



RECOMMENDATIONS FOR INSURERS & REINSURERS

FOR UNDERWRITING ACTIVITIES

April 2023

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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”).

COAL SECTOR

General sector overview

The coal sector is a long way from aligning with 1.5 °C and even continues to expand. Today, 2,400 coal-fired power plants are in operation, with a total capacity of nearly 2,100 GW.³² Global coal use is set to rise by 1.2% in 2022, surpassing 8 billion tonnes in a single year for the first time and eclipsing the previous record set in 2013.³³ 476 GW of new coal-fired power capacity are still in the pipeline worldwide (enough to increase the world's current coal power capacity by 23%), 61% of this in China.³⁴

Only 27 of the 1,064 listed in the Global Coal Exit List have announced coal exit dates aligned with a 1.5 °C scenario, and 490 of them still plan to develop new coal assets. 2,500 Mtpa of new coal mining capacity is in the pipeline worldwide (37% of the world's current thermal coal production), with 39% of this in China.³⁵

Any delay in phasing out coal would jeopardize meeting the 1.5°C target and significantly increase financial risks. Coal companies risk wasting more than US\$1.4 trillion in stranded assets under a 1.5°C scenario.³⁶ 42% of global coal power plants already run at loss, this could rise to about 50% of the thermal coal capacity by 2030, and 72% would be unprofitable by 2040. In a “below 2°C” scenario, investors and governments would likely face over US\$267 billion in stranded assets.³⁷

Beyond its major contribution to global warming, coal poses serious environmental and public health issues: air pollution from outdoor sources caused more than four million premature deaths in 2021 (85% of which were in emerging and developing countries), and coal was responsible for over 60% of global SO₂ emissions.³⁸ The IMF estimated the world can realize a global net social benefit equivalent to US\$85 trillion by phasing out coal.³⁹

Overall objectives

According to the IPCC,⁴⁰ UNEP⁴¹ and the IEA,⁴² for the coal sector to be aligned with the objective of limiting global warming to 1.5°C, several conditions must be met.

- The development of coal mines must stop immediately: 89% of coal reserves proven in 2018 must remain unextracted in 2050.⁴³ Therefore, no new coal mines must be developed, and the lifetimes of existing mines must not be extended.⁴⁴
- Investment in coal supply must fall by 75% from 2021 to 2030, with the remaining coal-related investment focused on maintaining production at existing mines and on reducing their emissions intensity while waiting for definitive closure.
- Coal demand must fall by 45% by 2030, and by 90% by 2050 (reaching 540 million tonnes of coal equivalent (Mtce))⁴⁵ and all coal power plants must be closed by 2030 in advanced economies and by 2040 worldwide.⁴⁶ As a result, coal trade must decline to about 50% its current level by 2030, and 90% by 2050.⁴⁷

- Coal mine methane emissions must decline about 70% from 2021 levels by 2030 and about 95% by 2050.⁴⁸ This result can only be achieved through large-scale mine closures.⁴⁹

What to expect from companies

Insurers shall expect from covered coal companies not to have any coal expansion plan, and to adopt a credible and public coal phase-out plan aligned with a 1.5°C scenario. Such a plan shall include, at least, the following indicators:⁵⁰

- ✓ A commitment to close all the global coal facilities in the OECD and European countries by 2030, and globally by 2040.
- ✓ No expansion plans.
- ✓ Facility-by-facility closure dates.⁵¹ Assets shall not be sold or converted to fossil-based activities or biomass.
- ✓ Just and sustainable transition plans, including guarantees concerning the capacity to fund and implement all worker and environmental obligations (decontamination, retraining, infrastructure decommissioning, etc.)⁵²
- ✓ A commitment not to open any new met-coal mine or to expand any existing met-coal mine.

In case the facility is not closed but sold, insurers shall expect strong guarantees from the coal company that the new owner will:

- Close the facility before 2030 if it is located in the OECD or European countries, or before 2040 elsewhere.
- Not convert coal plants to fossil fuel-fired or biomass-fired plants.
- Provide sufficient financial means and measures to ensure that all social and environmental obligations are duly met.

In case the facility is not closed but converted to another use, insurers shall expect strong guarantees from the coal company that:

- A comparative analysis shows that this conversion is economically, ecologically, financially, and technically more advantageous than closure or replacement by renewable energies with equivalent production capacity.
- An environmental and climate impact assessment demonstrates that the conversion will not result in increased GHG emissions across the value chain (and not just at the combustion stage).
- A closure deadline consistent with a 1.5°C scenario with a just and sustainable transition plan, including guarantees concerning the capacity to fund and implement all worker and environmental obligations.⁵³

Claims of future retrofitting with carbon capture and storage (CCS) or conversion to fossil gas, biogas, hydrogen, biomass, or ammonia co-firing shall not be used to delay coal-fired plant closures.⁵⁴

Insurers shall not consider a decarbonization target or a net-zero commitment as a substitute for a credible coal phase-out plan, regardless of their validation by the SBTi.

Recommendations on targeted restrictions

Insurers shall adopt time-bound restrictions on coal companies, with the aim of preventing the expansion of the coal sector and supporting its phase-out. Achieving these measures will require insurers to:

- ✓ Make public their expectations from coal companies and associated exclusions.
- ✓ Implement an engagement policy towards the relevant companies to induce them to meet expectations.
- ✓ Implement a progressive escalation strategy that would ultimately lead to the end of insurance coverage in case the expectations are not met.

Insurers shall immediately end support to coal expansion by:

- ✓ Ceasing covering companies which participate in the expansion of the coal sector.
- ✓ Ceasing new insurance coverage in coal mines, plants, or infrastructure projects.

Insurers shall commit to no longer cover coal projects and companies active in OECD and European countries by 2030, and by 2040 worldwide.

Insurers shall adopt timed exclusions to progressively reduce their exposure to the coal sector and encourage companies that remain covered to reduce their coal activities and aim for full exit:

- ✓ No longer provide insurance coverage to companies which derive more than 10% of their revenues from coal mining, and of companies which produce annually more than 10 million tons of coal.⁵⁵
- ✓ No longer provide insurance coverage to companies which derive more than 10% of their power production or installed power capacity from coal, and of companies with more than 5 GW of coal-fired power capacity.⁵⁶

Until December 2024, companies that are above these exclusion thresholds may be exempted if they demonstrate their practical ability to move below the exclusion thresholds in the short term through the implementation of a credible and public coal phase-out plan.

- ✓ Commitment to reduce the relative and absolute exclusion thresholds used in the coal policy to zero, with the aim to exit completely from coal by 2030 in OECD and European countries, and by 2040 worldwide.

- ✓ Immediate commitment to no longer provide insurance coverage by 2027 companies that do not have a credible and public phase-out plan, aligned with a 1.5°C scenario, which includes, at least:
 - A detailed asset-by-asset closure (and not selling) timetable aligned with the objective to exit from the coal sector by 2030 in OECD and European countries, and by 2040 worldwide.
 - A just and sustainable transition plan for workers, local communities, and the environment.⁵⁷
- ✓ Immediate commitment to no longer provide insurance coverage:
 - From 2024, to companies with no public commitment to phase-out their coal activities by 2030 in OECD and European countries, and by 2040 worldwide (no renewal in 2023).
 - From 2025, to companies with no detailed asset-by-asset closure (and not selling) timetable aligned with the objective to exit from coal by 2030 in OECD and European countries, and by 2040 worldwide (no renewal in 2024)
 - From 2026, to companies with no credible coal phase-out plan aligned with a 1.5 °C scenario, completed with a just and sustainable transition plan for workers, local communities, and the environment (no renewal in 2025).⁵⁸
- ✓ Immediate commitment to no longer provide insurance coverage to companies that sells (and does not close) a coal asset, unless the new owner offers sufficient guarantees that the asset will be closed by 2030 in OECD and European countries, and by 2040 at the latest elsewhere via a just and sustainable transition plan for workers, local communities, and the environment.⁵⁹

An exception to the above measures may be made for insuring project or subsidiaries dedicated exclusively to the energy transition (e.g., the deployment of renewable energy).

This exception must remain temporary, and only apply for the time needed for the company to align its corporate strategy with a 1.5°C scenario.

N.B.: Insurers shall disclose the database used to evaluate the companies exposed to the coal sector. It is therefore recommended to use the [GCEL](#).

OIL & GAS SECTOR

General sector overview

Over half of global emissions are related to the production or use of oil and gas

Instead of aligning with the 1.5 °C, oil and gas companies are continuing to develop massive new capacity for oil and gas production and transport. In 2022, investment in upstream increased by 13% compared to 2021.⁶⁰ According to the IPCC, cumulative capex/opex for the exploration and extraction of oil and gas in new fields is expected to reach more than US\$4.2 trillion in total between 2020 and 2030 and climb to US\$570 billion annually by the end of the decade.⁶¹

The massive gap between industry projections of oil and gas production trajectories and a 1.5°C scenario increases related financial risks: over \$1 trillion of oil and gas assets risk becoming stranded if climate actions are taken and alternative energy sources are developed.⁶²

Overall Objectives

According to the IPCC, UNEP and the IEA, for the oil and gas sector to be aligned with a 1.5°C scenario, the expansion of oil and gas production must stop immediately. No exploration for new resources is required, and no new oil fields are necessary, beyond those already committed as of 2021. No new fossil gas fields are needed beyond those already under development. Many of the LNG facilities currently under construction or at the planning stage are not needed.

According to the IEA's World Energy Outlook 2022, declining demand for oil and gas in their NZE scenario can be met "through continued investment in existing production assets without the need for any new long lead-time projects."⁶³ In the NZE, fossil gas demand drops from 4,200 billion cubic meters (bcm) in 2021 to 3,300 bcm in 2030, and 1,200 bcm in 2050. Oil demand drops from 95 million barrels per day (mb/d) in 2021 to 75 mb/d in 2030, and to less than 25 mb/d in 2050.⁶⁴

Investments in oil and gas decline even faster than demand in the NZE, falling by around 50% from the 2017-21 average through 2030 for both oil and fossil gas.⁶⁵ Continued investment in existing fossil fuel operations is needed to reduce their emissions-intensity, especially of methane. Energy-related methane emissions drop by 75% by 2030 in the NZE through reducing leakage and venting and decreasing fossil fuel extraction.⁶⁶

What to expect from companies

Insurers shall expect oil and gas companies operating in upstream and midstream sectors to commit to cease their expansion plans and to meet, in the short-term, the following minimal criteria:

- ✓ Immediately commit to a 2050 net-zero objective based on a 1.5°C scenario.
- ✓ Meet milestones, including:
 - End of new upstream and midstream oil and gas projects.
 - Adoption of oil AND gas production reduction targets by 2030.
 - Allocation of most of capex to sustainable power.⁶⁷
- ✓ Adopt a comprehensive climate transition plan that allows investors to assess its alignment with a 1.5°C with low or no overshoot and a limited volume of negative GHG emissions.
- ✓ Commit to submit the above-mentioned plan and an assessment of its ongoing implementation in recent years to an annual vote (“Say on Climate”) at the AGM.

A comprehensive climate transition plan shall include, at least, the following indicators:

- ✓ Short- and medium-term GHG emissions reduction targets on Scopes 1, 2 and 3, expressed in both absolute and intensity terms, encompassing all its activities.
- ✓ Possible contribution of captured GHG volumes to achieving emissions reduction targets.
- ✓ Any carbon offsetting approaches that may be implemented to complement the reduction targets.
- ✓ Targeted energy mix evolution for short- and medium-term.
- ✓ Short- and medium-term capex plans disaggregated by activity and by allocation between maintenance and development of the Company’s assets.
- ✓ Short- and medium-term opex disaggregated by activity and by cost item.
- ✓ Explanation of baseline scenario used to set decarbonization targets and how this takes into account the best available science.
- ✓ Envisaged actions to reduce methane emissions along the value chain, including flaring, leakage control and venting.⁶⁸

Recommendations on targeted restrictions

Insurers shall adopt time-bound restrictions on a growing number of oil and gas companies, with a focus on halting expansion, as well as initiating a controlled decline in oil and gas production. Achieving these measures will require the insurers to:

- ✓ Make public its expectations from oil and gas companies and associated exclusions.
- ✓ Implement an engagement policy towards the relevant companies to induce them to meet expectations.
- ✓ Implement a progressive escalation strategy that would ultimately lead to investment restrictions and exclusions in case the expectations are not met.
- ✓ Insurers shall adopt restrictive measures over time to induce oil and gas companies to stop their oil and gas expansion plans with an immediate commitment to no longer provide insurance coverage, by 2025, to all companies that are still involved in new upstream and midstream oil and gas projects (no renewal in 2024).

Insurers shall commit to reducing their insurance portfolio exposure to oil and gas companies to close to zero by 2050 worldwide.

Insurers shall adopt restrictive measures over time to gradually reduce their exposure to oil and gas companies and to induce these companies to undertake a managed decline in oil and gas production and operation by:

- ✓ Provide insurance coverage only to oil and gas companies that committed to a net zero target by 2050 aligned with a 1.5 °C scenario.
- ✓ From 2024, provide insurance coverage only to oil and gas companies that would have adopted:
 - Reduction targets by 2030 in oil AND gas production.
 - A comprehensive climate transition plan that allows investors to assess it against a 1.5 °C scenario as a benchmark.
 - This climate transition plan is submitted to an annual vote at the AGM.

An exception to the above measures may be made for insuring project or subsidiaries dedicated exclusively to the energy transition (e.g., the deployment of renewable energy). This exception must remain temporary, and only apply for the time needed for the company to align its corporate strategy with a 1.5°C scenario.

N.B.: These recommendations come on top of the recommendations made in “Power sector”.

In the case when a policy is adopted on unconventional fossil fuels, insurers shall apply it to the activities and products listed in the comprehensive definition given in the “General Recommendations for the energy sector”, and they shall no longer provide insurance coverage to companies that:

- ✓ Produce more than 25% of their oil and gas from unconventional resources and commit to lowering this threshold to 5% by 2030.
- ✓ Are still involved in new unconventional oil and gas projects.

N.B.: Insurers shall disclose the database used to evaluate the companies exposed to the coal sector. It is recommended to use the [GOGEL](#).

POWER SECTOR

General sector overview

Coal-fired power generation is one of the highest emitting sectors in the world. Although many financial actors have already adopted restrictions on coal power funding, there are still 476 GW of new coal-fired power capacity still in the pipeline worldwide, 61% of this in China.⁶⁹

It is estimated that 42% of global coal power plants now run at a loss, and this numbers is projected to rise to 50% by 2030. By 2040, 72% will be unprofitable. Even with a “below 2°C” scenario, investors and governments will likely face over US\$267 billion in stranded assets.⁷⁰

Despite its repeated depiction over the past couple of decades as a “clean alternative” to coal, fossil gas power emits high levels of GHGs, particularly when methane emissions from its production and transport are considered. A fossil gas combined-cycle plant can emit 403 to 513 gCO₂e/kWh from a life cycle perspective compared to 751 to 1095 gCO₂e/kWh for coal power.⁷¹

In 2022, for the first time, global energy transition investments equalled fossil fuels investments.⁷² The significant shift toward “clean energy” is a trend unlikely to be reversed as the energy world entered what the IEA describe as “a new industrial age – clean energy manufacturing age”.⁷³

Overall objectives

According to the IPCC, the UNEP and the IEA, for the power generation sector to be aligned with a 1.5°C scenario, fossil fuel-fired power capacity must stop expanding and all unabated plants should be closed by 2040 worldwide. In the OECD and Europe, coal-fired plants should be closed by 2030 and fossil gas-fired plants by 2035.⁷⁴ There must be an immediate halt to approvals for new unabated coal-fired power plants.⁷⁵ No new unabated fossil gas-fired power plants shall be built since fossil gas-fired power plants commonly have an operational lifetime of at least 30 years.⁷⁶

Investments in the power sector must be massively reoriented from fossil fuels to conservation, energy efficiency, and renewable energy. To meet the IEA’s NZE scenario, for every one dollar spent globally on fossil fuels by 2030, at least nine dollars must be invested in what the IEA classifies as “clean energy and efficiency investments”.⁷⁷ In the NZE, 40% of electricity generation comes from wind and solar by 2030 when annual capacity additions of all renewables reach 1,200 GW compared to the 290 GW renewables capacity installed in 2021. To achieve this, the annual spending on “clean energy investments” (energy efficiency, clean fuels and clean power, network and storage) needs to reach USD 4.2 trillion in 2030. This requires a larger contribution from the private finance than seen today: whereas public spending currently plays a larger role, private capital will account for nearly 60% of global clean energy spendings (85% in advanced economies) by 2030.⁷⁸

What to expect from companies

Insurers shall expect insured utilities and power generation companies to meet the following minimal criteria:

- ✓ Immediate commitment to a net zero by 2050 objective aligned with a 1.5°C scenario.
- ✓ Immediately stop coal expansion plans and commit to meet in the short-term the following milestones:
 - Stop new unabated fossil fuel-fired and biomass-fired plants.
 - Commit to end coal-related activities by 2030 at the latest in OECD and European countries, and by 2040 worldwide.
 - Commit to bringing fossil gas-related activities close to zero by 2035 at the latest in OECD and European countries, and by 2040 worldwide.
 - By 2030, for every dollar of capex investment spent in fossil fuel-fired power sector, at least 4 dollars shall be invested in sustainable power.⁷⁹ This ratio shall be increased to 1:9 if it includes production, storage, transport and energy efficiency measures.⁸⁰
- ✓ Adopt a comprehensive climate transition plan that allows investors to assess its alignment with a 1.5°C scenario.
- ✓ Commit to submit the above-mentioned plan and an assessment of its ongoing implementation to an annual vote (“Say on Climate”) at the AGM.

The climate transition plan shall include, at a minimum, the following indicators:

- ✓ Short- and medium-term GHG emissions reduction targets on Scopes 1, 2 and 3, expressed in both absolute and intensity emissions, encompassing all activities.
- ✓ Possible contribution of captured GHG volumes to achieving emissions reduction targets.
- ✓ Carbon offsetting approaches that may be implemented to complement the reduction targets.
- ✓ Targeted energy mix evolution over short and medium terms
- ✓ Short- and medium-term capex plans disaggregated by activity and by allocation between maintenance and development of any new assets.
- ✓ Short- and medium-term opex disaggregated by activity and by cost item.
- ✓ Explanation of baseline scenario used to set decarbonization targets and how this takes into account the best available science.

Insurers shall require corporate climate transition plans to include a credible plan for dated closures of unsustainable assets, detailed on a facility-by-facility basis. These closures must be planned at a pace consistent with a 1.5°C scenario and accompanied by just transition plans, and funding for implementing all social and environmental obligations.⁸¹

In case the plants are not closed but sold, insurers shall expect strong guarantees from the power producer that any new owners will:

- ✓ Close any coal plant before 2030 and any fossil gas-fired plant before 2035 if it is located in the OCED or European countries, or before 2040 elsewhere.
- ✓ Not convert any plants to other fossil fuels or biomass.
- ✓ Provide sufficient financial means and measures to ensure that all social and environmental obligations are met.

In case the plants are not closed but converted to other technologies, insurers shall expect strong guarantees from the power producer that:

- ✓ A comparative analysis shows that this conversion is economically, ecologically, financially, and technically more advantageous than closure or replacement by renewable energies with equivalent production capacity.
- ✓ An environmental and climate impact assessment demonstrates that the conversion will not result in increased GHG emissions across the value chain (and not just at the combustion stage).
- ✓ A closure deadline consistent with a 1.5°C scenario, with a just and sustainable transition plan, including the guarantees concerning the capacity to fund and implement all workers and environmental obligations.⁸²

Claims that a future power plant will be retrofitted with carbon capture and storage (CCS) or conversion to “low-carbon energy sources” (such as biogas or hydrogen⁸³) shall not be used to delay a fossil fuel-fired plant’s closure.⁸⁴

Insurers shall not consider a decarbonization target or a net-zero commitment as a substitute for a credible coal phase-out plan.

Recommendations on targeted restrictions

Insurers shall adopt time-bound restrictions on an increasing number of fossil fuel and unsustainable power projects and companies, aiming to prevent the expansion of fossil and unsustainable assets in the power sector, while supporting their progressive phase-out. Achieving these measures will require the insurers to:

- ✓ Make public its expectations from power generation companies and utilities, and any associated exclusions.
- ✓ Implement an engagement policy towards the relevant companies to induce them to meet expectations.
- ✓ Implement a progressive escalation strategy that would ultimately lead to a full exclusion in case expectations are not met.

Insurers shall adopt restrictive measures over time to induce companies to stop their fossil and unsustainable expansion plans in the power sector with an immediate commitment to no longer provide insurance coverage:

- ✓ To fossil, unsustainable and biomass power plants.
- ✓ To still involved in new coal plants.

- ✓ To companies with no commitment not to develop new fossil fuel and biomass plants (an exemption to this restriction may apply until 2025 for companies subject to engagement from investors through Climate Action 100+).

Insurers shall commit to have no further insurance portfolio exposure to fossil fuel-fired and unsustainable power plants according to the following timeframe:

- ✓ Unabated coal-fired power plants in OECD and European countries by 2030.
- ✓ Unabated fossil oil- and gas-fired plants in OECD and European countries by 2035.
- ✓ All unabated fossil fuel plants by 2040 worldwide.

Insurers shall adopt restrictive measures over time to gradually reduce their exposure to these activities, while encouraging companies to plan a phase-out of their assets and support renewable energy development by committing to:

- ✓ No longer provide insurance coverage to companies which derive more than 10% of their power production or installed power capacity from coal, and of companies with more than 2.5 GW of coal-fired power capacity.⁸⁵
- ✓ Provide insurance coverage only to power producers that have adopted a net zero target by 2050 aligned with a 1.5°C scenario.
- ✓ From 2024, provide insurance coverage only to power producers that committed to:
 - Bring their fossil fuel activities close to zero by 2035 in OECD and European countries, and by 2040 worldwide.
 - Allocate most of their capex to renewable energy, excluding unsustainable energy sources.
 - A comprehensive climate transition plan that allows investors to assess it against a 1.5°C scenario as a benchmark and is subject to an annual consultative vote at the AGM (as described above).
- ✓ No longer provide insurance coverage to companies that sells any fossil fuel-fired plant, unless:
 - In case the plants are not closed but sold, insurers shall expect strong guarantees from the power producer that the new owners will:
 - Close any coal-fired plant before 2030 and any fossil gas-fired plant before 2035 if the plant is located in the OECD or European countries, or before 2040 elsewhere.
 - Not convert any plant to other fossil fuels or biomass.
 - Provide sufficient financial means and measures to ensure that all social and environmental obligations are met.
 - In case new biomass or fossil gas plants are allowed, or in case plants are not closed but converted to another technology, insurers shall expect strong guarantees from the power producer that:
 - A comparative analysis shows that this conversion is economically, ecologically, financially and technically more advantageous than closure or replacement by renewable energies with equivalent production capacity.

- An environmental and climate impact assessment demonstrates that the conversion will not result in increased GHG emissions across the value chain (and not just at the combustion stage).
- A closure deadline consistent with a 1.5°C scenario, with a just and sustainable transition plan, including guarantees concerning the capacity to fund and implement all worker and environmental obligations.⁸⁶

An exception to the above measures may be made for the financing of activities or subsidiaries dedicated to the energy transition (e.g. the deployment of renewable energy).

This exception must remain temporary, and only apply for the time needed for the company to align its corporate strategy with a 1.5°C scenario.

CLIMATE LOBBYING

Insurers shall adopt a responsible lobbying policy consistent with a 1.5°C scenario.

All lobbying activities in which insurers participate and that are aimed at influencing public officials (direct lobbying, such as governments, legislators, regulators, administration, international organisations, etc.) and public opinion (indirect lobbying, such as journalists, scientists, artists, etc.) shall apply to all their employees, subsidiaries and contractors, all business areas, and all operational jurisdictions.

Insurers shall commit, through a published code of conduct, to:

- Align climate change-related lobbying objectives and activities with a 1.5°C objective and establish an annual monitoring and review process to ensure that all direct and indirect climate change lobbying activities follow this commitment.⁸⁷
- Disclose, for all geographies, the climate change related lobbying objectives and recommendations (especially position papers submitted to public officials), as well as the assessment of the influence that this lobbying has had on (a) supporting ambitious public climate change policy, and (b) the company's ability to deliver its own corporate transition strategy.
- Disclose, for all geographies, their membership of, support for and involvement in all lobbying groups engaged in climate change-related lobbying.
- Establish a clear framework for escalation concerning misalignment between lobbying positions adopted by these groups and the 1.5°C scenario⁸⁸. This escalation should include leaving such lobbying groups if their activities are detrimental to reaching the 1.5°C target.
- Disclose the agenda of meetings with public authorities and the nature of the public decisions targeted by the lobbying activities.
- Disclose the budget spent on climate change-related lobbying, including the budget spent directly, through the previously mentioned lobbying institutions and through consulting firms or other external bodies.
- Create or participate in coalitions that have specific purpose of lobbying in support of the 1.5°C objective.
- Commit not to challenge the phase out of fossil fuel facilities through investor-state dispute settlement mechanisms (ISDS) and other legal mechanisms.⁸⁹
- Commit to disseminate only science-based, up-to-date and verifiable information or arguments, and not disseminate deliberately biased information.
- Name a senior decision-maker who is responsible for implementing these policies.
- Create or participate in coalitions with the specific purpose of lobbying in support of the 1.5°C objective. These should integrate all kind of financial institutions, data providers, rating agencies, shareholder voting agencies, etc.
- Sign the Global Standard on Responsible Climate Lobbying (RCLS)⁹⁰

For more information, insurers can refer to the [methodology](#) of indicator 7 (Climate policy engagement) set by the Climate Action 100+ and the [Recommendation of the Council on Principles for Transparency and Integrity in Lobbying](#) published by the OECD.

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- 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)
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- ¹⁷ Reclaim Finance, [The IEA's net-zero 2050 : The new normal and what's left to be done](#), December 2021
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- 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

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- ⁴⁶ Climate Analytics, [Coal phase-out](#)
- ⁴⁷ International Energy Agency, [Coal in Net Zero Transition: Strategies for rapid, secure, and people-centred change](#), § 1.4.3, November 2022
- ⁴⁸ 3.2.1 International Energy Agency, [Net Zero by 2050 : A roadmap for the global energy sector](#), § 3.2.1, October 2021
- ⁴⁹ International Energy Agency, [Coal in Net Zero Transition: Strategies for rapid, secure, and people-centred change](#), § 1.4.4, November 2022
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⁵³ *Ibid.*

⁵⁴ For more information : International Energy Agency, [CCS Retrofit : Analysis of the Globally Installed Coal-Fired Power Plant Fleet](#), 2012. Bloomberg NEF, [Japan's Ammonia-Coal Co-Firing Strategy a Costly Approach to Decarbonization, Renewables Present More Economic Alternative](#), September 2022

⁵⁵ Urgewald's GCEL currently lists 20%. They will be lowered to 10% of the in the updated plan of 2023.

⁵⁶ Urgewald's GCEL currently lists 20% of power production or installed power capacity from coal thresholds. They will be lowered to 10% of the coal share of power capacity in the updated plan of 2023.

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- ⁸³ Although these technologies provide an advantage in terms of lowering GHG emissions for electricity generation, their level of maturity is far too low and the cost of conversion far too high to expect a reduction in emissions from the sector in the medium term. For example, current production level for low-carbon hydrogen is only around 0.5% of current hydrogen production being from low-carbon sources, that is about 0.03% of global fossil gas production (Source : IGU, [Global Renewable and low-carbon gas report](#), 2021).
- ⁸⁴ For more information : International Energy Agency, [CCS Retrofit : Analysis of the Globally Installed Coal-Fired Power Plant Fleet](#), 2012
- ⁸⁵ Urgewald's GCEL currently lists 20% of power production or installed power capacity from coal thresholds, and 5 GW of coal-fired power capacity. They will be lowered to 10% of the coal share of power capacity/generation and 2,5 GW of in the updated plan of 2023.

⁸⁶ For more information : International Energy Agency, [Phasing out unabated coal : current status and three case studies](#) October 2021. Beyond Coal, [Just transition in the context of European power utilities and Insurers](#), August 2020.

⁸⁷ For more information: PRI, [Converging on climate lobbying: aligning corporate practice with investor expectations](#), May 2018

⁸⁸ For more information: CERES, [Blueprint for Responsible policy engagement on climate change](#), June 2020

⁸⁹ For more information : IISD, [Investor-State Disputes in the Fossil Fuel Industry](#), December 2021

⁹⁰ For more information: PRI, [Climate lobbying](#), March 2022