

# The (mis)use of scenarios in fossil fuel and industry climate disclosures

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# Often the market claims Paris-alignment, but global emissions are not dropping

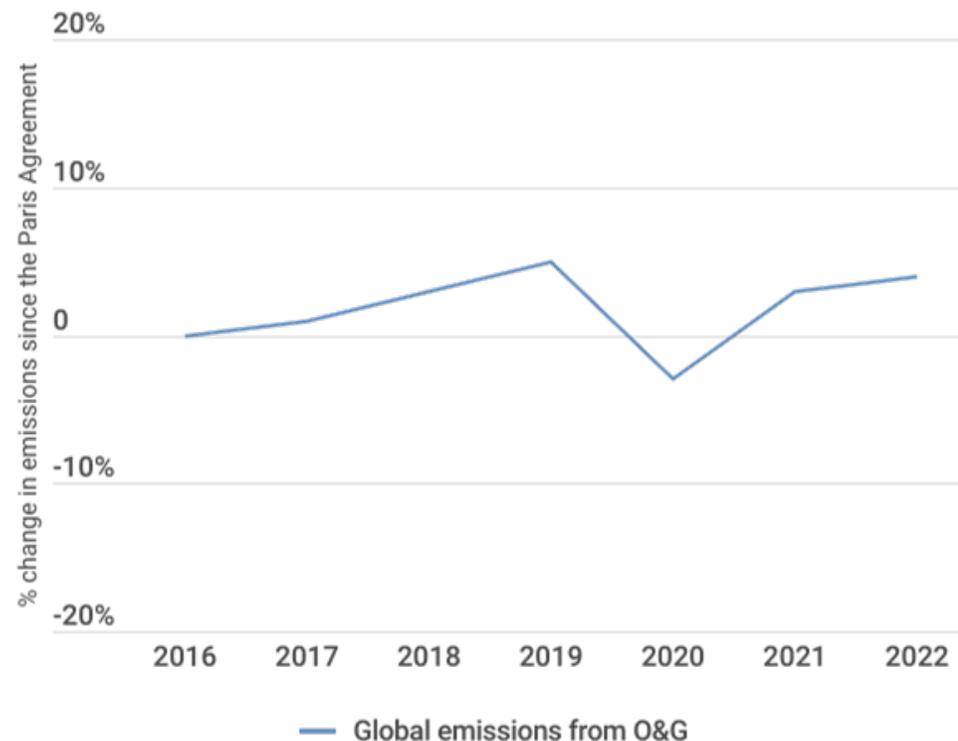
## Why?

Companies use scenarios to claim alignment with the Paris Agreement.

## What is the result?

Companies do not use scenarios appropriately to claim Paris-aligned strategies. Investors continue to invest in new fossil fuel projects.

### Global emissions from oil and gas have increased since the Paris Agreement was adopted



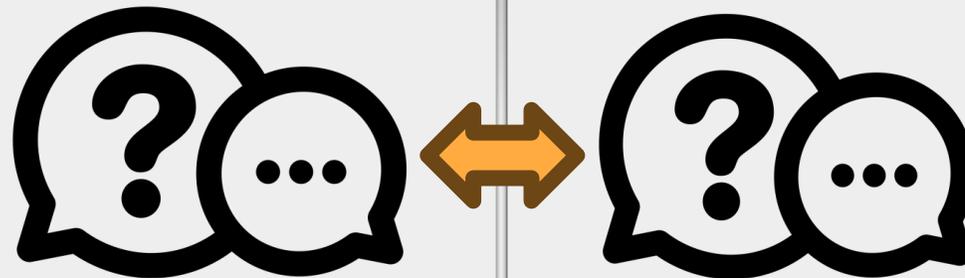
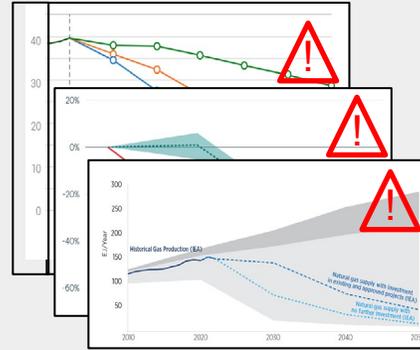
Source: IEA WEO extended datasets, company disclosures, ACCR modelling

## We ...

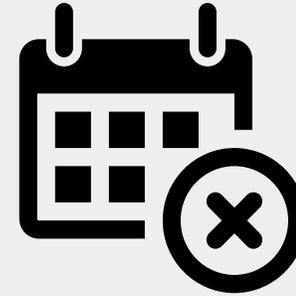
... find widespread scenario misuse in climate disclosures

... develop a simplified scenario assessment and escalation framework

... advocate for engagement with the expert community



## The IAMC community can ...



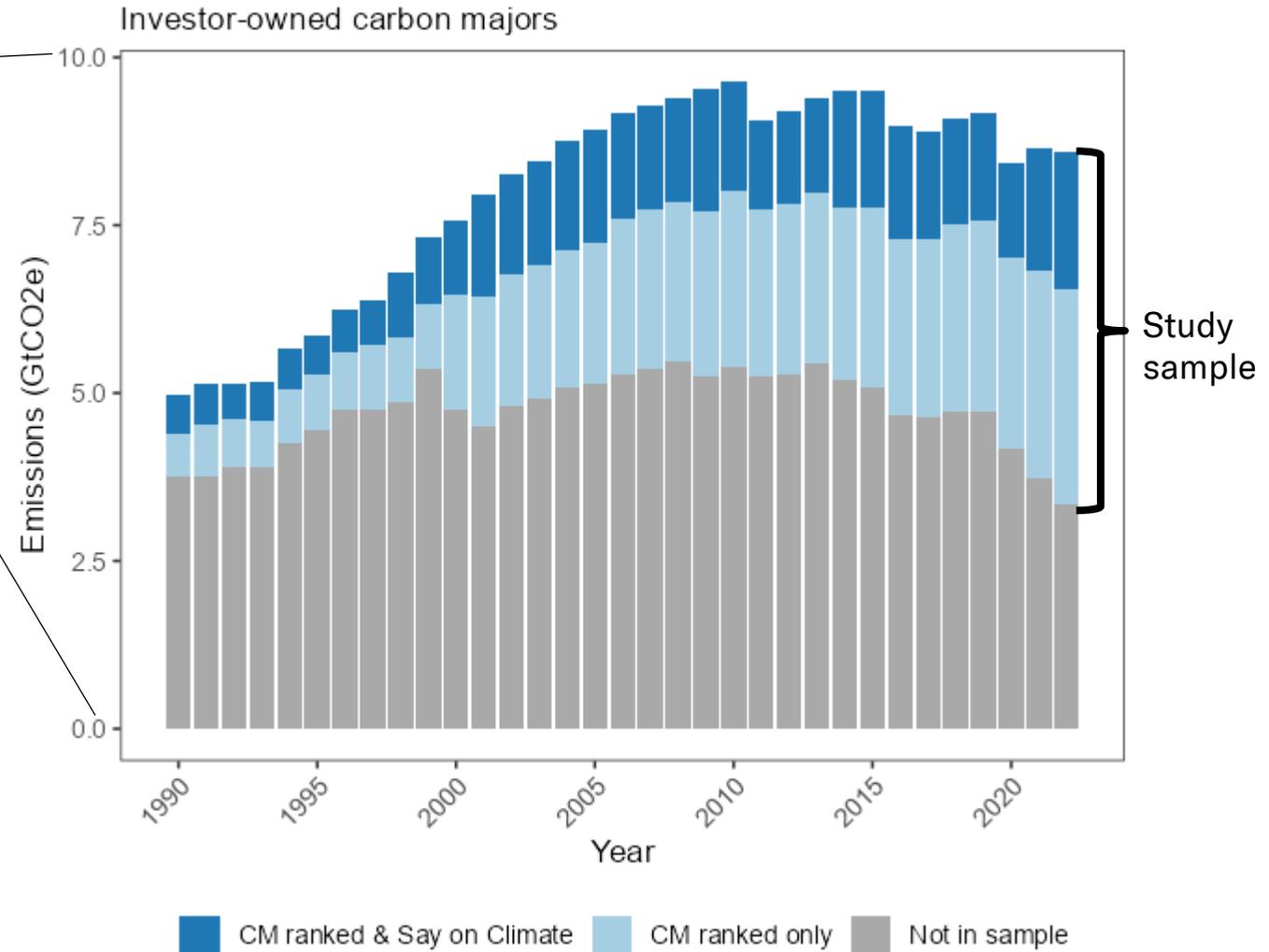
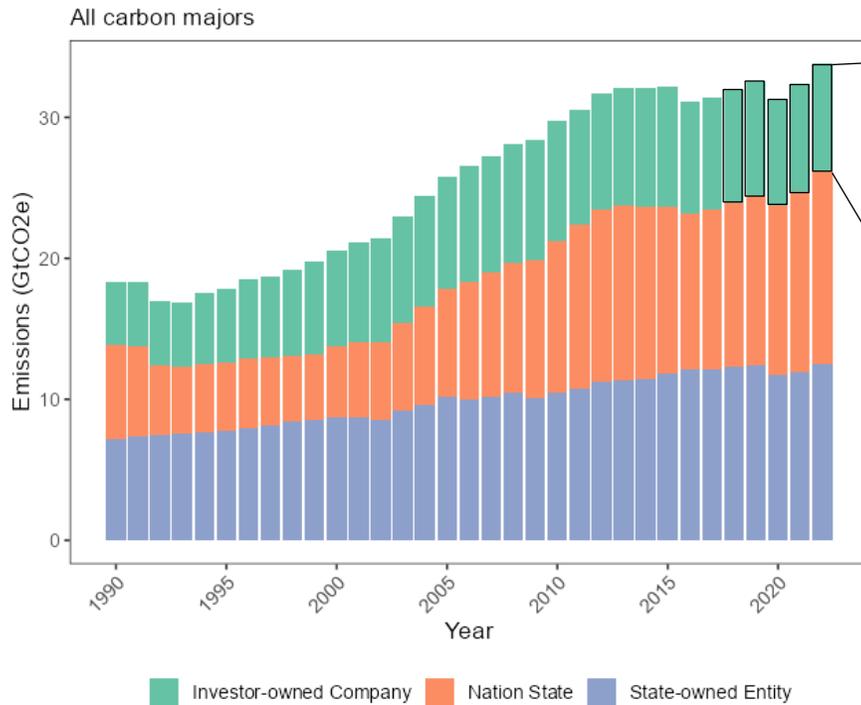
... introduce scenario expiry dates & renewal processes



... establish new peak temperature / overshoot naming conventions

... establish a public consultation mechanism for scenario databases

# Investor-owned companies represent almost a quarter of carbon majors<sup>1</sup> emissions. We investigated more than half of them

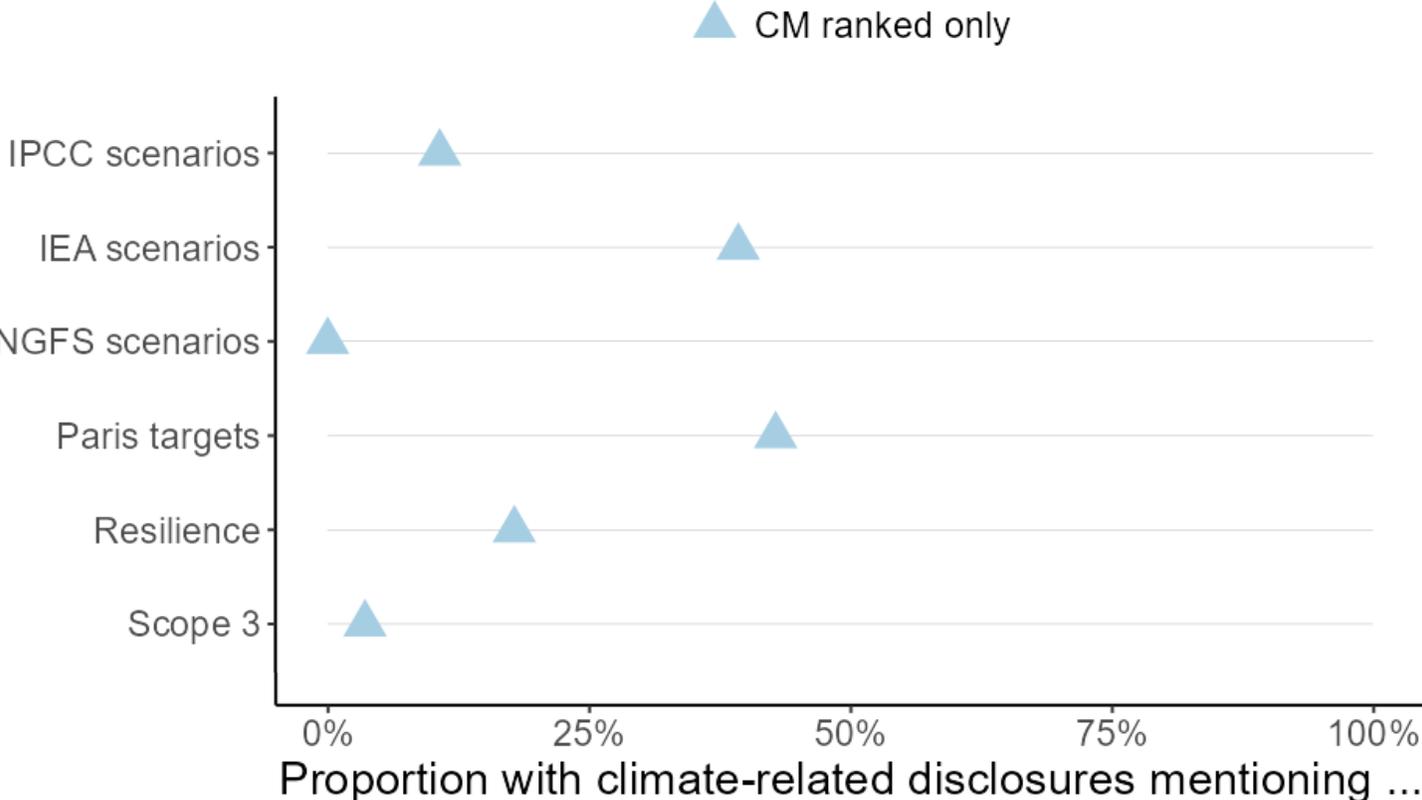


We examine the climate-related disclosures of a sample, representing more than half of total investor-owned carbon major emissions.

Some had a Say on Climate vote: investors voting on investment strategy

<sup>1</sup> The 122 largest oil, gas, coal, and cement producers. Source: <https://carbonmajors.org/>

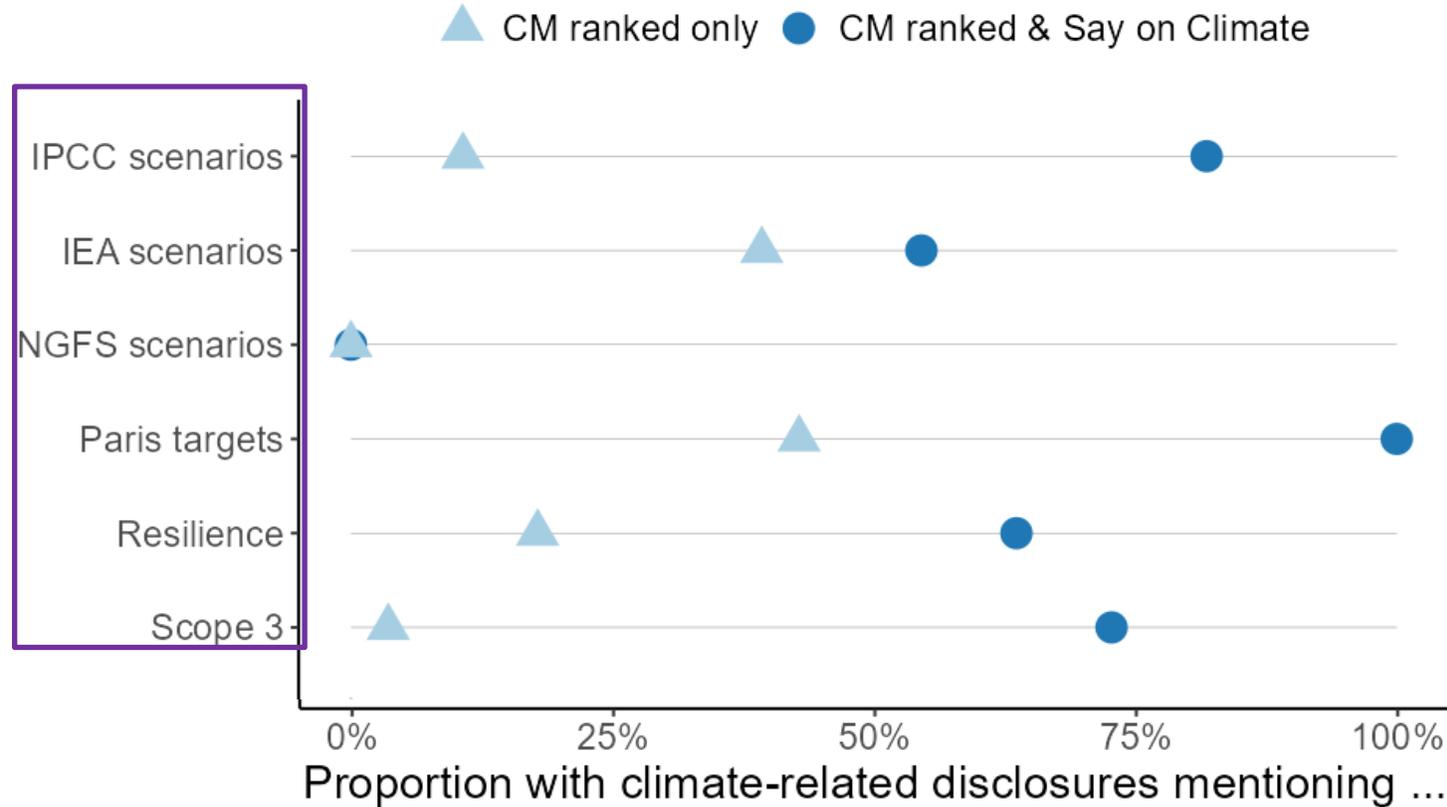
# Some carbon majors used IAM scenarios to assess Paris alignment



We examined whether and how scenarios were used to claim alignment with the Paris Agreement.

Large emissions companies may talk about targets and use scenarios.

# Most Say on Climate participants used IAM scenarios to assess Paris alignment



We examined whether and how scenarios were used to claim alignment with the Paris Agreement.

Large emissions companies may talk about targets and use scenarios.

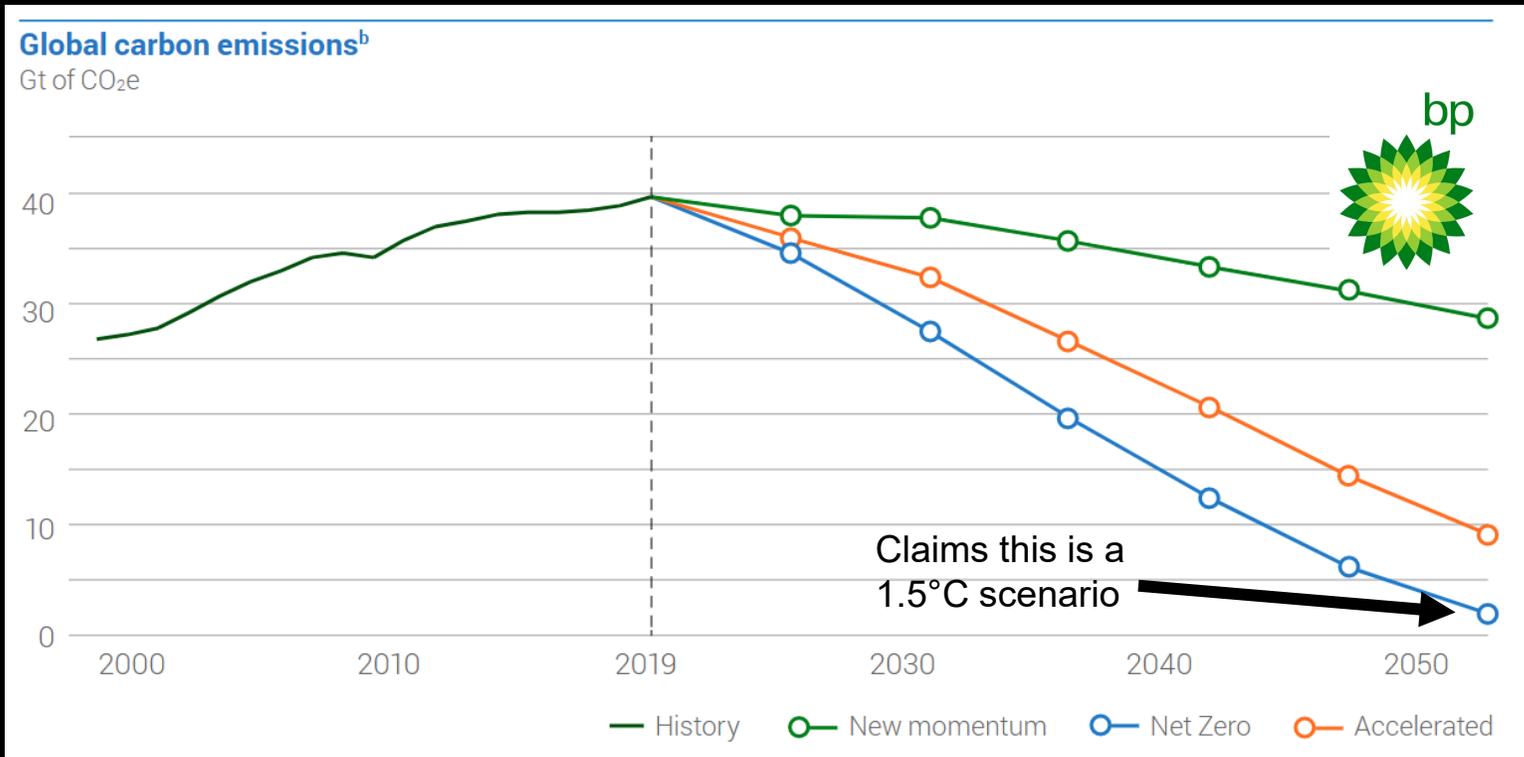
Say on Climate participants are more likely to mention IAM scenarios, global climate goals, resilience to climate impacts and scope 3 emissions.

**Say on Climate participation motivated scenario use, but also scenario misuse.**

# **A summary of IAM scenario misuse across our sample of investor-owned carbon majors**

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# 93% of companies using scenarios do not disclose CCS/CDR requirements



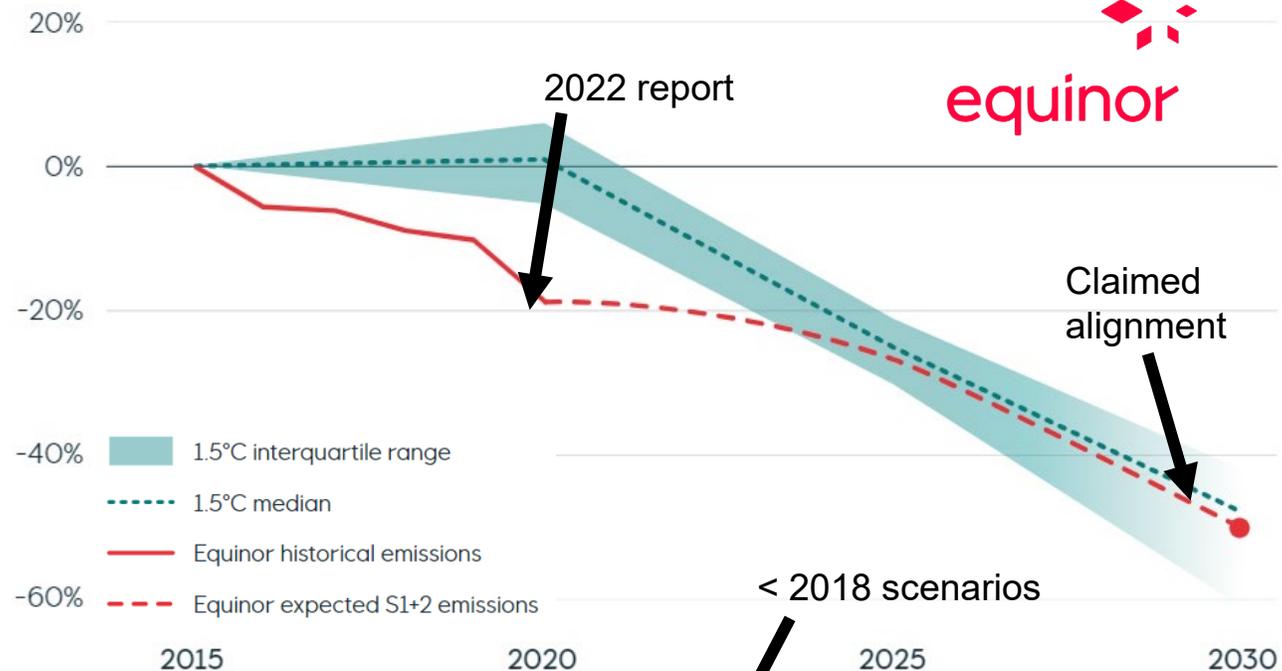
Companies use global scenario temperature labels without disclosing scenario CCS / CDR requirements post 2050 - when these are most important for addressing overshoot.

Scenario temperature labels without clear full-century CCS / CDR assumptions obfuscate risks and opportunities relevant to investors.

# 67% of companies used scenarios that were 2+ years old

## Equinor emission reductions vs IPCC 1.5°C pathway

Scope 1+2 GHG emissions, 100% operated basis



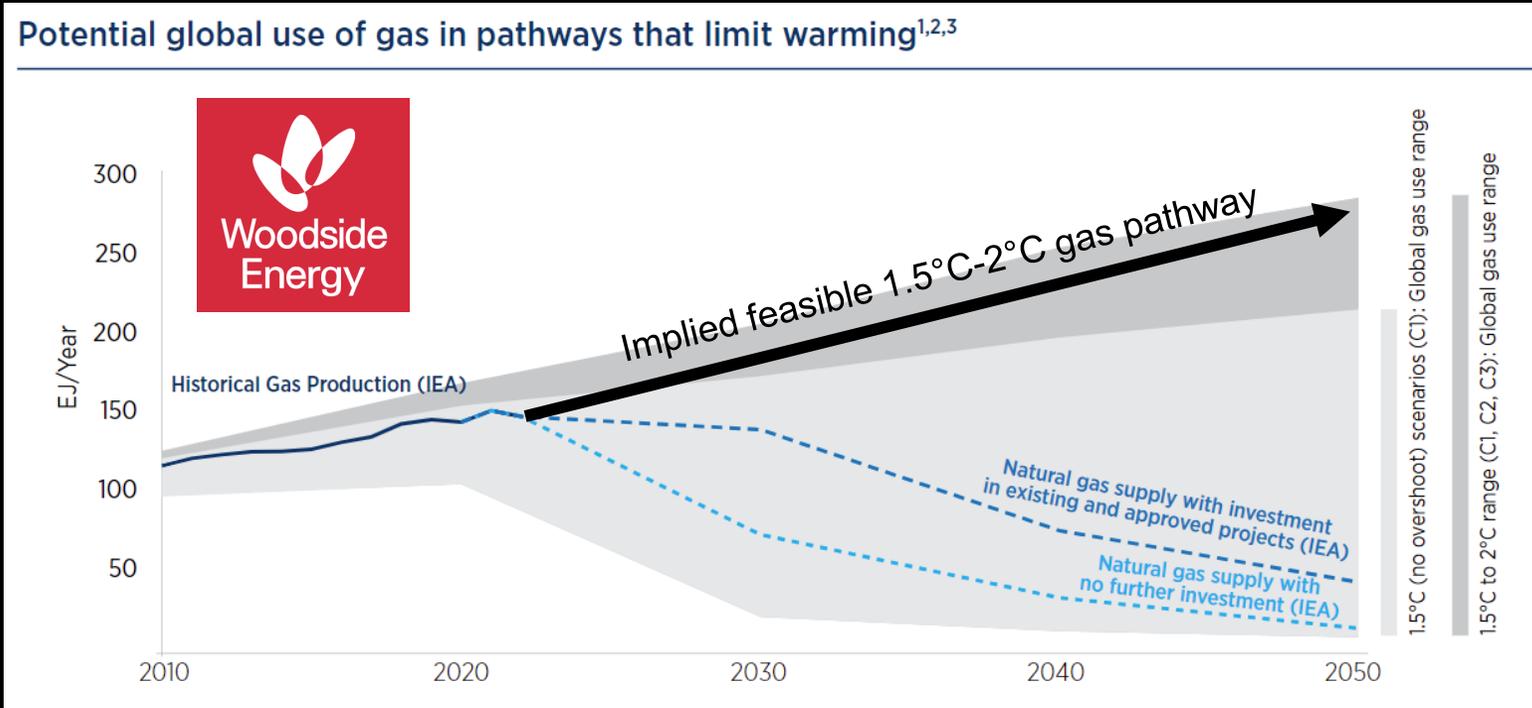
1.5°C median and interquartile range derived from IPCC Special Report on Global Warming of 1.5°C (SR15). See endnote [ii] on p. 26 for details on assumptions and methodology.

Companies compare relative reduction targets to older emissions scenarios neglecting that recent real-world emissions were quite different.

Company reduction targets informed by older scenarios no longer align with scenario temperature labels.

These targets will need to be steeper due to inaction, masking important downsides for investors.

# 47% of companies collapse scenario paths into ranges or 'ribbons'

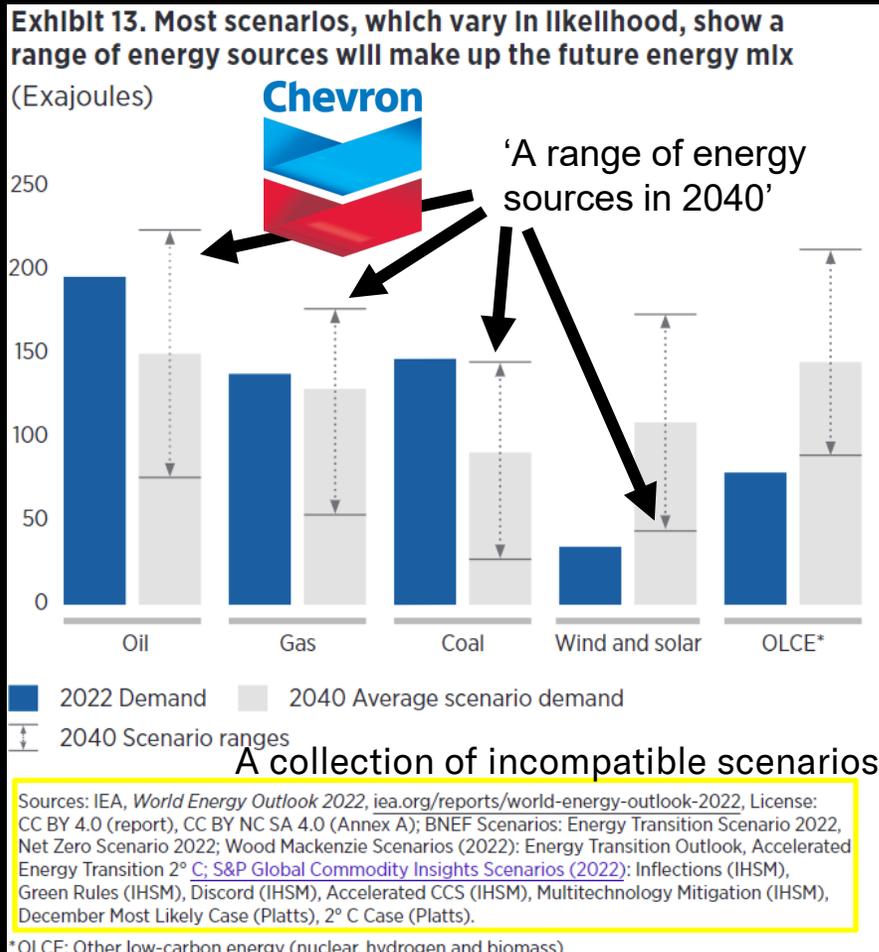


Companies collapse scenarios into 'ribbons', which masks commodity path dependencies.

Presenting a 'ribbon' implies that a scenario along the upper-bound exists and complies with labelled temperature targets.

This misrepresents stranded asset risk and commodity dependencies.

# 40% of companies collapse variables across incompatible scenarios



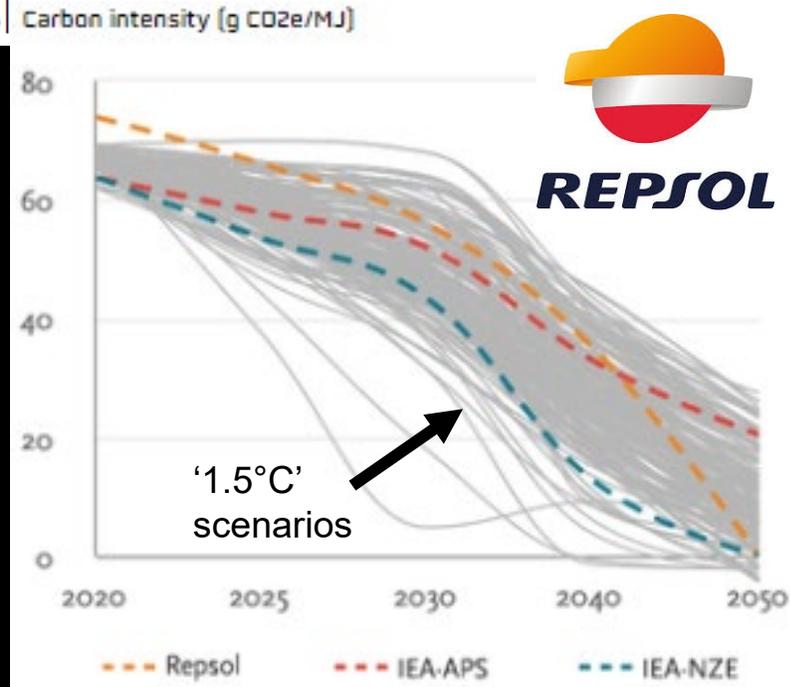
Companies present averages or ranges of variables across incompatible scenarios, erasing scenario-specific trade-offs and dependencies.

This implies that the upper bounds across commodity ranges are feasible and aligned with temperature goals.

This misrepresents stranded asset and reserve risk.

# 40% of companies using scenarios neglect probabilistic temperature rise

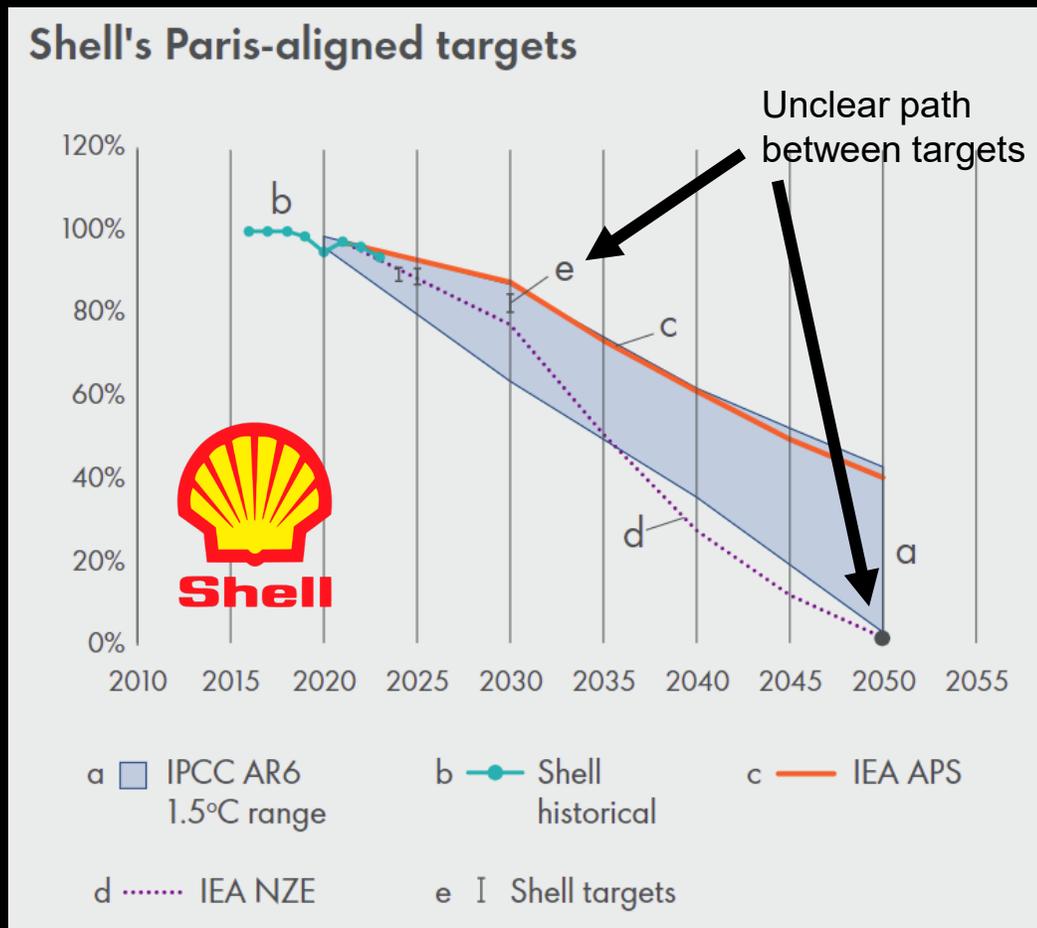
energy sources. Repsol has compared its decarbonization pathway with that of the different 1.5°C scenarios of the IPCC (AR6, 2022), calculating a carbon intensity for the scenarios based on GHG emissions data (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O) and primary energy (IIASA<sup>10</sup>), in order to draw comparisons with the reduction of Repsol



Companies do not disclose distinct probabilistic peak and long-term temperature likelihoods associated with their reference scenarios.

A naive grouping of scenarios by vague temperature labels neglects substantive differences in impacts and feasibility of managing overshoot.

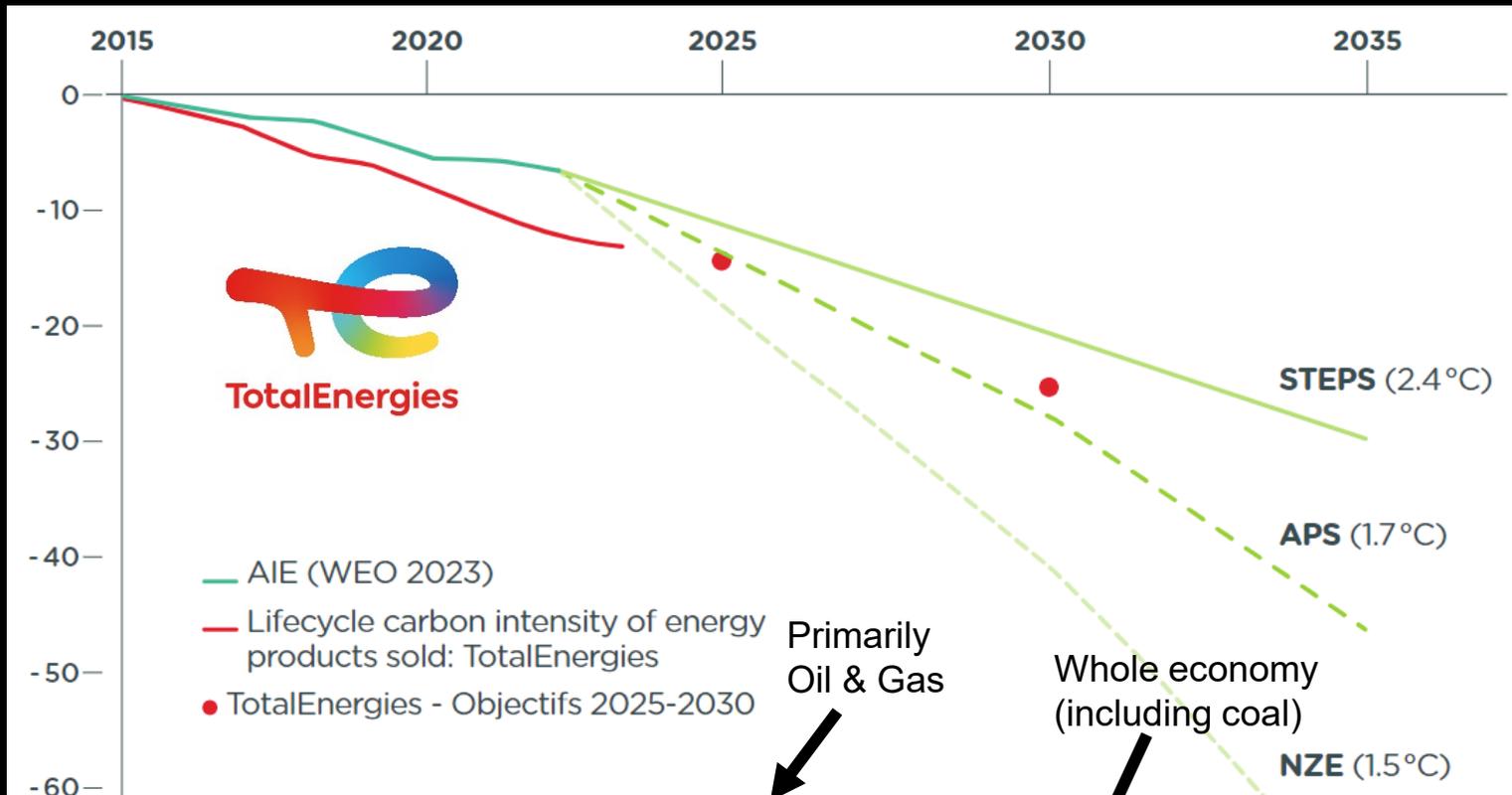
# 33% of companies using scenarios compare targets to paths



Companies present targets without any indication of paths between these, implying alignment with temperature goals that depend on *cumulative* emissions over time, not levels in the target year.

While paths may be uncertain, not showing these at all generates an implied feasibility of meeting targets in alignment with climate goals. This mispresents company strategy resilience to mitigation pathways.

# 27% of companies mix sector-specific and economy-wide emissions paths



GHG emissions. 2. TotalEnergies' lifecycle carbon intensity of energy products sold (see report's glossary for further details) and the change in carbon intensity of the world's energy, calculated as the ratio of the world's CO<sub>2</sub> emissions from fossil fuels (in Mt CO<sub>2</sub>) to the total primary energy supply (in EJ) of the IEA's World Energy Outlook 2023. A replacement factor

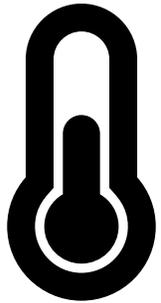
Companies compare sector-specific pathways with different emissions intensities and emissions reductions rates to whole economy scenarios.

This neglects scenario-specific sectoral emissions reductions targets in the reference scenarios, misrepresenting alignment.

# How the IAMC can help prevent and correct scenario misuse



Introduce scenario expiry dates alongside processes for scenario update and renewal



Make explicit scenario peak temperature and overshoot duration in naming conventions



Establish a public ‘ask-the-project-team’ consultation mechanism for scenario databases



## About Us

ACCR is a multidisciplinary organisation with expertise in shareholder strategy, equities analysis, climate science and legal risk. Our focus is enabling investors to escalate their engagements with major, heavy-emitting listed companies in their portfolios, as a tool for managing physical climate risk.

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