring limits, LDAR programmes, and emission limits for different equipment. The AEOS allows oil and gas companies to adopt new technologies, innovate, and reduce emissions cost-effectively. However, transactional costs require

careful measurement and quantification of savings. Therefore, specialist businesses and new sources of finance are encouraged to enter the market as service providers to remove capacity barriers and reduce financing risks significantly.

3 The Emmison Reduction Fund in Canada is a USD 610 million fund for oil and gas companies to drive methane abatement projects and maintain jobs for oil and gas workers. This public fund was put together by the government. Beneficiary companies are required to install meters to track emissions avoided by the project and report data annually for five years to validate emissions reductions. This funding technique showed that direct public funding for emission reduction could reduce potential regulatory costs and mobilise the industry. These funds offset abatement projects' high upfront cost, hence the need for well-defined requirements and mechanisms to quantify and measure emission reductions.

4 Transition bonds are the largest asset class in global financial markets. Climate-related transition bonds were valued at USD 110 trillion in 2021, while green and social sustainability bonds were valued at USD 860 billion in 2022. Repsol was the first energy company to issue a green bond to raise capital for methane reduction in 2017. The proceeds funded energy efficiency projects and low-emission technology. After that, several companies followed suit. However, The effectiveness of a green bond relies heavily on the framework. A clear objective must be laid out before bonds are issued, with credible and clear performance indicators to guide the impact evaluation process. Also, current financial classifications need to set out best practices for bond issuers and investors. Provisions should be made to allow relevant and impactful financing for methane abatement, whether from green transition bonds or sustainability-linked bonds.

Nigeria has the 9th largest natural gas reserves but ranks 38th in natural gas consumption. This is a dilemma because how can a country so rich in this energy resource not use it to solve its problems? Nigeria has the largest energy deficit in the world, with about 92 million Nigerians lacking access to power, accounting for about 45% of its population. This abundant gas resource should be utilised to drive economic growth. There have been set penalties and payments on gas flaring to reduce GHG emissions in the atmosphere while sticking to our nationally determined contributions (NDCs) based on the Paris Agreement. However, methane abatement gives the nation an opportunity to drive the NZE agenda and profit in the process. Therefore, we need to adopt more productive measures to achieve this target. A more practical way is to draw from strategies that have worked for other countries based on case studies in the report;

Recommendations

1. As seen in the Alberta Emission Offset System, strong policies and regulatory reforms in Nigeria's oil and gas sector need to be in place. The implementation of these policies and regulations is crucial as well. Therefore, an implementation body should be set up to monitor and enforce stringent sanctions, ranging from penalty payments to retrieving operation licenses based on the regulations.
2. Nigeria needs to adopt an effective system of monitoring, quantifying, and tracking emissions in the oil and gas sector, as seen in Canada's Emissions Reduction Fund case scenario.
3. Based on The World Bank's Pilot Auction Facility for Methane and Climate Change Mitigation (PAF) case scenario, systems need to be in place to enlighten stakeholders on emission credits and emission trading and support oil companies in leveraging these credits as they adopt methane reduction into their operations.
4. The government needs to put gas delivery infrastructure in place to encourage producers not to flare or vent but to channel gas for domestic use.
5. Investors and funding organisations like the African Development Bank should adopt policy restrictions on financing oil and gas projects that boycott flaring and methane reduction.

Conclusion

Methane is a valuable product of oil and gas production, which should be monetised instead of flared, causing damage to our ecosystem. Financing methane abatement is crucial and holds huge prospects for Net zero emissions reductions globally. Therefore, stakeholders should be enlightened, and the impact of the funding should be effectively monitored and reported. With the world on a fast track to go green and transition from fossil fuel, we need to consider methane abatement processes as one of the clean ways to process gas, which is a transition fuel. This emission reduction is necessary to inhibit global warming and preserve the earth and jobs of millions of people employed by the oil and gas industry as we drive the global energy transition.