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# Emerging Practice: Climate Target Setting for Oil & Gas Financing



May 2024

# Disclaimer

The content set out within this paper does not constitute advice to Members of the Net-Zero Banking Alliance (the Alliance). Further, any views expressed in this paper do not necessarily represent the views of each individual member, including those in the relevant working group that assisted in the preparation of the paper. This paper is intended as a general guide for emerging practices and is not prescriptive as to actions or decisions to be taken by Members. The Members of the Alliance set individual targets and make their own unilateral decisions. The use of content, including the scope of participation in the Alliance, is at the discretion of each individual Member. As such, the Alliance takes no liability for actions or decisions taken by Members when applying the principles of this paper. Any references to external frameworks or organisations should not be considered an endorsement of these organisations or their work.

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# Purpose of this publication

This paper is one of a series of publications with the purpose of outlining possible choices banks can make when setting climate targets for sectors of the real economy. The paper does this by providing an overview of emerging practices, common challenges and policy, data, and other gaps.

Emerging practices and expertise for climate target setting are evolving quickly. This paper aims to increase banks' awareness and understanding of useful approaches and latest methodologies in this space at the time of publication.

By joining NZBA, members have already chosen to commit to:

- Aligning their lending and investment portfolios with net zero emissions by 2050
- Setting intermediate climate targets for their highest emitting sectors for 2030 or sooner by using robust, science-based guidelines consistent with limiting global warming to 1.5°C
- Developing transition plans for the highest emitting sectors for which they have set targets
- Reporting annually on their approach to and progress towards meeting their targets

For many banks, this includes setting decarbonisation targets for their oil and gas lending and investment portfolios.

This paper does not impose any requirements on NZBA members over and above the commitments made when becoming a signatory and is not prescriptive in terms of specifying when and how members with oil & gas lending and investment portfolios are expected to decarbonise those.

The details of the commitment to which NZBA members sign up can be found in the [NZBA Commitment Statement](#) and the [Guidelines for Climate Target Setting for Banks](#). This series of publications on sectoral emerging practices does not change that commitment.



# Acknowledgements

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# About the Net-Zero Banking Alliance

The bank-led, UN-convened [Net-Zero Banking Alliance \(NZBA\)](#) brings together a global group of banks which currently represent over 40% of global banking assets and are committed to aligning their lending and investment portfolios with net zero emissions by 2050.

Combining near-term action with accountability, this ambitious commitment sees signatory banks setting intermediate climate targets for 2030 or sooner by using robust, science-based guidelines.

NZBA is a flagship climate initiative operated by the [United Nations Environment Programme—Finance Initiative \(UNEP FI\)](#) to accelerate science-based climate target setting and develop common practice. As the banking alliance within the global efforts on net zero across the finance industry brought together under the [Glasgow Financial Alliance for Net-Zero \(GFANZ\)](#), the NZBA is open to all banks globally, including banks that are not UNEP FI members and Principles for Responsible Banking signatories.

The Alliance reinforces, accelerates, and supports the implementation of decarbonisation strategies, providing an internationally coherent framework and guidelines in which to operate, supported by peer-learning from pioneering banks. It recognises the vital role of banks in supporting the global transition of the real economy to net zero emissions.

Learn more here: <https://www.unepfi.org/net-zero-banking/>

This paper focuses on decarbonisation and does not consider other important environmental and social issues.

# Abbreviations & acronyms

|                |  |
|----------------|--|
| <b>ACT</b>     | Assessing low-Carbon Transition  |
| <b>BICS</b>    | Bloomberg Industry Classification Standard                                       |
| <b>BOE</b>     | Barrel of oil equivalent   |
| <b>CAPEX</b>   | Capital Expenditure  |
| <b>CCS</b>     | Carbon Capture & Storage   |
| <b>CCUS</b>    | Carbon Capture Utilisation & Storage   |
| <b>EEIO</b>    | Environmentally extended input-output  |
| <b>E&amp;P</b> | Exploration & Production   |
| <b>EVIC</b>    | Enterprise value including cash  |
| <b>FPSO</b>    | Floating production storage and offloading                                       |
| <b>GFANZ</b>   | Glasgow Financial Alliance for Net-Zero  |
| <b>GHGs</b>    | Greenhouse Gases   |
| <b>GICS</b>    | Global Industry Classification Standard  |
| <b>IEA</b>     | International Energy Agency  |
| <b>IGUs</b>    | International Gas Union Standards  |
| <b>ILNG</b>    | International Liquefied Natural Gas Company                                      |
| <b>IPCC</b>    | Intergovernmental Panel on Climate Change  |
| <b>ISIC</b>    | International Standard Industrial Classification of All Economic Activities      |
| <b>IOCs</b>    | Integrated Oil and Gas Companies   |
| <b>LNG</b>     | Liquefied Natural Gas Company  |
| <b>NACE</b>    | Nomenclature statistique des Activités économiques dans la Communauté Européenne |
| <b>NAICS</b>   | North American Industry Classification System                                    |
| <b>NGFS</b>    | Network for Greening of the Financial System                                     |
| <b>NZBA</b>    | Net-Zero Banking Alliance  |
| <b>NOCs</b>    | National Oil and Gas Companies   |
| <b>O&amp;G</b> | Oil & Gas  |
| <b>OPEX</b>    | Operating Expenditure  |
| <b>PACTA</b>   | Paris Agreement Capital Transition Assessment                                    |
| <b>PCAF</b>    | Partnership for Carbon Accounting Financials                                     |
| <b>SBTi</b>    | Science-Based Target initiative  |
| <b>SIC</b>     | Standard Industrial Classification   |

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# Summary

The table below summarises the key design choices financial professionals face when setting net-zero financing targets for the oil and gas (O&G) sector.

| Design choice       |                     | Summary for the oil & gas sector   |
|---------------------|---------------------|--|
| Target scope        |                     | The <a href="#">Guidelines for Climate Target Setting for Banks</a> are built around a sectoral approach to target setting and require that clients' Scope 1, Scope 2, as well as Scope 3 emissions that are 'significant' to a given sector, be included in scope for banks' climate targets. As such, O&G target-setting frameworks need to clearly define which emissions and economic activities of the O&G value chain should be covered by climate targets, both at the client level and the sector level. |
| Target metrics      |                     | The <a href="#">Guidelines for Climate Target Setting for Banks</a> direct banks to set financed emissions targets using absolute emissions metrics and/or emissions intensity metrics, but also require members to report financed emissions in both absolute and intensity metrics to provide a more complete picture.   |
| Financial scope     | In-scope clients    | Banks can use classification systems such as the North American Industry Classification System (NAICS) or set economic activity thresholds based on crude oil production, revenue generated from O&G activities, or both, to define in-scope clients for O&G climate targets.  |
|                     | In-scope financings | Banks can set targets for emissions attributed to their loan books as well as capital market services. The <a href="#">updated second version of the Guidelines for Climate Target Setting for Banks</a> , published in March 2024, outlines that member banks shall include capital markets activities when setting or revising their climate targets for their O&G portfolios from November 2025 onwards.  |
|                     | Exposure indicator  | Banks need to decide what indicator to use to determine the exposure to each in-scope client for their O&G climate targets. Methodologies can use financial data, such as a company's revenues or capital expenditure (CAPEX), to determine an indicator.  |
| Attribution methods |                     | Attribution relates to how emissions in the real economy are attributed to a financial institution or a financial instrument providing financing. There are four approaches that banks can use for the O&G sector.   |



| Design choice                          | Summary for the oil & gas sector   |
|--|--|
| <b>Benchmarking and target setting</b> | <p>The <a href="#">Guidelines for Climate Target Setting for Banks</a> direct member banks to use widely accepted, science-based decarbonisation scenarios to guide members when setting individual long-term and intermediate targets that are aligned with the temperature goals of the Paris Agreement such as <a href="#">IEA's Net-Zero Emissions by 2050</a> (IEA NZE) scenario.</p> <p>There are three target-setting approaches banks can use for their O&amp;G climate targets:</p> <ul style="list-style-type: none"> <li>▪ Convergence approach: implies that all counterparties converge to net-zero-aligned, industry-average emissions intensity levels.</li> <li>▪ Rate-of-reduction approach: implies that all counterparties reduce emissions at the same net-zero-aligned, industry-average rate, irrespective of their current and past performance.</li> <li>▪ Fair share approach: defines the average rate of reduction in absolute emissions for an industry but recognises that individual counterparties may be better- or worse- performing than average.</li> </ul> |

## Key considerations for banks when setting financing targets for the oil and gas sector

The process of setting targets for a net-zero commitment begins by assessing baseline financed emissions through the use of relevant carbon accounting standards such as the [Global GHG Standard](#)<sup>1</sup> provided by the [Partnership for Carbon Accounting Financials \(PCAF\)](#). Then, financial institutions independently set targets for their individual portfolios and specific carbon-intensive sectors, such as oil and gas (O&G), by using science-based scenarios. When setting targets, banks are seeking to improve the strategic management of their climate-related risks and opportunities. There are some key items banks need to consider with regard to their target-setting approach for their O&G portfolios, including the following:

- Considering the materiality of emissions for different parts of the O&G value chain
- Avoiding double counting of emissions across the O&G value chain
- Understanding how they can help O&G companies' alignment with net zero
- Understanding their O&G clients' transition plans

<sup>1</sup> Financed emissions are classed as Category 15 Scope 3 emissions for financial institutions in the [Greenhouse Gas Protocol](#).

## **Oil and gas industry operational emissions reduction is one of the biggest opportunities in the short-term**

Over the period 2020–2030, respected 1.5°C scenarios<sup>2</sup> project that emissions reductions will come from increased efficiency in O&G operations (-60%) which account for a significant part of the sector’s carbon and methane emissions as well as from reductions in O&G end use (-29%). The higher contribution in emissions reductions from increased efficiency in O&G operations is because a significant number of abatement measures such as investments in reducing flaring, venting and fugitive emissions, would pay for themselves.<sup>3</sup> Banks should consider financing emissions reduction initiatives as they set and operationalise their net-zero targets for the sector.

## **Transparency on oil and gas target-setting can improve practice and inform policy**

Approaches to setting O&G targets by NZBA member banks vary a lot (see [NZBA’s 2022 Progress Report](#)). This reflects the complexity of the O&G industry’s net-zero alignment and the voluntary nature of the NZBA commitment. Voluntary approaches are often a precursor to mandatory regimes and part of their role is to allow for experimentation and to see which approaches work best.

Transparency on the scopes, parts of the portfolio, and banking activities covered by targets, the metrics, approaches, scenarios used, and the assumptions made can inform policy and regulatory design and accelerate learning for other banks working to improve their climate governance.

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2 According to the IEA NZE for the period 2020–2030.

3 <https://www.iea.org/reports/driving-down-methane-leaks-from-the-oil-and-gas-industry>

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# 1. Introduction

According to the [Intergovernmental Panel on Climate Change \(IPCC\)](#)<sup>4</sup>, limiting global warming to 1.5°C to avoid the worst impacts of climate change requires global Greenhouse Gas (GHG) emissions to peak before 2025 and decline by 43% by 2030 from a 2019 baseline.

This publication aims to help banks that are looking to align their oil & gas (O&G) lending and investment portfolios with a 1.5°C pathway by providing an overview of emerging practices in setting, measuring, and monitoring progress of climate targets for those portfolios. It evaluates the strengths and weaknesses of different target-setting approaches including the design choices banks face when defining the scope of emissions, types of counterparties, target metrics, attribution methods, and benchmarking as well as provides suggestions for the operationalisation of chosen approaches.

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4 See [IPCC AR6 synthesis report](#) (March, 2023).

## 2. Understanding the oil and gas sector

### 2.1 Structure and emissions of the oil and gas sector

The oil and gas (O&G) sector encompasses a broad spectrum of activities from exploration and extraction of O&G to the supply of end products to consumers. The typical segmentation of the sector aligns with the activities across the different parts of the value chain which are split into **upstream**, **midstream**, and **downstream** activities. Individual companies within the sector exhibit varying degrees of vertical and horizontal integration across the different parts of the value chain. Table 1 summarises the value chain of the O&G sector and the types of companies that operate across each segment.

**Table 1:** Upstream, midstream, and downstream activities in the O&G sector

| Activities |  | Companies   |   |                             |
|------------|--|---|---|-----------------------------|
|            |  | Pure players  | Integrated O&G and National Oil Companies (NOCs)  |                             |
| Upstream   | Exploration & Production (E&P)                         | E&P pure players                                    | <ul style="list-style-type: none"> <li>Integrated oil companies</li> <li>Integrated gas utilities</li> <li>Integrated liquefied natural gas (LNG) companies</li> <li>National oil companies (NOCs)</li> </ul> |                             |
|            |  | Services companies                                  |   |                             |
| Midstream  | Pipeline & Land Transportation                         | Oil transporters                                    |   |                             |
|            | Maritime Transportation (crude or product tanker, LNG) | Gas transporters                                    |   |                             |
|            | Midstream Services                                     | Services companies                                  |   |                             |
| Downstream | Refining   | Refineries  |   | Refineries pure players     |
|            |  | Petrochemicals                                      |   | Petrochemicals pure players |
|            | Sales & Marketing                                      | Crude O&G Trading                                   |   | Traders                     |
|            |  | Gas distribution for cooking, heating, and power    |   | Gas distributors            |
|            |  | Wholesale marketing and retailing of transport fuel |   | Service stations            |
|            |  | Lubricants, plastics, and chemicals                 | Other manufacturers/retailers   |                             |

Under the [Greenhouse Gas Protocol](#), GHG emissions for the O&G sector are split into emissions coming from the operations of O&G companies and emissions coming from the end-use of O&G by consumers:

- GHG emissions from O&G companies' operations where they exert a high degree of control are known as **Scope 1 & 2 emissions**<sup>5</sup> and primarily occur at the production, transportation, refining, and petrochemical production stages of the O&G value chain. According to the [IEA World Energy Outlook 2023](#), Scope 1 & 2 emissions for the O&G sector accounted for 5.1 GTCO<sub>2</sub>eq in 2022, or just under 15% of total energy-related GHG emissions, with upstream activities accounting for the majority, followed by refining and transportation. No data is available on the scale of Scope 1 & 2 emissions from the sales and marketing segment, but it is expected to be small. Within Scope 1 & 2 emissions, methane emissions (CH<sub>4</sub>) form a very significant part. According to the [IEA](#) as of 2022 methane emissions were responsible for roughly a third of the rise in global temperatures since the industrial revolution. The [IPCC's 2021 Report](#) noted that atmospheric methane levels are now higher than at any point in the past 800,000 years and are tracking close to the high emissions scenarios outlined in its previous assessment from 2013<sup>6</sup>. Although methane is relatively short-lived in the atmosphere, it has a warming impact which is 84 times that of CO<sub>2</sub> over a 20-year period. IPCC's report concludes that strong, rapid, and sustained reductions in methane emissions are needed in the next two decades to keep the 1.5°C warming limit within reach.<sup>7</sup> The [Global Methane Pledge](#), launched at [COP26](#), aims to stimulate voluntary actions to reduce global methane emissions by at least 30% by 2030 compared to 2020 levels.
- GHG emissions from the end-use of O&G are referred to as end-use combustion emissions and are known as **Scope 3 emissions** at the company level according to the [Greenhouse Gas Protocol](#). Scope 3 emissions for the O&G sector accounted for just under 40% of total energy-related GHG emissions in 2022. Table 2 summarises the share of the O&G sector in global GHG emissions.

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5 As defined by the [Greenhouse Gas Protocol](#). In this paper, the scopes described are the scopes of the O&G companies as bank clients, rather than the scopes of the banks' emissions.

6 International Panel on Climate Change IPCC (2021). Sixth Assessment Report. Working Group 1: The Physical Science Basis.

7 Currently, data availability and accuracy of methane emissions are still limited but increasing through various initiatives, e.g. the [Global Methane Tracker](#).



**Table 2:** O&G share in total energy-related greenhouse gas emissions

| Energy-related GHG Emissions  | GTCO <sub>2</sub> eq (2022)       | Reference                                     |
|---|-----------------------------------|---|
| Whole Economy   | 36.8                              | <a href="#">IEA CO2 Emissions in 2022</a>     |
| O&G Emissions   | 18.6<br>(Oil: 11.2)<br>(Gas: 7.4) |   |
| Scope 1 & 2<br>(O&G Operations:<br>E&P, Transportation &<br>Refining) | 5.1                               | <a href="#">IEA World Energy Outlook 2023</a> |
| Scope 3<br>(O&G End-Use)  | 13.5                              |   |

## Strategic options for the transition of the oil and gas sector

There is no single response or decarbonisation business model that will be suitable for the full spectrum of companies that operate across the different segments of the O&G sector. Hence, this paper is only concerned with providing an overview of emerging practices that banks may adopt to facilitate their own independent decision-making and target setting. The different elements in Table 3 outline the wide range of strategic options for the transition of O&G companies.

**Table 3:** Strategic options for the decarbonisation of O&G companies

| Category                     | Strategic options   |
|------------------------------|---|
| Reduce Scope 1 & 2 emissions | <ul style="list-style-type: none"> <li>Improve emissions efficiency in production through the reduction of methane leakages, venting, flaring, and fugitive releases.</li> <li>Produce / transport less fossil fuels including non-energy use of O&amp;G non-combustion products (e.g. agrochemicals, petrochemicals, lubricants).</li> <li>Abate emissions at source through the deployment of carbon capture and storage technologies (CCS, CCUS) at the site of extraction or refining.</li> </ul> |
| Reduce Scope 3 emissions     | <ul style="list-style-type: none"> <li>Refine / sell less fossil fuels including non-energy use of O&amp;G non-combustion products (e.g. agrochemicals, petrochemicals, lubricants).</li> <li>Abate emissions at consumption through the deployment of carbon capture and storage technologies (CCS, CCUS) at the site of end-use combustion.</li> </ul>  |

|                                   |   |
|-----------------------------------|---|
| <b>Diversify in new segments</b>  | <ul style="list-style-type: none"> <li>▪ Diversify into non-fossil fuel energy businesses such as low-carbon electricity, low-carbon hydrogen, biomethane and advanced biofuels.</li> <li>▪ Diversify into renewables such as energy/electricity distribution businesses, EV battery charging, energy efficiency, distributed battery storage.</li> <li>▪ Diversity into other areas of the economy, not specifically linked to energy generation.</li> </ul> |
| <b>Phase down unabated assets</b> | <ul style="list-style-type: none"> <li>▪ Return cash to shareholders via dividends and/or share buybacks, phase down unabated assets, and wind up the company.</li> </ul>   |

The first strategic option, reduce Scope 1 & 2 emissions, is an important aspect for all O&G companies. As outlined in the [IEA 2023 World Energy Outlook](#), this can be done by minimising the flaring of associated gas and venting of CO<sub>2</sub> and CH<sub>4</sub>, tackling methane leaks, and integrating renewables and low-carbon electricity into new upstream and liquefied natural gas (LNG) developments. These technologies can help O&G companies to reduce their gross emissions. O&G companies can also invest in capital-intensive technologies including carbon capture and storage (CCS) and Carbon Capture Utilisation & Storage (CCUS) to reduce their net emissions, the difference being that these technologies do not have a direct impact on gross emissions.<sup>8</sup>

The remaining strategic options, however, can vary widely across O&G companies. For some, this will involve repositioning themselves as ‘energy companies.’ Integrated O&G companies and several national oil companies (NOCs) are seemingly taking this route, however, not all of them will or even should follow this route. NOCs, for example, face some particular challenges, as do their host governments. The stakes are high for NOCs that are charged with the stewardship of national hydrocarbon resources, and for their host governments and societies that often rely heavily on the associated oil income ([IEA 2023 World Energy Outlook](#)).

Other companies may also decide that their focus is on O&G in the near term, possibly shifting more towards a market repositioning over time. For as long as these fuels are in demand and returns on investment are sufficient, these companies’ strategic focus will be to supply them as cleanly and efficiently as possible.

In addition to these strategic options, some O&G companies may choose to go beyond the science-based pathway for the O&G sector and look to compensate for their residual emissions by purchasing credits through the voluntary carbon markets or making advance market commitments to projects deploying carbon dioxide removal (CDR) technologies and other nature-based solutions.

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8 [IEA’s 2023 World Energy Outlook](#)

## 2.2 Trends in oil and gas target setting for banks

NZBA members have committed to setting sectoral decarbonisation targets for their O&G lending and investment portfolios in line with the transition towards a net-zero economy by 2050.

The first [NZBA progress report](#), published in November 2022, provided an overview of the initial set of targets that have been produced by its members. The report shows that to date, banks have taken a varied approach to setting climate targets for the O&G sector. While this in part reflects the complexity of the transition of the O&G sector and the different responses and business models that the wide range of O&G companies can adopt, this methodological fragmentation is an issue for banks' stakeholders—in particular investors, extra-financial rating agencies, regulators, and supervisors—as it complicates the comparative analysis of banks' different levels of risk and return. According to the report:

- Around half of the banks that had set climate targets by that time had done so for the O&G sector; more banks had done the initial work on their O&G emissions footprint and most banks had some type of policy on O&G financing in place. The targets ranged from 9 to 71% decreases with an average of 32% reduction by 2030.
- Of the banks that had set O&G targets (see section 1.2), over half had set them on an absolute emissions basis. Of the intensity-based targets, around two-thirds were set on a per MJ basis, and about a third were set on a financial intensity basis.
- Two banks chose to set separate targets for upstream and downstream O&G activities, to differentiate between the emissions reduction opportunities of upstream and downstream segments. On the other hand, three banks set combined targets for O&G and coal, and one bank set a combined target for O&G and power generation.
- Two thirds of the set targets covered banks clients' Scope 1, 2 & 3 emissions. Around half of the set targets were for lending only; 6% covered lending, investment, and capital markets; 10% covered lending and capital markets; and 6% covered lending and investment. Where it was disclosed, targets covered an average of 80% of the O&G portfolio.
- Over half of banks used [IEA's Net-Zero Emissions 2050](#) (IEA NZE) scenario for target setting, and a smaller number used the [Network for Greening the Financial System](#) (NGFS) or other scenarios.

In December 2023, NZBA published the [NZBA 2023 Progress Update](#) on the actions taken by member banks on climate target setting which did not include the in-depth analysis of the [NZBA 2022 Progress Report](#) but provided a stocktake of any new targets set by member banks. At the time of publication, the share of member banks setting targets for O&G had risen from 51% to 57%.

The use of carbon credits in climate target-setting by banks is another area of increasing focus. NZBA published a supporting note on the [Use of Carbon Credits in Climate Target-Setting](#) in 2023 to provide clarification on how it views the treatment of offsetting in relation to member banks' commitments. NZBA expects that any carbon credits utilised are consistent with the sectoral decarbonisation pathway of a selected climate scenario and only carbon credits for which clients or the bank have provided evidence that they meet overall quality principles are considered eligible. Any inclusion of client-attributed carbon credits should be reported by the banks.

### 3. Design choices in oil and gas target setting for banks

This section details the design choices banks need to make when looking to set their climate targets for the O&G sector. This includes which greenhouse gas emissions, parts of the O&G value chain and counterparties banks need to scope as part of their net-zero targets ([ACT 2021](#))<sup>9</sup>. Table 4 summarises the key design choices and considerations for banks in that respect.

**Table 4:** Key design choices and considerations in O&G target setting

| Design Choice                 | Key considerations for banks   | What may inform your decision   |
|-------------------------------|--|---|
| Target scope                  | <ul style="list-style-type: none"> <li>What activities/actors within the O&amp;G value chain are in scope for target setting?</li> <li>What is the level of analysis (e.g. O&amp;G activities vs cross-sector activities)?</li> <li>What are the emissions boundaries for upstream, midstream, and downstream activities?</li> </ul> | <ul style="list-style-type: none"> <li>Sector vs client approach</li> <li>Emissions materiality</li> <li>Capacity to influence emissions sources</li> </ul> |
| Target metrics                | <ul style="list-style-type: none"> <li>Whether to have separate metrics for operational and end-use combustion emissions?</li> <li>What are the target metric approaches that banks can use in O&amp;G target-setting?</li> <li>How can banks deal with multiple counting of emissions across the O&amp;G value chain?</li> </ul>    | <ul style="list-style-type: none"> <li>Incentives to transition</li> <li>Carbon budget (for 1.5°C alignment)</li> </ul>                                     |
| Financial scope               | <ul style="list-style-type: none"> <li>Which financing activities are included in the O&amp;G target setting and reporting methodology?</li> </ul>   | <ul style="list-style-type: none"> <li>In-scope clients</li> <li>In-scope financing</li> <li>Exposure indicator</li> </ul>                                  |
| Attribution methods           | <ul style="list-style-type: none"> <li>How are client emissions attributed to banks and calculated?</li> </ul>   | <ul style="list-style-type: none"> <li>Technical feasibility</li> <li>Volatility</li> </ul>   |
| Benchmarking & target setting | <ul style="list-style-type: none"> <li>How can banks translate macro scenarios into counterparty and portfolio benchmarks?</li> </ul>  | <ul style="list-style-type: none"> <li>Incentives to transition</li> <li>Technical feasibility</li> </ul>   |

For a thorough review of the design choices outlined in Table 4, please refer to GFANZ's [Concept Note on Measuring Portfolio Alignment](#).

<sup>9</sup> Partly following the ACT Oil and Gas Methodology 2.0.



## 3.1 Target scope

Selecting the scope of a decarbonisation target requires decisions on which types of companies, and which parts of their emissions to include. When setting their climate targets for the O&G sector, banks may choose to account for the emissions and financing of O&G activities only (sector-level approach), or to look at clients' cross-sector emissions and financing including those outside of the O&G sector (client-level approach), for example, clients' renewables activities.

- The **sector-level approach** considers that only O&G emissions and financing are in scope. Emissions and financing of clients' activities in other sectors (e.g. power generation or EV charging) are treated separately, potentially under the scope of other targets. This approach assumes that the specificities of the transition in each sector are too unique to be blended with those of other sectors.
- The **client-level approach** considers that net-zero alignment should be looked at from the point of view of the client relationship and thus emissions and financing of all of clients' activities are treated as part of the O&G sector even if financing is provided for non-O&G activities. In this case, targets are sometimes referred to as 'energy' sector targets given their broader scope.

To make this design choice, banks typically consider the emissions materiality of the different actors along the O&G value chain as well as their degree of integration and diversification and capacity to influence specific emissions sources.

- **Emissions materiality:** This is about considering the materiality of Scope 1 & 2 emissions (see Table 5) and Scope 3 emissions (see Table 6) within a bank's portfolio. For example, within O&G operations emissions, each part of the value chain accounts for a material share of global GHG emissions.
- **Capacity to influence emissions sources:** This is about identifying which company types should be included within the scope of the O&G target.

The following tables provide a summary of the emissions materiality and the capacity to influence emissions sources for the different segments of the O&G value chain.

**Table 5:** Emissions materiality and O&G companies' capacity to influence emissions—  
Scope 1 & 2

| Type of company                         | Materiality of emissions  | Capacity to reduce Scope 1 & 2 emissions  | Assessment                           |
|---|---|---|--------------------------------------|
| IOCs, IGUs, ILNG, NOCs                  | High  | Can reduce emissions (e.g., reduce carbon leakages, reduce venting, flaring, electrification of installation using renewable sources).  | Can include in target scope          |
| E&P pure players                        |   |   |                                      |
| O&G transporters, FPSOs or distributors |   | Can assess emissions reduction capabilities including methane leakages in transportation and distribution networks, considering the varying degree of such capabilities across different jurisdictions. |                                      |
| Refiners                                |   | Can assess emissions reduction capabilities including methane leakages and unit electrification, considering the varying degree of such capabilities across different jurisdictions.                    |                                      |
| Petrochemical pure/ integrated players  |   | Can reduce emissions but non-energy activities may be considered out of scope for O&G targets.  | Consider excluding from target scope |
| Transport services                      | Can play an enabling role but are not the decision-makers on investments needed to convert reserves into product. |   |                                      |
| Traders, Service stations               | These players have low operational emissions and are not seen as a strong lever for change.                       |   |                                      |

**Table 6:** Emissions materiality and O&G companies' capacity to influence emissions—  
Scope 3

| Type of company                  | Materiality of emissions | Capacity to reduce Scope 3 emissions  | Assessment                                       |
|----------------------------------|--------------------------|---|--|
| IOCs, IGUS, NOCs, ILNG           | High                     | May choose to address the energy transition by pursuing some of the strategic options: <ul style="list-style-type: none"> <li>Managing the decline of O&amp;G production</li> <li>Develop low-carbon energy (e.g., power, biofuels, H2)</li> <li>Provide CCS/CCUS services, though this is not yet significant, and some uncertainties remain in relation to CCS/CCUS technologies that are highly dependent on funding and demand availability, or products related to carbon</li> </ul> Diversify into other businesses (e.g. energy efficiency, EV charging) | Can include in target scope                      |
| E&P                              |                          |   |  |
| O&G transporters or distributors |                          | May choose to facilitate the injection or transport of green hydrogen, bioLNG, though this is not yet significant.  | May wish to include or exclude from target scope |
| Refiners                         |                          | May choose to address the energy transition by fostering biofuel production, though this is not yet significant.  |  |
| Petrochemicals                   |                          | Can reduce emissions but non-energy activities may be considered out of scope for O&G targets.  | Consider excluding from target scope             |
| Upstream or Transport services   |                          | Can play an enabling role but have little influence over investment decisions to exploit new resources or pursue new strategic options.   |  |
| Traders or Service stations      |                          |   |  |

In summary, when it comes to O&G target setting banks can account for Scope 1 & 2 emissions only, Scope 3 emissions only, or all Scopes collectively, or exclude one or the other across different value chain segments given the materiality of emissions and the capacity of O&G companies to reduce them. The respective merits and drawbacks of each approach are detailed in the following section (3.ii. Target Metrics). Table 7 provides a summary of the value chain segments that can be considered in-scope or out-of-scope by banks when establishing the boundaries for O&G operations and end-use combustion emissions.

**Table 7:** Summary of emissions and counterparties in scope of targets

| Emissions   | Can be considered in target scope  | May be considered in target scope   | May reasonably be considered out of target scope   |
|-------------|--|---|--|
| Scope 1 & 2 | <ul style="list-style-type: none"> <li>Integrated O&amp;G companies (IOCs, IGUs, ILNG) and NOCs</li> <li>E&amp;P pure players</li> <li>O&amp;G transporters, mining operations using FPSOs, gas distributors &amp; LNG</li> <li>Refining pure players</li> </ul> |   | <ul style="list-style-type: none"> <li>Petrochemical pure players</li> <li>Upstream and transport services</li> <li>Traders</li> <li>Service stations</li> </ul> |
| Scope 3     | <ul style="list-style-type: none"> <li>Integrated O&amp;G companies (IOCs, IGUs, ILNG) and NOCs which mainly operate upstream business</li> <li>E&amp;P pure players</li> </ul>  | <ul style="list-style-type: none"> <li>O&amp;G transporters, Gas distributors &amp; LNG</li> <li>Refining pure players</li> </ul> |  |

The updated [Guidelines for Climate Target Setting for Banks](#) published in March 2024 outlines that member banks shall include Scope 3 emissions when setting or revising their climate targets for their O&G portfolios.

## 3.2 Target metrics

Different metrics and units may be used to set targets for different types of emissions or parts of the O&G value chain. There are three key design questions when making a choice on target metrics, as per below:

- a. Whether to set a combined target that covers clients' Scope 1, 2 & 3 emissions or set separate targets for clients' Scope 1 & 2 operational emissions and Scope 3 end-use combustion emissions.
- b. Whether to set target(s) based on absolute emissions and/or emissions intensity. Emissions intensity metrics should be physical metrics (MJ, Boe), but may be financial if the rationale for not using a physical metric is provided as per the [Guidelines for Climate Target Setting for Banks](#).
- c. How to deal with multiple counting of emissions across the O&G value chain.

Banks' choices against these fundamental design questions matter as they have direct implications for the transition incentives communicated to counterparties which may in turn influence clients' decarbonisation efforts as well as for the carbon budget to achieve 1.5°C alignment. Banks need to decide whether there is a risk of mis-judging the alignment of their clients with 1.5°C pathways and are encouraged to provide details on these findings to enhance transparency for external stakeholders. The rest of this section explores the three fundamental design choices on target metrics.

- d. Combined or separate targets for Scope 1, 2, & 3 emissions?

The advantages of setting a combined target for Scope 1, 2 & 3 emissions vs. setting separate targets for Scope 1 & 2 operational emissions and Scope 3 end-use combustion emissions are described in TABLE 8.

**Table 8:** Advantages of different approaches to target metrics

| Approach   | Advantages   |
|--|--|
| <b>Combined target for all Scope 1, 2 &amp; 3 emissions</b>  | <ul style="list-style-type: none"> <li>▪ Limits the number of metrics and thus targets to set, track and disclose.</li> <li>▪ Even though the <a href="#">IEA's Net-Zero Emissions 2050</a> (IEA NZE) scenario comes with pathways for operational emission intensities and data enabling calculation of end-use combustion emission intensities, combining scopes may be more straightforward.</li> </ul>   |
| <b>Separate targets for Scope 1 &amp; 2 operational emissions and Scope 3 end-use combustion emissions</b> | <ul style="list-style-type: none"> <li>▪ A bank may wish to include different parts of the O&amp;G value chain for the calculation of Scope 1 &amp; 2 vs. Scope 3 emissions. For instance, a bank may calculate Scope 1 &amp; 2 emissions for the full O&amp;G value chain but decide to calculate Scope 3 emissions only for the upstream segment, given its role in investment decisions to produce new reserves. This would lead to excluding Scope 3 emissions of refiners and O&amp;G transporters and limit double counting between the different segments of the O&amp;G value chain.</li> <li>▪ The emissions reductions from O&amp;G operations are much steeper (-60%) than those of O&amp;G end-use combustion (-29%) in respected 1.5°C scenarios<sup>10</sup> as these are 'low hanging fruit' which could be relevant for banks to consider on their operationalisation of targets.</li> <li>▪ End-use combustion emissions often far exceed operational emissions (80:20). With a combined metric of Scope 1 &amp; 2 and Scope 3 emissions, there is a risk that improvements in operational emissions are not sufficiently valued.<sup>11</sup></li> </ul> |

Should a bank decide to have a separate target for Scope 1 & 2 emissions of its O&G portfolio companies, this may be monitored using the sector-level approach i.e. accounting for emissions only of O&G activities. One benefit of this is that it is a simpler and clearer way of disclosure for banks.

10 According to the IEA NZE for the period 2020–2030.

11 There is a risk that oil companies' decarbonisation efforts on their Scope 1 & 2 are not valued effectively relative to gas companies. This would be most applicable to targets that rely on a physical intensity metric. This may be illustrated by a hypothetical portfolio with two upstream counterparties: a pure oil player and a pure gas player. The oil company reduces its operational emissions to the required level, but the gas company does not do so entirely. The oil company's emissions intensity could still be higher than the gas company's emissions intensity, given that the emission factor for oil combustion is 25% higher than for gas combustion. As a result, banks may be tempted to provide more finance to the gas company, while it does not sufficiently tackle its Scope 1 & 2 emissions.



Should a bank decide to have a separate target for Scope 3 emissions of its O&G portfolio companies, four options can be used:

- Absolute emissions using the sectoral approach
- Absolute emissions using the client approach
- Emissions intensity using the sectoral approach
- Emissions intensity using the client approach

Please refer to Annex 1 and Annex 4 for detailed calculations.

### a. Absolute emissions or emissions intensity targets?

There are advantages and disadvantages for banks using absolute emissions vs. emissions intensity metrics for the O&G sector, as summarised below:

- **Absolute emissions:** Absolute emissions measurements are unlikely to over- or underestimate warming impact due to the absence of intermediate variables, and therefore provide the most direct measurement of climate impact. A potential downside of an absolute emissions target is that it could discourage investments in any activity that has a positive level of emissions even if some of these investments may deliver very significant emissions reductions (e.g. investment in a gas-CCUS project with residual emissions, depending on how CCUS projects are accounted for). Or it could encourage the divestment of assets to other providers of capital, transferring the emissions with the asset and resulting in no real-world emissions decrease.
- **Emissions intensity:** Targets expressed in these terms enable the evaluation and comparison of the climate performance of different O&G counterparties regardless of their economic growth. Using an emissions intensity metric for Scope 1 & 2 (see Annex 3 for technical details) enables the monitoring of emissions from O&G operations and the comparison of the climate performance of different O&G assets relative to a benchmark in kgCO<sub>2</sub>e/MJ. Past efforts to improve efficiency, placing an asset below the benchmark, would be captured. However, a key disadvantage of emissions intensity metrics, particularly physical intensity metrics, is that they are likely to over- or under- estimate warming impact due to the presence of intermediate variables. As a result, a company may remain aligned with the 1.5°C pathway in intensity terms but with its net emissions growing.

Beyond general considerations, neither absolute emissions nor emissions intensity (in their raw form) can fully reflect the net-zero alignment of the O&G sector, because these metrics do not fully reflect the different ways that O&G firms can decarbonise. As discussed in the introduction, the industry transition is complex and certain companies will diversify into other non-O&G sectors. Thus, making a choice around the target metrics needs to be looked at in conjunction with other factors, for example how banks consider their financing to O&G companies.

As absolute and intensity metrics each have advantages and disadvantages, the [Guidelines for Climate Target Setting for Banks](#) provide the option to set a target on either basis, or set both absolute and intensity targets, but also require members to report financed emissions in both absolute and intensity metrics to provide a more complete picture of a bank's impact.

## b. Dealing with the risk of multiple counting of emissions when setting O&G targets

The updated [Guidelines for Climate Target Setting for Banks](#) published in March 2024 outline that member banks shall include Scope 3 emissions when setting or revising their climate targets for their O&G portfolios. Calculating Scope 3 end-use combustion emissions for the upstream segment of the O&G value chain only (i.e. excluding Scope 3 emissions of refiners and O&G transporters) ensures that the incentive is set on reducing the production of O&G while limiting the issue of double counting (refer to Annex 4 for detailed calculations). Banks can use a separate Scope 3 indicator when looking to monitor Scope 3 emissions of their refining or O&G transporter clients.

Indeed, if banks were to monitor Scope 3 emissions for upstream operations together with Scope 3 emissions of refiners and O&G transporters, not only would it potentially triple the counting of emissions, but it could create a disincentive to finance the part of the O&G value chain with the lowest added value impact to the target process. This is because the profitability of the O&G value chain is not evenly distributed. Thus, banks looking to monitor Scope 3 emissions of refiners and O&G transporters may wish to consider setting a separate Scope 3 indicator for each part of the O&G value chain i.e. one for refiners and one for O&G transporters. Multiple counting of Scope 3 emissions could be eliminated by, when aggregating at sector level, taking only the maximum of Scope 3 emissions from the upstream, refining and transportation segments into account, as detailed in Section 4.iv.

## 3.3 Financial scope

The financial scope determines which of the bank's financing activities will be included in the target-setting and reporting methodology. A clearly defined financial scope provides greater transparency and accountability and should cover the following three core areas:

- The bank's clients included in the boundary
- The bank's financial instruments, products, services, and investments covered
- The indicator used to determine exposure to each client

### In-scope clients

The financial scope must define which of the bank's clients are included in the methodology. A methodology may simply refer to the boundary directly (see Section 3.ii and Table 7) and recommend coverage of any company that is active within the boundary. Without further guidance, however, banks may find it difficult or burdensome to identify relevant companies in this way, especially since many clients will be diversified across multiple parts of the O&G value chain.<sup>12</sup> To overcome this challenge, a methodology can establish certain thresholds to determine client inclusion within the scope. For example, the methodology can set thresholds based on crude oil production, revenue generated from O&G activities, or both. Furthermore, these thresholds may refer to the activities

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<sup>12</sup> The Financial Scope may therefore rely on NAICS (North American Industry Classification System), NACE (Statistical Classification of Economic Activities in the European Community) codes, or other classification systems used to categorize businesses and industries based on their primary economic activity.

specified in the boundary. This approach can simplify reporting and result in more precise outcomes. Implementing any of these approaches would lead banks to report on their exposures to companies operating in the O&G sector but may not account for trading or financial companies. Nonetheless, since such companies can serve as sales or financing offices for O&G businesses, there is a rationale for considering exposure to such entities if they are controlled by, or affiliated with, an O&G company. As a result, methodologies should clarify how non-producing firms in the O&G industry should be treated.

## In-scope financing

The [Guidelines for Climate Target Setting for Banks](#) provide guidance for minimum inclusions of in-scope financing and state that targets and reporting shall cover lending activities and should cover investment activities (members may exclude on-balance sheet securities held for client facilitation and market-making purposes).

As a major source of capital for the industry, lending (and specifically long-term lending) should be comprehensively covered by any O&G sector target setting and reporting framework. Shorter-term instruments, as well as unfunded instruments (e.g. guarantees), may be considered in the financial scope but may also be excluded since these instruments are generally considered to have a lower climate impact (and a lower level of climate-related risk) compared to longer-term and funded instruments. Any methodology should clearly outline the types of lending exposure that are included for reporting purposes, and banks should clarify relevant exclusions in their reporting.

The updated Guidelines for Climate Target Setting for Banks published in March 2024 outline that member banks shall include capital markets activities when setting or revising their climate targets for their O&G portfolios from November 2025 onwards. This is in line with NZBA's guiding principle that, over time, banks should increase the volume of investment activities covered by the targets in line with methodological developments.

## Exposure indicator

The portfolio value used to calculate financed emissions may draw on a variety of financial indicators and methodologies that may utilise different approaches. While banks may choose what is the best fit depending on the metric they use for steering purposes, whichever methodology is selected by a bank, should be applied consistently across all clients in target-setting and reporting.

Whichever methodology is chosen, it should draw on detailed counterparty data such as a company's revenues, capital expenditure (CAPEX), or debt, to determine how to weight financial exposure to clients. In many cases, such data is not readily available, and banks may face difficulties in gathering it and/or keeping it up-to-date. The data can be used to model how a company's debt is distributed across various business lines, enabling accurate allocation of general-purpose loans that support a company's activities across different sectors. For banks that have exposure to large and diversified groups, this approach can simplify reporting by allowing them to weigh their total exposure based on metrics such as the percentage of O&G-related revenues for the entire group, rather than identifying how the provided financing will be used.

### 3.4 Attribution methods

Attribution relates to how emissions in the real economy are attributed to a financial institution or financial instrument providing financing.

There are four common approaches that banks can leverage for emissions measurement:

- Absolute emissions
- Economic emissions intensity
- Physical emissions intensity
- Weighted average physical unit intensity<sup>13</sup>

**Equation 1:** Absolute emissions

$$\underbrace{\text{Portfolio emissions}}_{\text{Portfolio indicator}} = \sum_{\text{Company}} \left[ \underbrace{\text{Company emissions}}_{\text{Company indicator}} * \underbrace{\frac{\text{Bank financing (€)}}{\text{EVIC or company debt + equity (€)}}}_{\text{Attribution factor}} \right]$$

The portfolio O&G emissions are calculated based on the sum of the companies' emissions attributed to the financial instruments.

Volatility can result from unrelated movements in Enterprise Value Including Cash (EVIC) or debt + equity, and attributed emissions may change independently from counterparties' emissions or banks' actions.

**Equation 2:** Economic emissions intensity

$$\underbrace{\text{Economic emission intensity}}_{\text{Total outstanding amount or assets under management (AUM)}} = \sum_i \left[ \frac{\text{Outstanding amount}_i}{\text{Investee company's EVIC}_i} * \text{Investee company's emissions}_i \right]$$

13 See PCAF Standard A (page 22): [Enabling financial institutions to assess and disclose greenhouse gas emissions associated with financial activities \(carbonaccountingfinancials.com\)](https://www.carbonaccountingfinancials.com/enabling-financial-institutions-to-assess-and-disclose-greenhouse-gas-emissions-associated-with-financial-activities)

Economic emission intensity is calculated based on the investee companies' emissions allocated to the reporting financial institution using the attribution factor and an economic activity indicator (e.g., total outstanding amount or assets under management).

The denominator is exposed to volatility due to inflation or market volatility, but this may be corrected according to the PCAF standard.<sup>14</sup>

**Equation 3:** Physical emissions intensity approach

$$\underbrace{\left[ \sum_{\text{Company}} \left[ \text{Company emissions} \right] \right]}_{\text{Portfolio indicator}} = \underbrace{\left[ \sum_{\text{Company}} \left[ \text{Company output} \right] \right]}_{\text{Company indicator}} * \underbrace{\left[ \frac{\text{Bank financing (€)}}{\text{EVIC or company debt + equity (€)}} \right]}_{\text{Attribution factor}}$$

Physical emissions intensity is calculated based on the investee companies' emissions allocated to the reporting financial institution using the attribution factor and the companies' physical outputs (e.g., barrel of crude oil produced) allocated to the reporting financial institution using the attribution factor.

Volatility can result from unrelated movements in EVIC or debt + equity, and attributed emissions may change independently from counterparties' emissions or banks' actions.

**Equation 4:** Weighted average physical unit intensity approach

$$\underbrace{\left[ \sum_{\text{Company}} \left[ \frac{\text{Company emissions}}{\text{Company output (X)}} \right] \right]}_{\text{Portfolio indicator}} = \underbrace{\left[ \sum_{\text{Company}} \left[ \frac{\text{Bank financing (€)}}{\sum \text{Bank financing to the sector (€)}} \right] \right]}_{\text{Attribution factor}}$$

14 See [PCAF Report on "Global GHG Standard"](#)

For this approach, emissions intensities are allocated based on index weights, rather than based on ownership or responsibility. As such, the sum is composed of the sum of the carbon intensity of each constituent in the index, multiplied by its respective weight in the index.<sup>15</sup>

From a bank's perspective, companies with a higher carbon intensity are likely to be also more exposed to market and regulatory risks. This approach therefore can be seen as a proxy for the portfolio's exposure to potential transition risk.

The approach aims to measure the exposure of carbon-intensive companies, acknowledging sector-specific variation in rates of decarbonisation, however investors operating from a baseline of relatively high carbon emission exposure might, on average, still be more impacted by the low-carbon transition relative to sector peers based on the need for an overall engagement of their portfolio.

The approach applies to emission intensity indicators only. It is a simple average of the emissions intensity weighted by loan values. The advantage of this approach is that it is simple to implement as it does not require information on the companies' debt and equity or EVIC. It is also more stable (i.e. not introducing volatility) and reflects a bank's capital allocation.<sup>16</sup>

### 3.5 Benchmarking and target setting

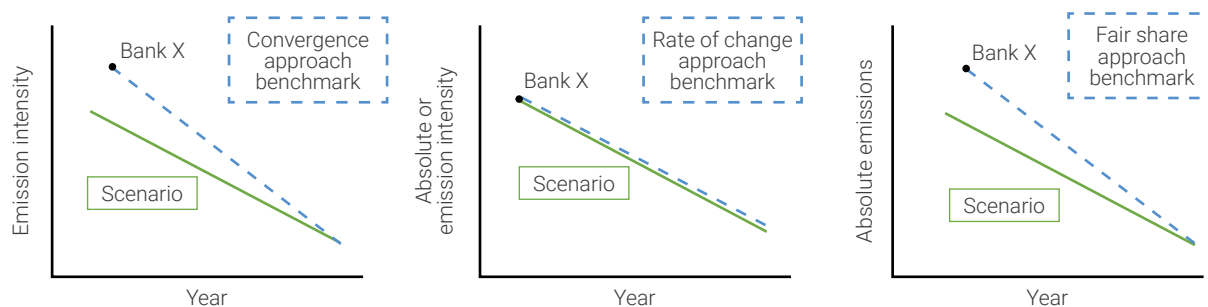
The [Guidelines for Climate Target Setting for Banks](#) encourage its members to independently set individual long-term and intermediate targets that are aligned with the temperature goals of the Paris Agreement. NZBA members have independently committed to use no or limited overshoot scenarios with a >50% probability of limiting global warming to 1.5°C by the end of the century. It is also possible to select alternative regional scenarios, but they must be equivalent to low/no overshoot 1.5°C scenarios. Benchmarking refers to how macro scenarios are broken out to create individual benchmarks for portfolios and financial institutions (e.g. assessments of World Benchmarking Alliance). Here again, the aim is to ensure that the right incentives are set for companies to align with a low/no overshoot 1.5°C pathway.

Based on the benchmarks, three approaches are then possible for banks for target setting. When choosing between these designs (Figure 1), it is important to consider the incentives they create for the counterparties within the portfolio being measured.

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15 See S&P Global 2020 "[Index Carbon Metrics Explained](#)"

16 Katowice Banks (2020) [Credit Portfolio Alignment: An application of the PACTA methodology by Katowice Banks in partnership with the 2 Degrees Investing Initiative.](#)



**Figure 1:** Types of target setting approach

- i. The **convergence approach** implies that portfolios are expected to converge to the required industry-average emissions levels. This metric applies only to emissions intensity metrics. The convergence approach may disadvantage counterparties within the portfolio that are more carbon-intensive than their industry average, while reducing incentives for other counterparties within the portfolio that are below average in their intensity to rapidly decarbonise.
- ii. The contraction or **rate of change approach** implies that portfolio emissions are expected to reduce at the same required industry-average rate and applies to metrics expressed in intensity and absolute units. This approach requires a consistent rate of global GHG emissions reduction in line with scientific decarbonisation trajectories, indifferent to regional or sectoral business growth or variation. However, it is the easiest to understand and communicate and the most robust in terms of alignment with the global carbon budget and a steep trajectory for a 1.5°C-aligned decarbonisation target<sup>17</sup>. The contraction approach may disadvantage counterparties within the portfolio that are less carbon-intensive, while reducing incentives for counterparties within the portfolio that are more carbon-intensive since the same rate of reduction is applied to the portfolio, irrespective of current performance and past efforts of counterparties within it. This means that a company with a relatively low emissions intensity today would have to reduce its emissions by the same percentage as a carbon-intensive company. For example, if the 2020–2030 decarbonisation pathway implies a 60% reduction in emissions intensity, under the contraction approach, all counterparties within the portfolio would be expected to achieve that, but if a counterparty or portfolio has already reduced its intensity greatly in the past, it may be very hard if not unfeasible to keep on reducing at this rate.
- iii. The **fair-share approach** defines the average rate of reduction in emissions for an industry but recognises that individual counterparties will be better- or worse-performing than that average. This approach implies that portfolio emissions are expected to reduce in line with a counterparty-specific rate-of-reduction benchmark for absolute emissions.<sup>18</sup> Thus, with this approach, metrics are only expressed as an absolute emissions unit. The fair share approach combines the convergence and contraction approaches, preserving some of the benefits and eliminating many

17 See SBTi, May 2018 [How can companies address their scope 3 greenhouse gas emissions?](#)

18 For more details on the calculation of the fair-share approach, refer to Appendix 2 of [Measuring Portfolio Alignment: Technical Considerations](#)



of the disadvantages of both. However, according to GFANZ guidance<sup>19</sup> the fair-share approach also involves various underlying assumptions that drive uncertainty when operationalised. This is a particular challenge when attempting to account for a company's growth within the benchmark. Banks have noted that this trade-off between the robustness of portfolio alignment methodologies and the ease of computation and/or comprehension is a key barrier to its adoption.

## Considerations

Banks should be mindful of their target calculation approach because portfolios are not strictly representative of the economy. For example, some banks may finance the downstream part of the value chain relatively more than the industry average activity. If banks choose to calibrate the benchmark with the distribution of the portfolio along the O&G value chain, please see Annex 4 iii. for how such calibration can be done.

Likewise, if a bank portfolio is particularly exposed in a given region, it would be reasonable for the bank to choose a regional scenario or construct a regional benchmark out of a global scenario.

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19 See Announcement of Launch of GFANZ, November 3rd 2021 ([Link](#))

## 4. Operationalisation of approaches

The process of operationalising net-zero targets can be challenging particularly in markets where less data is available. This section offers some practical tips on how to approach this operationalisation.

### 4.1 Identifying and sourcing counterparty emissions data

Identifying and sourcing emissions data is a critical but challenging aspect of the operationalisation process. Using asset-level data also helps identify counterparties with exposure to a climate-relevant sector that may fall outside internal sector classifications. Legal Entity Identifiers (LEI) and other unique identifiers can be used to reconcile data without requiring text matching. To compute absolute emissions and/or emission intensity targets, the data points listed in Table 9 are required to first calculate the financed emissions.

**Table 9:** Counterparty data required to calculate financed emissions

| Used for              | Input data required   | Unit                 |
|-----------------------|---|----------------------|
| Attribution factor    | Counterparty EVIC or total debt and equity                  | EUR, USD, etc        |
|                       | Counterparty O&G CAPEX and OPEX out of total CAPEX and OPEX | %                    |
| Operational emissions | Counterparty emissions                                      | MtCO <sub>2</sub> eq |
|                       | Counterparty output (production, transport, refining)       | MJ                   |
| End-use emissions     | Counterparty production                                     | MJ                   |

### 4.2 Organisational boundaries of counterparty emissions

To account for GHG emissions, the O&G companies consolidate emissions according to their accounting responsibility. This grouping is known as the organisational boundary. Two distinct approaches can be used to consolidate GHG emissions for organisational reporting:

- **The control approach:** This is the most common approach taken to demonstrate the company's management performance to reduce emissions. This may be subdivided into operational control and financial control.<sup>20</sup> This approach reflects legal and contractual requirements, as well as internal policies, to manage GHG impacts. Conversely, this approach excludes data from assets that are partly owned by the reporting unit but operated by another company.
- **The equity approach:** Direct GHG emissions data are consolidated in proportion to the reporting company's percentage share of emissions from its partly- or wholly-owned assets (both operated and non-operated). This is done where the company wishes to provide information on the significance of its emissions in a manner more aligned with its financial reporting.

For O&G companies, the choice of approach could affect how emissions from these operations are categorised as either direct or indirect. If a company fully owns and operates its activities, its organisational boundary will be the same whichever approach is used. But if a company has shared operations, its organisational boundary will differ depending on the approach used.<sup>21</sup>

Differences in clients' consolidation approaches could create issues for banks. When two companies hold interests in the same operation and use different consolidation approaches, emissions from that joint operation could be double-counted or not counted at all. Moreover, comparing two companies that report GHG emissions on a different basis could be misleading regarding actual performance. Hence, when accounting for emissions on a credit portfolio, these considerations would need to be factored into data procurement decisions and utilisation.

### 4.3 Ways to identify suitable data sources

Beyond price considerations, there are some essential criteria that banks can use when selecting a reliable data source, including the following:

- **Exhaustivity:** banks are encouraged to comply or explain difficulties in achieving coverage as per the PCAF standard. The best way to test the exhaustivity of a third-party database is to conduct a matching exercise. As a proxy though, banks can ask for the total volume of assets that are covered in the database.
- **Data availability and quality:** The data should include all relevant GHG emissions. Analysis has shown that some data providers use different assumptions than those used in the formulation of the scenario benchmark. This makes the comparison between the two challenging, especially in emissions intensity terms. In particular, the methane emissions in the IEA scenarios are much higher than those reported by data

<sup>20</sup> Based on the GHG Protocol, in the financial control approach, the company has financial control over the operation if the former can direct the financial and operating policies of the latter with a view to gaining economic benefits from its activities. For example, financial control usually exists if the company has the right to the majority of benefits of the operation, however, these rights are conveyed. Similarly, a company is considered to financially control an operation if it retains the majority risks and rewards of ownership of the operation's assets.

<sup>21</sup> See [GHG Protocol, Standard Supporting \(Provisional Draft\)](#).

providers. As a reference, the worldwide average operational emissions on a lifecycle basis were 15 kgCO<sub>2</sub>e/MJ on average in 2020; one should expect third-party data to be on average at the same level for it to be considered credible.

The NZBA working group calls for more coordination and exchanges between third-party data providers and scenario providers.

- **Proxies and data quality:** PCAF distinguishes three different options for data to calculate the financed emissions from business loans and unlisted equity depending on the emissions data used. Banks are free to use or reference other frameworks that comply with the NZBA framework, though many banks already use the PCAF approach and feel it is a robust option in the market, which is why we reference it here. However, this reference does not imply explicit endorsement of PCAF or its methodology.
  - **Option 1: Reported emissions**, where verified or unverified emissions are collected from the borrower or investee company directly (e.g., from their company sustainability report) or indirectly via verified third-party data providers (e.g. CDP) and then allocated to the reporting financial institution using the attribution factor.
  - **Option 2: Physical activity-based emissions**, where emissions are estimated by the reporting financial institution based on primary physical activity/production data collected from the borrower or investee (e.g., megawatt-hours of natural gas consumed) and then allocated to the reporting financial institution using the attribution factor. The emissions data should be estimated using an appropriate calculation methodology or tool with verified emission factors expressed per physical activity (e.g., tCO<sub>2</sub>e/MWh) issued or approved by a credible independent body. Data availability or accuracy remain critical challenges in calculating financed emissions. Currently, many financial institutions rely on third-party providers or utilising proxy data or estimates to identify portfolio areas within high emission-intensity. However, PCAF has been working on the [Financed Emissions Standard](#) to provide guidance on these issues.
  - **Option 3: Economic activity-based emissions**, where emissions are estimated by the reporting financial institution based on economic activity/financial data collected from the borrower or investee company (e.g. GBP/USD/EUR of revenue or GBP/USD/EUR of asset) and then allocated to the reporting financial institution using the attribution factor. The emissions data should be estimated using official statistical data or acknowledged Environmentally Extended Input-Output (EEIO) tables providing region- or sector-specific average emission factors expressed per economic activity (e.g., tCO<sub>2</sub>e/EUR of revenue or tCO<sub>2</sub>e/EUR of asset).

While Options 1 and 2 are based on company-specific reported emissions or primary physical activity data provided by the borrower or investee company or third-party data providers, Option 3 is based on region- or sector-specific average emissions or financial data using public data sources such as national statistics or data from other third-party providers. PCAF's data quality score attempts to measure the degree of quality based on the combined use of any three options.

The data quality mix can be reflected in the average data quality score.

Please refer to the PCAF data quality scores of data that can be used to calculate the financed emissions for business loans and unlisted equity<sup>22</sup>. While PCAF’s score works well for operational emissions (Scope 1 & 2), it is limited for end-use emissions (Scope 3) in relation to a specific subcategorisation in 15 categories, as part of a consideration of upstream and downstream Scope 3 emissions. Indeed, there are diverse approaches used by counterparties in reporting their Scope 3. Some integrated O&G companies or NOCs count emissions from production, others from refining, and some from sales. Banks can refer to PCAF for how to assess emissions data quality and calculation approaches, and thus take a “comply or explain” approach.

## 4.4 Scope 3 accounting for integrated oil and gas companies and national oil companies

On Scope 3 accounting, emissions from some integrated O&G companies or NOCs purchasing crude from third parties to refine and sell are more heavily weighted towards downstream activities. From a climate perspective, those emissions released from the combustion of products sold by a company—regardless of whether they extracted the original crude—fall under that company’s Scope 3 emissions and so should be included in emissions goals.

One approach to avoid double counting considers all volumes managed at each step of the value chain for each product, considering imports and exports and netting internal exchanges of products to avoid double counting. A Net Value Chain method<sup>23</sup> to account for products destined for energy use is defined in Equation 5.

**Equation 5:** Net Value Chain approach

$$\text{Net value chain (MJ)} = \text{Max} \left[ \text{Volume produced (MJ)}, \text{Volume refined (MJ)}, \text{Volume marketed (MJ)} \right]$$

This approach considers the entire value chain of economic activities, by understanding what is happening at different stages of the O&G value chain. It can help identify strategic interventions and shape corresponding actions, however, this could create a perverse incentive. Given that the added value in the O&G value chain is not linearly distributed between production, refining, and marketing, companies active across the value chain may be encouraged to reduce their volumes sold as opposed to cutting down production. Thus, banks may prefer to account for the Scope 3 emissions of integrated O&G companies and NOCs using physical-based activities and taking O&G production only (see tables 5–7).

22 The Global GHG Accounting and Reporting Standard for the Financial Industry ([Link](#)).

23 See Science-based Targets Initiative Publication for [Oil and Gas Guidance](#) (2020).

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## 5. Further research and methodological development

There are various areas of further research and methodological development that would support banks to develop robust targets for their engagements in the O&G sector.

### Facilitated emissions

Currently, most targets set include financed emissions arising from lending and investment. A few banks include facilitated emissions from the capital markets activities they undertake in the scope of targets. Facilitated emissions from capital markets activity may be very significant for some banks and [the updated second version of the Guidelines for Climate Target Setting for Banks](#), published in March 2024, outline how such NZBA member banks shall include capital markets activities when setting or revising their climate targets for their O&G portfolios from November 2025 onwards. The guidelines do not specify whether banks should use combined or separate targets for financed and facilitated emissions. Banks may choose the approach that works better for them.

### Transition finance

Many banks have outlined their climate ambition and chosen to make commitments to financing ambitious climate action to transition the real economy to net zero. Financing provided to banks' clients in that respect is frequently described as "transition finance" and essentially encourages companies to set transition plans and accelerate those plans which, in turn, will support banks' decarbonisation strategies. It may, however, result in higher financed emissions in the short term. Transition finance is currently going through rapid development and further work is needed. NZBA published a discussion paper in December 2023 on [Developing Metrics on Transition Finance](#), outlining how banks may consider reporting their transition finance efforts.

### Transferred emissions

The Environmental Defence Fund (EDF) in its report "[Transferred Emissions: How Risks in Oil and Gas M&A Could Hamper the Energy Transition](#)" (EDF 2022)<sup>24</sup> found that transfers of assets to operators with lower ESG policies can hamper progress in reducing overall GHG emissions and in some cases lead to a rise in emissions. While recognising that there are several drivers for asset sales beyond the management of GHG emissions, EDF nevertheless warns that they may mean that an increasing number of O&G assets are at risk of weaker climate stewardship. Instead of blanket asset sales, an approach is needed that allows financial institutions and O&G companies to act as responsible stewards of high-emitting assets and manage them responsibly in line with a 1.5°C pathway ([GFANZ 2022](#)).<sup>25</sup> However, at this stage, further work is needed to address these considerations.

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24 EDF Report on [Transferred Emissions: How Oil & Gas M&A Hamper the Energy Transition \(edf.org\)](#).

25 GFANZ's report on [The Managed Phaseout of High-emitting Assets](#).

## 6. Conclusion

There is an opportunity to improve the transparency of banks' O&G target disclosures by making clear targets' boundaries in relation to the operations and end-use emissions from clients, the banking activities covered, metrics, approaches and scenarios used, the portfolio coverage of the target and the assumptions made.

NZBA hopes that this sector paper will assist member banks and the wider banking sector in setting O&G sectoral targets and engaging with their clients on this important subject to facilitate their transition to a net-zero economy. NZBA members will continue to evaluate the different approaches to target setting to identify good practice.

### 6.1 Call-to-action for data and scenario providers, oil and gas companies, and governments

In December 2023, [COP28](#) in Dubai concluded with the [UAE Consensus](#), calling on parties to be “transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner”. Commercial banks have a role to play in supporting the O&G sector to achieve this and to align with 1.5°C pathways in various ways including the provision of financing for emissions reduction initiatives, development of new financial products, and engagement with O&G clients to help them finance their transition. However, commercial banks do not operate in isolation and the extent to which they can support the decarbonisation of the O&G sector is dependent on other actors of the economy taking action as well as on broader macro-economic developments including energy price shocks and fluctuations. In addition, there are challenges banks may need to navigate such as limited data availability and absence of carbon disclosures in the O&G sector. NZBA calls on other actors of the economy to help make this task easier by addressing the following requests:

**Third-party data and scenario providers** can provide clarity on data and transition pathways for the O&G sector to achieve net zero by 2050, particularly through:

- Coordinating efforts to standardise data and transition pathways so these are compatible and decision-useful for banks. For instance, analysis shows that some data and scenario providers currently employ different assumptions than those used in formulating scenario benchmarks, making a comparison between the two challenging.
- Providing region-specific insights in relation to 1.5°C-aligned scenarios. For instance, there is currently limited regional analysis on the role of the O&G sector in relation to the energy transition of developing and least-developed countries.



- Providing the data required for banks to be able to construct benchmarks that are suitable for the target-setting approach they have chosen. For instance, recent analysis shows that the absence of comprehensive, accurate data is the biggest challenge that banks face in target setting.<sup>26</sup>
- **Oil and gas companies** can take action to accelerate the net-zero alignment of the sector and engage with banks in that respect, particularly through:
  - Providing improved disclosures on their emissions and the data required to break out fossil fuel versus non-fossil fuel activity and investment including operating expenditure (OPEX) and capital expenditure (CAPEX).
  - Designing and implementing transformation projects and adopting technology solutions that can contribute to the reduction of their emissions.
  - Developing transition plans and engaging with banks regarding the financing and long-term implementation of those transition plans.
- **Governments** can develop a stable policy and regulatory environment that supports banks in financing the net-zero alignment of the O&G sector, particularly through:
  - Setting the national ambition and developing and implementing energy transition strategies for the O&G sector as a whole to achieve net zero by 2050.
  - Reducing demand for O&G through conducive regulation and policies, in particular on real estate building codes and energy efficiency, transport, and industry.
  - Providing clear direction for the O&G companies where they have a controlling stake; national O&G companies control approximately three quarters of the world's O&G reserves.

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26 [spglobal.com/marketintelligence/en/news-insights/blog/spotlight-on-sustainability-how-banks-can-overcome-the-challenges-of-achieving-net-zero-by-2050](https://spglobal.com/marketintelligence/en/news-insights/blog/spotlight-on-sustainability-how-banks-can-overcome-the-challenges-of-achieving-net-zero-by-2050)

# Annexes



# Annex 1: Four options to monitor Scope 3 emissions

The [Guidelines for Climate Target Setting for Banks](#) provide the option to set targets on either an absolute emissions or intensity basis, but also require members to report financed emissions in both metrics to provide a more complete picture of the bank's impact. The working group identified four options to monitor Scope 3 O&G emissions currently being used by banks. FIGURE 2 gives detail on how these metrics are calculated. The pros and cons of using each are discussed in turn and summarised below.

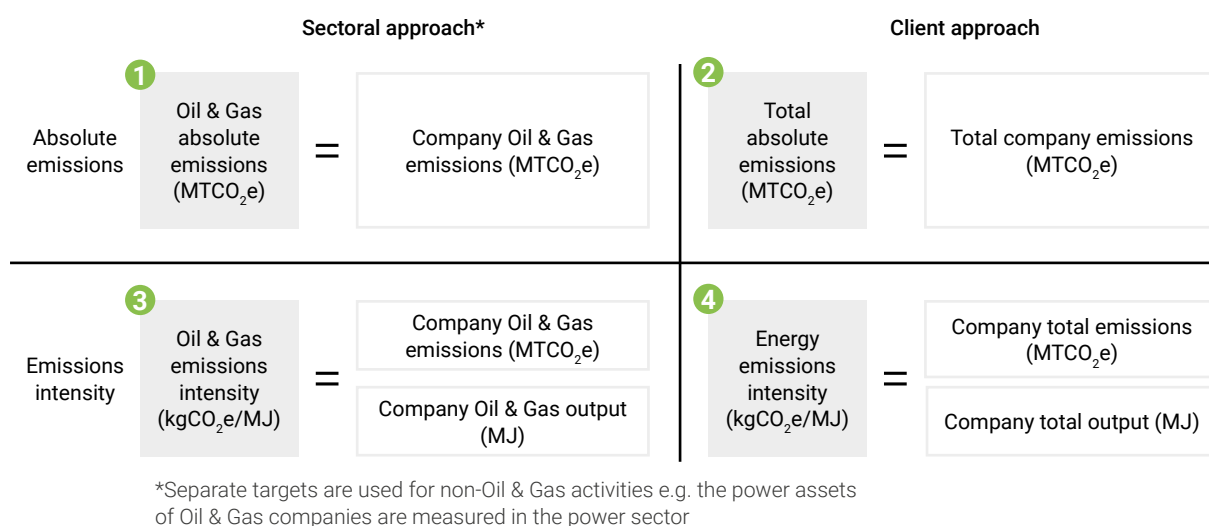


Figure 2: Four Scope 3 Emissions Metric Options

1) **Oil and gas absolute emissions (Absolute emissions with sectoral approach)** accounts only for the counterparty O&G emissions. This approach has certain advantages.<sup>27</sup>

- It reflects the reduction in emissions from O&G production in absolute terms
- It captures the transition to non-fossil fuel activities, as only O&G emissions are accounted for, and non-O&G financing is not included
- It reduces the risk of over- or under- estimating warming impact due to the presence of intermediate variables is limited
- There are scenarios easily computable for this scope.

27 See TCFD Report on "Measuring Portfolio Alignment" (pp 38–40)

Drawbacks of this approach are that:

- Banks that primarily provide general purpose lending may find this difficult to implement.
- Banks would have to determine and isolate data around clients' emissions intensive lines-of-businesses on an ongoing basis which may be a difficult task for some banks to implement.

**2) Absolute emissions (Absolute emissions with client approach)** consider the counterparty's whole emissions. This would capture any reduction in fossil fuel output and development of CCS at source, but it will not encourage companies to diversify into greener lines of business such as renewables production, which is perhaps the most important way the industry will decarbonise. Meanwhile, the O&G industry will undergo a diversification phase as part of the transition.

**3) Oil and gas end-use emissions intensity (Emissions intensity with sectoral approach)** implies taking only the emissions from the company's O&G activities. This metric provides a view on the efficiency of the company's decarbonisation process, however, it does not necessarily fully reflect the way O&G firms decarbonise a) emissions intensity does not necessarily reflect emission reductions; b) it also does not reflect the transition of companies to renewable energy or their exit from the energy supply business. Emissions from combusting a tonne of oil or gas is a constant and so an emissions intensity target on clients' Scope 3 emissions cannot serve to encourage efficiency of use.

**4) An energy emissions intensity (Emissions intensity with client approach)** accounts for all types of emissions and energy supply including oil, gas, coal, biofuels, hydrogen, solar, and wind for which production can be measured in units of energy. The benefit of this metric is that it encourages fossil fuel counterparties and other energy firms to transition their businesses while reflecting efforts to decarbonise and reduce fossil fuel dependence. This approach also accommodates businesses that are already partially diversified. Utilities that do not have a fossil-fuel business should continue to be measured against their own utility benchmark and not a benchmark that includes fossil fuel emissions<sup>28</sup>. However, this approach suffers from certain limitations. While this metric works well for integrated O&G companies that are transitioning into sustainable products or services, it does not cater to counterparties that are purely active in O&G. Second, there is still a risk of misalignment with the 1.5°C carbon budget using only this intensity metric as intensity may improve while increasing overall emissions.

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28 See [TCFD Report on "Measuring Portfolio Alignment" \(Page 40\)](#)



**Table 10:** Incentives Provided by Different Metric Units & Analysis Level

| Evaluation criteria   |  | 1) Oil & Gas emissions intensity (sectoral approach) | 2) Energy intensity (client approach) | 3) Oil & Gas absolute emissions (sectoral approach) | 4) Absolute emissions (client approach) |
|---|--|--|---------------------------------------|---|---|
| Reflecting and incentivising the industry's transition on Scope 3 | Produce, refine, transport, or sell less               | x  | ✓                                     | ✓   | ✓                                       |
|   | Transition to non-fossil fuel energy businesses        | x  | ✓                                     | x   | ✓                                       |
|   | Transition outside the energy supply business          | x  | x                                     | x   | ✓                                       |
|   | Deploy CCUS technologies                               | ✓  | ✓                                     | ✓   | ✓                                       |
|   | Switch from oil to gas                                 | ✓  | ✓                                     | ✓   | ✓                                       |
| Other considerations  | Minimizes risk of misalignment with the carbon budget? | x  | x                                     | ✓   | ✓                                       |
|   | Available scenario indicators?                         | ✓  | x                                     | ✓   | ✓                                       |

# Annex 2: Sectoral codes by counterparty type in scope

**Table 11:** Sectoral Codes by Counterparty Type In-Scope

| Activities                    | Integrated O&G and NOCs                              | Pure players                                      | NACE Codes                   | GICS codes | NAICS codes                | SIC codes            |
|-------------------------------|--|---|------------------------------|------------|----------------------------|----------------------|
| Production / upstream         | Integrated O&G companies (IOCs, IGUs, ILNG) and NOCs | E&P pure players                                  | B6.1.0<br>B6.2.0<br>D35.2.1  | 10102020   | 211120<br>336611<br>213112 | 1311<br>3731<br>1382 |
| Transportation & distribution |  | O&G transporters, FPSOs, Gas distributors and LNG | D35.2.2<br>D35.2.3<br>H49.50 | 10102040   | 486110<br>237120<br>424710 | 4922<br>1389<br>5171 |
| Refining                      |  | Refining pure players                             | C19.2.0                      | 10102030   | 324110                     | 2911                 |

# Annex 3: Calculating operational (Scope 1 & 2) emissions intensity

This section gives the precise formulation and steps for the calculation of the Scope 1 and 2 emissions intensity metrics and scenario benchmark. Table 12 sets out the definitions.

**Table 12:** Object and variable definitions

| Object definition       |                               | Variable definition     |   |
|-------------------------|-------------------------------|-------------------------|---|
| <i>i</i>                | Counterparty                  | $CO_{2i}$               | Oil & gas emissions of counterparty <i>i</i>  |
| <i>p</i>                | Portfolio                     | $MJ_i$                  | Oil & gas output of counterparty <i>i</i> (production, transport, refining depending on the segment concerned—both production and throughput can be considered depending on company activity) |
| <i>b</i>                | Benchmark                     | $Financing_i$           | Dedicated financing to counterparty <i>i</i>  |
| <i>dedicatedo&amp;g</i> | Dedicated O&G financing       | $Attribution\ factor_i$ | Attribution factor for counterparty <i>i</i>  |
| <i>undedicated</i>      | Undedicated financing         | $Value_i$               | Company value which is EVIC for listed companies or the total debt and equity for non-listed companies  |
| <i>up</i>               | Upstream segment              | $Opex_i$                | Oil and gas OPEX of counterparty <i>i</i>   |
| <i>tra</i>              | Transportation segment        | $Capex_i$               | Oil and gas CAPEX of counterparty <i>i</i>  |
| <i>ref</i>              | Refining segment              |                         |   |
| <i>int</i>              | Vertically integrated segment |                         |   |
| <i>y0</i>               | Baseline year                 |                         |   |
| <i>yt</i>               | Target year                   |                         |   |
| <i>f</i>                | Fuel type, e.g., oil or gas   |                         |   |



## Identify counterparty financing in scope

A bank can use a sectoral or another appropriate approach if it so chooses for target development. Concretely, a sectoral approach means that the net-zero target of an O&G company applies only to the financing going towards the O&G activities of these companies. Should any financing go towards other activities, for example, power, it would be monitored by another target, i.e., a power target.

For dedicated financing this is straightforward, but for undedicated financing doing so is more challenging. There are two options for banks to use. A simple approach (Equation 6.a) involves accounting for both dedicated O&G financing and undedicated financing entirely. In the case where companies do not disclose their OPEX+CAPEX amount for the O&G segment, Equation 6.a is applicable.

A more advanced approach (Equation 6.b) considers that not all undedicated financing ends up financing O&G activities and it is necessary to take only financings towards O&G, while the rest is allocated into other portfolios for target-setting.

For undedicated financing, several options are possible:

- **Use the revenue share approach** to only account for the share of O&G revenues. The advantage is that such an approach creates a transition incentive; however, revenue may change due to external factors such as variations in O&G prices, independently from efforts to transition.
- **Use the production share approach** to only account for O&G financing based on their production share in the overall product mix. Such an approach could encourage transition out of the O&G value chain but might be difficult to apply in cases where the product mix is very diversified.
- **Use the CAPEX and OPEX share approach.** Such an approach could encourage companies to invest in transition technologies (e.g. renewables) and it recognises that some options are more OPEX intensive (e.g. biofuels), while others are more CAPEX intensive (e.g. renewable power).

If banks choose to include this transition incentive, they may wish to disclose both metrics, with and without the transition-adjusted metrics, for full transparency. Furthermore, to avoid volatility in CAPEX and OPEX values, it may be preferable to take a two- or three-year rolling average and, a suitable absolute threshold should be applied (e.g. > EUR 1bn in total OPEX+CAPEX).

Banks should be aware that if they include this transition incentive term, the main underlying assumptions are:

- Offsetting Scope 3 financed emissions with the non-O&G CAPEX+OPEX ratio assumes that, in the real world, there is a **linear** relationship between for example an increase in non-O&G OPEX+CAPEX relative spend and a reduction in Scope 3 emissions; and
- That all future emissions reductions due to today's non-O&G CAPEX+OPEX spend will indeed happen and hence can be entirely realised today.

### Equation 6.a:

$$\text{Financing}_i = \text{Financing}_{\text{dedicated}\&g,i} + \text{Financing}_{\text{undecided}\&g,i}$$

### Equation 6.b:

$$\text{Financing}_i = \text{Financing}_{\text{dedicated}\&g,i} + \text{Financing}_{\text{undecided}\&g,i} \left[ \text{Financing}_{\text{undecided}\&g,i} \times \left\{ \begin{array}{l} \text{Revenue share}_{o\&g} \\ \text{Production share}_{o\&g} \\ \text{(Opex+Capex) share}_{o\&g,i} \end{array} \right\} \right]$$

## Attribution of emissions to the financing

Refer to Section 2.iv.

### Calculate portfolio Scope 1 & 2 emissions intensity

In this section we refer to operational emissions only, and not end-use combustion emissions. We refer to counterparties' output, which can be O&G production, transport, or refining throughput. If preferred, the equations presented can be adapted to reflect exposure with a respective exposure weighting factor.

We start by taking a portfolio of the counterparty's emissions (Equation 7) and output produced, transported, or refined (Equation 8).

### Equation 7:

$$\text{CO}_{2p} = \sum_i \left[ \text{CO}_{2i} \times \text{Attribution factor}_i \right]$$

### Equation 8:

$$\text{MJ}_p = \sum_i \left[ \text{MJ}_i \times \text{Attribution factor}_i \right]$$

The attribution factor may be calculated on a company basis, rather than on a scope basis.

Then, we can measure the operational emissions intensity of the portfolio. Recall that it's ideal to compute operational emissions on the entire value chain.

There is the difficult issue of aggregating emissions from counterparties that are active on just one part of the value chain (e.g. E&P pure players) and others that are vertically integrated. A "fixed-boundary approach", as discussed in section 3.i, can be used by banks to define the scope boundaries of counterparties for target setting.

There are two options for banks to consider how to deal with this. A simple approach (Equation 9.a) is to take the whole portfolio emissions (for all counterparties in the

value chain) divided by the production of O&G from integrated O&G companies, NOCs, and upstream companies. This approach is simple to implement and mimics the way scenarios are constructed and works well for a diversified portfolio representative of the industry average.

However, for portfolios not representative of the industry, Equation 9.a would not work well. A more advanced option (Equation 9.b) may therefore be useful. It requires taking the production-weighted average of the emissions intensities from the upstream, midstream, and downstream segments and, the emissions intensities of the integrated segment.

**Equation 9a:**

$$\frac{CO_{2p}}{MJ_p} = x \times \left[ \frac{CO_{2p,up}}{MJ_{p,up}} \frac{CO_{2p,tra}}{MJ_{p,tra}} \frac{CO_{2p,ref}}{MJ_{p,ref}} \right] + (1-x) \frac{CO_{2p,int}}{MJ_{p,int}}$$

**x = share in the portfolio**

**Equation 9b:**

$$\frac{CO_{2p}}{MJ_p} = x \times \frac{CO_{2p,up}}{MJ_{p,up}} \frac{CO_{2p,tra}}{MJ_{p,tra}} \frac{CO_{2p,ref}}{MJ_{p,ref}} + w \times \frac{CO_{2p,int}}{MJ_{p,int}}$$

**w,x,y,z: share in the portfolio**

### Measurement of benchmark scope operational emission intensity

Two options can help banks measure the benchmark for operational emission intensity, depending on the distribution of their portfolio. If the portfolio is diversified, a simple approach can be used, whereby the target is set based on the benchmark level (Equation 10.a). If not, a bank-specific benchmark may be created based on the attributed portfolio output across production, transport, and refining (Equation 10.b).

**Equation 10a:**

$$\frac{CO_{2p,y}}{MJ_{p,y}} = \frac{CO_{2b,y}}{MJ_{b,y}}$$

**x = share in the portfolio**

**Equation 10b:**

$$\frac{CO_{2p,y}}{MJ_{p,y}} = \left[ \frac{CO_{2b,up,y,up}}{MJ_{b,up,y}} \times \frac{MJ_{p,up,y0}}{MJ_{p,y0}} \right] + \left[ \frac{CO_{2b,tra,y}}{MJ_{b,tra,y}} \times \frac{MJ_{p,tra,y0}}{MJ_{p,y0}} \right] + \left[ \frac{CO_{2b,ref,y}}{MJ_{b,ref,y}} \times \frac{MJ_{p,ref,y0}}{MJ_{p,y0}} \right] + \left[ \frac{CO_{2b,y}}{MJ_{b,y}} \times \frac{MJ_{p,int,y0}}{MJ_{p,y0}} \right]$$

**w,x,y,z: share in the portfolio**

# Annex 4: Calculation of the end-use absolute emissions (Scope 3) for upstream

## Identify counterparty financing in scope

This is the same approach as for Scope 1 & 2, detailed in Annex 3.

## Attribution of production to the financing

In this section, end-use combustion emissions refer to client's production of O&G only. To standardise banks' reporting, it is proposed to work directly from counterparties' reported O&G production data, which is easily obtained. We start by attributing a portion of the production of integrated O&G companies, NOCs, and upstream companies to the portfolio (Equation 11). Depending on company activity both production and throughput can be considered.

Equation 11:

$$MJ_p = \sum_{i, up} (MJ_{i, up} \times \text{Attribution factor}_{i, up}) + \sum_{i, int} (MJ_{i, int} \times \text{Attribution factor}_{i, int})$$

It is suggested that the attribution factor is calculated on a company basis, not on a scope basis.

## Calculate portfolio emissions

The end-use combustion emissions are simply the product of the production with emission factors for O&G separately (Equation 12).

Equation 12:

$$CO_{2p} = MJ_{p,f} \times EF_f$$

## Measure of benchmark end-use absolute emission

The benchmark for a given year is derived by applying a reduction rate, as given by scenario and associated trajectories, to the current absolute emission of the portfolio (Equation 13).

Equation 13:

$$CO_{2py} = CO_{2p,y0} \times \frac{CO_{2b,y0}}{CO_{2b,y}}$$

**UN**   
**environment  
programme**

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**finance  
initiative**

UNEP Finance Initiative brings together a large network of banks, insurers and investors that collectively catalyses action across the financial system to deliver more sustainable global economies. For more than 30 years the initiative has been connecting the UN with financial institutions from around the world to shape the sustainable finance agenda. It has established the world's foremost sustainability frameworks that help the finance industry address global environmental, social and governance (ESG) challenges. Convened by a Geneva, Switzerland-based secretariat, more than 500 banks and insurers with assets exceeding US\$100 trillion work together to facilitate the implementation of UNEP FI's Principles for Responsible Banking and Principles for Sustainable Insurance. Financial institutions work with UNEP FI on a voluntary basis and the initiative helps them to apply the industry frameworks and develop practical guidance and tools to position their businesses for the transition to a sustainable and inclusive economy.

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