Decarbonization metrics and targets update

ESG Investor Roadshow, March 2025

The Repsol Commitment
Net Zero Emissions
by 2050

INDEX

<< Repsol strategy is fully aligned with i) Paris Agreement pledges, ii) limiting global warming to +1.5°C at the end of the century, and iii) carbon neutrality by 2050 >>

Stakeholders: Ranging from supportive, to more demanding, to some with extreme views ("O&G cannot be aligned").

Our Focus

Not our Focus

02 What is being requested by our stakeholders?

	Requirements	ESG Stakeholders[1]	Reporting CSRD[2]
1	Consistency between financial and non-financial reporting metrics	✓	✓
2	Report & target scope 3 emissions category 11 (“Use of products sold”)	✓	✓
3	Report & target absolute emissions	✓	✓
4	Do not include avoided emissions in key metrics and targets	✓	✓
5	Limited use of carbon sinks (CCUS and NCS)	✓	✓
6	Compatible with +1.5°C w/o significant overshoot and Net Zero 2050	✓	✓

(1) ESG investors, ESG analyst, ESG prescribers, methodology standardization bodies

(2) CSRD: EU Corporate Sustainability Reporting Directive

Changes fit with the framework of Repsol Strategic Update 2024-2027 and its business objectives

Adjusted methodology for key metrics

1. Apply the same company perimeter used in our financial accounts to our emissions
2. Do not add avoided emissions to global company KPIs (neither absolute nor intensity)
3. Apply the ‘substitution method’ to make energy from renewable electricity comparable to that from fossil energy
4. Report carbon sinks used, and distinguish CCS/DAC projects (engineered carbon capture) from any use of NCS and carbon credits

Decarbonization metrics and targets

1. Ratification of current CII reduction pathway and targets (scope 3 based on primary energy) after methodology adjustment: (15% 2025, 28% 2030, 55% 2040, and NZ 2050)
2. Substitute the current scope 1+2+3 net absolute emission reduction target (scope 3 based on primary energy, avoided emissions included) with a new scope 1+2+3 absolute emission reduction target (scope 3 based on sales, avoided emissions not included)
3. Ratification of operated scope 1+2 emission reduction targets

04 What does the new set of decarbonization targets look like?

- Keep ambition and consistency with the Strategy Update (Feb. 24) for 2024-2027-2030
- Adjusted and new KPIs and targets to reassure stakeholders of our alignment with Paris pledges, +1.5°C at End of Century, and Net Zero 2050

	Decarbonization targets	Unit	Base year	State	Years			
					2025	2030	2040	2050
1	**Carbon Intensity Indicator reduction (based on primary energy)**	g CO_2e/MJ	2016	**Improved methodology**	15%	28%	55%	NZE
2	**Absolute S(1+2+3) emissions reduction (based on sales)**	Mt CO_2e	2018	**NEW**	-	20%	-	NZE
3	Operated Scope 1+2 emissions reduction	Mt CO_2e	2016	Unchanged	-	55%	-	NZE
4	Methane emissions intensity	%; m^3/m^3	2017	Unchanged	0.2	Near zero (1)		
5	Routine flaring	kt CO_2	2018	Unchanged	172	Zero		

(1) As committed in Oil & Gas Decarbonization Charter (OGDC) announced in COP28

05 Deep Dive 1: CII Methodological Changes

Alignment of Company perimeter (financial vs non-financial metrics)

- Repsol-controlled companies/assets: 100% of energy production and scope 3 emissions(1) are accounted for (same as financial metrics are fully consolidated in financial accounts).
- Companies/assets under joint control: energy production and scope 3 emissions are accounted for in proportion to the % ownership of Repsol.
- Interests in companies/assets where Repsol has neither control nor joint control (no case today): production and scope 3 emissions would not be accounted for.
- For scope 1+2 emissions, the industry practice of accounting for 100% of operated assets emissions is maintained.

~~Avoided emissions~~ / **Substitution Method**

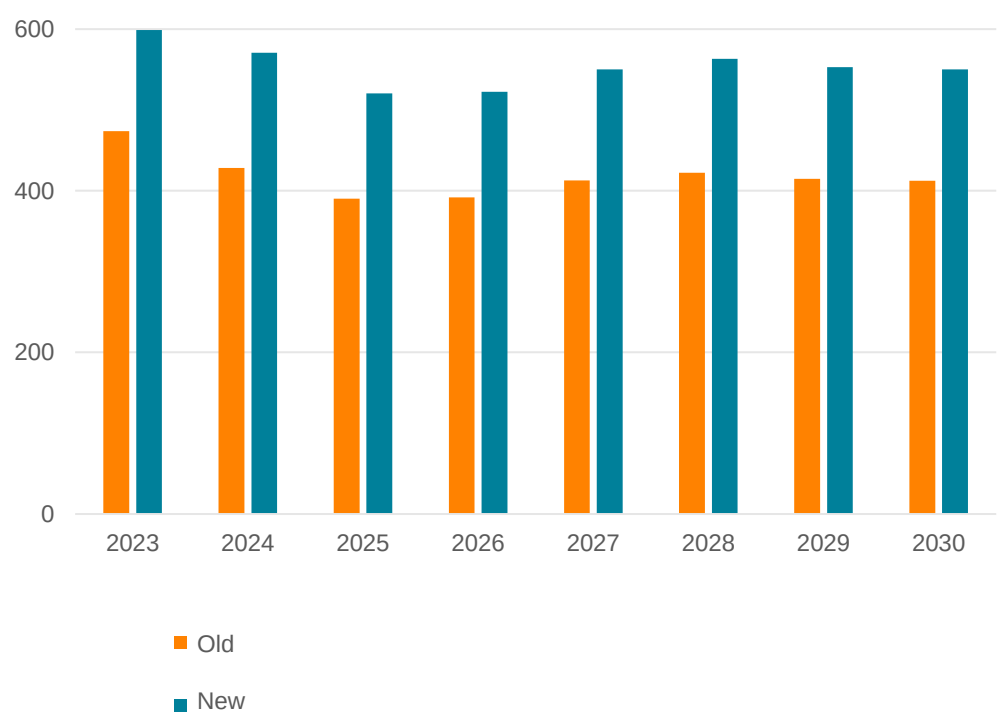
$$CII\ (gCO_2/MJ) = \frac{\text{Scope 1 + 2 Operational} + \text{Scope 3 O\&G (E\&P prod.)} - \text{Low-carbon Emissions shift} - \text{Carbon sinks}}{\text{Energy products (E\&P prod.)} + \text{Low-carbon energy sources}}$$

- **Emissions avoided** by substitution of non-renewable with renewable energy in the energy mix will no longer be accounted for in company KPIs (neither CII nor absolute emissions)
- In the **substitution method**, renewable electricity is computed as the equivalent non-renewable energy needed to generate that electricity (to be applied to the "low-carbon energy sources" term in the CII denominator)

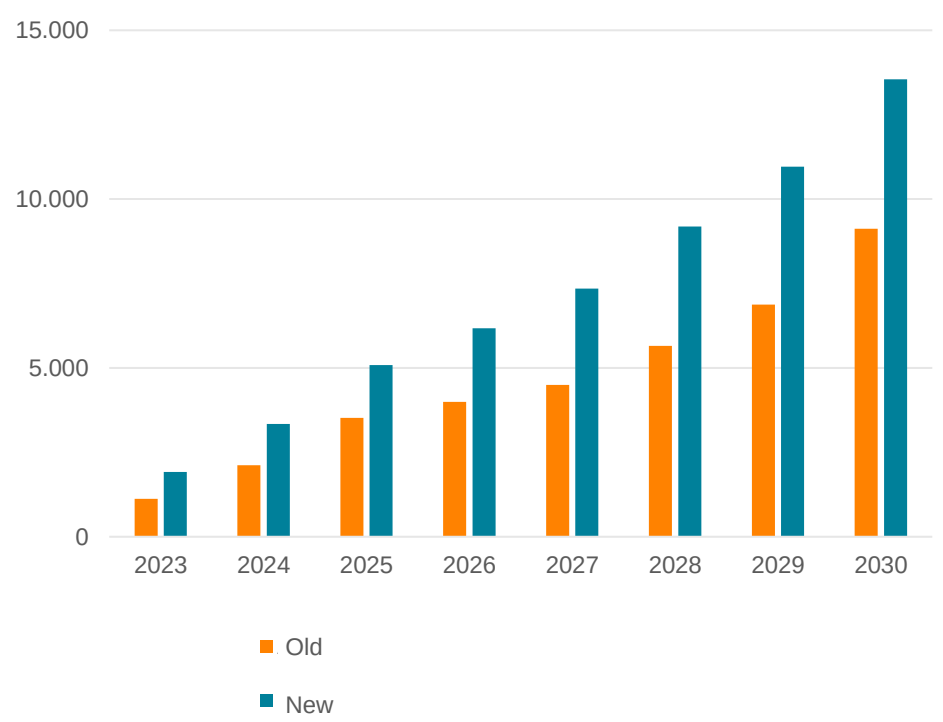
(1) Scope 3 emissions, category 11

Impact on hydrocarbon production and renewable electricity generation

E&P Production (kboed)



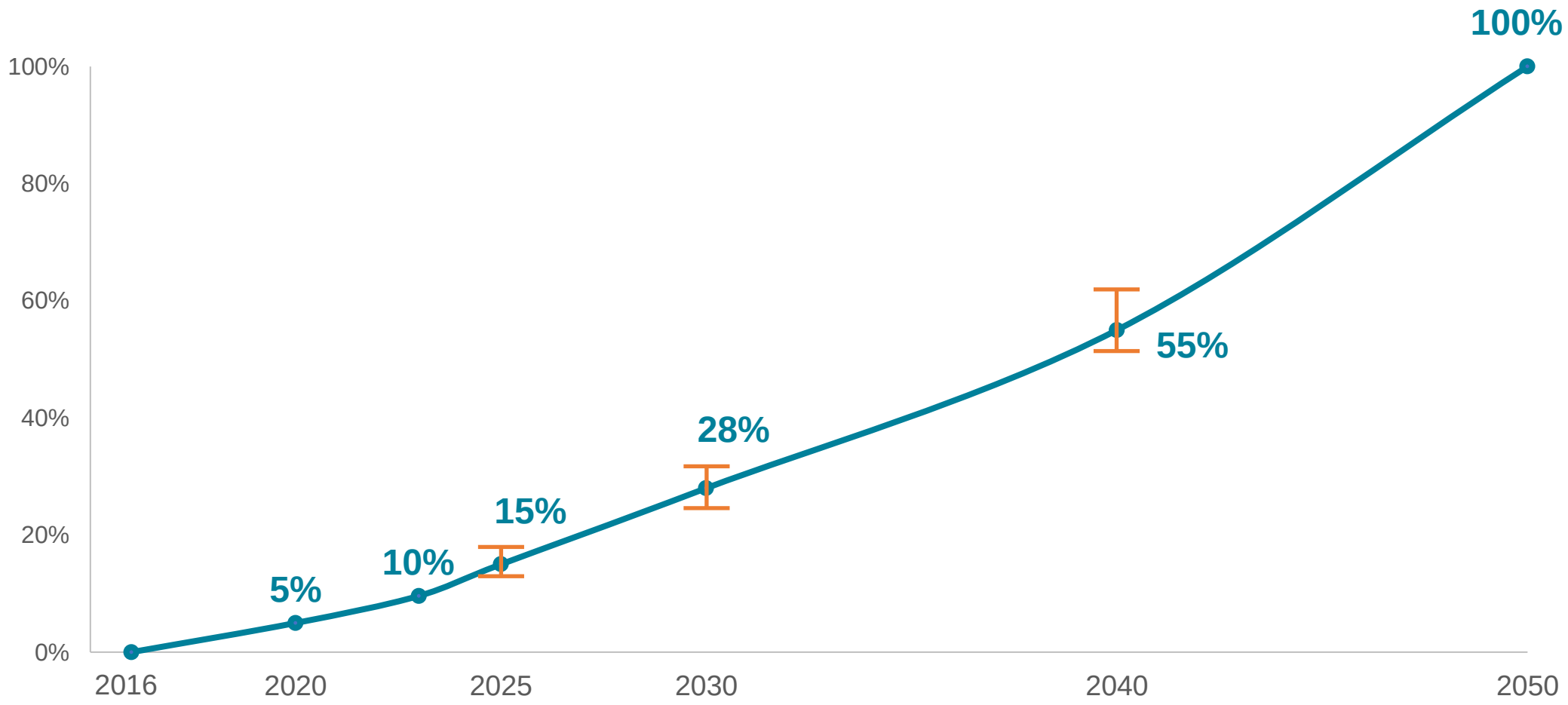
Renewable Capacity (MW)



05 Deep Dive 2: Ratifying our CII interim reduction targets

Carbon Intensity Indicator Progress and Targets (% vs. 2016)

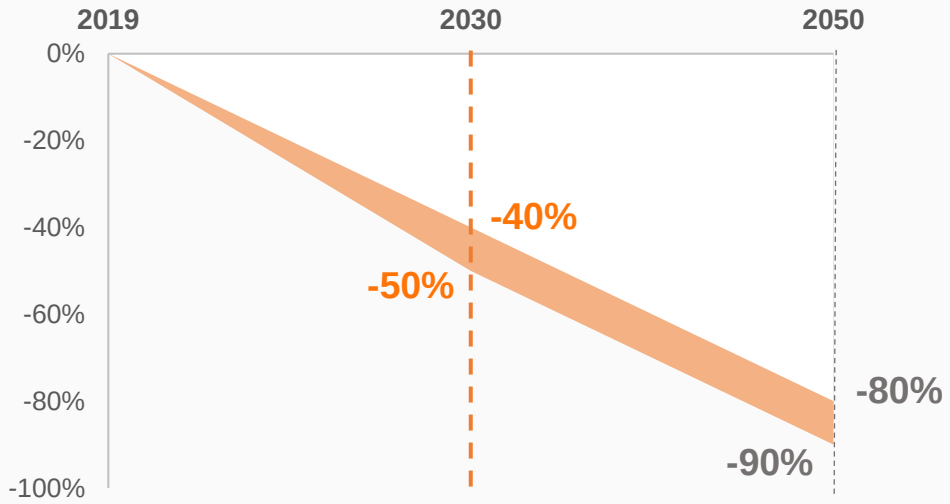
gCO_2/MJ reduction, %



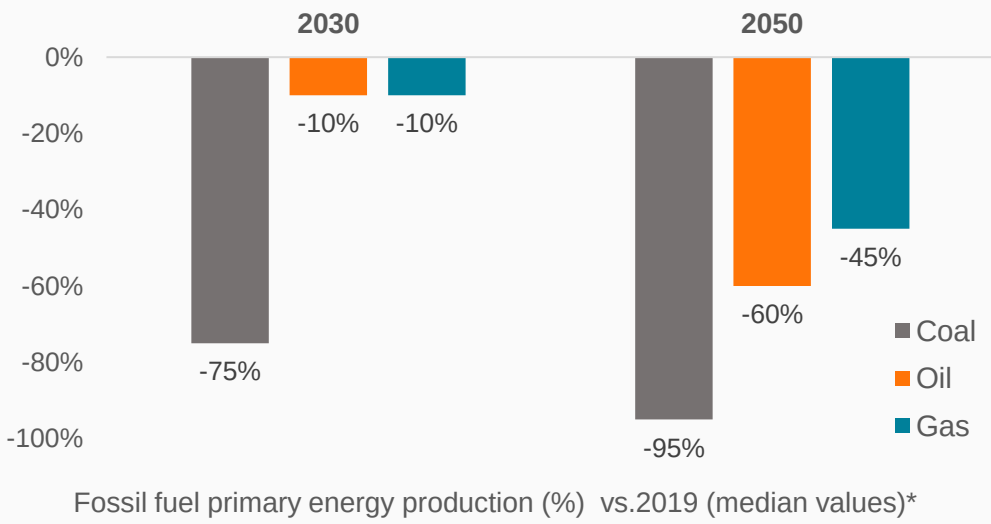
05 Deep Dive 3: What does compatibility with +1.5°C and net-zero 2050 mean?

- A flawed statement from some stakeholders: in the absence of a sector-focused emissions reduction pathway, O&G should exhibit a 40-45% reduction in GHG emissions by 2030.
- Those figures are in line with global emission reduction scenarios compatible with +1.5°C at End of Century with no or limited overshoot: 97 IPCC C1 scenarios. Scenarios cover however emissions from the whole of the energy mix and other emitters, not just those from O&G:
  - All sectors including AFOLU
  - All primary energy sources, including coal, oil, gas and renewables
- The deterministic IEA NZE scenario includes in WEO 2024 shows a reduction of 33 % of global energy sector GHG emissions by 2030 vs 2022 (a perimeter which is different from that of IPCC scenarios), which adds to the need to analyze emission reductions by energy segment to compare them properly with reference scenarios.

% Reduction GHG Emissions C1 scenarios*



Global fossil fuel production under C1 scenarios



Fossil fuel primary energy production (%) vs.2019 (median values)*

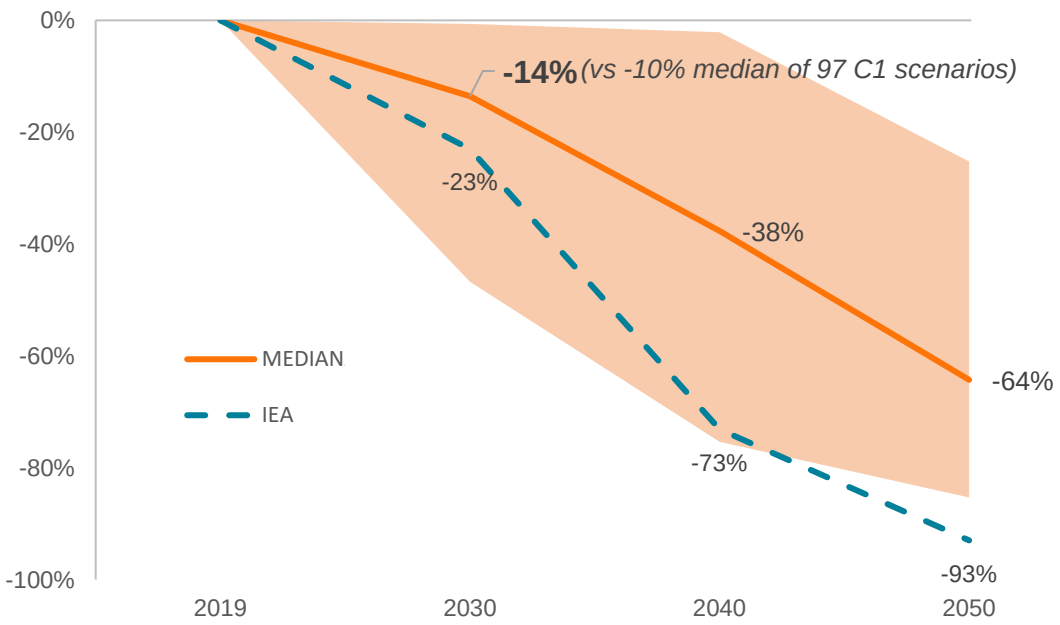
***Source:** *Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (Table 3.2 and 3.6). IPCC, 2022*
C1 scenarios: limits warming to 1.5°C in 2100 with a likelihood greater than 50%, with no or limited overshoot throughout the 21st century
Shown are interquartile ranges (5% and 95%)

05 Deep Dive 3: What does compatibility with +1.5°C and net-zero 2050 mean?

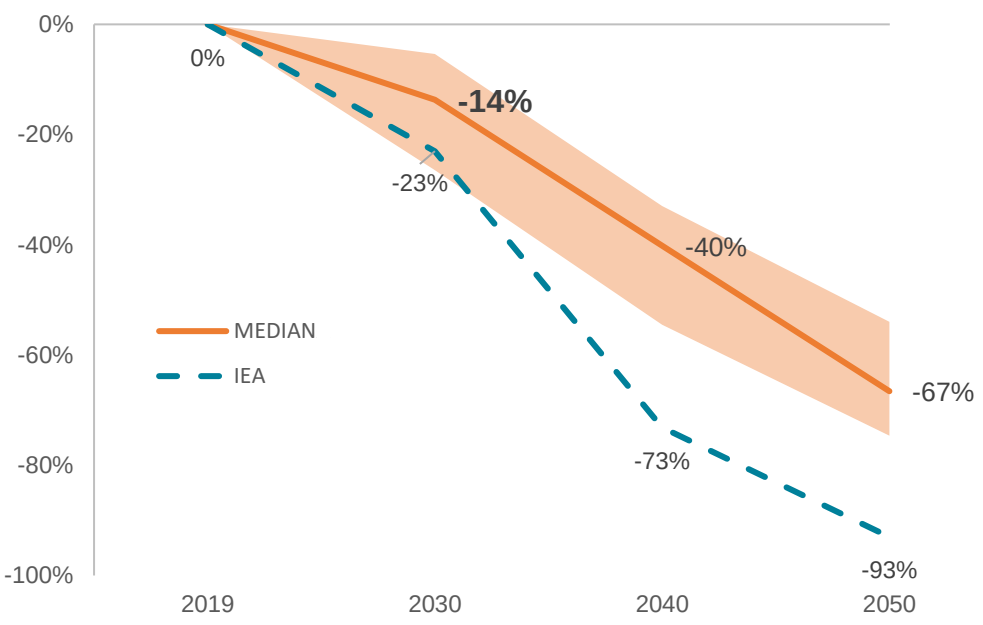
- Second consideration: net zero emissions in 2050 is an additional requirement to the compatibility with +1.5˚C at end of century with no or limited overshoot.
- Out of 97 IPCC C1 scenarios, **19(1) are net zero by 2050, with a median absolute emission reduction from O&G of 14%.**

Change in primary emissions from oil & gas

Change in 19 scenarios in primary emissions from oil & gas



Change 9 scenarios in primary emissions from oil & gas (2)

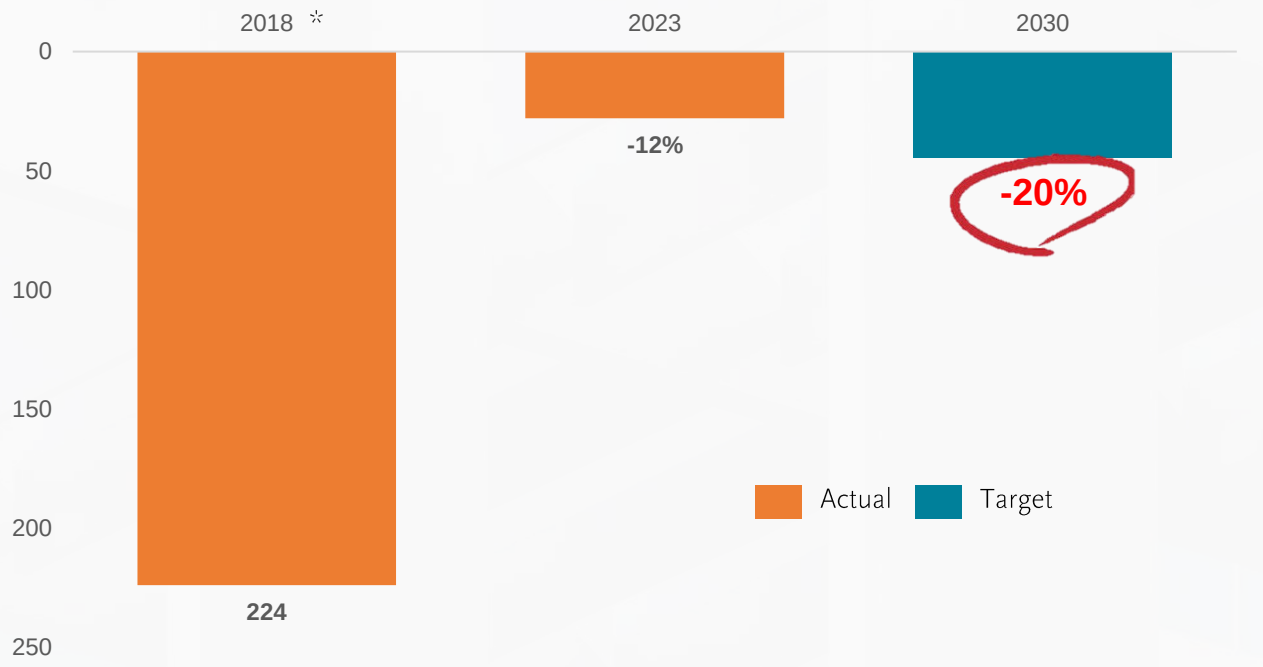


(1). Scenarios that achieve a net emissions reduction of more than 95% by 2050 in the energy sector compared to 2021
(2). Including restrictions for CCS, nuclear and CO_2 price, among others

05 Deep Dive 4: Absolute emissions target scope 1+2+3 based on products sold

TOWARDS SETTING A NEW TARGET FOR REPSOL
(formalized in the 2024 annual Integrated Management Report)

Reduction of Scope 1, 2 and 3 emissions Category 11 (use of products sold)



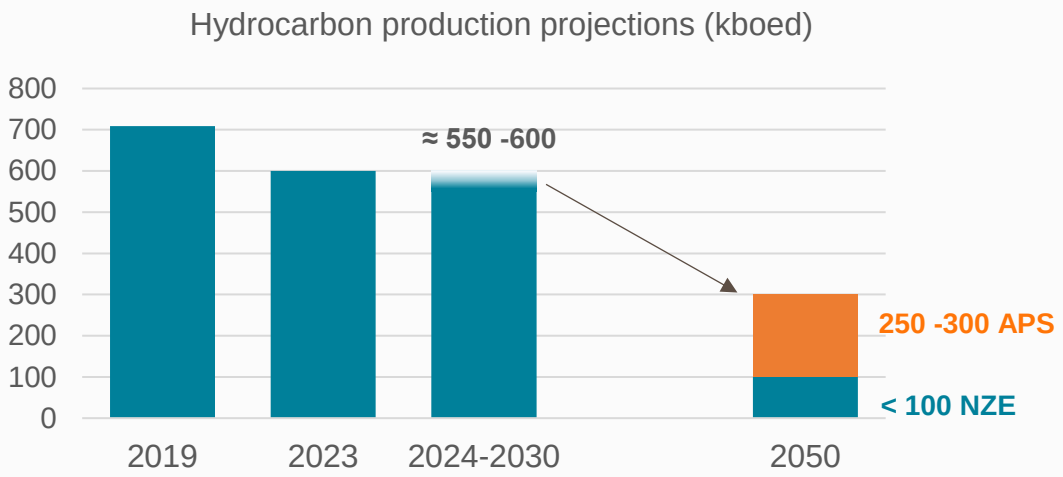
* Reference year

06 An additional stakeholders' request: a framework for Repsol E&P

- Some stakeholders request a more explicit picture of Repsol´s E&P strategy and its compatibility with decarbonization targets.

- Repsol E&P decarbonization strategic framework:

1 Production growth is not a target. Projections consistent with strategy show flattish production this decade, declining afterwards:



2 E&P Capital allocation key role as a free cash generator for shareholder remuneration and low-carbon investment

3 Asset portfolio management for higher margin ($/boe) and 1st quartile lower carbon per barrel (CO_2/boe), towards 10 kg CO_2/boe

4 No frontier exploration to avoid long-cycle projects, limit exploration capex to < 2$/boe (from peak of >10$/boe in the past) around our existing plays

5 Unconventionals represent a growing share of production providing greater capex flexibility (no stranded reserves)

Decarbonization metrics and targets update

ESG Investor Roadshow, March 2025

The Repsol Commitment
Net Zero Emissions
by 2050