MISSING METHANE:

The decarbonization risks and opportunities of financed methane emissions

ACTIONABLE INSIGHTS FOR A DECARBONIZING WORLD

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INTRODUCTION

In 2019 and 2020, the largest US banks – Bank of America, Citi, Goldman Sachs, JPMorgan Chase, Morgan Stanley, and Wells Fargo – set targets to decarbonize their oil and gas portfolios. So far, however, the Big Six have yet to demonstrate clear reductions in their financed emissions. Although they have each committed to reducing the climate impacts associated with their activities, it is hard to say whether real-world oil and gas emissions are, in fact, coming down.

Much of the ambiguity in the banks' progress on climate has been due to instability in the various metrics used to measure financed emissions, which are calculated based on ever-shifting factors such as emissions reporting methodology, portfolio composition, and even energy prices. These issues are discussed more fully in our previous report, Carbon Conundrum: The Curious Case of Financed Emissions. While financial carbon accounting metrics are likely to become more accurate as methods and standards evolve, we don't have the luxury of time: investors and other stakeholders need ways to assess banks' climate risk management today.

Focusing on methane may hold part of the answer. With a near-term warming impact more than 82 times that of carbon dioxide, methane is a major source of oil and gas emissions. Because methane emissions are significantly underreported by the oil and gas sector, banks lack clear visibility into both their actual financed emissions and the most cost-effective opportunities to drive progress toward their 2030 targets.

By taking action on financed methane emissions, banks can decarbonize their portfolios even as carbon accounting remains an imperfect science. Engaging oil and gas clients on methane provides banks with a credible, near-term, and cost-effective path to making headway on financed emissions.

In this report we argue:

Oil and gas methane emissions are significantly underreported and thus pose a material climate transition risk to banks financing oil and gas.

Encouraging clients to measure and mitigate methane emissions is a critical opportunity for banks to achieve 2030 financed emissions targets for the oil and gas sector while addressing climate risk.

Of the six large banks, JPMorgan Chase has the most comprehensive methane risk and opportunity disclosure, as detailed in its 2023 Methane Emissions Opportunity report. Citi follows, with some discussion of methane as a point of client engagement. The remaining four banks lag well behind.

How Banks Should Manage Financed Methane Emissions

We encourage each of the banks to take the following steps to prioritize methane abatement within their oil and gas portfolios:

1. **Encourage clients to join the Oil and Gas Methane Partnership (OGMP 2.0)**
   OGMP 2.0 has emerged as the global standard for measurement-based methane emissions reporting framework for the sector.

2. **Incorporate methane performance in company evaluations**
   Banks should integrate methane performance into oil and gas client screening and due diligence, and consider it when setting terms of finance.

3. **Provide financing bespoke to the challenge of measuring and mitigating methane emissions**
   Banks should work with industry to find ways of providing access to capital for abating oil and gas methane emissions, contingent upon best-in-class targets, measurement, and reporting.

4. **Disclose more granular engagement metrics on methane**
   Such as the share of clients engaged on methane measurement and the share of clients directly measuring and reporting methane emissions through OGMP 2.0.

5. **Disclose how methane emissions factor into 2030 targets**
   Disclosures should separate financed emissions targets for oil and gas clients' operational (Scope 1 and 2) and end-use (Scope 3) emissions, as well as explain how each of those targets will be achieved.

6. **Publish a dedicated methane risk and opportunity report**
   Other banks should follow JPMorgan Chase's lead by issuing a methane emissions risk and opportunity report that is specific to their business and their strategy to address the issue.

7. **Publicly support OGMP 2.0 and strong methane policies**
   Engaging meaningfully with policies and initiatives empowers banks not only to prepare for and capitalize on their implications, but also raises the floor for clients' methane performance.

Full recommendations found on page 8

CHAPTER 1

HOW METHANE SHOWS UP IN BANKS' FINANCED EMISSIONS

Methane generally appears in banks' financed oil and gas emissions in their clients' operational (Scope 1) emissions. To calculate these emissions, banks gather data from client company reports and data broker estimates and aggregate them into a single financed emissions metric. However, these emissions data sources often underestimate methane emissions due to the standard practice of using emissions factors derived from engineering estimates – as opposed to directly measuring emissions on the ground.

The disparity between estimated and real-world measurements of methane emissions has been shown in study after study, and these misrepresentations pose risks to both oil and gas companies and their financiers. EDF field research finds that US-wide methane emissions are 60% higher than companies report to the EPA. In certain oil and gas basins, studies find emission rates to be more than 10 times higher than industry-disclosed figures. The discrepancy can be even greater outside the United States.

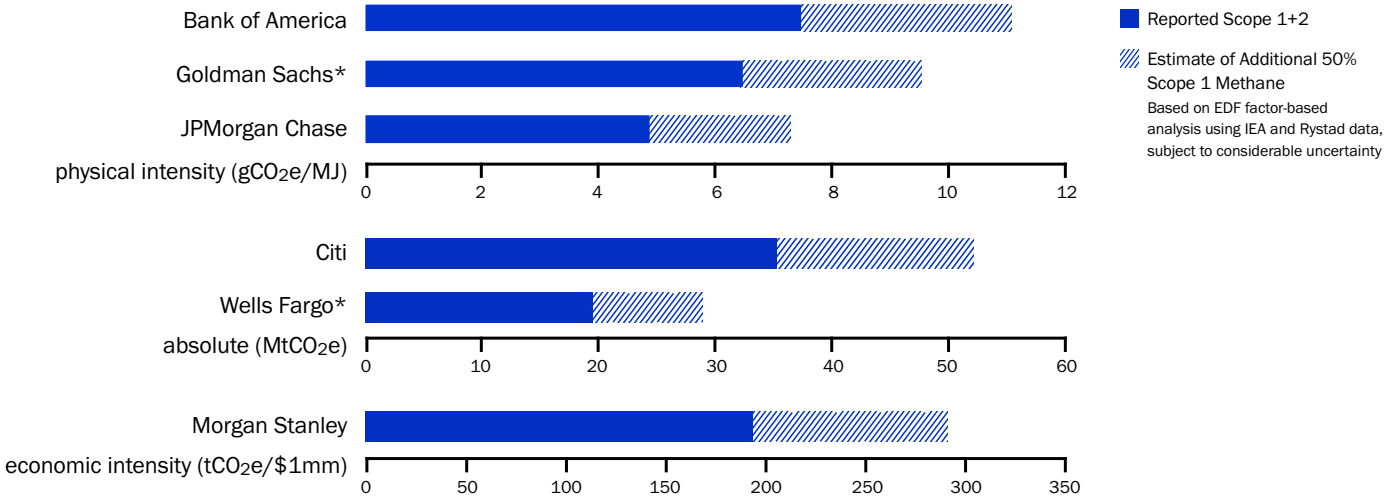
The underreporting of methane creates two problems for banks looking to bring down financed emissions. The first is a decarbonization problem: oil and gas clients that do not directly measure methane emissions may struggle to bring those emissions down as rapidly as possible – despite the fact that 75% of methane emissions can be eliminated using current technologies, with more than half those solutions at no net cost. The second is a reporting problem: as emissions measurement improves, clients will likely start to report higher emissions based on direct measurement. This could make oil and gas financed emissions targets harder to achieve and compare across reporting years.

Transitioning from estimated to directly measured methane emissions would likely increase bank-reported financed oil and gas emissions. But by how much? To get a sense of the potential impact, EDF used best-available IEA methane emissions data – which combines improved emissions factors with existing directly measured datapoints – as a proxy for emissions (see methodology note in Appendix for further details).

This analysis suggests that banks' financed Scope 1 and 2 emissions could increase by 50% if direct measurement were used in place of the current, factor-based emissions (see Figure 1). However, this estimate is subject to considerable uncertainty – the real figure could be anywhere in this range, or even beyond it. In addition, each bank defines their target differently, both by metric and by the oil and gas activities considered, some of which have more or less methane exposure. The true impact will only be known once directly measured methane data becomes more widely available and integrated into each bank's reporting and targets. Because the degree of underreporting is highly uncertain and can only be determined through better measurement, banks should seek directly measured methane emissions data from their clients to better assess progress against their own financed emissions targets.

FIGURE 1

How underestimated oil and gas methane may impact banks' financed Scope 1 emissions



*Scope 1 and 2 baselines were estimated for Goldman Sachs and Wells Fargo using their reports and the reporting of similar peer banks.
Multiple axes reflect variation in reported financed emissions metrics across the six banks. Values cannot be compared across metrics.

Source: EDF analysis of company disclosures

JPMorgan Chase highlights this point in its 2023 Methane Emissions Opportunity report: “direct measurement may result in companies disclosing higher operational emissions in the short- to medium-term when compared to prior data that relied only on desktop-based emission factors.” But the bank goes on to emphasize that “accurate measurement is necessary for effective management,” encouraging clients to improve their data quality to reduce methane emissions.

Underpinned by a focus on direct measurement, banks should encourage oil and gas clients to prioritize immediate methane emissions reductions, toward improving credible progress against financed emissions targets. Encouraging companies to join the Oil and Gas Methane Partnership (OGMP 2.0) is the most straightforward way for banks to improve data quality and unlock rapid and credible cuts in real-world emissions. With more than 115 members representing 35% of global oil and gas production, OGMP 2.0 is widely seen as the leading framework for methane emissions reporting and mitigation. Banks can further assist clients in the right direction by advocating publicly for robust methane regulations and improving their own methane emissions reporting strategy.

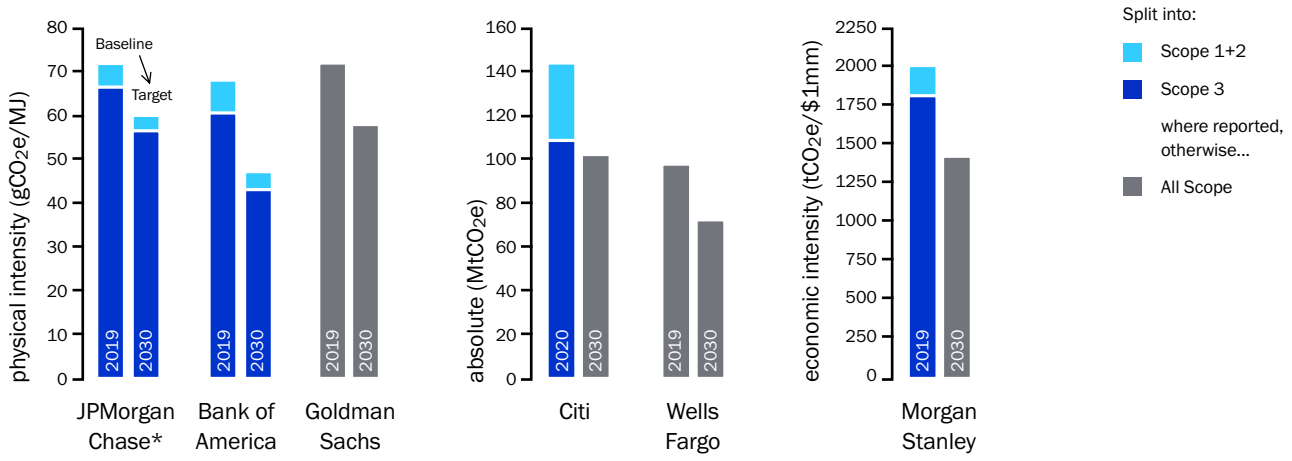
CHAPTER 2

HOW METHANE FITS INTO BANKS’ 2030 TARGETS

Methane abatement should be central to banks’ plans to meet their 2030 financed emissions targets. Although these targets cover all three scopes of banks’ oil and gas clients – and the largest share of emissions consists of Scope 3 (see Figure 2) – banks’ strategies for achieving their 2030 goals rely disproportionately on driving down their clients’ Scope 1 emissions, much of which is methane.

FIGURE 2

Oil and gas financed emissions: 2030 targets



*Values shown for JPMorgan Chase are taken from their December 2022 Climate Report.
JPMorgan Chase’s updated 2023 targets are not comparable to peer banks.
Multiple axes reflect variation in reported financed emissions metrics across the six banks.
Values cannot be compared across metrics.

Source: company disclosures

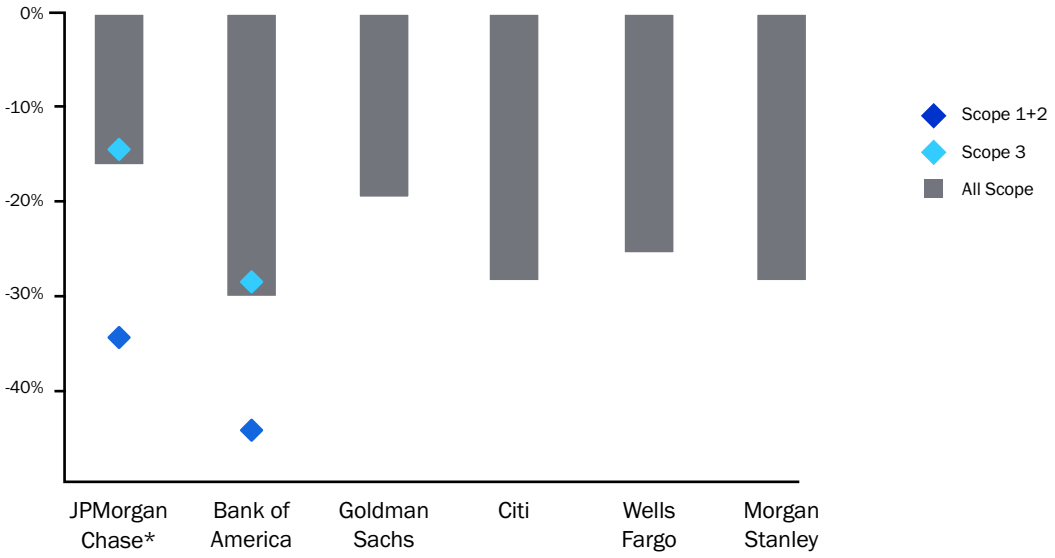
The case of JPMorgan Chase offers insight into the critical role methane emissions play in banks' financed emissions strategies. In its previous climate reporting, JPMorgan Chase disclosed plans to reach its 2030 oil and gas target through greater percentage reductions in Scope 1 and 2 emissions (35%) than in Scope 3 (15%) (see Figure 3). These targets were updated in JPMorgan Chase's 2023 Climate Report, which increased its oil and gas operational target to a 45% emissions reduction below the 2019 baseline. In its 2023 Carbon Compass Methodology report, JPMorgan Chase explained that this financed Scope 1 and 2 emissions target is derived from a:

- 79% reduction in methane emissions
- 93% reduction in CO2 emissions from methane flaring
- 29% reduction in CO2 emissions from all other activities

JPMorgan Chase's new Scope 3 target (called "Energy Mix") is no longer comparable to past years or peer banks. However, its earlier 2021 Carbon Compass Methodology report disclosed that oil and gas Scope 3 emissions reductions were more reliant on economy-wide trends such as declining demand for oil and gas and rising demand for renewables.

FIGURE 3

Oil and gas financed emissions: target reductions



*Values shown for JPMorgan Chase are taken from their December 2022 Climate Report. JPMorgan Chase's updated 2023 targets are not comparable to peer banks.

Source: company disclosures

There is good reason for banks to give a prominent role to methane in their targets: many of the pathways around which the targets are built assume significant reductions in methane emissions. Over a dozen of the largest banks in the US, EU, and Canada have set their targets based on pathways defined by the International Energy Agency (IEA) – often the IEA Net Zero Emissions (NZE) Scenario. JPMorgan Chase, Bank of America, Citi, and Morgan Stanley use the IEA NZE pathway, which relies on a 75% reduction in methane from fossil fuel Scope 1 emissions by 2030. Achieving this assumes the oil and gas sector implements "measures that put a stop to all non-emergency flaring and venting, and universal adoption of monthly or continuous leak detection and repair programs," in addition to reductions in methane emissions from declining oil and gas production.

In both the inception of and strategy behind banks' 2030 oil and gas sector targets, cutting methane emissions is a core consideration – with direct methane measurement serving as the key to achieving real-world reductions.

CHAPTER 3

WHY BANKS SHOULD PUSH FOR BETTER OIL AND GAS METHANE MANAGEMENT

Beyond setting strong targets, banks should engage with their oil and gas portfolio companies to implement strong methane management procedures to reduce portfolio risk and inform their real-world progress on emissions reductions. Regulators, advocates, and the public have become increasingly sophisticated in their understanding of methane's role in near-term global warming. With the upcoming launch of the leak detecting MethaneSAT satellite, the heightened understanding of methane emissions only increases risks for companies and financial institutions that fall behind in managing it.

By supporting direct measurement and credible management of methane emissions, banks:

> **Address climate transition risk:** Methane emissions pose fundamental financial, regulatory, and reputational risks to oil and gas companies, which may lead to significant impacts on bank portfolios. High methane leakage rates may indicate that an oil and gas client is incapable of operating safely and effectively, is unprepared to comply with emerging regulations, and is ill-equipped to meet basic climate and energy transition expectations.
>
> **Capitalize on decarbonization opportunities:** Better data leads to better decision-making, which leads to better performance. Direct measurement-based methods will allow banks to better assess methane risks, identify and facilitate potential financial opportunities, and guide their approach to relationships with oil and gas clients – including ceasing support for clients where progress is insufficient.
>
> **Demonstrate climate action:** Facing increasing scrutiny from a diverse set of stakeholders, banks can demonstrate credible climate action by transparently advocating for a proven, high-impact climate solution. Support for participation in OGMP 2.0 is a no-regrets course of action that allows banks to make progress on their climate goals.

While there is substantial momentum within the oil and gas industry for methane reduction, banks cannot rely entirely on regulation or voluntary company action alone to mitigate the methane risk in their portfolios. Banks deal with many smaller, privately-owned operators as well as with larger, state-owned national oil companies that have largely lagged on undertaking direct methane measurement. Banks have both an opportunity and a responsibility to use their debt financing relationships to engage clients - especially those falling behind - on improving methane management.

CHAPTER 4

WHAT THE BIG SIX US BANKS ARE DOING ON METHANE

With six years left to achieve their 2030 financed emissions targets, no major US bank is currently providing sufficient disclosure on the strategies to achieve targets and address portfolio methane risk. However, of the six largest banks, JPMorgan Chase leads in the steps it has taken to call out methane through its 2023 Methane Emissions Opportunity report, which details the specific actions JPMorgan Chase is taking to engage oil and gas clients and improve direct methane measurement. To a lesser extent, Citi has also discussed oil and gas methane emissions as a component of the sector's transition strategy and its own client engagements.

Other banks lag these two in their treatment of methane. Wells Fargo acknowledges methane emissions reductions as a "potential action" for the oil and gas sector to reduce its operational emissions. Bank of America, Morgan Stanley, and Goldman Sachs hardly mention methane at all: at most, listing methane alongside carbon dioxide as a greenhouse gas considered in their financed emissions metrics.

EDF conducted a landscape analysis of the Big Six US banks' public climate disclosures to assess how each bank communicates its strategy for achieving its target and mitigating methane risk. Because financed methane emissions appear in clients' Scope 1 emissions, the analysis assessed the banks on the granularity of their financed emissions reporting, as well as how methane emissions fit into their portfolio target strategy (see Figure 4). See Appendix 1 for further detail on bank-specific performance.

FIGURE 4

Comparing Big Six US banks' target transparency and methane performance

	Target Transparency			Methane Performance		
	Breaks oil and gas baseline by Scope	Breaks oil and gas target by Scope	Discloses strategy for achieving target, by Scope	Discusses methane as a point of client engagement	Advocates for direct methane measurement	Disclose metrics for client engagement on methane
JPMorgan Chase	●	◒	●	●	●	○
Citi	●	○	○	●	○	○
Bank of America	●	●	○	○	○	○
Wells Fargo	◒	○	○	●	○	○
Morgan Stanley	●	○	○	◒	○	○
Goldman Sachs	○	○	○	◒	○	○

Source: company disclosures

Though some of the Big Six have begun discussing methane in their public disclosures, this is just a start: banks should prioritize improved methane management as a core part of their client engagements and climate strategy. Much more remains to be done for banks to fully address portfolio methane risks and capitalize on the decarbonization opportunity.

CHAPTER 5

OUR RECOMMENDATIONS

Banks are well positioned to push for strong methane emissions management as a key component of climate planning within their oil and gas portfolios. We recommend the following best practices for banks to address methane risks:

Client Engagement

> **Encourage clients to join OGMP 2.0.** The industry-leading reporting framework enables companies to measure, report, and mitigate methane emissions in a comprehensive and transparent way that builds confidence with stakeholders. Achieving OGMP's 'Gold Standard' for methane measurement is the core indicator of determining whether companies are credibly pursuing improvements in methane emissions management.

Incorporate methane performance in company evaluations. Banks should thoroughly evaluate the material financial risks posed by clients that lag on directly measuring and credibly managing their methane emissions – and be prepared to cease support for clients where progress is insufficient. Banks should consider integrating methane performance as part of screening clients, conducting due diligence, and setting terms of finance.

Provide financing bespoke to the challenge of measuring and mitigating methane emissions. Oil and gas methane abatement remains severely underfunded and access to capital remains a barrier for many small- and medium-sized operators and national oil companies. Banks should work with industry to find ways of addressing this need, with finance made available contingent upon best-in-class targets, measurement, and reporting.

Enhanced Reporting

Disclose more granular engagement metrics on methane. These metrics should include: 1) the share of oil and gas clients engaged on methane measurement; and 2) the share of clients directly measuring and reporting methane emissions through OGMP 2.0. These metrics could be expressed as a proportion of total clients, financed emissions, or bank financing to sector. Engagement metrics are critical to demonstrate clear and consistent year-over-year progress toward addressing climate transition risks while the carbon accounting for existing financed emissions metrics improves.

Disclose how methane emissions factor into 2030 targets. To build stakeholder confidence and demonstrate credibility, banks should disclose their strategic plans for how to achieve 2030 financed emissions targets. At minimum, disclosures should include separate financed emissions targets for oil and gas clients' operational (Scope 1 and 2) and end-use (Scope 3) emissions, explanations for how each of those targets will be achieved by reductions in specific oil and gas emissions sources, and explanations of specific actions the bank is taking to drive those emissions reductions.

Publish a dedicated methane risk and opportunity report. Other banks should follow – and go beyond – JPMorgan Chase's lead by issuing a methane emissions risk and opportunity report. A comprehensive report should detail the bank's current efforts and future plans to mitigate methane risks from their oil and gas portfolios, ideally describing how the bank is progressing against the recommendations listed in this report and providing robust quantitative metrics that track progress in tackling methane risk.

Public Support

Publicly support OGMP 2.0 and strong methane policies. Engaging meaningfully with policies and initiatives empowers banks not only to prepare for and capitalize on their implications, but also raises the floor for performance across their vast range of diverse clients – enabling companies to undertake best practice on methane emissions management. Beyond OGMP 2.0, banks should consider publicly supporting upcoming methane regulations, such as state-level implementation plans of the US EPA's oil and gas methane rule, along with emerging regulations and initiatives in Canada, Mexico, the European Union, Japan, and elsewhere.

APPENDICES

APPENDIX 1

SUMMARIES AND EXCERPTS FROM THE BIG SIX US BANKS' CLIMATE REPORTING

Insights from EDF's benchmarking analysis are described below:

JPMorgan Chase discusses methane throughout its 2023 Climate Report and Carbon Compass Methodology report, and leads the Big Six banks on public methane disclosures as of its November 2023 release of a dedicated Methane Emissions Opportunity report. Methane reductions are highlighted as "an immediate action that can produce positive outcomes for businesses, the climate, and energy security." The bank discloses how it will drive methane emissions reductions through financing the deployment of methane management technology, funding clients' decarbonization efforts, engaging with stakeholders on methane management best practice, evaluating methane emissions as part of companies' risk profiles, and encouraging clients to improve their methane data reporting.

JPMorgan Chase also explains how methane emissions reductions contribute to its 2030 financed emissions target for operational oil and gas emissions. However, JPMorgan Chase altered its oil and gas Scope 3 target in 2023 such that it is no longer comparable to past years or peer banks. The new "Energy Mix" target (which combines oil and gas end-use emissions with end-use emissions from zero-carbon alternatives in its electrical power portfolio) obscures how the bank's financed oil and gas Scope 3 emissions will fall by 2030.

> *"JPMorgan Chase applauds efforts to improve the accuracy of methane monitoring and enable robust disclosure, and aims to work with industry partners and NGOs to help make direct measurement technologies a preferred method of tracking methane emissions and informing emissions reporting. We also recognize that direct measurement may result in companies disclosing higher operational emissions in the short- to medium-term when compared to prior data that relied only on desktop-based emission factors. We commend companies who take forward-leaning action on direct measurement and reporting based on the view that accurate measurement is necessary for effective management. We believe that reporting higher-quality data is an important way to build investor and stakeholder confidence over time."*
>
> – 2023 Methane Emissions Opportunity Report, JPMorgan Chase

Citi discusses methane as a point of engagement with its clients in both its 2022 and 2021 TCFD Reports. Methane emissions reductions are framed as an important component of near-term decarbonization because some clients "have less ability today to branch out from oil and gas production, and instead are focusing on decarbonizing their operations." While Citi does not give specific details for how it plans to achieve its 2030 oil and gas sector targets through methane management, it does qualitatively say that decreasing methane emissions is an important component of reducing their clients' Scope 1 and 2 emissions.

> *"Other clients, however, have less ability today to branch out from oil and gas production, and instead are focusing on decarbonizing their operations. Although we acknowledge that operational Scope 1 and 2 GHG emissions are a fraction of the Scope 3 GHG emissions from the combustion of oil and gas, we also believe that any efforts to decarbonize today, for example by increasing operational efficiency or decreasing methane emissions, amount to real GHG emissions reductions and climate benefits, and provide some clients with a foothold to make progress and potentially identify further opportunities for decarbonization."*
>
> — 2022 TCFD Report, Citi

Wells Fargo did not mention "methane" at all in its most recent 2022 TCFD Report. However, methane does receive a shoutout in its 2022 CO_2eMission report, which outlines its target-setting methodology. Methane management practices, such as eliminating routine flaring, reducing venting, and addressing methane leaks during extraction and transportation, are listed as potential actions for decreasing oil and gas operational emissions.

> *"To manage its greenhouse gas emissions, the Oil & Gas industry has available a range of potential actions including decreasing operational emissions by consuming low-carbon energy during the extraction process; eliminating routine flaring; and reducing methane emissions from venting (i.e., the direct release of gas into the atmosphere) and addressing methane leakage during oil and gas extraction and transportation."*
>
> – 2022 CO_2eMission Report, Wells Fargo

Bank of America only mentions methane twice in its 2023 TCFD Report and has no explicit outline for reducing oil and gas methane emissions. However, the bank has separate targets for oil and gas operational and end-use emissions that demonstrate that oil and gas operational emissions – the emissions segment that includes methane – play an important role in achieving its targets.

> *"To arrive at a separate target for Scopes 1 and 2, we applied the NZE2050 reduction pathways for methane, flaring and other carbon emissions. For Scope 3 we applied the intensity reduction pathway for the sector end use emissions. We feel this best reflects the clients' efforts to reduce emissions from existing processes and the necessary transition to other low- and zero-carbon energy sources."*
>
> – 2023 TCFD Report, Bank of America

Morgan Stanley mentions methane minimally throughout its 2022 ESG Report, 2021 Climate Report, and financed emissions target-setting methodology report – no more than once per report. The bank says that it supported the Environmental Protection Agency's proposed methane regulations in 2021 through the Business Roundtable, and mentions frameworks for measuring and managing methane – along with other greenhouse gases – may be used as part of enhanced due diligence for shale hydraulic fracturing and oil and gas pipelines.

> *"Enhanced due diligence considerations may include impacts on biodiversity and freshwater resources, local communities and Indigenous Peoples, and the company's framework for and track record in managing seismicity, greenhouse gas emissions, including methane leaks, spills, water use, waste and wastewater management, and occupational health and safety."*
>
> – 2023 Environmental and Social Policy Statement, Morgan Stanley

Goldman Sachs has not released a TCFD report since 2021 and is the only major US bank to not yet report any updates to its financed emissions targets. In its 2021 TCFD Report, methane and flaring are only mentioned alongside carbon dioxide as activities that are considered within the target – this clarification is made by all the other banks in this analysis. Goldman Sachs also publishes its own decarbonization pathway called "Carbonomics." However, in both its 2021 and 2023 Carbonomics reports, Goldman Sachs makes no mention of methane emissions as an important component of the oil and gas sector's emissions. Methane is mentioned in Goldman Sachs' Environmental Policy Framework along with other factors that cause enhanced due diligence for new unconventional hydraulic fracturing clients.

> *"Our 1.5°C target is based on the sectoral pathways published in Goldman Sachs' Carbonomics research, and these pathways include emissions from methane and flaring as well as carbon dioxide."*
>
> – 2021 TCFD Report, Goldman Sachs

APPENDIX 2

METHODOLOGY FOR FINANCED METHANE EMISSIONS ANALYSIS

Given systematic underestimation of methane emissions via the industry's emissions factor-based reporting, EDF sought to independently estimate oil and gas methane emissions using respected and publicly available IEA Methane Tracker data. Although IEA also relies on emissions factors, their country-level emissions estimates take into account satellite and scientific data when available. While direct measurement is ultimately needed to properly assess the issue of methane measurement, our analysis estimates that banks' financed Scope 1 and 2 emissions could be 50% higher than currently reported.

We arrived at this multiplier using methane emissions data from IEA, production data from Rystad Energy UCube, and reported emissions data from the seven oil and gas supermajors: BP, Chevron, ConocoPhillips, Eni, ExxonMobil, Shell, and TotalEnergies. We focused on the supermajors due to a variety of factors, including their contribution to global production, high exposure in the portfolios of the six largest US banks, and relatively high level of methane emissions disclosure among fossil fuel companies.

Using IEA and Rystad data, we calculated an upstream methane intensity (kt CH4/BOE) for each country, applied this intensity to country-level production figures for the supermajors, then aggregated globally to estimate methane emissions from the supermajors. Methane estimates were calculated in CO_2e using GWP100 to align with the methodological convention in the banking sector. A more accurate assessment of methane's climate impact would use GWP20, as using GWP100 represents an underestimation of short-term impact.

By comparing EDF's calculated methane estimates to supermajors' reported emissions, we generated an average multiplier for how much larger both methane emissions and all Scope 1 and 2 CO_2e emissions could be than reported figures. Although it is challenging to precisely apply our results to banks' portfolios due to limited transparency into lending practices, we used the banks' financed emissions formulas to estimate a multiplier for currently reported financed emissions.

This estimation relies on a number of assumptions:

- Methane emissions are roughly proportional to production in each of the countries studied,
- Supermajors underreport methane emissions to a similar degree to the rest of the fossil fuel industry, and
- Bank oil and gas portfolios are diversified across regions in similar proportions to the production-weighted average of the supermajors.

These assumptions are not always the case, so we cannot be certain how much higher emissions could be for any one particular bank – we represent the data for each bank only for illustrative purposes. However, for the banking sector as a whole, we estimate that banks' financed Scope 1 and 2 emissions could be approximately 50% higher than currently stated, due to underestimation of upstream methane emissions. This estimate is subject to considerable uncertainty, which highlights the importance of increasing direct measurement-based reporting of oil and gas methane emissions.