

ASSESSMENT OF ENI'S CLIMATE STRATEGY





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INTRODUCTION

while a growing number of institutions are disengaging from the oil and gas sector, deeming it incapable of transformation, others believe that oil and gas companies are essential to the energy transition and that their support is indispensable to the massive development of renewable energies. Considering this: What is the actual situation? To what extent does Eni contribute to the development of sustainable solutions? Given that we can't limit global warming to 1.5°C without gradually reducing hydrocarbon production, has Eni given up on developing new oil and gas projects?

To assess Eni's climate strategy and provide our analysis, Reclaim Finance relied on the International Energy Agency's (IEA) Net Zero Emissions by 2050 Scenario (NZE). The NZE is based on a 1.5°C trajectory and includes:

- A drop in oil and gas production of 21% and 18% respectively by 2030, compared with 2022 levels.
- A halt to the development of new oil and gas production projects and liquefied natural gas (LNG) terminals.
- A 67% increase in total annual investment in energy, with a 2.3-fold increase in annual investment in energy transition, covering clean energy supply, end-use and energy efficiency. This would mean investing ten euros in the transition by 2030, six in energy supply – mainly electricity – for every euro invested in fossil fuels, i.e. a 6:1 ratio.

Eni ranks as the 19th biggest oil and gas producer and the 15th biggest oil and gas upstream developer worldwide. The company is the 26th largest LNG export terminal developer.²

As one of the top European integrated oil and gas companies and one of the largest greenhouse gas (GHG) emitters globally, Eni is among the few companies in the world whose climate transition (or lack thereof) in the coming years will have a determining impact on our collective ability to limit global temperature rise to 1.5°C. In 2020, the company pledged to achieve carbon neutrality across its entire operations on an absolute basis by 2050 or sooner.³



KEY FINDINGS

1. The investment strategy of Eni prioritizes the oil and gas sector and redistribution to shareholders, to the detriment of climate solutions

- Eni invested in oil and gas rather than in renewable energy: For every euro invested in 2023 in its low carbon "Plenitude" business including renewable energy, as well as gas power and nuclear research Eni invested 12.9 euros in oil and gas.
- Eni remunerates shareholders rather than investing in renewable energy: For every euro invested in 2023 in its integrated power business, Eni distributed 7.7 euros to its shareholders through dividends and share buybacks.

2. The energy strategy of Eni will continue to rely on the development of new fossil fuel projects

- With Eni's oil and gas production from its currently producing fields and already committed short-term expansion plans, the company's production in 2030 will be 49% higher than the level required to align with the NZE. In terms of short-term expansion, Eni ranks as the 15th biggest oil and gas upstream developer.
- Yet, Eni will have to develop additional discoveries or acquire fields beyond those already under short-term expansion to meet its 2030 oil and gas production target. Its existing operating fields and short-term expansion plans will not be sufficient to reach its 3-4% yearly increase
- in underlying oil and gas production by 2027. With the company's current strategy, Eni will overshoot the NZE by 73%. As Eni plans mature asset sales combined with additional expansion, reported production will grow by 2% per year by 2027. Even in that case, Eni's 2030 production will still be 66% higher than the NZE.
- Eni is constructing and plans to develop new liquefaction terminals in the coming years. Consequently, with its current LNG strategy, Eni will add 8.2 Mtpa of liquefaction capacity and will exceed the NZE capacities by 100.1%.

3. Eni's diversification strategy remains marginal and partly relies on gas and unsustainable energies

- Oil and gas extraction will still represent 86.0% of Eni's energy mix by 2030. The company will account for 1.5% of the worldwide oil and gas production in the NZE.
- With more than 15 gigawatts (GW) of net installed renewable power capacities in 2030, renewable energy will represent 6% of Eni's energy mix. The company will produce 0.1% of the worldwide renewable power production in the NZE.
- In 2023, gas power represented 84% of Eni's electricity production. Eni owns gas plants and is constructing new ones worldwide. By maintaining its gas power production at current level, gas power will represent 3.9% of the company's energy production mix in 2030.
- By 2030, Eni will develop unsustainable renewable energies such as Sustainable Aviation Fuel (SAF). In 2030, bioenergy will represent around 3.9% of the company's energy production mix.



1. CURRENT ENERGY PRODUCTION

ni accounts for 1.3% of global oil and gas production.⁵ In 2023, Eni extracted 296 million barrels of oil (mmbbl) and 248 million barrels of oil equivalent (mmboe) of gas.⁶ Beyond exploration and production, Eni is also active in other energy segments such as oil and gas transportation, oil refining, hydrogen, solar, wind and gas power generation and retail.

The company's power production is composed of gas power and renewable energy - wind, solar and battery storage. In 2023, Eni produced 20.7 terawatt-hours (TWh) of

electricity through gas and 4.0 TWh through renewable energy. Renewable energy only represented 16% of its electricity production last year. Net installed renewable capacities reached 3 GW, primarily solar energy and storage (64%) and wind energy (36%).⁷

Renewable energy represented 0.9% of Eni's energy mix in 2023, while oil and gas extraction represented more than 93.2% of its energy produced and gas power represented 4.6% of its energy produced. 1.3% of Eni's energy mix is biofuel production.

2. CASH-FLOW ALLOCATION

he future energy mix and GHG emissions of a company are determined by its current energy mix and its investment strategy.

From 2021 to 2023, Eni invested US\$1,011 million per year in oil and gas exploration, making it the 14th largest investor in this area over those three years.⁸ The investments reveal the importance of oil and gas expansion in the company's long-term strategy, which includes the search for new fields that once discovered could come into production in decades.

Information in Eni's 2023 annual report⁹ shows how the cash and cash flows generated from its operational activities were spent in 2023:

- 1. Eni invested €637 million in its Plenitude business, which includes solar and wind energy, power storage, nuclear research, e-mobility, retail gas and power.
- 2. Eni invested €8,234 million in oil and gas, including €7,133 million in oil and gas exploration and production. In total, for every euro invested in Plenitude, 12.9 euros were invested in oil and gas.

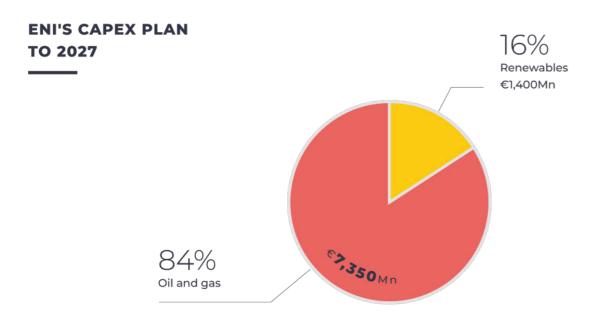


3. Eni provided its shareholders with €4,901 million through dividend payments (€3,082 million) and share buybacks (€1,819 million). In total, for every euro invested in Plenitude, 7.7 euros were distributed to shareholders.

Eni's investment plan remains fossil-fuel driven. It plans to invest around €35 billion from 2024 to 2027¹⁰ - 8,750 million per year in average – including 1.4 billion renewable CAPEX in renewable energy.¹¹



Source: Eni, 2023 Annual report, 2024

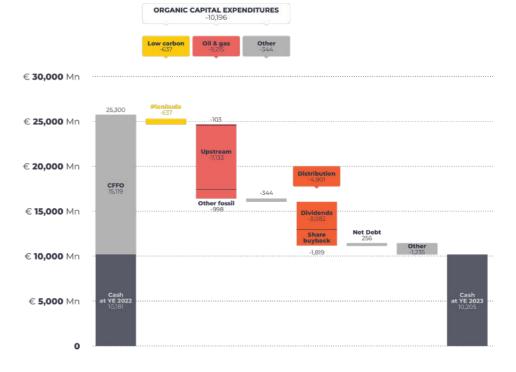


Source: Eni, Capital Markets Update 2024-2027, 2024

Total annual energy investment needs to increase by 67% by 2030 according to the NZE, which includes a shift from fossil fuels to clean alternatives. Investments in clean energy supply, end-use and efficiency are multiplied by 2.3 times by 2030 in the NZE, with 10 euros spent in these areas for each

euro spent on fossil fuels, 6 euros of which are for sustainable power supply. 12 In its 2023 report, the IEA established that oil and gas companies must allocate more than 50% of their capital expenditure (CAPEX) in clean energy by 2030. 13

BREAKDOWN OF ENI'S 2023 CASH-FLOWS



Source: Eni, 2023 Annual report, 2024



3. FOSSIL FUEL STRATEGY

a. Upstream expansion plans

The IEA published the NZE in May 2021¹⁴ to provide a pathway to meet global energy needs while maintaining a 50% chance of keeping global temperature increases below 1.5°C. It was used as the reference scenario in the IEA's World Energy Outlook (WEO) 2021 and was updated in the WEO 2022¹⁵ and WEO 2023.16 The NZE projects a halt to the development of any new oil and gas fields for which a Final Investment Decision (FID) was not approved by January 1st, 2022, plus an end to the construction of LNG terminals.

The Intergovernmental Panel on Climate Change (IPCC) also highlights the risks associated with the development of any new fossil fuel projects. This concurs with a large and growing body of scientific evidence showing the need to immediately end fossil fuel development, and a growing consensus on this in net-zero policy discussions.

According to the 2023 Global Oil and Gas Exit List (GOGEL), Eni is the 15th top global oil and gas upstream short-term developer. The company accounts for 1.4% of global short-term expansion plans, with 71.0% of its short-term expansion plans not obtaining a FID before 2022 - therefore overshooting the NZE. Moreover, Eni recently acquired Neptune Energy, an oil and gas developer active in the North Sea that detains 114 mmboe of shortterm expansion plans.

These projects would give Eni significant additional resources even though it already has enough to extract oil and gas for several years. As of April 2nd, 2024:

• Eni has 6,411 mmboe of resources under production, including 3,681 mmbbl of oil and 2,730 mmboe of gas. This represents the equivalent of 11.7 years of production at 2023 levels.

- Eni has 3,258 mmboe of resources under development or field evaluation, including 1,538 mmbbl of oil and 1,721 mmboe of gas. This represents 6.0 years of production at 2023 levels.
- Eni owns 4,749 mmboe of oil and fossil gas discoveries, including 1,946 mmbbl of oil and 2,804 mmboe of gas. This represents 8.7 years of production at 2023 levels.

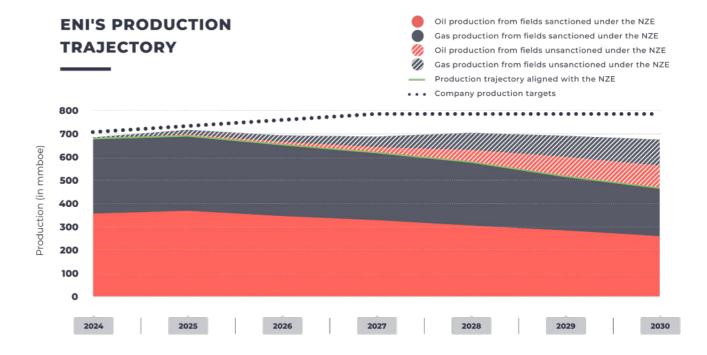
b. Upstream production

Oil and gas production should decrease by 20.9% and 17.9%, respectively, between 2022 and 2030 according to the NZE.¹⁷ In this scenario, the rate of oil and gas production declines due to a combination of the natural depletion of existing oil and gas fields and the absence of new fields to fill the gap, despite the reliance on negative emissions. Oil and gas production would need to decline much faster without this reliance. Negative emissions include the deployment of technologies unproven at scale, such as carbon capture, utilization and storage (CCUS). Other prominent 1.5°C scenarios with no or low overshoot also show oil and gas production declining by 2030. These include the One Earth Climate Model (OECM), 18 the net zero climate scenarios from the Network for Greening the Financial System (NGFS), 19 and the IPCC's 1.5°C with no or low overshoot scenarios filtered to limit to reasonable volumes the reliance on negative emissions (e.g. CCUS, nature-based solutions (NBS), etc.).20

The following chart compares Eni's planned oil and gas production level by 2030 with:

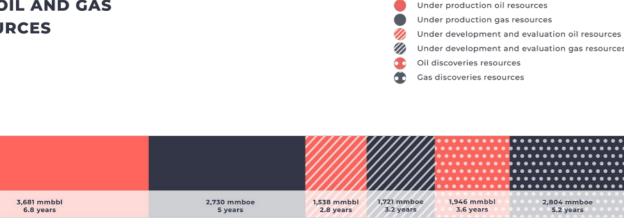
- · Eni's production by 2030 if it aligns with the NZE (i.e. Eni's production level from its producing fields and its fields currently under development with a FID obtained before 2022).
- Eni's production by 2030 if it carries out its short-term expansion plans (i.e. Eni's production from its fields currently under production, under development and under field evaluation).

In 2030, with oil and gas from currently producing fields, fields under development and under evaluation, Eni's production level will be 49% higher than the NZE.



Source: Rystad Energy on oil and gas production and expansion, accessed in April 2024; Eni investor presentations on company production targets.

ENI'S OIL AND GAS RESOURCES



Source: Rystad Energy, accessed in April 2024

12 13 Eni plans to grow its underlying production by 3-4% per year by 2027.21 Eni's production growth is driven by an increase of its gas production that will represent 60% of its oil and gas mix in 2030 while it represented 54% of its oil and gas production in 2023.22 With its already committed short-term expansion plans, Eni still could not achieve its target. In other words, to reach its production target, Eni will have to develop part of its discoveries and/ or acquire new fields. Indeed Eni declared that they plan to increase its underlying production with new projects that have not obtained their FID yet. Assuming the conservative hypothesis that Eni will reach plateau in 2027, Eni's 2030 underlying production target for oil and gas will be 73% above NZE alignment. However, its reported 2027 reported production growth would be of 2% per year due to asset sales.

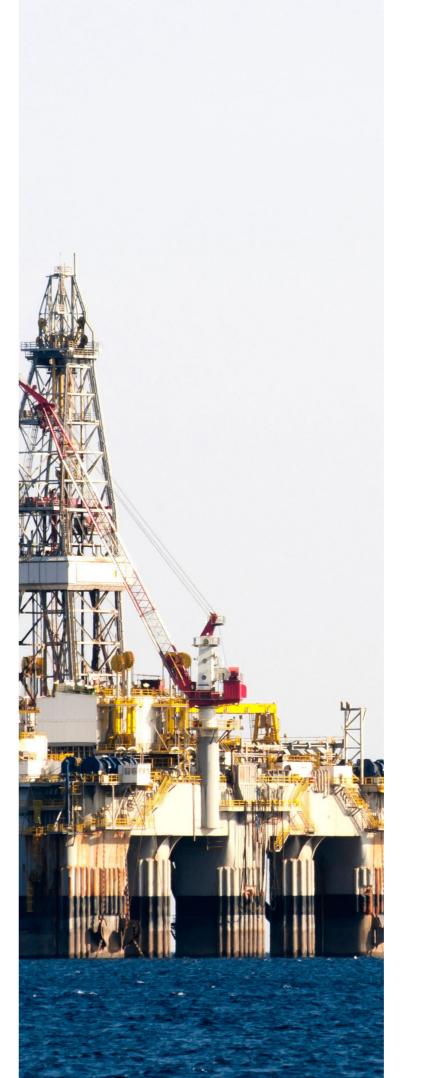
Eni will not close fields earlier than expected or stop developing new fields to reduce emission, but it will sell assets to another company that will exploit them and develop new ones. Even with this asset sale strategy, Eni's 2030 reported production target for oil and gas will be 66% above NZE alignment.²³

With its production target, Eni's 2030 oil and gas extraction will represent 86.0% of its energy production mix and 1.5% of the global oil and gas production in 2030, according to production level of the NZE.

Eni plans to become mostly a gas player by 2030, with gas representing 54% of its upstream production and will represent 60% of its 2030 production. As of April 2024, gas accounts for 43% of all resources present in



Source: Enerdata LNG database for operational terminals and Global Oil and Gas Exit List 2023 for under construction and planned terminals, accessed in January 2024



Eni's fields already under production. Gas also represents 53% of its resources from fields under development and under evaluation, and 59% of its resources from discovered assets.²⁴ Furthermore, along with its 2030 gas production target and retained resources, Eni intends to increase its LNG business.

c. LNG terminal net capacities

Under the NZE, gas demand by 2050 is met with all existing LNG terminals. Under the IEA's Announced Pledges Scenario (APS), gas demand is met with operational and under construction facilities. In either case, no new LNG terminal plans are necessary to meet demand. With its current plans, none of Eni's LNG expansion plans are aligned with the NZE, while only the infrastructure already under construction is aligned with the APS.²⁵

Eni's gas-oriented strategy relies on new midstream infrastructure that will be commissioned in the coming years. Indeed, Eni owns existing LNG export terminals, and both constructs and plans to construct new LNG export terminals in the coming decade.

- Eni is a shareholder of existing export terminals such as Darwin LNG in Australia, Oman LNG in Asia, Angola LNG, Congo Fast LNG, Rovuma-Coral FLNG, NLNG in Africa. Eni's operational export terminals net liquefaction capacity reaches 8.2 Mtpa.²⁶
- Eni is already constructing additional liquefaction capacities with the train 7 of NLNG in Nigeria. These would add net liquefaction capacities of 1 Mtpa to its portfolio.²⁷
- Moreover, Eni plans to construct additional liquefaction capacities with projects such as Rovuma Mozambique LNG, Congo Fast II, Qatar North Field LNG and plan to expand Darwin LNG in Australia. These would add net liquefaction capacities of 7.2 Mtpa to its portfolio.²⁸

With its current LNG plans, Eni's 2030 total net liquefaction capacity will increase by 8.2 Mtpa to 16.5 Mtpa. Then, Eni will exceed the APS by 78.2% and the NZE by 100.1%.

4. DIVERSIFICATION STRATEGY

a. Sustainable energy

The NZE projects strong growth in renewable energy production, from 27 exajoules (EJ) in 2021 to 80 EJ by 2030, led by solar and wind capacity additions.

In 2023, Eni generated 4.0 TWh of electricity from renewable sources, exclusively solar, storage and wind generation. Eni's installed renewable capacity was in 2023 of 3 GW.²⁹ It aims to develop its renewable energy activity, with an installed renewable capacity above 15 GW by 2030.³⁰

As Eni is exploring, developing new oil and gas upstream and LNG projects, additional renewable capacities do not change the company's fossil-based business model.³¹ If Eni meets its targets, the maximum renewable power energy share of the company's energy production mix in 2030 would reach 6.2%, while oil and gas extraction will represent 86.0% of its energy production mix. Overall, Eni will represent 0.1% of global renewable energy production in 2030, according production level of the NZE.

b. Unsustainable diversification

The NZE also projects strong growth in hydrogen production, from 94 megatonnes

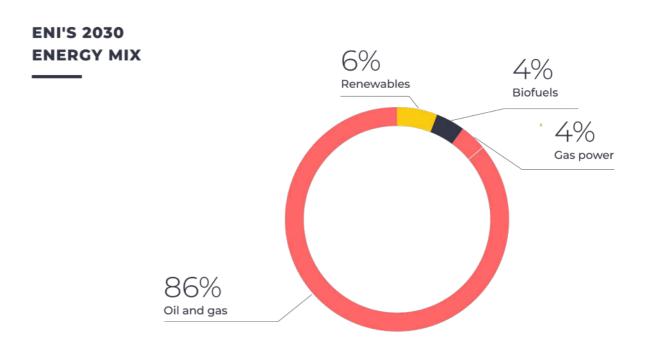
(Mt) in 2021 to 180 Mt by 2030, led by "low-carbon hydrogen" capacity addition. Of this, one-third is produced from fossil fuels – therefore unsustainable – and two-thirds from water-based electrolysis.³² To meet the NZE scenario's production targets, electrolytic hydrogen production capacity should reach 720 GW to 850 GW by 2030.³³

Although Eni is involved in the development of new hydrogen capacities, the company does not communicate targets for these capacities. Moreover, Eni's hydrogen projects by 2030 are blue hydrogen, ³⁴ that rely on fossil fuels.

In 2023, 84% of Eni's electricity production was fossil-based, with 20.7 TWh being generated using gas.35 Gas combustion is one of the main contributors to carbon dioxide (CO2) and methane emissions and should be replaced by sustainable solutions - i.e. gas power is unsustainable. By 2035, advanced economies should achieve a carbon neutral power sector, according to the NZE.36 Nevertheless, Eni has neither committed to stop developing gas plants nor committed to closing its gas plants. Eni is constructing a new plant in Nigeria and announced a new one in Congo planned for 2027.37 If Eni's gas power production remains at current level, gas power will represent 3.9% of Eni's energy production mix in 2030.

The NZE projects strong growth in bioenergy production, with an increase of biofuel from 133 Mtpa in 2021 to 367 Mtpa by 2030 and of biomethane from 278 TWh to 1,944 TWh by 2030. By then, Eni targets a biofuel production of 5 Mtpa, including 2 Mtpa of Sustainable Aviation Fuels (SAF), through its biorefiner unit Enilive.³⁸ Eni's bioenergy production will represent 3.9% of its energy mix at the end of the decade. Most biomethane is produced via methanization using feedstock such as plant crops, livestock effluents, food and catering effluents, and sewage sludge. Likewise, most biofuel production currently uses so-called

conventional feedstocks, such as sugarcane, corn and soy. Due to feedstocks use, emissions from direct and indirect land-use change, increased fertilizer use and carbon emissions from energy-intensive refining, both biofuels and biomethane can have a higher emissions factor than fossil diesel.³⁹ In addition to the climate impacts of land-use change, biofuels can divert crops from food production to energy production, leading to higher food prices.⁴⁰



Source: Eni, Capital Markets Update 2024-2027, 2024



5. EMISSIONS TARGETS

Eni pledged mitigation targets for 2025 on scope 1 and 2 using 2018 baseline and for 2030 on scope 1, 2 and 3 using 2018 and 2020 baselines in intensity and absolute terms on scopes 1, 2 and 3 for 2030. In 2023, Eni's net greenhouse gas lifecycle emissions (scope 1, 2 and 3) were 398 MtCO2e.⁴² Scope 3 greenhouse gas emissions are by far the largest, representing 87% of the company's emissions.⁴³ However, while scope 3 represents the most significant part of the company's GHG emissions, Eni has no scope 3 targets by 2025.

Using the IEA's energy supply data from the NZE in the WEO 2023, Reclaim Finance calculated Eni's GHG emissions trajectory. By 2030, the company's targeted carbon intensity will be 13.4% higher than the NZE.

Eni relies heavily on CCUS and NBS. The company will offset 15 Mtpa of CO2e from 2030 through NBS⁴⁴ and capture more than 15 Mtpa CO2. These technologies have a significant place in the company's decarbonization plan: 14% of its absolute emissions reduction by 2030 is planned through using CCUS and offsets. As highlighted by the IPCC, however, CCUS in the energy sector still has limitations to overcome before it can be scaled up, which means it comes with limited potential and prohibitive costs. Too high reliance on these types of mitigation approaches represents a material risk factor for Eni's ability to reach its decarbonization targets. 46

Base year	Target year	Reduction target	Emission scope	Emission Type
2018	2024	-50%	1 & 2	Absolute
2018	2025	-65%	1 & 2	Absolute
2018	2025	-40%	1 & 2	Absolute
2020	2030	-100%	1 & 2	Intensity
2018	2030	-35%	1 & 2 & 3	Absolute
2018	2030	-15%	1 & 2 & 3	Intensity

Source: Eni, Capital Market Update, page 31, 2024



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Useful links

Methodology - Glossary

Factsheets on bioenergy, hydropower, hydrogen, CCUS in power, Energy storage

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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 financial players, 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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