



# IS ENI 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

ENI<sup>1</sup> 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),<sup>2</sup> 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



Excess of 1.5°C Carbon budget by 2050



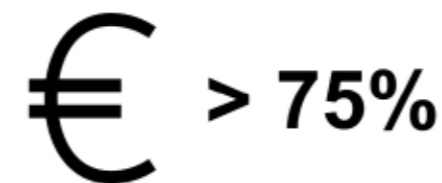
Year of the carbon budget overshoot



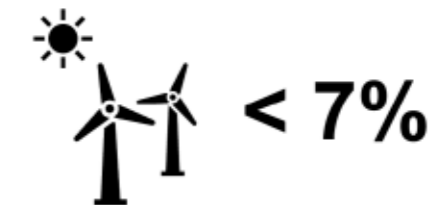
Oil and gas production between 2016 and 2025



Biggest European oil and gas developer



Near term CAPEX dedicated to oil and gas



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,<sup>3</sup> 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 products<sup>4</sup> 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.<sup>5</sup> 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,<sup>6</sup> 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.

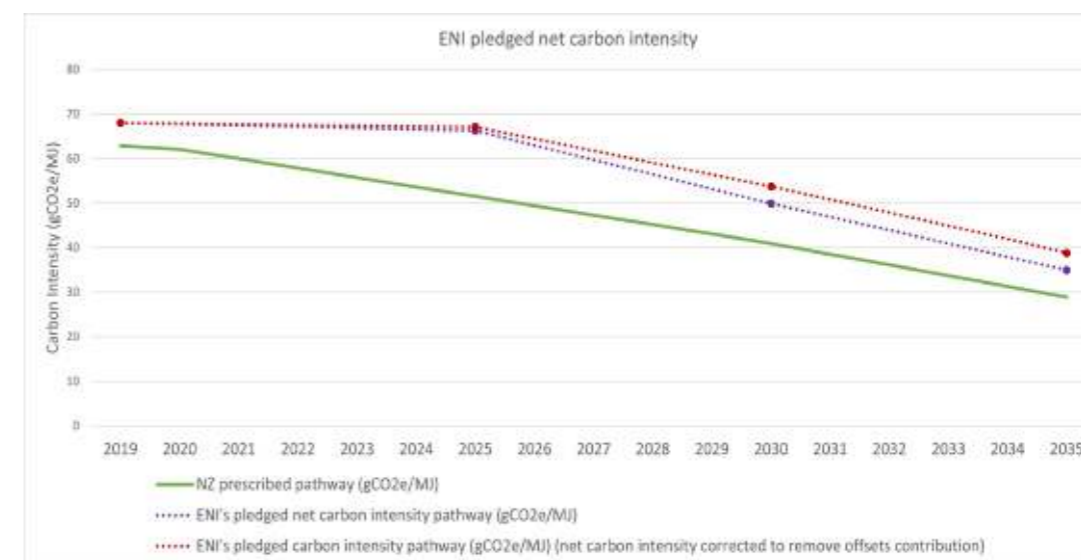
## c. What to expect on offsets?

ENI plans to heavily rely on offsets to achieve its climate targets. The company plans to offset 15 MtCO<sub>2</sub>e 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 MtCO<sub>2</sub>e 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.<sup>7</sup>

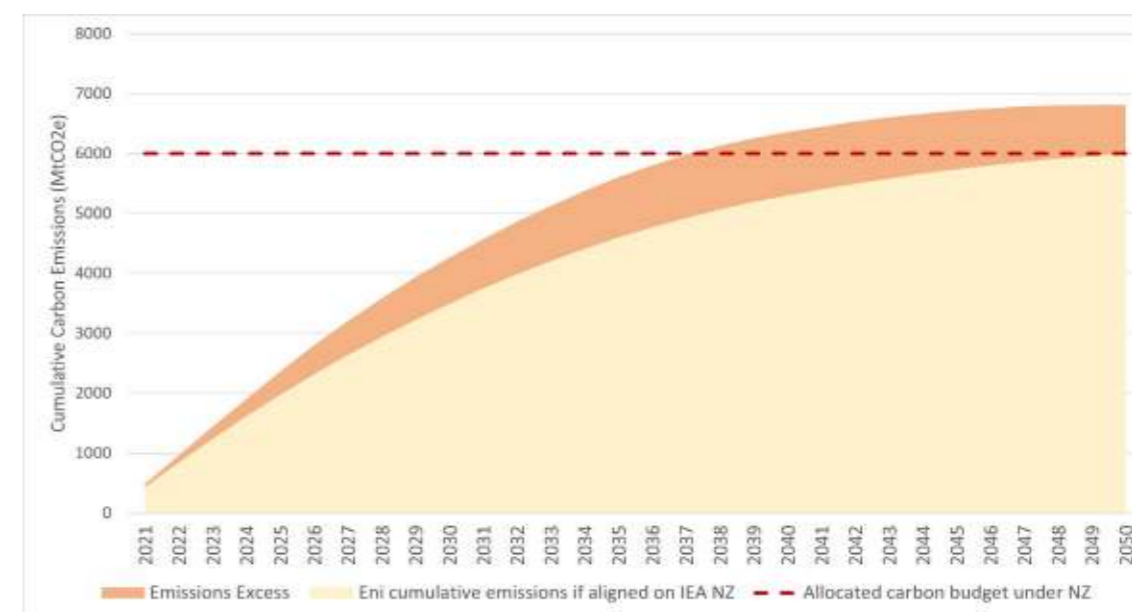
ENI also announced offset targets for 2040 and 2050. The company aims to steadily increase its use of offset to reach 25 MtCO<sub>2</sub>e per annum of NBS and 50 MtCO<sub>2</sub>e per annum of CCUS by 2050. According to the company's target, offsets will cover from 13.5% to 15% of 2030, 2040 and 2050 emissions reduction targets.<sup>8</sup> To reach the 2050 target, ENI would have to grow a forest bigger than Calabria region, as well as opening 34 new CCUS centers.<sup>9</sup>

Graph 1. ENI's decarbonization pathway



Source: ENI forecasted carbon intensity pathway, based on the company reported emissions, carbon intensity and decarbonization targets.<sup>10</sup> “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,<sup>11</sup> 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,<sup>12</sup> whose emissions have, supposedly, been offset or “avoided”. However, most emissions created by these LNG shipments were not canceled out.<sup>13</sup> 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.<sup>14</sup> 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

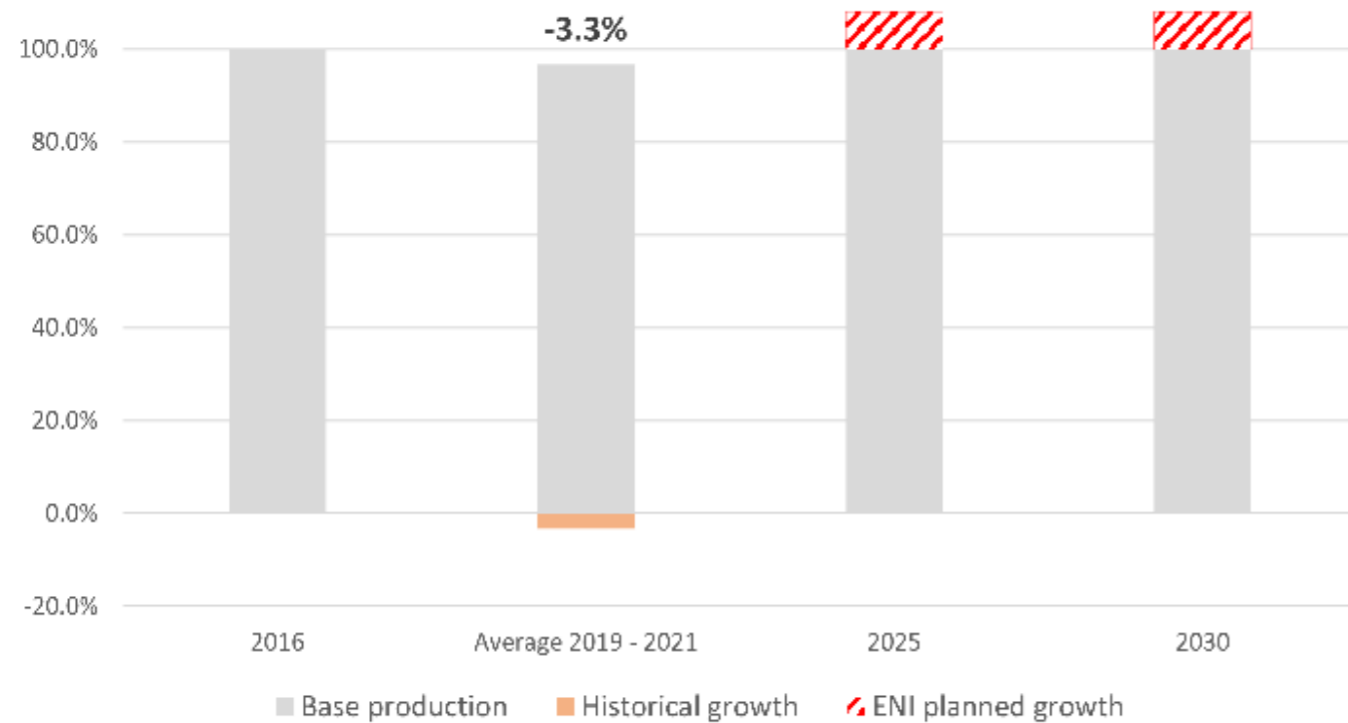
## a. ENI still plans to increase oil and gas production in the short term

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,<sup>16</sup>

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,<sup>17</sup> after the Paris Agreement was signed, will be 8.0%<sup>18</sup> higher. According to its own plans, ENI upstream production will grow until 2025 before plateauing.<sup>19</sup>

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,<sup>20</sup> 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,<sup>21</sup> the equivalent of 20 years of production (at its 2019-2021 level).<sup>22</sup>

- Currently, there are more than 1,894<sup>23</sup> 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 CO<sub>2</sub> 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 business<sup>24</sup> by 2024.<sup>25</sup> 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.<sup>26</sup>

**As a result, and assuming the company meets its targets, ENI will be producing fifteen times more fossil fuels than renewables in 2030.**<sup>27</sup>

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.

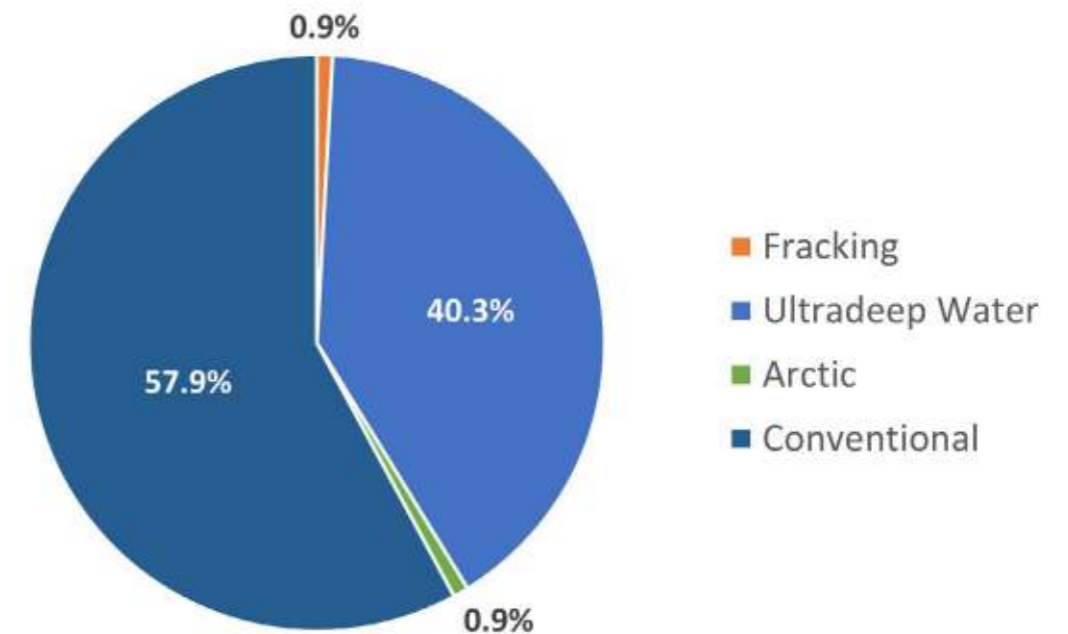
### What the IEA says about the need for new CAPEX in oil and gas

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 <sup>28</sup>	Net target	Geographical scope	Emission scope	Emission type <sup>29</sup>
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)

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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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