



IS BP ON TRACK FOR 1.5°C?

**Reality check for financial
institutions**

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Reality check for financial institutions

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EXECUTIVE SUMMARY

BP aims to become Net Zero across its activities on an absolute basis by 2050 or sooner. However, based on our calculation using the company's own carbon intensity projection, BP is not on track to meet the 1.5°C climate goal. Even under the conservative assumption that BP does reach its emissions targets and reduces its production as per the IEA's Net Zero-based 1.5°C scenario (referred to as the 1.5°C scenario in this briefing),¹ by 2050, BP will have emitted 50.9% more greenhouse gas (GHG) than what is authorized under a 1.5°C compatible carbon budget. In fact, BP will be overshooting its share of the remaining carbon budget to limit global warming to 1.5°C as soon as 2033.

Why? Because BP short term plans are totally incompatible with efforts to stay below 1.5°C. BP is the 3rd biggest European oil and gas developer according to the Global Oil and Gas Exit List (GOGEL) and the 10th largest developer in the world. The sale of BP's shares in Rosneft could lead to a major decline in BP's oil and gas production between 2022 and 2030. However, it remains to be seen whether BP will choose to invest in the renewable energy transition or more oil and gas. If BP chooses to replace its Russian assets with other oil and gas assets, the energy mix will remain very oil and gas-intensive, further jeopardizing the fossil fuel decline and any longer term climate ambitions.

Our methodology

This briefing analyzes how and if the company is aligned with a 1.5°C reference scenario. This scenario was computed by the Transition Pathway Initiative, based on the IEA Net Zero Scenario and on a IPCC scenario, to provide pathways for greenhouse gasses emissions and energy production.

A company is considered aligned if its cumulative GHG emissions fit within the 1.5°C carbon budget. To make these calculations, we considered its "climate" ambitions and targets, to calculate a conservative estimate of its cumulative GHG emissions. We also look at other indicators indicating the direction the company is taking: near term oil and gas production trend, CAPEX trends and energy mix forecasted in 2030, and reliance on offsets. To find out more, please look at [our methodology](#).

KEY FINDINGS



Excess of 1.5°C Carbon budget by 2050



Year of the carbon budget overshoot



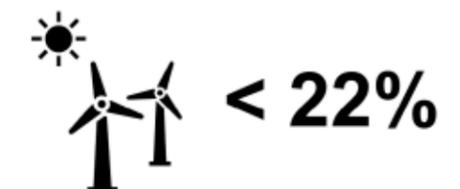
Oil and gas production between 2016 and 2024



Biggest European oil and gas developer



Near term CAPEX dedicated to oil and gas



Renewable share in the 2030 energy mix

1. BP'S DECARBONIZATION PATHWAY WILL EXCEED ITS 1.5°C CARBON BUDGET

a. Emission levels will remain too high for too long

In 2022,² British Petroleum (BP) pledged to achieve Net Zero carbon intensity of its sold energy products by 2050 or sooner. **However, committing to distant carbon neutrality targets is not enough to keep global warming below 1.5°C.** Our analysis shows that BP's short-to-medium term strategic and operational orientations (Greenhouse gas (GHG) emissions, CAPEX allocation, etc.) are not consistent with achieving carbon neutrality by 2050 and therefore put the climate at risk.

Although BP has pledged to reduce its carbon intensity of sold energy products (scope 1 & 2 & 3) by 5% by 2025, and by 15% to 20% by 2030 (see table 1 in the annex), these targets will not stop the company's emissions from increasing quickly over short-term.

According to the company's own projections and our calculations, between 2021 and 2035, **BP's carbon intensity of energy products³ is on average 49.2% higher than the maximum carbon intensity levels allowed by the 1.5°C reference scenario** (see graphic 1).

In other words, each unit of energy the company will produce until 2035 (and beyond) will consistently emit too much GHG. Given that oil and gas production levels will also remain high, BP will keep releasing high levels of GHG emissions. For BP to align with a 1.5°C decarbonization pathway, its absolute emission levels must decrease.⁴

b. BP's 1.5°C carbon budget is exceeded by 2033

Given that BP does not plan to reduce carbon intensity fast enough, its absolute emissions are still significant and could remain so for a long time if BP does not cut down on production as planned. BP's decision to exit Rosneft has created uncertainty on projected oil and gas production levels (see part 2). For our calculations, we assume that BP's production profile falls in line with the 1.5°C reference scenario. By 2050, our analysis shows that BP will have exceeded its 1.5°C carbon budget by at least 50.9% (see graphic 2).

Even in the unlikely event that BP did start reducing hydrocarbon production as per the 1.5°C reference scenario,⁵ **the major would still overshoot its allocated carbon budget as early as 2033.** Based on BP's own carbon intensity projections, Reclaim Finance calculations indicate that 83.9% of BP's carbon budget would be consumed as early as 2030.

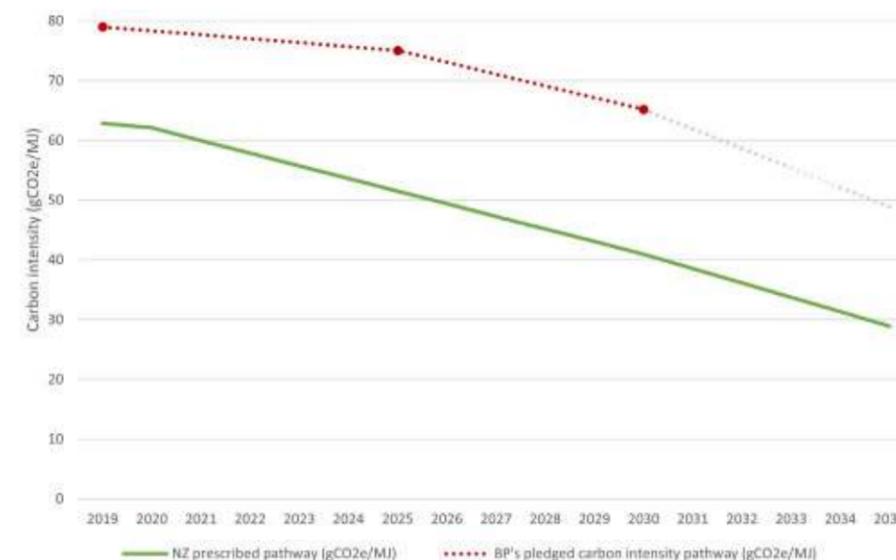
This carbon budget overshoot could keep increasing. The decision to exit Rosneft⁶ leads to a sharp decrease in production levels but this decline could be temporary and depends on what BP does next. Before the decision was made, we calculated that given BP's assets, the major was likely to see an increase in hydrocarbon production by 2030 (see part 2). If BP acquires new oil and gas assets to make up for the loss of its Russian assets, the company's production could go up again, putting the climate at risk (see chapter 2).

c. What to expect on offsets?

Unlike its peers, BP does not (yet) have an offset target. The company is currently scoping and investing in Carbon Capture Use and Storage in power generation and in blue

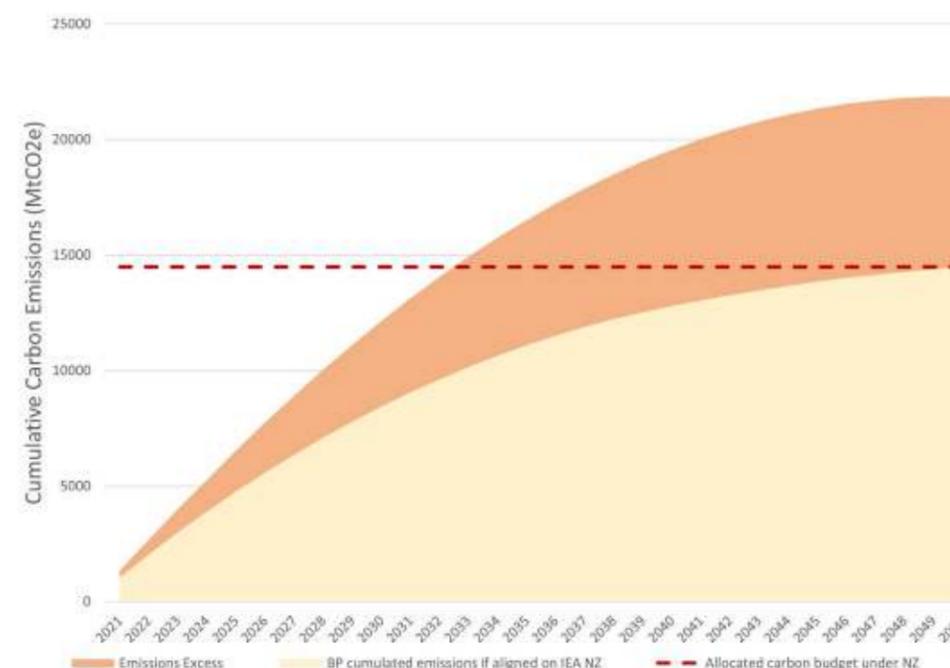
hydrogen production. As for so-called "Nature-Based Solutions", BP will be announcing its 2030 strategy by the end of 2022. In any event, resorting to offsets will either be unrealistic or far from enough to re-align the company with 1.5°C given its projected carbon intensity and hydrocarbon production plans.

Graph N°1. BP's short and mid-term decarbonization pathway



Source: Reclaim Finance based on BP's forecasted carbon intensity pathway, based on the company reported emissions, carbon intensity and decarbonization targets.⁷

Graph N°2. BP's 1.5°C carbon budget overshoot



Source: Reclaim Finance based on a) production forecasts using company data and the 1.5°C reference scenario's demand projections b) the 1.5°C reference scenario carbon intensity pathway computed by TPI c) the company's pledged carbon intensity pathway.

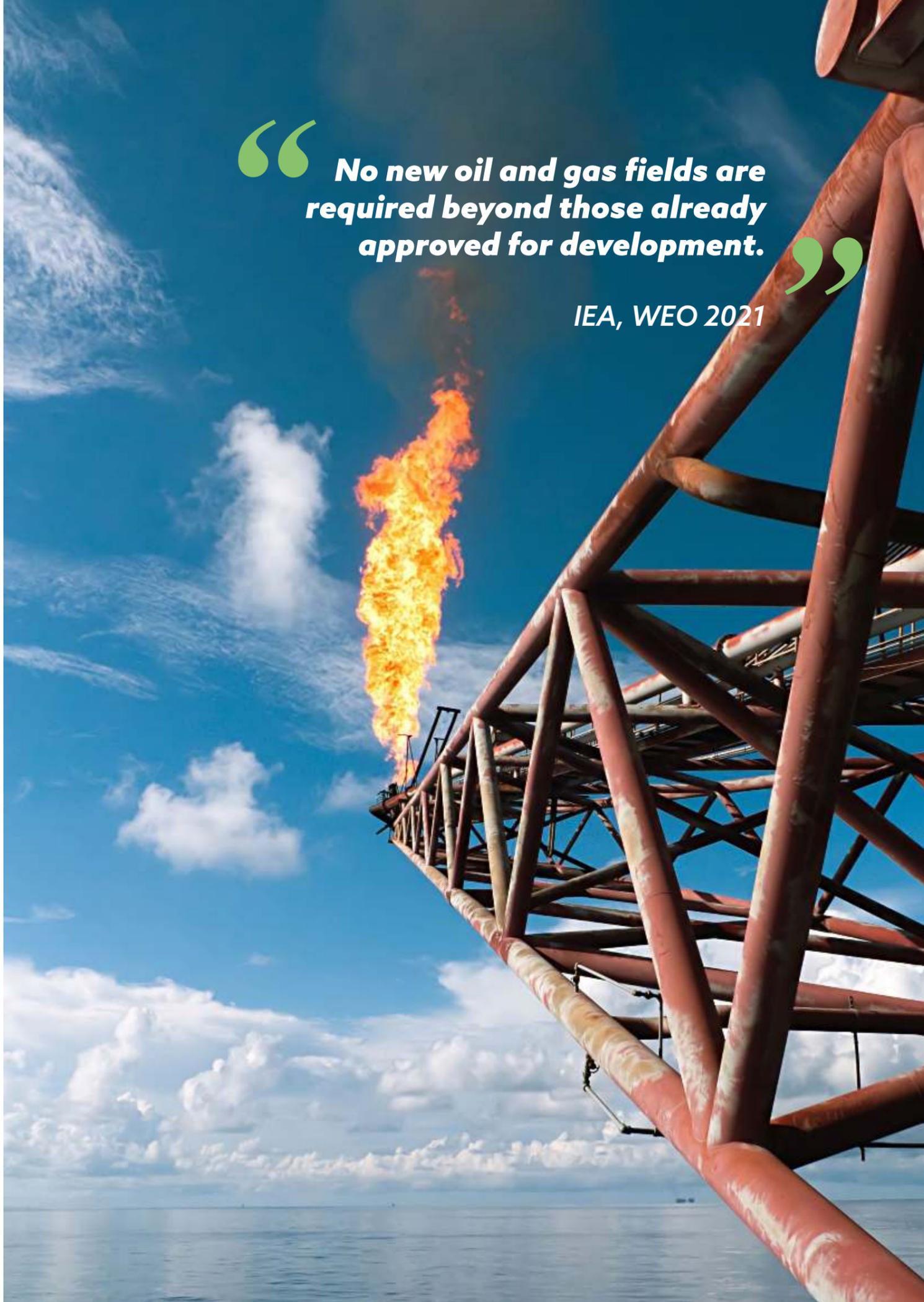
Does the TPI benchmark really assess alignment with 1.5°C?

In November 2021, TPI updated its energy sector benchmark,⁸ stating that a company is “aligned with 1.5°C” on the ground that the company’s carbon intensity is predicted to converge with the scenario’s pathway by 2050. However, this conclusion is misleading. TPI declares a company aligned as soon as the carbon intensity of the company falls below the carbon intensity level allowed by the 1.5°C reference scenario that same year. TPI’s approach, centered only on carbon intensity, does not take into account excess GHG emissions and fossil production stocks built up between today and 2050.⁹

On the contrary, our stock-based method (based on carbon budgets), considers the cumulative GHG emissions piling up each year as a result of annual fossil production. If both carbon intensity and oil and gas production remain high, then GHG emissions increase quickly and fall short of the remaining carbon budget to stay below 1.5°C. For a company to be deemed “aligned” (in the short, mid or long-term), its absolute emissions must fall within the carbon budget allocated by the IEA net zero scenario in that same time frame (short, mid or long term).

Why offsets are not an easy fix

For over two decades, oil companies have responded to pressure to reduce their emissions by promoting the use of carbon offsets, especially via tree plantations in tropical countries. As pressure to cut emissions has increased in recent years, so has the companies’ interest in offsets. However numerous studies have shown that tree plantations and supposed forest protection projects often have much lower carbon benefits than claimed and can have seriously negative impacts on Indigenous and other local communities, especially by taking over the land that they use for farming or other purposes. Furthermore, studies have repeatedly shown that the carbon offsets market as a whole is rife with fraud, flawed methodologies, opacity and conflicts of interest. As a result, the great majority of offsets generated since the global market started to grow in the late 1990s — 85% of the Kyoto Protocol Clean Development Mechanism’s offsets according to one widely cited analysis — are likely fictitious and do not represent emission reductions or removals.¹⁰



“ No new oil and gas fields are required beyond those already approved for development. ”

IEA, WEO 2021

2. BP IS INVESTING IN AN OIL AND GAS FUTURE

a. Oil and gas production will increase in the near term

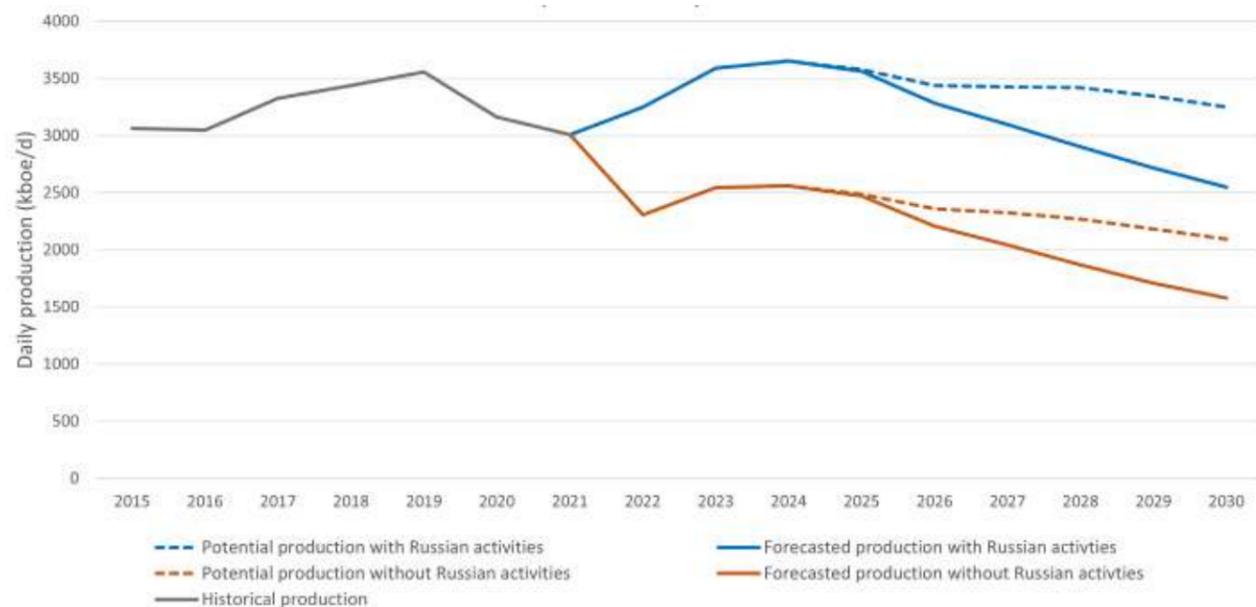
Reducing oil and gas production is a crucial part of any credible decarbonization pathway and is required to achieve deep and absolute emission cuts. Both the UN Production gap report and the 2021 World Energy Outlook Net Zero scenario entail a decline in fossil fuel production during this decade.¹¹

Before the war on Ukraine, BP had committed to reduce its oil and gas production by 40% compared with 2019 levels by 2030.¹² However, given this target does not cover BP's production coming from Rosneft,¹³ what BP has really committed to is a 17.1% decrease of oil and gas production by 2030.¹⁴ The blue

lines on graph n°3 shows that post-covid, production was increasing again, instead of decreasing as it should. Furthermore, our calculations showed the importance for BP to commit to stop developing new oil and gas assets. If not, BP's overall production would not decline enough: -8.7% by 2030, compared with 2019 levels.¹⁵

The situation has drastically changed due to BP's decision to sell its 19.75% stake in Rosneft announced February 27th.¹⁶ It leads to a 41.2% decrease in production by 2030,¹⁷ compared with 2019 levels (see the red lines on graph n°3). However, BP has not yet announced whether it would replace its Russian assets with other oil and gas assets or invest more in the energy transition.¹⁸

Graph N°3. BP production profiles



Source: Reclaim Finance calculations based on Rystad Energy UCube

The cut could be even deeper (-55.7% by 2030 against 2019 levels) if BP made the decision to stop developing more oil and gas assets beyond those already under field evaluation or development.¹⁹ This decision has not been made: despite the sale of its Russian assets, BP remains the third biggest European oil and gas developer and the tenth worldwide.²⁰

According to Carbon Tracker modeling,²¹ to align with the IEA's Net Zero scenario, BP's production would need to drop by 34% by 2030, compared with 2021 levels. According to our calculations, the current situation will lead BP to reduce oil and gas production by only 30.5% compared with 2021 levels. If BP

replaces Rosneft with other fossil fuel assets and/or keeps developing new oil and gas assets, the company's production will not decrease enough by 2030.

b. BP, a key player in oil and gas expansion

While BP is investing in renewables and planning to lock in 50 GW of clean energy capacity by 2030, the company is also investing in new fossil fuel operations across the world. According to the Global Oil and Gas Exit List, BP ranks among the top 10 oil and gas developers in the world.

Why increasing gas production is toxic for the climate

BP pledged to reduce its oil and gas production by 40% by 2030, (notwithstanding the oil and gas produced by Rosneft). At the same time, LNG capacity is due to double by 2030. Gas production results in methane leaks in the atmosphere at different stages (eg. venting during extraction and evaporation during transportation of LNG by boat). Methane is a potent greenhouse gas with a warming potential 85 times that of CO₂. According to the IPCC, methane emissions have nearly tripled since pre-industrial times and are increasingly responsible for rising temperatures. The IEA net zero roadmap is also adamant that there is no room for both new oil and new gas fields in the 1.5°C carbon budget.

In 2020, the company's resources under production amounted to 21,396 mboe, the equivalent of 20 years of production (at its recent level).²¹ The 3,189 mboe²² worth of assets currently at the development stage will allow BP to quickly add the equivalent of three years of production to its production portfolio. BP also owns 7,845 mboe of discovered hydrocarbon reserves that have not yet entered the field evaluation or development stage.

From 2019 to 2021, BP spent, on average, \$939.2 million²³ per year on exploration. BP has pledged to stop searching for undiscovered new oil and gas in 2030 but it's unclear

whether BP could cut down on exploration before then.

BP is increasingly tapping into unconventional oil and gas reserves. According to the Global Oil and Gas Exit List,²⁴ more than 57% of the oil and gas reserves currently being developed by BP will come from unconventional sources, essentially fracking and ultradeep water drilling. Both present enormous risks for the environment. BP is well aware given past experience with the Deepwater Horizon oil Spill in the Gulf of Mexico in 2010, leading BP to pay up \$20.8 billion in fines, the largest corporate settlement in United States history.

c. Investments and energy mix remain heavily fossil fuels oriented

Despite claims that BP is massively investing in renewables, a quick look at the CAPEX allocation demonstrates that the major's investment strategy is still focused on fossil fuels.

In 2022,²⁵ BP announced a 4 to 5-fold increase of its "low carbon" CAPEX by 2025 and a 6 to 7-fold increase by 2030 (up to \$6 billion). Although this is a significant increase from 2020 levels, it amounts to 27% of overall CAPEX which in turns, means that in 2025, more than 70% of the CAPEX will still be going to oil and gas.

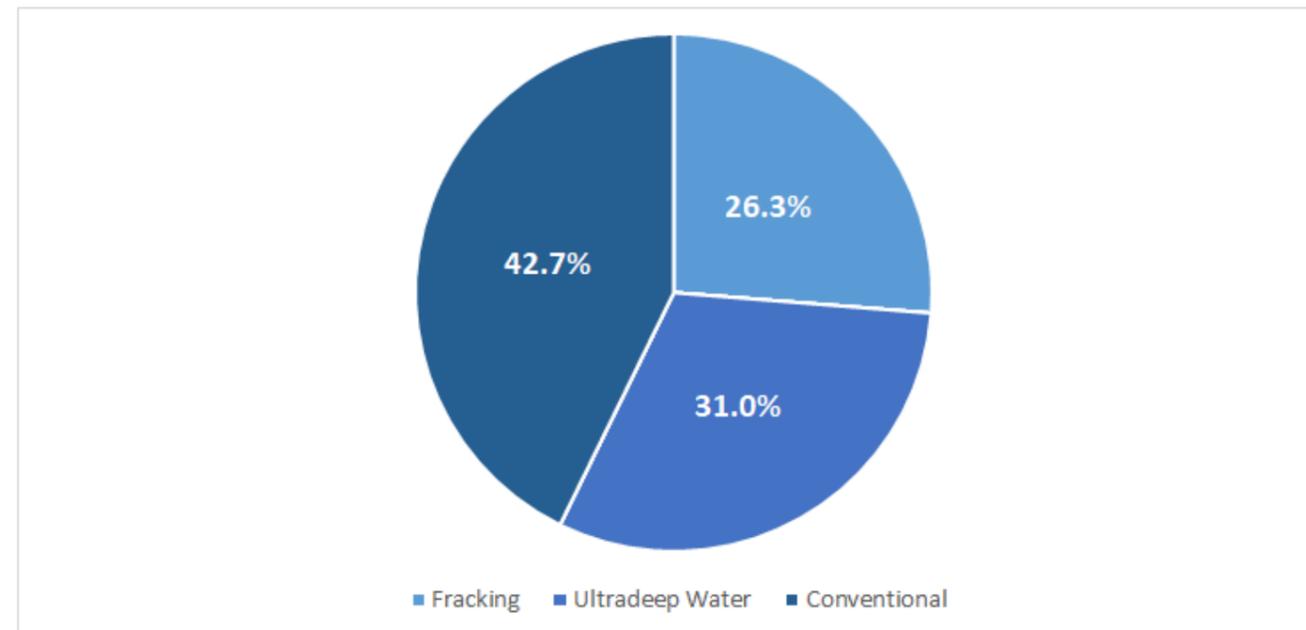
It is furthermore unclear how much of this investment capacity will be dedicated to renewable energy specifically given that in BP business plan, "low carbon" activities cover a wide range of activities, including CCUS investments.

This will not be enough for BP's energy mix to transition away from fossil fuels in the near and medium term. BP's energy mix in 2030 will still be fossil-fuel powered: **assuming the company meets its targets, BP's maximum renewable share of its energy mix would range from 13.9% to 21.4%, depending on its strategy following Rosneft's exit.**²⁶

The oil and gas majors argue that they are in the process of "diversifying" their energy mix. However, for the time being, their diversification strategy is adding renewable energy capacity on top of oil and gas production, instead of replacing it. As long as the company maintains high levels of fossil fuel productions, it will not achieve the deep emission cuts required - 50% by 2030 - to keep climate change in check.



Graph n°4. BP's short term expansion plan



Source: Urgewald analysis based on data from Rystad Energy

What the IEA says about the need for new CAPEX in oil and gas

According to the IEA Net Zero scenario, oil and gas capex will be divided by two up to 2030. The IEA estimates that an average \$365 billion per year would be spent on oil and gas until 2030: that's 50% less than oil and gas capital expenditures before the COVID crisis (\$719 Mds a year from 2016 to 2018).

Furthermore, the IEA explicitly states that investments are needed in existing fields, but it bans investments in new oil and gas fields after 2021. From the \$365 billion, only \$77 billion (20%) would go to new fields that have been approved for development before the end of 2021.

According to the IEA, the investments in oil and gas would continue to drop as time goes by, reaching an average \$171 billion per year from 2031 to 2050.

Table 1. BP's pledged mitigation targets²⁷

Base year	Target year	Reduction target ²⁸	Net target	Geographical scope	Emission scope	Emission type ²⁹
2019	2025	-20%	No	World	1 & 2, operational control	Absolute
2019	2025	-20%	Yes	World	3, use of sold products from its own upstream production	Absolute
2019	2025	-5%	No	World	1 & 2 & 3, use of sold energy products	Intensity
2019	2030	-50%	No	World	1 & 2, operational control	Absolute
2019	2030	-35 to 40%	Yes	World	3, use of sold products from its own upstream production	Absolute
2019	2030	-15% / -20%	No	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2019	2050	-100%	Yes	World	1 & 2, operational control	-
2019	2050	-100%	Yes	World	3, use of sold products from its own upstream production	-
2019	2050	-100%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	-

REFERENCES

1. In this briefing, we analyze companies alignment against a 1.5°C reference scenario computed by the Transition Pathway Initiative. The latter based its work on the IEA Net Zero Scenario and on a IPCC scenario, to provide pathways for greenhouse gas emissions and energy production. See our methodology for more information. All following mentions of “1.5°C reference scenario” refer to this output from the TPI.
2. BP, BP sets ambition for net zero by 2050, fundamentally changing organisation to deliver
3. To simplify, the “carbon intensity of sold energy products” of the company is referred to by “carbon intensity” of the company in the rest of this briefing.
4. To analyze whether or not a company’s decarbonization pathway is aligned with the 1.5°C carbon budget, it’s critical to look at two indicators simultaneously: the carbon intensity pathway and the production pathway. Any company aligning on the emissions pathway but producing too much - or the other way around - will end up emitting too much GHG. The overarching goal being for absolute emissions to decrease, we hence look at the carbon intensity and production pathway of the company and compare it to the benchmark described by the 1.5°C reference scenario.
5. This is a conservative hypothesis: due to lack of reliable data regarding BP’s production plans beyond 2024, we make the assumption that the company’s production levels will decrease in accordance with the IEA Net Zero demand projections. However, nothing in BP’s current plans confirms this direction. In fact, we estimate that BP’s hydrocarbon production will have increased by 2030 (see chapter 2).
6. Data on production levels is very reliable until 2024 and takes into account the production profile of reserves under production as well as oil and gas fields currently under evaluation or development. After 2024, the production levels will depend on the company’s plans that have not yet been made public.
7. Reported climate data are sourced from [BP ESG datasheet 2020](#)
8. TPI, Energy sector “finally moving out of first gear” on climate as first three oil and gas firms align with 1.5°C pathway, 2021
9. See Reclaim Finance analysis here [The TPI benchmark: misleading approach, dangerous conclusion](#)
10. References “Bad Deal for the Planet: Why Carbon Offsets Aren’t Working...and How to Create a Fair Global Climate Accord,” International Rivers, 21 May, 2008; “How additional is the Clean Development Mechanism,” M. Cames et al., Öko Institut, March 2016; “Shell’s net zero climate plans need land up to three times the size of the Netherlands for carbon offsets,” ActionAid, 17 May 2021; “Systematic over-crediting of forest offsets,” Grayson Badgley et al. (carbon)plan, 29 April 2001.
11. According to the [2021 Production Gap report](#), global oil and gas production must fall by 4% and 3% respectively each year by 2030. According to the [2021 World Energy Outlook](#), global oil and gas demand will fall by 20% and 10% respectively by 2030.
12. BP, [BP update on strategic progress](#)
13. Oil Change International, [Oil Change International response to BP’s new commitment to major cuts in extraction by 2030](#).
14. Calculations made by Reclaim Finance using BP projections and Rystad Ucube energy data
15. This projection takes into account the potential development of BP’s discovered reserves until 2030 using Rystad Energy data.
16. BP, [BP to exit Rosneft shareholding, 2022](#).
17. This projection takes into account the potential development of BP’s discovered reserves until 2030 using Rystad Energy data.
18. No statements made by BP as of March 7th, 2022.
19. Calculations made using Rystad Energy data excluding the potential development of BP’s discovered reserves until 2030.
20. See [Global Oil and Gas Exit List](#).
21. Carbon Tracker Initiative, [Adapt to Survive: Why oil companies must plan for net zero and avoid stranded assets, 2021](#)
22. Data collected by Urgewald for the Oil and Gas Exist List on the Rystad Ucube Energy database.
23. See [Global Oil and Gas Exit List, 2021](#).
24. [Global Oil and Gas Exit List](#) (data collected in October 2021 on Rystad Energy Ucube database)
25. [Bp update on strategic progress, 2022](#)
26. According to Reclaim Finance calculations, based on BP’s hydrocarbons and primary energy-equivalent renewable production plans. Refer to the methodology and datasheet for further details.
27. BP, [GHG emissions](#)
28. A net target is a target the company aims to achieve using offsets.
29. Targets can apply either to the absolute emissions (absolute amount of GHG emissions) or to the intensity of emissions (amount of GHG emissions per unit of energy produced)

IS BP ON TRACK FOR 1.5°C? Reality check for financial institutions

Reclaim Finance is an NGO affiliated with Friends of the Earth France. It was founded in 2020 and is 100% dedicated to issues linking finance with social and climate justice. In the context of the climate emergency and biodiversity losses, one of Reclaim Finance’s priorities is to accelerate the decarbonization of financial flows. Reclaim Finance exposes the climate impacts of some financial actors, denounces the most harmful practices and puts its expertise at the service of public authorities and financial stakeholders who desire to bend existing practices to ecological imperatives.

contact@reclaimfinance.org

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EXECUTIVE SUMMARY

ENI¹ aims to become a net-zero emissions energy business by 2050. However, based on our calculation using the company's own carbon intensity projection, ENI's strategy is not on track to meet the 1.5°C climate goal. Even under the conservative hypothesis that ENI meets its decarbonization targets and reduces its oil and gas production as per the IEA Net Zero-based 1.5°C scenario (referred to as the 1.5°C scenario in this briefing),² the company will have emitted at least 13.6% more greenhouse gas (GHG) than what is authorized under a 1.5°C compatible carbon budget. ENI will be overshooting its share of the remaining carbon budget to limit global warming to 1.5°C as soon as 2038.

Why? Because the pathway to net zero matters much more than the final destination and ENI's short term plans are incompatible with efforts to stay below 1.5°C. Despite efforts to showcase a pro-renewable energy and diversification strategy, the investment strategy will remain oil and gas intensive. In 2030, ENI investment strategy and energy mix will still be very focused on oil and gas, further jeopardizing the fossil fuel decline and any longer term climate ambitions.

Our methodology

This briefing analyzes how and if the company is aligned with a 1.5°C reference scenario. This scenario was computed by the Transition Pathway Initiative, based on the IEA Net Zero Scenario and on a IPCC scenario, to provide pathways for greenhouse gasses emissions and energy production.

A company is considered aligned if its cumulative GHG emissions fit within the 1.5°C carbon budget. To make these calculations, we considered its "climate" ambitions and targets, to calculate a conservative estimate of its cumulative GHG emissions. We also look at other indicators indicating the direction the company is taking: near term oil and gas production trend, CAPEX trends and energy mix forecasted in 2030, and reliance on offsets. To find out more, please look at [our methodology](#).

KEY FINDINGS



+14%

Excess of 1.5°C Carbon budget by 2050



2038

Year of the carbon budget overshoot



+8%

Oil and gas production between 2016 and 2025



N°5

Biggest European oil and gas developer



> 75%

Near term CAPEX dedicated to oil and gas



< 7%

Renewable share in the 2030 energy mix

1. ENI'S DECARBONIZATION PATHWAY WILL EXCEED ITS 1.5°C CARBON BUDGET

a. Emission levels will remain too high for too long

ENI announced an ambition to become “a net-zero emissions energy business” by 2050,³ aiming for net zero worldwide on all the group activities (scope 1 and 2) by 2040 and indirect emissions (scope 3) by 2050. However, committing to distant carbon neutrality targets is not enough to keep global warming below 1.5°C. Despite welcome improvements announced during its 2022 Capital Market Day, when ENI announced new absolute emissions reduction targets for 2030, 2035 and 2040 for its scope 1, 2 and 3, our analysis shows that ENI's short-to-medium term strategic and operational orientations (GHG emissions, CAPEX allocation) are not consistent with achieving carbon neutrality by 2050 and therefore put the climate at risk.

Although ENI has pledged to reduce its scope 1 and 2 operated upstream emissions by 50% by 2024 and its average carbon intensity of sold energy products⁴ by 15% by 2030 (see table 1 in the annex), these targets will not stop the company's absolute emissions from increasing quickly in the short-term.

According to ENI's own projections and our calculations, until 2035, ENI's carbon intensity is on average 21.9% higher than the maximum carbon intensity levels allowed by the 1.5°C reference scenario (see graph 1).

In other words, each unit of energy the company will produce until 2035 (and beyond) will consistently emit too much GHG. Given that oil and gas production levels will also remain high, ENI will keep releasing high levels of GHG emissions. For ENI to align with a 1.5°C

decarbonization pathway, its absolute emission levels must decrease.⁵ For absolute emissions to decrease, fossil fuel production must decrease. Currently, ENI's projections do not lead to a reduction in hydrocarbon production in the short term (see part 2 of this briefing).

b. ENI will exceed its 1.5°C carbon budget by 2038

Given that ENI does not plan to reduce carbon intensity fast enough, but plans to increase its oil and gas production in the near-term, its absolute emissions are growing quickly. By 2050, our analysis shows that ENI will exceed its 1.5°C carbon budget by at least 13.6% (see graph n°2).

Even in the unlikely event that ENI starts reducing hydrocarbon production as per the 1.5°C reference scenario,⁶ the major would still overshoot its allocated carbon budget as early as 2038. Based on ENI's own carbon intensity projections, Reclaim Finance calculations indicate that more than 71.1% of ENI's carbon budget will be consumed as early as 2030.

The carbon budget overshoot could keep increasing. Production levels will rise until 2025 as ENI is developing new oil and gas assets, and could remain very high or keep rising given that ENI has discovered resources that have not yet entered the field evaluation or development stage, and is investing in further exploration of yet to be discovered resources.

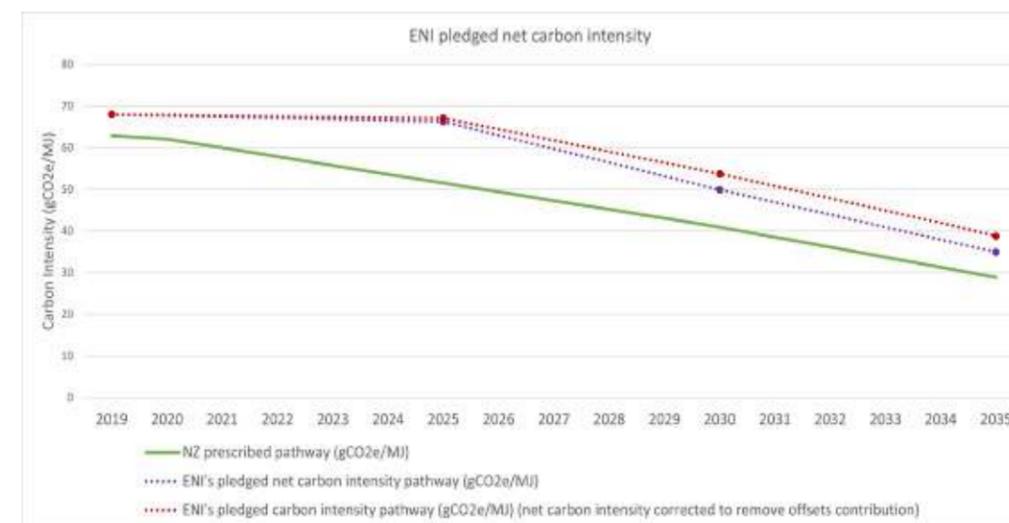
c. What to expect on offsets?

ENI plans to heavily rely on offsets to achieve its climate targets. The company plans to offset 15 MtCO₂e per annum through Nature-based

solutions (NBS) by 2030. This would require 3.2 millions acres of plantations, equivalent to the Campania region. The Italian firm is also developing Carbon Capture Use and Storage (CCUS) and aims to reach a capacity of 10 MtCO₂e per annum by 2030 (7 CCUS units). This raises feasibility issues: currently, there are only 28 operating around the world because Carbon Capture Use and Storage technology is not mature at large-scale yet, and its economic viability is still in doubt.⁷

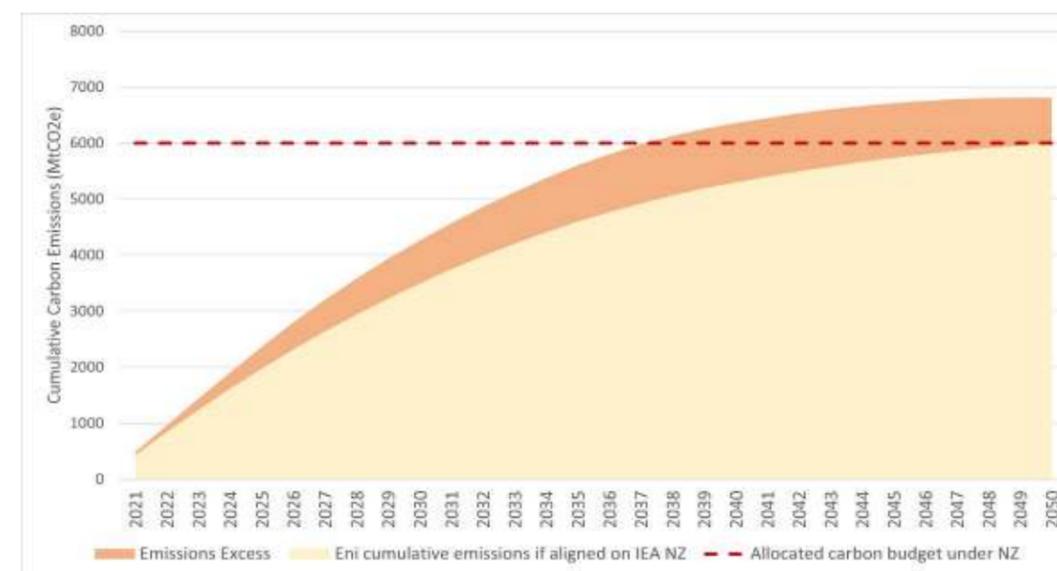
ENI also announced offset targets for 2040 and 2050. The company aims to steadily increase its use of offset to reach 25 MtCO₂e per annum of NBS and 50 MtCO₂e per annum of CCUS by 2050. According to the company's target, offsets will cover from 13.5% to 15% of 2030, 2040 and 2050 emissions reduction targets.⁸ To reach the 2050 target, ENI would have to grow a forest bigger than Calabria region, as well as opening 34 new CCUS centers.⁹

Graph 1. ENI's decarbonization pathway



Source: ENI forecasted carbon intensity pathway, based on the company reported emissions, carbon intensity and decarbonization targets.¹⁰ “NZ prescribed pathway” based on TPI's work on IEA Net Zero scenario (see methodology).

Graph 2. ENI's carbon budget overshoot



Source: Reclaim Finance based on a) production forecasts using company data and the 1.5°C reference scenario's demand projections b) the 1.5°C reference scenario carbon intensity pathway computed c) the company's pledged carbon intensity pathway.

Does the TPI benchmark really assess alignment with 1.5°C?

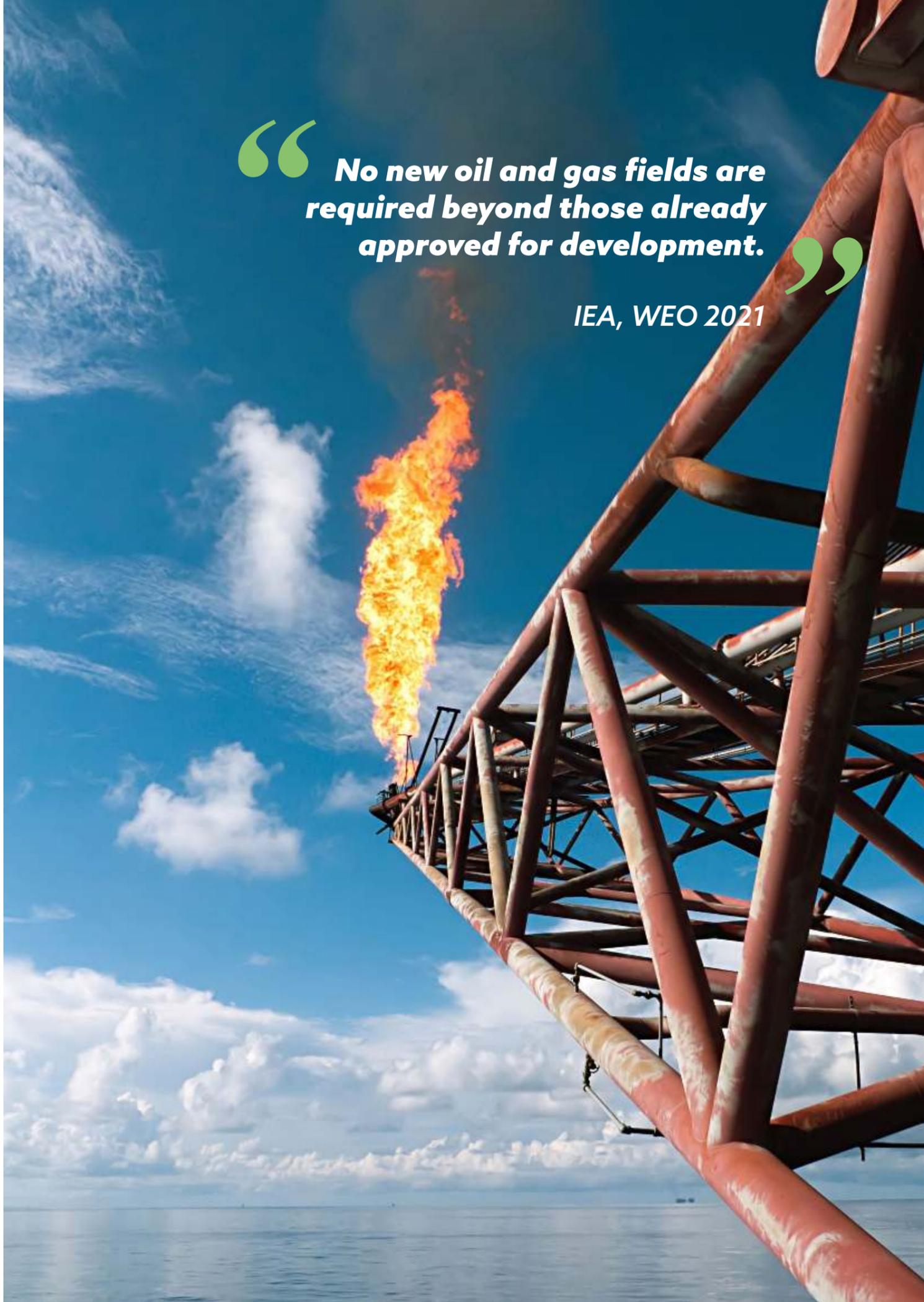
In November 2021, TPI updated its energy sector benchmark,¹¹ stating that a company is “aligned with 1.5°C” on the ground that the company’s carbon intensity is predicted to converge with the scenario’s pathway by 2050. However, this conclusion is misleading. TPI declares a company aligned as soon as the carbon intensity of the company falls below the carbon intensity level allowed by the 1.5°C reference scenario that same year. TPI’s approach, centered only on carbon intensity, does not take into account excess GHG emissions and fossil production stocks built up between today and 2050.

On the contrary, our stock-based method (based on carbon budgets), considers the cumulative GHG emissions piling up each year as a result of annual fossil production. If both carbon intensity and oil and gas production remain high, then GHG emissions increase quickly and fall short of the remaining carbon budget to stay below 1.5°C. For a company to be deemed “aligned” (in the short, mid or long-term), its absolute emissions must fall within the carbon budget allocated by the 1.5°C reference scenario in that same time frame (short, mid or long term).

“Carbon neutral LNG” - A dangerous marketing claim?

ENI claims to sell “carbon-neutral” liquefied natural gas (LNG) cargoes,¹² whose emissions have, supposedly, been offset or “avoided”. However, most emissions created by these LNG shipments were not canceled out.¹³ Numerous studies have shown that tree plantations and supposed forest protection projects often have much lower carbon benefits than claimed and can have seriously negative impacts on Indigenous and other local communities, especially by taking over the land that they use for farming or other purposes. Furthermore studies have repeatedly shown that the carbon offsets market as a whole is rife with fraud, flawed methodologies, opacity and conflicts of interest.

As a result the great majority of offsets generated since the global market started to grow in the late 1990s — 85% of the Kyoto Protocol Clean Development Mechanism’s offsets according to one widely cited analysis — are likely fictitious and do not represent emission reductions or removals.¹⁴ Carbon neutral-LNG is a dangerous claim as the use of offsets justifies selling more fossil fuels, which will ultimately lead to more emissions.



“ **No new oil and gas fields are required beyond those already approved for development.** ”

IEA, WEO 2021

2. ENI IS INVESTING IN AN OIL AND GAS FUTURE

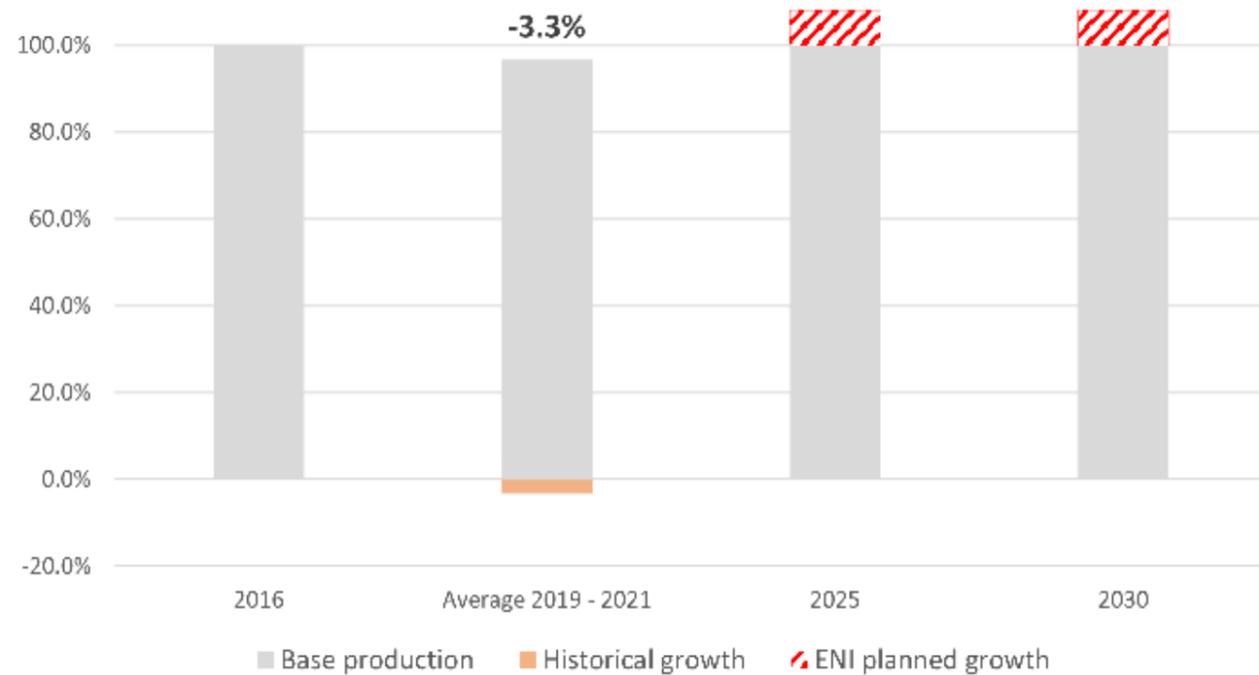
a. ENI still plans to increase oil and gas production in the short term

Reducing oil and gas production is a crucial part of any credible decarbonization pathway and is required to achieve deep emission cuts. Both the UN Production gap report and the 2021 World Energy Outlook Net Zero scenario entail a decline in fossil fuel production during this decade. According to Carbon Tracker models,¹⁶

to align with the IEA's Net Zero scenario, most oil and gas companies will need to drastically cut down on hydrocarbon production : by at least 51% by 2030 in the case of ENI.

As ENI is currently developing new oil and gas fields, the 2025 oil and gas planned production compared to the 2016 historical production level,¹⁷ after the Paris Agreement was signed, will be 8.0%¹⁸ higher. According to its own plans, ENI upstream production will grow until 2025 before plateauing.¹⁹

Graph N°3. ENI production growth since 2016



Source: Reclaim Finance calculations based on Rystad Energy UCube

b. ENI, a key player in oil and gas expansion

While ENI is investing in renewables and planning to lock in 15 GW of clean energy by 2030 and 60 GW by 2050, the company is also investing in new fossil fuel operations across the world.

According to the Global Oil and Gas Exit List,²⁰ ENI is in the top 20 oil and gas producers and developers worldwide.

- In 2020, the company's resources under production amounted to 11,458 mmboe,²¹ the equivalent of 20 years of production (at its 2019-2021 level).²²

- Currently, there are more than 1,894²³ worth of assets being developed, which will allow ENI to add the equivalent of three years of recent production to its portfolio.
- ENI also has 5,210 mmboe of discovered hydrocarbon resources that have not yet entered the field evaluation or development stage.

Not only is ENI expanding, it is also increasingly tapping into unconventional oil and gas resources. According to the Global Oil and Gas Exit List, circa 40.3% of the oil and gas resources currently being developed by ENI are in ultradeep water, and 0.9% come from each the Arctic region and fracking.

Why increasing gas production is toxic for the climate

ENI claims to decrease upstream oil from 2024 but is essentially switching from one fossil fuel to another. Fossil gas production will account for 60% of the oil and gas mix by 2030 and 90% beyond 2040. Gas production results in methane leaks in the atmosphere at different stages (eg. venting during extraction and evaporation during transportation of LNG by boat).

Methane is a potent greenhouse gas with a warming potential 85 times that of CO₂ over 20 years. According to the IPCC, methane emissions have nearly tripled since pre-industrial times and are increasingly responsible for rising temperatures. The IEA net zero roadmap is also adamant that there is no room for both new oil and new gas fields in the 1.5°C carbon budget.

c. ENI's investments will remain heavily focused on fossil fuels

Despite claims that ENI is gradually transitioning, a quick look at the CAPEX allocation demonstrates that the major's investment strategy is still focused on fossil fuels.

The company aims to dedicate 25% of its annual CAPEX to its low-carbon activities by 2024. Previously, ENI had announced 14% of its annual CAPEX would go to its Renewable business²⁴ by 2024.²⁵ Although this represents ten times its past share of renewable investments (1.4% allocated in 2020), this will not be enough for ENI's energy mix to transition away from fossil fuels in the near and medium term. ENI

announced upstream capex will amount to € 4.5 billion per year by 2024, half being growth CAPEX, and did not specify CAPEX going to midstream and downstream fossil activities.²⁶

As a result, and assuming the company meets its targets, ENI will be producing fifteen times more fossil fuels than renewables in 2030.²⁷

The oil and gas majors argue that they are in the process of "diversifying" their energy mix. However, for the time being, their diversification strategy is adding renewable energy capacity on top of oil and gas production, instead of replacing it. As long as the company maintains high levels of fossil fuel productions, it will not achieve the deep emission cuts required to keep climate change in check.

Eni and the gas curse in Mozambique

Between 2010 and 2013, huge gas discoveries were made by Eni off the coast of Capo Delgado, in northern Mozambique. The scale of the reserves could potentially make the small country one of the world's largest gas producers. Over the past years, foreign energy companies and investors have rushed into the country to take control of its natural resources, signing off deals worth close to \$60 billions.

With estimated emissions amounting to seven times France's annual emissions, the three LNG projects underway in the country, two of which are led by Eni, can unleash a climate bomb of catastrophic proportions. The first project, Coral FLNG, which is by Eni, will be completed soon and should get in production in 2023 with the capacity to process 3.4 million tons per year. Eni already signed a gas off-take agreement with BP. Coral is the world's deepest FLNG facility with six wells drilled nearly 2,000 meters deep - the first ultra-deep water FLNG ever operated.

Many believe that the expansion of the fossil fuel industry in Mozambique, with its corollary of displacements and loss of livelihood, contributed to fuel the underlying tensions that erupted in a bloody conflict that has caused 3,100 deaths and displaced over 800,000 people since 2017.

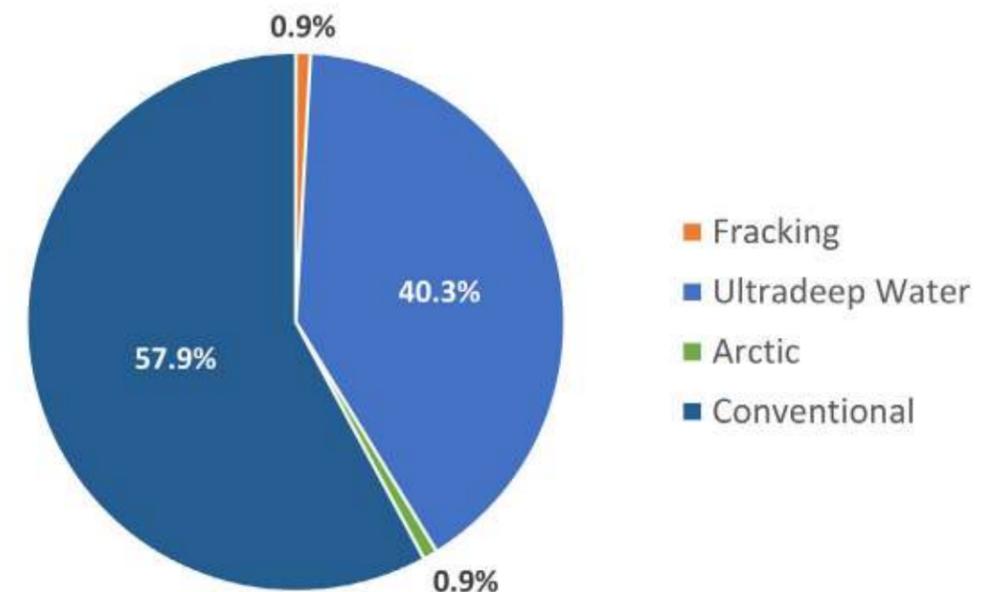
What the IEA says about the need for new CAPEX in oil and gas

According to the IEA Net Zero scenario, oil and gas capex are not "continued" but rather divided by two. The IEA estimates that an average \$365 billion per year would be spent on oil and gas until 2030: that's 50% less than oil and gas capital expenditures before the COVID crisis (\$719 Mds a year from 2016 to 2018).

Furthermore, the IEA explicitly states that investments are needed in existing fields, but it bans investment in new oil and gas fields after 2021. From the \$365 billion, only \$77 billion (20%) would go to new fields that have been approved for development before the end of 2021.

According to the IEA, the investment in oil and gas would continue to drop as time goes by, reaching an average \$171 billion per year from 2031 to 2050.

Graph n°4. ENI's short term expansion plans



Source: Urgewald analysis based on data from Rystad Energy

Table 1. ENI's pledged mitigation targets

Base year	Target year	Reduction target ²⁸	Net target	Geographical scope	Emission scope	Emission type ²⁹
2018	2025	-65%	Yes	World	1 & 2, upstream operational control	Absolute
2018	2025	-40%	Yes	World	1 & 2, group level	Absolute
2020	2030	-100%	Yes	World	1 & 2, upstream operational control	Absolute
2018	2030	-35%	Yes	World	1 & 2 & 3	Absolute
2018	2030	-15%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2018	2035	-55%	Yes	World	1 & 2 & 3	Absolute
2020	2035	-100%	Yes	World	1 & 2, group level	Absolute
2018	2040	-80%	Yes	World	1 & 2 & 3	Absolute
2018	2040	-50%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2018	2050	-100%	Yes	World	1 & 2 & 3,	-

REFERENCES

1. Eni, [Carbon Neutrality by 2050, 2020](#);
Eni, [Capital Market Day 2022 Presentation, 2022](#)
2. In this briefing, we analyze companies alignment against a 1.5°C reference scenario computed by the Transition Pathway Initiative. The latter based its work on the IEA Net Zero Scenario and on a IPCC scenario, to provide pathways for greenhouse gasses emissions and energy production. See our methodology for more information.
All following mentions of "1.5°C reference scenario" refers to this output from the TPI.
3. Eni, [Eni for 2020 – Carbon neutrality by 2050, 2020](#)
4. To simplify, the "carbon intensity of sold energy products" of the company is referred to by "carbon intensity" of the company in the rest of this briefing.
5. To analyze whether or not a company's decarbonization pathway is aligned with the 1.5°C carbon budget, it's critical to look at two indicators simultaneously: the carbon intensity pathway and the production pathway. Any company aligning on the emissions pathway but producing too much - or the other way around - will end up emitting too much GHG. The overarching goal being for absolute emissions to decrease, we hence look at the carbon intensity and production pathway of the company and compare it to the benchmark described by the 1.5°C reference scenario.
6. This is a conservative hypothesis: due to lack of reliable data regarding ENI's production plans beyond 2024, we make the assumption that the company's production levels will decrease in accordance with the IEA Net Zero demand projections. However, nothing in ENI's current plans confirms this direction. In fact, we estimate that ENI's hydrocarbon production will have increased by 2030 (see chapter 2).
7. Carbon Tracker Initiative, [Oil companies should hedge their bets on CCUS and offsetting, 2021](#)
8. This calculation was done using ENI's offset target
9. Carbon Tracker Initiative, [Oil companies should hedge their bets on CCUS and offsetting, 2021](#)
10. Reported climate data are sourced from [Eni Annual Report 2020](#)
11. TPI, [Energy sector "finally moving out of first gear" on climate as first three oil and gas firms align with 1.5°C pathway, 2021](#)
12. Eni, [Eni reaches an agreement for the delivery of a Carbon Neutral LNG cargo to CPC Corporation, Taiwan, 2021](#)
13. Bloomberg, [The Fictitious World of 'Carbon Neutral' Fossil Fuel](#) Most of the offset market does not even remove carbon from the atmosphere. Renewable energy generation and preventing deforestation accounted for 66% respectively of all offsets used by December 2020).
14. References "Bad Deal for the Planet: Why Carbon Offsets Aren't Working...and How to Create a Fair Global Climate Accord," [International Rivers, 21 May, 2008](#); "How additional is the Clean Development Mechanism," M. Cames et al., [Öko Institut, March 2016](#); "Shell's net zero climate plans need land up to three times the size of the Netherlands for carbon offsets," [ActionAid, 17 May 2021](#); "Systematic over-crediting of forest offsets," [Grayson Badgley et al. \(carbon\)plan, 29 April 2001](#).
15. According to the [2021 Production Gap report](#), global oil and gas production must fall by 4% and 3% respectively each year by 2030. According to the [2021 World Energy Outlook](#), global oil and gas demand will fall by 20% and 10% respectively by 2030.
16. Carbon Tracker Initiative, [Adapt to Survive: Why oil companies must plan for net zero and avoid stranded assets, 2021](#)
17. Historical data from [Rystad Energy UCube](#).
18. Calculation made using the company's targets and historical data from [Rystad Energy UCube](#).
19. Eni, [Eni for 2020 – Carbon neutrality by 2050, 2020](#)
20. [Urgewald, Global oil and gas Exit List](#) (data collected in October 2021 on [Rystad Energy UCube](#) database)
21. Data collected by [Reclaim Finance](#) on [Rystad UCube Energy](#) database.
22. To establish "recent production levels" and avoid a "covid effect", we calculated an average annual production level based on 2019, 2020 and 2021 production data.
23. Data collected by [Urgewald](#) for the [Oil and Gas Exist List](#) on the [Rystad UCube Energy](#) database.
24. ENI does not disclose investments in renewable alone, but in Renewable and Gas & Power Retail, which lead to an overestimation of the figure dedicated to renewable as electricity can be produced using fossil gas.
25. Eni, [Eni Retail & Renewables Capital Markets Day, 2021](#)
Eni, [Capital Markets Day Strategic plan 2022-2025, 2022](#)
26. Eni, [Eni strategic plan 2021-2024: towards zero emissions, 2021](#)
27. According to [Reclaim Finance](#) calculations, based on ENI's hydrocarbons and primary energy-equivalent renewable production plans. Refer to the methodology and datasheet for further details.
28. A net target is a target the company aims to achieve using offsets.
29. Targets can apply either to the absolute emissions (absolute amount of GHG emissions) or to the intensity of emissions (amount of GHG emissions per unit of energy produced)

Credits

Ecoflight | AdobeStock

IS ENI ON TRACK FOR 1.5°C? Reality check for financial institutions

Reclaim Finance is an NGO affiliated with Friends of the Earth France. It was founded in 2020 and is 100% dedicated to issues linking finance with social and climate justice. In the context of the climate emergency and biodiversity losses, one of Reclaim Finance's priorities is to accelerate the decarbonization of financial flows. Reclaim Finance exposes the climate impacts of some financial actors, denounces the most harmful practices and puts its expertise at the service of public authorities and financial stakeholders who desire to bend existing practices to ecological imperatives.

contact@reclaimfinance.org





IS SHELL ON TRACK FOR 1.5°C?

**Reality check for financial
institutions**

IS SHELL ON TRACK FOR 1.5°C?

Reality check for financial institutions

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EXECUTIVE SUMMARY

Shell¹ aims to become a net-zero emissions energy business by 2050. However, based on our calculation using the company's own carbon intensity projection, Shell's strategy is not on track to meet the 1.5°C climate goal. Even under the conservative hypothesis that Shell meets its decarbonization targets and reduces its oil and gas production as per the IEA Net Zero-based 1.5°C scenario (referred to as the 1.5°C scenario in this briefing),² by 2050 Shell will have emitted 40.9% more greenhouse gas (GHG) than what is authorized under a 1.5°C compatible carbon budget. In fact, Shell will be overshooting its share of the remaining carbon budget to limit global warming to 1.5°C as soon as 2034.

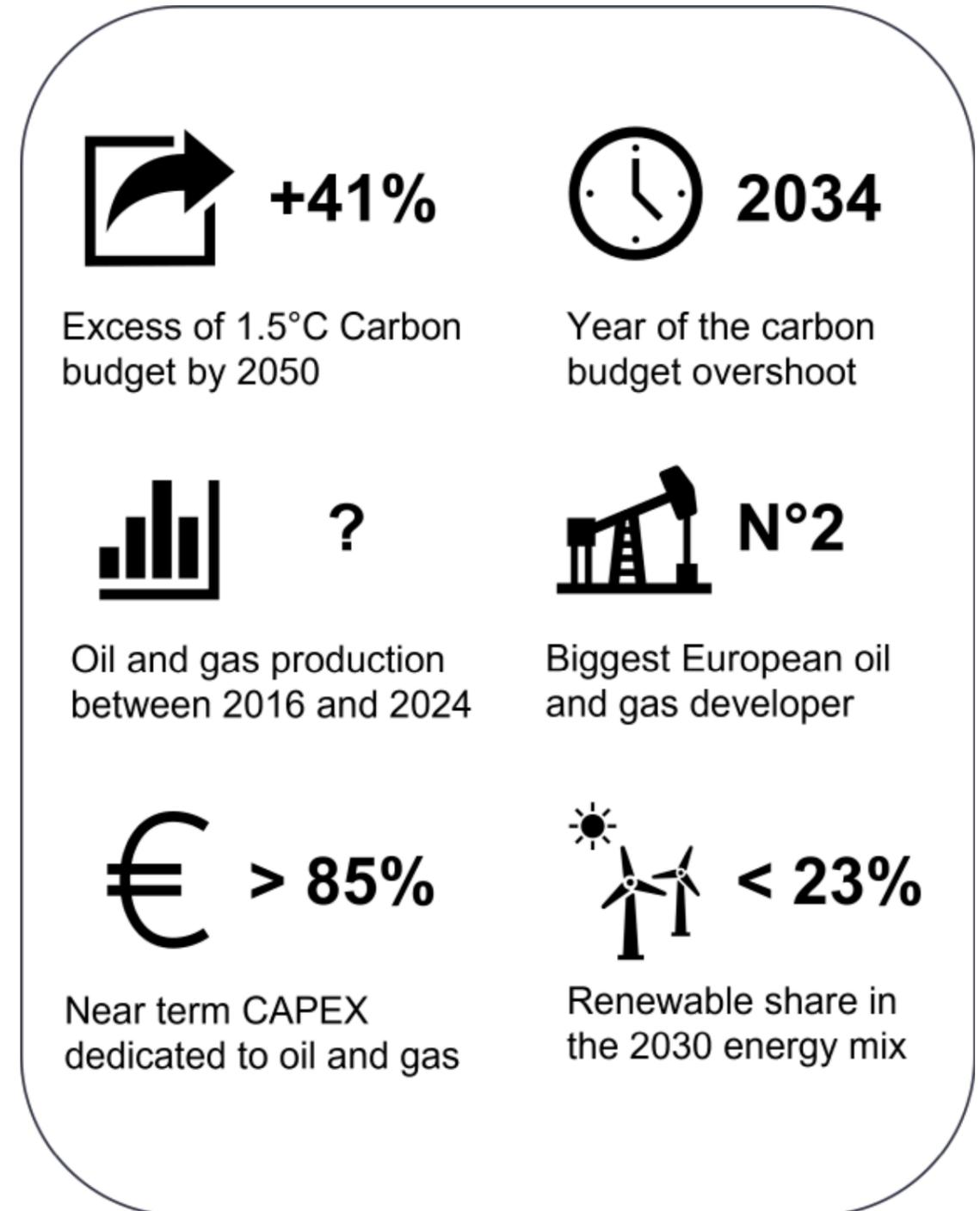
Why? Because Shell short term plans are totally incompatible with efforts to stay below 1.5°C. Shell is currently the biggest European oil and gas producer. And the second biggest European developer of oil and gas.³ Instead of transitioning away from new oil and gas, Shell plans to rely on unrealistic offset plans to achieve its net zero ambitions by 2050. In 2030, Shell's investment strategy and energy mix will still be very focused on oil and gas, further jeopardizing the fossil fuel decline and any longer term climate ambitions.

Our methodology

This briefing analyzes how and if the company is aligned with a 1.5°C reference scenario. This scenario was computed by the Transition Pathway Initiative, based on the IEA Net Zero Scenario and on a IPCC scenario, to provide pathways for greenhouse gasses emissions and energy production.

A company is considered aligned if its cumulative GHG emissions fit within the 1.5°C carbon budget. To make these calculations, we considered its "climate" ambitions and targets, to calculate a conservative estimate of its cumulative GHG emissions. We also look at other indicators indicating the direction the company is taking: near term oil and gas production trend, CAPEX trends and energy mix forecasted in 2030, and reliance on offsets. To find out more, please look at [our methodology](#).

KEY FINDINGS



1. SHELL'S DECARBONIZATION PATHWAY WILL EXCEED ITS 1.5°C CARBON BUDGET

a. Emission levels will remain too high for too long

Shell announced an ambition to become "a net-zero emissions energy business" by 2050,⁴ aiming for net zero worldwide on both operated activities (scope 1 and 2) and indirect emissions related to its energy business (scope 3). However, committing to distant carbon neutrality targets is not enough to keep global warming below 1.5°C. Our analysis shows that Shell's short-to-medium term strategic and operational orientations (GHG emissions, CAPEX allocation) are not consistent with achieving carbon neutrality by 2050 and therefore put the climate at risk.

Although Shell has pledged to reduce its scope 1 and 2 emissions by 50% by 2030 and its average carbon intensity of sold energy products⁵ by 9 to 12% by 2024 and by 20% by 2030 (see table 1 in the annex), these targets will not stop the company's absolute emissions from increasing quickly over the short term.

According to Shell's own projections and our calculations, until 2035, Shell's carbon intensity is on average 41.4% higher than the maximum carbon intensity levels allowed by **the 1.5°C reference scenario** (see graph 1).

In other words, each unit of energy the company will produce until 2035 (and beyond) will consistently emit too much GHG. Given that oil and gas production levels will also remain high, Shell will keep releasing high levels of GHG emissions. For Shell to align with

a 1.5°C decarbonization pathway, its absolute emission levels must decrease.⁶ For absolute emissions to decrease, fossil fuel production must decrease.

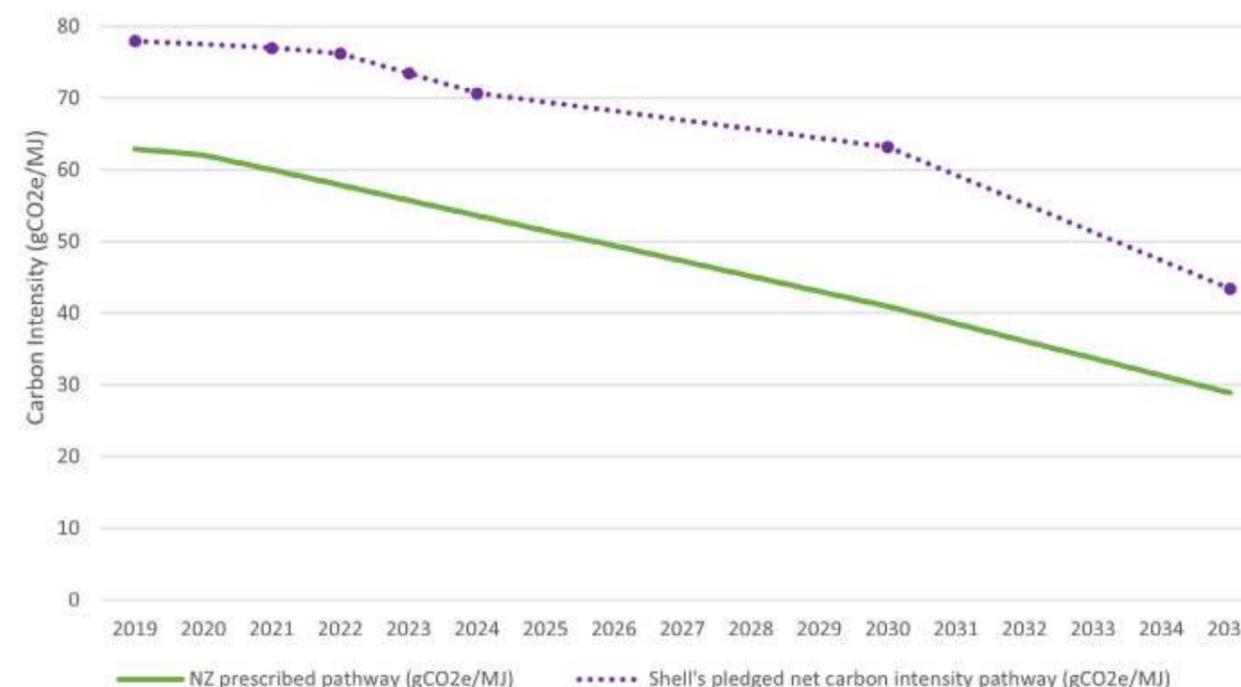
b. Shell will exceed its 1.5°C carbon budget by 2034

Given that Shell does not plan to reduce carbon intensity fast enough, and plans to maintain high levels of oil and gas production, its absolute emissions will not decrease quickly enough. By 2050, our analysis shows that Shell will exceed its 1.5°C carbon budget by at least 40.9% (see graph n°2).

Even in the unlikely event that Shell starts reducing hydrocarbon production as per the 1.5°C reference scenario,⁷ the major would still overshoot its allocated carbon budget as early as 2034. Based on Shell's own carbon intensity projections, Reclaim Finance calculations indicate that more than 80.2% of Shell's carbon budget would be consumed as early as 2030.

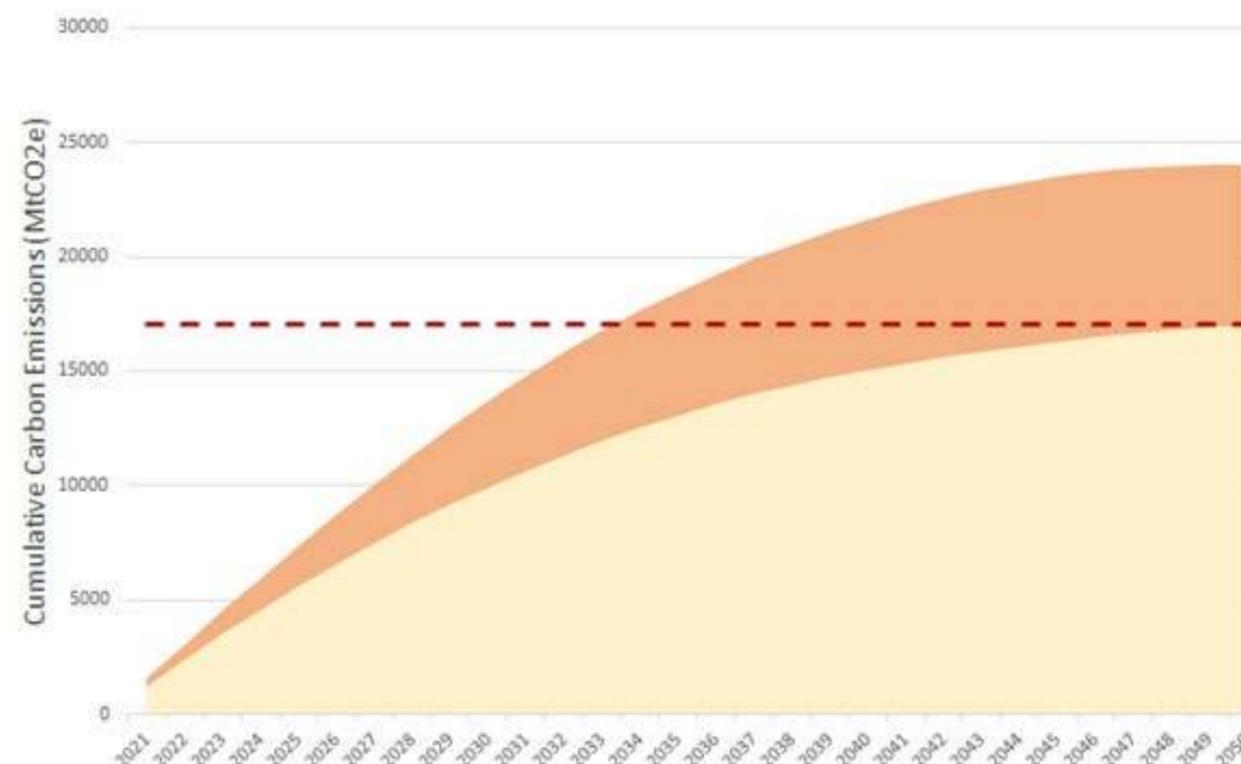
The carbon budget overshoot could keep increasing. Production levels will remain too high at least until 2024⁸ as Shell is developing new oil and gas assets. Beyond 2024, unless Shell makes a clear commitment to stop developing new oil and gas projects and investing in exploration, fossil fuel production will not decrease at a sufficient pace (see chapter 2).

Graph N°1. Shell's short and mid-term decarbonization pathway



Source: Shell's forecasted carbon intensity pathway, based on the company reported emissions, carbon intensity and decarbonization targets.⁹ "NZ prescribed pathway" based on TPI's work on IEA Net Zero scenario and an IPCC scenario (see methodology).

Graph N°2. Shell's carbon budget overshoot



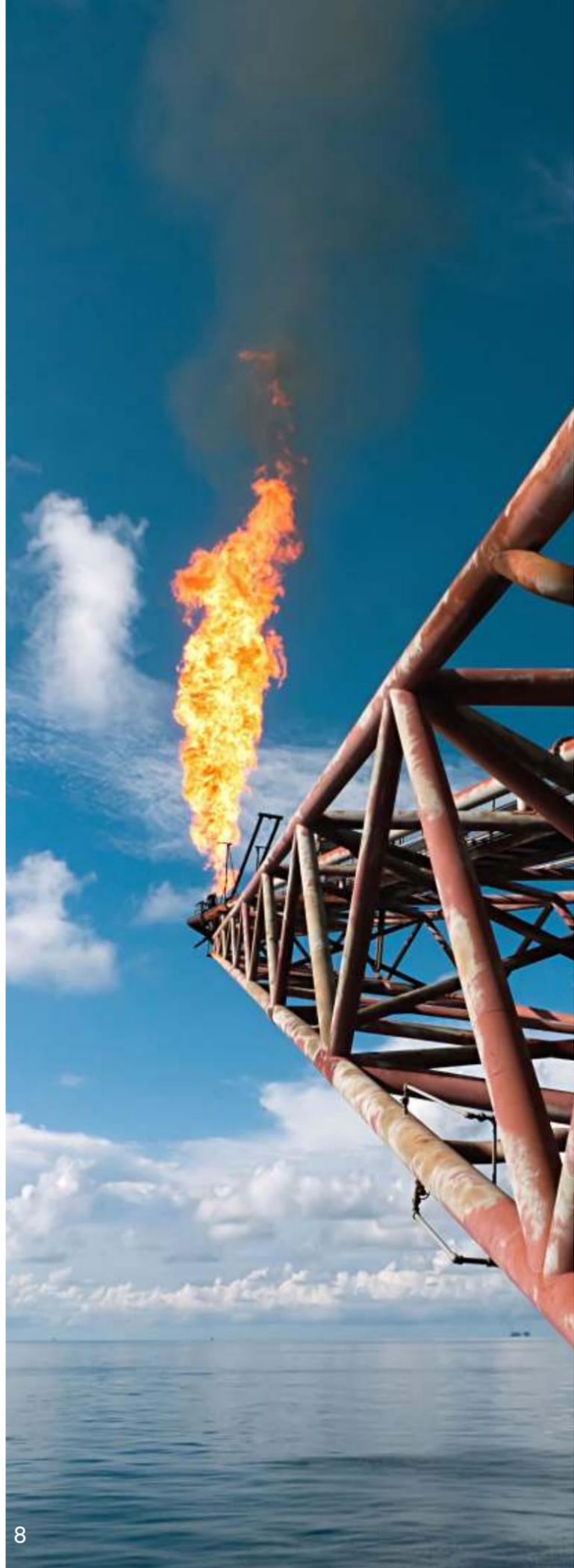
Source: Reclaim Finance based on a) production forecasts using company data and the IEA Net Zero's demand projections b) the 1.5°C reference scenario carbon intensity pathway computed by TPI c) the company's pledged carbon intensity pathway.

c. Unsustainable reliance on offsets

Shell plans to heavily rely on offsets to achieve its climate targets. The company plans to offset 120 MtCO₂e per annum through Nature-based solutions (NBS) by 2030. This would require around 26 millions acres of plantations, the equivalent of nearly three times the size of the Netherlands. Shell is also developing Carbon Capture and Storage (CCUS) and aims to reach a capacity of 26 MtCO₂e per annum by 2035. This raises feasibility issues as it will require building 18 CCUS units. Currently there are only 28 operating around the world today because Carbon Capture Use and Storage technology is not mature at large-scale yet, and its economic viability is still in doubt.¹⁰

According to ACCR research in 2021,¹¹ Shell's offset plan requires amounts of NBS greater than the size of voluntary offsets traded in 2019 and Shell will require a material increase in offsets/CCUS capacity of 25x for CCUS and 30x for offsets to achieve its 2030 targets. According to our calculations based on the company's projections, offsets will cover 17.7% of absolute emission reductions required to meet Shell's targets by 2035.¹²

If Shell were to keep relying on offsets in the longer term, and meet around 17.7% of its decarbonization targets until 2050, the company would have to grow a forest five times the size of the Netherlands and open 35 new CCUS centers.¹³



Does the TPI benchmark really assess alignment with 1.5°C?

In November 2021, TPI updated its energy sector benchmark,¹⁴ stating that a company is "aligned with 1.5°C" on the ground that the company's carbon intensity is predicted to converge with the scenario's pathway by 2050. However, this conclusion is misleading. TPI declares a company aligned as soon as the carbon intensity of the company falls below the carbon intensity level allowed by the 1.5°C reference scenario that same year. TPI's approach, centered only on carbon intensity, does not take into account excess GHG emissions and fossil production stocks built up between today and 2050.

On the contrary, our stock-based method (based on carbon budgets), considers the cumulative GHG emissions piling up each year as a result of annual fossil production. If both carbon intensity and oil and gas production remain high, then GHG emissions increase quickly and fall short of the remaining carbon budget to stay below 1.5°C. For a company to be deemed "aligned" (in the short, mid or long-term), its absolute emissions must fall within the carbon budget allocated by the 1.5°C reference scenario in that same time frame (short, mid or long term).

"Carbon neutral LNG" - A dangerous marketing claim?

Shell claims to sell "carbon-neutral" liquefied natural gas (LNG) cargoes,¹⁵ whose emissions have, supposedly, been offset or avoided. However, most emissions created by these LNG shipments were not avoided or canceled out.¹⁶ Numerous studies have shown that tree plantations and supposed forest protection projects often have much lower carbon benefits than claimed and can have seriously negative impacts on Indigenous and other local communities, especially by taking over the land that they use for farming or other purposes. Furthermore studies have repeatedly shown that the carbon offsets market as a whole is rife with fraud, flawed methodologies, opacity and conflicts of interest. As a result the great majority of offsets generated since the global market started to grow in the late 1990s — 85% of the Kyoto Protocol Clean Development Mechanism's offsets according to one widely cited analysis — are likely fictitious and do not represent emission reductions or removals.¹⁷ The use of offsets justifies selling more fossil fuels, which will ultimately lead to more emissions. Carbon neutral-LNG is a dangerous claim as the use of offsets justifies selling more fossil fuels, which will ultimately lead to more emissions.

2. SHELL IS INVESTING IN AN OIL AND GAS FUTURE

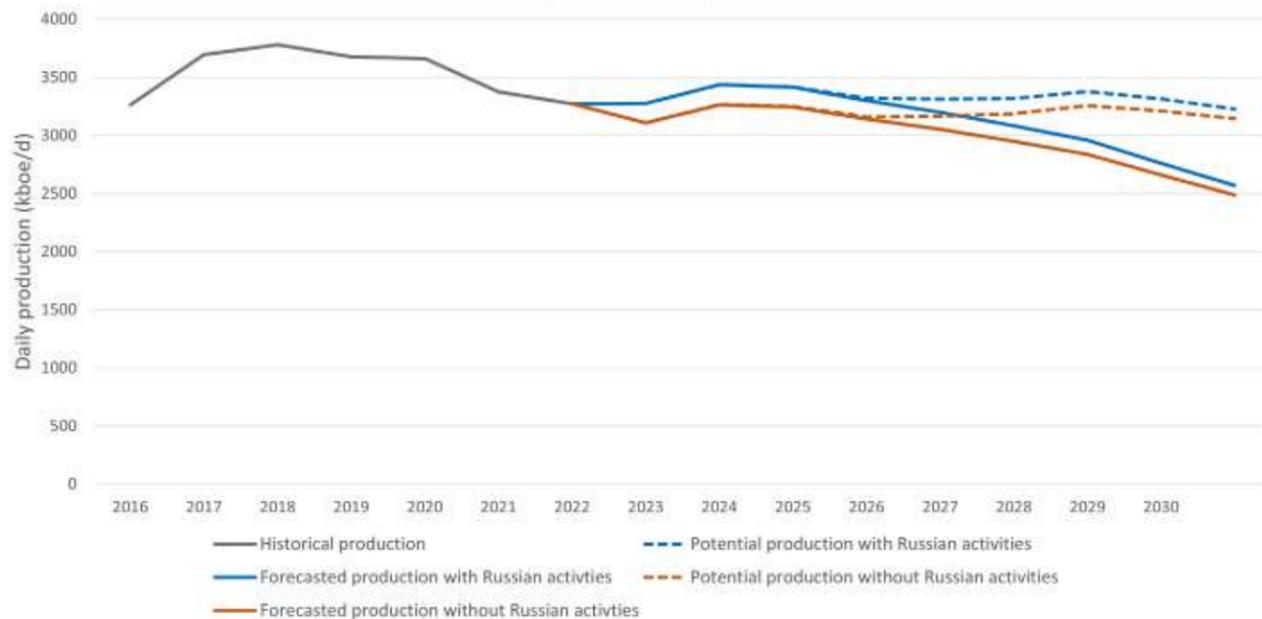
a. Shell still plans to increase oil and gas production in the short term

Reducing oil and gas production is a crucial part of any credible decarbonization pathway and is required to achieve deep emission cuts. Both the UN Production gap report and the 2021 World Energy Outlook Net Zero scenario entail a decline in fossil fuel production during this decade.¹⁸ According to Carbon Tracker models,¹⁹ to align with the IEA's Net Zero scenario, most oil and gas companies will need to drastically cut down on hydrocarbon production : by at least 50% by 2030 in the case of Shell.

Shell has committed to reduce oil production by 1 to 2% per year by 2030²⁰ (with a peak in 2019). Following the sale of its Russian assets, Shell's production is expected to decrease by 5.6% over the short-term instead of plateauing. By 2030, production could more or less decline, depending on Shell's strategic decisions.

- Will Shell replace its Russian assets with similar oil and gas assets? By 2030, production could decline by 8.5% compared with recent levels²¹ if Shell does not replace its Russian assets with similar oil and gas assets (vs. -6.1% with Russian assets).

Graph N°3. Shell production profiles



Source: Reclaim Finance calculations based on Rystad Energy UCube

- Will Shell invest in new oil and gas fields beyond those currently under development or evaluation? If Shell stops developing new oil and gas assets as per the IEA's net zero scenario²² and does not switch its Russian assets for other oil and gas assets, the major's production could drop by as much as 24% by 2030²³ (compared with 2021 levels).
- However, the decision to stop investing in new oil and gas has not been made. In fact, Shell ranks in the top 10 biggest hydrocarbon developers in the world.²⁴

Unless Shell decides to stop expansion, production is likely to decrease by a mere 1.4% to 3.9% by 2030 (compared with 2021 levels, depending on the decision regarding Russian assets). This is very far from the -50% cut required in Carbon Tracker's 2030 calculations.

- Even in the best case scenarios mentioned here, if there are no deeper cuts in existing production levels, Shell will keep producing too much oil and gas to be aligned with a 1.5°C scenario over mid-term.

Why increasing gas production is toxic for the climate

Shell claims to decrease oil production by 1-2% per year from 2019, but is essentially switching from one fossil fuel to another. Fossil gas production will account for 55% of the oil and gas mix by 2030, i.e. an increase of 6.9% by 2030. Shell is planning to invest \$4 billion per year to grow the gas business, more than it will commit for renewable energy. Gas production results in methane leaks in the atmosphere at different stages (eg. venting during extraction and evaporation during transportation of LNG by boat). Methane is a potent greenhouse gas with a warming potential 85 times that of CO2. According to the IPCC, methane emissions have nearly tripled since pre-industrial times and are increasingly responsible for rising temperatures. The IEA net zero roadmap is also adamant that there is no room for both new oil and new gas fields in the 1.5°C carbon budget.

b. Shell is a major oil and gas developer and top explorer

While Shell may have committed to reduce oil production by 2030, the company is still heavily invested in new oil and gas developments.

According to the Global Oil and Gas Exit List, Shell is the 2nd biggest European developer and is listed in the top10 developers worldwide.

- In 2020, the company's resources under production amounted to 22,010 mboe,²⁵

the equivalent of more than 18 years of production (at its recent level).²⁶

- Currently, there are more than 3,779²⁷ worth of assets being developed, which will allow Shell to add the equivalent of three years of recent production to its portfolio.
- Shell also has 8,962 mboe of discovered hydrocarbon resources that have not yet entered the field evaluation or development stage.
- Shell is heavily involved in exploration, looking for further undiscovered oil and gas resources to extract. From 2019 to

2021, Shell was the top explorer among European majors and over that period,²⁸ spent an average \$2.4 billion per year, twice as much as its European peers.

Not only is Shell expanding, it is also increasingly tapping into unconventional oil and gas resources. According to the Global Oil and Gas Exit List, circa 40% of the oil and gas resources currently being developed by Shell are in ultradeep water, in the Arctic, as well as from fracking.²⁹

c. Shell's investments will remain heavily focused on fossil fuels

Despite claims that Shell is gradually transitioning, a quick look at the CAPEX allocation demonstrates that the major's investment strategy is still focused on fossil fuels.

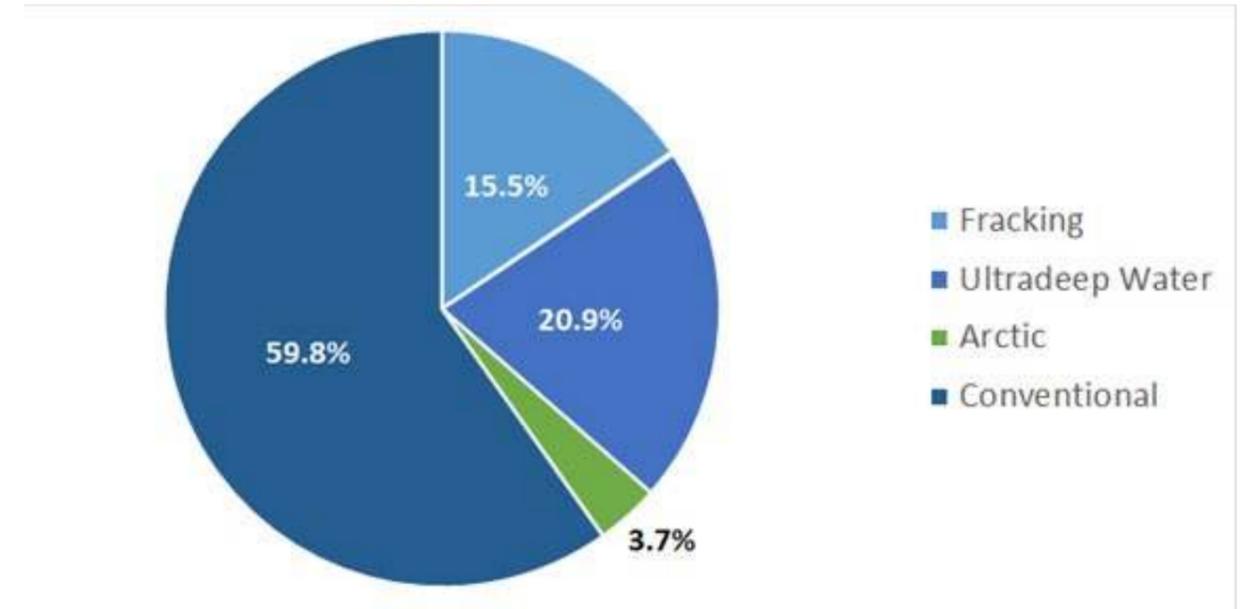
The company aims to dedicate 11.4% of its annual CAPEX to the Renewable and Energy services business line³⁰ "in the near term".³¹ Shell just announced that in 2022, approximately 90% of the CAPEX would be allocated to fossil fuels.³²

Although this will double the share of renewable investments (5 % allocated in 2020), this will not be enough for Shell's energy mix to transition away from fossil fuels in the near and medium term. In 2030, assuming the company meets its targets, Shell's renewable share of its energy mix will be at best 22.3%.³³

Shell and the other majors argue that they are in the process of "diversifying" their energy mix. However, for the time being, their diversification strategy is adding renewable energy capacity on top of oil and gas production, instead of replacing it. As long as the company maintains high levels of fossil fuel productions, it will not achieve the deep emission cuts required - 50% by 2030 - to keep climate change in check.



Graph n°4. Shell's short term expansion plan



Source: Urgewald analysis based on data from Rystad Energy

What the IEA says about the need for new CAPEX in oil and gas

According to the IEA Net Zero scenario, oil and gas capex are not "continued" but rather divided by two. The IEA estimates that an average \$365 billion per year would be spent on oil and gas until 2030: that's 50% less than oil and gas capital expenditures before the COVID crisis (\$719 Mds a year from 2016 to 2018).

Furthermore, the IEA explicitly states that investments are needed in existing fields, but it bans investment in new oil and gas fields after 2021. From the \$365 billion, only \$77 billion (20%) would go to new fields that have been approved for development before the end of 2021.

According to the IEA, the investment in oil and gas would continue to drop as time goes by, reaching an average \$171 billion per year from 2031 to 2050.

Table 1. Shell's pledged mitigation targets

Base year	Target year	Reduction target ³⁴	Net target	Geographical scope	Emission scope	Emission type ³⁵
2016	2021	-2/3%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2016	2022	-3/4%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2016	2023	-6/8%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2016	2024	-9/12%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2016	2030	-50%	Yes	World	1 & 2, operational control	Absolute
2016	2030	-20%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2016	2035	-45%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2016	2050	-100%	Yes	World	1 & 2 & 3	-

REFERENCES

1. Shell, [Our climate target](#)
2. In this briefing, we analyze companies alignment against a 1.5°C reference scenario computed by the Transition Pathway Initiative. The latter based its work on the IEA Net Zero Scenario and on a IPCC scenario, to provide pathways for greenhouse gas emissions and energy production. See our methodology for more information.
All following mentions of “1.5°C reference scenario” refer to this output from the TPI.
3. See [Global Oil and Gas Exit List, 2021](#)
4. Shell, [Our climate target](#)
5. To simplify, the “carbon intensity of sold energy products” of the company is referred to by “carbon intensity” of the company in the rest of this briefing.
6. To analyze whether or not a company’s decarbonization pathway is aligned with the 1.5°C carbon budget, it’s critical to look at two indicators simultaneously: the carbon intensity pathway and the production pathway. Any company aligning on the emissions pathway but producing too much - or the other way around - will end up emitting too much GHG. The overarching goal being for absolute emissions to decrease, we hence look at the carbon intensity and production pathway of the company and compare it to the benchmark described by the 1.5°C reference scenario.
7. This is a conservative hypothesis: due to lack of reliable data regarding Shell’s production plans, we make the assumption that the company’s production levels will decrease in accordance with the IEA Net Zero demand projections. However, nothing in Shell current plans confirms this direction. In fact, we estimate that Shell’s hydrocarbon production will have increased by 2030 (see chapter 2).
8. Data on production levels is very reliable until 2024 and takes into account the production profile of reserves under production as well as oil and gas fields currently under evaluation or development. After 2024, the production levels will depend on the company’s plans that have not yet been made public.
9. Reported climate data are sourced from [Our performance data, 2020](#)
10. Carbon Tracker Initiative, [Oil companies should hedge their bets on CCUS and offsetting, 2021](#)
11. ACCR, In-depth: [Royal Dutch Shell plc \(Shell\) climate vote, 2021](#)
12. This calculation was done using the volume of offsets projected by Shell in 2035
13. Carbon Tracker Initiative, [Oil companies should hedge their bets on CCUS and offsetting, 2021](#)
14. TPI, Energy sector “finally moving out of first gear” on climate as first three oil and gas firms align with 1.5°C pathway, 2021
15. Shell, [Shell and PetroChina sign world’s first term contract for carbon-neutral LNG, 2021](#)
16. Bloomberg, [The Fictitious World of ‘Carbon Neutral’ Fossil Fuel, 2021](#). Most of the offset market does not even remove carbon from the atmosphere. Renewable energy generation and preventing deforestation accounted for 66% respectively of all offsets used by December 2020).
17. References “Bad Deal for the Planet: Why Carbon Offsets Aren’t Working...and How to Create a Fair Global Climate Accord,” International Rivers, 21 May, 2008; “How additional is the Clean Development Mechanism,” M. Cames et al., Öko Institut, March 2016; “Shell’s net zero climate plans need land up to three times the size of the Netherlands for carbon offsets,” ActionAid, 17 May 2021; “Systematic over-crediting of forest offsets,” Grayson Badgley et al. (carbon)plan, 29 April 2001.
18. According to the [2021 Production Gap report](#), global oil and gas production must fall by 4% and 3% respectively each year by 2030. According to the [2021 World Energy Outlook](#), global oil and gas demand will fall by 20% and 10% respectively by 2030.
19. Carbon Tracker Initiative, [Adapt to Survive: Why oil companies must plan for net zero and avoid stranded assets, 2021](#)
20. Shell, [Our climate target](#).
21. To establish “recent production levels” and avoid a “covid effect”, we calculated an average annual production level based on 2019, 2020 and 2021 production data.
22. IEA, [Net Zero by 2050 - A Roadmap for the Global Energy Sector](#).
23. Reclaim Finance calculations based on Rystad Energy UCube.
24. See [Global Oil and Gas Exit List, 2021](#)
25. Data collected by Reclaim Finance on Rystad UCube Energy database.
26. To establish “recent production levels” and avoid a “covid effect”, we calculated an average annual production level based on 2019, 2020 and 2021 production data.
27. Data collected by Urgewald for the Oil and Gas Exit List on the Rystad UCube Energy database.
28. See [Global Oil and Gas Exit List, 2021](#).
29. Fracking figure may not be updated as it does not factor in Shell’s sale of its Permian assets.
30. Shell does not disclose investments in renewable alone, but in renewable and electricity, which lead to an overestimation of the figure dedicated to renewable as electricity can be produced using fossil gas. Shell does not explicit its definition of “near term”
31. Shell, [Strategic report, 2020](#)
32. Shell, [Fourth quarter 2021 results](#)
33. According to Reclaim Finance calculations, based on Shell’s hydrocarbons and primary energy-equivalent renewable production plans. Refer to the methodology and datasheet for further details.
34. A net target is a target the company aims to achieve using offsets.
35. Targets can apply either to the absolute emissions (absolute amount of GHG emissions) or to the intensity of emissions (amount of GHG emissions per unit of energy produced)

IS SHELL ON TRACK FOR 1.5°C? Reality check for financial institutions

Reclaim Finance is an NGO affiliated with Friends of the Earth France. It was founded in 2020 and is 100% dedicated to issues linking finance with social and climate justice. In the context of the climate emergency and biodiversity losses, one of Reclaim Finance’s priorities is to accelerate the decarbonization of financial flows. Reclaim Finance exposes the climate impacts of some financial actors, denounces the most harmful practices and puts its expertise at the service of public authorities and financial stakeholders who desire to bend existing practices to ecological imperatives.

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IS TOTALENERGIES ON TRACK FOR 1.5°C?

**Reality check for financial
institutions**

IS TOTAL ENERGIES ON TRACK FOR 1.5°C?

Reality check for financial institutions

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EXECUTIVE SUMMARY

TotalEnergies is often presented as “best in class” among its peers. However, based on our calculations using the company’s own carbon intensity projections, the French oil and gas giant is not on track to meet the 1.5°C climate goal. The company may have committed to achieve carbon neutrality in 2050, but is not planning or committed to the deep greenhouse gas (GHG) emissions cuts required to stabilize global warming below 1.5°C. Even under the conservative assumption that TotalEnergies does reach its emissions targets by 2050 and reduces its production in line with the IEA’s Net Zero-based 1.5°C scenario (referred to as the 1.5°C scenario in this briefing),¹ the company will have emitted at least 31.8% more GHG than what is authorized under a 1.5°C compatible carbon budget. Given TotalEnergies will increase production levels until at least 2024, it will be overshooting its share of the remaining carbon budget to limit global warming to 1.5°C as soon as 2035. The overshoot will happen even earlier if Total increases production until 2030 as announced.

Why? Because the pathway to net zero matters much more than the final destination and TotalEnergies’s short term plans are incompatible with efforts to stay below 1.5°C. Despite efforts to showcase a pro-renewable energy and diversification strategy, the investment strategy will remain oil and gas intensive. TotalEnergies is the top European oil and gas developer according to the Global Oil and Gas Exit List (GOGEL) and the 7th largest globally. In 2030, TotalEnergies’ investment strategy and energy mix will still be very focused on oil and gas, further jeopardizing the fossil fuel decline and any longer term climate ambitions.

Our methodology

This briefing analyzes to what extent the company is aligned with a 1.5°C reference scenario. This scenario was computed by the Transition Pathway Initiative, based on the IEA Net Zero Scenario and on a IPCC scenario, to provide pathways for greenhouse gasses emissions and energy production.

A company is considered aligned if its cumulative GHG emissions fit within the 1.5°C carbon budget. To make these calculations, we considered its “climate” ambitions and targets, to calculate a conservative estimate of its cumulative GHG emissions. We also look at other indicators indicating the direction the company is taking: near term oil and gas production trend, CAPEX trends and energy mix forecasted in 2030, and reliance on offsets. To find out more about our methodology, please look at [our methodology](#).

KEY FINDINGS



+32%

Excess of 1.5°C Carbon budget by 2050



2035

Year of the carbon budget overshoot



+20%

Oil and gas production between 2016 and 2024



N°1

Biggest European oil and gas developer



> 70%

Near term CAPEX dedicated to oil and gas



< 15%

Renewable share in the 2030 energy mix

1. TOTAL ENERGIES' DECARBONIZATION PATHWAY WILL EXCEED ITS 1.5°C CARBON BUDGET

a. Emission levels will remain too high for too long

In 2020, TotalEnergies pledged to “achieve carbon neutrality by 2050 for its global business, together with society”, aiming for net zero worldwide on both operated activities (scope 1 and 2) and indirect emissions (scope 3).² Although the company fails to provide strong and holistic intermediary emission targets, this goal has been reasserted at its 2022 Capital Market Day.³ **However, committing to distant carbon neutrality targets is not enough to keep global warming below 1.5°C.** In fact, TotalEnergies' CEO made it very clear in February 2022 that the company was aiming for a 2°C world, not 1.5°C. This in itself should raise concerns for financial institutions that have committed to stabilizing global warming below 1.5°C.⁴ Our analysis shows that TotalEnergies' short-to-medium term strategic and operational orientations (looking at indicators such as GHG emissions and CAPEX allocation) are not consistent with keeping its emissions within a 1.5°C-compatible range by 2050 and therefore put the climate at risk.

Although TotalEnergies has pledged to reduce its scope 1 and 2 emissions by 15% by 2025 and its average carbon intensity of sold energy products⁵ by 20% by 2030 (see table 1 in the annex), these targets will not stop the company's absolute emissions from increasing quickly in the short term.

TotalEnergies' carbon intensity hardly decreases before 2025 and decreases very

slowly until 2035. According to the company's own projections and our calculations, between 2021 and 2035, **TotalEnergies' carbon intensity is on average 30.4% higher than the maximum carbon intensity levels allowed by the 1.5°C reference scenario** (see graph 1).

In other words, **each unit of energy the company will produce until 2035 (and beyond) will consistently emit too much GHG.** Given that oil and gas production levels will also remain high, TotalEnergies will keep releasing high levels of GHG emissions. For TotalEnergies to align with a 1.5°C decarbonization pathway, its absolute emission levels must decrease.⁶ **For absolute emissions to decrease, fossil fuel production must decrease.** Currently, none of Total's projections commit to reducing hydrocarbon production levels (see part 2 of this briefing).

b. TotalEnergies will exceed its 1.5°C carbon budget by 2035

Given that TotalEnergies does not plan to reduce carbon intensity fast enough, but does plan to increase its oil and gas production, its absolute emissions are growing quickly. **By 2050, our analysis shows that TotalEnergies will exceed its 1.5°C carbon budget by at least 31.8%** (see graph n°2).

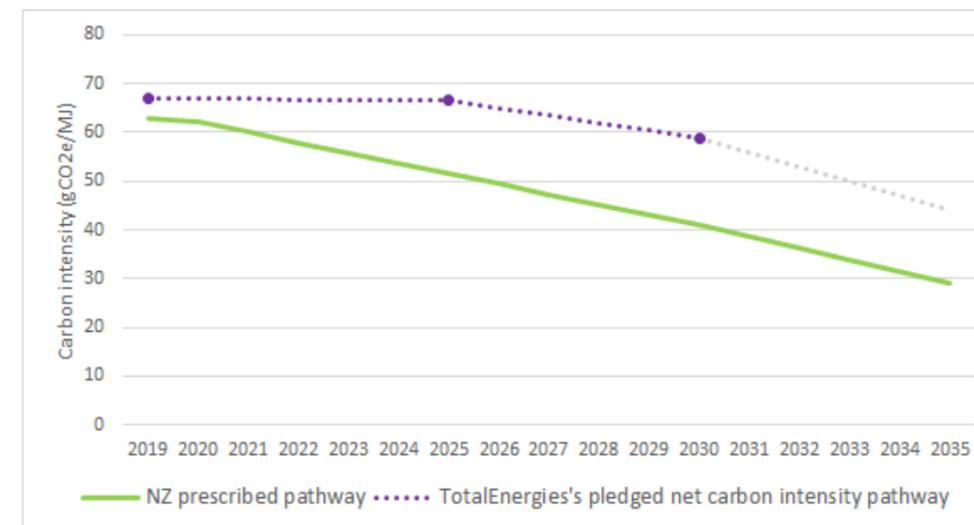
This carbon budget overshoot could keep increasing. Production levels will rise until 2024 as it is developing new oil and gas assets,

and could keep rising in the medium-term as TotalEnergies has discovered reserves that have not yet entered the field evaluation or development stage, and is investing in further exploration of undiscovered reserves (see chapter 2).

Given TotalEnergies will increase production levels until 2024, **the major will overshoot its**

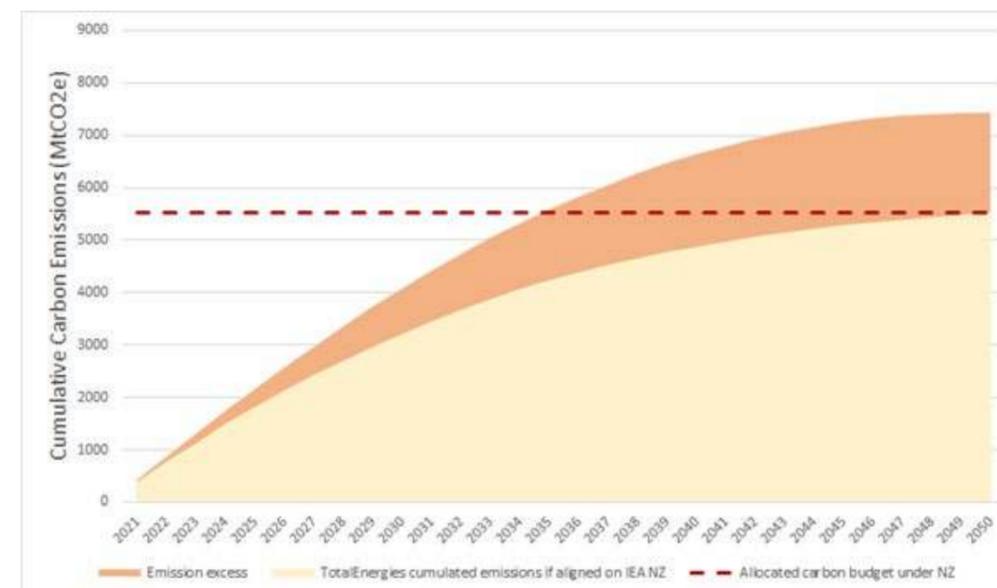
allocated carbon budget as early as 2035. This will happen even earlier if the major increases production until 2030 as announced, instead of aligning on the 1.5°C reference scenario.⁷ Based on TotalEnergies' own carbon intensity projections, Reclaim Finance calculations indicate that 73.4% of Total's carbon budget would be consumed as early as 2030.

Graph N°1. TotalEnergies' short and mid term decarbonization pathway



Source: Reclaim Finance based on TotalEnergies' forecasted carbon intensity pathway, based on the company reported emissions, carbon intensity and decarbonization targets.⁸ "Net Zero prescribed pathway" based on TPI's work on IEA Net Zero scenario and an IPCC scenario (see methodology).

Graph N°2. TotalEnergies' 1.5°C carbon budget overshoot



Source: Reclaim Finance based on a) production forecasts using company data and the 1.5°C reference scenario's demand projections b) the 1.5°C reference scenario carbon intensity pathway c) the company's pledged carbon intensity pathway.

c. Unsustainable reliance on offsets

The company plans to offset 15 MtCO₂e per annum from 2030: a third of that capacity would be Nature-based solution (NBS), and the rest would come from Carbone Capture Utilization and Storage (CCUS). According to our calculations based on the company's projections, offsets will cover 13.4% of absolute emission

reductions required to meet Total's 2030 targets.⁹

By 2050, TotalEnergies aims to rely even more on such technologies and use them to meet 18.6% of the absolute emissions reduction required to meet its 2050 targets. Practically, the company will need to both grow a forest of more than 2 millions acres,¹⁰ and open 34 to 67 new CCUS centers¹¹ (bearing in mind that there are only 28 CCUS centers across the planet for the time being).

TPI's data shows that TotalEnergies is not aligned with the net zero carbon budget

In November 2021, TPI updated its energy sector benchmark,⁸ stating that among other companies, TotalEnergies is "aligned with 1.5°C" on the ground that the company's carbon intensity is predicted to converge with the scenario's pathway in 2047. However, this conclusion is misleading. TPI declares a company aligned as soon as the carbon intensity of the company falls below the carbon intensity level allowed by the IEA scenario that same year. TPI's approach, centered only on carbon intensity, does not take into account excess GHG emissions and fossil production stocks built up by Total between today and 2047.

On the contrary, our stock-based method (based on carbon budgets), considers the cumulative GHG emissions piling up each year as a result of annual fossil production. If both carbon intensity and oil and gas production remain high, then GHG emissions increase quickly and fall short of the remaining carbon budget to stay below 1.5°C. For a company to be deemed "aligned" (in the short, mid or long-term), its absolute emissions must fall within the carbon budget allocated by the IEA 1.5°C reference scenario in that same time frame (short, mid or long term).

TPI's own analysis shows that TotalEnergies projects to reach net zero carbon intensity only by 2047. Until 2047, TPI's data clearly indicate that carbon intensity levels remain high. This is part of the reason why TotalEnergies cannot be deemed "aligned" in our methodology.⁹

"Carbon neutral LNG" - A dangerous marketing claim?

TotalEnergies claims to sell "carbon-neutral" liquefied natural gas (LNG) cargoes, whose emissions have supposedly been offset or "avoided". However, most of these emissions were not canceled out. Studies have shown that tree plantations and supposed forest protection projects often have much lower carbon benefits than claimed and can negatively impact local communities. Furthermore studies have shown that the carbon offsets market is rife with fraud, flawed methodologies, opacity and conflicts of interest. As a result the great majority of offsets generated since the late 1990s — around 85% of the Kyoto Protocol Clean Development Mechanism's offsets — do not represent emission reductions or removals. The use of offsets justifies selling more fossil fuels, ultimately leading to more emissions.



“ **No new oil and gas fields are required beyond those already approved for development.** ”

IEA, WEO 2021

2. TOTALENERGIES' INVESTMENT AND PRODUCTION STRATEGY IS OIL AND GAS-DRIVEN

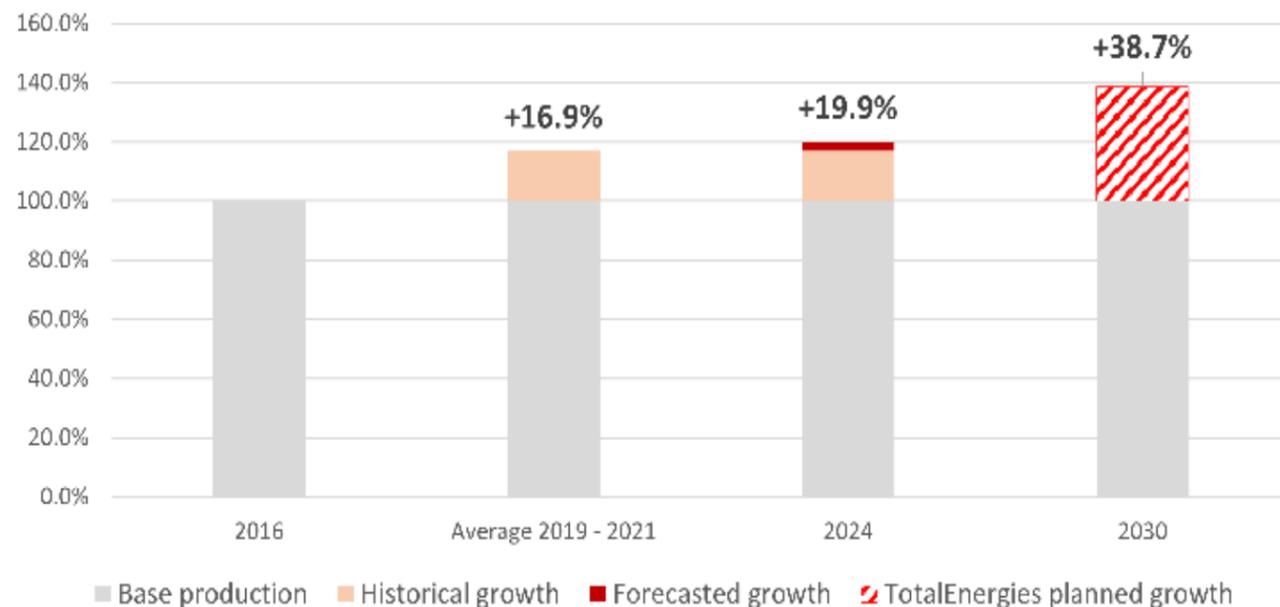
a. Total still plans to increase oil and gas production

Reducing oil and gas production is a crucial part of any credible decarbonization pathway and is required to achieve deep emission cuts. Both the UN Production gap report and the 2021 World Energy Outlook Net Zero scenario entail a decline in fossil fuel production during

this decade.¹⁴ According to Carbon Tracker models,¹⁵ to align with the IEA's Net Zero scenario, **oil and gas companies will need to drastically cut down on hydrocarbon production: by at least 38% by 2030 in the case of TotalEnergies.**

Yet, TotalEnergies is currently not demonstrating efforts to reduce production in line with what climate science requires.

Graph N°3. TotalEnergies' expected and potential production growth from 2016 to 2030



Source: Reclaim Finance calculations based on Rystad Energy UCube

Quite the opposite:

- Recent oil and gas production levels¹⁶ have grown by 16.9%¹⁷ since 2016, after the Paris agreement was signed. TotalEnergies is currently developing new oil and gas fields which will lead to an increase in production of 2.6%¹⁸ by 2024¹⁹ compared with recent levels²⁰ (overall, a 19.9% growth since 2016).
- Beyond 2024, Total's oil and gas production levels will depend on whether or not Total develops more oil and gas assets (see next section). According to TotalEnergies'

own data, our calculations show the company's oil and gas production is due to increase by 18.4% by 2030 compared with 2020. This amounts to an increase of 38.7% since 2016.

TotalEnergies defined its decarbonization targets against its 2015 levels (see table 1). It is therefore unclear how the major aims to reach them: since that year, it increased its production by 20.8%, and aims to keep on this track with fossil fuel production plans leading to a 43.3% growth by 2030.

Why increasing gas production is toxic for the climate

TotalEnergies aims for oil production to peak in this decade but is essentially switching from one fossil fuel to another. Our calculations reveal that **fossil gas production is due to increase by 35.5% by 2030 compared with 2019 levels**, mainly driven by the development of Liquefied Natural Gas (LNG) capacity. Gas production results in methane leaks in the atmosphere at different stages (eg. venting during extraction and evaporation during transportation of LNG by boat).

Methane is a potent greenhouse gas with a warming potential 85 times that of CO₂ over 20 years. According to the IPCC, methane emissions have nearly tripled since pre-industrial times and are increasingly responsible for rising temperatures. The IEA net zero roadmap is also adamant that there is no room for both new oil and new gas fields in the 1.5°C carbon budget.

b. Total is the top oil and gas developer among the European majors

While TotalEnergies's 2021 strategy aims to lock in 100 GW of renewable energy capacity by 2030, it's still overshadowed by the major's ongoing efforts to expand fossil fuel operations across the world.

- In 2020, the company's resources under production amounted to 18,744 mmboe,²¹ the equivalent of 20 years of production (at its recent level).
- According to the Global Oil and Gas Exit List, TotalEnergies is the top European

expansionist and ranks 7th globally. Currently, there are more than 4,306 mmboe²² worth of assets being developed, which will allow Total to quickly add the equivalent of 5 years of production to its production portfolio.

- TotalEnergies also has 9,599 mmboe²³ of discovered hydrocarbon reserves that have not yet entered the field evaluation or development stage.
- TotalEnergies is also still involved in exploration, looking for further undiscovered oil and gas reserves to extract. From 2019 to 2021, TotalEnergies spent, on average, \$837 million²⁴ per year on exploration.

TotalEnergies is increasingly tapping into unconventional oil and gas reserves. According to the Global Oil and Gas Exit List, more than a quarter of the oil and gas reserves currently being developed by TotalEnergies will come from the Arctic, ultradeep water and fracking which all entail heightened risks for communities, biodiversity and the climate. In the Arctic, Total Energies' production level is due to increase by 28% this decade.²⁵ TotalEnergies is also a partner in the Arctic-

LNG 2 terminal project in the Russian Arctic which will double LNG capacity in the Arctic.

c. Total's investments will remain heavily focused on fossil fuels

TotalEnergies may be massively investing in renewables; a quick look at the CAPEX allocation

demonstrates that the major's investment strategy is still focused on fossil fuels.

By 2025, the company aims to dedicate 25% of its annual CAPEX²⁷ to the Electricity and Renewable business line. Although this is an increase from 2020 levels (15.4%), it means that around 70% or more²⁸ of its CAPEX will still be going to oil and gas in 2025.

As a result of this investment strategy, Total's energy mix in 2030 will still be fossil fuel-heavy: 15 % of the energy will be produced by the "renewable and electricity" activity (which also includes fossil gas turbines). In other words,

in 2030, assuming the company meets its targets, TotalEnergies will be producing five to six times more fossil fuels than renewables.²⁹ In an interview, Total's CEO confirmed that in 2035 oil and gas will still be "Total's core business".³⁰

The company argues that it is in the process of "diversifying" its energy mix. However, for the time being, TotalEnergies' diversification strategy is adding renewable energy capacity on top of its oil and gas production, instead of replacing it. As long as Total maintains high levels of fossil fuel productions, it will not achieve the deep emission cuts - 50% by 2030 - required to keep climate change in check.

Tilenga and EACOP- a project affecting livelihoods and ecosystems across East Africa

Despite calls from civil society and many financial institutions refusing to support the project, TotalEnergies' board recently approved the Final Investment Decision for 10 billion USD to develop the 1,445 km-long East African Crude Oil Pipeline (EACOP) connecting two oilfields across Uganda and Tanzania. The company claims that the project has been designed to minimize its environmental impact and will benefit the local communities. However, tens of thousands of people are being displaced in the process and 14,000 will lose their land. During the production phase, the pipeline will carry up to 216,000 barrels of crude oil per day and could emit up to 33 million tons of CO2 per year according to the Swedish Environmental Research Institute, representing more than 30 times the annual emissions of Uganda and Tanzania together. Friends of the Earth France, alongside other organizations, has filed a legal suit against Total²⁶ in France for not complying with its duty of care obligations.

Does Total really need oil and gas cash flow to fund its renewable energy investments?

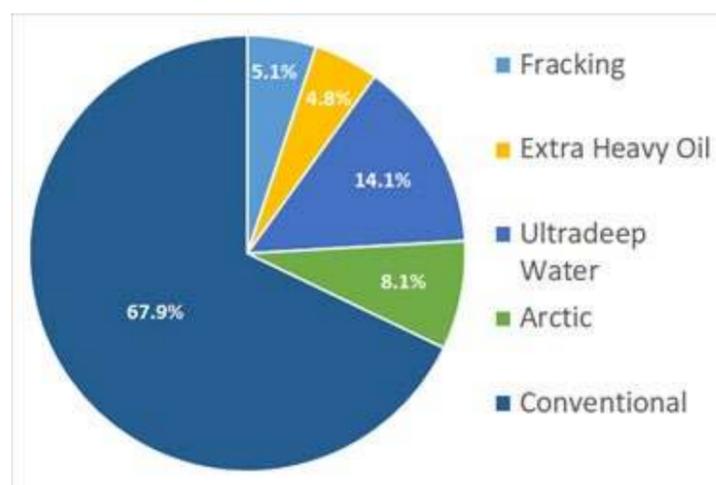
This argument is increasingly being used by oil & gas majors to advocate for sustained fossil fuel production.³¹ While cash flows and investments are indeed fungible and fossil revenues can partially be used to power "green investment", the picture is much more complex and nuanced: it cannot be assumed that renewable energy investments could not be sustained without fossil revenues.

First of all, there is no systematic correlation between fossil cash flows and green investment. In 2021, TotalEnergies' cash flows from exploration and production steadily increased (from \$3.8 to 4.9 billion) while the net investments in its Integrated gas and renewables Business Unit declined from \$2.6 bn to -\$302 million.

Secondly, the majors' argument only holds if they pursue an aggressive investment strategy and reinject most of their revenues in (green) investment. However, the numbers don't add up. TotalEnergies is not planning to spend the lion's share of its cash flow on renewable energy investments: out of the 20 to 30 billion of cash flow that TotalEnergies expects to generate each year from 2022 to 2025, only \$3.3 to \$3.7 billion will be spent on CAPEX and less than 25% of the CAPEX will be dedicated to renewables.³² The rest of the cashflow will essentially be allocated to dividends and share buybacks.

Finally, some investors consider that having fossil-based revenues is not a condition but an obstacle to increased green investments, since the cost of capital for renewable energy projects is now much lower than for new fossil assets. For example, New York-based hedge fund Third Point has recently acquired \$750 million of Shell stock and advocated for the company to separate its oil & gas activities from its initiatives in renewable energies, arguing that legacy business in the former prevented aggressive investment in the latter.³³

Graph n°4. TotalEnergies' short term expansion plan



Source: Urgewald analysis based on data from Rystad Energy

Table 1. TotalEnergies' pledged mitigation targets³⁴

Base year	Target year	Reduction target ³⁵	Net target	Geographical scope	Emission scope	Emission type ³⁶
2020	2025	-50%	No	World	1 & 2, methane emissions under operational control	Absolute
2015	2025	-15%	No	World	1 & 2, operational control	Absolute
2020	2025	-80%	No	World	1 & 2, methane emissions under operational control	Absolute
2015	2030	-20%	Yes	World	1 & 2 & 3, carbon intensity of sold energy products	Intensity
2015	2030	-40%	Yes	World	1 & 2, operational control	Absolute
2015	2030	-30%	No	World	3, final use of sold oil energy products	Absolute
2015	2030	-2%	No	World	3, final use of sold energy products	Absolute
2015	2030	-30%	No	Europe	1 & 2 & 3	Absolute
2015	2050	-100%	Yes	World	1 & 2, operational control	-
2015	2050	-100%	Yes	World	3, final use of sold products	-
2015	2050	-100%	Yes	Europe	1 & 2 & 3	-

REFERENCES

1. In this briefing, we analyze companies alignment against a 1.5°C reference scenario computed by the Transition Pathway Initiative. The latter based its work on the IEA Net Zero Scenario and on a IPCC scenario, to provide pathways for greenhouse gas emissions and energy production. See our methodology for more information. All following mentions of "1.5°C reference scenario" refer to this output from the TPI.
2. TotalEnergies, [Getting to Net Zero, 2020](#) ; TotalEnergies, [Sustainability Climate 2022 Progress Report, 2022](#)
3. TotalEnergies, [Strategy and Outlook, 2021](#)
4. TotalEnergies, [Climate: a conversation with Pouyanné, 2017](#)
5. To simplify, the "carbon intensity of sold energy products" of the company is referred to by "carbon intensity" of the company in the rest of this briefing.
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8. This calculation was done using the volume of offsets projected by TotalEnergies in its 2020 annual report and the "Climate roadmap in action"
9. See our methodology for calculation details
10. According to current CCUS centers' offsetting capacities, on average 1.5MtCO₂e/y. Carbon Tracker Initiative, [Oil companies should hedge their bets on CCUS and offsetting, 2021](#)
11. TotalEnergies, [Total Delivers its First Carbon Neutral LNG Cargo, 2021](#)
12. Bloomberg, [The Fictitious World of 'Carbon Neutral' Fossil Fuel, 2021](#). Most of the offset market does not even remove carbon from the atmosphere. Renewable energy generation and preventing deforestation accounted for 66% respectively of all offsets used by December 2020).
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18. Data on production levels is very reliable until 2024 and takes into account the production profile of reserves under production as well as oil and gas fields currently under evaluation or development. After 2024, the production levels will depend on the company's plans that have not yet been made public.
19. To establish "recent production levels" and avoid a "covid effect", we calculated an average annual production level based on 2019, 2020 and 2021 production data.
20. Data collected by Reclaim Finance on Rystad UCube Energy database.
21. Urgewald analysis based on data from Rystad Energy.
22. Data collected by Reclaim Finance on Rystad UCube Energy database.
23. Data collected by Reclaim Finance on Rystad UCube Energy database.
24. See [Global Oil and Gas Exit List, 2021](#).
25. Analysis by Reclaim Finance in 2021 using data collected on the Rystad UCube Energy database. See full report: [Drill, Baby, Drill](#)
26. Les Amis de la Terre, [Total, rendez-vous au tribunal](#)
27. Source : TotalEnergies, [Strategy and Outlook, 2021](#)
28. This number is likely an underestimate. Given that TotalEnergies does not disclose investments in renewable energy alone, but in renewable and electricity, this includes gas power plants. The group currently owns [8 combined cycle gas turbine \(CCGT\) plants](#). This capacity of 3.5 GW is due to reach 5 GW by 2025 according to Total's strategy outlook. This means that in effect, less than 25% of the CAPEX will be allocated to renewables.
29. In a recent interview in French newspaper Les Echos, CEO Pouyanné made this argument [Patrick Pouyanné \(PDG\) : « TotalEnergies ne fait pas de greenwashing ! »](#)
30. TotalEnergies, [Climate: a conversation with Pouyanné, 2017](#)
31. TotalEnergies, [Avis de convocation - Assemblée Générale Mixte, 2021](#)
32. p. 70 & 71 of TotalEnergies' 2021 [Strategy Outlook](#)
33. The New York Times, [Activist Investor Third Point Calls for Breakup of Shell, 2021](#)
34. According to Reclaim Finance calculations, based on TotalEnergies' hydrocarbons and primary energy-equivalent renewable production plans. Refer to the methodology and datasheet for further details.
35. A net target is a target the company aims to achieve using offsets.
36. Targets can apply either to the absolute emissions (absolute amount of GHG emissions) or to the intensity of emissions (amount of GHG emissions per unit of energy produced)

Credits

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IS TOTALENERGIES ON TRACK FOR 1.5°C? Reality check for financial institutions

Reclaim Finance is an NGO affiliated with Friends of the Earth France. It was founded in 2020 and is 100% dedicated to issues linking finance with social and climate justice. In the context of the climate emergency and biodiversity losses, one of Reclaim Finance's priorities is to accelerate the decarbonization of financial flows. Reclaim Finance exposes the climate impacts of some financial actors, denounces the most harmful practices and puts its expertise at the service of public authorities and financial stakeholders who desire to bend existing practices to ecological imperatives.

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