

Higher Natural Gas Prices Have Made Methane Capture Projects Increasingly Economic, Potentially Unlocking Vast Amounts of New Supply While Lowering Overall Emissions

New source of supply greater than the total annual demand of France could be added within just 2-3 years, S&P Global Commodity Insights analysis finds

WASHINGTON, Dec. 14, 2022 [/PRNewswire/](#) -- Current natural gas prices, including record high global prices, and renewed concerns for energy security are making projects that capture and commercialize vented, fugitive and flared methane increasingly economic, with the potential to lower emissions and unlock substantial new supplies of gas, [a new analysis by S&P Global Commodity Insights](#) finds.

The analysis examined 6 key regions—North America, North Africa, Central Asia-China, Nigeria, Aussie-ASEAN, and Eastern Mediterranean—and found that the elevated price outlook for natural gas makes it economic to capture and commercialize more than 70% of the lost methane and flared gas from those areas, equivalent to 80 bcm of new supply.

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Notably, the analysis finds that it could be possible to add 40 bcm of new supply—more than the total annual demand of France—to global markets within just 2-3 years. Capturing and commercializing this gas would simultaneously reduce GHG emissions by more than 750 Mt CO₂e*, an amount approximately the size of Germany's total annual emissions.

Methane emission reductions are particularly critical to limit near-term warming as methane is a highly potent, short-lived climate pollutant (with over 80 times more global warming potential than CO₂ over a 20-year period), and is estimated to have contributed roughly 30% of global warming to date.**

"With natural gas prices at historic levels and energy security returning as a global priority, efforts to capture and commercialize methane are increasingly economic and present a win-win proposition," said **Amb. Carlos Pascual, senior vice president, global energy and international affairs, S&P Global Commodity Insights**. "Accelerating efforts to bring these projects forward can provide much-needed supply to the global market while supporting energy security and climate imperatives in the energy transition."

The spike in global gas prices—which began in Fall 2021 and then amplified by the conflict in Ukraine—have particularly enhanced the near-term economics for methane capture projects in regions that have access to the global gas market, the analysis finds.

For a methane capture project deployed next year, 10-year revenues are now expected to be 140-240% higher than they otherwise would have been prior to the price spike. Even as natural gas prices stabilize in the longer term, forecasted revenues remain elevated compared to pre-war price forecasts (56%-93% higher for a project deployed in 2026 and 31%-38% higher for a project deployed in 2030).

"The elevated price outlook for natural gas has created a substantial economic opportunity to capture flared gas and methane emissions, especially in the near term," said **Eleonor Kramarz, vice president, energy transition consulting, S&P Global Commodity Insights**. "While these opportunities will remain economic over the longer-term, the strongest incentives are for acting sooner rather than later when it comes to bringing new projects online."

Advancing methane and flare capture and commercialization projects benefit from well-established technologies that already exist at scale, meaning that there are few technological barriers to deployment, the analysis notes. Still, other impediments need to be overcome.

The analysis identifies key barriers for each of the six target regions across four major categories—export capacity, capital availability, commercial and financing environment, and security risk—and lays out pathways that would enable projects to move forward.

"While the paths forward will be different in each region, there is a consistent need for clear project implementation roles, stronger collaboration between private and public organizations and improved capital availability," Kramarz said. "Bringing together key constituencies will be essential to address barriers and deliver new sources of supply that can strengthen energy security while reducing emissions."

About the Study:

The study examines target regions where efforts to capture methane could quickly increase the supply of natural gas in global markets while reducing methane emissions.

S&P Global Commodity Insights identified key barriers to capturing and commercializing methane across the six target regions selected. Next, S&P Global Commodity Insights developed abatement pathways that could address these barriers and unlock methane emission reduction opportunities. This work consisted of:

- **Developing rough estimates of country-level methane emissions** from venting, fugitives and flaring, and associated **abatement costs**. This analysis utilized IEA's methane tracker, SkyTruth flaring data, and S&P Global Commodity Insights infrastructure and field-level data.
- **Identifying key barriers** to capture and monetize methane based on export capacities, capital availability, commercial and financing environment and security risks.
- **Developing abatement pathways** that could address key barriers and facilitate gas capture and commercialization projects.

The study contributes to the continuing dialogue about achieving Net-Zero Emissions by 2050 by quantifying the requirements of that goal and benchmarking them against the supply response. These insights are intended to facilitate well-informed policy choices.

The analysis and metrics developed during the course of this research and its conclusions represent the independent analysis and views of S&P Global Commodity Insights.

The study was supported by the Environmental Defense Fund.

Additional Resources:

Download the executive summary here: <https://bit.ly/Methane-Consulting>

* Calculation assumes methane or flared gas captured is replacing other natural gas use. For flare capture projects, 2% of methane is assumed to remain uncombusted. Calculation uses an 86x multiplier to approximate methane's 20-year global warming potential (relative to CO₂). Using a 25x multiplier to approximate methane's 100-year global warming potential results in over 250 Mt CO₂e.

** See IEA, "Methane and climate change," available at <https://www.iea.org/reports/global-methane-tracker-2022/methane-and-climate-change>, accessed November 22, 2022

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