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European Federation of Pharmaceutical Industries and Associations



WHITE PAPER

On Climate Change

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EXECUTIVE SUMMARY



The pharmaceutical industry is committed to making a positive impact on the lives of patients while operating sustainably and therefore strives to contribute to a healthy environment and demonstrate leadership in doing what's necessary to mitigate climate change. This commitment is aligned with the ambition the European Commission recently expressed through their European Green Deal and the European Climate policies.

The driving motivation of the industry is to improve human health and wellbeing. It has been well documented that climate change can adversely impact human health. Further understanding of these impacts and the interface between people, health and the environment is critical to ensuring the pharmaceutical industry can form and execute our response.



This White Paper highlights the commitment made by the EFPIA companies to:

- ESTABLISH CLIMATE CHANGE POLICIES AND STRATEGIES BASED ON MATERIALITY AND IMPACT FOR INDIVIDUAL COMPANIES, WHILST ADDRESSING THEIR ENTIRE VALUE CHAINS.
- PURSUE SCIENCE-BASED CO2 REDUCTION TARGETS.
- CONTRIBUTE TO REDUCED ENERGY CONSUMPTION AND INCREASED ENERGY EFFICIENCY AND SEEK OPPORTUNITIES TO USE MORE ENERGY FROM RENEWABLE SOURCES THROUGHOUT THE VALUE CHAIN.
- ANNUALLY AND PUBLICLY DISCLOSE CO2 PERFORMANCE CALCULATED ACCORDING TO RECOGNIZED METHODOLOGIES SUCH AS THE WRI GREENHOUSE GAS PROTOCOL.



CLIMATE CHANGE: AN OVERVIEW

The United Nations' Framework Convention on Climate Change (UNFCCC) defines climate change as 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.'

Since 1988, the Intergovernmental Panel on Climate Change (IPCC), established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO), has regularly published reports and papers which indicate that climate change is increasingly impacting the earth's physical, biological and human systems.

In addition, the World Health Organization documented the fact that this change has the potential to affect human health in a number of ways, including, but not limited to: altering the geographic range and seasonality of certain infectious diseases, disturbing food-producing ecosystems, rise in sea level and increasing the frequency of extreme weather events, such as hurricanes.

At the United Nations' Climate Change Conference (Conference of the Parties (COP21) in Paris in December 2015, 195 Parties to the UN Framework Convention on Climate Change (UNFCCC) – pledged to curb emissions, strengthen resilience, and joined forces to take common climate action and reached the Paris Agreement.

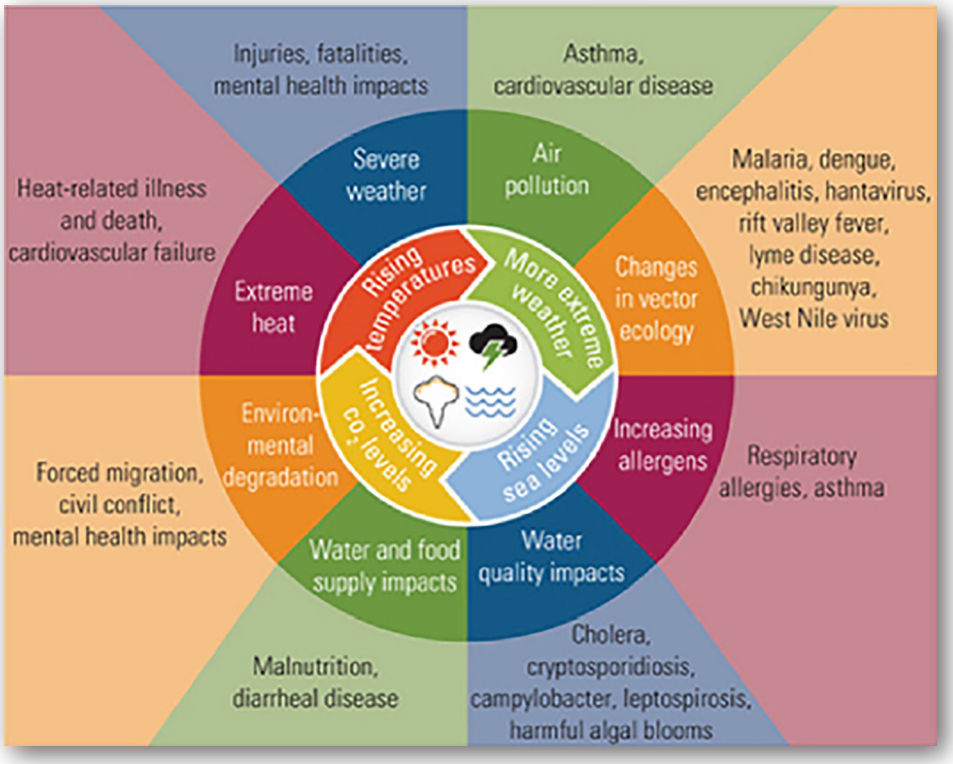
The agreement covered all the crucial areas identified as essential for a landmark conclusion:

- **Supporting the long-term goal to hold the increase in global average temperatures well below 2°C and to pursue efforts to limit the increase to 1.5°C;**
- **A transparency system and global stock-take – accounting for climate action;**
- **Adaptation – strengthening ability of countries to deal with climate impacts;**
- **Loss and damage – strengthening ability to recover from climate impacts;**
- **Support - including finance, for nations to build clean, resilient futures;**
- **Decoupling of economic growth from Green House Gas emissions.**



EFPIA welcomes the translation of this ambition in the European Union's Green Deal and Climate policies. President Ursula von der Leyen said: "We are acting today to make the EU the world's first climate neutral continent by 2050. The Climate Law is the legal translation of our political commitment and sets us irreversibly on the path to a more sustainable future. It is the heart of the European Green Deal. It offers predictability and transparency for European industry and investors. And it gives direction to our green growth strategy and guarantees that the transition will be gradual and fair." The first climate action initiatives under the Green Deal include the European Climate Law to enshrine the 2050 climate-neutrality objective into EU law and the European Climate Pact to engage citizens and all parts of society in climate action. Based on a comprehensive impact assessment, analysis of the national energy and climate plans, the Commission will propose a new EU ambition to reduce greenhouse gas emissions by 2030.

WHY DO WE CARE ABOUT CLIMATE CHANGE?



Air, water, and soil pollution; improper waste management; and degradation of ecosystems all negatively impact human health. According to the WHO, climate change is among the greatest health risks of the 21st Century. Climate change does have an influence on health be it directly or indirectly by changing infectious disease patterns; increasing extreme weather events and the risk of drought, floods and subsequent food insecurity; and increasing respiratory disease from poor air quality.

It is estimated by the WHO that one in every four premature deaths today is due to environmental factors. This illustrates that our personal health depends on a healthy planet.[1]

As illustrated in the figure[2] above, it is widely predicted that climate change will affect disease patterns and outcomes in the future – in some cases adversely. Therefore, addressing climate change should be considered as preventative care and puts the patient in the centre of tackling climate change.

The pharmaceutical industry is committed to making a positive impact on the lives of patients while operating sustainably and therefore wants to contribute to a healthy environment and demonstrate leadership in doing what's necessary to mitigate climate change.

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[1] WHO Publication 2016: Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks

[2] Injury Prevention and Environmental Health. 3rd edition. Mock CN, Nugent R, Kobusingye O, et al., editors. Washington (DC): The International Bank for Reconstruction and Development / The World Bank; 2017 Oct 27.



The driving motivation of the pharmaceutical industry is to improve human health and wellbeing. It has been well documented that climate change can adversely impact human health. Further understanding of these impacts and the interface between people, health and the environment is critical to ensuring the pharmaceutical industry can form and execute our response.

The pharmaceutical industry is, in absolute terms, generally considered a medium-impact sector (FTSE4Good) with regard to CO2e emissions and EFPIA member companies, research driven pharmaceutical companies, do typically not belong to the high energy consuming companies. We are committed to contribute responsibly to progress in regard to CO2e reduction targets, specifically addressing increased energy efficiency and lowered energy intensity across our value chains.

In addition, early evidence suggests that innovation that improves health outcomes while optimizing resources also reduces carbon impacts. As our mission is to create a collaborative environment that enables our members to innovate, discover, develop and deliver new therapies and vaccines for people across Europe; we believe that innovation that also considers the use of resources will reduce the footprint of addressing diseases.



OUR APPROACH: ADDRESSING GLOBAL WARMING

Our industry encourages appropriate use of a risk-based approach to environmental challenges and undertakes initiatives to promote climate action by supporting:

- The principles in UN Global Compact regarding climate;
- United Nations' Sustainability Development Goal 13, aiming for urgent action to be taken to combat climate change and its impacts;
- The Paris Climate Accord approved at COP21 by supporting the long-term goal to hold the increase in global average temperatures well below 2°C and to pursue efforts to limit the increase to 1.5°C;
- The European Union's ambition to be climate neutral by 2050;
- Adoption of a global framework (based on COP21) to address CO2e challenges under which all major emitting countries are committed to emission reduction goals and thus addressing the entire value chain.

EFPIA members are consistently working towards reducing Green House Gas emissions. An EFPIA 2020-survey identified several trends in finding innovative solutions to mitigate climate change. The pharmaceutical industry is setting an increasing number of science-based targets and favours these targets to also be absolute.

The industry also recognizes that the majority of its Green House Gas emissions are located in its supply chain and hereto are taking action to engage its entire value chain.

One concrete step to reduce the Green House Gas emissions would be to replace the paper package leaflets with electronic leaflets. A transfer from paper to electronic product information will also save paper and forest. EFPIA proposals for improved product information is available here.

This is illustrated by the activities listed below which will also showcase to our stakeholders, examples of how the pharmaceutical industry addresses climate change.

COMPANY SITE CO2 REDUCTION

UCB

In support of the ambition to render operations UCB directly controls carbon neutral, UCB installed a Combined Heat Power (CHP) unit at its site in Braine - l'Alleud (Belgium). Through the improved energy efficiency of this technology, the annual consumption of natural gas at the site was reduced by 3100 MWh and corresponding CO2e emissions by 600 Tons (or 5% of the site's CO2e emissions).

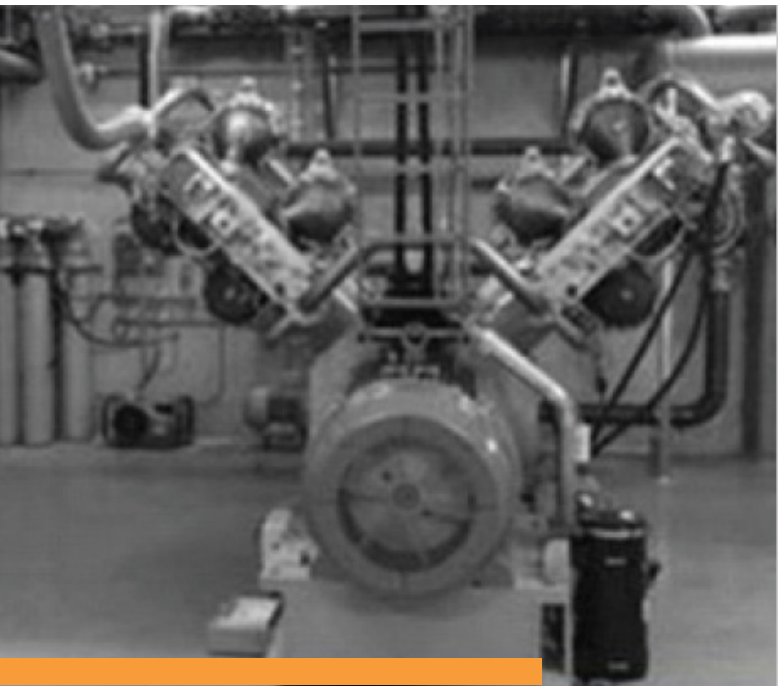
As of 2020 the usage of natural gas, used as an energy source to e.g. the CHP unit at the site, will gradually be phased out and replaced by renewable biomethane. This will reduce the site's annual CO2e emissions in 2020 by 2500 Tons CO2 (based on the usage of 20% biomethane) and by 14 000 TCO2 as of 2024 when the site will totally have replaced natural gas by biomethane.





LEO PHARMA

In 2019 and first half of 2020, LEO Pharma has carried out energy savings projects, reducing CO2 emissions with 800 tons and reducing consumption of energy with 4.1 GWh corresponding to the consumption of 165 Danish households. Projects include energy friendly pumps and fans, update of light units, new compressors and not least a heat pump alone saving 490 tons CO2. Also, several savings in optimising operations have been identified, mainly in ventilation. The realized savings are driven by a 10% consumption reduction target ending 2020 with 2013 as baseline. Furthermore, 150 new meters were installed in 2019 at Danish sites in order to identify more saving opportunities.



ASTRAZENECA

As part of AstraZeneca's GHG reduction program (validated for the first time by SBTi in 2016), Astra Zeneca's site in Gothenburg, Sweden has installed three highly efficient heat pumps, which has allowed it to drastically reduce the use of gas. It electrifies some of the site's steam demand and has the potential to replace over 60% of site gas consumption.

Coupled with the site transitioning to renewable electricity in 2016, the investment has saved approximately 2,500 tonnes of CO2 per year and increased energy efficiency. The residual gas is now also transferred into biogas.

PFIZER

Pfizer's history of sustainability leadership includes being the first pharmaceutical company to have approved Science Based Targets (SBTs) in 2015 and issuance of the first Sustainability Bond in the sector in March 2020.

Through successive greenhouse gas reduction goals, Pfizer has delivered 55% reduction in GHG since 2000.

To achieve these goals thousands of energy efficiency and other projects have been completed. This includes investment in renewable energy including installation of a 2-Megawatt wind turbine at a manufacturing facility in Puurs, Belgium; and construction of solar panels at several other sites, in addition to pursuing Leadership in Energy and Environmental Design including first in the sector LEED-NC Platinum certification for our aseptic facility in Dalian, China.

Pfizer remains committed to continuing to implement greenhouse emission and other resource use reduction projects and continuing to work with key supply chain partners to help them achieve greenhouse gas reductions.



LUNDBECK

At its chemical factory, Lundbeck has switched from fossil fuels to bio fuel and by this reduced CO2 emission by 3.000 tons per year, a 16% absolute reduction of the total scope 1 and 2 emissions.

Since 2006 Lundbeck has reduced its energy consumption by 35% equal to a 68% absolute CO2 reduction (scope 1 and 2) achieved by many different process and facility optimizations. E.g. HQ cooling facility refurbishment in Denmark with six new degassing units in 2019. This saves 300 MWh annually equivalent to 60 Tonnes of CO2.



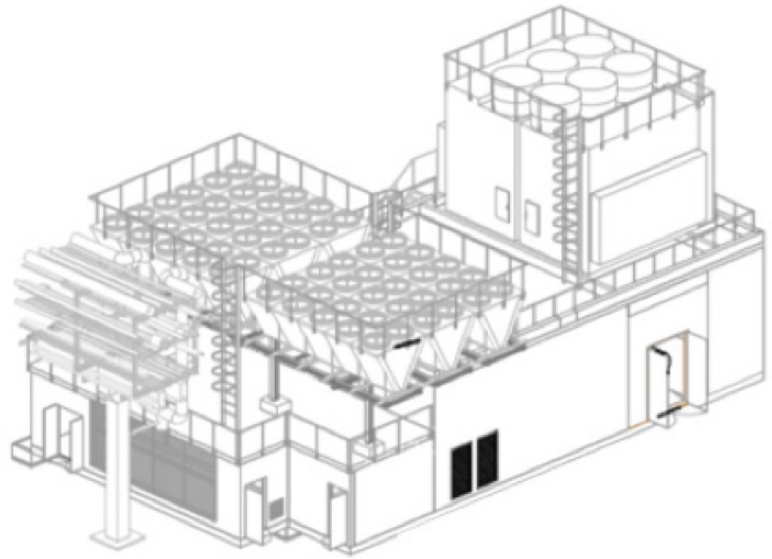


NOVARTIS

Novartis negotiated a Virtual Power Purchase Agreement (VPPA) with Invenergy, North America's largest privately held renewable energy company. The agreement added 100 megawatts (MW) of renewable energy to the electrical grid and is in support of the Novartis environmental sustainability strategy and goals.

The electricity is generated from Invenergy's Santa Rita East wind farm, located approximately 70 miles west of San Angelo, Texas. Coming online in June 2019, the wind farm created about 300 jobs during construction and now supports up to 12 to 15 permanent jobs once operational.

This VPPA delivers 100 MW of new wind power capacity to the Electric Reliability Council of Texas that operates the electric grid and manages the deregulated market for 75% of the state. Over the life of the 12-year agreement, the project is expected to reduce Novartis greenhouse gas emissions by more than 220,000 metric tons per year. This equates to removing more than 48,000 passenger vehicles from the road on an annual basis and eliminates all of the Novartis carbon footprint from purchased electricity in the US market, moving Novartis towards carbon neutrality in own operations.



SANOFI

In 2015, 50,000 tons of Sanofi's CO2 equivalent emissions came from refrigerant leaks in the chillers. Sanofi has launched a program to prioritize natural fluids and better control leaks. In four years, our CO2 emissions linked to refrigerants have been reduced by 40% with 22,000 tons of CO2 savings. For example, on a chemical site in France, a single cold loop at -20° C with ammonia and CO2 was able to replace 6 chillers (R507A) and 6 cooling towers and thus increased energy efficiency by 250%.

JANSSEN

The Janssen Beerse site in Belgium is the largest energy user of all Johnson & Johnson sites worldwide. Its electricity consumption equals that of 38,000 homes. That's why Janssen is continually focusing on innovative solutions and sustainable ways of minimizing their impact on the environment. Janssen is making significant investments to ensure that as from 2020 the campus buildings will be heated and cooled using deep geothermal energy as a green and renewable energy source. Calculations have demonstrated that utilizing the earth's deeply embedded heat would reduce CO2 emissions by 30% for the Beerse site, Belgium.



DRIVING SUSTAINABLE SOLUTIONS

CHIESI

As a Benefit Corporation and certified BCorp®, Chiesi has in place a systematic green design approach for all its new products. One concrete example, announced at the United Nations Climate Change Conference (COP25), are Chiesi's pressurized metered dose inhalers (pMDIs) which currently use hydrofluorocarbon (HFC) propellants. These inhalers are being fundamentally reworked to reduce their carbon footprint by 90%, as measured thanks to Chiesi's systematic approach model for Carbon Footprint Measurement. Chiesi's carbon minimal pMDIs will be on the market by the end of 2025. Not only does this preserve the health of the patient but of the planet too whilst further minimizing the already limited contribution of HFCs in pharmaceutical uses.



BOEHRINGER INGELHEIM



Boehringer Ingelheim recognizes the negative effects of greenhouse gas emissions and has identified the use of renewable energies and reducing energy consumption as key strategic priorities. Within their worldwide environmental sustainability program 'BE GREEN', they are now working to reduce their total greenhouse gas emissions notably. In addition, they are reducing emissions across the value chain. In order to foster its transition to a low carbon economy, BI has implemented for all investments and business systems a green fund and an internal carbon price of 100 € / ton CO2 equivalent. Creating environmental awareness at work contributes to environmental protection and the reduction of greenhouse gas emissions.



MERCK

Merck KGaA has set the target to reduce CO2 emissions by 20% from 2006 to 2020. In the last decade more than 360 energy efficiency and greenhouse gas reduction projects have been implemented.

For example, to achieve the goal to reduce the environmental impact of the supply chain of Global Health Observatory (GHO) medicines by re-designing shipping routes and adopting more environment-friendly transportation schemes, the GHO organization launched a transformation program in 2019 to reduce carbon footprint associated with logistics by converting the air freights into sea freights.

In 2018, 65% of medicines were shipped by air. In 2019, 3800t of CO2 emissions were reduced by converting the shipment of medicine from air freights into sea freights. The changes impacted routes in 12 countries with main contributions from China, Vietnam, South Africa and India. The GHO ambition is to reduce by 10,000 tons/year by 2023 which is the equivalent to neutralize the CO2 emission of 20,000 passengers travelling from Paris to New York every year. Further reviews concluded that GHO can convert up to 85%-90% of our medicine shipments in primary distribution to sea freight while taking no risk to impact their patients' supply.

CUTTING SCOPE 3 EMISSIONS

TRACKING VALUE CHAIN CARBON EMISSIONS



NOVO NORDISK

Novo Nordisk strives to reduce CO2 emissions from their activities and value chain as a part of an overall ambition to have zero environmental impact. Since 2005, Novo Nordisk has focused on reducing emissions related to production and has recently reached the target of sourcing 100% renewable power across all global production sites. Now Novo Nordisk is focusing on transitioning to green sources for steam and heat in order to have 100% renewable energy across Scope 1 and Scope 2 sources.

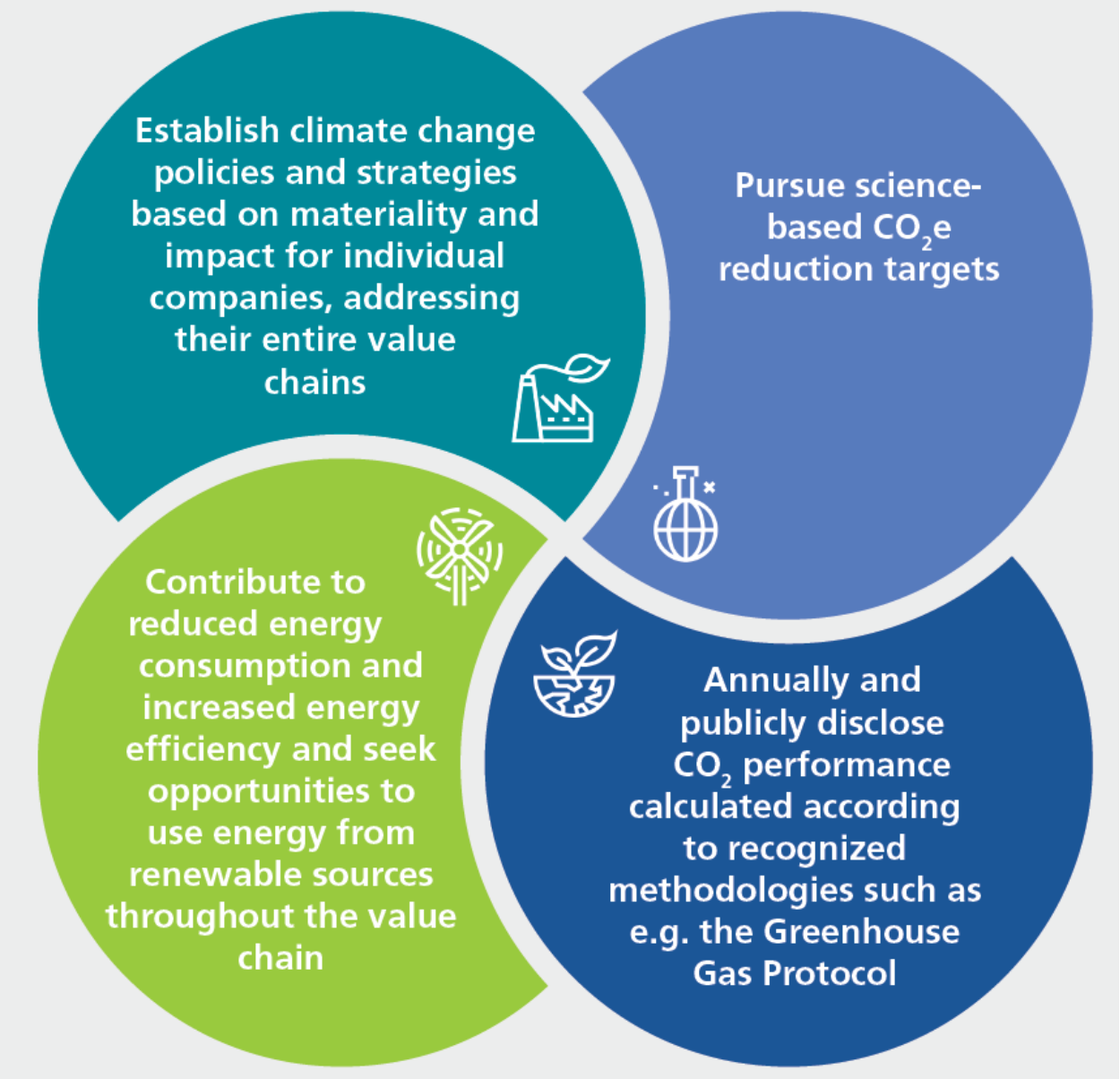
However, emissions from operations (Scope 1 & 2) only make up a small percentage of the Novo Nordisk carbon footprint. Therefore, Novo Nordisk has expanded their targets to also include transportation (product distribution and business travel), along with engaging with suppliers of raw materials and goods & services to reduce their carbon footprints. Novo Nordisk has an approved Science Based Target, which includes that key suppliers (300 suppliers representing 2/3 of scope 3 emissions) will have GHG reduction targets by 2030. As a part of the Novo Nordisk Suppliers for Zero programme, Novo Nordisk is working with suppliers to reduce CO2 emissions, waste and resource use across the value chain.

ADDITIONAL COMPANY COMMITMENTS AND REPORTS

- AbbVie 2018 Responsible Action Report and AbbVie - Prioritizing environmental sustainability
- Chiesi - SUSTAINABILITY REPORT
- Johnson & Johnson (Janssen) – Climate & Energy Commitments
- Lundbeck – UN Global Compact Progress Report
- Merck – Climate Action Report 2019
- MSD – Environmental sustainability
- Novartis – Climate commitments
- Takeda Commitment to Carbon Neutrality and Position statement on climate change

OUR COMMITMENT

As the pharmaceutical industry is committed to making a positive impact on the lives of patients while operating sustainably and therefore wants to contribute to a healthy environment and demonstrate leadership in doing what's necessary to mitigate climate change, EFPIA member companies are committed to:





PARTNERING

To make the above commitments even stronger, EFPIA will partner with stakeholders so that:

- Public policies are clear and stable, allow for flexible and predictable approaches and allow sufficient time and technical, organizational and procedural freedom for change and development to achieve emission reduction targets.
- Public policies address the links between climate change, water scarcity, biodiversity and public health risks.
- The entire value chain is driven to improve performance.
- The broader healthcare community is engaged in developing future climate policies.



Disclaimer: This document has been developed under the leadership of the EFPIA Environment, Health and Safety group. The examples included are a non-exhaustive selection which do not represent the full level of activities on climate change being undertaken across our industry.

June 2020

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