



Industry overview — as it relates to executive compensation

Pharmaceuticals and life sciences

The pharmaceuticals and life sciences industry accounts for approximately 4.5% of worldwide greenhouse gas (GHG) emissions and similar percentages of toxic air pollutants, putting it amongst some of the most carbon-intensive service sectors in the industrialized world. The race to cut carbon emissions and reach net-zero by 2030 is on, but to get anywhere near that goal in under 10 years, healthcare needs a sustainability overhaul, including clinical trials. Pharmaceuticals produce GHGs throughout their life cycles by means of manufacturing, procurement, transportation, packaging, disposal through incineration and the use of drugs themselves. Metered-dose inhalers (MDIs) and inhaled anesthetics are particularly carbon heavy, accounting for 4% and 2% of the U.K. National Health Service's (NHS) overall carbon footprint, respectively.

Conversely, climate-sensitive events and trends harm health directly, but also indirectly by altering interdependent pathways that act as environmental, social and economic determinants of health. Wildfires and floods cause initial spikes in physical and mental health needs, followed by lasting ill health that, over time, accounts for the bulk of consequent healthcare costs and productivity losses.

The industry is being driven to act against climate change risks by their own commitments to make a positive impact on human welfare, coupled with mounting regulatory pressures from government and international agencies. However, the “competing” ESG focus on patients and societal wellbeing means that climate is not necessarily the industry's greatest focus of the broader ESG banner.



Regional and global progress

Three factors could move the industry forward in terms of GHG emissions:

- The UK's NHS was the first national healthcare system to make a net zero commitment, pledging in 2020 to achieve net zero emissions from all sources by 2045.
- As the U.S. rejoins the Paris Climate Agreement under President Biden, there is a renewed focus on companies to operate in a cleaner, greener way. With nearly one third of global energy demand and CO2 emissions coming from manufacturing, the pharma industry is a clear starting area of focus
- In the context of global net-zero initiatives, many industry leaders have made their intentions clear by launching comprehensive sustainability plans to reduce their climate footprints and emissions. For example, in 2020, AstraZeneca announced a \$1 billion programs to eliminate emissions by 2025 and become net neutral across the entire value chain by 2030.



Actions pharma companies can take

There are some key actions pharma companies are considering to help materially turn the dial:

- The adoption of green chemistry — this refers to the design, development and manufacture of chemical products using efficient processes that reduce the amount of resources required, minimize waste and eliminate the use or generation of hazardous substances
- Developing ways to produce products more efficiently and in a more sustainable way, such as implementing green IT practices to lower costs, improve sustainability, and reduce energy consumption in data centers, clean rooms and laboratories.
- Improving focus on product quality and open association with healthcare professionals and patients. Companies need to adopt ethical standards, combined with a patient-oriented business model, while leveraging digital technology.

Given how emission-intensive the industry is, decarbonization will be a significant challenge. The healthcare industry will be potentially exposed to physical risks from varying natural disasters or extreme weather events, and it could face increasing transition risks due to market and regulatory dynamics, including carbon taxes and carbon pricing.



What are companies measuring and reporting?

Large pharmaceutical companies that have control over their entire value chains are targeting making (or exploring how to make) their manufacturing operations carbon neutral, as well as their supply chains, logistics and commercial sales force activities. There is also a focus on waste and water management — emissions from chemicals and antibiotics, which can enter the environment through improper disposal practices (i.e., in sinks, toilets, and household garbage) and natural human excretion. Wastewater treatment systems are not capable of completely removing pharmaceutical residues from entering water supplies and spreading to other environmental features such as soil and surface waters.

Smaller biotech companies have similar focuses from a sustainability perspective, but only with regards to the aspect of the value chain over which they have control. For example, many smaller companies (i.e., those with less than £1 billion in market capitalization) focus only on pre-commercial operations and research and development (and less on manufacturing or distribution), which also generally means their activities are less carbon intensive.



Examples of actions large industry players are taking

Roche: Given that most of the energy Roche uses is generated by burning fossil fuels, steps it takes to improve energy efficiency and reduce consumption would also reduce GHG emissions. The company seeks a 15% reduction in GHG emissions, measured in tons per employee, by 2025 from 2015 levels. This will be driven by a decrease in energy consumption and a corresponding reduction in the use of fossil fuels.

Pfizer has committed to a science-based target to become carbon neutral by 2030; this includes 45% absolute emissions reduction across direct emissions, 100% renewable energy procurement for indirect emissions from electricity purchased and additional targets across all other indirect emissions.

Novartis aims to become carbon neutral across its supply chain by 2030, replacing a previous goal targeting a carbon reduction of 50% from a 2016 baseline; further it is aiming for carbon neutrality within its own operations by 2025.

Johnson & Johnson supports initiatives to address pharmaceuticals in the environment and pharmaceuticals and personal care products. It pledged to source 100% of its electricity needs from renewable sources by 2025 and achieve carbon neutrality in its operations by 2030, while working with its suppliers to reduce upstream value chain emissions.

AstraZeneca has committed to meeting the Paris Agreement's most ambitious emissions reduction targets. It also measures business initiatives against the 17 sustainable development goals from the UN's wide-ranging 2030 agenda.



Aligning climate goals and targets and executive compensation

The industry's relatively lagging progress in embedding climate-related goals in executive compensation frameworks is somewhat reflective of the industry's focus on patient and societal welfare, the social factors under the broader ESG banner. Many companies measure performance against 'S' (social) factors in the executive compensation plan already, while only 7% include 'E' (environmental) metrics currently. We expect practices to change relatively quickly over the next few years, with more of the midsize to large industry players embedding climate goals within executive compensation as they articulate and commit to climate KPIs at the company level.

In line with other industries, European companies generally seem to be ahead of U.S. counterparts, which is perhaps unsurprising given the greater pressure to see ESG targets in executive compensation from European investors compared to those in the U.S.



Challenges aligning climate goals and executive compensation

By virtue of the industry being scientifically minded and operating in the healthcare sphere, culturally, the industry has an inherent emphasis on doing the right thing. Further, from a commercial perspective, the switch to green energy and operations is manageable given that the industry is generally high-margin and has high investment budgets to maintain innovation.

In lieu of any obvious cultural or commercial barriers, the main hurdles for the industry seem to include developing KPIs and incentive measures, as well as balancing climate goals with the focus on patient and societal wellbeing. The industry's focus on the social factors has been heightened by the COVID-19 pandemic, as an industry at the forefront of the response to the pandemic.



Leading company example — AstraZeneca

- **Metric name and description:** CO2 Emissions (Delivery of Ambition Zero Carbon commitments) – reduction of Scope 1 and Scope 2 greenhouse gas (GHG) emissions by 2025. The threshold target is 60% reduction and the maximum is 68% reduction.
- **Weight in vehicle:** 10% of long-term incentive plan (Performance Share Plan)