February 2023

Responsible Investing
AXA IM Climate Risks Policy

According to the Intergovernmental Panel on Climate Change (IPCC), "global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in CO_2 and other greenhouse gas emissions occur in the coming decades"[1]. This will require concerted efforts to reduce the global economy's dependence on fossil fuels.

On August 9, 2021, the IPCC released the first instalment of it Sixth Assessment Report on the physical science basis of climate change. One statement is stark and clear: "It is unequivocal that human influence has warmed the atmosphere, ocean and land.[2]"

This new report showcases once again the reality of climate change and its impacts on human societies – past, present, and future. In doing so, it highlights the need for our economies to transition to a different energy ecosystem. This will change how we produce and consume energy and wean us off hydrocarbons and fossil fuels – the main source of greenhouse gas (GHG) emissions.

At AXA Investment Managers (AXA IM) we believe that our fiduciary duty goes beyond delivering returns to our clients in the short term. It is also about investing responsibly, driving climate action, and ensuring the long-term sustainability of the world we live in. In that context, we are committed to supporting the energy transition in all its dimensions. This means embracing complexity, discarding simplistic solutions, thinking long term, and acting now, as time is running short. We will think in terms of entire value chains, whether they relate to supply or to demand, as no sector will be untouched. The energy transition is not limited to the energy sector and it should permeate our broader thinking.

In our view, participating as an investor in the energy transitions implies:

[1] IPCC 6th Assessment Report
[2] Ibid.

- Not investing in segments of the economy or companies that are not compatible with the transition or unwilling to adapt;
- Investing in selected, credibly transitioning industries and companies, using engagement with management to encourage them on their journey;
- Backing innovative solutions and future technology alternatives;
- Analysing companies and industries in grey areas to assess their transition potential.

The energy transition is a climate-led reality that will require us to consider other environmental impacts, but such a large transformation will also bring social impacts for workers and communities. We will therefore pursue a "Just Transition" as part of our investment analysis and will make it an integral component of our framework.

We intend to engage with any company that may contribute to a successful transition. This draws in a vast range of businesses, from low-carbon solution suppliers to carbon-heavy resource producers or service providers tackling their own emissions. In order to deliver tangible results, we will spend more time and effort on those with the largest GHG footprints. As a shareholder, we will vote in annual general meetings following the same logic: we will support companies genuinely participating in the energy transition, but we will challenge strategies that do not match our climate commitments[3].

This document details the approach deployed by AXA IM for the fossil fuel sector in particular. We will continue to evolve our approach to the sector over time, regularly reviewing our policy, in line with the objective of progressively phasing out coal and unconventional oil & gas. We will provide periodic updates on progress and next steps, as well as detailing our exposures in our annual climate report[4].

Additional information on AXA IM's climate commitments can be found in the annual climate report[5] as well as in AXA IM's Ecosystem Protection and Deforestation Policy[6].

Our approach to fossil fuels

Coal

Coal is often a low-cost form of energy, and is widely available to a large proportion of the world's population. However, it is also the most carbon-intensive energy source and generates a high level of other polluting emissions. In 2021, coal-fired electricity generation accounted for an estimated 36% of global electricity generation, but for three quarters of total CO_2 emissions from the electricity sector[7]. In addition, to produce electricity, there are many low-carbon solutions readily available, technologically mature, and economically superior – customers buy the same amount of power, suffer no disruptions to their activities, but emissions are reduced. As such, and while political and economic realities vary from one country to another, the use of thermal coal and development of thermal coal capacity should be constrained if we want to achieve the objectives of the Paris Agreement[8].

Exclusion

Since 2017, AXA IM has implemented a coal policy, with the objective of de-risking portfolios in the long term by reducing exposure to stranded assets while supporting the goals of the Paris Agreement and the transition to a low-carbon economy.

In 2020, AXA IM strengthened its coal policy to exclude companies with coal power expansion plans of more than 300 megawatts (MW), down from 3000MW previously, while a new exclusion was introduced for power generation companies with more than

[3] More details are available in our annual Stewardship reports as well as Engagement and Corporate Governance & Voting policies: Stewardship & Engagement | Responsible Investing | AXA IM Corporate (axa-im.com)

[4] Information on remaining fossil fuels exposure at AXA IM level, number of exemptions, and % of AUMs in scope of the policy is available in t AXA IM's annual Climate Report (Article 29 – TCFD combined report): Policies and reports | AXA IM Corporate (axa-im.com)

[5] More details are available in AXA IM's annual Climate Report (Article 29 – TCFD combined report): Policies and reports | AXA IM Corporate (axa-im.com)

[6] More details are available in AXA IM's Ecosystem Protection and Deforestation Policy

[7] IEA - Coal 2021 Report: IEA - World Energy Outlook 2021

[8] The Paris Agreement aims to "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels".

10 gigawatts (GW) of installed coal-based power production. The updated policy also excludes mining companies with at least 20 million tonnes of coal production, companies developing new coal mines and coal industry partners developing significant new coal assets. This rules out investments in most new coal projects around the world. AXA IM also committed to exit from all coal investments in countries that are part of the Organisation for Economic Co-operation and Development (OECD) by the end of this decade, and in the rest of the world by 2040.

Engagement

To support our commitment to exit coal, an engagement initiative was launched targeting a selection of issuers that are exposed to coal but lie below our exclusion thresholds[9]. This allowed us to inform them of our decisions, and to request robust transition plans with science-based carbon reduction targets including for the short and mid-term, including plans to close coal projects by 2030 in OECD and 2040 in the rest of the world and transition pathways in line with the Paris Agreement ambitions. Our engagement letter also requests regular reports on progress.

Oil and gas

Crude oil and natural gas offer a greater challenge than coal as we pursue an energy transition. Crude oil products and natural gas together accounted for 56% of primary energy consumption in 2020[10], an only modest decline from 60% some 20 years ago. Crude oil is especially ubiquitous in our societies, as a fuel or as a raw material for many products, such as plastics, paints and lubricants.

To transition away from oil and gas products, credible alternatives have to be invented, or existing alternatives scaled up. The International Energy Agency (IEA) reckons[11] that almost half of the required technologies are still under development. The energy transition will primarily be a demand transition, made possible by a technology transition as consumption patterns and habits change one by one. Supply will fall as demand falls thanks to technologies that allow customers to reduce or eliminate their oil and gas consumption. If supply was to be reduced without a parallel downward shift in demand, the mechanical outcome would be scarcity and higher prices. The question of the "Just Transition" would then rise to the fore. This transition will not occur overnight, but it must begin to accelerate with the tools available – whatever is possible today ought to be done today. With that in mind, it is important to understand that not all oil and gas is created equal[12].

In an article published in "Science" in 2018, it was shown that the two main drivers of the carbon intensity of crude oil production were natural gas flaring (burning natural gas produced alongside oil) and crude density[13]. The latter is an unavoidable geological fact (high density crude oils include heavy oil, extra heavy oil, and oil sands), but the former results from operational choices, influenced by local regulations. The IEA, in its World Energy Outlook 2018, showed that methane emissions were the main driver of the carbon intensity of natural gas production[14].

In addition, while all oil and gas resources have an environmental impact, there are certain types of resources that may have an oversized impact on the environment, either through a specific extraction process or due to the fragility of the ecosystem. It is also necessary, when the environmental stakes are high, to stress the critical importance of the behaviour of resource operators, i.e., the operational choices they make.

AXA IM's approach focuses on the most questionable resources[15], and on the companies exposed to those resources:

- Oil sands: Although they account for less than 4% of total crude oil production, oil sands have a significant impact on climate, biodiversity and health. They clearly contribute negatively to the United Nations Sustainable Development

[9] Further details are available in AXA IM's annual Climate Report (Article 29 – TCFD combined report): Policies and reports | AXA IM Corporate (axa-im.com)
[10] BP Statistical Review of World Energy 2021
[11] IEA - Net Zero Presentation
[12] AXA IM: Playing with fire: Measuring emissions from the world's oil and gas fields
[13] Global carbon intensity of crude oil production - Science 2018
[14] IEA - World Energy Outlook 2018
[15] Using the definition from the Scientific Committee of the French Sustainable Finance Observatory as initial definition, our policy focuses on segments which we assessed to be most impactful and for which data was available: our policy does not include coal bed methane, extra heavy oil, nor ultra-deep-water conventional oil & gas. We may review the criteria over time.

Goals (SDGs). When extracted, they emit three times more GHGs than conventional oil[16] and destroy forest and peatlands, creating significant harm to biodiversity. Due to the use of solvents during the extraction process, they are also responsible for air pollution, with the emission of particles and methane. Both the destruction of biodiversity and the pollution emitted during the extraction process have direct social and health impacts on local communities and workers of oil sands producers. AXA IM believes that the development of this energy source is not consistent with good management of climate risks, preservation of our environment at large or the fight against global warming. The development of oil sand capacities, as well as the major companies carrying oil sand via pipelines, should be constrained if we want to limit the increase in temperature within the limits of the Paris Agreement.

- **Shale and tight oil and gas**: The use of hydraulic fracturing technology – also called fracking – to produce oil and gas raises several environmental issues, encompassing GHG emissions (especially methane[17]), the injection of chemical products, heavy consumption of water and the production of wastewater[18]. It also impacts local communities through road safety due to reliance on trucking as well as creating disruptions in local ecosystems. What is at stake with shale operators is their ability to properly manage those environmental issues, notably through the deployment of significant methane and water infrastructure. This requires scale, which is why our exclusion focuses on smaller players that produce less than 100kboepd[19] of shale and tight oil & gas.

- **Arctic**: The Artic is home to a fragile environment and a complex ecosystem, and both can be easily damaged. It is also a region where global warming is most apparent. According to the IPCC, "it is virtually certain that the Arctic will continue to warm more than global surface temperature, with high confidence above two times the rate of global warming"[20]. Investments in companies exposed to the Arctic should be constrained.

Exclusion

Since 2017, AXA IM has implemented an exclusion on oil sand activities. In 2022, AXA IM reinforced its stance with new exclusions related to unconventional oil and gas:

- **Oil sands:** Reinforcement of the policy with an absolute exclusion threshold leading to the exclusion of companies for which oil sands represents more than 5% of global oil sands production;

- **Shale/Fracking:** Exclusion of players that produce less than 100kboepd of shale and tight oil & gas and with more than 30% of their total production derived from fracking;

- **Arctic**: Extension of the environmental focus through the adoption of a strict policy to exclude oil and gas extraction activities carried out in the Artic Monitoring and Assessment Programme (AMAP) region. This will mean divesting from companies deriving more than 10% of their production from this region or representing more than 5% of the total global Arctic production. Norwegian operations are not concerned given the stringent regulation in place[21].

Engagement

Our exclusion policy defines what we consider unacceptable as we seek to help meet global environmental challenges. We believe it is our duty to drive climate action and, as an investor, to influence the net zero trajectories of companies though engagement and open dialogue.

AXA IM will engage with a selection of oil and gas companies that remain in scope based on clear objectives and a specific timeframe, with the objective of ensuring they develop credible transition plans consistent with the goals of the Paris Agreement and are on track in their delivery, but also that their current operational practices aim to mitigate negative impacts on the

[16] the-energy-industry-of-tomorrow-on-the-ncs-konkraft-report-2021 – Page 41
[17] More methane in atmosphere linked to more fracking (nationalgeographic.com)
[18] Even if Injection of Fracking Wastewater Stops, Quakes Won't - Scientific American
[19] Means thousand barrels of oil equivalent per day.
[20] IPCC 6th Assessment Report
[21] Energy Policies of IEA Countries - Norway 2017 Review
Environment and technology - Norwegianpetroleum.no (norskpetroleum.no)
Norway oil sector braced for huge carbon tax hike as new climate plan hatched | Upstream Online

environment. These companies are identified through a combination of materiality criteria, climate and transition strategies, and environmental impact. When looking at companies' operational practices, for all companies, from 2022, we will monitor the GHG intensity of oil & gas production, which includes methane emissions and methane flaring, and will challenge poor performers. For companies active in the shale segment, we will in addition focus our dialogue on water consumption and wastewater production.

When focusing on companies' transition plans, our engagement strategy with the oil and gas sector is organized around three pillars:

– Strategy:
    - Companies should ensure their climate commitments are aligned with the goals of the Paris Agreement. This requires their strategies to be defined based on a Paris-aligned scenario and based on science (including "Scope 3" indirect emissions). Beyond long-term goals we require companies to define intermediary emissions reduction targets (including 2025 and 2030), with clear and communicated progress milestones. As part of this, we expect companies to adopt and publish absolute GHG emissions reduction targets, immediately for scope 1 and 2, and no later than from 2030 onward for scope 3;
    - The Science Based Targets initiative (SBTi) framework for the oil and gas sector is expected to be released in the future[22]. AXA IM will integrate this framework once it is available and will then request from companies that they set science-based targets. Given the urgency, we will in the meantime also use other sources – such as the Transition Pathway Initiative, the IIGCC oil & gas framework, or CDP Climate reports – and our own internal work to analyse strategies;
    - We also ask companies to integrate their value chain in their climate strategy;
    - While the transition is first a demand transition, enabled by the development of alternatives to oil and gas products, we will pay attention to supply trends and notably companies' upstream greenfield projects. The aim is to better understand the overall production profile, its path relative to demand trends, and contribution to coal substitution for natural gas specifically. More broadly, and being mindful of this context, we expect fossil fuels companies to demonstrate how Capex or Investment plans (including R&D) will contribute to change demand and lead to a decline in the upstream production. We are also attentive to lobbying practices in this perspective;

– Transparency: We require disclosures around capital expenditure plans to be consistent with international transition pledges, including reporting on their progress;

– Governance: Companies should align executive remuneration to climate change objectives.

We recognize that fossil fuel companies may not have the same level of maturity at the moment, due to geographic and business specificities notably. We therefore define timeframes to achieve the engagement asks listed above for each of the companies we engage with, which are ambitious but also realistic. Overall, we expect them to comply no later than in 2025, disclosing progress on their path in the meantime. If a company does not deliver on the defined timeframe, we will use escalation techniques which could include voting against the Board from 2023.

Focus on exclusion approach

AXA IM believes that investments in the companies most exposed to coal and unconventional oil and gas (the excluded companies) should be avoided. The exclusion policy covers upstream (production and extraction) and the transport activities of companies – from coal power generation, coal mining and coal transportation to companies producing and/or transporting oil sand. More details of our exclusion criteria are set out in the table below.

Companies that are not excluded by our exclusion criteria may be subject to engagement as described above. AXA IM engagement policy provides more details with regards to the engagement governance, tracking-system as well as situations which may require the use of escalation techniques. Should an issuer be considered as being a "laggard", meaning that they do not have Net Zero commitments, or have quantified emissions reduction targets deemed to be not credible or demanding enough[23], we may use the more forceful "Three Strikes and You're Out" approach described in the policy document.

[22] Oil and Gas - Science Based Targets

[23] The criteria for identifying "laggards" will be regularly reviewed over time, and the corresponding engagement list will be revised at least on an annual basis.

Excluded Companies

<table>
<tr><th>Resource type</th><th>Exclusion criteria</th><th>Approach</th><th>Sources and frequency of the update</th></tr>
<tr><td>Coal</td><td>- Companies that derive 30% or more of their revenue from thermal coal
- Mining companies that extract more than 20 million tonnes of coal per year
- Power generation companies that have 30% or more of coal share of power production
- Power generation companies that plan to expand coal power generation capacity by more than 300 MW
- Mining companies developing new coal mining projects and coal industry partners (e.g., equipment suppliers or infrastructure players, such as dedicated port terminals or railways) developing significant new coal assets listed by the GCEL database
- Power generation companies with more than 10 GW of installed coal-based capacities</td><td>For coal, affiliates[24] of excluded companies may also be excluded if they act as the securities issuance entity.</td><td rowspan="4">For all exclusion criteria, we rely on external providers to prepare initial lists of issuers in scope, namely Urgewald[25] Global Coal Exit List (GCEL) and Global Oil & Gas Exit List (GOGAL) using the thresholds and the value chain (i.e., all components of the value chain for coal, and upstream activities for oil & gas) defined in these databases.

The exclusion lists are then reviewed qualitatively and discussed within our responsible investment governance committees on a regular basis.
These exclusion criteria are applied to our existing investments and any future investments.

AXA IM may consider exceptions to these exclusion rules for issuers that have defined robust transition plans[26] or which do not operate in the fossil fuels sector[27].

The exclusion lists are updated on a yearly basis unless a specific event requires an intermediate revision[28] or a delay in the publication of data requires to postpone the update.</td></tr>
<tr><td>Oil sands</td><td>- Companies that derive 20% or more of their production from oil sands or that produce more than 5% of the total global oil sands production
- Pipelines companies that derive 20% or more of their revenue from oil sands transportation</td><td rowspan="3">For Shale, the Arctic and Oil sands, affiliates of excluded companies are also excluded.</td></tr>
<tr><td>Shale and tight oil & gas</td><td>- Companies that derive 30% or more of their production from shale and tight reservoirs and that produce less than 100kboepd of shale and tight oil & gas</td></tr>
<tr><td>Arctic</td><td>- Companies that derive 10% or more of their production from fields located in the Arctic as defined by the Arctic Monitoring & Assessment Programme (AMAP) or that produce more than 5% of the total Arctic production; Norwegian operations are not included</td></tr>
</table>

For funds which have a sustainability-related label (incl. Label ISR, Towards Sustainability Quality Standard, Lux Flag, etc.) and which are part of AXA IM ACT range, an additional exclusion threshold is applied on companies that derive 20% or more of their revenues from thermal coal. For those issuers, green bonds may be eligible based on qualitative analysis and based on our Green, Social and Sustainable Bonds (GSSB) framework.

[24] For the purpose of this policy, the term “affiliate” shall mean any entity, individual, firm or corporation, directly or indirectly, through one or more intermediaries, controlling or controlled by excluded companies.

[25] Urgewald is a non-profit environmental and human rights organization.

[26] Exemptions can only be granted to issuers which are close to the exclusion threshold, and where a robust transition plan with science-based carbon reduction targets including for the short and mid-term, including plans to close coal projects by 2030 in OECD and 2040 in the rest of the world and transition pathways in line with the Paris Agreement ambitions is being implemented successfully.
This exemption process is overseen by a RI governance committee. The exemptions are reviewed when the ban list is updated on an annual basis. A specific approach to exemptions may be applied for AXA IM Joint-Ventures in scope of the policy.

[27] Regarding the Arctic and shale, we may remove from the exclusion list a limited number of companies that are above the thresholds but where upstream activities are a small part of the revenue base, always below 10% and most often below 1%. This qualitative adjustment considers the nature of the company’s activities and may change in the future.

[28] Example given: major newsflow. The list is not systematically updated following corporate actions.

Scope

Financial instruments
The policy applies to all single-name financial instruments issued by the excluded companies or offering exposure to identified companies.

Portfolios
The policy applies in principle to all portfolios under AXA IM's management, including dedicated funds and third-party mandates unless the client has given different instructions for its mandate or the fund has been exempted for legal or risk management reasons.

The policy does not apply to:
- Funds of funds composed of funds which are not under the management of AXA IM. When possible, AXA IM will choose asset managers that have committed to these principles;
- Index funds;
- Funds of hedge funds;
- Tenants in real estate portfolios.

The policy applies to direct product investments, overall with no look-through except when local laws or regulations require to do so.

Entities
This policy applies to AXA IM and all its affiliates worldwide, to joint ventures where AXA IM's stake is 50% or higher, and to funds for which the management is delegated to one of our joint ventures.

Implementation

This policy is implemented on a best-effort basis, taking into account local regulation and the best interests of both the client and the fund's objective, with a transition period ordinarily of 30 days following the initial implementation for the funds/mandates in scope, and following periodic revisions of the exclusion lists. If the application of this standard dictates divestments, portfolio managers shall disinvest at their discretion as soon as possible within this transition period taking into account the portfolio impacts based on market conditions, liquidity and portfolio construction constraints. In practice, some targeted instruments could remain in the funds or mandates for a period if deemed in the best interest of their clients and provided that it is compliant with the applicable Laws; however, those holdings cannot be increased[29]. For certain alternative products such as Collateralized Loan Obligations ("CLOs"), Mutual Securitization Funds ("FCT" in French), closed-ended alternative funds and other alternative products, if the divestment is considered impossible, such holdings in portfolio could be kept until maturity following an internal validation process.

The exclusion lists are prepared using information from external data providers, and although a qualitative review is performed, AXA IM is therefore not responsible for the accuracy of this data.

The implementation of this policy is subject to compliance with asset management local laws or regulations; therefore, some specific alternative implementation mechanisms of this policy may be put in place locally. In the EU, the implementation of this policy is part of the compliance with SFDR requirements as it constitutes AXA IM's approach to consider sustainable investments for the 'Do No Significantly Harm' (DNSH) criteria (*i.e.*, applicable to Article 8 and Article 9 funds). Thus, if the application of this standard dictates divestments, portfolio managers shall disinvest for their product to be classified Article 8 or Article 9, following the abovementioned implementation process.

The implementation of this policy will be described in AXA IM's annual Climate Report (Article 29 – TCFD combined report): [Policies and reports | AXA IM Corporate (axa-im.com)]

[29] Such tolerance could be applied, for example in relation to strategies with accounting objectives (e.g., 'buy & maintain' strategies), or for concentrated strategies with appropriate validation from oversight functions.