

BP: Capex beyond Paris

bp



■ ACCR

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Executive Summary

Investors have long recognised that disciplined capital allocation is critical for BP to manage its resilience to the energy transition. At the 2019 annual general meeting (AGM), 99% of shareholders – and management – supported a binding special resolution which committed the company to annually review and disclose “*the consistency of each new material capex investment ... with the Paris Goals*”.¹

Shareholder support for BP’s decarbonisation strategy was seen at the 2022 AGM, when 80% of investors endorsed its climate plan, including a target to reduce hydrocarbon production 40% by 2030.

Despite this, in early 2023 BP significantly weakened its target for reducing hydrocarbon production – down to 25% – and is widely anticipated to scrap it altogether at a forthcoming investor day. We forecast this reduced ambition will result in BP producing 84% more oil and gas in 2030 than it was targeting in 2020.

BP’s capital allocation framework now stands as the primary lever for ensuring that the company’s capex is consistent with the Paris goals – which in turn reduces the risk of impairments as the energy transition progresses.

However, the methodology BP currently uses to evaluate its capital allocation is flawed – enabling expenditure that far exceeds a Paris-consistent framework. If the oil and gas industry used the same framework, as a sector it would consume five times the 1.5°C carbon budget and twice the well below 2°C budget.

Our modelling shows that none of BP’s oil and gas FIDs in 2023 aligned with the International Energy Agency’s (IEA) Net Zero Emissions (NZE) pathways for oil and gas, and none of its major unapproved oil and gas projects scheduled for FID before 2030 align with the NZE.

1. BP, Notice of BP Annual General Meeting 2019, p4.

Key points


- BP is expected to abandon its target to cut oil and gas output by 2030, which means its capital allocation framework is now the primary lever for the Company to ensure its capex is consistent with the goals of the Paris Agreement.
- BP's framework for evaluating if its capital allocation is consistent with the goals of the Paris Agreement is flawed, because:
 - it relies on a weak correlation between modelled oil & gas prices and temperature outcomes. A more credible approach would be based on oil and gas production, which shows a much stronger correlation with climate outcomes
 - it excludes projects with capex under \$250 million, and FIDs through joint ventures and equity-accounted entities. This means 86% of greenfield oil and gas capex was not assessed under the framework in 2023, and 55% not assessed since 2019.
- BP's capex evaluation framework incorrectly assumes its commodity prices are consistent with the Paris Agreement's temperature goals. If every oil and gas company applied this approach, the sector would consume five times the 1.5°C budget and twice the well below 2°C budget.
- Using our least-cost Paris alignment methodology to evaluate projects within the context of global oil and gas supply, we found that:
 - none of BP's hydrocarbon FIDs in 2023 were aligned with the IEA's NZE pathways for oil and gas, despite BP's assertion that they were consistent with the Paris goals
 - none of BP's major unapproved oil and gas projects scheduled for FID before 2030 align with the NZE, and the portfolio does not have a cost advantage.

BP's falling ambition


2019 – Management and 99% of shareholders support a CA100+ resolution requiring BP to annually review and disclose “a strategy that the board considers in good faith to be consistent with the Paris goals” and “the consistency of each new material capex investment...with the Paris Goals”.¹

The supporting statement calls on the company to evolve the methodology over time to include “consideration of the full lifecycle economics of individual projects, evaluation of potential return on investment and consideration of their competitive positioning in the context of the Paris Goals.”²


The resolution sought to limit capex into oil and gas projects based on the remaining carbon budget at the time. Since then, the world has consumed two thirds of the remaining 1.5°C carbon budget³, and the IEA has subsequently concluded there is no room for new oil and gas projects under its only Paris aligned scenario (the NZE).



2020 – BP targets a 40% reduction in hydrocarbon production by 2030. Endorsed by a majority of investors at the 2022 AGM.⁴



2022 – Target drops to 25%, resulting in a significant vote against the Chair at the 2023 AGM due to the lack of consultation around this strategic change.⁵



2025 - BP is expected to remove its 2030 production target at an investor day in February 2025.⁶

1. BP, Notice of BP Annual General Meeting 2019, p4.

2. BP, Notice of BP Annual General Meeting 2019, pp.23-24.

3. IPCC SR1.5 showed remaining 1.5°C budgets with 50% probability of [480-770 GtCO₂](#); relative to 170 GtCO₂ at the start of 2024.

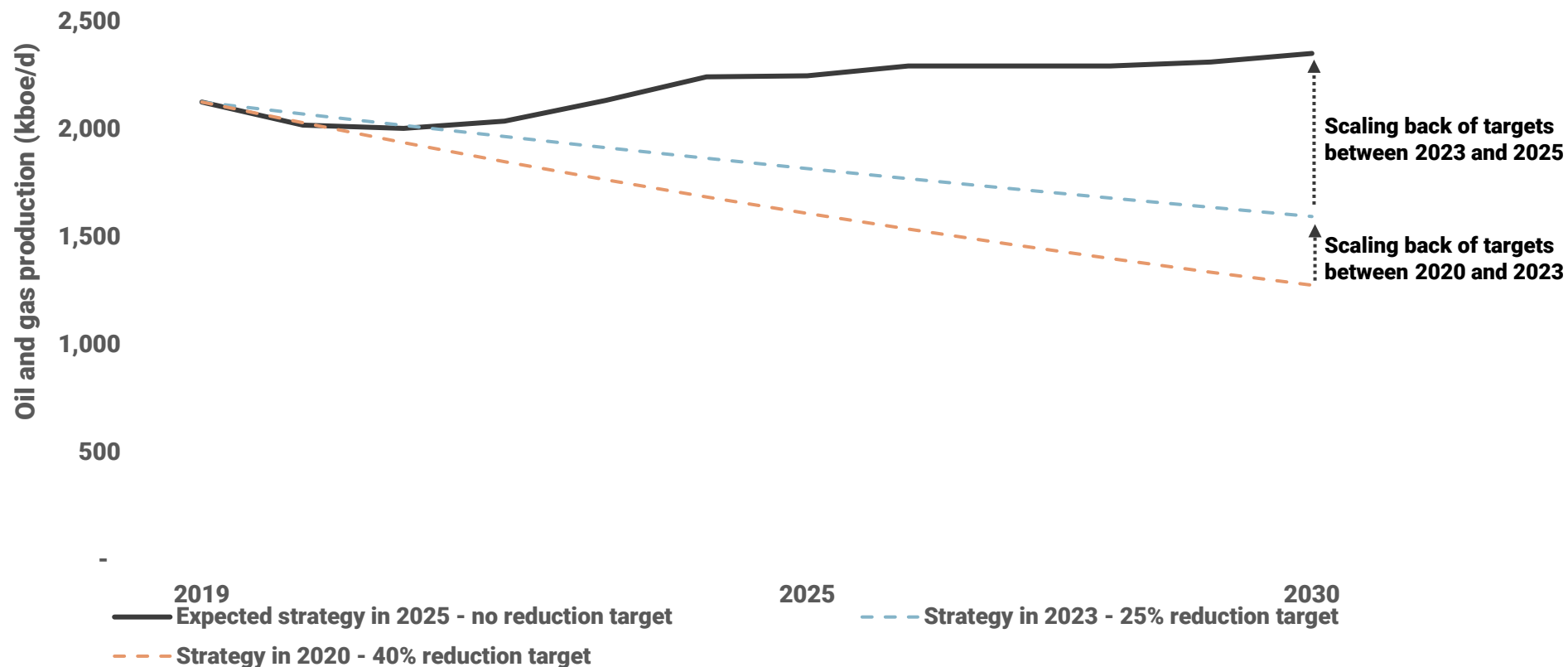
4. BP, [From International Oil Company to Integrated Energy Company: bp sets out strategy for decade of delivery towards net zero ambition](#), p1.

5. BP, [bp Integrated Energy Company strategy update: Growing investment. growing value. growing distributions.](#)

6. Reuters, [Exclusive: BP abandons goal to cut oil output, resets strategy.](#)

If BP continues to scale back its climate commitments as anticipated, it is forecast to produce 84% more oil and gas in 2030 than it was targeting in 2020¹

BP is forecast to produce 84% more oil and gas in 2030 than it was targeting in 2020¹



1. The expected strategy for 2025 is derived from BP's existing portfolio of operating projects and pre-FID projects that meet BP's investment criteria. This accounts for divestment in line with the GHG protocol.

Recommendations

To improve its project-by-project assessment BP should:

1. consider if there is room for additional fossil fuel developments in the 1.5°C (or well below 2°C) carbon budget, and if there is, whether individual projects are cheap enough to compete for this remaining carbon budget against the rest of the global industry.
2. apply the framework more broadly, so that a clear majority of the company's capex is assessed.

This is likely to conclude that:

- the 1.5°C and well below 2°C carbon budgets are consumed by existing oil and gas developments
- no new upstream oil and gas investment is consistent with the goals of the Paris Agreement, raising questions in ACCR's view as to whether BP is meeting the requests of the 2019 shareholder resolution.

BP's Paris-consistent capex framework



BP's Paris-consistent capex evaluation framework is not fit for purpose

Under BP's current framework, a new and material investment (defined as over \$250 million) is considered Paris-consistent if it:

- meets BP's financial criteria (i.e. hurdle rates, payback periods), which factor in its pricing assumptions of \$60/bbl¹ for oil and \$4/mmbtu for gas, that BP claims are "*broadly consistent with a range of transition pathways compatible with meeting the Paris goals*"² (see slide 13).
- improves BP's average operational carbon intensity, where applicable.

This framework is flawed because it:

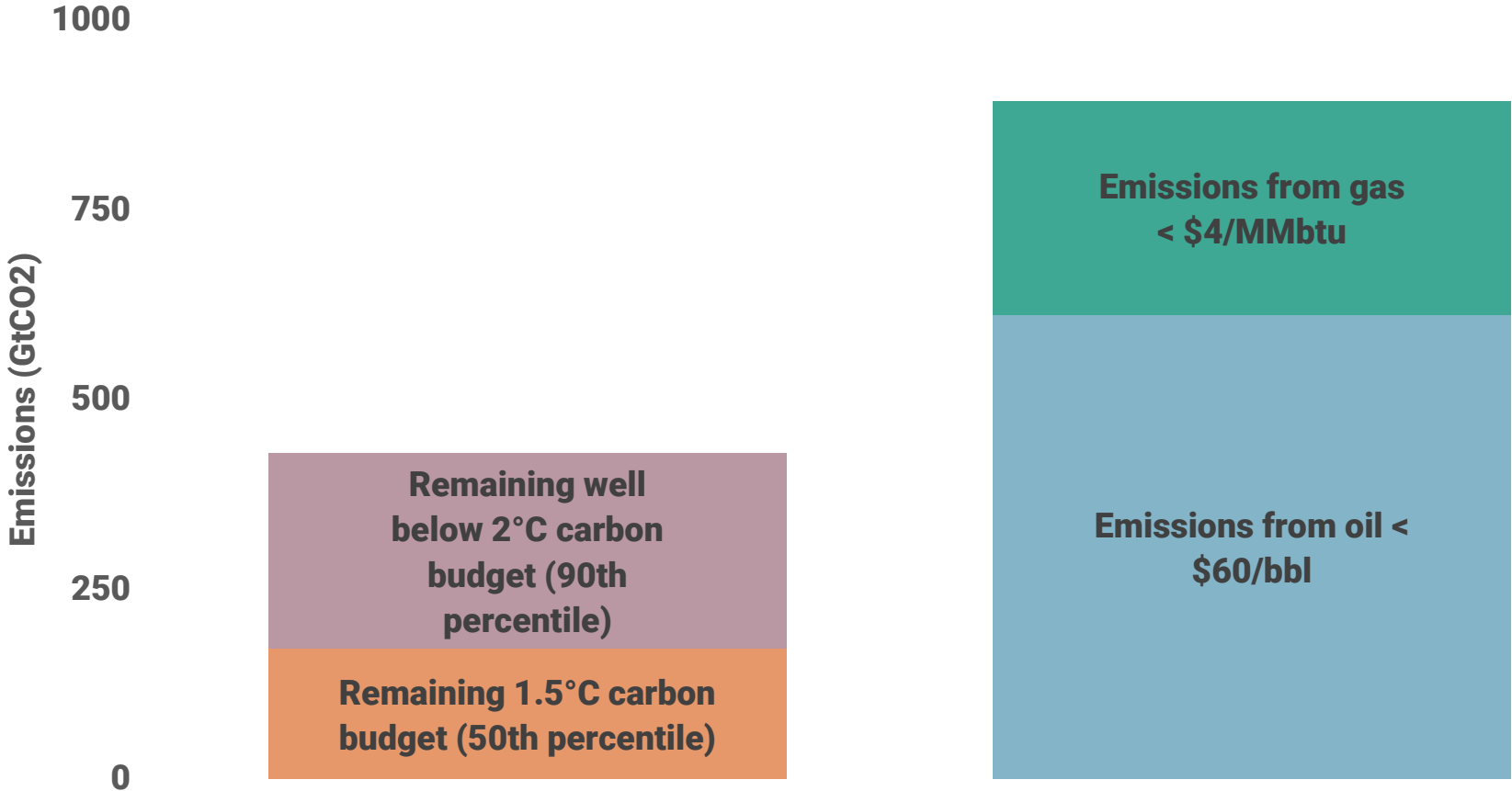
1. incorrectly assumes that modelled oil and gas prices are well correlated with temperature outcomes.
2. excludes projects with capex under \$250 million, and generally excludes FIDs made through joint ventures and equity-accounted entities. This means 86% of capex in 2023 was excluded from assessment, and 50% since 2019.

**BP's capital allocation framework is inconsistent with the goals of the Paris Agreement.
If every oil and gas company applied this approach, the sector would consume five times the 1.5°C budget and twice the well below 2°C budget.**

1. BP's central pricing assumptions go from \$70/bbl in 2025 to \$50/bbl in 2050, with an average price of \$64/bbl over the period. BP also tests whether investments meet return expectations using a \$60/bbl oil price. Our analysis conservatively adopts the lower \$60/bbl assumption (BP 2023 Annual Report, p30).

2. BP 2023 Annual Report, p30.

If the broader oil and gas industry justified investments as Paris-consistent like BP, it would consume over five times the remaining 1.5°C carbon budget alone^{1, 2}



Source: Rystad Energy, Lamboll et al., IEA WEO extended datasets, ACCR modelling

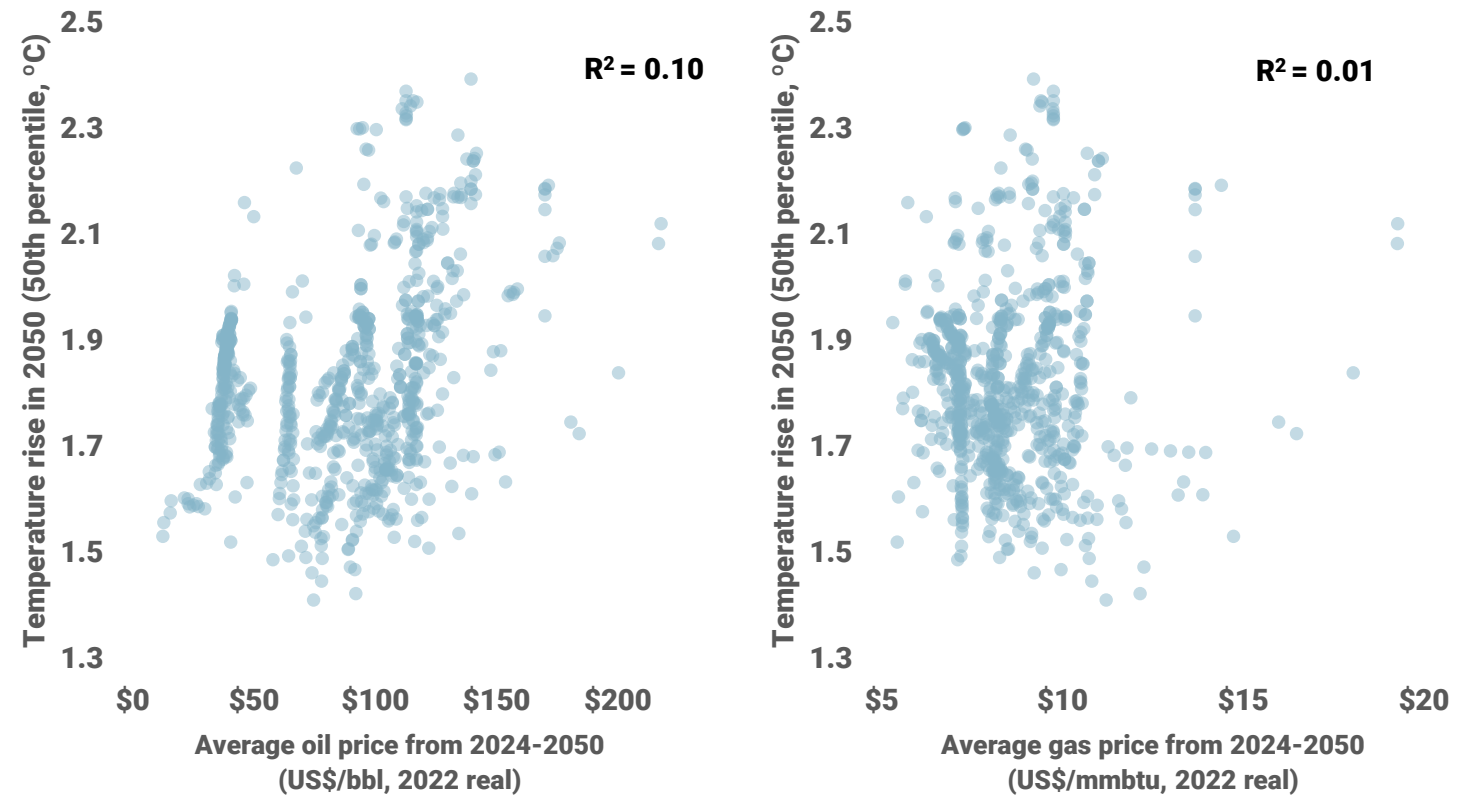
1. Lamboll, R.D., Nicholls, Z.R.J., Smith, C.J. et al. Assessing the size and uncertainty of remaining carbon budgets. Nat. Clim. Chang. 13, 1360–1367 (2023). <https://doi.org/10.1038/s41558-023-01848-5>. The remaining carbon budget (RCB) is adjusted to reflect the start of 2025, based on 2023 emissions data from the 2024 World Energy Outlook and [estimated 2024 emissions from Carbon Brief analysis](#).
 2. Schleussner, C.F., Ganti, G., Rogelj, J. et al. An emission pathway classification reflecting the Paris Agreement climate objectives. Commun Earth Environ 3, 135 (2022). <https://doi.org/10.1038/s43247-022-00467-w>. The justification for using the 90th percentile stems from the interpretation of the Paris Agreement's "well below 2°C" objective as a significant strengthening of the earlier "below 2°C" goal, aligning it with the IPCC's calibrated uncertainty language where "very likely" corresponds to a ≥90% probability.

BP relies on an incorrect assumption that modelled oil and gas prices are well correlated with temperature outcomes

Relying on price assumptions alone does not, in our view, accurately assess Paris consistency:

- As the scatter plots show, across 800 scenarios,¹ **there is no clear correlation between modelled oil and gas prices and temperature outcomes in 2050.**
- A \$60/bbl oil price appearing in some Paris-consistent scenarios does not justify projects with lower break-even prices as being consistent with the Paris temperature goals. Many scenarios with similar prices miss the goal of staying well below 2°C by 2100, with some exceeding 3°C.²
- BP acknowledges the "considerable uncertainty" in the relationship between oil and gas prices and temperature outcomes.³

There is no meaningful relationship between modelled oil and gas prices and temperature outcomes



Source: IPCC AR6, NGFS and IEA extended datasets, ACCR modelling

1. Our analysis covered ~1,100 scenarios from the IPCC AR6, NGFS, and IEA datasets. For ~800 scenarios with available price data, annual prices were adjusted to 2022 real terms for direct comparison with BP's assumptions. Average prices for 2024-2050 were calculated and linked to corresponding temperature outcomes.

2. We identified oil prices within ±10% of BP's \$60/bbl reference as "similar prices." Within this range, analysis of 61 scenarios shows that 84% exceeded 1.5°C by 2100, 36% exceeded 2°C, 13% exceeded 2.5°C, and 5% exceeded 3°C.

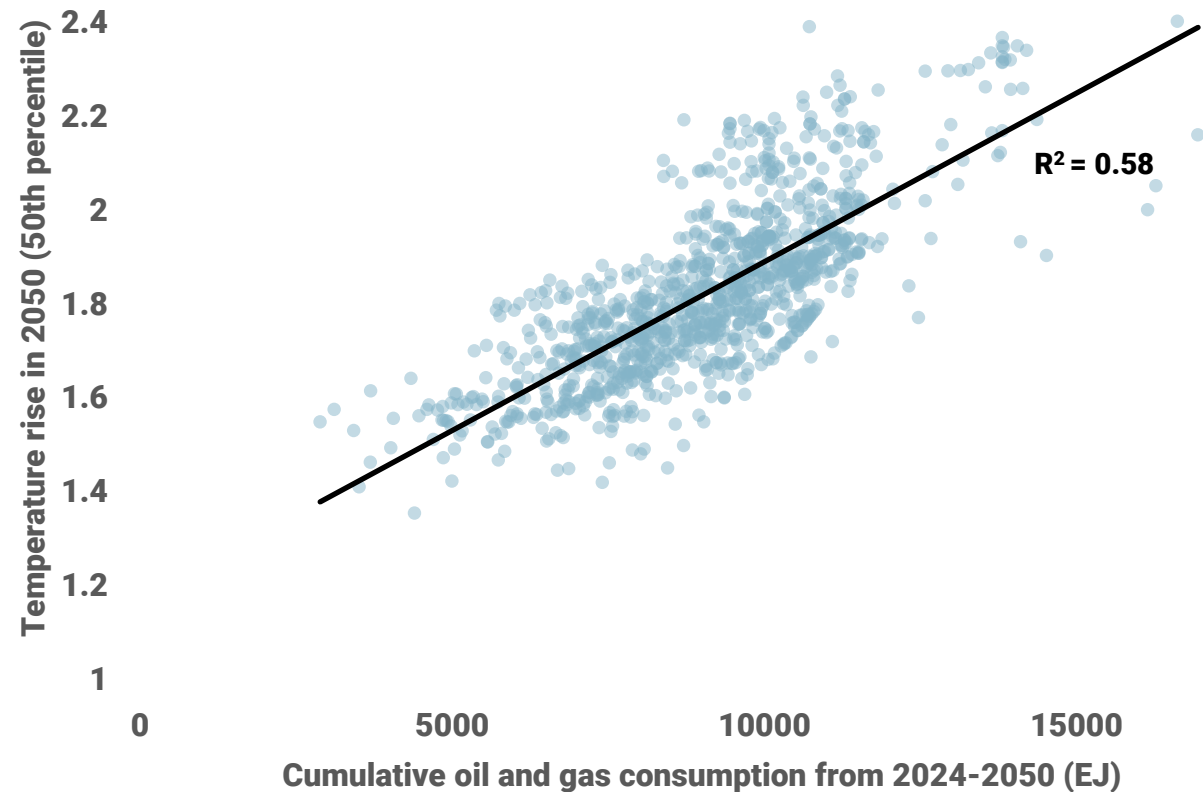
3. BP, 2023 Annual Report, p14.

There is, however, a strong correlation between oil and gas consumption and temperature rise - highlighting the need to link Paris consistency assessments with production

Unlike oil and gas prices, there is a strong correlation between modelled oil and gas consumption and temperature outcomes in 2050.

Any oil and gas company assessing its strategy for Paris consistency should therefore consider oil and gas production.

Modelled oil and gas consumption is well correlated with temperature outcomes in 2050



Source: IPCC AR6, NGFS and IEA extended datasets, ACCR modelling

BP has increased the gas price in its framework by 70% since 2019 while still claiming Paris consistency – a flexibility that highlights the flaws of its approach

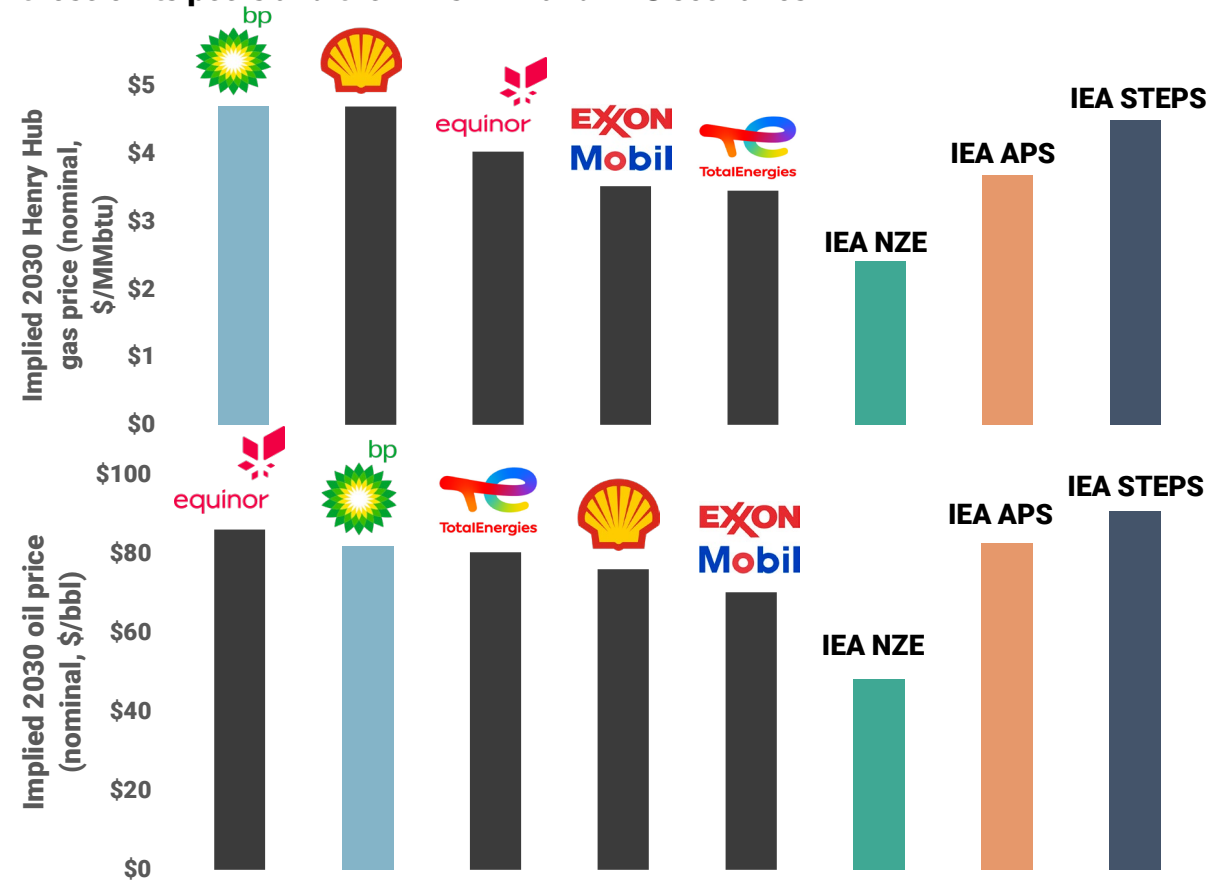
BP's gas price inputs into its Paris-consistent capex framework have increased 70% since 2019, from \$2.40/MMBtu to \$4/MMBtu in 2023.¹

Despite this sharp increase, BP maintains that its pricing remains “broadly consistent with a range of transition pathways compatible with meeting the Paris goals.”

Our analysis of 40 Paris-aligned scenarios² shows a wide range of gas prices, from \$4.50 to \$12.10/MMBtu, and oil prices ranging from \$32 to \$140/bbl. This variability allows BP to present nearly any price within these ranges as “broadly consistent,” providing considerable discretion and flexibility.

BP's central medium-term oil and gas price assumptions are generally higher than its peers' and exceed the IEA's NZE scenario (see chart). This relatively bullish outlook could drive investment decisions that increase BP's exposure to transition risks.

BP's 2030 central oil and gas price assumptions are generally higher than those of its peers and the IEA's NZE and APS scenarios³



Source: Company disclosures, WEO24 extended dataset

1. BP, [2019 Annual Report](#) (p.21) and [2023 Annual Report](#) (p.33). Figures adjusted to 2022 real terms. The price inputs for BP's Paris-consistent capex methodology have shifted from lower case price assumptions ([2019, p. 21](#)) to central case assumptions ([2023, p. 33](#)). This analysis focuses on the price inputs rather than the central case pricing.

2. Our analysis covered ~1,100 scenarios from the IPCC AR6, NGFS, and IEA datasets. Paris-aligned scenarios were classified as C1a (IPCC), Net Zero 2050/Low Demand (NGFS), and NZE (IEA), with pricing data available for ~40 scenarios.

3. Price assumptions are based on company disclosures (where available) and the IEA's WEO dataset. Values are adjusted to 2030 nominal terms using a 2% annual inflation rate. For comparability to other companies, this chart refers to BP's central \$70/bbl price, rather than the conservative \$60/bbl used elsewhere in this report.

BP's materiality criteria, and exclusion of joint venture and equity-accounted projects, has meant that nearly half of its upstream investments since 2019 have not been assessed

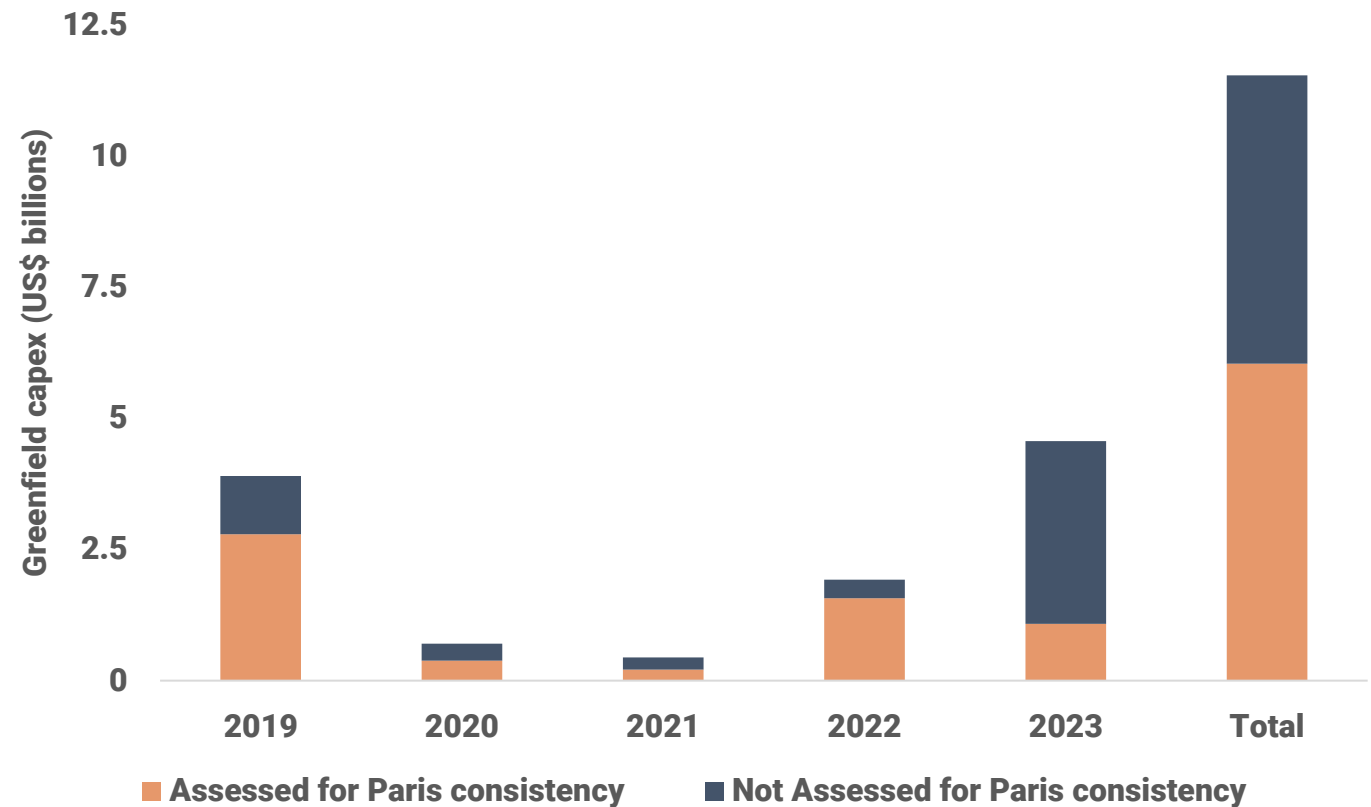
BP's Paris-consistent capex evaluation focuses only on new and material¹ projects, and generally excludes joint venture and equity-accounted projects.²

As a result, we estimate that:³

- 76% (\$3.5bn)⁴ of upstream investments that reached FID in 2023 were not evaluated, equating to 165 MtCO₂e
- almost 50% (\$5.5bn) of upstream investments since 2019 were not evaluated.

The projects sanctioned in 2023 are expected to generate over 1 GtCO₂e in gross emissions, approximately 0.6% of the remaining 1.5°C carbon budget.⁵

Since 2019, BP has not evaluated nearly half of its upstream investment within its Paris-consistent capex framework. This figure was 76% in 2023.



Source: Rystad Energy, ACCR modelling

1. BP, Annual Report, p33. BP's definition of material is projects with over \$250 million in capex.

2. Inferred based on reconciliation with Rystad Energy data.

3. Based on reconciliation of BP's Annual Reports – 2019 (p.23), 2020 (p.33), 2021 (p.36), 2022 (p.31) and 2023 (p.34), with upstream data from Rystad Energy. These figures exclude exploration and pipeline capex. Including it would raise the total capex further.

4. Oman Block 61 and Raven Infills were evaluated by BP but Rystad categorises these investments under existing projects that were previously approved, so we added them to this data manually.

5. See Note 1 on slide 10 for details on the remaining carbon budget.

Not only is BP's capex framework insufficient, but its business resilience testing uses selective inputs and downplays financial impacts beyond 2030

BP implies that maintaining EBITDA in a 1.5°C scenario is a useful way to assess consistency with Paris' goals. We disagree, because BP can still be eroding value even if it has a positive EBITDA.

Nonetheless, when assessing how BP has justified its business as “Paris-consistent”, we found that it:

- relies on scenarios categorised as Paris-aligned by the WBCSD (World Business Council for Sustainable Development), despite none of the "Paris-aligned well-below 2°C" scenarios in the WBCSD database meeting the goals of the Paris Agreement¹
- assesses impacts by testing individual variables like oil prices, while keeping others, such as gas prices, constant. This means that the 'worst case' outcome of a 27% reduction in 2030 EBITDA is unlikely to reflect the real impacts of a 1.5°C scenario, because society's response to climate change impacts both oil and gas markets (and other parameters) concurrently²
- doesn't disclose any financial impacts beyond 2030, despite BP regularly investing in projects with multi-decade lifespans.³

If BP uses climate resilience testing in the future, we recommend that it:

- uses realistic 1.5°C-aligned scenarios, such as the IEA's NZE
- models the impact of all variables in a single scenario, rather than as independent variables
- assesses impacts on a valuation metric (such as NPV) for the full life of its assets – including pre-FID assets – and not a point in time (e.g. 2030)
- understands and clearly communicates that financial stress testing is a measure of resilience, rather than Paris-alignment.

1. The WBCSD definition of “Paris-aligned well-below 2°C” includes scenarios with peak temperatures above 1.73°C and a 20-40% chance of breaching 2°C (WBCSD, 2024, [Energy Climate Scenario Catalogue: Technical Documentation](#), Figure 2). This is not aligned with the scientific framework from Schleussner et al. (2022), which defines Paris-aligned scenarios as those with peak temperatures ≤1.6°C, limited overshoot (≤0.1°C), and >90% likelihood of staying below 2°C. Almost none of the scenarios classified as “Paris-aligned well-below 2°C” meet this criteria.

2. BP's resilience testing focuses on single variables, overlooking the combined effects of multiple variables, which risks underestimating business vulnerabilities (BP, 2023 Annual Report, p67 “we made the simplifying assumption that, aside from the driver being modelled, our strategy, operating model, cost basis, volumes, margins, sales proceeds and taxes would remain unchanged out to 2030. This approach assumes all other variables remain at reference case”).

3. BP, 2023 Annual Report. “...we quantitatively assessed the impact, to each business area, of potential transition exposure scenarios in 2030” (p.64), “Most of our analysis focused on our medium-term time horizon (2030)” (p.66).

A least-cost evaluation of BP's Paris alignment

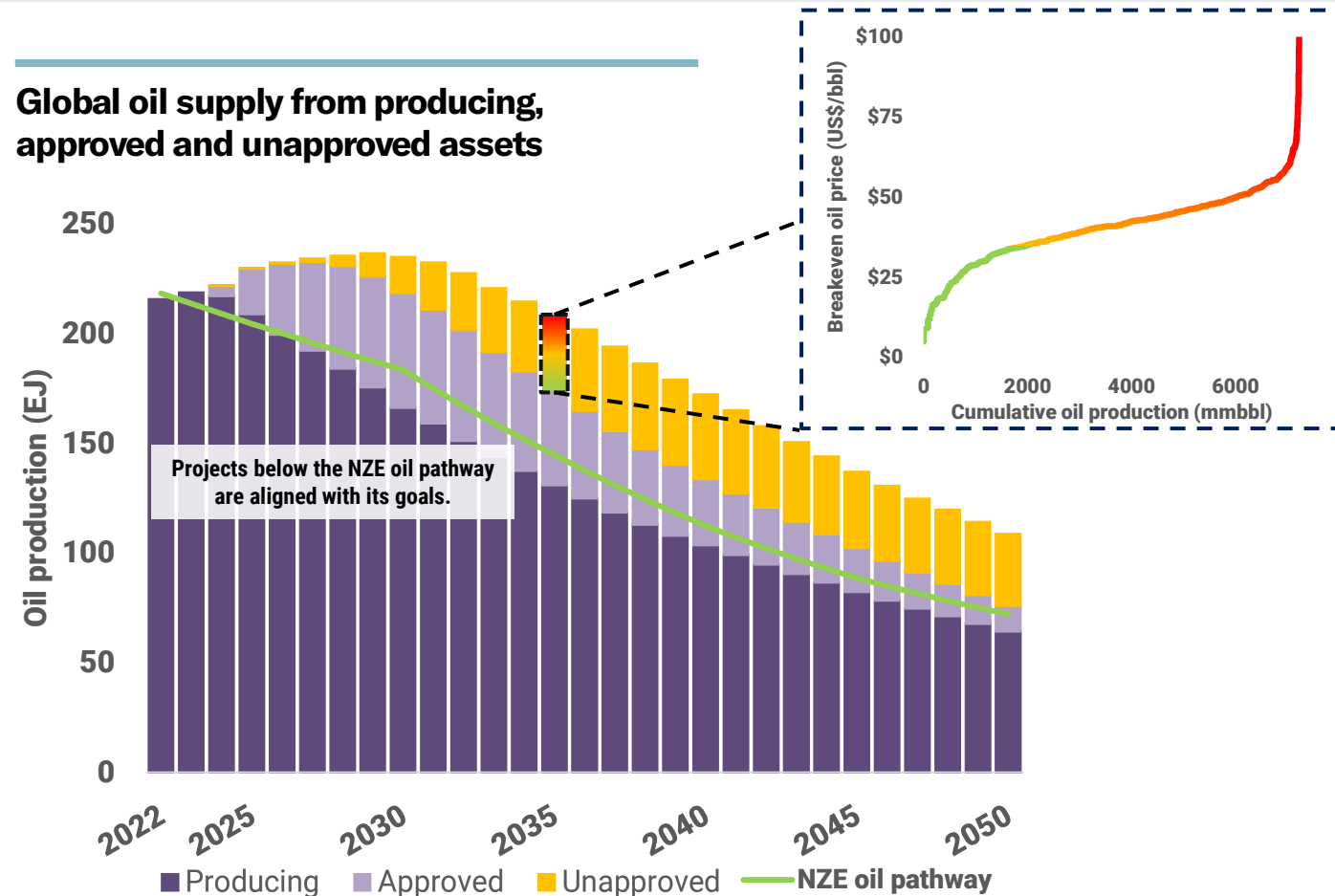
The BP logo, a stylized green and yellow flower-like shape, is centered in the background of the slide. It is partially obscured by the title text and a horizontal yellow line.

Using ACCR's least-cost Paris alignment methodology to evaluate projects within the context of global oil and gas supply, we found that:

- none of BP's oil and gas FIDs in 2023 aligned with the IEA's NZE pathways for oil and gas, despite BP's assertion that they were "consistent with the Paris goals"
- none of BP's major unapproved oil and gas projects scheduled for FID before 2030 align with the IEA's NZE, and the portfolio does not have a cost advantage.

Our methodology provides a complete view of global oil supply¹ within the context of the NZE oil pathway

Global oil supply from producing, approved and unapproved assets



1. Using data from Rystad Energy, we chart global oil supply from all **producing**, **approved** and **unapproved** assets.
2. For **unapproved** (pre-FID) projects, we chart relative cost, ranking assets for each year by break-even price to create stacked cost curves. Relatively more expensive projects are towards the top, cheaper projects towards the bottom.
3. The IEA NZE pathway² is represented by the **green** line. Any project below the green line is consistent with the Paris Agreement.
4. For the full methodology, see Appendix 1.

Source: Rystad Energy, ACCR modelling

1. We have also conducted the same analysis on gas supply.

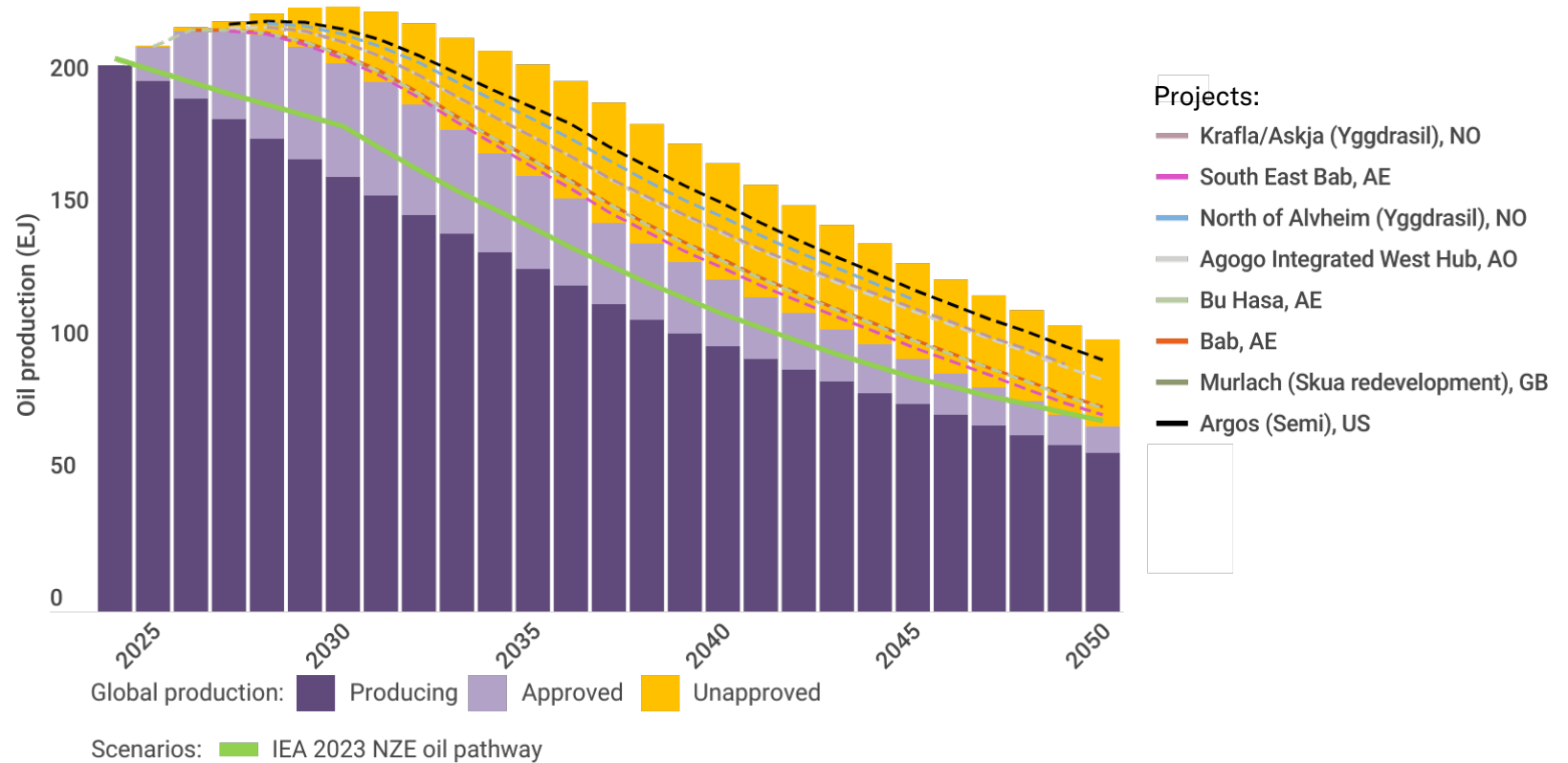
2. We currently view the IEA's NZE pathway as the best tool for Paris alignment assessments. It is based on IPCC temperature outcomes (1.5°C in 2100, with 50% certainty) and encompasses energy security, recent technology and geopolitical events, and equity, with comprehensive sectoral and geographic data. Global progress is lagging behind the NZE goals, leading to increasingly challenging assumptions like ending global deforestation by 2030 and large-scale carbon removal by 2050, highlighting the urgency for actions to align with this pathway.

None of BP's oil FIDs in 2023 were Paris-consistent – highlighting the insufficiency of its current framework

None of the oil supply that reached FID in 2023 was consistent with the goals of the Paris Agreement.

On average, they offer \$11/tCO₂e¹ in value to BP, which is significantly lower than BP's internal carbon price.²

BP's 2023 oil FIDs were not consistent with the IEA's NZE oil pathway



Source: Rystad Energy, IEA WEO extended datasets, ACCR modelling

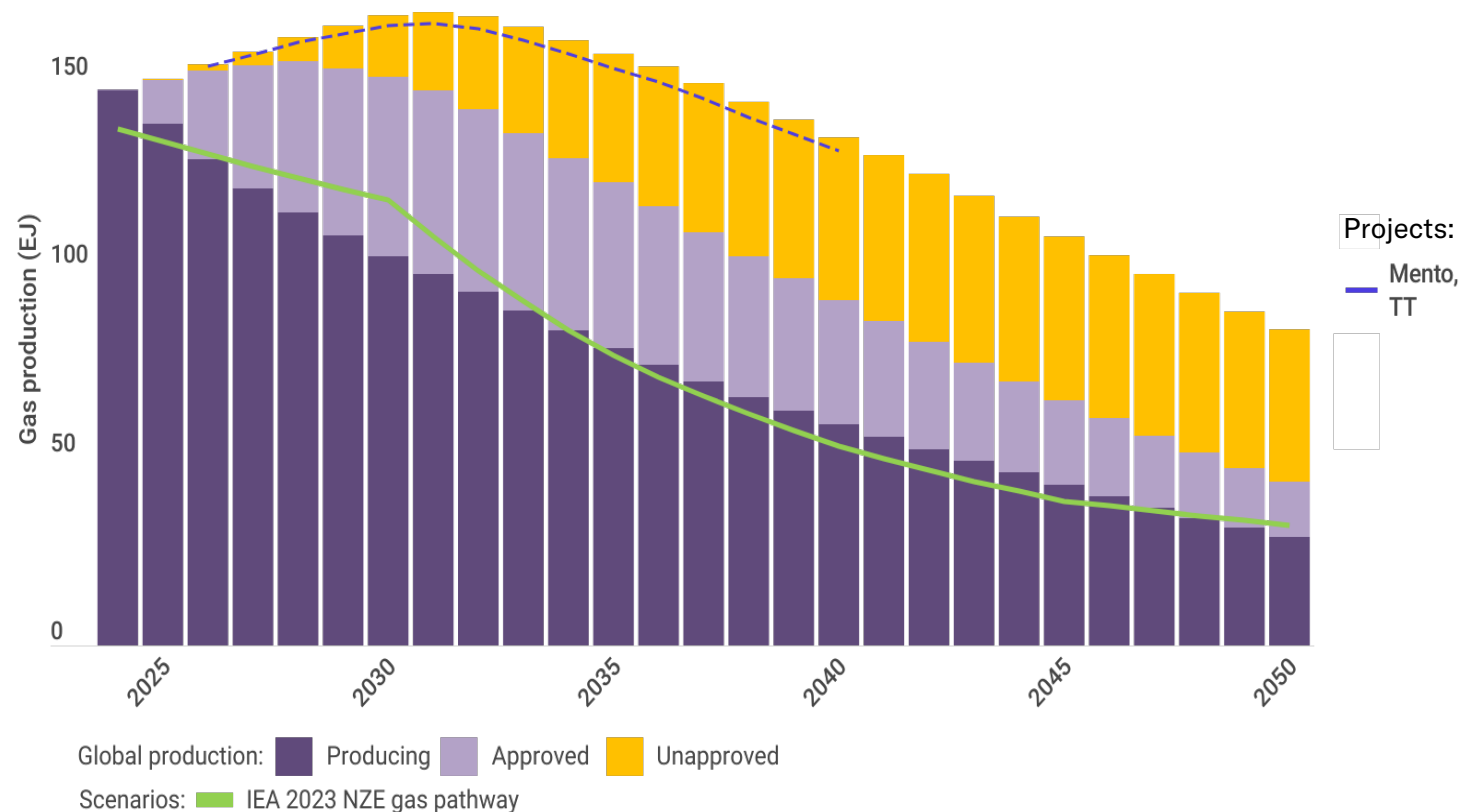
1. Refer to slide 34 for further details.

2. BP's central case carbon price is \$54/tCO₂e in 2022 real terms, increasing to \$108 by 2030, \$216 by 2040, and \$270 by 2050 (2023 Annual Report, p30).

BP's only gas project to reach FID in 2023 was not Paris-consistent, nor was it low cost

Gas supply from the projects that reached FID in 2023 is on the 62nd cost percentile, generating \$10/tCO₂e¹ in value for BP - significantly lower than the company's internal carbon price.²

Mento is not consistent with the IEA's NZE



Source: Rystad Energy, IEA WEO extended datasets, ACCR modelling

1. Refer to slide 34 for further details.

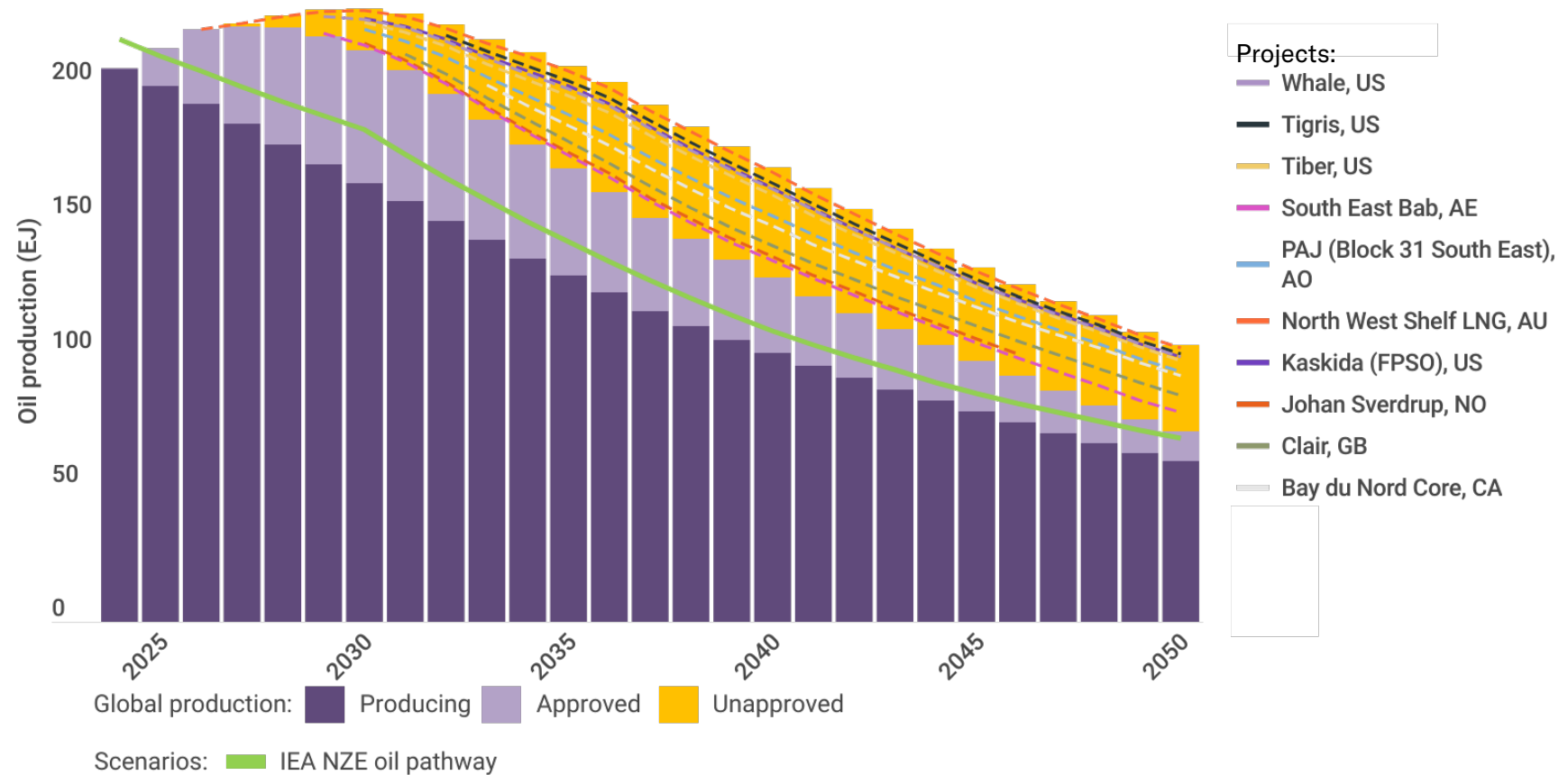
2. BP's central case carbon price is \$54/tCO₂e in 2022 real terms, increasing to \$108 by 2030, \$216 by 2040, and \$270 by 2050 (2023 Annual Report, p30).

We found that none of BP's large oil projects scheduled for FID before 2030 are Paris-consistent

BP's largest imminent oil¹ projects:

- are not consistent with the Paris Agreement
- sit on the 59th cost percentile, on average
- provide an average net present value (NPV) of \$13/tCO₂e to BP,² well below its central carbon price³
- have production profiles extending beyond 2050, locking in fossil fuel dependence and delaying the energy transition.

None of BP's imminent oil projects are Paris-consistent



Source: Rystad Energy, IEA WEO extended datasets, ACCR modelling

1. "Imminent" refers to projects that Rystad forecasts will reach FID before 2030.

2. Refer to slide 34 for further details.

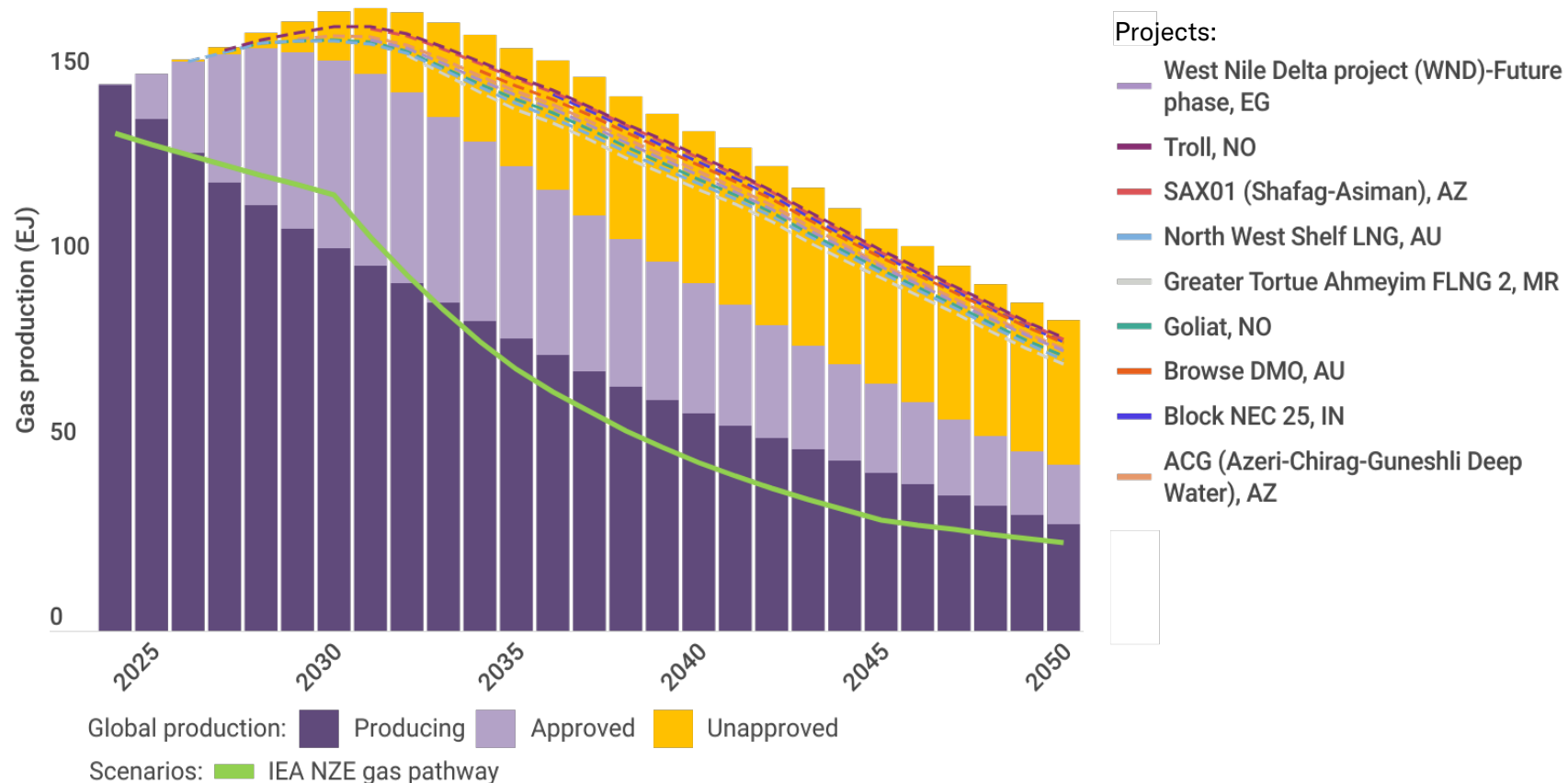
3. BP's central case carbon price is \$54/tCO₂e in 2022 real terms, increasing to \$108 by 2030, \$216 by 2040, and \$270 by 2050 (2023 Annual Report, p30).

BP's large gas projects scheduled for FID before 2030 are also not Paris-consistent, nor are they relatively low-cost

BP's imminent gas projects are not Paris-consistent or low cost

BP's largest imminent¹ gas projects:

- are not consistent with the Paris Agreement
- sit on the 66th percentile of the cost curve, on average, with no individual project in the bottom two quartiles
- provide an average NPV of \$3/tCO₂e to BP² - well below its central carbon price³
- have production profiles extending beyond 2050, risking long-term fossil fuel dependence and delaying the energy transition.



Source: Rystad Energy, IEA WEO extended datasets, ACCR modelling

1. "Imminent" refers to projects that Rystad forecasts will reach FID before 2030.

2. Refer to slide 34 for further details.

3. BP's central case carbon price is \$54/tCO₂e in 2022 real terms, increasing to \$108 by 2030, \$216 by 2040, and \$270 by 2050 (2023 Annual Report, p30).

Investors expect BP's methodology for evaluating the consistency of its capex with the Paris Goals to include consideration of "competitive positioning"



[BP] should determine the methodology for this evaluation and evolve this over time. However, investors expect this to include consideration of the full life-cycle economics of individual projects... [and] their competitive positioning in the context of the Paris Goals.

2019 Climate Action 100+ resolution supporting statement¹

ACCR's least-cost model, developed independently of this context, offers a method to consider where BP's projects are positioned in the context of broader oil and gas supply, and against the IEA's only pathway for Paris alignment - the NZE.

1. [Notice of BP Annual General Meeting 2019](#), p. 23

Appendix 1

ACCR's least-cost Paris alignment methodology



Global oil and gas emissions are higher than when the Paris Agreement was adopted, despite much of the market claiming to have a Paris-aligned strategy

Why is this happening?

Company climate targets and reporting are subject to gaming.

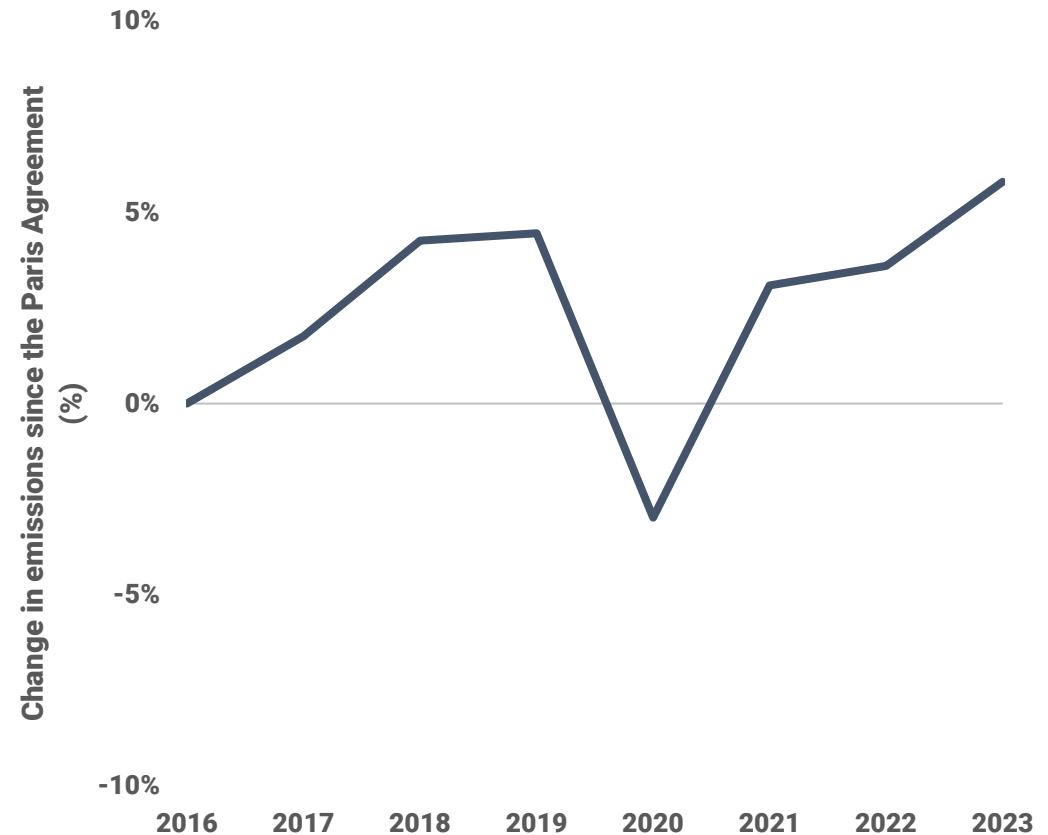
For example, BP's reporting involves significant discretion. The company:

- treats divested emissions as reductions
- uses intensity targets that don't necessarily reduce absolute emissions
- relies on outdated carbon budgets and speculative assumptions about negative emissions technologies in its scenario analysis.

What is required?

A methodology that allows for a consistent comparison between oil and gas companies and is not able to be gamed.

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



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

ACCR's NZE alignment methodology

Objective

To test whether future oil & gas projects are aligned with Paris-aligned scenarios¹ through a global industry lens.

At a high level, our methodology involves:

1. Assuming all operating and under-development projects operate until end of life.
2. Ranking all unapproved projects by break-even price.
3. Assessing each unapproved project to see if it is 'required' to meet demand levels under the NZE scenario, after accounting for operating and under-construction facilities.

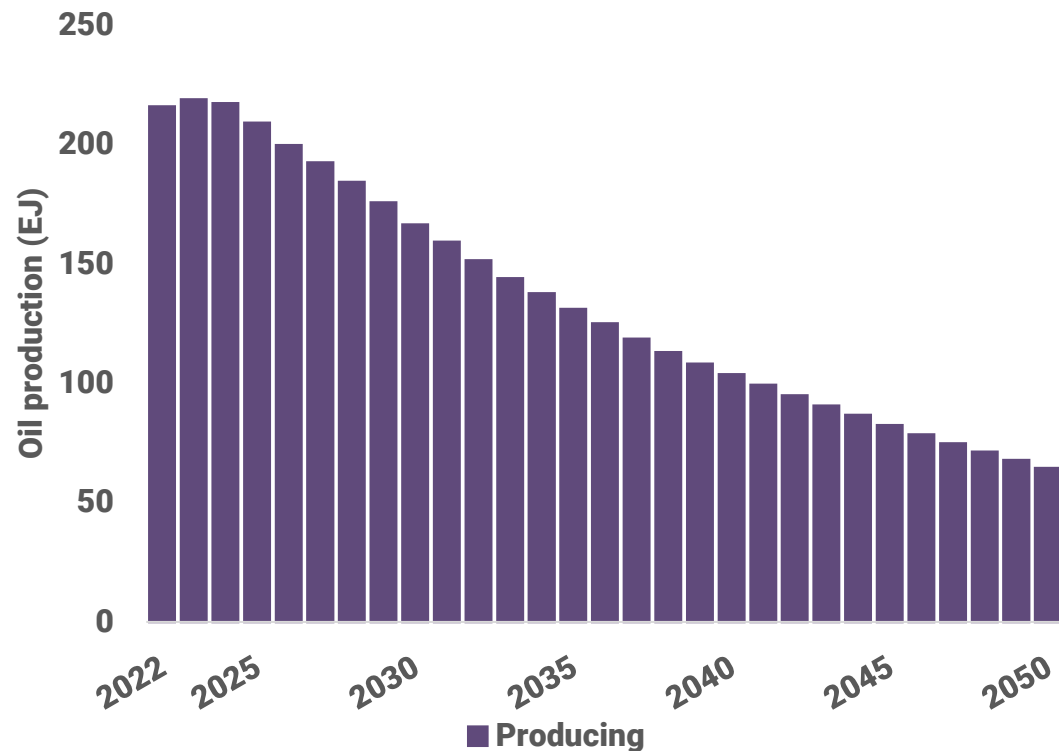
The benefits of this method include that it:

- removes the opportunity for companies to use a range of self-selected, voluntary decarbonisation targets to claim Paris alignment
- removes the ability for a company to justify future emissions on the basis of historic emissions
- allows relative climate alignment or transition risk analysis between companies using a standardised scenario.

1. ACCR currently views the IEA's NZE pathway as the best tool for Paris alignment assessments. It is based on IPCC temperature outcomes (1.5°C in 2100, with 50% certainty) and encompasses energy security, recent technology and geopolitical events, and equity, with comprehensive sectoral and geographic data. Global progress is lagging behind the NZE goals, leading to increasingly challenging assumptions like ending global deforestation by 2030 and large-scale carbon removal by 2050, highlighting the urgency for actions to align with this pathway.

First we chart global oil production from operating assets

Global oil supply from producing assets



Step 1: chart global oil production from operating assets

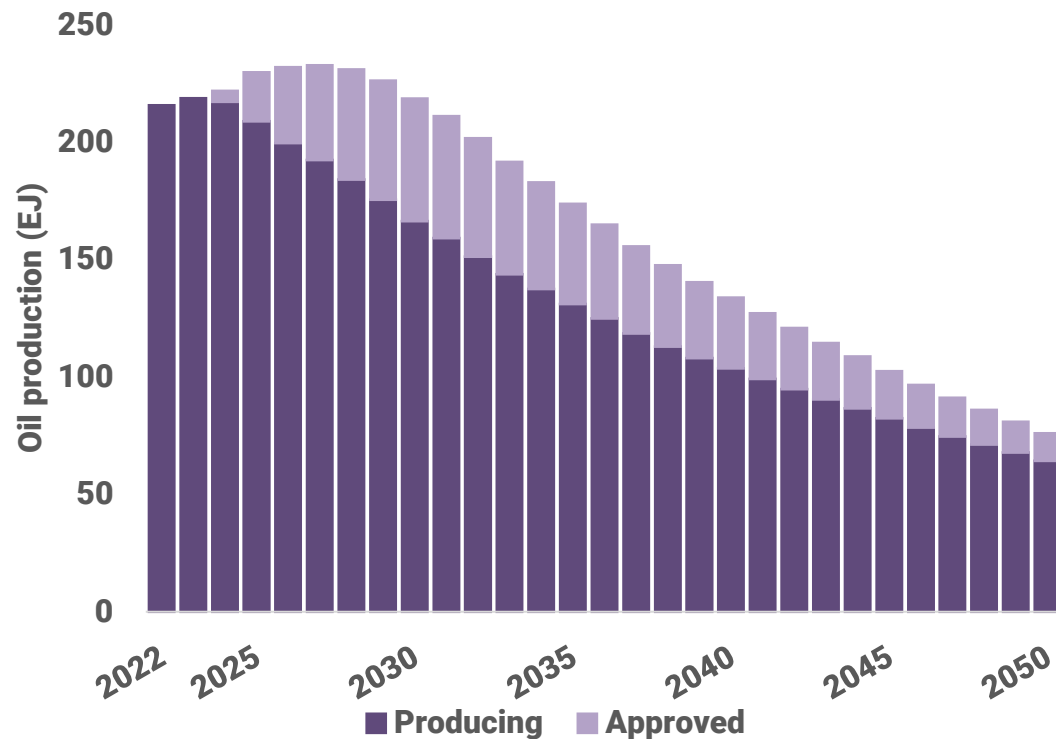
These assets are classified as “producing,” with oil production from these assets naturally declining over time due to the depletion of reservoirs.

All production data is from Rystad Energy.

Source: Rystad Energy, ACCR modelling

Then we add production from "approved" assets

Global oil supply from producing and approved assets



Step 2: add global oil production from assets that have been approved by companies and governments¹

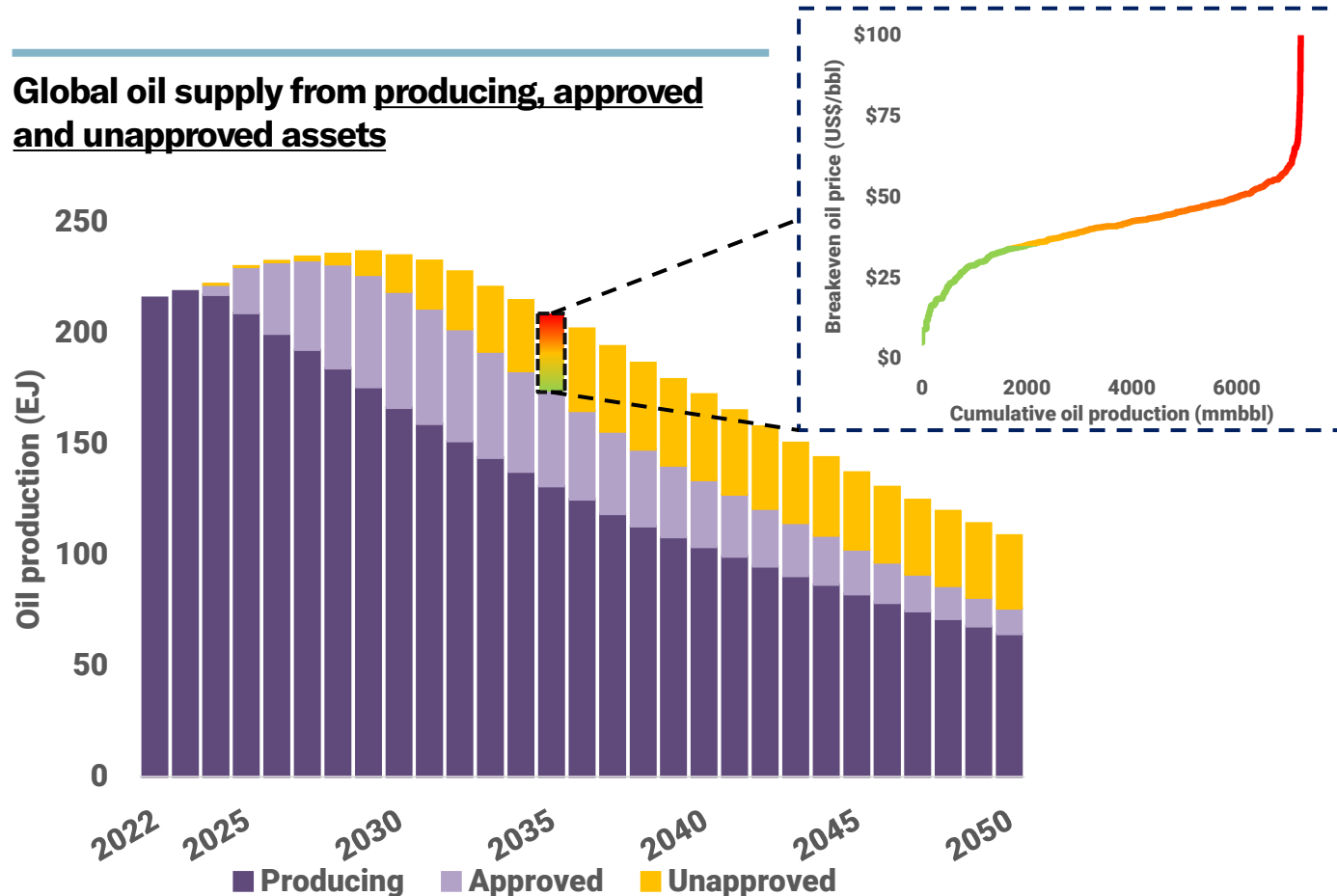
A stacked chart of producing and approved projects shows the expected global oil production from financial decisions that have already been made.

Source: Rystad Energy, ACCR modelling

1. For North American shale assets, approved projects include Drilled-but-Uncompleted Wells (DUCs). DUCs are a partially completed source of supply that can be brought to market more quickly and at less cost than a newly drilled well ([Natural Gas Intelligence](#)).

We then add production from “unapproved” assets, and assume that they are ranked by break-even price

Global oil supply from producing, approved and unapproved assets



Step 3: add cost-ranked global oil production from assets that have been discovered but not yet reached FID.

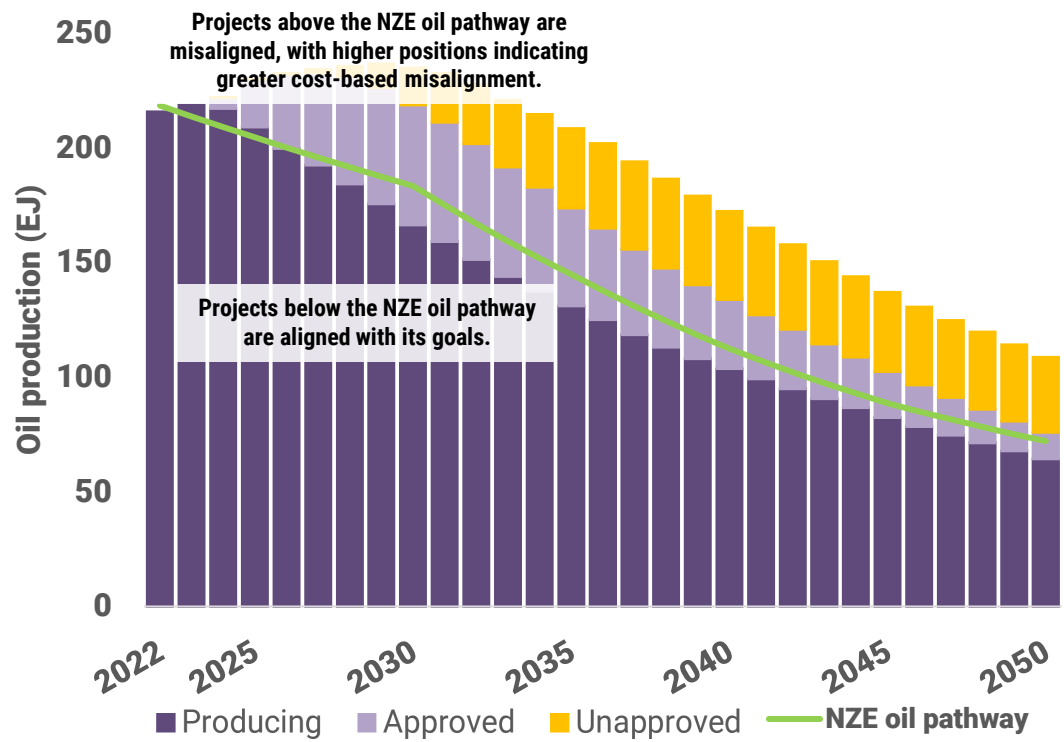
For each year, cost curves are created, and individual assets are stacked from the lowest to the highest break-even price.

The color codes indicate how the annual cost curves are arranged in the column chart.

Source: Rystad Energy, ACCR modelling

Overlaying the global IEA NZE oil pathway shows whether a project is Paris-aligned

Global oil supply from producing, approved and unapproved assets, in the context of the IEA's NZE oil pathway



The analysis now provides a complete view of global oil supply in the IEA's NZE.

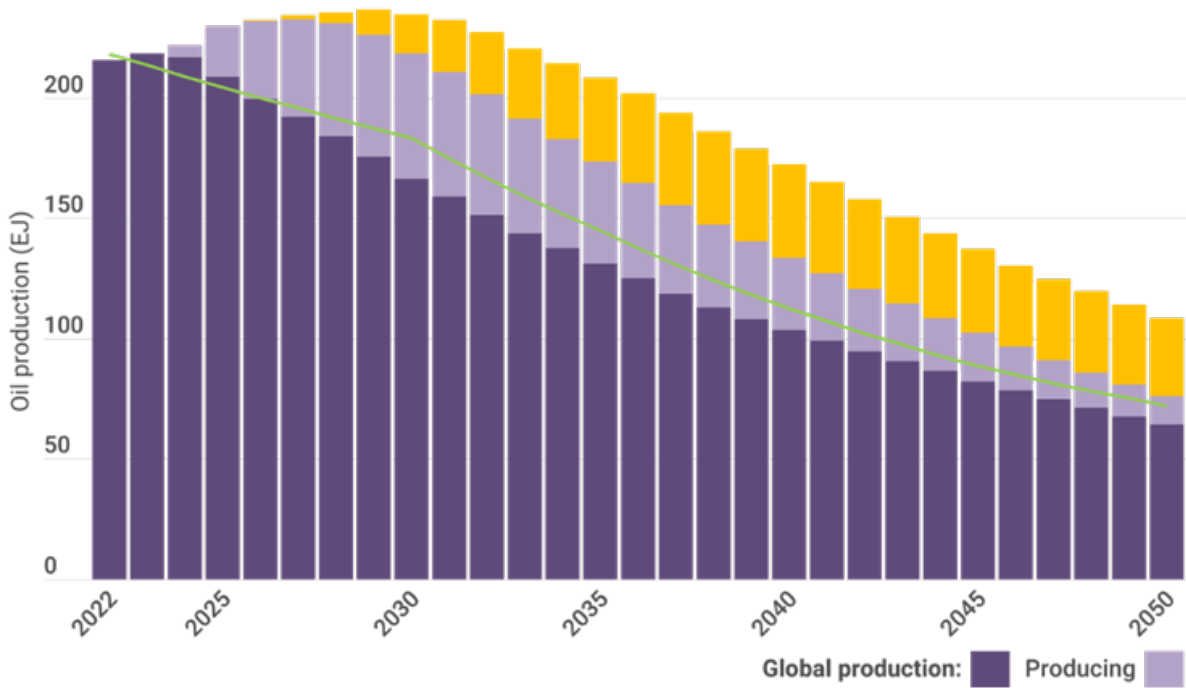
All unapproved projects are ranked by cost, enabling an assessment of:

1. the misalignment of specific projects or portfolios within the NZE oil pathway, based on a least-cost approach.
2. the cost competitiveness of projects compared to other unapproved projects, providing additional insight into their transition risk.

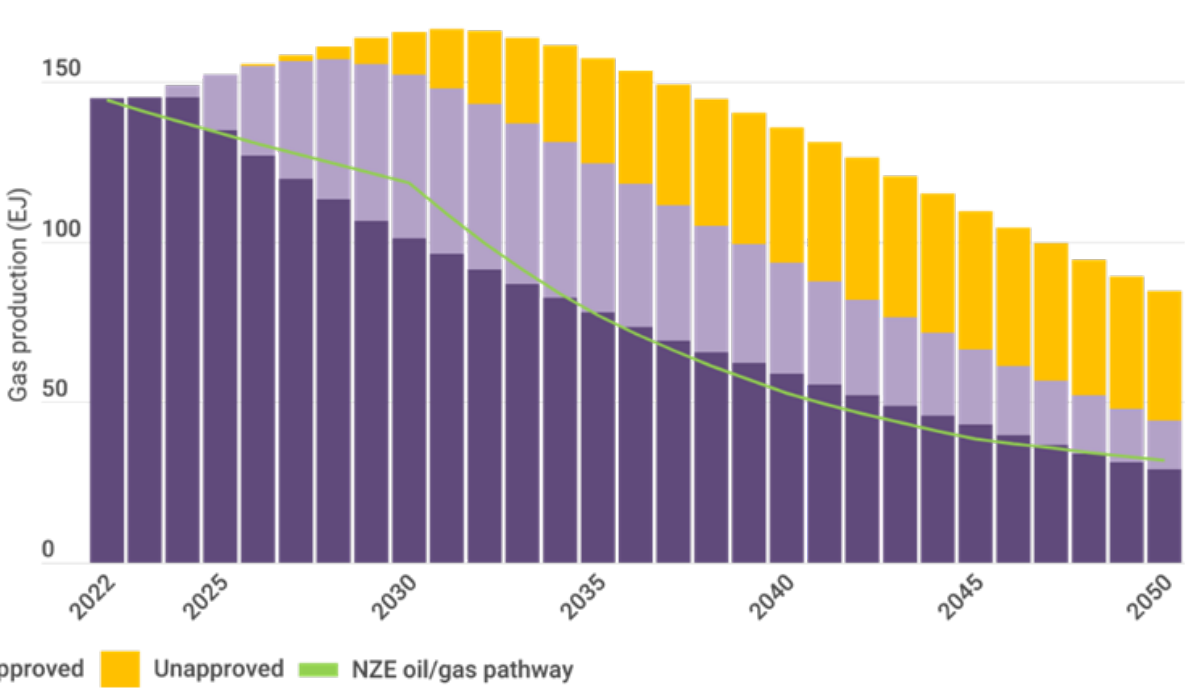
Source: Rystad Energy, ACCR modelling

By also applying the method to the gas market, we can assess the Paris alignment of any oil and gas asset, and by extension, any oil and gas portfolio

Global oil supply in the context of Paris-aligned scenarios



Global gas supply in the context of Paris-aligned scenarios



Source: Rystad Energy, ACCR modelling

Appendix 2



Summary of BP's major FIDs in 2023

Project ¹	Field type	Start-up year	Final year of production	Emissions (MtCO ₂ e)	Value created (\$/ tCO ₂ e ²)	Cost percentile ³
Within the scope of the current Paris-consistent capex evaluation framework:						
Murlach (Skua redevelopment), GB	Oil field	2025	2046	9	20	12
Argos (Semi), US	Oil field	2026	2052	27	20	63
Outside the scope of the current Paris-consistent capex evaluation framework:						
Bab, AE	Oil field	2027	2059	252	14	16
South East Bab, AE	Oil field	2026	2081	238	9	8
Bu Hasa, AE	Oil field	2027	2059	227	13	15
Agogo Integrated West Hub, AO	Oil field	2026	2042	211	14	37
Krafla/Askja (Yggdrasil), NO	Oil field	2027	2049	119	8	38
North of Alvheim (Yggdrasil), NO	Oil field	2027	2044	98	8	52
Fenris (King Lear), NO	Oil field	2027	2046	58	7	46
Mento, TT	Gas field	2025	2040	29	11	81
Total				1268	12	

1. Oman Block 61 and Raven Infills were evaluated by BP but are not in this table, as Rystad categorises these investments under existing projects that were previously approved.

2. The Net Present Value (NPV) and emissions are calculated at the project level, accounting for the combined free cash flow from both oil and gas production using futures pricing. Refer to slide 34 for further details on data and methodologies.

3. Cost percentiles are listed based on the dominant product of each field - gas fields are compared to global gas supply costs, and oil fields to global oil supply costs.

Summary of BP's major projects scheduled for FID before 2030

Project	Field type	Start-up year	Final year of production	Emissions (MtCO ₂ e)	Value created (\$/tCO ₂ e ¹)	Cost percentile ²
North West Shelf LNG, AU	Gas-Condensate field	2025	2045	812	5	65
Kaskida (FPSO), US	Oil field	2029	2063	398	11	81
South East Bab, AE	Oil field	2027	2057	247	13	14
Tiber, US	Oil field	2029	2062	167	13	71
Clair, GB	Oil field	2030	2060	124	16	30
Whale, US	Oil field	2028	2052	76	20	76
Johan Sverdrup, NO	Oil field	2029	2046	73	13	17
PAJ (Block 31 South East), AO	Oil field	2029	2040	68	13	54
ACG (Azeri-Chirag-Guneshli Deep Water), AZ	Gas field	2028	2051	44	7	64
Goliat, NO	Gas-Condensate field	2035	2061	35	11	66
Total				2094	8	

1. The NPV and emissions are calculated at the project level, accounting for the combined free cash flow from both oil and gas production using futures pricing. Analysis was conducted for projects that qualify as commercial under these assumptions (i.e. positive NPV). Tigris (US), Browse DMO (AU), NEC 25 (IN), WND-Future Phase (EG), GTA FLNG 2 (MR) and Troll (NO) are excluded due to negative NPVs at futures pricing. Refer to slide 34 for further details on data and methodologies.

2. Cost percentiles are listed based on the dominant product of each field - gas fields are compared to global gas supply costs, and oil fields to global oil supply costs.

Data and methodologies

Oil and gas asset data is from Rystad Energy, extracted in early December 2024. Rystad Energy provided the asset-level data including production, cash flow and capital expenditures. Rystad Energy also provided the model that we used to determine which projects met BP criterion and other sensitivities. Rystad Energy is not responsible for any conclusions drawn from the data, and ACCR retains responsibility for any subsequent analysis, including assumptions used or errors made.

Unless stated otherwise:

- emissions are scope 3, based on multiplying production by combustion factors in the National Greenhouse Energy Reporting (NGER) [Measurement Determination](#)
- NPVs use a forward price deck and country-specific WACCs (Damodaran, Aswath, [Country Risk: Determinants, Measures, and Implications - The 2024 Edition](#) (July 14, 2024)), with each project's base year set as its approval year. Costs incurred prior to the approval year are excluded
- the value added by a project or portfolio, when expressed as \$/tCO₂e, is the ratio of its NPV to its emissions
- currencies are in USD, and asset metrics (costs, NPV, emissions, etc.) are expressed as BP share.

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