

Transferred Emissions: How Risks in Oil and Gas M&A Could Hamper the Energy Transition



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Foreword

The Glasgow Financial Alliance for Net Zero was created to bring stakeholders from across the finance sector together to accelerate the transition to a net zero economy. Core to our work is the recognition that business-as-usual will not support our climate goals and that collaboration between companies, investors, banks, and regulators is essential to driving climate progress and a just and orderly transition.

The climate impact of oil and gas asset transfer is a key challenge that calls for such collaboration. Whether sales are driven by traditional business imperatives or explicitly linked to energy transition goals, ownership transfers bring the potential for reduced environmental stewardship and limited climate disclosure.

To quantify the scope of this “transferred emissions” problem, Environmental Defense Fund analyzed recent oil and gas transaction data. They found a troubling trend of assets moving from owners with stronger climate commitments and disclosures to those with weaker standards. In a series of case studies, they found evidence that sales involving reduced environmental commitments can correspond with increases in greenhouse gas emissions.

Mergers and acquisitions are an essential business tool for oil and gas companies, and that won't change. But how companies sell assets must change. The industry needs new tools to ensure sustained climate stewardship as assets change hands.

A variety of actors across the private sector have roles to play in shifting oil and gas dealmaking. Corporate sellers can introduce specific climate standards in deal terms to improve disclosure and environmental stewardship. Private buyers – both companies and private equity investors – can work proactively to implement and adopt these types of standards. Banks can help corporate clients integrate climate provisions across transactions. Closing the transferred emissions loophole requires coordinated planning from leaders across the financial and real-economy communities.

At GFANZ we are committed to facilitating collective action to address this challenge. Through our Implementation workstreams, we are bringing together major financial institutions and NGOs to determine how best to align heavy-emitting assets with net zero. This process will demand a stronger emphasis on stewardship and a focus on reducing real-world emissions. If and when companies elect to exit holdings, they should consider the climate impacts that result.

Asset sales alone do not lead to decarbonization. With *Transferred Emissions*, EDF sheds light on the transferred emissions problem and its potentially dire environmental consequences. We encourage oil and gas operators, civil society groups, banks, and investors to engage on this issue and to collaborate toward solutions that remake oil and gas dealmaking for a net-zero global economy.

- Curtis Ravenel



The industry needs new tools to ensure sustained climate stewardship as assets change hands.



Curtis Ravenel

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Executive Summary

The clock is ticking on climate action in the oil and gas industry. As the Intergovernmental Panel on Climate Change has [noted](#), accelerating the move away from fossil fuels is critical to limiting global warming to 1.5° C and protecting people and the planet from perilous climate disruption.

This process involves not only curtailing fossil fuel use but limiting near-term emissions stemming from fossil fuel production as economies continue to rely on oil and gas. A rapid decrease in oil and gas emissions is essential to achieving climate progress. At a minimum, to reach international climate goals dictated by science, emissions from the oil and gas industry cannot increase.

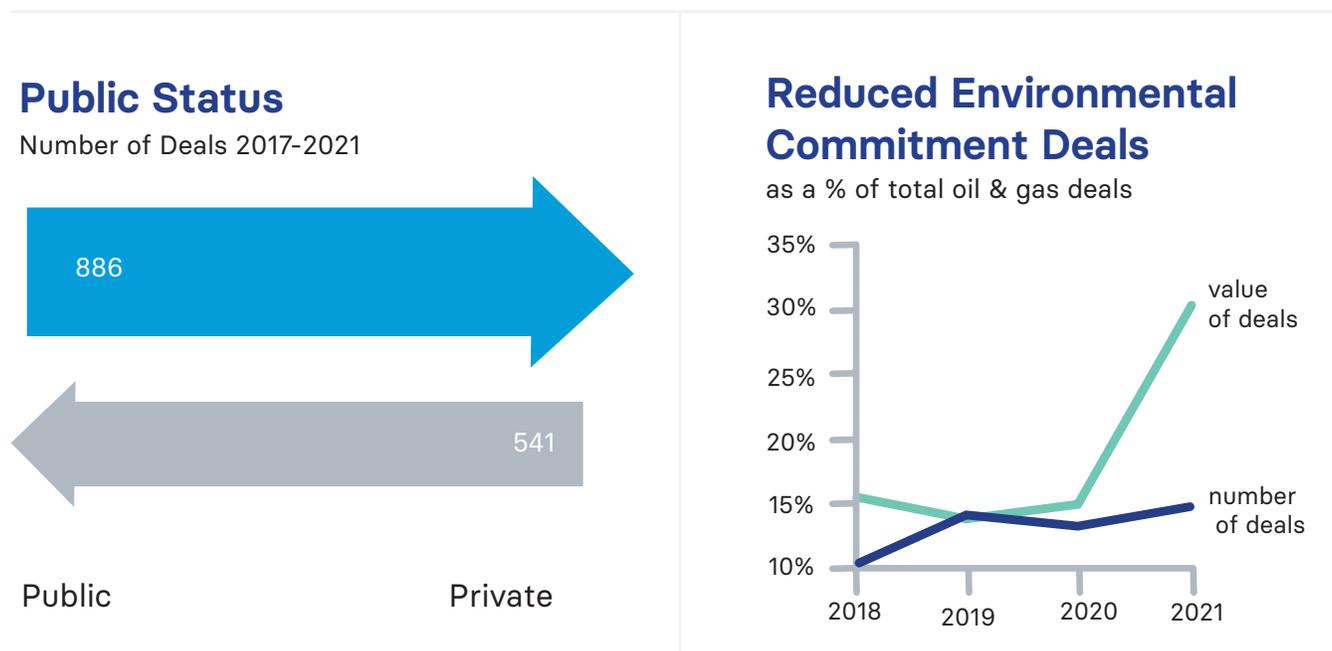
In recent years, stakeholders have grown concerned that oil and gas mergers and acquisitions may undermine these emissions reduction efforts. If assets

move from industry leaders on the energy transition to industry laggards, emissions could increase and transparency could decrease, regardless of why M&A transactions take place. Traditional oil and gas dealmaking – blind to the climate implications of asset transfer – may not be compatible with a net zero world that demands sustained and proactive climate stewardship.

Given the potential ramifications of oil and gas dealmaking, the “[transferred emissions problem](#)” has become an increasingly mainstream topic across the environmental community, especially as demand for decarbonization incentivizes companies to sell high-emitting assets. However, existing analysis has not captured the real scope of this problem, with sparse information on where upstream assets are moving and how asset transfers may impact climate outcomes.

This report aims to address these two questions. Analyzing global upstream oil and gas M&A data from 2017 through 2021 and digging deep into specific high-risk transactions, we unpack the climate implications of oil and gas asset sales. We find that:

- 1. A significant amount of upstream oil & gas dealmaking has taken place in recent years.** Deal value in 2021 totaled \$192B, exceeding annual deal value in 2015, 2016, 2018, and 2020. Additionally, the aggregate number of deals in 2021 rose to 498, surpassing 2015, 2016, and 2020.
- 2. Assets are flowing from public to private markets at a significant rate.** Over the last five years, the number of public-to-private transfers exceeded the number of private-to-public transfers by 64%. In every year during this period public-to-private transfers comprised the largest share of deals.
- 3. Assets are increasingly moving away from companies with environmental commitments.**¹ In 2018, deals that moved assets away from companies with environmental commitments accounted for only 10% of transactions. By 2021, these deals accounted for 15% of transactions. During this same period from 2018 through 2021, more than twice as many deals moved assets away from operators with net zero commitments than the reverse.
- 4. Stewardship risk in upstream oil and gas appears to be rising.** The movement of upstream oil and gas facilities to private markets with traditionally less transparency and to companies with reduced environmental commitments suggests that a growing number of assets are at risk of weak climate stewardship.



¹ Corporate commitments as of Q1 2022 were applied retroactively to transactions over the last five years. For example, if a company had a net zero commitment as of Q1 2022, it would be listed as a net zero buyer or seller in a 2017 transaction, even if it did not have a net zero pledge in 2017.

Case studies on specific upstream deals add color to this trend, showing post-transaction increases in natural gas flaring and other climate risk indicators. These case studies reveal that transfers of assets to operators with reduced environmental commitments can stall progress in reducing emissions and in some cases lead to a near-term rise in emissions.

Taken together, upstream M&A trends and deep dive analyses of distinct transactions show that oil and gas asset sales can have a significant effect in slowing the energy transition. Not only could emissions increase in the immediate future, climate disclosure could decrease while environmental liabilities could remain unresolved for decades longer than necessary.



Investors, regulators, and the public have good reason to concentrate on the transferred emissions problem and recognize that conventional oil and gas dealmaking could stall decarbonization.



Asset transfer – and its associated climate impact – has long been overlooked by NGOs and investors alike in assessing corporate net zero planning. M&A is not going away, but with coordinated action from asset managers, companies, banks, private equity firms, and civil society groups, stewardship risks can be reduced.

Institutional investors can ask oil and gas companies to disclose their annual emissions reduction stemming from asset transfer and encourage operators to incorporate climate safeguards in M&A deal terms. Rather than calling for blanket asset sales, investors can reward oil and gas companies that decide to steward assets responsibly.

In parallel, buyers can commit to enhanced climate disclosure and best-in-class methane mitigation, flaring reduction, and well remediation. Companies selling assets can require prospective buyers to adhere to these practices, while banks can ensure that such standards are integrated in real transactions.

The transferred emissions problem presents an opportunity for firms across the energy and finance sector to demonstrate real climate leadership. Forging a new model of climate-aligned dealmaking, refashioning traditional business tools for a net-zero reality, is the type of bold, immediate action needed to combat the pressing climate crisis.

Introduction

Mergers and acquisitions in upstream oil and gas are nothing new. Since the oil and gas industry's early days, companies have bought and sold assets for a variety of reasons, from debt repayment to infrastructure consolidation. In recent years, however, M&A has taken on new significance not just as a key element of business strategy but as a potential source of climate risk.

Common Drivers of Oil and Gas Asset Transfer

Though news outlets have often framed emissions reduction as a leading impetus for asset transfer in recent years, oil and gas companies continue to exit assets for a wide variety of reasons. The list below outlines common drivers of oil and gas dealmaking. All of these drivers – regardless of their connection to net zero planning – can have significant climate implications depending on the characteristics of buyers and sellers.

Portfolio optimization: Companies can leverage M&A to discard non-core assets with insufficient production. Getting rid of underperforming facilities can allow companies to streamline their asset portfolio and raise money to acquire new assets or expand operations at existing high-value assets.

Debt repayment: Selling assets often helps companies raise money to pay off debt. In 2021, for example, Occidental Petroleum sold \$9.2 billion of assets to pay down \$12.7 billion of its principal debt.

Dividend increase: By exiting assets, companies can raise money to boost dividends for shareholders. The Institute for Energy Economics and Financial Analysis found that between 2010 and 2020, the five largest publicly traded oil and gas companies relied primarily on asset sales to pay out \$207 billion in dividends.

Share buybacks: Oil and gas operators often sell assets to raise money to buy back shares, boosting share price and returning cash to stockholders. In 2019, ExxonMobil announced a restart to its share buyback program driven by asset sales.

Geographic optimization: Companies may exit assets to consolidate operations in certain non-core geographies. Consolidating production in specific regions can enable companies to boost operating efficiency.

Life cycle optimization: Certain companies specialize in stewarding oil and gas assets at different stages of the production life cycle. These companies may exit assets that have matured beyond the companies' area of expertise.

Energy transition planning: As demand for climate ambition grows, companies may sell assets to raise money to invest in the energy transition. Cash derived from asset sales can be directed towards research and development in hydrogen, renewable energy, carbon capture and storage, and other emissions reduction technologies.

Emissions reduction: In response to growing investor, regulator, and stakeholder pressure, companies have begun to sell certain assets to reduce their overall emissions footprint. Shell, for example, has publicly stated that asset sales are “a key part of our efforts to...become a net zero energy business by 2050.”



The sale of carbon-intensive assets can be ineffective and even lead to real-world emissions increases if assets flow from responsible to irresponsible operators.



With growing public scrutiny of GHG emissions from fossil fuel companies, stakeholders have begun to interrogate the potential climate impact of oil and gas asset sales. If an upstream asset moves from an operator with strong climate commitments and reporting to an operator with limited climate commitments and reporting, emissions can increase and transparency can decline.

Media outlets have taken note. Over the past year, [Bloomberg Green](#), [Financial Times](#), [The Economist](#), and the [New York Times](#) have all published stories on climate risks associated with oil and gas asset transfer. Investors have also raised concerns about oil and gas M&A. BlackRock CEO Larry Fink has [noted](#) that “passing carbon-intensive assets from public markets to private markets...will not get the world to net zero.” Similarly, the Glasgow Financial Alliance for Net Zero – representing over 450 finance firms with approximately \$130 trillion in assets – stated in its [November 2021 progress report](#) that the sale “of carbon-intensive assets can be ineffective and even lead to real-world emissions increases” if assets flow from responsible to irresponsible operators.

This report addresses this growing concern, tracking the flow of upstream oil and gas assets from public to private markets and from companies with climate commitments to those without. In analyzing these trends, we attempt to uncover the potential emissions and disclosure implications stemming from oil and gas dealmaking. Though oil and gas companies sell assets for myriad reasons – many of

which are unrelated to net zero strategy – we find that asset transfer can significantly reduce climate disclosure and worsen emissions.

This research seeks to shed light on an energy transition blind spot that could undermine net zero ambition. We hope that quantifying the transferred emissions problem can promote effective problem-solving between stakeholders. With a better understanding of how oil and gas asset transfers can affect the planet, NGOs, operators, banks, private equity firms, and asset managers can work together to guarantee that future dealmaking takes climate standards into account.

This study begins with an analysis of oil and gas M&A trends over the last five years. We then dive into specific deals, evaluating changes in climate metrics pre- and post-transaction. Synthesizing trends data and granular case studies, we conclude that upstream asset transfer presents material climate risks, increasing near-term emissions, extending the lives of oil and gas wells, and decreasing climate disclosure. Oil and gas asset sales require further attention from the environmental community, the finance sector, and the energy sector, which can bolster environmental outcomes by integrating robust climate safeguards in dealmaking.

Oil & Gas M&A Trends

Consolidation has defined the last five years of upstream oil and gas mergers and acquisitions, accelerated by the COVID-19 pandemic. With commodity price volatility and rising investor demand for disciplined capital allocation, companies have used M&A dealmaking to increase operational efficiency and cut costs.

In a market landscape increasingly hostile to new exploration, many operators over the last five years have leveraged M&A to sustain or grow production through the scaled-up development of existing assets. Additionally, with rising investor expectations on climate change, companies have also used asset transfer to reduce emissions. As Deloitte noted in its [2020 oil and gas M&A outlook](#), “Pursuing greener pastures means divesting higher carbon assets.” In many instances, the capital raised from these exits allows companies to pursue CAPEX-intensive energy transition opportunities

in renewables, electrification of transport, hydrogen and carbon capture and storage.

Across all of these deals, the potential climate impact of asset transfer depends just as much on the characteristics of buyers and sellers as the rationale for exiting the asset.

The following section analyzes upstream M&A activity from 2017 through 2021, quantifying the movement of assets from public to private markets and from companies with climate commitments to those without.

Methodology

Data Sources

This analysis relies on upstream oil and gas M&A data from Refinitiv between January 1, 2017 and December 31, 2021. The dataset includes information on buyers and sellers, the parent companies of buyers and sellers, the public status of buyers’ and sellers’ parent companies, transaction value, and financial advisors.

In certain instances, the public labeling of buyers and sellers was altered to reflect a company’s market status more accurately. For example, Refinitiv labeled some private-equity backed operators as “public” because the private-equity firm itself was publicly traded. These operators were recategorized as private. Additionally, because Refinitiv lacked a label for “national oil companies,” some operators originally listed as public or private were recategorized as “NOC,” drawing on the Natural Resource Governance Institute’s [national oil company database](#).

Data on transaction value and financial advisors across all five years were limited. These gaps stem from sparse corporate reporting on M&A transactions, especially in emerging markets and among smaller operators. As a result, trends analysis of changes in transaction value presents a slightly less clear picture than trends analysis of changes in deal number.

Refinitiv transaction data were paired with information on buyers’ and sellers’ climate commitments.

The following metrics were used to track climate ambition:

1. Net zero commitment

Reason for inclusion: Companies that have made net zero pledges have a long-term strategic incentive and mandate to ensure that emissions across assets decrease over time. Companies that lack such a commitment may be less focused on decarbonization.

Data source: Information on corporate net zero commitments was drawn from corporate press releases and sustainability reports.

2. Methane target

Reason for inclusion: Methane has more than 80 times the warming power of carbon dioxide in the first 20 years after its release and accounts for at least 25% of current global warming. The oil and gas industry is the largest source of anthropogenic methane emissions. Cutting methane emissions from upstream operations is core to near-term reduction in the climate footprint of the oil and gas industry. Operators with explicit methane targets are better positioned strategically to reduce methane emissions than operators that lack such targets.

Data source: Information on corporate methane targets was drawn from corporate press releases and sustainability reports.

3. Zero routine flaring commitment

Reason for inclusion: Gas flaring hurts companies' bottom lines and the planet. Flaring wastes valuable gas. In 2020, roughly 4% of global gas production was flared, gas that could otherwise have sold for [\\$15 billion](#). Flaring also generates significant carbon dioxide and methane emissions.

Depending on assumptions of flare combustion efficiency and the warming potential of methane, flaring could account for 1GT CO₂e per year, [nearly 2% of global GHG emissions](#). Cost-effective solutions for flaring already exist, and companies with zero routine flaring commitments are better positioned to reduce near-term emissions than those without flaring commitments.

Data source: Information on zero routine flaring commitments was drawn from the World Bank Zero Routine Flaring by 2030 initiative and corporate press releases and sustainability reports.

4. Membership in Oil and Gas Methane Partnership 2.0

Reason for inclusion: Though methane accounts for a significant portion of oil and gas companies' GHG footprints, methane measurement and reporting across the industry remains poor. Traditional reporting practices using generic emission factor-based calculations have been shown to underestimate methane emissions by 70% or more.^{2,3,4} The Oil and Gas Methane Partnership 2.0 (OGMP) provides an industry-leading, science-based framework to improve methane measurement. Companies that have joined OGMP – representing over 30% of global oil and gas production – have committed to direct measurement-based reporting and standardized, transparent emissions accounting. OGMP membership can differentiate industry leaders from laggards on methane mitigation.

Data source: Information on OGMP membership was drawn from the OGMP 2.0 partners list.

Deals involving a seller with any of the above climate commitments and a buyer lacking the same commitments were categorized as “reduced-environmental-commitment” deals. Reduced-environmental-commitment deals plus transfers from public to private operators were bundled into a larger category of “stewardship-at-risk” transactions.

We included public-to-private sales in the stewardship-at-risk category because climate disclosure is typically less robust in private markets than public markets. We recognize that a number of private oil and gas companies have recently taken steps to bolster their climate disclosure and strengthen their emissions reduction strategies. However, in the aggregate, emissions reporting and target setting in private markets remains less thorough, thus landing public-to-private deals in the stewardship-at-risk tranche.⁵

Across all four of these metrics, corporate commitments as of Q1 2022 were applied retroactively to transactions over the last five years.

For example, if a company had a net zero pledge as of Q1 2022, it would be listed as a net zero buyer or seller in a 2017 transaction, even if it did not have a net zero pledge in 2017.

This retroactive labeling sharpens our understanding of how assets are being operated now and into the future. If a company set a zero routine flaring target in 2021, that target would apply to assets acquired by the company in previous years. By labeling deals retroactively, we can better project the current stewardship of transferred assets. We acknowledge that this approach could be misleading in cases in which the environmental commitments of buyers or sellers have changed significantly since the point of asset transfer.

² <https://www.iea.org/reports/global-methane-tracker-2022/overview>

³ Zhang et al 2020, DOI: 10.1126/sciadv.aaz5120 (Permian Basin assessment based on PermianMAP initiative and 2018/19 TROPOMI satellite observations).

⁴ Brandt et al 2022 DOI: 10.1021/acs.est.1c06458 (Quantifying Regional Methane Emissions in the New Mexico Permian Basin with a Comprehensive Aerial Survey)

⁵ From 2017 through 2021, the total number of public-to-private transfers involving private buyers with stronger environmental commitments was negligible. Only 4 of 2995 deals (roughly 0.1%) involved a private buyer with stronger environmental commitments than a public seller. This trend supports our decision to categorize public-to-private transfers as stewardship-at-risk. It is possible that some private companies have strong climate commitments that they have yet to disclose publicly. This gap in disclosure, though, reinforces the stewardship at risk phenomenon.

Findings

Five-year trends: Climate metrics

Over the last five years, a significant number of upstream oil and gas deals moved assets from companies with climate commitments to companies that lack such commitments.



155 deals worth \$86.4 billion have moved assets away from net-zero aligned companies



298 deals worth \$144.9 billion have transferred assets from companies with flaring commitments to those without



211 deals totaling \$115.6 billion have pushed assets away from companies with methane goals to companies without explicit methane goals



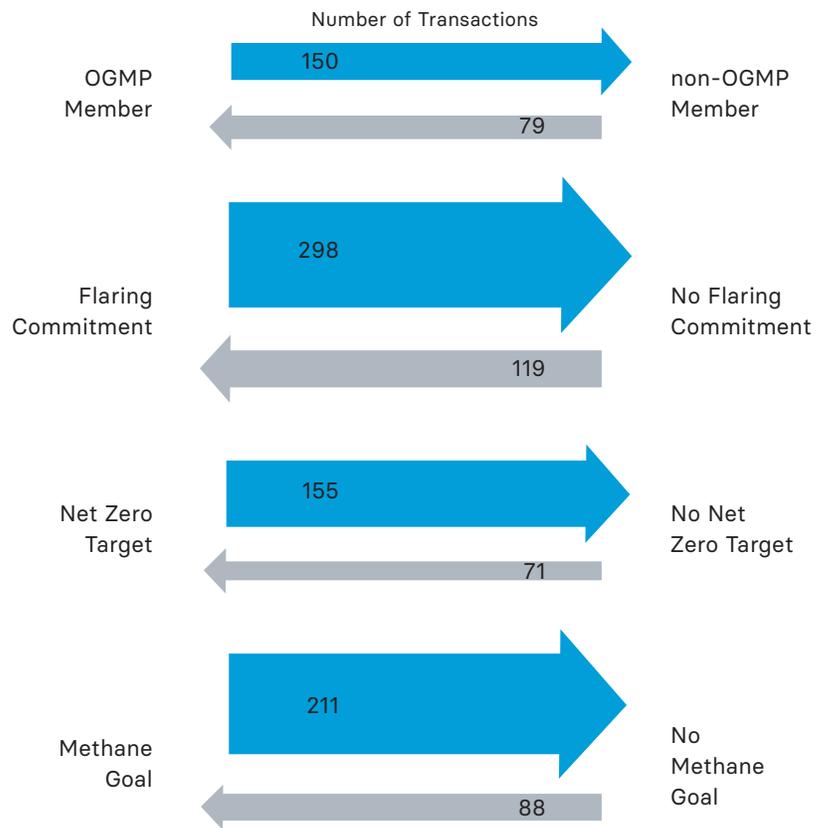
150 deals totaling \$76.8 billion have shifted assets from OGMP members to non-members

Across all four of the climate metrics analyzed, reduced-environmental-commitment transfers comprised the second largest share of deals, behind transactions in which both buyers and sellers lacked environmental commitments. Deals between companies without environmental commitments comprised the vast majority of transactions.

Reduced-environmental-commitment deals have also grown to comprise a larger percentage of transactions over time.

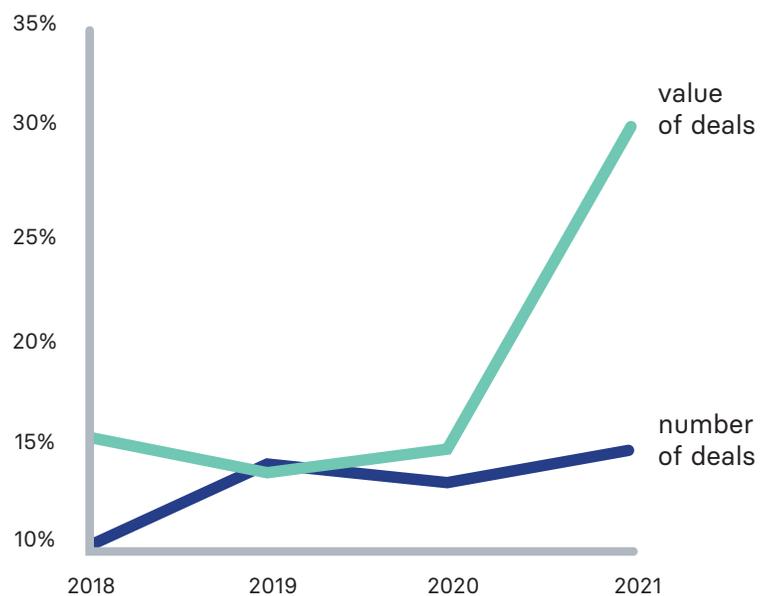
In 2018, reduced-environmental-commitment transfers accounted for roughly 10% of total deals. By 2021, that percentage rose to 15%. The proportional value of reduced-environmental-commitment transactions also ballooned from 15% of overall deal value in 2018 to 30% of overall deal value in 2021. These figures highlight the risk of oil and gas emission reductions stalling in the near term and point to a potential growing trend of asset transfers becoming more central to companies' emission reduction strategies.

Changes in Environmental Commitments from Asset Transfers 2017-2021



Reduced Environmental Commitment Details

as a % of total oil & gas deals

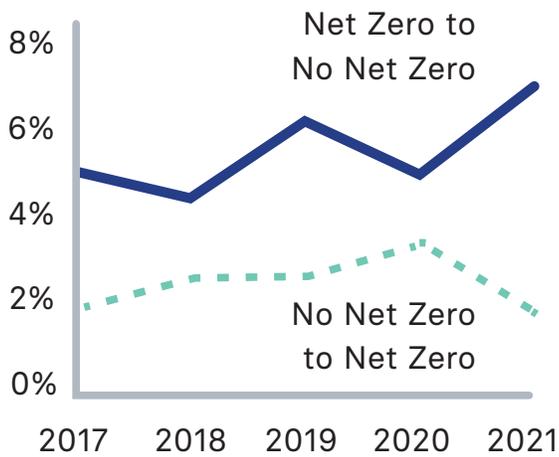


For methane, flaring, and net zero targets, the proportion of annual reduced-environmental-commitment deals increased over the five-year time frame. Net zero and flaring reduced-environmental-commitment deals, in particular, are becoming increasingly common.

In 2017, deals with reduced net zero commitments accounted for less than 5% of transactions; by 2021, these deals climbed to 7% of transactions. Similarly, from 2017 to 2021, deals with reduced flaring targets grew from 8% of annual deals to 12%.

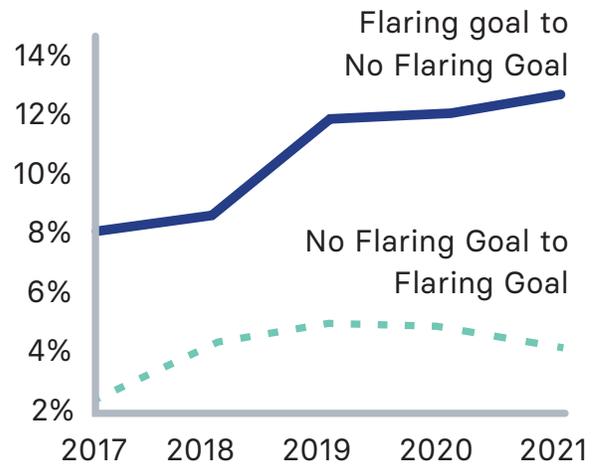
Reduced Environmental Commitment (Net Zero)

as a % of total oil & gas deals



Reduced Environmental Commitment (Flaring)

as a % of total oil & gas deals

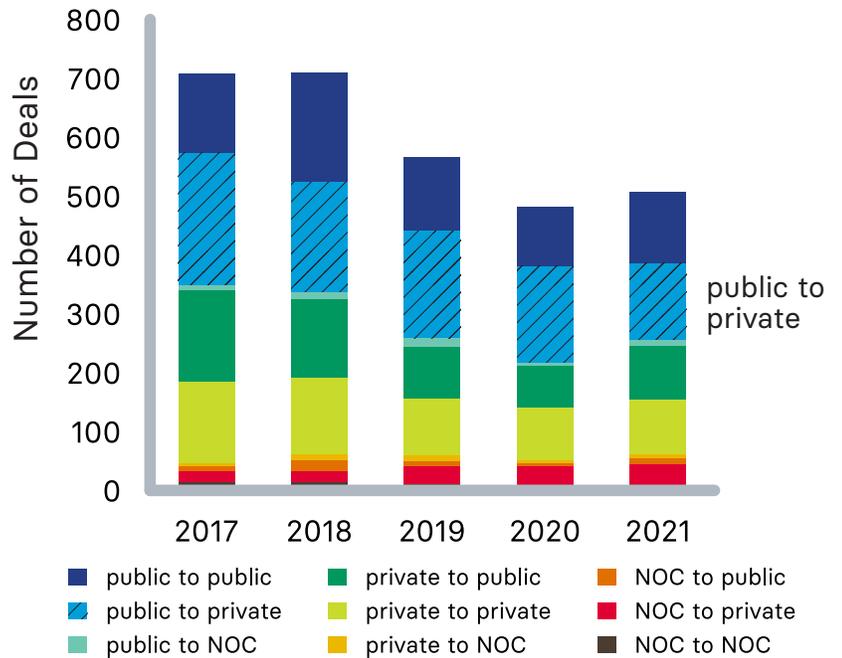


Five-year trends: Public Status

Asset movement from public to private markets over the last five raises serious concerns about climate risk disclosure in the oil and gas industry.

Transfers between public and private markets

From 2017 through 2021, sales from public to private companies also accounted for the largest share of deals. These public-to-private transfers comprised roughly 25%-30% of total transactions each year.



Public Status

Movement from public to private markets outpaced private to public flows. Over the five-year period, 886 assets went public to private, while 541 went private to public.



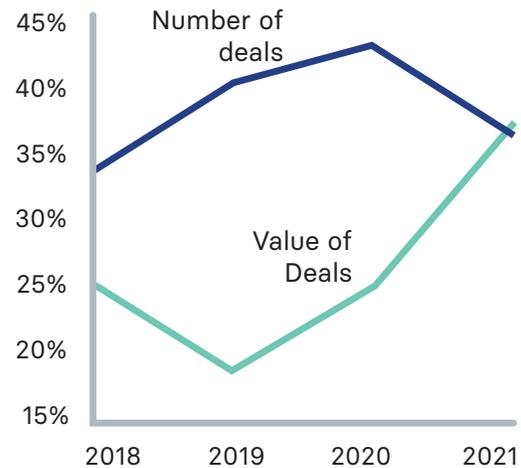
Five-year trends: Stewardship at Risk Deals

Synthesizing reduced-environmental-commitment trends with data on the movement of assets from public to private markets shows that stewardship-at-risk deals account for a significant portion of upstream oil and gas transactions. Between 2018 and 2021, stewardship-at-risk deals comprised 34-43% of annual transactions.

The proportional value of stewardship-at-risk deals is also increasing. In 2018, stewardship-at-risk deals comprised only 25% of annual deal value; this number ballooned to over 35% by the end of 2021.

Stewardship at Risk Deals

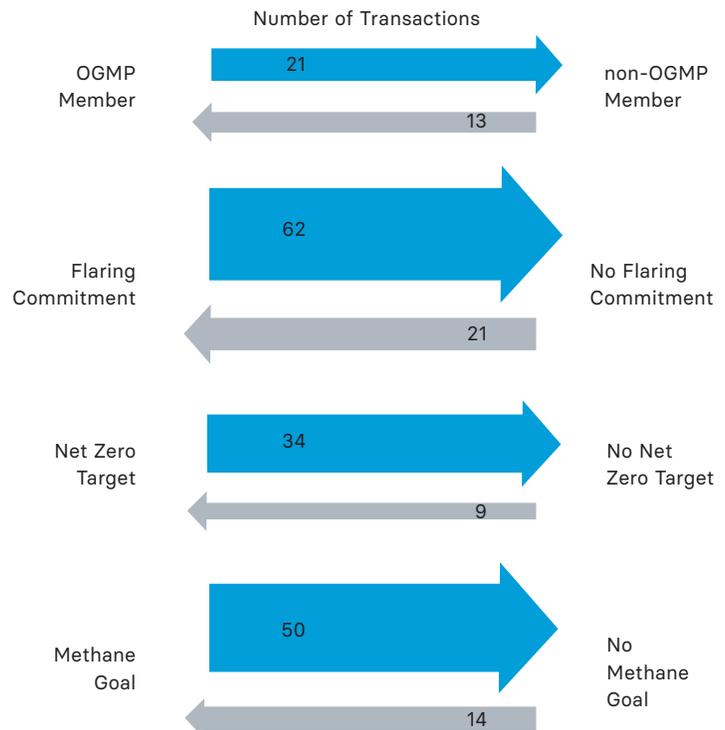
as a % of total oil & gas deals



2021 Deals

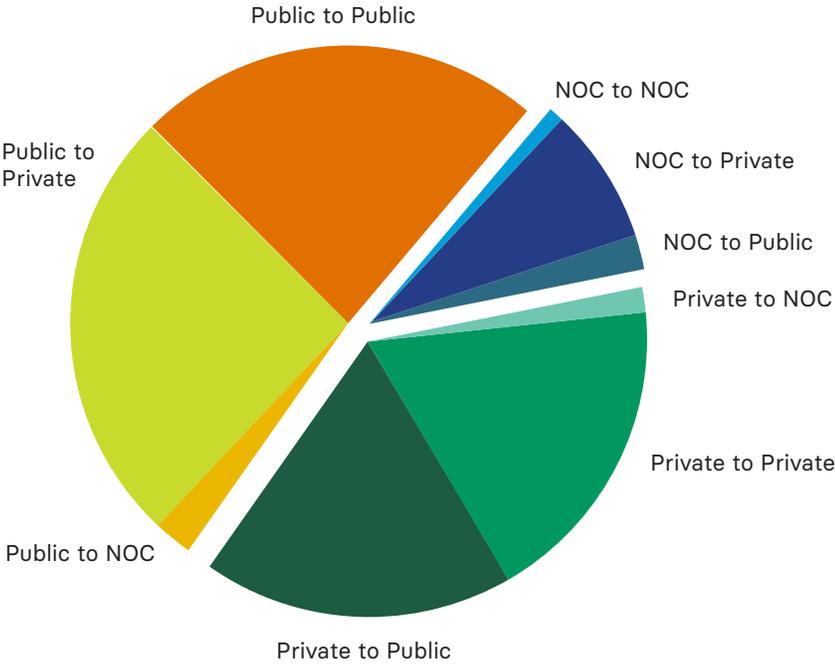
2021 was consistent with trends since 2017. Reduced-environmental-commitment deals surpassed their counterparts, with 62 deals worth \$51.6 billion moving assets away from companies with flaring commitments, and 50 deals worth \$26.2 billion moving assets away from companies with methane goals.

Changes in Environmental Commitments from Asset Transfers in 2021



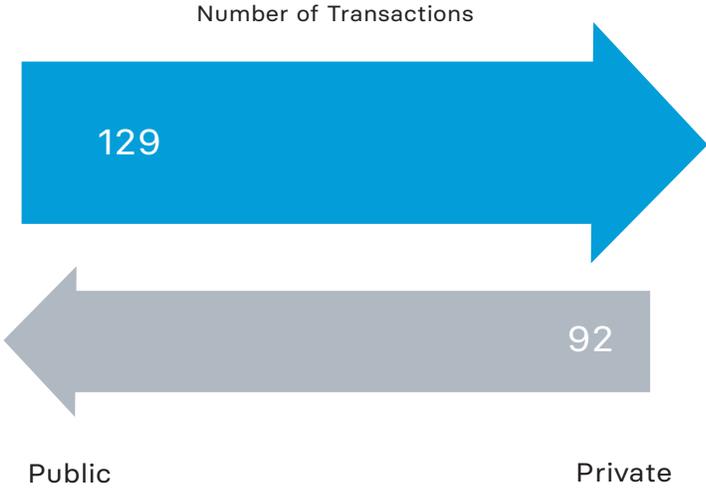
**Public Status by
Number Deals, 2021**

Public-to-private transactions accounted for the largest proportion of deals in 2021.



**Public Status
Number of Deals,
2021**

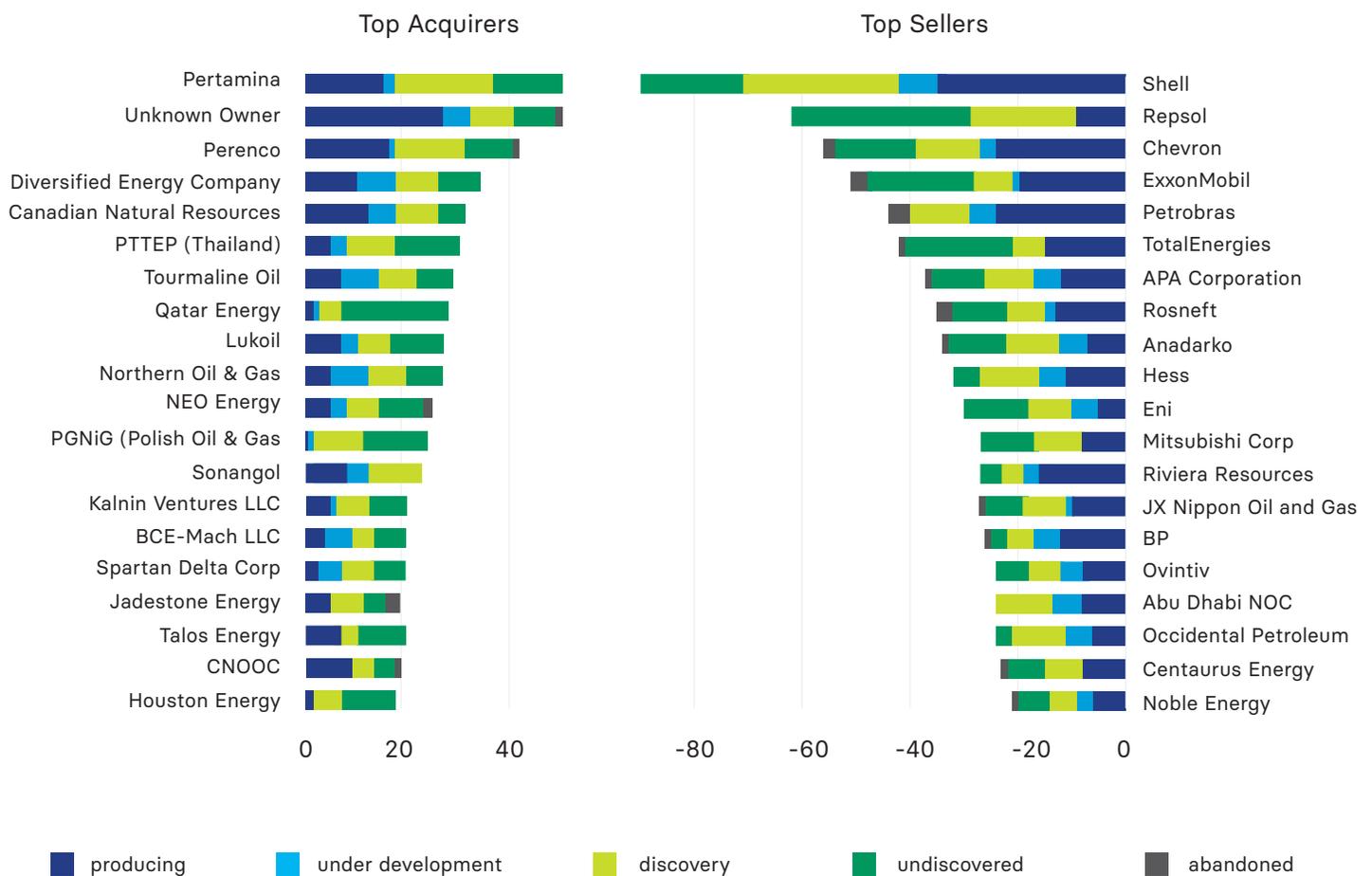
More specifically, public-to-private deals in 2021 exceeded private to public deals by 40%.



Corporate and bank exposure to upstream M&A

Over the last five years, specific oil and gas companies and banks have been particularly involved in upstream M&A. These companies and financial institutions have unique leverage to address the transferred emissions problem.

Asset Transfers by Company, 2017-2021

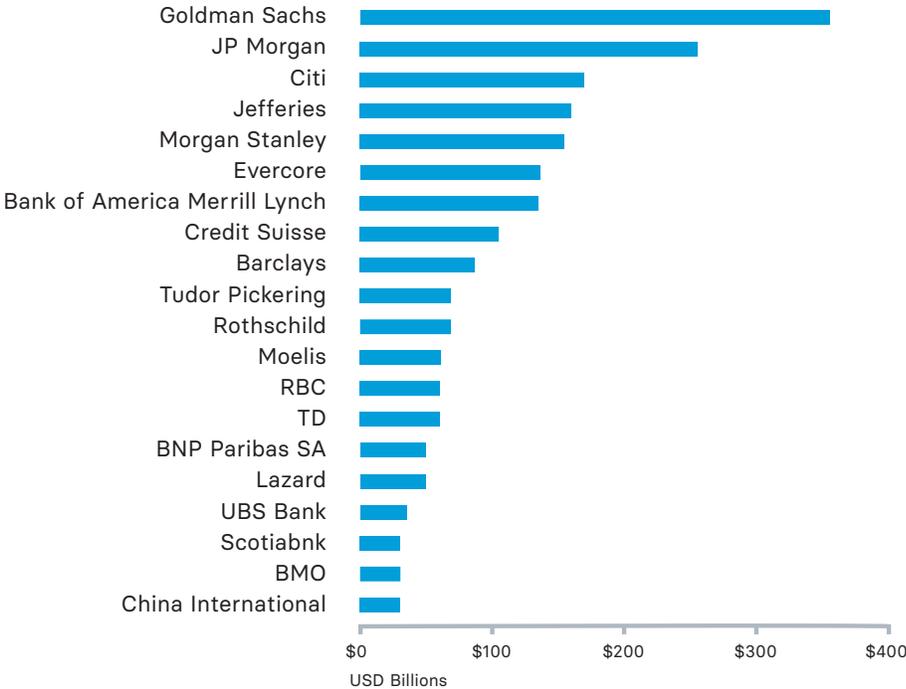


Top sellers like Shell, Repsol, and Chevron, for example, are well positioned to pilot climate-aligned asset transfers by devising contracts that require buyers to disclose emissions and emissions reduction targets.

Regular buyers like Diversified Energy can work to implement these standards.

Many of the world's largest banks, many of which have set net zero financed emissions targets, have played a prominent role in facilitating upstream transactions.

**Deal Values by
Financial Advisor,
2017-2021**



Over the last five years, America's biggest banks have remained at the top of global upstream M&A league tables for both deal value and fees collected. Since 2017, five of the six largest U.S. banks – all of which are members of the Net Zero Banking Alliance – have advised on billions of dollars worth of upstream deals.

These banks can use their exposure to upstream M&A as leverage to accelerate climate-informed asset sales with their oil and gas clients. The transferred emissions problem presents an opportunity for oil and gas companies and their bankers to demonstrate real leadership on the energy transition.

Takeaway from Findings

Overview

Data from the last five years of upstream oil and gas M&A show that fossil fuel assets are, in aggregate, moving from relative industry leaders on climate to relative industry laggards and from public to private markets. While these trends do not guarantee that GHG emissions are rising due to M&A activity, they show that, at minimum, the climate risk management, disclosure and governance of oil and gas facilities is weakening, making emissions more likely to stall out, or increase.

In particular, macro-level data suggest that asset transfer could stall urgently needed progress on reducing methane emissions and flaring, threaten long-term energy transition planning, and weaken climate disclosure.

Near-term warming

The number of transactions that moved assets from companies with methane and flaring targets to operators without methane and flaring targets indicates that high-risk M&A activity may amplify near-term warming from the oil and gas sector. Methane is a potent greenhouse gas responsible for over a quarter of current warming. Assuming that companies without methane and flaring standards operate facilities less diligently than companies with such standards – or even maintain lackluster business as usual practices – oil and gas M&A since 2017 has worsened progress on methane emission reduction across hundreds of assets.

Long-term transition planning

Over the last five years, twice as many transactions have moved oil and gas facilities from companies with net zero targets to

companies without such targets. Though net zero by 2050 goals do not guarantee climate action and can mean different things to different companies, they at least demonstrate organizational interest in long-term transition planning. Companies that have made net zero pledges understand the importance of aligning business strategy with growing demand for low-carbon energy and have signaled an intent to cut emissions accordingly.

With hundreds of assets falling to companies that lack net zero targets, strategic oversight of high-emitting facilities is primed to decline. These transactions may hamper the oil and gas industry's capacity to meet climate expectations over the long term.

Climate disclosure

The movement of assets from public to private companies indicates an overall decline in climate risk disclosure from upstream operators. Public companies are subject to stricter disclosure regulations than private companies, enabling private operators to avoid scrutiny from investors, regulators, and the general public. Though a number of private companies and private equity firms are taking steps to lead on emissions reporting, in the aggregate, asset transfer from public to private markets is likely to make the oil and gas industry's climate impact even more opaque.

Energy and finance sector exposure

A distinct array of oil and gas companies and financial institutions are well positioned to address the climate risks stemming from this dealmaking. Through strong coordination and collaboration, these actors can work together to reduce near-term emissions, bolster long-term transition planning, and drive climate disclosure.

Transferred Emissions Case Studies

To understand the potential ramifications of asset transfer at a more granular level, we analyzed changes in environmental performance at three upstream assets following changes in ownership that meet the “stewardship-at-risk” criteria described above.

By highlighting emissions increases post-transaction, we are not suggesting that all stewardship-at-risk deals will impede decarbonization. Rather, we intend to show that stewardship-at-risk deals can – and in some cases do – exacerbate emissions. These examples indicate that in some cases, stewardship-at-risk transactions do indeed pose a real risk to the energy transition.

Methodology

To track changes in climate performance following asset sales, we partnered with the oil and gas analytics firms ESG Dynamics and Capterio, which evaluated upstream deals in the United States and outside of the United States respectively.

Case studies were drawn from stewardship-at-risk transactions between 2017 and 2021. The overall pool of stewardship-at-risk deals was narrowed based on data quality and availability. Because ESG Dynamics specializes in the Texas oil and gas market, we concentrated on stewardship-at-risk deals in Texas for our suite of U.S. case studies. To identify our non-U.S. case study, we prioritized the Middle East and parts of Africa – geographies with less dense cloud cover, allowing for better satellite imaging. As previously mentioned, our final array of case studies – two U.S., one non-U.S. – are not intended to be exhaustive and are not representative of all upstream deals.

Each case study focuses on one of two key climate performance indicators: flaring and inactive wells. Concentrating on these metrics helps chart both near-term emissions risks (flaring) and long-term emissions risks (inactive wells).

Flaring

Reason for inclusion: Flaring generates significant carbon dioxide and methane emissions. Depending on assumptions of flare combustion efficiency and the warming potential of methane, flaring could account for 1GT CO₂e per year, nearly 2% of global GHG emissions. Cost-effective solutions for flaring already exist, allowing for rapid emissions reduction.

Inactive wells

Reason for inclusion: Inactive wells are a significant source of GHG emissions. In the U.S. alone, 2 million inactive wells are [estimated to release](#) between 7 and 20 million metric tons of CO₂e per year, approximately the emissions of 2-5 million cars. Inactive wells can also diminish groundwater quality and surface land quality, with pollution increasing the longer a well remains unplugged and inactive. Cost-effective methods exist to responsibly plug and retire inactive wells.

Flaring and inactive wells do not capture the full array of metrics one could use to track oil and gas climate performance. Future research could prioritize other metrics such as fuel gas use, methane emissions and others to provide additional insights on the impact of stewardship-at-risk dealmaking.

ESG Dynamics provides data analytics, enhancement, and visualizations on the environmental performance of oil and gas companies. For its case studies on U.S. transactions, ESG Dynamics sourced data from a variety of state, regional, and federal reporting agencies and applied proprietary algorithms for data preparation/consolidation, quality assurance, aggregation, and visualization.

Capterio provides gas flaring solutions for energy companies to capture flared gas, create value, and reduce pollution, using its FlareIntel analytics platform to track every gas flare globally via satellite. Capterio uses data derived from the “VIIRS” (Visible Infrared Imaging Radiometer Suite) satellite instruments, which make between 1-3 detections at night, per 750m x750m pixel, per 24-hour period. Capterio’s FlareIntel Pro consumes raw VIIRS data from the Colorado School of Mines and conducts further cloud-based processing before integrating the daily flare estimates with metadata (e.g. field names, operators, equity partners) and recent photographic imagery.

Case Study 1: APA Corporation (Apache) to Slant Operating

Asset transfer extends the life of inactive wells

- Asset Location:** Permian Basin, Texas
- Asset Transfer:** Asset was sold by Apache to Slant Operating in July 2021
- Transfer Type:** Public company to private equity-backed operator
- Climate Risk:** Inactive wells
- Key Takeaway:** APA Corporation (Apache)'s sale of over 2,000 wells in West Texas to a small private equity-backed operator, Slant Operating (Slant), with a track record plugging of wells slowly, creates the risk of an overhang of wells that are not being plugged.

Company Summaries:

Company Summaries:			Emissions Disclosed in Annual Reporting	Methane Target	OGMP Member	Flaring Target	Net Zero Target
Seller	Apache Corporation	■	✓	✓ †	✗	✓ ‡	✗
Buyer	Slant Operating	■	✗	✗	✗	✗	✗

■ Public Operator ■ Private Operator † Methane target: 0.37% methane intensity by 2025 ‡ Zero routine flaring by 2021, less than 1% overall flaring intensity for U.S. onshore operations, and a commitment to zero routine flaring on all new wells.

Background:

Apache has been active in exiting non-core assets in the Permian Basin over recent years. The largest of these deals, both by production and well count, was a sale to Slant in July 2021. Oil and gas production under Apache had been trending downward in the year and a half prior to the sale; since Slant took over operations, oil and gas production has increased. The group of wells sold to Slant contains a disproportionately high number of inactive wells (859 of 2100 wells sold – roughly 40%) compared to Apache's overall Permian holdings.

Impact:

This slow plugging rate will likely extend the methane emissions stemming from the assets included in this transaction. As a result of the asset transfer, long-term methane emissions could increase.

Change in Environmental Performance: Inactive Wells

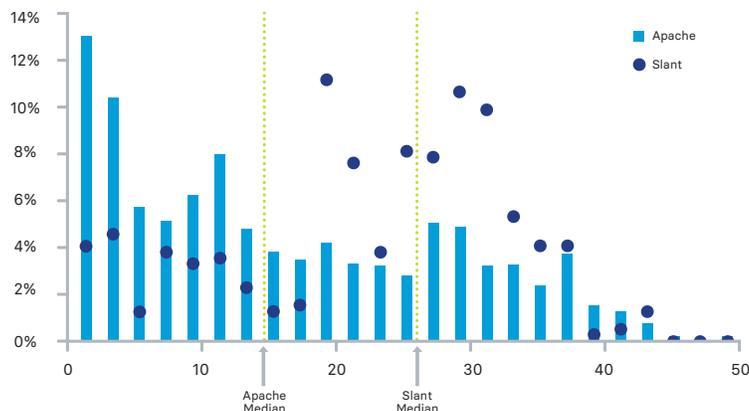
The disproportionately high number of inactive wells included in this transaction create environmental risks. Our analysis shows that Slant is likely to plug the sizable number of inactive wells it acquired at a slower rate than Apache would have.

- At Slant's 10-year plugging average, it would take the company over 120 years to permanently abandon this inactive well inventory. It currently remaining inactive wells (about 1500 wells, post-sale) in just over 9 years.
- In contrast, Apache has been active in plugging wells in the Permian Basin, with a 5-year average of 169 wells per year. At this pace, the company would permanently abandon
- Since acquiring this asset, Slant has plugged only two wells.

Well Distribution by Years Inactive

As a % of each company's total wells

From its deal with Apache, Slant has taken on a significant number of inactive wells. The median duration of inactivity for Slant's well portfolio is over 25 years.



Case Study 2: Oasis Petroleum to Percussion Petroleum II

Asset transfer results in significantly higher flaring

- Asset Location:** Delaware Basin, Texas
- Asset Transfer:** Asset was sold by Oasis to Percussion in March 2021
- Transfer Type:** Public company to private equity-backed operator
- Climate Risk:** Flaring
- Key Takeaway:** Oasis Petroleum's sale of its entire Delaware Basin portfolio to a small private equity backed operator raises the risk of poor action on flaring abatement. Though flaring intensity across the Delaware Basin has declined since the transaction closed, flaring across the acquired assets has remained high.

Company Summaries:			Emissions Disclosed in Annual Reporting	Methane Target	OGMP Member	Flaring Target	Net Zero Target
Seller	Oasis Petroleum ■	✓	✗ †	✗	✗ ‡	✗	
Buyer	Percussion Petroleum ■	✗	✗	✗	✗	✗	

■ Public Operator
 ■ Private Operator
 † report methane intensity reduction of 50% in 2020
 ‡ report lower than average flaring in North Dakota

Background:

In March 2021, Oasis Petroleum sold its entire Delaware Basin holdings of over 100 wells to Percussion Petroleum II, a portfolio company of Carnelian Energy Capital Management. While Oasis claims significant methane and GHG emissions reductions in recent years across its entire portfolio and has achieved best in class gas capture status in North Dakota, its assets in the Delaware Basin have consistently underperformed environmentally. Since the acquisition, Percussion has drilled or completed 7 new wells, which has contributed to a noticeable boost in oil and gas production.

Impact:

Percussion's continued high flaring across its acquired assets – despite flaring reduction in the Delaware Basin – increases GHG emissions in the near term. This case study shows that stewardship-at-risk transactions can stall out emission reduction activities and drive near term warming.

Flaring Rate

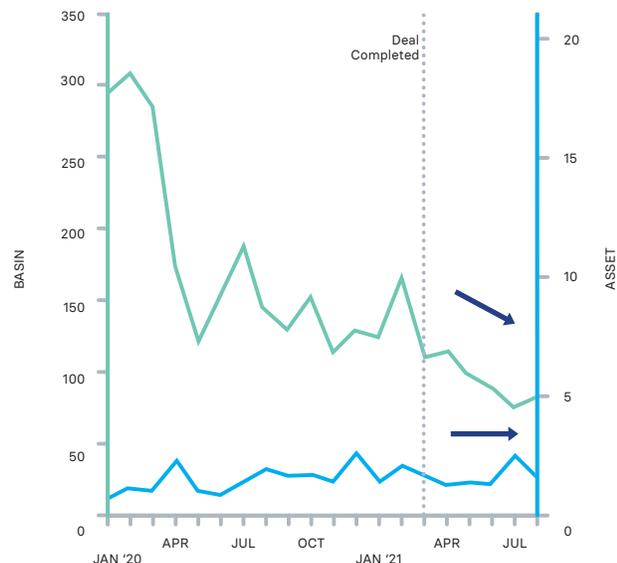
thousand Mcf/d

Though flaring rate has decreased in the Delaware Basin since the Oasis/Percussion deal, flaring has remained constant across the assets acquired by Percussion

Change in Environmental Performance: Flaring

Percussion has maintained the asset's high flaring intensity post-acquisition, with no expected plans to improve its environmental performance. Though flaring intensity across the Delaware Basin has declined since the point of the transaction, flaring across Percussion's acquired assets remain high.

- In the six months prior to the deal, Oasis's Delaware Basin asset had the highest flaring intensity within a comparison group of similar producers (11.7% compared to a group average of 4.0%). During this same period, the Delaware Basin as a whole had an average flaring intensity of 1.5%.
- In the six month period after Percussion acquired the asset, there was no fundamental shift in the flaring or fuel gas intensities of the asset or the comparison group. In contrast, the overall Delaware Basin experienced a 38% reduction in flaring intensity to reach an average intensity of 0.93%.



Case Study 3: Shell, TotalEnergies, and Eni to Trans-Niger Oil & Gas

Asset transfer results in significantly higher flaring

Asset Location: Niger Delta, Nigeria
Asset Transfer: Asset was sold by Shell, TotalEnergies, and Eni to Trans-Niger Oil & Gas (TNOG) in January 2021
Transfer Type: Public companies to private equity-backed operator
Climate Risk: Flaring
Key Takeaway: Shell, TotalEnergies, and Eni's sale of the Umuechem field in the northeast Niger Delta to a private-equity backed Nigerian operator led to a dramatic increase in flaring, underscoring climate risks stemming from upstream oil and gas transactions.

Company Summaries:			Emissions Disclosed in Annual Reporting	Methane Target	OGMP Member	Flaring Target	Net Zero Target
Seller	Eni	■	✓	✓ †	✓	✓ ‡	✓
	Shell	■	✓	✓ †	✓	✓ ‡	✓
	TotalEnergies	■	✓	✓ †	✓	✓ ◇	✓
Buyer	Trans-Niger Oil & Gas (TNOG)	■	✗	✗	✗	✗	✗

■ Public Operator ■ Private Operator † Methane target: 0.20% methane intensity by 2025 ‡ Zero routine flaring by 2025 ◇ Zero routine flaring by 2030

Background:

Flaring near the Umuechem field has been the subject of local community-led campaigns and academic research since the early 2000s. TNOG, owned by Heirs Holdings, has [stated](#) that it aims to triple the oil production from the Umuechem block.

Impact:

This noticeable rise in flaring showcases the risks associated with transferring assets to companies with strong climate commitments to those that lack similar commitments. As a result of this increase in flaring, emissions have gone up.

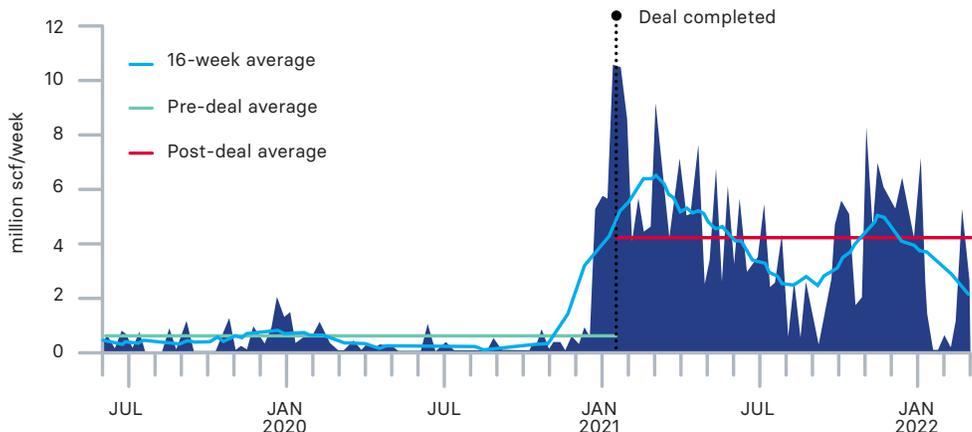
Change in Environmental Performance: Flaring

Flaring at the Umuechem field increased dramatically following the asset's transfer to TNOG.

- Between 2013 and the point of transfer, the field displayed almost no routine flaring under the stewardship of Shell, TotalEnergies, and Eni
- Since the transaction, flaring has consistently hovered around 4.1 million scf/week

Flare volumes at Umuechem oil field

Flaring at the Umuechem field increased dramatically following the asset's transfer from Shell, TotalEnergies, and Eni to TNOG.



Key takeaways from case studies

The above case studies reinforce the conclusions drawn from trends analysis of oil and gas M&A since 2017. Though the risks captured in our case studies may not surface in every asset transfer, the above transactions reveal that stewardship-at-risk asset transfer can exacerbate near-term emissions, hamper long-term stewardship of oil and gas facilities, and weaken climate disclosure.

Near-term warning

Case studies 2 and 3 show that stewardship-at-risk transfers can worsen near-term warming. In all three case studies, flaring persisted post-transfer, even as flaring declined across nearby assets. In case 3, flaring actually increased post-transaction, as assets moved from operators with strong climate commitments to those lacking such commitments.

The methane associated with this flaring activity will supercharge immediate atmospheric warming, given the near-term potency of methane compared to CO₂. In certain instances, then, upstream asset transfer can significantly disrupt efforts to curb atmospheric warming.

Long-term transition planning

Case study 1 also shows that long-term net zero transition planning can be impeded by stewardship-at-risk dealmaking. With Permian assets now in the hands of Slant rather than Apache, plugging of inactive well can be expected to decrease.

For every year that an inactive well remains unplugged, methane continues to seep into the atmosphere, hindering long term efforts to reach net zero emissions by 2050. Asset sales can undermine the energy transition when wells are purchased by companies with limited decommissioning plans.

Climate Disclosure

All three case studies highlight disclosure risks stemming from stewardship-at-risk transfers. When assets moved from public to private markets, disclosure of flaring intensity, methane emissions, and GHG emissions more broadly disappeared. Well plugging and flaring data were drawn from government

databases and satellite images and analyzed using proprietary software from ESG Dynamics and Capterio. The general public and the vast majority of investors do not have access to this information. Stewardship-at-risk asset transfers reduce transparency in upstream oil and gas.

Conclusion: Towards a Transferred Emissions Solution

Every year, billions of dollars of upstream oil and gas assets change hands. These transactions are core to the energy industry, helping companies achieve a variety of business goals from debt repayment to share buybacks. There may also be increasing incentives to exit assets as part of energy transition planning and emission reduction. Across all of these situations, asset transfer can have serious climate implications. When assets move from public to private markets or from operators with environmental commitments to those without, near-term emissions can increase, energy transition planning can falter, and climate disclosure can worsen.

Every year over the last five years, public-to-private transfers have comprised the largest share of annual transactions. During this same time, deals reflecting a reduced environmental commitment have become increasingly common. These two trends suggest that stewardship risk in upstream oil and gas is growing. Transfer may help majors begin to execute their energy transition plans, but it does not help reduce global greenhouse gas emissions. To reach net zero by 2050, climate considerations need to be integrated into oil and gas dealmaking.

The transferred emissions problem presents an opportunity for oil and gas companies, their investment bankers, and private equity buyers to demonstrate leadership on the energy transition. By working collaboratively with civil society partners to embed climate safeguards in upstream transactions, companies can pioneer a new model of dealmaking better suited for a net zero world.

Asset sales will necessarily remain central to the oil and gas industry, but the transferred emissions problem can and should become a relic of the past. Understanding the climate ramifications of upstream dealmaking is the first step towards crafting tailored solutions that catalyze progress to net zero.