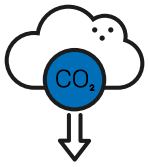
For directors of companies that issue securities on public markets. Capital at risk.

LGIM

Net-zero: Road transport

12% of human-caused greenhouse gas emissions come from road transport.[1] What does the **automobile sector** need to do to reach net-zero?

LGIM will vote and implement investment sanctions against companies falling short of our climate expectations. LGIM expects companies' boards to oversee and publicly disclose answers to the following:

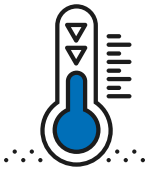


Net-zero commitment

- Does the company have a comprehensive target for net-zero by 2050 or earlier, covering scopes 1, 2 and material scope 3 emissions?[2]
- Has the company made a commitment to certify/certified this target with the SBTi or other external independent parties as it develops?
- Does the company have a net-zero transition plan that includes short- and medium-term targets?[3]

Strategy

- What are the actions and investments embedded in the company's plan to reach net-zero, and what is the contribution of each action towards meeting its targets?[4]
- Is executive remuneration aligned with the company's short- and/or medium-term emissions targets, as set out in the net-zero transition plan?
- Does the company's decarbonisation strategy address and incorporate the impact of the Just Transition?
- Does the company's net-zero strategy integrate an assessment of related-nature risk and opportunities, impacts and dependencies (e.g. from land-use change and/or biofuel production)?



Resilience

- Has the company analysed its business model resilience to climate-related risks and opportunities using scenario analysis (including the IEA's net-zero by 2050 scenario and a 'Business as usual' scenario) and disclosed how the output has influenced its strategy?
- Has the company analysed the physical climate risks to its assets, operations, and value chain, including potential financial impacts and evidenced measures to mitigate or adapt to them?

Targets

- Does the company have targets to improve life-cycle emissions/the circularity of products, particularly with batteries?
- Does the company have targets related to the use and roll-out of low/zero-carbon fuels/vehicles/technologies?
- Does the company have a commitment to reach 100% zero emission new car and van sales by 2035 in advanced economies, and by 2040 globally?

Collaboration

- How is the company working collaboratively across its value chain to reduce emissions (e.g. strategic R&D partnerships, charging infrastructure providers, financing, sector initiatives etc.)?
- Is the company advocating meaningful policy action, including from regulators, to meet global net-zero targets (e.g. with carbon pricing)?

Red lines

- Does the company have a net-zero emissions target, covering all of the scopes of material emissions, including the phasing out of ICE vehicles?
- Does the company disclose its climate-related lobbying/advocacy activities, including trade association memberships, and explain the action it will take if these are not aligned with a 1.5°C scenario?

1. HSBC (2019), based off IEA, EDGAR, Global Carbon Project.
2. Aiming to cover all segments of the business, as articulated within the GHG protocol guidance.
3. Short-term refers to 2022 - 2025, medium-term 2026-2035 and long-term 2036-2050.
4. E.g., Phase-out of Internal Combustion Engine (ICE) vehicles, uptake of electric vehicles (EVs)/plug-in hybrid electric vehicles (PHEVs)/fuel cell electric vehicles (FCEVs)/biofuel vehicles, etc.

Further areas for company consideration

Nature expectations

Why? The climate and nature crises are inextricably linked.[5] Climate change is one of the five direct drivers of nature change. Net-zero requires both emission avoidance and sequestration. Therefore, the inter-dependencies between climate and nature are a critical factor in the transition.

LGIM's expectations: As part of a climate transition plan, companies should integrate an assessment of the related-nature risks and opportunities, impacts and dependencies, and appropriate mitigation actions.[6]

Sector-specific considerations: Indirect impacts could result from raw-material extraction, polluting emissions and the use of biofuels. Direct impacts could come from the manufacturing process.

Company levers

- Electrification and battery storage
- Charging infrastructure
- Fuel economy and biofuel blending
- Digitalisation
- Hydrogen
- Decentralisation of energy
- Automation/self-driving
- Ride-sharing

Government policies

- Phasing out sales of internal combustion engine vehicles (ICE)
- Carbon pricing
- Subsidy reform and R&D assistance
- Emissions and efficiency standards
- Congestion charges and public transport
- Scrappage schemes
- Government procurement

Challenges

Charging infrastructure and 'range anxiety'

Limited alternatives for heavy-goods vehicles (HGVs)

Potential raw material bottlenecks

Costs of green hydrogen production

Consumer choice and time lag for vehicle switch

Opportunities

Growing demand for passenger vehicles

Fuel cells

'Mobility as a service' as new business model; synergies with IT and power sector

Increased efficiency and safety from digitalisation and automation

What is needed?

Company leadership

Investment and R&D for net-zero across vehicle life cycle

Research and innovation

Fuel cells and hydrogen infrastructure

Advancement in battery cells

Demand management

Consumer behaviour

Optimising vehicle usage

Modal shift in transport

5. UN IPCC-IPEBS, Biodiversity and Climate Change workshop report (2021)
6. LGIM's Nature Framework can be accessed here

Sources of emissions

'Scope 3' Upstream

Indirect GHG emissions from a company's supply chain (e.g. extraction of metals)

'Scope 1'

Direct GHG emissions from the vehicle manufacturing process

'Scope 2'

Indirect GHG emissions from purchased energy

'Scope 3' Downstream

Other **indirect** GHG emissions, primarily from consumers' use of fuel when driving

Sources: HSBC (2019), based off IEA, EDGAR, Global Carbon Project.

'Just Transition' considerations

The potential implications for employees, the supply chain, customers and communities from the transition to a lower-carbon business model

Affordability of transport

Labour rights in battery value chain

Physical risk impacts

Disruption to production facilities and supply chains from extreme weather

For more information and to see how companies are rated

LGIM Climate Impact Pledge score

LGIM Climate Impact Pledge

Important information
Source: LGIM as at September 2024. The value of an investment and any income taken from it is not guaranteed and can go down as well as up, and the investor may get back less than the original amount invested.