Big Oil's Climate Pledges: A Dangerous Distraction

After years of denying climate science, oil and gas companies began to portray themselves as part of the solution in the early 2000s. Shell promised to pursue renewables and exceed Kyoto targets. BP spent $200 million to rebrand as "Beyond Petroleum." Behind these bold campaigns, though, was little action. For decades, the industry has remained steadfastly committed to fossil fuels, investing less than 1% of expenditures in low carbon ventures while projecting massive increases in oil and gas production.

Now, as oil majors announce climate pledges and net zero targets, they say will keep the world on track to achieve the goals of the Paris Agreement, it is important to assess whether these plans will affect real and necessary change, or if they are simply the industry's latest round of empty promises.

Meeting the Paris Agreement goal to limit warming to 1.5°C above pre-industrial levels requires bold and immediate action. According to the United Nations, to achieve this goal, the world must cut annual greenhouse gas emissions in half by 2030. For the fossil fuel industry, this means oil and gas production must fall 4% and 3% respectively each year between 2020 and 2030. The IEA found oil and gas exploration must end immediately to keep warming below 1.5°C. In fact, nearly 60% of known oil and gas reserves "must remain unextracted to keep within a 1.5 °C carbon budget" according to a peer-reviewed study published in *Nature*.

Not a single major oil and gas company's climate plan analyzed meets these standards. Instead, the plans are filled with loopholes, misrepresentations, and empty words that ultimately serve little more than to greenwash the fossil fuel industry's image and deceive customers about the climate risks inherent in continued use of its products.

While meeting the Paris goals requires cutting greenhouse gas emissions in half by 2030, industry "Paris-aligned" climate plans will allow:

- **BP to increase overall emissions** through 2030, as the company told investors last fall.
- **Shell to increase overall emissions** through 2030, according to an analysis of the company's own targets and disclosures.
- **Chevron to increase overall emissions**, as the company's 17% increase in oil and production by 2025 will far outweigh a 5% reduction in emissions intensity
- **Exxon to reduce overall emissions just 2%**, as its 20% reduction target applies to only 10% of company emissions. If the company increases production, as it has indicated it may, overall emissions for the company will likely increase.

The following analysis closely examines the climate pledges of ExxonMobil, Chevron, Shell, and BP, comparing each company's fossil fuel production and exploration plans, emission reduction targets, and investments in renewable energy with the action scientists and international bodies have found is necessary to combat this crisis.

Broadly, there are four major flaws found throughout oil and gas climate plans.

Exclusion of Scope 3: Industry emissions are classified under three scopes. Scope 1 emissions are directly released by company operations, for example by flaring methane at a natural gas well. Scope 2 emissions are indirectly released by company operations, for example from the production of electricity used to power a refining plant. Scope 3 emissions result from the ultimate use of the company's product, for example a customer's gasoline burned while driving. Scopes 1 and 2 are often referred to as operational emissions, while scope 3 is referred to as end-use emissions.

Exclusion of Activities or Product: Companies may set targets that only cover a portion of the business, for example by excluding so-called downstream operations like refining or joint-venture assets operated by a partner company.

Reliance on Post Emission Compensation: Companies often claim to meet climate targets not by directly reducing emissions, but through "post emission compensation" measures such as nature-based offsets (e.g. tree planting) and carbon capture and storage (CCS). Offsets present a number of persistent and serious equity, implementation, and verification issues, and have never been attempted at the scale contemplated by the oil majors. CCS is a nascent technology that has yet to be brought to scale. CCS systems require significant energy to operate, and unless they are powered by renewables result in a net increase in overall emissions.

Reliance on Emission Intensity Metrics: Emission intensity, or emissions released per unit of energy produced, can be used to deflect attention from an increase in absolute emissions. If a company begins to produce oil more efficiently but also increases production, absolute emissions can increase even as the emission intensity decreases.

ExxonMobil

In January 2022, ExxonMobil announced its ambition for net zero emissions by 2050. The company's target covers only scope 1 and 2 emissions from operated assets, and builds off a previously announced emission-reduction plan that ExxonMobil estimates will reduce scope 1 and 2 emissions by 20% by 2030, relative to 2016 levels. The company has also pledged to invest $15 billion in lower-emission projects through 2027 as part of its climate strategy, which the company claims is consistent with the Paris Agreement.

But ExxonMobil's climate strategy falls far short of what is needed to meet the goals of the Paris Agreement. The company has made no plans to wind down oil and gas production or to halt exploration, both of which are immediately necessary to meet Paris goals. ExxonMobil's emission-reduction plan and net zero ambition fail to address nearly 90% of company emissions, including all scope 3 emissions resulting from the use of its products. And despite the company's bold claim to be advancing climate solutions, ExxonMobil's pledged investments in "lower carbon" solutions are directed towards technologies like carbon capture and algae biofuels that will not significantly reduce their overall emissions, as they continue to be far outweighed by fossil fuel investments.

Production and Exploration: no plans to reduce oil and gas production or halt exploration. According to the UN Production Gap Report, oil and gas production must decrease 4% and 3% respectively each year through 2030. Yet Exxon has made no plans to reduce its fossil fuel production, and may look to increase it in the future. In November 2021, the company told CNBC "it will try to flatten its production of fossil fuels through 2025, depending on market conditions." ExxonMobil announced its plans to hold production steady after it was forced to reign-in spending during 2020; the company had previously planned to increase production 25% by 2025 and there is no reason to believe the company won't pursue an increase again, should market conditions allow. In fact, CEO Darren Woods told the FT that Exxon could expand its oil and gas production in the coming years and still meet the emissions reduction goals at its operations.

ExxonMobil has not pledged to end or even reduce exploration, despite the IEA's finding that no new exploration is compatible with limiting warming to below 1.5C°. In March 2021, the company told investors it has a "robust pipeline of future developments." The company anticipates it will "need to replenish its existing proved reserves entirely by 2040." An analysis by Carbon Tracker found $10.44 billion of ExxonMobil's 2019 capital expenditures and 88% of ExxonMobil's potential future oil and gas capital expenditures to be inconsistent with limiting warming below 2°C.

Emission Reduction Targets: exclude 90% of company emissions.
Two years after CEO Darren Woods called net zero targets a "beauty match," and just months after the company's executive committee reportedly rejected a senior investor's urging to adopt a target, ExxonMobil announced its "ambition for net zero greenhouse gas emissions by 2050." The company's target covers scope 1 and 2 emissions from operated assets, and builds off a previously announced emission-reduction plan that ExxonMobil estimates will reduce scope 1 and 2 emissions by 20% by 2030, relative to 2016 levels.

These targets exclude 90% of ExxonMobil's emissions, because they do not cover any scope 3 emissions, or scope 1 and 2 emissions from non-operated assets. ExxonMobil rejects responsibility for scope 3 emissions resulting from the use of its products, claiming that "changes in society's energy use coupled with the development and deployment of affordable lower-emission technologies will be required to drive meaningful Scope 3 emissions reductions." In the summer of 2021, however, a lawyer for ExxonMobil, while urging the court to dismiss a consumer and investor fraud case brought by the Commonwealth of Massachusetts against the company, told the judge, "Exxon Mobil, however, is advocating for a continued role for fossil fuels to play in the decades to come...." effectively admitting the company's attempts to slow if not block "changes in society's energy use."

Over the course of this critical decade, ExxonMobil's emissions may actually increase. The company's target to reduce scope 1 and 2 emissions from operating assets 20% by 2030 applies to just 10% of company emissions, meaning it would result in an overall 2% decrease in company emissions if oil and gas production levels stay the same. However, the company's target is based on a series of emission intensity targets, not absolute reductions. If ExxonMobil increases oil and gas production, as CEO Darren Woods has suggested it could, the company could meet its emission intensity targets even as absolute emissions increase.

Transition Investments: directed towards false solutions.
In November 2021, ExxonMobil announced plans to increase its investment in lower-carbon initiatives to $15 billion over the next six years. While this sum is a notable increase over the company's previous pledge to spend $3 billion on "lower emission energy solutions'' through 2025, it's still just 10–12.5% of the company's planned capital expenditures.

The majority of these funds will be directed towards ExxonMobil's *Low Carbon Solutions* business, which was established in February 2021 with a focus on CCS projects. CCS is an nascent technology that is almost exclusively used to extract more oil from depleted wells, through a process called enhanced oil recovery (EOR). Millions of dollars of investments into "state-of-the-art" fossil fuel power plants equipped with CCS have been abandoned due to cost overruns. According to a recent review of carbon removal literature, CCS is net-additive to carbon emissions, emitting 1.46 to 3.44 tons of CO_2 for each ton captured, unless it is powered by renewables.

While ExxonMobil claims to be a leader in carbon capture, the company is estimated to capture less than 1% of its annual emissions. ExxonMobil's proposed $100 billion CCS hub in Houston is expected to have the potential to store 100 million metric tons of CO_2 per year by 2040– equivalent to less than 8% of ExxonMobil's 2019 emissions.

ExxonMobil has defended not investing in wind and solar energy by saying it is focused on areas where it "can make the most meaningful and expedient contribution to society's efforts to manage the risks of climate change," including algae biofuels. However, the company has spent just $300 million on its quest to develop algae biofuels since 2009, less than 3% of the company's research budget and roughly half the $600 million ExxonMobil originally planned to spend between 2009–2019. The company's goal is to have the "technical capability" to produce algae biofuels equivalent to 10,000 barrels of oil per day by 2025, which is just 0.2% of current daily fossil fuel production. ExxonMobil told a Massachusetts judge that its algae ads are not deceptive because "reasonable consumers" can look at SEC filings to compare algae and fossil fuel investment.

Chevron

Chevron claims it "supports the Paris Agreement and is committed to addressing climate change while continuing to deliver energy that supports society." The company also claims to "believe the future of energy is lower carbon" and to "support the global net zero ambitions of the Paris Agreement." In 2019, the company first announced emission targets "aligned with stocktake milestones set in the Paris Agreement." In October 2021, Chevron announced its net zero aspiration, which applies to its upstream scope 1 and 2 emissions, and a goal to reduce its portfolio carbon intensity, which applies to all company emissions, 5% by 2028, relative to 2016 levels.

Yet Chevron plans to increase oil and gas production 17.5% by 2025, relative to 2020 levels. This production increase means that even if the company achieves its goal to reduce its Portfolio Carbon Intensity 5% by 2028, overall emissions will still increase. Chevron's plan to invest $3 billion over the next seven years is equivalent to just 3% of the company's planned capital expenditures.

Production and Exploration: increasing oil and gas through 2025.
Chevron has not pledged to reduce oil and gas production. In March 2021, Chevron announced plans to increase oil and gas production from 2.98 million barrels of oil per day in 2020 to 3.5 million barrels of oil per day in 2025 – a 17.5% increase over the five year period – in direct conflict with the need to reduce oil and gas between 4% and 3% annually through 2030.

The company has dismissed the fundamental need to decrease fossil fuel production to limit warming. In 2019, Chevron's general manager for environmental, social and governance engagement Michael Rubio told the New York Times, "You can increase your fossil-fuel production, deliver superior returns for your shareholders, and still be compliant with Paris."

Chevron has not pledged to end or even reduce exploration. In 2021, Chevron planned to drill 25 exploration and appraisal wells worldwide, spending $1.5 billion on "exploration, early stage development projects, and midstream activities." An analysis by Carbon Tracker found $5.36 billion of Chevron's 2019 capital expenditures and two-thirds of Chevron's potential future oil and gas capital expenditures to be inconsistent with limiting warming below 2°C. The World Benchmarking Alliance found "no evidence that the company is committed to transitioning away from oil and gas products.

Emission Reduction Targets: allow overall emissions to increase.
Chevron's 2050 net zero aspiration excludes the vast majority of the company's emissions, as it applies only to upstream scope 1 and scope 2 emissions and does not include scope 3, end-use emissions. This highly limited goal is also heavily qualified, with the company noting that "Accomplishing this aspiration depends on continuing progress on commercially viable

technology, government policy, successful negotiations for CCS and nature-based projects, availability of cost-effective, verifiable offsets in the global market, and granting of necessary permits by governing authorities."

Chevron's Portfolio Carbon Intensity (PCI) target covers the company's full range of emissions, including scope 3. But this target is merely "a reduction greater than 5% carbon emission intensity from 2016 levels by 2028." Given the company's plans to increase oil and gas production 17.5% by 2025, overall emissions will increase even if the company achieves its PCI target.

Transition Investments: minimal investments in renewables.
In 2010, Chevron claimed it was time for oil companies to "get behind the development of renewable energy" Yet from 2010-2018, Chevron invested just 0.23% of its capital expenditure in renewables and low carbon technologies. Robert Redlinger, a former Director of Renewable and Sustainable Energy at Chevron, reflected "When you have a very successful and profitable core oil and gas business, it can be quite difficult to justify investing in renewables…I didn't perceive that kind of commitment from Chevron during my time with the firm."

In September 2021, Chevron announced plans to invest $3 billion over the next seven years with a goal to produce 100,000 barrels of oil per day in renewable energy by 2030, just 3% of the company's capital expenditures and only 2.9% of current fossil fuel production. The company is facing an FTC complaint for misleading consumers about its actions to combat climate change, in part due to the misalignment between the company's extensive advertisements of renewable energy and its minimal investments.

Shell

In 2020, four years after Shell released a report on net zero pathways that contained a footnote making clear the company had "no immediate plans to move to net zero… over our investment horizon of 10–20 years," Shell announced an ambition to become a net zero energy company. Shell claims its 2021 Energy Transition Strategy is "aligned with the more ambitious goal of the Paris Agreement, to limit the increase in the average global temperature to 1.5 degrees Celsius above pre-industrial levels."

Yet while Shell plans to decrease oil production 1-2% per year through 2030, the company will increase gas production 4% per year over the same period. Its strategy to become a net zero energy company by 2050 is reliant on large-scale offsets purchased by customers, not a commitment to reduce oil and gas production. Despite an order by the Dutch courts to decrease emissions 45% by 2030, Shell's absolute annual emissions are expected to increase through 2030. Shell is appealing the court order. After years of failing to meet more limited renewable investment goals, Shell's new pledge to invest $2-3 billion annually in "Renewables and Energy Solutions," is still less than 15% of the company's anticipated capital expenditures.

Production and Exploration: increasing natural gas production and continuing exploration.

Shell plans to increase gas production an estimated 4% annually through 2030, in direct conflict with the need to reduce gas production 3% annually over the same time period to stay within the Paris goal of 1.5C. Despite the fact that natural gas is roughly as bad for the climate as coal when methane leaks and total emissions are added to the equation, Shell includes increasing natural gas production as one of the company's six key levers for reducing emissions in its strategy.

While Shell has said it will decrease oil production 1-2% per year, this is substantially less than the 4% reduction called for by the UN Production Gap Report. And Shell still plans to continue exploration through 2025, despite the IEA's conclusion that no new oil and gas exploration is consistent with limiting warming to below 1.5°C; the company claims it has "attractive exploration opportunities in the first half of this decade." According to Carbon Tracker, $3.94 billion of Shell's 2019 capital expenditures and 66% of Shell's potential future oil and gas capital expenditures are inconsistent with limiting warming below 2°C.

Emission Reduction Targets: emissions will increase through at least 2030.

According to an analysis by Global Climate Insights, Shell's increase in gas production will drive up Shell's annual emissions over the next decade, even as the company works towards a 20% reduction in emission intensity target by 2030. Shell's absolute emissions are projected to be 12% higher in 2030 than 2019. Even the company's net emissions (including CCS and offsets) are projected to be 4% higher in 2030 than today.

In May 2021, a Dutch court ordered Shell to slash its emissions by 2030. According to the decision, the company must reduce scope 1 and 2 emissions 45% by 2030 and has a "significant best-efforts obligation" to lower scope 3 emissions 45% by 2030. In July 2021, Shell confirmed its intent to appeal the decision, claiming it does not control scope 3 emissions, which according to the company, society must figure out how to reduce.

Shell's refusal to accept responsibility for scope 3 emissions is reflected in its strategy. While the company claims its net zero "target includes Scope 3 emission" the plan relies on actions taken by its customers, not the company, to meet its target. Shell says it plans to "offer our customers nature-based solutions to offset around 120 million tonnes per annum of our Scope 3 emissions by 2030, "but has published no specifics on how this program would work." While the company won't take responsibility for scope 3 emission reductions, apparently it is willing to take credit.

The 120 million tonnes of voluntary customer-driven CO2 offsets is roughly equivalent to the entire global market of voluntary carbon offsets in 2019, and significantly more than the 4.3 million tonnes the company offset in 2020. Shell has called for "Planting forests the size of Spain" to fully offset company emissions. Offsets present a number of serious and persistent equity, implementation, and verification issues and do not reduce absolute emissions. Importantly, CCS and nature-based offsets only capture carbon dioxide emissions, and will be unable to address Shell's increasing methane emissions from expanded gas production.

Shell's strategy also does not cover its chemical and plastics business, a sector that is projected to make up 20% of oil consumption and produce 600 coal plants-worth of greenhouse gases globally by 2050. According to the World Benchmarking Alliance, Shell's "current actions and lack of detailed planning undermine its net-zero strategy."

Transition Investments: minimal investments, massive reliance on false solutions.
Shell CEO van Beurden has explicitly rejected the title of oil, stating in 2019 "We are not Big Oil, we are Big Energy," and last year claiming to be "a much more sophisticated and integrated energy player."

Yet the company has consistently failed to live up to these claims. Between 2010 and 2018, Shell invested just 1.3% of capital expenditures in low carbon, in spite of claims as early as 1999 that the company was moving toward renewables. Shell failed to meet its goal to invest $6 billion in low carbon by 2020, spending just $3.2 billion since 2016, less than 4% of the $84 billion it spent on fossil fuels. In 2021, Shell set a near-term goal to invest $2-3 billion annually in "Renewables and Energy Solutions." While a notable increase over earlier investment goals, the sum equates to only 9-15% of planned capital expenditures.

Shell intends to have access to 25 megatonnes of CCS capacity by 2035, a significant increase over the 0.94 megatonnes captured in 2020. CCS is an nascent technology that has yet to achieve the scale predicted by proponents, and is almost exclusively used to extract more oil from depleted wells, through a process called enhanced oil recovery (EOR). Millions of dollars of investments into "state-of-the-art" fossil fuel power plants equipped with CCS have been abandoned due to cost overruns. A recent analysis of Shell's major CCS project, a hydrogen plant in Canada, found that between 2015–2019 the plant emitted 50% more CO2 than it captured.

BP

In February 2020, BP became the first oil major to announce an ambition to become a net zero energy company by 2050. The company has released 10 aims to support this transition, which BP claims provide "a path that we believe is consistent with the Paris goals."

Yet BP admits its overall emissions are projected to increase through at least 2030. While the company claims it plans to reduce oil and gas production 40% by 2030, it misleadingly excludes production from its joint venture with Rosneft from the equation. In truth, the company plans to reduce production by only 28% from 2019 levels. Its strategy highlights a commitment to end exploration in new countries, but BP continues to explore across the 70 countries in which it currently operates. In total, nearly half (46%) of BP's emissions aren't covered by the company's net zero goal, including emissions from all of the oil and gas BP purchases from other companies to refine and sell to customers.

Production and Exploration: loopholes misrepresent the scale of its planned reductions. BP is the only oil major assessed here with a plan to substantially decrease its oil and gas production, pledging a 40% reduction by 2030 over 2019 levels. Yet the pledge excludes the company's joint venture with Russian oil giant Rosneft, which accounts for roughly a third of BP's production. With this production taken into account, BP is only planning to reduce production 28% by 2030. While BP claims it does not have any control over Rosneft's production (despite holding two seats on the board), there is no reason BP should exclude Rosneft from its calculations and misrepresent the scale of its planned production cuts.

BP plans to achieve these production cuts not by winding down operations, but by divesting $25 billion in assets by 2025. Selling off oil and gas assets to other fossil fuel companies will not remove them from production, and may even increase emissions if sold to smaller companies with lower public accountability and dirtier operations.

While BP pledged to end exploration in new countries, as a part of its pledge, the company may continue to explore in the 70 countries in which the company currently operates. In 2020, after the release of its net zero plan, BP acquired 3,000 square kilometers of new exploration licenses. In the November 2021 Gulf of Mexico lease sale, BP submitted 46 high bids totaling $28,967,128. Carbon Tracker found $2.4 billion of BP's 2019 capital expenditures and 58% of BP's potential future oil and gas capital expenditures to be inconsistent with limiting warming below 2°C.

Emission Reduction Targets: absolute emissions to increase through 2030. According to analysis by Oil Change International, an estimated 46% of BP's current emissions are excluded from its net zero target. These exclusions will allow emissions to increase in the short term, as the company admitted to investors in the fall of 2020: "We do

expect the absolute level of emissions associated with our marketed products to grow out to 2030, even as the carbon intensity covered by Aim 3 falls."

In May 2021, BP discouraged shareholders from supporting a resolution put forward by the investor group *Follow This* that asked the company to commit to reducing emissions over the next decade. World Benchmarking Alliance found BP "lacks detailed disclosure against which its targets, new business activities and transition plan can be assessed" and "still plans to grow its gas output, which would lead to an increase in its absolute emissions."

Transition Investments: BP's renewables and false solutions

In December 2019, ClientEarth filed a complaint in the UK with the OECD alleging that BP's *Keep Advancing* and *Possibilities Everywhere* campaigns misled the public due to their focus on low carbon projects when 96% of the company's annual expenditure is on fossil fuels. The UK National Contact Point for the OECD later found ClientEarth's complaint "material and substantiated, despite the complaint not proceeding due to BP ending its ad campaign." Between 2010 and 2018, BP invested just 2.3% of its capital expenditures in low-carbon projects.

BP aims to significantly increase low carbon spending from $500 million in 2019, just 3% of capital expenditure, to $5 billion in 2030, roughly 30% of capital expenditure. However, previous projects supported by its low carbon transition fund included "shares in companies developing new ways to find and use fossil fuels," or in other words, more efficient extraction and production of oil and gas.