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

LGIM

Net-zero: Oil & Gas

12% of human-caused greenhouse gas emissions come from oil & gas.[1] What does the **oil & gas sector** need to do?

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?
- 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]
- Does the company place restrictions on investing in the exploration of new greenfield sites?
- Is executive remuneration aligned with the company's short- and/or medium-term emission 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 consider the potential impacts and dependencies on biodiversity – for example, in relation to land-use change/biofuel production/offsetting?

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 disclosed the undiscounted costs to decommission its assets, including assumptions and sensitivities to the most relevant climate scenarios?
- Has the company analysed the physical climate risks to its assets and operations, including potential financial impacts, and evidenced measures to mitigate or adapt to them?

Targets

- Does the company have a target for material scope 3 emissions?
- Does the company have a green revenue target?

Collaboration

- How is the company working collaboratively across its value chain to reduce emissions (e.g. customers, finance sector, strategic R&D partnerships, sector initiatives etc)?[5]
- Is the company advocating meaningful policy action, including from regulators, to meet global net-zero targets (e.g. with carbon pricing)?

Red lines

- Has the company committed to net-zero operational emissions?
- Does the company have time-bound methane reduction/zero flaring targets?
- Does the company disclose its climate-related lobbying activities, including trade association memberships, and explain the action it will take if these are not aligned with a 1.5°C scenario?

1. LGIM, based off McKinsey (2019), IEA (2020).
2. Aiming to cover all segments of the business, as articulated within the GHG protocol guidance. These targets should include both absolute and intensity targets, and for Integrated oil & gas companies, we expect separate medium- and long-term emission targets for their upstream business.
3. Short-term refers to 2022-2025, medium-term 2026-2035 and long-term 2036-2050.
4. E.g., Managed decline of oil and gas production; restrict oil sands; responsible divestments; investments in CCUS, hydrogen, renewables, EV charging, biofuels etc.
5. E.g., The Oil & Gas Methane Partnership 2.0.

Further areas for company consideration

Biodiversity expectations

Why? The climate and nature crises are inextricably linked.[6] Net-zero requires both emission avoidance and sequestration. Functioning natural systems are essential to this, but increasingly vulnerable due to climate change.

LGIM's expectations: An assessment of the impacts and dependencies on nature and biodiversity, and appropriate mitigation actions.

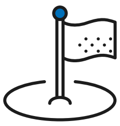
Sector-specific considerations: Direct impacts could result from exploration and development: oil spills, ocean noise, alien species, water extraction etc. Indirectly – through financing of poor offsetting practices and the production of biofuels.

Company levers

- Managed decline for upstream business
- Shift to lower-carbon product mix
- Electrification and renewables in pursuit of net-zero operational emissions
- Methane reductions possible at no net cost
- Blending hydrogen / biomethane in gas grid
- Installing EV charging in petrol stations

Government policies

- Stable and higher carbon prices
- Removal of subsidies
- Strengthened flaring and venting regulation
- Zero-emissions transport/heat/power standards
- Waste collection and recycling standards
- Development of low-carbon infrastructure
- Standards for biofuels and hydrogen



Challenges

Scope 3 accounting uncertainty

Price volatility

Loss of revenues and market share

Technology costs

Lack of infrastructure

Policy uncertainty

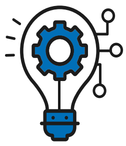
Behavioural barriers to "managed decline"

Opportunities

Portfolio diversification

Growth in non-combustion uses of fossil fuels (e.g. petrochemicals)

Attracting talent and maintaining social license to operate



What is needed?

Company leadership

Commitment to 'ex-growth' for upstream oil and gas

Pursuing diversification

Research and innovation

CCUS

Lower-temperature refining catalysts

Green hydrogen

Consumer behaviour

Changes in energy use and transport habits: ride-sharing, working from home

6. UN IPCC-IPEBS, Biodiversity and Climate Change workshop report (2021)

Sources of emissions

'Scope 3' Upstream

Indirect GHG emissions from a company's purchased goods, supply chain, employee travel etc

'Scope 1'

Direct GHG emissions from operations, including from energy-intensive extraction and refining processes, methane leaks, venting and flaring

'Scope 2'

Indirect GHG emissions from purchased energy

'Scope 3' Downstream

Indirect GHG emissions, primarily from the use of final products (e.g. burning gas for power and oil for transport)

'Just Transition' considerations

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

Employment and tax revenues from oil and gas

Consumers' sensitivity to fuel costs

Need to retrain workforce

Physical risk impacts

Disruption from extreme weather events (e.g. storms and flooding for coastal facilities, water scarcity in water-intensive processes, melting permafrost affecting pipelines)

Sources: LGIM, based off McKinsey (2019), IEA (2020)

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 2023. The value of an investment and any income taken from it is not guaranteed and can go down as well as up, you may not get back the amount you originally invested. The above information does not constitute a recommendation to buy or sell any security.