

SUSTAINABLE IMPACT FRAMEWORK

Fossil Fuels & Low-carbon molecules

Sectors:

- Energy equipment & services
- Gas Utilities
- Oil, Gas & Consumable fuels

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This document is not a promotional communication. This is a methodological document aimed at explaining how Mirova takes into account sustainable development issues in the framework of the environmental, social and governance analysis of each sub-sector of activity.

An affiliate of:

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Executive Summary



EXECUTIVE SUMMARY

Fossil Fuels & Low-Carbon Molecules

At COP28, governments acknowledged the need to transition away from fossil fuels in energy systems. Yet, global consumption of coal, oil and natural gas remains at record levels and has not yet entered a sustained decline, despite record deployment of renewable electricity, batteries, electric vehicles and electrification technologies. For energy companies, achieving net zero will require managing an orderly decline of fossil fuels while scaling low-carbon molecules for hard-to-electrify sectors. At the same time, methane emissions, biodiversity impacts and social considerations remain critical sustainability challenges across the value chain.

20%

Share of global energy demand met by fossil fuels in the NZE, compared to 80% in 2025

Fossil fuels remain the foundation of the global energy system, accounting for around 80% of primary energy supply. According to the IPCC, the most ambitious Paris-aligned pathways require global coal use to decline by around 95% by 2050, while oil and gas demand fall by approximately 60% and 45%, respectively. In the IEA's Net Zero Emissions scenario, the sharp decline in fossil fuel demand means that there are no new coal mines or coal mine lifetime extensions and that no new conventional long lead-time oil and gas projects are approved for development. **In the IEA "business as usual" STEPS scenario, coal peak before 2030, oil demand plateau around 2030 and natural gas demand stabilize in the mid 2030s, driven by the continued deployment of low-carbon technologies.** As a result, the long-term challenge for the sector is increasingly to manage the orderly decline of fossil fuel production and consumption, while continuing to ensure energy security and affordability and the resilience of energy systems.

1 Mt

Low-carbon hydrogen production in 2025, compared to 420 Mt in 2050 in the NZE

Energy companies can play a key role in scaling low-carbon molecules for hard-to-electrify sectors such as industry, aviation, shipping and chemicals. However, the large-scale deployment of hydrogen, synthetic fuels and bioenergy has proven more difficult than initially expected. Green hydrogen is a notable example: despite significant interest and investment, around 98% of global hydrogen production remains fossil-based, reflecting persistent challenges related to economics, infrastructure development and policy support. **Achieving scale will require addressing the economic, technological and regulatory barriers that continue to constrain the deployment of low-carbon molecules.** Energy companies have both the capital and the expertise to help drive this transition.

-30% by 2030

Methane emission reduction commitment taken at COP 26. Achieving this target could avoid more than 0.2°C of additional warming

Fossil fuel activities are associated with GHG emissions, methane leakage, pollution, biodiversity impacts, workplace safety risks, human rights concerns and heightened exposure to corruption, negative lobbying and social acceptance issues. Cutting methane emissions from the energy sector is one of the least-cost opportunities to limit global warming in the near term. **Low-carbon molecules also present important sustainability challenges.** The environmental performance of bioenergy depends on sustainable biomass sourcing and the avoidance of indirect land-use change, while hydrogen, synthetic fuels and CCUS raise questions related to energy efficiency, water consumption and storage integrity. **The transition towards a decarbonized energy system therefore requires robust environmental safeguards, strong social practices and transparent governance across all technologies and fuel pathways.**



Drivers of contribution and obstruction to sustainability goals

	Activities	Practices
Positive Impact	Sustainable Activities LOW CARBON ENERGY - Low carbon hydrogen - Bioenergy & Synthetic fuels ACCESS TO BASIC NEEDS - Access to Clean cooking INDUSTRIAL EFFICIENCY FOR CLIMATE - Carbon capture and sequestration technologies and services	Advanced Practices HUMAN CAPITAL: - Diversity and inclusion - Job quality CLIMATE BIODIVERSITY <i>Advanced governance models</i>
Residual ESG Risks	Harmful Activities¹ FOSSIL FUELS: - Coal - Oil - Fossil gas PLASTICS	Risk Mitigation CLIMATE CHANGE BIODIVERSITY FOOTPRINT WORKING CONDITIONS LABOR & HUMAN RIGHTS GOVERNANCE: - Governance of sustainability - Business ethics - Taxes

1. See: [Minimum standards and exclusions, Mirova](#)



Positive Impact





CONTEXT

SUSTAINABLE ACTIVITY

Hydrogen can be produced through different pathways, including grey hydrogen from unabated fossil fuels, blue hydrogen from natural gas combined with carbon capture and storage, and green hydrogen from water electrolysis using renewable electricity. Hydrogen can also be converted into derivatives such as ammonia and synthetic fuels¹. According to the IEA Net Zero Emissions (NZE) scenario, low-carbon hydrogen is expected to play an important role in decarbonising hard-to-abate sectors such as refining, chemicals, fertilizers and steel. However, slower-than-anticipated deployment and breakthrough in electrification technologies (heavy-duty trucks), have narrowed the range of end uses where hydrogen is considered a relevant decarbonisation pathway. Indeed, hydrogen deployment remains constrained by the large quantities of low-carbon electricity and infrastructure required, as well as significant energy losses across the value chain. From a sustainability perspective, we favour green hydrogen over blue hydrogen, as the latter remains dependent on the fossil gas value chain and the uncertain scaling of carbon capture and storage.

Low-carbon hydrogen

Companies/projects focused on the production of hydrogen and/or its byproducts (such as ammonia, and methanol) based on low-carbon processes (i.e. electrolysis of water, or steam methane reforming with CO₂ capture), or providing key enabling equipment and services such as electrolyzers, or fuel cells

IMPACT CRITERIA

- Production of low-carbon hydrogen achieving substantial lifecycle GHG emissions reductions
- Hydrogen-related equipment and infrastructure (e.g. electrolyzers, fuel cells, storage and distribution assets) enabling the scaling of a low-carbon hydrogen economy
- Deployment in hard-to-abate sectors where direct electrification is not a viable option
- Contribution to the decarbonisation of industrial value chains and integration of low-carbon electricity

Around 2.3 billion people still rely on traditional biomass, charcoal, coal or kerosene for cooking, exposing households to harmful indoor air pollution and contributing to millions of premature deaths each year. Expanding access to clean cooking solutions is therefore a key component of SDG 7 (Affordable and Clean Energy) and an important driver of public health, gender equality and economic development. Cleaner fuels such as LPG, biogas and biomethane can reduce indoor air pollution, improve living conditions and decrease pressure on natural resources associated with unsustainable biomass harvesting. In some regions, modern fuels can also support essential household and agricultural energy needs where alternatives remain limited.

Access to basic Needs

Development of resilient energy infrastructure providing affordable and sustainable energy for individuals, housing and agriculture

IMPACT CRITERIA

- Revenues generated by the provision of clean cooking solutions to populations lacking access to modern cooking fuels
- Number of people or households reached by clean cooking programs

For this pillar, the positive contribution of activities is analysed through a combination of revenues exposure, capital expenditures planned, and capacity installed, under development and targets

LOW POSITIVE IMPACT

> 10% sustainable activities

MODERATE POSITIVE IMPACT

> 20% to 50% sustainable activities

HIGH POSITIVE IMPACT

> 50% sustainable activities



Focus on Bioenergy & Synthetic Fuels



CONTEXT

Bioenergy and synthetic fuels refer to two distinct families of low-carbon energy carriers. Bioenergy is produced from biomass feedstocks such as woody biomass, agricultural residues, organic waste or dedicated energy crops. It can be converted into heat, electricity or fuels through pathways including direct combustion, anaerobic digestion (biogas and biomethane) and liquid biofuel production (ethanol, biodiesel and sustainable aviation fuels). **Bioenergy offer advantages in certain applications by leveraging existing infrastructure and equipment, thereby limiting the need for retrofits and new energy networks.** Synthetic fuels are produced by combining low-carbon hydrogen with captured CO₂ to create e-methanol, e-methane or e-kerosene. According to the IEA Net Zero Emissions scenario, modern bioenergy demand is expected to increase by around 20% by 2030 to support the decarbonisation of power generation, heating and industry, while synthetic fuels are expected to become an important decarbonisation pathway for hard-to-electrify sectors such as aviation and shipping. However, bioenergy and synthetic fuels deployment raise important environmental and social concerns. The climate benefits of biomass depend heavily on feedstock type and lifecycle assumptions and may be undermined by indirect land-use change (ILUC), particularly when biomass is sourced from primary forests or dedicated crops. Large-scale bioenergy production can require substantial land, water and agricultural inputs, potentially creating conflicts with food security and community rights. Biomass sourcing may also contribute to biodiversity loss when expanding into ecologically sensitive or high-carbon areas. For synthetic fuels, climate benefits depend on the availability of low-carbon electricity and sustainable CO₂ sourcing, while large energy requirements can limit scalability. As a result, **bioenergy and synthetic fuels can only be considered a climate solutions under strict sustainability conditions.**

POSITIVE IMPACT

CONDITION FOR ELIGIBILITY

SUSTAINABLE ACTIVITY	IMPACT CRITERIA
Bioenergy & Synthetic fuels Companies/projects focused on the production of bioenergy from secondary biomass, and key enabling infrastructure and equipment (including transmission and distribution networks, and storage), methanisation (anaerobic process of organic matter degradation), advanced biofuels (for example from anaerobic digestion or from agricultural waste/wastewaters), and synthetic fuels (excluding landfill gas)	• Deployment in sectors where lower-carbon alternatives remain limited and/or contribution to circular economy through waste valorisation or carbon utilisation • ≥70% lifecycle GHG emissions reduction, based on robust and preferably audited methodologies, including indirect emissions where relevant • Priority to sustainable feedstocks and energy inputs, favouring waste and residues for biofuels, aligned with cascading use principles, and low-carbon hydrogen and CO₂ for synthetic fuels

- No sourcing of biomass from primary forests, recently converted natural ecosystems, or areas with high biodiversity or high carbon stocks¹
- No material adverse impacts on food security, land rights, indigenous peoples or local communities
- Demonstrated feedstock traceability and sustainability policies covering biomass, low-carbon hydrogen and CO₂ inputs throughout the supply chain. Recognised certification schemes such as FSC, PEFC, ISCC, SBP or RFNBO may be used as evidence of compliance.

The information provided reflects Mirova’s opinion/the situation as of the date of this document and is subject to change without notice. 1 Eligibility conditions are broadly aligned with RED III sustainability requirements





CONTEXT

Carbon Capture, Utilisation and Storage (CCUS) refers to a set of technologies designed to capture carbon dioxide emissions from industrial facilities or energy production processes and either permanently store them underground or utilise them in industrial applications. In decarbonisation scenarios, CCUS is generally considered a complementary decarbonisation lever, particularly for hard-to-abate sectors such as cement, steel, chemicals and refining, where direct electrification or fuel switching may not fully eliminate “process” emissions. According to the IEA NZE scenario, global carbon capture capacity would need to increase from less than 50 MtCO₂ per year today to more than 1 GtCO₂ per year by 2030 and several gigatonnes by 2050. When coupled with bioenergy, CCUS becomes Bioenergy with Carbon Capture and Storage (BECCS), a technology that can deliver so-called “negative emissions” by capturing and permanently storing CO₂ that was previously absorbed by biomass during its growth. As a result, BECCS plays a significant role in many climate scenarios that rely on negative emissions. Despite their potential, CCUS & BECCS face significant environmental, economic and technological challenges. Scaling-up of this technology is highly uncertain due to upfront costs, high electricity consumption and technological uncertainty. In addition, CCUS may be used to prolong the lifetime of fossil fuel assets or justify continued fossil fuel expansion, potentially delaying more cost-effective mitigation measures. For BECCS, climate benefits depend on the sustainability of biomass sourcing and are subject to the same land-use, biodiversity and food security concerns associated with bioenergy. As a result, CCUS & BECCS can only be considered a relevant decarbonisation solution in well-defined applications, particularly for process industrial emissions and negative-emissions pathways.

POSITIVE IMPACT

CONDITION FOR ELIGIBILITY

SUSTAINABLE ACTIVITY	IMPACT CRITERIA	
Carbon emissions and energy efficiency Companies/projects providing carbon capture and sequestration technologies and services, aimed at reducing net greenhouse gases emissions.	• Deployment in hard-to-abate sectors where lower-carbon alternatives remain limited, and/or contribution to durable negative-emissions pathways • High lifecycle GHG emissions reduction, based on robust and preferably third-party verified methodologies, including upstream emissions, capture rates and storage performance • Existence of a credible decarbonisation strategy, showing that CCUS complements rather than replaces available decarbonisation levers • For BECCS: impact criteria applicable to bioenergy	• No use of captured CO₂ to support Enhanced Oil Recovery (EOR) • Demonstrated long-term storage integrity, including robust monitoring, reporting and verification systems, with clear accountability for potential leakage risks • For BECCS: condition for eligibility applicable to bioenergy



POSITIVE IMPACT

Advanced Practices



		SUSTAINABLE PRACTICE	
CONTEXT		Practices/measures expected:	Impact indicators examples:
CLIMATE	The Energy sector's climate impact is largely driven by the downstream use of its products, creating significant exposure to transition risks associated with stranded assets and locked-in emissions. To assess climate strategies, we rely on the Net Zero Investment Framework (NZIF), which evaluates climate ambition, disclosures, targets, planning, capital allocation and emission performance. Unlike the power sector, there is currently no widely accepted 1.5°C-aligned target-setting framework for upstream oil and gas activities, making qualitative assessment of transition plans particularly important. We therefore assess companies' ability to manage the decarbonisation and phase-out of existing assets, while scaling investment in low-carbon businesses. Relevant levers may include methane abatement, the elimination of routine flaring and venting, electrification of operations, deployment of CCUS, the conversion of existing assets into biorefineries or low-carbon fuel production ¹ , and the diversification into clean power, while avoiding fossil fuel expansion.	Implementation of a climate strategy aligning with the Paris Agreement	• Short, medium and long term GHG reduction targets aligned with the Paris Agreement, verified by third parties, and including all relevant scopes and greenhouse gases • Comprehensive, transparent and audited climate disclosures, including climate risks exposure and avoided emissions • Decarbonisation plan including the description of key levers and sub-targets, a plan phase-out fossil fuel assets • A coherent capital allocation plan, focusing mostly on green technologies. Use of carbon credits should be limited. • Corporate lobbying positions aligned with the Paris Agreement • Oversight of climate targets by governance bodies and executive remuneration linked to delivering targets • A track record of emission reduction
	Most plastics are produced from petrochemical products derived from oil and gas. According to the OECD, global plastic consumption could almost triple by 2060. Despite growing efforts, recycling rates remain low and most plastic waste is still landfilled, incinerated or leaked into the environment. As demand for oil products declines, plastics are expected to become one of the sector's key growth engines. As a result, oil and gas companies have an important role to play in reducing reliance on virgin fossil-based plastics and scaling circular solutions. This includes increasing recycled content, investing in mechanical and chemical recycling infrastructure, improving product recyclability through eco-design and expanding the use of alternative feedstocks derived from waste or biomass. Other advances practices include the implementation of strategies and action plans to reduce key pressure drivers such as water use in water scarce areas, water pollution, use of hazardous chemicals, land degradation and deforestation.	Implementation of a strategy to increase business circularity	• Issuance of double materiality assessment aligned with TNFD-LEAP methodologies, identifying key pressure drivers. Disclosure of KPIs to monitor identified material pressures and improvement overtime such as : • Share of recycled or alternative feedstocks used in petrochemical production • Share of recycled content in polymers and plastic products sold, and volumes of recycled materials incorporated annually • Investments and R&D spending dedicated to circular plastics solutions, including mechanical recycling, chemical recycling, bio-based feedstocks and product redesign • Targets to reduce virgin fossil-based feedstock use and increase circular feedstock sourcing • Targets to increase circular material use rate and recycled content across petrochemical and plastics value chains
LOW POSITIVE IMPACT		MODERATE POSITIVE IMPACT	
> Advanced practices - Medium Stake topic		> Advanced practices - High Stake issues	
> Credible strategy to achieve advanced practices			

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POSITIVE IMPACT

Advanced Practices



HUMAN CAPITAL

CONTEXT

Just Transition

The oil and gas industry currently employs 12 million workers globally. This falls by 10% in the APS and 20% in the NZE scenario to 2030. A just transition involves proactive measures to ensure that workers, communities and regions historically dependent on oil and gas activities are not disproportionately affected by this transformation. For companies in the fossil fuels sector, this means responsibly managing the phase-down, conversion or closure of fossil fuel assets, supporting workforce reskilling and redeployment, developing skills relevant to low-carbon businesses, and maintaining constructive dialogue with employees, contractors and affected communities.

Job Quality

The oil and gas sector relies on a highly skilled workforce operating in technically complex and often hazardous environments. As companies diversify into low-carbon activities, they face growing challenges in attracting, retaining and reskilling talent while ensuring high standards of health and safety, employee well-being and workforce engagement. Implementing advanced human capital practices is therefore essential to maintain operational excellence and ensure that new low-carbon jobs provide quality employment opportunities.

Diversity & Inclusion

Women account for 26% of the energy industry’s workforce, despite making up nearly 40% of workers globally. Women remain significantly underrepresented across the oil and gas industry, particularly in operational, technical and leadership roles. While diversity metrics have gradually improved in recent years, the sector continues to face challenges in attracting, retaining and promoting women and other underrepresented groups. Persistent gender pay gaps and unequal representation in senior management remain key concerns across many companies. To address these challenges, companies can increase awareness of career opportunities among underrepresented groups, broaden recruitment pipelines and create clear pathways for career progression into technical and leadership positions. Particular attention should also be paid to the inclusion of employees from diverse socioeconomic backgrounds, age groups and minority communities, especially in regions where the sector plays a major economic role. Ensuring equal opportunities in recruitment, promotion and remuneration, fostering an inclusive workplace culture, and raising awareness of unconscious biases among employees and management are essential to building a more diverse, innovative and resilient workforce.

LOW POSITIVE IMPACT

- > Advanced practices - Medium Stake topic
- > Credible strategy to achieve advanced practices

SUSTAINABLE PRACTICE

Practices/measures expected:

Employee’s well-being and Just Transition policies

Impact indicators examples:

- Measures in place for employees impacted by restructuring (financial severance, re-training, job-search assistance etc.)
- Training hours per employee, % of workforce trained, training spendings
- Qualitative analysis of the training offering including upskilling programs, leadership development...,
- Creation of internal universities / academies targeting actionable skillsets and accessible to most employees
- Employee share ownership programme
- Workplace wellbeing measures: flexible work arrangements, mental health support, counselling
- Low employee’s turnover rate and attrition rate
- Social targets in STIP/ LTIP remuneration

Diversity & Inclusion Policies

- Percentage of women in the Executive Committee, difference between women representation in the workforce and Executive Committee, C-Suite female representation (CEO, CFO, CIO, CTO, CCO)
- Wage gap or credible target to reach pay equality & unadjusted pay gap
- Succession planning including at least one woman as a possible candidate for every Senior position
- Roadmap to improve recruitment of minorities and ensure unbiased recruitment
- Gender-neutral leave policy
- Provision of daycare options (affordable and/or paid by the company) and work flexibility options

MODERATE POSITIVE IMPACT

- > Advanced practices - High Stake issues



Advanced governance model

CONTEXT	ADVANCED GOVERNANCE MODEL DETAILS	
Mirova aims to promote the development of a corporate vision focused on the creation of collective value over the long term. Corporate governance should be shaped to include the interests of its key stakeholders. We believe that the creation of wealth requires a long-term perspective, which takes into account sustainability issues. Mirova encourages companies to include environmental and social issues in its purpose, and to adapt their articles of association accordingly. We feel that shareholders have a role to play in spreading this vision of what a company should be. Thus, we are promoting the development of a long-term shareholder base, the creation of governing bodies that serve all stakeholders and address CSR¹ issues, the introduction of a compensation policy which is not only fair to its stakeholders, but which also promotes sustainable growth, and -increased transparency and a better quality of both financial and extra financial information, through annual audited reports covering all these issues. Advanced governance practices only foster sustainability but is not a standalone driver of impact.	Practices/measures expected	Impact indicators examples
	Commitment to long-term shared value creation	Disclose policy around shared value creation. Strive towards the model of a purpose-driven organization or/and a B-Corp organization.
	Integrate stakeholders in the decision-making process	Create of a Sustainable Development Committee or sustainability representative at Board-level. Integration of sustainability criteria – assessed through pre-determined, quantifiable metrics– into the variable compensation of top executives. Transparency about measures implemented to ensure value created is shared fairly amongst company stakeholders.
	Fair taxes & governance	Disclose breakdown of value creation among stakeholders, improving transparency around employee remuneration and payroll. Provide country-by-country reporting on tax payments. Provide disclosure that contemplates the company's approach to employee remuneration within the context of economic fluctuations such as inflation and/or cost of living pressure.



ESG Risks



Climate & Biodiversity

CONTEXT

Climate risks

The production, transport and combustion of fossil fuels are a major source of greenhouse gas emissions, pollution and biodiversity loss throughout their lifecycle. Particular attention should be paid to **methane emissions, which have a much stronger warming effect than CO₂ over a 20-year period**. Methane can be released intentionally through venting or unintentionally through leaks across production, processing and transport infrastructure. **Cutting methane emissions from the energy sector is one of the least-cost opportunities to limit global warming in the near term**. Flaring also generates substantial GHG emissions and air pollution. The climate performance of natural gas and LNG can also be significantly affected by methane leakage rates along the value chain. **Unconventional oil and gas resources, such as shale oil and gas or oil sands, may present additional climate risks due to higher lifecycle emissions and energy-intensive extraction processes**. Renewable and low-carbon fuels may also present environmental challenges¹. For hydrogen, emerging research highlights that hydrogen leakage could indirectly contribute to global warming by altering atmospheric chemistry, reinforcing the need for robust infrastructure and monitoring systems.

Biodiversity risks

Oil, gas and coal activities can affect biodiversity through land transformation, habitat fragmentation, water withdrawal, pollution and the development of infrastructure in ecologically sensitive areas. Coal mining may also result in significant land disturbance, mine waste generation and impacts on freshwater ecosystems. Of particular concern are projects located near protected areas, high biodiversity ecosystems or regions with high carbon stocks. To manage these risks, companies should apply the mitigation hierarchy (avoid, minimise, restore and, where necessary, offset) and integrate climate biodiversity considerations throughout project design, feedstock sourcing, infrastructure development and operational management. Effective risk management relies on robust emissions reduction programmes, methane monitoring and abatement, biodiversity assessments, and transparent disclosure of environmental performance across the value chain.

MINIMUM STANDARDS

Type of ESG risk:

Greenhouse gases

Risk assessment indicators examples:

- Disclosure of a comprehensive GHG inventory, including methane emissions
- Disclosure of carbon intensity of energy products sold and oil and gas production volumes and targets over 2025/2030
- Share of revenues and capex aligned with the EU taxonomy or green revenues and capex validated by independent third parties
- Potential locked-in GHG emissions from key assets and products
- Ambition of climate targets and validation by an external third-party
- Disclosure of a climate transition plan, including impairment assumptions and long-term oil, gas and carbon price scenarios

PAI #2

PAI #5

Pollution

- Disclosures of emissions to air/water/soil by pollutant
- ISO-14001 certification rate (environmental management)
- Provisions for environmental protection and remediation

Biodiversity losses

- Operations in sites located in or near biodiversity-sensitive areas
- ISO certified EHS risk management plan
- Traceability of feedstock derived from deforestation linked commodities (livestock fat, soy palm) to the mill/field
- Exposure of operations and infrastructure to physical climate risks
- Disclosures of total water consumption and total water consumption in areas at water risk, including areas of high-water stress
- Disclosures of water produced, withdrawals and discharges, particularly in water stressed areas total water recycled and reused
- Disclosures of total waste generated, hazardous waste generated, recycling waste and waste diverted from landfill indicators
- Waste management policy including compliance with the waste management hierarchy
- Disclosure of land-use change metrics

PAI #9

PAI #8

PAI #7



Focus on Fossil Fuel Expansion

CONTEXT

Achieving the goals of the Paris Agreement requires a rapid and sustained decline in fossil fuel production and consumption. The IPCC highlights that projected CO₂ emissions from existing and planned fossil fuel infrastructure are already broadly consistent with the remaining carbon budget for 2°C, leaving very limited room for additional long-lived fossil assets. The UNEP Production Gap Report also shows that companies still plan to produce far more fossil fuels than would be consistent with the Paris Agreement.

The transition implications differ by fuel and across the value chain. **Coal has the clearest phase-out requirement:** In the IEA Net Zero Emissions scenario, global coal demand declines by more than 90% between 2023 and 2050, and no new coal mines, mine extensions or unabated coal plants are needed.

For oil and gas, upstream activities are the primary focus. The NZE scenario indicates that the sharp decline in fossil fuel demand means that no new conventional long lead time oil and gas projects are approved for development. New exploration or field development therefore increases the risk of locked-in emissions and stranded assets, especially for long-lived infrastructure whose economic viability depends on demand levels inconsistent with net zero. Unconventional resources, such as shale oil and gas, oil sands, extra-heavy oil, Arctic drilling or ultra-deep offshore projects, often entail higher transition risks due to methane leakage exposure and stronger lock-in effects.

Midstream oil and gas infrastructure, including pipelines, LNG terminals, can prolong fossil fuel dependence by enabling future supply and demand. Downstream activities, such as refining and distribution, also carry transition risk when they extend the lifetime of fossil fuel products rather than supporting asset conversion. However, the role of gas infrastructure may vary depending on local circumstances, including energy security considerations, existing fuel mixes and the pace of the transition away from coal.

As a result, fossil fuel expansion is treated as a **critical exclusion trigger, particularly for new coal projects and upstream oil and gas exploration or development.**

MINIMUM STANDARDS REQUIREMENTS¹

FOSSIL FUEL EXPOSURE

Exclusion applies to companies deriving:

- Coal: >1% of their revenues from exploration, mining, extraction, distribution or refining of hard coal and lignite.
- Unconventional oil & gas: > 5% of their revenues from oil shale, shale oil, shale gas, oil sands, extra-heavy oil, methane hydrates, ultra-deep offshore oil or Arctic drilling
- Oil: >10% of their revenues from the exploration, extraction, distribution or refining of oil fuels.
- Natural gas: 50% of sales derived from the exploration, extraction, manufacturing or distribution of gaseous fuels.
- Power generation from fossil fuels: >50% of their revenues from electricity generation with a GHG intensity of more than 100 g CO₂ e/kWh.
- Total fossil fuel exposure: >50% of their revenues from coal, oil, natural gas, fossil fuel power and fossil fuel services.

FOSSIL FUEL EXPANSION

Exclusion applies to companies involved in:

- Coal: New project related to the exploration, mining, extraction, distribution or refining of hard coal and lignite.
- Upstream Oil & gas: Exploration or development of new oil and gas fields, or in the expansion of existing fields.



Working conditions

CONTEXT

Health & Safety

Employees working in the oil, gas and coal sectors face significant workplace risks, including exposure to flammable substances, hazardous chemicals, high-pressure equipment, heavy machinery and transportation activities. Coal mining also presents specific risks related to mine collapses, explosions and dust exposure. Operations are often conducted in remote environments, with a high reliance on contractors. Companies must also manage process safety risks, including fires, well blowouts, pipeline failures and accidental releases of hydrocarbons. Strong safety management systems, and a safety-first culture are therefore essential to protect workers, communities and the environment.

Labour standards

Oil, gas and coal companies operate globally, including in countries where the labour rights promoted by the International Labour Organization (ILO) may not be fully enforced. Particular attention should be paid to freedom of association, collective bargaining, forced labour risks, migrant workers' rights and equal treatment across operations and supply chains.

Human rights in the Supply Chain

The extraction, transport and processing of oil, gas and coal have a documented history of human rights challenges, including impacts on local communities, indigenous peoples and land rights. The sector also relies on complex global supply chains involving contractors, subcontractors and equipment suppliers operating across jurisdictions with varying levels of labour protection. Workers may be exposed to risks related to forced labour, poor working conditions, excessive working hours and inadequate health and safety standards, particularly in construction, offshore services and equipment manufacturing. Companies should therefore strengthen transparency, traceability and oversight across their supply chains through human rights due diligence, supplier engagement and monitoring programmes. Particular attention should be paid to contractor and migrant workers, who are often more vulnerable to labour rights abuses. Robust human rights governance, effective grievance mechanisms and corrective action plans are essential to identify, prevent and mitigate adverse impacts throughout the energy value chain.

MINIMUM STANDARDS

Type of ESG risk

Health and safety

Labour standards

Human Rights in the Supply Chain

Risk assessment indicators examples

Frequency and severity of health & safety accidents (direct workers and contractors)
Description of the occupational safety management system at site level
Occupational Health & Safety certification rate (ISO 14 001, ISO 45 001 or equivalent)
Disclosure of absenteeism rate and employee engagement rate
Emergency preparedness plans
Product quality and security certifications

Measures to promote fair working conditions, decent remuneration and a sustained social dialogue in countries with less stringent regulations
Percentage of employees covered by collective agreements
Existing and effective employees' association mechanisms

Existence of a Code of Conduct for Suppliers that includes Human Rights and Labor Rights considerations
Join a multistakeholder industry initiative and promote the development of ambitious environmental standards in the supply-chain (ex, Responsible Minerals Initiative (RMI), RCS Global Group, etc.)
Implementation of a policy, audits and reports on Conflict Minerals
Violation of UNGC principles and OECD guidelines for Multinational Enterprises and implementation of corrective measures
Implementation of a policy to monitor compliance with UNGC principles or OECD guidelines for multinational enterprises

PAI #10
PAI #11
PAI #16



CONTEXT

Business Ethics, Lobbying and Tax Practices

The energy sector operates in close interaction with governments, regulators and state-owned entities, exposing companies to elevated risks related to corruption, bribery, fraud and anti-competitive practices, particularly in licensing, public procurement and access to natural resources. Its global footprint and complex corporate structures may also create incentives for aggressive tax optimisation strategies, making transparency on tax governance and country-by-country reporting increasingly important. In addition, companies in the sector can play a significant role in shaping energy and climate policies. Transparency regarding lobbying activities, trade association memberships and alignment with the objectives of the Paris Agreement is therefore an important component of responsible business conduct.

Community Engagement

Energy projects frequently face challenges related to local acceptance and social licence to operate. Exploration, extraction, transport and processing activities can affect local communities through land use, environmental impacts, water use and pollution. Projects may also contribute to disputes involving land and indigenous people rights. Community engagement is therefore essential to identify, prevent and mitigate adverse impacts. This includes stakeholder engagement processes, regular consultations, transparent disclosure of environmental and social impacts, integration of community feedback into project planning, and effective grievance and remediation mechanisms.

Governance of Sustainability

The credibility and robustness of a company's transition and sustainability strategy depend on a strong ESG governance framework, effective board oversight of climate and sustainability risks, and the integration of ESG and transition-related objectives into executive remuneration and capital allocation decisions.

MINIMUM STANDARDS

Type of ESG risk

Risk assessment indicators examples

Business Ethics and lobbying

Exposure of reserves, production or projects to jurisdictions with high corruption risk, and due diligence for licensing, public procurement and state-owned counterparties

Robust Business ethics policies covering lobbying practices, anti-corruption, anti-competitive and bribery policies, including non-operated assets and joint-ventures

Effective whistleblower channels and transparency around cases reported and actions implemented, training on Company's and Suppliers' Code of Conduct

Climate lobbying policy addressing alignment with the Paris alignment, including disclosures of main lobbying positions at company and industry level

PAI #12

PAI #13

Tax practices

Effective tax rate vs. equal statutory tax rate

Absence of controversies or evidence of aggressive tax optimization practices

Estimated exposure to tax havens* or tax non-cooperative jurisdictions with no real activity in the country

Community engagement

Community engagement disclosures aligned with the IFC guidelines

Environmental impact studies disclosures aligned with the IFC guidelines

Disclosure of grievance mechanisms

Rehabilitation of decommissioned sites and management of environmental liabilities

PAI #17

Governance of sustainability

Existing governance structure enabling the mitigation of environmental and social risks

Unadjusted gender pay gap

Board Gender Diversity

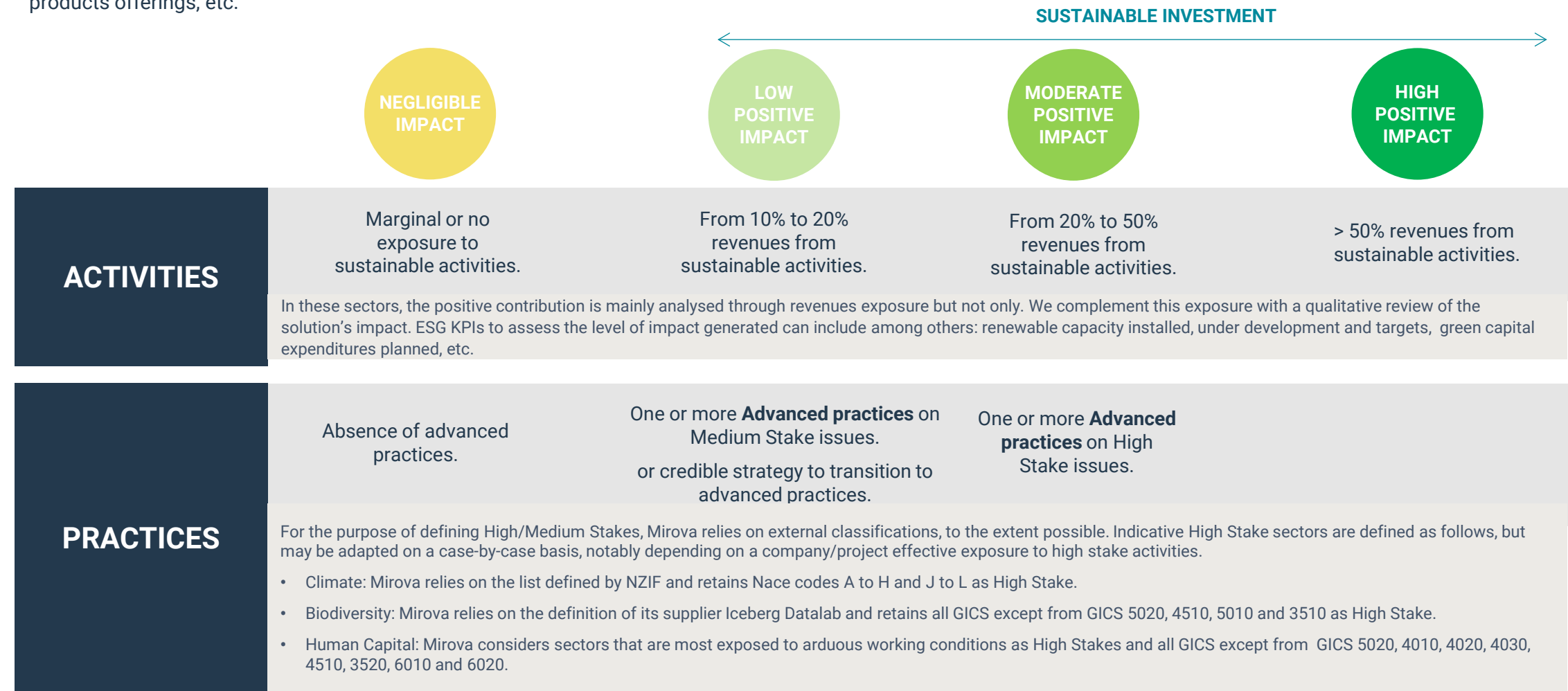
Appendices



Positive Impact

According to Mirova’s internal methodology, contribution to the SDGs can be grouped into two main categories, which are often complementary.

- The “**activities**” i.e. the products and services they offer.
- The “**practices**” i.e. the way operations can contribute to create sustainable and inclusive jobs, or by having strong commitments to net zero targets beyond their green products offerings, etc.



SECTOR INHERENT RISK LEVEL: HIGH

Companies in the fossil and renewable fuels sector face significant ESG risks. The production, transport and combustion of fossil fuels are major contributors to climate change and are associated with pollution, methane emissions, biodiversity loss and water impacts throughout their lifecycle. Transitioning away from fossil fuels is essential to achieving global climate objectives, but renewable and low-carbon fuels such as bioenergy, hydrogen and CCUS also present sustainability challenges related to land use, resource consumption, biodiversity, food security and long-term environmental performance. Employees operating in extraction, processing and transport activities are exposed to elevated health and safety risks, particularly in oil, gas and coal operations. The sector also faces human rights challenges across global value chains and in its interactions with local communities. Finally, given its strategic role in energy systems and public policy, the sector is exposed to heightened business ethics, lobbying and governance risks.

COMPANY INHERENT RISK LEVEL

A company inherent risk level may differ from the inherent risk level of the sector.

The definition of the company inherent risk level may also be determined by the specificities of the business model, the nature of the activities and their locations as well as that of their suppliers (incl. country specific risks).

MAIN ESG RISKS FACTORS

Climate change
Biodiversity footprint
Working conditions

RESIDUAL ESG RISK LEVEL

LOW RESIDUAL RISK

Satisfactory management of the company's or project's main sustainability risks on most material issues.

MEDIUM RESIDUAL RISK

Current management in place does not fully cover all ESG risks but these are considered as moderate and current practices are deemed acceptable.

HIGH RESIDUAL RISK

Companies demonstrating significant mitigation efforts operating in sectors with industry-wide complex and unaddressed challenges - systematically under targeted engagement.

SIGNIFICANT HARM

Not eligible for investment.

SUSTAINABLE INVESTMENT

APPENDICES

Principal Adverse Impact Indicators

ADVERSE SUSTAINABILITY INDICATOR		MOST RELEVANT	Thresholds / Criteria
CLIMATE AND OTHER ENVIRONMENT-RELATED INDICATORS			
Greenhouse gas emissions	1. GHG emissions	X	Systematic integration in qualitative internal analysis and systematic engagement with the largest emitters to strengthen their climate strategy
	2. Carbon Footprint	X	
	3. GHG intensity of investee companies		Not applicable
	4. Exposure to companies active in the fossil fuel sector		Not applicable
	5. Share of non-renewable energy consumption and production	X	Systematic integration in qualitative internal analysis and systematic engagement with the largest emitters to strengthen their climate strategy
	6. Energy consumption intensity per high impact climate sector		
Biodiversity	7. Activities negatively affecting biodiversity sensitive areas	X	Exclusion of companies or projects significantly harming biodiversity sensitive areas.
Water	8. Emissions to water	X	Systematic integration in qualitative internal analysis and systematic engagement with relevant investee companies on this issue.
Waste	9. Hazardous waste and radioactive waste ratio	X	
INDICATORS FOR SOCIAL AND EMPLOYEE, RESPECT FOR HUMAN RIGHTS, ANTI-CORRUPTION AND ANTI-BRIBERY MATTERS			
Social and employee matters	10. Violations of UN Global Compact principles and Organization for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises	X	Exclusion of companies violating UNGC and OECD principles and monitoring of exposure to violations as part of controversy monitoring process.
	11. Lack of processes and compliance mechanisms to monitor compliance with UN Global Compact principles and OECD Guidelines for Multinational Enterprises	X	
	12. Unadjusted gender pay gap	X	Systematic integration in qualitative internal analysis and systematic engagement with relevant investee companies on this issue.
	13. Board Gender Diversity	X	
	14. Exposure to controversial weapons (anti-personnel mines, cluster munitions, chemical weapons and biological weapons)		Exclusion (any involvement)
INDICATORS FOR SOCIAL AND EMPLOYEE, RESPECT FOR HUMAN RIGHTS, ANTI-CORRUPTION AND ANTI-BRIBERY MATTERS			
Human Rights	16. Number of identified cases of severe human rights issues and incidents	X	Systematic integration in qualitative internal analysis and monitoring of exposure to violations as part of controversy monitoring process.
Anti-corruption and anti-bribery	17. Number of convictions and number of fines for violation of anti-corruption and antibribery laws	X	



Useful Resources

SFDR

- [Sustainable Finance Disclosure Regulation \(SFDR\): positioning of Mirova Funds](#)
- [Description of the principal adverse impacts on sustainability factors](#)

POLICIES AND METHODOLOGIES

- [Our approach to impact](#)
- [Our approach to impact & ESG assessment](#)
- [Minimum standards](#)
- [Voting and Engagement policies](#)
- [Temperature alignment of listed investment portfolios](#)
- [Transparency codes](#)
- [Our Taxonomy for Sustainable Solutions](#)



Disclaimer



MAIN RISKS

ESG Investing Risk & Methodological limits

By using ESG criteria in the investment policy, the relevant Fund's objective would in particular be to better manage sustainability risk and generate sustainable, long-term returns. ESG criteria may be generated using Mirova's proprietary models, third party models and data or a combination of both. The assessment criteria may change over time or vary depending on the sector or industry in which the relevant issuer operates. Applying ESG criteria to the investment process may lead Mirova to invest in or exclude securities for non-financial reasons, irrespective of market opportunities available. ESG data received from third parties may be incomplete, inaccurate or unavailable from time to time. As a result, there is a risk that Mirova may incorrectly assess a security or issuer, resulting in the incorrect direct or indirect inclusion or exclusion of a security in the portfolio of a Fund.

Sustainability risks

The Sub-Funds are subject to sustainability risks as defined in the Regulation 2019/2088 (article 2(22)) by environmental, social or governance event or condition that, if it occurs, could cause an actual or a potential material negative impact on the value of the investment.

Sustainability Risks are principally linked to climate-related events resulting from climate change (i.e. Physical Risks) or to the society's response to climate change (i.e. Transition Risks), which may result in unanticipated losses that could affect the Sub-Funds' investments and financial condition. Social events (e.g. inequality, inclusiveness, labour relations, investment in human capital, accident prevention, changing customer behaviour, etc.) or governance shortcomings (e.g. recurrent significant breach of international agreements, bribery issues, products quality and safety, selling practices, etc.) may also translate into Sustainability Risks. Sustainability factors consist in environmental, social and employee matters, respect for human rights, anti-corruption and anti-bribery matters (the "Sustainability Factors"). Portfolio investment process includes binding and material ESG approach to focus on well rated securities from an ESG viewpoint in order to mitigate potential impact of Sustainability Risks on portfolio return. More information on the framework related to the incorporation of Sustainability Risks is to be found in the sustainability risk management policy of the Management Company on its website.

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