



Industry overview — as it relates to executive compensation

Transportation

The global transport sector is exposed and vulnerable to the impacts of extreme weather events and climate change. Greenhouse gas emissions (GHG) from this sector primarily involve fossil fuel energy. Approximately 95% of the world's transportation energy comes from petroleum-based fuels, largely gasoline and diesel.

Transportation activities (aviation, rail, shipping, heavy and light trucking) are responsible for about 17% of global GHG emissions. The sector is directly linked with energy sector. An increase in infrastructure of clean energy would lead to a corresponding increase in alternative fuels for the transportation sector.

Public health impacts from transportation emissions have continued to rise despite progress on reducing emissions per vehicle-kilometer-traveled (VKT). Air pollution emitted from transportation contributes to smog and poor air quality, which has negative impacts on the health and welfare of citizens. Pollutants that contribute to poor air quality include particulate matter (PM), nitrogen oxides (NOx), and volatile organic compounds (VOCs).

International trade-related freight movement is responsible for about 30% of overall transport-related CO2 emissions from fuel combustion. Freight accounts for more than 7% of global GHG emissions.

An increase in external pressure from regulators, customers and shareholders for immediate review and action on climate risks is driving rapid changes within the sector.

The industry is focused on:

- Replacing fossil power with sustainable energy: low-carbon alternative fuels such as bio-based fuels, hydrogen or synthetic fuels made of carbon dioxide are likely routes for decarbonization
- Adopting new fuel technologies: companies are or will be partnering with government to fund the efforts and reduce the risk. For example, the U.K. government plans to slash transport emissions by decarbonizing aviation, trucks and rail; significant investment is required in areas such as charging infrastructure for electric vehicles

There are of course nuances between how climate change impacts the different types of transportation companies.

Aviation

- Extreme heat is likely to result in payload restrictions, flight cancellations, and service disruptions at affected airports.
- CO2 emissions levels by 2050 will be highest in the U.S (440.4), followed by APAC (418.1) and China (371.6).*

- Sustainable aviation fuels (SAFs) and carbon offsets: Compared with fossil kerosene, SAF could lead a reduction in carbon emissions of 70% to almost 100%.

Roadways

- Higher temperatures can cause pavement to soften and expand, hampering the infrastructure.
- Extreme heat waves or snow fall can limit construction activities, resulting in increased maintenance and construction costs.
- Heavy rains might result in flooding, which could disrupt traffic, delay construction activities, and weaken or wash out the soil and culverts that support roads, tunnels and bridges.

Marine

- Increasing temperature could reduce the amount of sea ice in many important shipping lanes, extending the shipping season.
- With international trade expected to increase in the coming years, emissions from ships and boats may increase by as much as 250% by 2050.
- Changing water levels disrupt transport on inland waterways as well.

Railways

- High temperatures causes rail tracks to expand and buckle. More frequent and severe heat waves may require track repairs or speed restrictions to avoid derailments.



Climate challenges and responses

Since transportation companies and assets tend to be in highly vulnerable locations, companies are experiencing a loss of insurance coverage. They are therefore leveraging their insurance policies to account for the physical risks climate change poses to their supply chains, locations and ability to deliver services without delays.

Heavy transport is still reliant on oil, with the International Energy Agency estimating that oil demand in aviation will increase more than 50% by 2040 and by 25% in trucking. Turnover in vehicle stock is relatively slow, with automobiles serving useful lives of up to 20 years or more, making changing the technology within short time spans difficult.

Transition to a hydrogen-based transportation system will require concurrent availability of appropriate fuel sources, fuel cells or internal combustion engines that can be fueled by hydrogen and related infrastructure at a cost and performance level that is competitive with the existing petroleum-based system.

Additionally, the development of infrastructure to support new technologies for climate change strategies is capital heavy and requires time to be integrated in the current market. Many new

technologies are expensive or untested at scale, which means public sector investments in research and development will be needed to spur private sector innovation.



What are companies measuring and reporting?

Transportation companies are talking primarily about GHG reductions. Many are setting ambitious GHG emission-reduction targets and goals for net-zero emissions by 2050. Action plans vary by sector:

- Automotive companies are adopting alternative fuel vehicles powered by batteries, hydrogen fuel cells or biofuels.
- Air cargo companies are using sustainable aviation fuel and investing in more efficient aircraft.
- Maritime operators are switching to low-sulfur fuels, installing scrubbers and using shore-to-ship power.
- Rail organizations are leveraging automation for optimal efficiency, and trialling hydrogen fuel cell technology in trains.

In general, companies are focused on emissions reductions as the headline goal they are articulating, measuring and reporting. Transportation companies typically do not have control over the manufacturing side of things, which are responsible for the technological advancements that will enable meaningful change in tackling climate change and therefore, to date we have seen less measuring and reporting of strategic change metrics in the industry.

Companies are also committing to the Business Ambition Pledge for 1.5°C, moving toward renewable sources of energy and improving supply chain infrastructure. They are also disclosing their GHG and smog ratings, climate disclosure scores and ESG ratings to showcase their climate-change initiatives as well as reviewing ratings of suppliers or associated parties to induce sustainability in supply chains.

Companies are making transformational strategies in their business models. For example, many auto companies are seeking to move from traditional vehicle production to offering “sustainable transportation solutions”. Individual company examples include:

- Etihad airways reports savings of 17,000 tons of CO₂ due to flight plan improvements (0.16% of its emissions).
- Singapore Airlines modified the Trent 900 engines on their A380 aircraft, saving 26,326 tons of CO₂ (equivalent to 0.24% of the airline’s annual emissions).
- Delta airlines plans to replace 10% of its fossil fuel-based jet fuel with sustainable aviation fuel by 2030.



Aligning climate goals and targets with executive compensation

Overall the industry lags others, with only around 5% of companies globally having embedded climate goals within executive compensation. Progress varies by region, with the U.S. behind Europe and the U.K. It also varies by subsector to some extent:

- Airlines, especially European companies, are recognizing pressure from the investor community to embed climate strategy within their executive compensation frameworks. We are seeing this reflected in incentive plans with quantifiable metrics such as emissions per passenger.
- Some shipping and logistics companies are starting to consider including carbon emissions goals in incentive plans; one of the global leaders in the industry has committed to investors to include such a metric in its long-term incentive plan with a 10% weighting. However, this is not necessarily representative of the whole subsector.
- U.S. shipping and delivery companies have clearly-defined climate goals, though such goals have not yet been reflected in executive compensation frameworks, at least, not yet formally. There are examples of broad ESG objectives within individual performance metrics, which may qualitatively assess progress against climate goals, but such measures fall short of the emerging expectation of European investors to see clear, quantifiable climate targets.
- Some railway companies in Asia Pacific have introduced climate metrics in their long-term incentive plans but with weightings that arguably cannot meaningfully drive change. However, for some, we understand that this is intentional and are in place as a test for them to track the quality, appropriateness and impact of the metric, while the company climate strategy is developed over the course of the next few years.



Challenges aligning climate goals and executive compensation

For many, the main challenge is target setting in lieu of a fully developed climate strategy at the company level. U.S. transportation companies (similarly other sectors) are financially and growth focused; this, combined with less pressure from U.S. investors to see climate targets embedded in executive compensation frameworks, contributes to their lag behind European transport companies.



Leading company example — Wizz Air

- **Metric name and description:** Achieving carbon emissions of 45.1g/RpK during F2026, a 36% reduction over the F21 position of 77.3g/RpK
- ESG criteria to be met over the five-year period are 5% based on achieving carbon emissions of 45.1g/RpK during F2026, a 36% reduction over the F21 position of 77.3g/RpK

- **Weight in vehicle:** 5% of the annual bonus plan
- **Metric name and description:** CO2 emissions reduction and gender diversity
- **Weight in vehicle:** 10% of long-term incentive plan