



GENERAL RECOMMENDATIONS FOR INSURERS & REINSURERS

FOR UNDERWRITING ACTIVITIES

April 2023

This document is part of a [set of recommendations](#) for (re)insurers to develop their climate policies.

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INTRODUCTION

Human activity has already warmed the world by about 1.1°C since pre-industrial times.¹

As the IPCC has repeatedly warned, limiting global warming to 1.5°C is essential to avoiding catastrophic changes to the environment and human life. Every additional increment of global warming worsens the impact and even at 1.5°C – and even more so at 2°C – climate change will have major consequences on our societies and ecosystems. Indeed, the consequences of climate change have become painfully obvious in recent years.

However, according to the United Nations,² current policies would lead to a 2.8°C temperature rise by the end of this century and a rise of 2.4 to 2.6°C even if climate pledges are met. According to the IPCC's Sixth Assessment Report, CO₂ emissions must be cut by 50%, and emissions of all major greenhouse gases (GHGs) by 45% by 2030 to stay on track to limit global warming to 1.5°C.³ Only an urgent system-wide transformation can deliver the necessary emission cuts.

Reducing GHG emissions requires a rapid reduction in fossil fuel supply and consumption, and a commitment to this is a key climate policy litmus test. But, achieving cuts at this scale requires breaking with current trends: governments are in aggregate planning to produce around 110% more fossil fuels in 2030 than would be consistent with limiting global warming to 1.5°C, and 190% more by 2040.⁴ Existing and currently planned fossil fuel infrastructure alone would emit about 850 GtCO₂, 350 GtCO₂⁵ more than the quantity of CO₂ that humanity can still emit to keep global warming at 1.5°C.⁶

The last eight years have been the warmest year on record.⁷ Between 1970 and 2019, 4.6 million people died in 22,300 disasters associated with natural hazards, causing US\$4.9 trillion in economic losses.⁸ In 2021, natural disasters caused overall losses of US\$280 billion.⁹

If urgent action is not taken, climate change could cost the world's economy US\$178 trillion by 2070¹⁰. The cost of adapting to climate impacts is expected to grow to US\$160-340 billion per year by 2030, and US\$315-565 billion per year by 2050.¹¹ Moreover, the cost of humanitarian assistance due to the climate crisis could double by 2050 (US\$20 billion per year),¹² and 216 million people could be forced to migrate within their own countries by 2050.¹³

By contrast, bold climate action could deliver US\$26¹⁴ to US\$43¹⁵ trillion in economic benefits through to 2030, compared with business-as-usual.

As natural disasters increase in frequency and intensity, insurers and reinsurers are facing ever greater risks related to climate change. While this has only happened three times in 30 years (between 1991 and 2020), the \$100 billion mark in insured losses from natural disasters has been passed in the last two consecutive years (2021 and 2022).¹⁶ The losses incurred in the last two years are part of a continuing trend of increasing losses for insurers related to climate risks: the average insured loss between 2012 and 2021 was \$81 billion compared to \$110 billion over the 2017-2021 period.

In light of the urgent situation explained above, this document lays out essential demands for insurers to align with the international goal of limiting global warming to 1.5°C.

GENERAL RECOMMENDATIONS

Climate scenarios to use to limit global warming to 1.5°C

Insurers shall adopt a climate policy aimed at contributing to the goal of limiting global warming to 1.5°C, which entails reducing CO₂ emissions by about 50% by 2030 and reaching net-zero CO₂ emissions by 2050 at the latest. This plan must be developed based on credible and robust science-based scenarios.

Alignment and carbon neutrality commitments and pledges mean that insurers' emissions targets are based on **no or low overshoot 1.5°C pathways with limited use of negative emissions**. Relying on large quantities of negative emissions increases the risk of overshooting the temperature target in case carbon capture technologies and solutions are not deployed or effective at scale and/or do not ensure the permanence of the GHG removals.

In the present document, the term "1.5°C scenario" is used as shorthand for low or no overshoot 1.5°C scenarios with limited use of negative emissions.

When insurers refer to the Paris Agreement, they shall make it clear that they are aligning with the Agreement's stronger target of limiting global warming to 1.5°C, not the weaker "well-below 2°C" objective.

It is recommended to use the following scenarios for referring to 1.5°C global scenarios with no or low overshoot and limited use of negative emissions:

- [One Earth Climate Model](#) (OECM) by the University of Technology Sydney Institute for Sustainable Futures and supported by the UN-Convened Net-Zero Asset Owner Alliance (NZAOA). The OECM includes the use of nature-based removals increasing over time to 1.4 GtCO₂ per year by 2050 to compensate for cement process emissions. It does not use technological carbon capture and storage. It includes regional data, and [sectoral pathways](#) covering Scope 1, 2 and 3 emissions.
- The [Net-Zero Emissions by 2050](#) Scenario (NZE) by the International Energy Agency (IEA). This was first published in May 2021 and updated in the October 2023 [World Energy Outlook](#). It includes technology-based removals (direct air capture (DAC) and biomass energy with carbon capture and storage (BECCS)) ramping up to 1.5 GtCO₂ per year in 2050.¹⁷
- The 26 1.5°C no or low overshoot scenarios published in the IPCC's 6th Assessment Report and identified by the International Institution for Sustainable Development (IISD) as not relying on unrealistic amounts of negative emissions.¹⁸

Decarbonization targets

The decarbonisation targets for the portfolios of insurers and reinsurers must be based on two complementary approaches:

- Portfolio coverage approach: targets covering the entire insurance and reinsurance portfolio
- Sectoral approach: targets by industrial sector based on the best available science-based 1.5°C scenarios (for example, the IEA NZE scenario for the energy sector).

Decarbonization targets shall cover all insurance and reinsurance products. This is particularly the case for property and casualty insurance lines for both insurance packages and project insurance (singlesite/standalone insurance policy).

Decarbonization targets adopted by insurers shall:

- **Include interim and long-term targets** – The long-term target of net zero emissions by 2050 at the latest shall be accompanied with a target for 2030 consistent with the Race to Zero criterion of a “fair share” of the 50% global cut in CO2 emissions required by 2030. An interim target for 2025 should also be set, as is required by the NZAOA. In advance of 2030, targets should be set for 2035 and 2040.
- **Include absolute and intensity metrics** – Targets shall be set in absolute GHG emission reductions to ensure they result in real-world reductions aligned with 1.5°C pathways. Absolute targets can be supplemented with both physical- and revenue-based intensity indicators to facilitate comparisons of ambition and progress within sectors, and between portfolios, financial institutions, and regions.¹⁹
- **Cover all material emission scopes** – Targets shall cover all investee emission scopes where these are material. Where data quality is low, proxy or estimated data should be used as per the methodology of the Platform for Carbon Accounting Financials (PCAF),²⁰ and insurers should engage with investees and regulators to promote improved disclosures. As is noted by GFANZ, “Scope 3 should be included at a minimum for high-emitting sectors, such as the priority sectors identified in the NZAOA target-setting protocol.” Among these sectors are oil and gas, utilities (including coal), transport, steel, cement, agriculture and forestry, and chemicals.²¹
- **Differentiate between GHGs** – Targets should be set in CO2-equivalent to measure overall warming impact with separate targets for CO2 and CH4 in the energy sector, and for other GHGs as relevant for other sectors (e.g., N2O for agriculture, and industrial gases for relevant industrial sectors). Using only CO2e targets makes it impossible to measure progress toward reducing individual gases and to compare targets and progress with scenarios based on specific gases (such as NZE which is mainly CO2 based).
- **Cover all asset classes** – Targets shall cover all asset classes for which financed emissions are material and for which methodologies exist, in particular listed equity and corporate bonds, business loans and unlisted equity, project finance and private equity.²²

- **Not include offsets** – Serious methodological and conceptual problems with offsetting mean that portfolio and sectoral targets must not be wholly or partially met with the use of offsets by investees or insurers. This is consistent with the position of the [Science Based Targets initiative \(SBTi\) and the UN Race to Zero Campaign](#).
- **Be transparent and accountable** – Insurers’ transition plans should clearly specify target timetables, metrics, scopes, gases covered, and asset classes and sectors included. Transition plans should outline what actions will be taken to meet the targets, including engagement strategies with financial sanctions. Reporting on progress toward meeting targets should be done annually and verified by third parties. If any targets are missed, emission reductions will need to be steeper in future to compensate.

Key alignment and company assessment resources

While assessing the decarbonisation trajectories of portfolio companies is a relevant exercise, it is only complementary to robust sectoral policies.

It is recommended to use the following resources for:

- Building financial institution transition plans in line with a *1.5 °C Scenario*:
 - The recommendations from the UN [High-Level Expert Group](#) (HLEG) on net zero, published during COP27, that provides key criteria for all carbon neutrality and alignment commitments and plans.
 - The [criteria](#) of the UN [Race to Zero Campaign](#). The Net Zero Insurance Alliance (NZIA) is a partner of Race to Zero, as are all the sectoral alliances that make up the Glasgow Financial Alliance for Net Zero (GFANZ).
 - GFANZ’s November 2022 report, “[Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations and Guidance](#).”
- Assessing the credibility of the corporate and financial institution transition plans:
 - The [Science Based Targets initiative \(SBTi\)](#) and its sectoral target-setting methodologies and validation process. Science-based targets are useful to assess whether companies have set decarbonization targets aligned with the Paris Agreement, but are not in themselves sufficient to do so. They do not ensure that companies are on track to meet these targets, nor that they are implementing the changes in business models and activities that are necessary for 1.5° scenarios.
 - The [Climate Action 100 + benchmark](#) by 5 [investor networks](#) (PRI, AIGCC, Ceres, IGCC and IIGCC). This benchmark provides some useful indicators to assess the credibility of company transition plans, notably regarding carbon neutrality and intermediate decarbonization targets, climate disclosures, governance and capex allocation.

- The [Assessing Low Carbon Transition](#) (ACT) by the French Environmental Agency (Ademe) and the CDP. The intent of this methodology is to provide a granular analysis of company transition plans and their implementation. While the overall rating attributed does not provide a clear benchmark for alignment with a 1.5°C trajectory, the methodology contains useful information and data that can be used to assess the credibility of transition plans.
- The [PACTA](#) scenario analysis program, now hosted by RMI.
- Assessing the quality of fossil fuel policies adopted by financial institutions:
 - Reclaim Finance has developed the [Coal Policy Tool](#) and the [Oil & Gas Policy Tracker](#). These analyse the quality of the policies adopted by banks, insurers, asset owners and insurers.

[Transition Pathway Initiative](#) (TPI)²³ assessments should be used with caution as these consider that a company has a credible climate policy only by considering the date at which the level of GHG emissions reaches that of a 1.5°C scenario, whereas for a trajectory to be truly aligned, the entire projected carbon budget must be considered.

What shall a good climate policy contain?

A credible and comprehensive climate policy must be made public and contain a range of general and sectoral measures, including commitments, restrictions, and exclusions.

A comprehensive climate policy shall include the following elements:

- **Decarbonization targets** for insurance-associated emissions. These allow insurers to align their underwriting activities with the 1.5°C scenarios described above, and with the 50% reduction in CO₂ emissions required by the Race to Zero, based on the findings in the IPCC's Special Report on 1.5°C and Sixth Assessment Report.
- **Sectoral policies presenting expectations and restrictions**, with priority given to the most emitting sectors. Adopting decarbonization targets is by no means sufficient to ensure corporate alignment with a 1.5°C scenario. Indeed, the fight against climate change implies concrete actions with a real impact on the economy and the energy mix. Thus, the objectives of reducing GHG emissions must be associated with measures and indicators that will lead to the decline of the most polluting activities on the one hand, and the development of alternative solutions on the other. Sector policies shall clearly and precisely explain what is expected from companies active in the sector and how these requests are formulated through the side letters associated with insurance coverage. Policies must also explain the engagement and exclusion measures that insurers will implement in order to secure the alignment of insured companies with these expectations.
- **Governance, executive remuneration and lobbying policies**, which must be made consistent with the overall climate policy.

Scope of application of the climate policy

The climate policy shall apply to all insurance portfolio, including those managed by subsidiaries.

The (re)insurer's climate policy shall apply to the following insurance business lines:

- *Property lines, including but not limited to Construction and Engineering Lines (Contractors' and Erection All Risks (CAR/EAR) .*
- *Casualty lines, including but not limited to liability insurance (Directors & Officers insurance – D&O)*
- *Surety bonds*
- *Health and Disability insurance, including those for workers' compensation.*

The climate policy shall apply to all form of insurance coverage, including *single-site, stand-alone and package insurance for insurers*, and including *facultative reinsurance and treaty reinsurance (or obligatory reinsurance)*. Insurance consulting services shall all be covered.

Coverage restrictions shall apply to all clients, including their captives.

In this document, the term "(re)insurance coverage" means any type of insurance activity among those listed above.

Any update of the climate policy shall be accompanied by a communication on the number of clients and the amount of premiums affected by the new exclusion thresholds, or by any change coming from the data provider.

Any exceptions to the climate policy should be limited in scope, limited in time, publicly disclosed, justified, and detailed. A list of projects and companies benefiting from these exceptions should be published annually.

ENERGY SECTOR IN GENERAL

Company databases to be used

For their sectoral **coal policies**, insurers shall use the [Global Coal Exit list \(GCEL\)](#), updated annually by Urgewald. This list gives access to information about 2,800 companies playing a significant role in the thermal coal value chain (coal miners, coal power producers, companies involved in coal exploration, processing, trading, transport, logistics, engineering, transmission, equipment manufacturing, coal to gas/liquids production, coal-related services in operation & maintenance/mining/procurement and construction/advisory, underground coal gasification, and other coal-related activities), which meet at least one of the following criteria:

- Companies with coal power, coal mining or coal infrastructure expansion plans.
- A coal share of revenue or power production of at least 20%.
- An annual thermal coal production of at least 10 Mt.
- An installed coal-fired power capacity of at least 5 GW.

These thresholds will be lowered to 10% at the end of 2023 for the next update of the GCEL.

The GCEL includes information on companies planning the addition of an annual production of 2500 Mt of coal, and 476 GW of new coal power capacity. It also covers companies with plans to build new coal infrastructure such as ports or railways which can be instrumental in the opening of new coal basins. Companies with expansion plans shall be the first ones to be excluded since any new coal project is incompatible with a 1.5°C scenario. This allows financial players not only to take measures aimed at protecting themselves against financial risks, but also allowing them not to contribute to the aggravation of the climate crisis.

The GCEL also covers companies above a specific relative threshold, referring to the share of their activity in the coal sector, regardless of their size. The metrics used for power companies are the share of coal power generation for power companies first, the closest to the real climate impact of a company, and then the share of power capacity in the absence of the first metric. The last metric used is the share of revenues of the company, if the two first metrics are not available, because it is less relevant to the real climate impact of the company and can vary considerably from one year to another. The share of revenues is the only metric used for other coal-related companies such as coal mining or coal infrastructure companies. These different metrics are important because the use of different metrics can have an important impact on the number of companies covered by a specific threshold.

To be able to cover companies whose share of activity in the coal sector is low, but which produce large quantities of coal or coal-fired electricity in absolute terms, the GCEL also uses absolute thresholds for the coal mining and coal power sectors. The metric used for coal mining is the annual amount of coal produced in million tonnes per year (Mtpa). The metric used for coal power is the coal power capacity.

For their sectoral policies in oil and gas upstream and midstream sectors, insurers shall use the [Global Oil & Gas Exit list \(GOGEL\)](#), updated annually by Urgewald. This database gives data on the activities of oil and gas companies according to the following criteria:

- Total oil and gas production.
- Unconventional oil and gas share of production.
- Total short-term expansion plans.
- Share of unconventional oil and gas short-term expansion plans.
- IEA NZE expansion overshoot
- Capital expenditures on oil and gas exploration.
- Fossil fuel share of revenue.
- Reputational risk projects.

Other databases provided by private market players could be used in addition to the GCEL and GOGEL, in particular to cover the downstream of the oil and gas sector. However, we recommend insurers to use them with caution: forward-looking data about the expansion plans of companies and their activities in some unconventional oil and gas sectors might be missing, as well as granular information necessary to identify the relevant corporate level (group and subsidiaries) exposed to a specific activity. Insurers should also make sure that the definitions used match their own policies.

Points of attention for the oil and gas sector

In order to evaluate a company's exposure to a specific sector, its impact on that sector and its decarbonization pathways within that sector, it is recommended to use a **metric** based on absolute values (mmboe in production or in reserve, tCO₂e in scope 1, 2 and 3, etc.).²⁴ Relative values (% of revenue, % of number of companies, % of GHG emissions, % of power assets fired by coal or with more than X gCO₂e/kWh in average, etc.) can eventually be used as an additional indicator applicable to the whole value chain or for specialized companies (joint ventures dedicated to a specific project, oil and gas service companies, mining or coal power companies, etc.).

When insurers have adopted measures related to unconventional oil and gas, it is recommended to use a definition matching the one used by the GOGEL, which includes the following sectors:

- Extra heavy oil (API gravity index < 15)
- Tar sands
- Coal bed methane
- Fracking
- Ultra-deep offshore oil and gas (depth > 1,500 meters)²⁵
- Oil and gas resources located in [Arctic area](#) as defined by the Arctic Council's Assessment and Monitoring Programme (AMAP)²⁶

Insurers could also rely on the definition recommended by the Scientific and Expert Committee of Paris’ Observatory of Sustainable Finance²⁷, which also includes tight oil and gas,²⁸ gas hydrates,²⁹ and oil shale.

Where the oil and gas sector policy refers to the upstream, midstream and downstream sectors, particularly in the expectations for portfolio companies’ climate transition plans, the breakdown of associated activities to which it applies shall be read as follows.³⁰

Upstream	Midstream	Downstream
Exploration Drilling Production Processing	Transportation by rail, road, pipeline, and shipping Pure trading Storage Gas Liquefaction LNG regasification	Oil Refining Distribution Retail Use (power, heating, etc.) Energy efficiency services

Where the oil and gas sector policy refers to Scope 1, 2 and 3 GHG emissions, particularly in the expectations for portfolio companies’ climate transition plans, the breakdown of the different associated emissions sources to which it applies is as follows:

	Upstream	Midstream	Downstream
Scope 1+2 emissions	<ul style="list-style-type: none"> CO2 from combustion (mobile and stationary, including flaring) CH4 venting and flaring Indirect emissions from electricity, heat and steam consumption 	<ul style="list-style-type: none"> CO2 from combustion (mobile and stationary, including flaring) CH4 venting and flaring CH4 leaks from gas midstream logistics Indirect emissions from electricity, heat and steam consumption 	<ul style="list-style-type: none"> CO2 from combustion (mobile and stationary) CH4 leaks from gas downstream logistics Indirect emissions from electricity, heat and steam consumption
Scope 3 upstream emissions		<ul style="list-style-type: none"> GHG emissions from Oil & Gas upstream GHG emissions from biomass production (incl. land use change) GHG emissions from electricity equipment manufacturing 	<ul style="list-style-type: none"> GHG emissions from Oil & Gas upstream and midstream GHG emissions from biofuels and biogases production GHG emissions from electricity production
Scope 3 downstream emissions	<ul style="list-style-type: none"> Midstream logistics Processing of sold products Downstream transportation and distribution Use of sold products 	<ul style="list-style-type: none"> Downstream transportation and distribution Use of sold products 	<ul style="list-style-type: none"> Use of sold products

Source: [ACT Methodology for the Oil and Gas sector](#) (ADEME, CDP)

Definitions

This section provides definitions of some important terms used in this document.

Company in transition – A company with a credible decarbonization plan aligned with a 1.5 °C scenario with low or no overshoot and a limited volume of negative GHG emissions, including at least a comprehensive and public climate transition plan, and respecting key milestones such as the end of fossil fuel expansion.

Climate transition plan (for companies) – A set of commitments, implementation and monitoring measures undertaken by a company to contribute to the fight against global warming. Such a policy must be comprehensive and credible and shall aim at contributing to limiting global warming to 1.5°C with low or no overshoot and a limited volume of negative GHG emissions. The plan should be sufficiently legible to be easily assessed by insurers.

Climate policy or climate transition plan (for insurers) – A set of general and sectoral policies adopted by insurers to publicly detail how they intend to decarbonise their portfolios along a 1.5 °C scenario with low or no overshoot and a limited volume of negative GHG emissions. This shall include, at least, short-, medium- and long-term decarbonisation targets, systematic engagement, voting, governance, and good lobbying practice policies, as well as sectoral engagement, and restriction measures.

Coal developer – Companies are identified as coal developers if they meet at least one of the following criteria:

- **Mining:** companies engaged in coal exploration activities, planning to develop new coal mines, extend their coal mines by applying for new permits or that are involved in coal exploration activities.
- **Power:** companies planning to develop new coal-fired power capacity of at least 100 MW prorated (based on a company’s ownership of a project, or on the number of companies involved in a project).
- **Services:** companies involved in the development or expansion of coal transportation assets or infrastructure assets dedicated to support coal mines, coal transportation and coal-to-gas facilities.

Such companies are listed in the “Expansion” criteria of the [Global Coal Exit List](#).

- Companies extending the lifetime of existing coal mines and/or coal plants.
- Companies purchasing existing coal assets.
- Companies selling services or equipment supporting coal expansion.

Oil & gas developers - Companies intending to add oil and/or gas resources to their production capacities in the short term (at least 20 mmbœ of resources to their production portfolio in the near future), i.e. resources associated with assets under development and field evaluation (the two stages preceding production), or in the long term by their involvement in exploration activities, or II) companies with oil and/or gas pipelines or LNG terminals proposed or under construction.

Exclusion – A measure consisting of the total exclusion of a type of activity, company, or project from a financial portfolio and/or financial service offerings. The date and modalities of entry into force of such a measure must be precisely defined.

Infrastructure coal project – Transportation assets or infrastructure assets dedicated to support coal mines, coal transportation and coal-to-gas facilities.

New upstream oil and gas projects – Exploration or development of new oil and gas fields (i.e. fields that are not yet in production), or the redevelopment or expansion of existing fields already in production.

New midstream oil and gas projects – Development of new oil and gas transportation and storage infrastructure.

Power producer – Company involved in the production of electricity, either as a utility or as an operator of power generation facilities.

Restriction – A measure consisting of the partial exclusion of a type of activity, business or project from the financial portfolio and financial service offerings (e.g., ending some but not all financial services to these activities, or excluding them from a type of assets but not all). The restriction may be related to being temporary, being subject to a threshold or having specific exemptions.

Sustainable power – In contrast to “unsustainable power”, this means electricity production or storage from renewable energy sources by installations with limited climate and environmental impact throughout the value chain, including in the future.

Unabated power plant – Power plant with no facilities to capture GHG emissions during operation.

Unsustainable power – In contrast to “sustainable power”, this means electricity production that has a significant impact on the climate and the environment throughout the value chain in which it operates, including in the future. This includes nuclear, industrial-scale biogas and biomass-fired power plants, hydropower plants that do not comply with the recommendations of the World Commission on Dams³¹, and any form of hydrogen that is not produced directly from renewable energy source (or “green hydrogen”).

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- ¹ World Meteorological Organization, [Provisional State of the Global Climate in 2022](#), 2022
- ² UNEP, [Emissions Gap Report 2022](#), October 2022
- ³ The numbers in this table are rounded to the nearest 5. The Summary for Policymakers cites the necessary reductions as 43% GHGs and 48% CO₂. IPCC, [Sixth Assessment report. Climate Change 2022: Mitigation of Climate Change](#), Technical Summary Table TS-2, p.71, April 2022.
- ⁴ UNEP, [Production gap report 2021](#), October 2021
- ⁵ IPCC, [Sixth Assessment report. Climate Change 2022: Mitigation of Climate Change](#), B.7.1, p. 20, April 2022)
- ⁶ Working group II of IPCC, [Technical Summary of the 6th assessment report](#), November 2021
- ⁷ World Meteorological Organization, [Eight warmest years on record witness upsurge in climate change impacts](#), November 2022
- ⁸ World Meteorological Organization, [WMO Atlas of Mortality and Economic Losses from Weather, Climate and Water Extremes \(1970–2019\)](#), 2021
- ⁹ Munich Re, [Hurricanes, cold waves, tornadoes: Weather disasters in USA dominate natural disaster losses in 2021](#), January 2022
- ¹⁰ Ibid.
- ¹¹ UNEP, [Adaptation finance gap report](#), November 2022
- ¹² ICFR, [The cost of doing nothing](#), December 2019
- ¹³ World Bank, [Groundswell Part 2: Acting on Internal Climate Migration](#), September 2021
- ¹⁴ Global Commission on the economy and climate, [Unlocking the Inclusive Growth Story of the 21st Century](#), 2018
- ¹⁵ Deloitte, [Global Turning Point Report](#), May 2022
- ¹⁶ Swiss Re Institute, [A perfect storm - Natural catastrophes and inflation in 2022](#), 2023
- ¹⁷ Reclaim Finance, [The IEA's net-zero 2050 : The new normal and what's left to be done](#), December 2021
- ¹⁸ For more information: IISD, [Lighting the Path: What IPCC energy pathways tell us about Paris-aligned policies and investments](#), June 2022
- ¹⁹ For more information: GFANZ, [Financial Institution Net-Zero Transition Plans: Fundamentals, Recommendations and Guidance](#), pp.78-79, November 2022
- ²⁰ PCAF, [Financed Emissions: The Global GHG Accounting and Reporting Standard](#). Part A, December 2022

²¹ GFANZ, [Financial Institution Net-Zero Transition Plans: Fundamentals, Recommendations and Guidance](#), p.77, November 2022

²² For methodologies see PCAF, [Financed Emissions: The Global GHG Accounting and Reporting Standard](#). Part A, December 2022. NZAOA, [Target-Setting Protocol 3rd edition](#), January 2023.

²³ For more information : Reclaim Finance, [The TPI benchmark: misleading approach, dangerous conclusion](#), December 2021

²⁴ The halt to expansion stipulated by the IEA in its NZE relates to the opening of new production fields. Furthermore, the research of the analysts who built the GOGEL shows that the data on company revenues is unfortunately very approximate. Indeed, private data providers, in the absence of accurate reporting from companies, are often forced to estimate the share of revenues derived from unconventional hydrocarbons from a production amount and a proxy on revenues.

Not only is the data unreliable, but this results in an underestimate of the share of unconventional in companies' activities - for example, a 20% revenue criterion in shale gas covers a much smaller number of companies than a 20% production criterion. Finally, a growing number of companies are diversifying, increasing their activities in midstream and power generation, without decreasing their hydrocarbon production, including in unconventional. As a result, the share of unconventional oil in their revenues is decreasing without a decrease in production in absolute value.

There is therefore no decrease in the climate impact of these companies. The revenue metric can be justified when the assessment is carried out on all or a significant part of the value chain, beyond production, even though it would be possible to have an assessment based on volumes transported for what comes under the midstream.

²⁵ Energy Policy, [The impact of water depth on safety and environmental performance in offshore oil and gas production](#), Volume 55, 2013, Pages 699-705, April 2013

²⁶ For more information: Reclaim Finance, [Drill, baby, drill. How banks, investors and insurers are driving oil and gas expansion in the Arctic](#), September 2021

²⁷ Observatoire de la finance durable, [Recommandations du Comité Scientifique et d'Expertise portant sur les hydrocarbures non conventionnels et les stratégies d'alignement](#), p. 10, Septembre 2021

²⁹ Ibid.

³⁰ ADEME, [Methodology of ACT in Oil & gas sector](#), p. 10, February 2021

³¹ The World Commission on Dams, [Dams and development. A new framework for decision-making](#), November 2000.