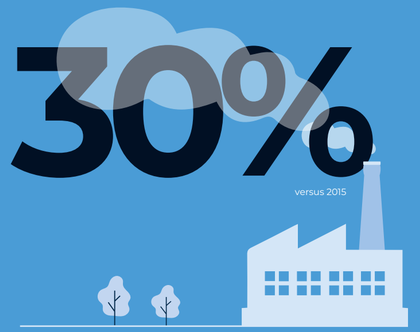
Case Studies

European Round Table for Industry

Making the most of Europe's climate leadership

Case studies



Case Study

Air Liquide is committed to reduce the carbon intensity of its activities, to work with its customers toward a sustainable industry

Official commitment

Air Liquide is committed to reduce the carbon intensity of its activities, to work with its customers toward a sustainable industry and to contribute to the development of a low carbon society. Air Liquide aims to reduce by 30% the carbon intensity of its operations by 2025 versus 2015, notably by:

- increasing by 70% purchases of renewable electricity;
- improving by 5% the energy efficiency of its plants;
- reducing by 10% the carbon footprint of its products.

With its customers, the Group is promoting low carbon breakthrough solutions, such as carbon capture and storage (CCS), hydrogen for steel or new materials in Electronics (EnScribe). Through active dialogue with key stakeholders in various ecosystems, Air Liquide contributes to the development of biomethane and the use of low carbon and green hydrogen in mobility.

Lighthouse initiative

Air Liquide aims to contribute to building the clean heavy-duty transport in Europe by 2025 and announced in July 2020 together with the Port of Rotterdam the project HyTruck to materialise this ambition. Within this time horizon, it will bring 1,000 hydrogen-powered trucks on the road by developing semi-captive fleets of tractors for drayage and regional deliveries in and around major North-Western European logistic hubs (Port of Rotterdam, Port of Antwerp, German Rhine river ports), reducing CO_2 emissions by 120,000 tons on an annual basis.

It will deploy an embryo of 25 large size refuelling stations in critical areas and include the production of low carbon and renewable H2. The objective is to be competitive with diesel. This model will then be repeatable in other large logistic hubs in Europe. The project is involving a consortium of different partners in the three hosting countries (The Netherlands, Belgium and Germany).

Case Study

We have set a goal for our operations to be net carbon neutral in 2050

MAERSK

Official commitment

We have set a goal for our operations to be net carbon neutral in 2050. To reach this goal, we have set a roadmap of 60% relative emission reductions in 2030 and net carbon neutral operations in 2050. We also have as an ambition to have a commercially viable net zero ship on the seas before 2030. We are well underway on this roadmap with 42% relative emission reductions today. We will continue to work intensely on energy efficiency measures for emission reductions. But to reach net-zero emissions, we need to transition to alternative and sustainable marine fuels.

Maersk is also a partner in the "Maersk Mc-Kinney Møller Center for Zero Carbon Shipping", which is an independent and non-profit research facility with a mission to decarbonise global shipping. The Center is made possible by a donation from the A.P. Møller Foundation.

Lighthouse initiative

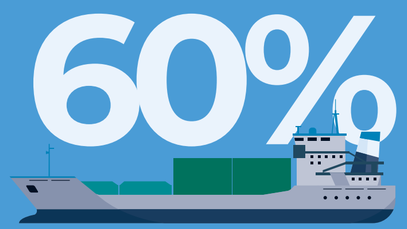
Maersk is together with Copenhagen University developing a new scalable, low cost carbon neutral fuel called LEO. The fuel is a mix of alcohol and a plant waste material and is currently being produced at ton level to undergo engine testing within the next year.

NET CARBON NEUTRAL OPERATIONS IN

2050

BY 2030 WE WANT
RELATIVE EMISSION REDUCTIONS OF

60%



100%

USAGE OF RENEWABLE ENERGY FOR POWER AND HEAT BY 2025

50,000,000

ESTABLISHED TREES BY 2025 VIA THE AZ FOREST PROGRAMME

Case Study

'Ambition Zero Carbon' is AstraZeneca's commitment to achieving zero carbon emissions from its global operations by 2025

AstraZeneca

Official commitment

Launched at the World Economic Forum in January 2020, 'Ambition Zero Carbon' is AstraZeneca's commitment to achieving zero carbon emissions from its global operations by 2025 and having a carbon negative value chain by 2030. By 2025, AstraZeneca will double its energy productivity; use 100% renewable energy for power and heat, eliminate F-gas emissions from its sites, launch next-generation respiratory inhalers to treat asthma and Chronic Obstructive Pulmonary Disease (COPD) with near-zero climate impact propellants and plant 50 million trees under the 'AZ Forest' programme. AstraZeneca is a member of Climate Group RE100, EV100 and EP100 initiatives.

The company's Scope 1 and 2 greenhouse gas emission reduction targets have been verified by the Science-Based Targets Initiative as being consistent with reductions required to keep warming to 1.5°C, the most ambitious goal of the Paris Agreement.

Lighthouse initiative

'AZ Forest' - Alongside the work to eliminate carbon emissions from its operations and value chain, AstraZeneca recognises the direct link between reforestation and the impact it can have on both the climate and human health. Trees naturally remove CO_2 and are essential to mitigate the effects of climate change. 'AZ Forest' is a reforestation initiative where 50-million trees will be planted by 2025, with longer term stewardship to ensure their permanence. In partnership with local governments and One Tree Planted, a non-profit organisation focused on global reforestation, the first trees were planted in Australia in September 2020, with Indonesia and other countries to follow. This initiative supports WEF's newly launched '1T.org – The Champions for a Trillion Trees' platform.

Case Study

Climate protection is firmly embedded in our corporate purpose, “We create chemistry for a sustainable future”

BASF
We create chemistry

Official commitment

Climate protection is firmly embedded in our corporate purpose, “We create chemistry for a sustainable future,” and is a cornerstone of our strategy. We are committed to the goals of the Paris Climate Agreement and our innovative climate protection products (e.g. battery materials for electromobility) play a role here.

We are also continually working to reduce our own carbon emissions. Until 2030, we want to continue to grow our production without adding further CO_2eq emissions. Global activities to reduce our greenhouse gas emissions over the long term are bundled in our Carbon Management[1]. This includes increasing efficiency, purchasing electricity from renewable sources, and developing completely new low-emission technologies.

To further accelerate emission reduction, we support collaboration via the World Economic Forum’s Low-Carbon Emitting Technologies initiative, which is part of the Mission Possible Platform[2].

Lighthouse initiative

One key element of our Carbon Management is a dedicated R&D Program, which focuses on production processes for base chemicals. These are responsible for 70% of the greenhouse gas (GHG) emissions of the chemical industry. By electrification and new processes, they could be produced almost GHG emission free.

Deploying these new technologies could start around 2030. Currently, we are building a test facility at the Ludwigshafen site for producing hydrogen in a CO_2 free process – methane pyrolysis. In this project, funded by the Federal Ministry of Education and Research (BMBF), a new process technology is developed to split methane directly into its components of hydrogen and solid carbon.

Other elements of the Carbon Management R&D Program include the first electric heating concept for steam crackers and a CO_2-free synthesis pathway for olefins by an innovative catalyst system.

We’re focused on developing completely new low-emission technologies

1 https://www.basf.com/global/en/who-we-are/sustainability/we-produce-safely-and-efficiently/energy-and-climate-protection/carbon-management.html

2 https://www.weforum.org/mission-possible/action-areas

NET CARBON NEUTRAL OPERATIONS IN

2050

Case Study

our strategy aims by 2030 to have increased developed renewable energy generating capacity 20-fold to 50GW, to increase low carbon investment to $5 billion a year

bp

Official commitment

bp’s ambition is to become a net zero company by 2050 or sooner, and to help the world get to net zero. Our ambition is supported by ten aims, including:

- Getting to net zero on bp’s operational emissions on an absolute basis, by 2050 or sooner (scope 1&2 emissions).
- Getting to net zero on emissions arising from carbon in bp’s oil and gas production on an absolute basis by 2050 or sooner (scope 3 emissions)
- Cutting the carbon intensity of the products bp sells by 50% by 2050 or sooner (scope 3 emissions)

To deliver this ambition, our strategy aims by 2030 to have increased developed renewable energy generating capacity 20-fold to 50GW, to increase low carbon investment to $5 billion a year and to reduce oil and gas production by 40%.

Lighthouse initiative

Lightsource bp - a 50:50 joint venture between Lightsource and bp - is a global leader in the development and management of solar energy projects.

Since the partnership began at the start of 2018, Lightsource bp has more than doubled its global presence, from five to 14 countries and now has activities in eight countries across Europe. Its development pipeline has also grown ten-fold from 1.6GW to 16GW

Case Study

Our ambition is to make our fleet of new cars CO_2-neutral by 2039 and we will cover all stages of the automotive value chain

DAIMLER

A CO_2-NEUTRAL FLEET OF NEW CARS BY

2039

Official commitment

An emission-free fleet of vehicles: With this vision, we are committed to climate protection and air pollution control. Our ambition is to make our fleet of new cars CO_2-neutral by 2039 and we will cover all stages of the automotive value chain – from technical development to the extraction of raw materials, to production, service life and recycling. Our milestones until 2039:

- **2022:** Several electrified variants in all segments of Mercedes-Benz Cars.
- **2025:** Up to 25 % of unit sales to be accounted for by all-electric vehicles
- **2030:** Achieving more than 50 % of car unit sales with plug-in hybrids or all-electric vehicles.
- **2039:** A CO_2-neutral fleet of new cars.

Mercedes recently joined “The Climate Pledge”, an initiative with the goal to contribute to the achieving the Paris Agreement target.

Lighthouse initiative

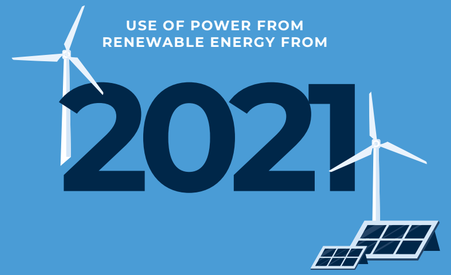
Daimler Trucks strategy for electrification includes vehicles for urban distribution to international long-haul transport, thus reaffirming its commitment to the goals of the Paris Climate targets. The GenH2 truck marks the beginning of the fuel-cell hereby demonstrating which specific technologies Daimler Trucks is driving forward at full speed so that heavy-duty fuel-cell trucks can perform flexible and demanding long-distance haulage operations with ranges of up to 1,000 km and more on a single tank of hydrogen.

Daimler Trucks plans series production in 2023. For regular journey’s Daimler Trucks will be using a purely battery-powered trucks, the Mercedes-Benz eActros and eActros long-haul. The combination of hydrogen and battery power enables us to offer our customers the best vehicle options, depending on the application and at the same time consistently pursuing our vision of CO_2-neutral transport.

100%

USE OF POWER FROM RENEWABLE ENERGY FROM

2021



SMART WASTE SOLUTION CAN SAVE ROUGHLY

27,000

TONNES OF CO_2EQ EMISSIONS IN GERMANY

Case Study

Deutsche Telekom wants to reduce its Scope 1+2 emissions by 90% until 2030 based on 2017

Deutsche Telekom

Climate Targets

Deutsche Telekom decided on a group climate target which was approved and published by the Science Based Target Initiative in 2019. It covers all emissions level from Scope 1 to Scope 3 and also considers the use of renewables.

Deutsche Telekom wants to reduce its Scope 1+2 emissions by 90% until 2030 based on 2017. One major part to achieve this target is the use of 100% power from renewables already from 2021 for the whole group. Furthermore, there is a relative target for Scope 3 emissions from the value chain which aims to reduce emissions by 25% per customer until 2030 based on 2017.

Latest by 2050 Deutsche Telekom wants to be carbon neutral covering all emissions from Scope 1 to Scope 3.

Case Study Smart Waste

What with shopping online, having food delivered to your door and working mostly from home, Covid-19 has changed daily life significantly. One result is the growing amount of garbage.

How can we handle these garbage mountains intelligently? This is where the Internet of Things (IoT) comes into play. Used correctly, it can help to optimise garbage truck schedules and upgrade the cityscape and do so with much shorter routes and fewer emissions. Cities like Darmstadt or Bochum have paved the way.

That not only cuts operating and waste disposal costs; the environment benefits too. Optimised route planning helps reduce CO_2 emissions by saving on mileage and road use. This approach also boosts the circular economy because glass and plastic waste can be recycled faster. A study of Fraunhofer Institute from 2020 shows that this Smart Waste solution can save roughly 27,000 tonnes of CO_2eq emissions in Germany.

Case Study

ENGIE's purpose is to act to accelerate the transition towards a carbon-neutral economy, through reduced energy consumption and more environmentally friendly solutions

Official commitment

ENGIE's purpose is to act to accelerate the transition towards a carbon-neutral economy, through reduced energy consumption and more environmentally friendly solutions. This purpose brings together the company, its employees, its clients and its shareholders, and reconciles economic performance with a positive impact on people and the planet. ENGIE's actions are assessed in their entirety and over time.

Some key targets and achievements:

- Greenhouse gas emissions from electricity production should be reduced from 149 Mt in 2016 to 43 Mt in 2030 (80 Mt in 2019);
- Proportion of renewable energy in the electricity mix should increase from 20% in 2016 to 58% in 2030 (28% in 2019).

The amount of green bonds issued by ENGIE since 2014 now stands at €11.15 billion, making the Group one of the world's leading corporate issuers of green bonds.

Lighthouse initiative

In Rivesaltes (France), ENGIE has built a solar power plant that at the same time serves as a car storage park. The photovoltaic solar shades shelter the parked vehicles from bad weather while allowing the production of clean and renewable electricity.

Recharging terminals for e-vehicles have been installed. To optimise its energy management, this power station is part of an experimental micro-smartgrid consisting of three photovoltaic solar shades feeding a storage system by batteries, an e-vehicle and workshops on site. To build it, ENGIE Green has called on local companies, while the photovoltaic solar panels are produced by Solarworld in Germany.

Key figures

- 48,384 solar panels photovoltaic systems spread over 17.3 hectares of parking space
- Total power of 13.5 megawatt-peak (MWp)
- Investment of €17.3 million
- Annual production of nearly 18.5 million kilowatt hours

48,384

SOLAR PANELS PHOTOVOLTAIC SYSTEMS SPREAD OVER 17.3 HECTARES OF PARKING SPACE

2050

80%

ENI HAS SET A TARGET OF 80% NET REDUCTION FOR SCOPE 1, 2 AND 3 EMISSIONS BY 2050

Case Study

Eni has designed a strategic roadmap for the next 30 years that combines economic and environmental sustainability

Official commitment

Eni has designed a strategic roadmap for the next 30 years that combines economic and environmental sustainability. It has set a target of 80% net reduction for scope 1, 2 and 3 emissions by 2050, with reference to the entire life-cycle of the energy products sold and a 55% reduction in emission intensity compared to 2018.

In Europe, Eni will be Scope 1,2 and 3 net emissions neutral by 2050. Moreover, in the path towards 2050 the company has adopted decarbonisation targets of net-zero carbon footprint by 2030 for scope 1 and 2 emissions from its upstream activities and for scope 1 and 2 emissions of the entire Eni group by 2040.

Lighthouse initiative

In this path towards the decarbonisation of our activities, we aim at fostering the circular economy process and bio-products. A flagship project is represented by the reconversion of traditional refineries into bio-refineries to produce high-quality biofuels. This has been done thanks to the Ecofining™ proprietary technology, based on a flexible hydrogenation process that makes it possible to use raw materials of biological origin as feedstock.

Venice, in 2014, was the first traditional refinery in the world to be converted into a bio-refinery. Then, with the start-up of the Gela biorefinery in 2019, (add comma) Eni has reached a total processing capacity of over 1 million tonnes of biofuels. These plants will be able to treat increasing quantities of advanced feedstock, such as used vegetable oil, animal fat, algae and by-products. This feedstock diversification strategy will allow Eni to become palm-oil-free by 2023.

Case Study

E.ON set itself a clear target of making its own operations carbon neutral by 2040 and for the products and services we deliver by 2050

E.ON OPERATIONS CARBON NEUTRAL BY

2040

+ PRODUCTS AND SERVICES BY **2050**

Official commitment

E.ON set itself a clear target of making its own operations carbon neutral by 2040 and for the products and services we deliver by 2050.

We have unequivocally supported the climate-neutrality target by 2050 set by the Green Deal and called for an increased ambition to 55% greenhouse gas emission reductions by 2030 to put Europe on track. And we called for a green economic recovery early on. To that end, E.ON signed several initiatives (e.g. CLG-led initiative, Green recovery Alliance) urging European institutions and national governments to agree mainstreaming climate objectives in the recovery and put our economy on a clear and resilient pathway.

Lighthouse initiative

SmartQuart drives the local energy transition and aims to almost entirely switch from fossil fuels in three districts in different cities, by intelligently connecting energy systems within and between the participating neighbourhoods. This enables the differently structured communities to complement each other sustainably and economically within a systemic network and exchange energy.

SmartQuart, which was developed by a consortium of ten partners led by E.ON, will develop new products and solutions for the planning, construction and operation of energy-optimized neighbourhoods. Citizens are actively involved in the implementation from the very beginning. The programme will test future-proof energy technologies under real conditions and on an industrial scale following the vision of zero carbon and 100% renewables. The investment amounts to a total of more than €60 million.

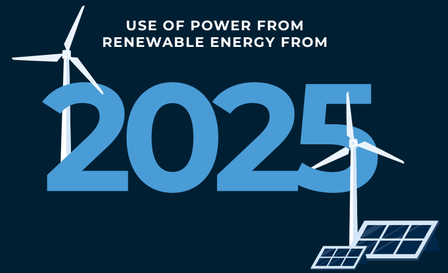
€60m

INVESTED IN SMARTQUART

100%

USE OF POWER FROM RENEWABLE ENERGY FROM

2025



NET CARBON NEUTRAL BY

2050

Case Study

Ferrovial began its journey more than a decade ago by implementing its Climate Strategy and setting reduction targets

ferrovial

Official commitment

Ferrovial began its journey more than a decade ago by implementing its Climate Strategy and setting reduction targets. Such strategy has driven Ferrovial to reducing emissions by 59% in 2019 (vs 2009, base year, in terms of carbon intensity), and increasing renewable energy sourcing up to 60% globally.

From now on, Ferrovial speeds up the decarbonisation of its portfolio and operations by agreeing ambitious reduction targets: 32% in absolute terms by 2030 (regarding direct sources, i.e. Scope 1&2), and reducing 20% indirect emissions (Scope 3).

Ferrovial has been the first company of its sector, globally, in validating reduction targets according to science expectations (SBTi). Moreover, the company will be 100% renewable by 2025 and carbon neutral by 2050. Additionally, its 2030-50 Climate Strategy deepens business R&O providing a roadmap to develop further business opportunities.

Lighthouse initiative

Ferrovial Shadow Carbon Pricing - Ferrovial has developed a tool to quantify the climate risk of its most relevant investments in the form of “shadow pricing”, in order to accelerate the decarbonisation of its business portfolio. This tool considers variable prices for a tonne of carbon for different time horizons, regions and project types, thus quantifying the potential economic risk in the projects for which the tool is used.

Ferrovial’s initiative on carbon pricing is fully aligned with the Paris Climate Agreement and investors’ expectations, incentivising a shift in investment toward carbon abatement, as well as providing better information for making decisions on significant investments. Ferrovial’s methodology follows an evidence-based approach, drawing on the best available published data and studies, to forecast future changes in effective carbon prices.

Case Study

At Roche we reduced our greenhouse gas emissions by 45% absolute from 2009 - 2019

Roche

Official commitment

At Roche we reduced our greenhouse gas emissions by 45% absolute from 2009 - 2019. We have set goals to further reduce emissions by another 75% from 2019 - 2029, to use 100% sustainable electricity by 2025 and to achieve real zero in 2050.

Lighthouse initiative

We recently extended our site in Kaiseraugst (Switzerland) with numerous new buildings, including our global IT centre, learning centre, quality labs etc. This site is fully driven with sustainable energy (heating, cooling, electricity).

The buildings are highly energy efficient and we built a woodchip heating plant, geothermal cooling, and several solar power installations, including one of the biggest facade solar plants in Switzerland.

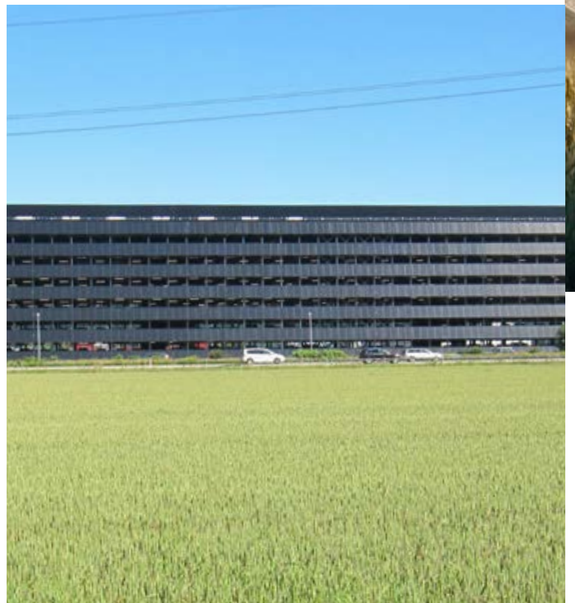
ACHIEVE A REAL ZERO-CARBON FOOTPRINT BY

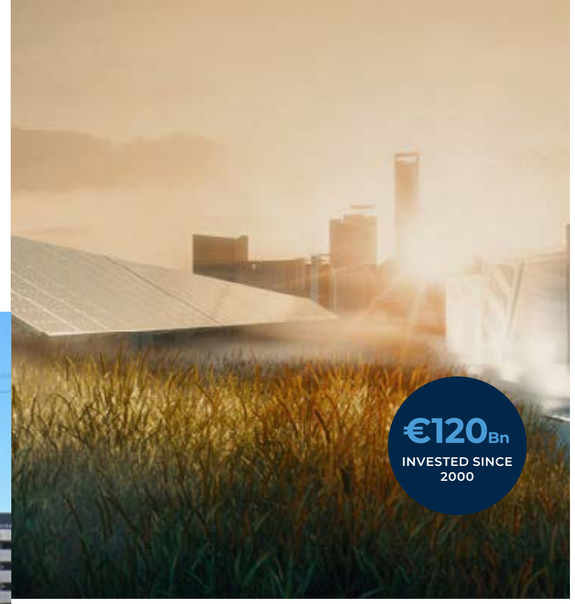
2050

2025

100%

USE OF 100% POWER FROM SUSTAINABLE ENERGY FROM 2025





REACH CLIMATE NEUTRALITY IN EUROPE BY

2030

With our partner company, Fertiberia, our objective is to decarbonise the production of ammonia and produce only green fertilisers in Spain by 2027

IBERDROLA

Official commitment

Iberdrola is committed to leading the energy transition, a task it has begun 20 years ago, and in which it has invested €120 billion since then, making it the world leader in renewables.

Today, our emissions are only 80g/kWh, one third of those of our sector in Europe, and we plan to reduce them by half in 2025 and reach climate neutrality in Europe already by 2030, and globally in 2050. To this aim, we will reach this year an all-time record of €10bn in green investments.

As part of a large number of initiatives aimed at reaching the most ambitious climate goals, such as the United Nations Global Compact, we defend that aligning climate goals and industrial policies will create wealth and high-quality jobs in Europe.

Lighthouse initiative

With our partner company, Fertiberia, our objective is to decarbonise the production of ammonia and produce only green fertilisers in Spain by 2027, by integrating green hydrogen, renewable sources and hydroelectric pumping plants.

To that aim, Iberdrola will be launching the two largest plants producing green hydrogen for industrial use in Europe, amounting to 800 MW of electrolytic capacity with an investment of over 1.800 million euros. The first plant, Puertollano I, will consist of a solar plant, a lithium-ion battery system and a 20 MW electrolyser.

Pumped storage facilities will provide these plants with renewable power on a 24-hour basis. Iberdrola´s flagship project, the Tamega Hydroelectric complex in Portugal, with an investment of 1.500 million euros has enough storage capacity to supply 2 million households with clean energy for an entire day.

Case Study

KONE, a global leader in the elevator and escalator industry, has set targets for significant reductions in its greenhouse gas emissions by 2030

Official commitment

KONE, a global leader in the elevator and escalator industry, has set targets for significant reductions in its greenhouse gas emissions by 2030. KONE's targets are the most ambitious in the industry and have been validated against the latest climate science by the Science Based Targets initiative. In another first for the industry, KONE has pledged to have carbon neutral operations by 2030.

KONE commits to a 50% cut in the emissions from its own operations (scope 1 and 2 emissions) by 2030, compared to a 2018 baseline. This target is in line with limiting global warming to 1.5°C, which is currently the most ambitious criteria for setting science-based targets. In addition, KONE targets a 40% reduction in the emissions related to its products' materials and lifetime energy use (scope 3 emissions) over the same target period, relative to orders received.

Lighthouse initiative

On top of the ambitious emissions reduction targets for the entire company, KONE aims to increase the sourcing of renewable electricity at its facilities worldwide to 80% by 2025 and to 100% by 2030. This will be achieved, for example, by on-site solar energy generation and sourcing electricity from renewable sources.

CARBON NEUTRAL OPERATIONS BY

2030

100%

ELECTRICITY FROM RENEWABLE SOURCES BY

2030

ACCELERATING OUR REDUCTION IN CO_2 INTENSITY TO EXCEED

20%

compared to our 2018 baseline

2030

SBTI-VERIFIED ACTION PLAN

Case Study

In 2020 LafargeHolcim introduced ECOPact, the industry's broadest range of green concrete for high-performing, sustainable and circular construction

Official commitment

Leading the way in green construction, LafargeHolcim is the first global building materials company to sign the UNGC's "Business Ambition for 1.5°C" initiative, and thereby joining the "Race to Zero" with a 2030 SBTi-verified action plan.

Walking the talk on our commitment, we are:

- Setting ourselves ambitious 2030 climate targets that are validated by the Science-Based Targets initiative (SBTi)
- Accelerating our reduction in CO_2 intensity to exceed 20% (compared to our 2018 baseline)
- Partnering with SBTi looking beyond 2030, to support the development of the first climate roadmap for a 1.5°C future in the cement sector.

Lighthouse initiative

Launching carbon-neutral solutions

In 2020 LafargeHolcim introduced ECOPact, the industry's broadest range of green concrete for high-performing, sustainable and circular construction. ECOPact is sold at a range of low-carbon levels, from 30% to 100% less carbon emissions compared to standard (CEM I) concrete. Where regulatory conditions allow, ECOPact products integrate upcycled construction and demolition materials, further closing the resource loop.

LafargeHolcim offers the broadest portfolio of sustainable products and solutions with the industry's leading R&D organization and global innovation network with 50% of patents dedicated to low-carbon solutions and more than 50% of resources focused on low-carbon products. In 2019, one third of 2019 net sales stemmed from a portfolio of sustainable solutions.

Case Study

Lenzing became the world's first producer of wood-based cellulosic fibres to make a strategic commitment to dramatically reducing our carbon footprint

Lenzing
Innovative by nature

CUT CO_2 EMISSIONS BY

50%
BY 2030

CLIMATE-NEUTRAL PRODUCTION WITHOUT NET-CARBON EMISSIONS BY

2050

Official commitment

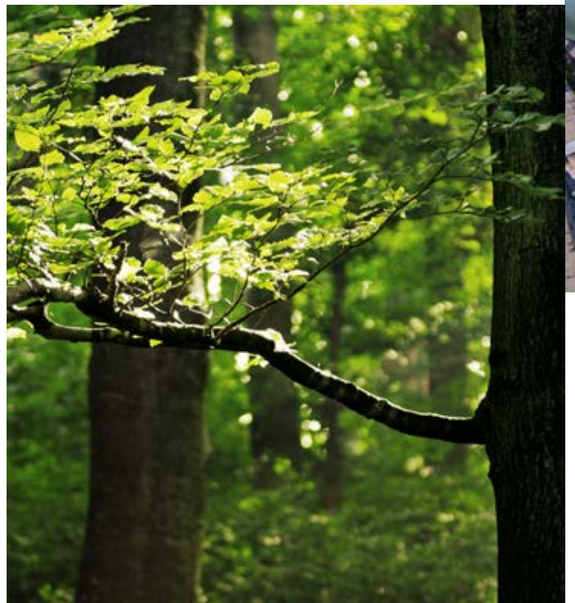
At Lenzing, we look beyond fibres and take responsibility for our children and grandchildren by standing up against the troubles of our time. This attitude is part of our strategic principles. Hence our ambitious climate target represents an important component of our strategy and our responsibility to future generations.

In the 2019 financial year, Lenzing became the world's first producer of wood-based cellulosic fibres to make a strategic commitment to dramatically reducing our carbon footprint and cutting our emissions per tonne of product by 50 percent by 2030. We intend to achieve our vision of climate-neutral production without net-carbon emissions by 2050. The most highly regarded organisation for climate targets, the Science Based Targets initiative, has confirmed that the Lenzing Group's climate target is indeed science-based.

Lighthouse initiative

The Lenzing Group is constructing a production plant for lyocell fibres in Prachinburi, Thailand. This lyocell facility will be the largest one in the world. The plant, which is expected to be finished by the end of 2021, will be the Lenzing Group's first lyocell production facility that is carbon-neutral. This expansion shows that sustainability and ambitious growth need not be mutually exclusive. On the contrary, our lyocell fibres – produced in a cutting-edge, highly eco-responsible closed-cycle process – improve the global supply of fibres and play a substantial role in shrinking our industry's environmental footprint.

The lyocell production plant in Thailand will use predominantly bioenergy, which is derived from the paper and pulp production as well as from a biomass plant located in the industrial park next to the lyocell plant.



DEVELOPMENT OF MORE EFFICIENT AIRCRAFT AIMED AT REDUCING CO_2 AND NOX EMISSIONS BY MORE THAN

50%

compared to the solutions currently on the market.

Case Study

Leonardo is committed to the targets embedded in the ambitious Clean Sky initiatives and to the definition of the Clean Aviation partnership program

LEONARDO

Official commitment

Leonardo actively engages with European political and industrial actors, contributing to the implementation of a strategy to support sustainable growth and to lower climate impacts through scientific excellence and leading-edge technologies.

On climate action, the aviation sector being among the industrial activities functional to achieve climate neutrality, it is widely recognised that this transition requires public and private commitments and dedicated investments. In this view Leonardo substantiates its commitment through several innovation initiatives, which entail the development of solutions for a solid decarbonisation within the fields where it operates, as in aviation.

Indeed, Leonardo is committed to the targets embedded in the ambitious Clean Sky initiatives and to the definition of the Clean Aviation partnership program, which targets an impactful climate action by a systemic R&D and investment effort for the development of competitive low carbon technologies.

Lighthouse initiative

As regards climate action, Leonardo plays a leading role in various dedicated initiatives within the EU Framework Programme Horizon 2020; particularly, it is committed to the ambitious Clean Sky programme (2008-2024), involving a plurality of industrial, SMEs and institutional actors from 27 countries, for a total investment of €4 billion.

Leading the Green Regional Aircraft and the Next Generation Civil Tiltrotor platforms, Leonardo has been engaged in climate action by steering the development of a new generation of more efficient and environmentally-friendly regional aircraft and tiltrotors - aircraft that take off like helicopters - with innovative, cutting-edge technology aimed at reducing CO_2 and NOx emissions by more than 50% compared to the solutions currently on the market.

Case Study

L'Oréal's overarching objective for 2030 is to align the group's greenhouse gas emissions to the +1.5°C scenario in accordance with the Science-Based Targets (SBT) rationale

L'ORÉAL®

THE SETTIMO PLANT REACHED CARBON NEUTRALITY IN

2015

Official commitment

L'Oréal's overarching objective for 2030 is to align the group's greenhouse gas emissions to the +1.5°C scenario in accordance with the Science-Based Targets (SBT) rationale. To achieve this, L'Oréal will reduce by 50% per finished product all its greenhouse gas emissions (scopes 1, 2 and 3) by 2030 with the following targets:

- achieve carbon neutrality in all the group's sites by improving energy efficiency and using 100% renewable energy.
- reduce the greenhouse gas emissions resulting from the use of its products by 25% compared to 2016, on average and per finished product.
- reduce by 50% on average and per finished product, the greenhouse gas emissions linked to the transport of our products, compared to 2016.
- have its strategic suppliers reduce their direct emissions (scopes 1 and 2), by 50% in absolute terms, compared to 2016.

Lighthouse initiative

Located in Italy, L'Oréal's Settimo Plant is specialised in the manufacturing of mass market make-up and haircare products that are then distributed in over 30 countries.

Committed to industrial excellence and sustainable performance, the Settimo plant reached carbon neutrality in 2015 thanks to several innovations:

- Electricity provided by a biomass power station as well as more than 14,000 photovoltaic solar panels on the site;
- The factory is heated by biogas, the remainder coming from the town's district heating network, to which the plant is connected.

In 2018, the plant took an additional step forward in terms of sustainable water management by becoming a «waterloop factory», meaning that 100% of the water used for the manufacturing process is recycled on a closed loop.

ACHIEVE CARBON NEUTRAL MANUFACTURING BY

2050

REDUCE CO_2 EMISSIONS FROM MANUFACTURING BY

50% IN 2030

Case Study

Michelin's ambitions are to reduce CO_2 emissions from manufacturing by 50% in 2030 compared to 2010 and to achieve carbon neutral manufacturing by 2050

MICHELIN

Official commitment

Michelin's ambitions are to reduce CO_2 emissions from manufacturing by 50% in 2030 compared to 2010 and to achieve carbon neutral manufacturing by 2050.

Michelin's 2030 target for manufacturing has been validated by SBTi, as have 2 targets for reducing emissions in our value chain:

1. Reduce absolute scope 3 GHG emissions from fuel- and energy-related activities, upstream and downstream transportation and distribution, and end-of-life treatment of sold products by 15% by 2030 from a 2018 base year.
2. 70% of Michelin's suppliers for purchased goods and services (in terms of emissions generated) will have science-based targets by 2024.

Michelin has declared its support for the Task Force on Climate-related Financial Disclosure and publicly discloses according to the TCFD recommendations.

Lighthouse initiative

As part of its commitment to decarbonized mobility, Michelin has been developing R&D expertise in the field of hydrogen fuel cells for more than 15 years. In 2019, Michelin and Faurecia created a Joint Venture around Symbio to produce and market hydrogen systems for light and commercial vehicles, buses and trucks. However, first industrial deployments are a pre-requisite towards competitive mass production and simultaneous deployment of HRS and H2 vehicles is a key success factor.

Therefore, in 2018, the French Auvergne Rhône Alpes region, Michelin and ENGIE launched the first "Zero Emission Valley" mobility project in Europe, a €100 million project to deploy 1,200 vehicles for professional use and a network of 20 stations supplied with green hydrogen throughout the region. To this end, these players created in 2019 the Hympulsion company to deploy hydrogen mobility on a regional scale.

Case Study

Our current targets are on track with the aim to reduce by 75% our Scope 3 greenhouse gas emissions caused by the use of our sold products in our customers networks

NOKIA

Official commitment

Nokia was the first telecoms vendor to commit to Science Based Targets (SBT) in 2017 based on the Paris Agreement. Our current targets are on track with the aim to reduce by 75% our Scope 3 greenhouse gas emissions caused by the use of our sold products in our customers networks. Emissions from our products in use in customer networks are by far the greater part of our carbon footprint.

Furthermore, we also aim to reduce our Scope 1 and 2 emissions from our own operations by 41%. Our current science-based targets are set for 2030 (baseline 2014). We are currently recalibrating and submitting our targets in line with our commitment in September 2019 to the 1.5°C warming scenario. We expect to have the new targets accepted by SBT Initiative in early 2021.

Lighthouse initiative

Nokia Digital Deployment Services - Beyond speed, quality and cost efficiency, the new requirement for network rollout is sustainability. Deployment of robust, reliable networks is more critical than ever, and it is now possible to reduce the emissions and environmental impact of those deployments.

Digitalisation of network rollouts and builds enables the conversion of regular site inspections to remote site surveys through drones or video platforms, allowing also remote issue resolution. AI and virtual reality collaboration tools mean multiple teams and individuals no longer need to travel back and forth for site inspections, and engineers can remotely provide expertise and management support. Imagine removing on average 10km drives to and from hundreds of thousands of sites – and the emission reductions potential is clear. This same digitalisation through 5G is enabling other industries to achieve greater emission reductions.

WE ARE ON TRACK TO REDUCE GREENHOUSE GAS EMISSIONS BY

75%

caused by the use of our sold products in our customers networks

70%

TODAY, 70% OF OUR METAL PRODUCTION IS BASED ON RENEWABLE POWER

Case Study

Hydro has the ambition of reducing GHG emissions by 30% in own production and processes by 2030

Hydro

Official commitment

Hydro has the ambition of reducing GHG emissions by 30% compared to 2020, by greener sourcing and greener production. Our low-carbon and circular products help our customers to reduce their emissions.

Climate action has been a priority for Hydro for decades. We have built a pilot plant in Karmøy, Norway, with the world's most energy- and climate- efficient aluminium smelter technology. Over the last years, we have increased production in areas with renewable power sources and have entered several long-term wind power contracts. Today, 70% of our metal production is based on renewable power.

Hydro is also an active member of the Aluminium Stewardship Initiative (ASI), a global, non-profit standards setting organization, working toward responsible production, sourcing and stewardship of aluminium. Hydro is ASI certified throughout the entire value chain.

Lighthouse initiative

Hydro REDUXA and Hydro CIRCAL are low-carbon circular products, certified by independent verifiers, and covering emissions along the entire value chain.

Hydro REDUXA is low-carbon aluminium having a footprint of 4.0 kg CO_2 per kg of aluminium – which is less than a quarter of the global average. Using renewable energy from hydropower, wind and solar, we can produce cleaner aluminium than ever before.

Hydro CIRCAL is recycled aluminium made with a minimum of 75% recycled, post-consumer scrap. Remelting aluminium requires only 5% of the energy needed to produce the primary metal. Therefore, the higher the recycled content of post-consumer scrap, the better it is for the environment, while maintaining high-quality aluminium. More than 100 large building projects globally are underway with Hydro CIRCAL low-carbon aluminium, only a year after the launch.

Case Study

Rolls-Royce wants to play a leading role in enabling the sectors in which it operates to reach net zero carbon by 2050

Official commitment

- Rolls-Royce wants to play a leading role in enabling the sectors in which it operates to reach net zero carbon by 2050 through the development of new products and technologies.
- Rolls-Royce joined the Business Ambition for 1.5°C campaign early 2020 and will align its business to the Paris Agreement goals, to limit global temperature rise to 1.5°C.
- Rolls-Royce has ambitious targets to reduce greenhouse gas (GHG) emissions from its operations and facilities to net-zero by 2030.
- Rolls-Royce is committed to sharing approaches that will drive the sustainability of aviation and reach the Air Transport Action Group (ATAG) targets: reducing net CO_2 emissions from aviation to 2005 levels by 2050; and limiting the growth of net CO_2 emissions by 2020.
- Rolls-Royce supports the Advisory Council for Aviation Research (ACARE) to reduce new aircraft CO_2 emissions by 75% by 2050.

Lighthouse initiative

The MethQuest project, funded by the German Federal Ministry of Economics and Technology, is investigating and developing how methane and renewable energies can be efficiently generated and used in mobile applications, such as ships, or stationary applications, such as combined heat and power plants.

Under the leadership of Rolls-Royce Power Systems, a further 26 partners from research, industry and the energy sector are involved in the project.

Rolls-Royce Power Systems, with its expertise in high-speed and dynamically operable marine engines, coordinates the MethMare network, which deals with propulsion systems for ships using fuels from renewable energy sources.

A separate project MethPower, investigates new engine concepts for combined heat and power plants, which are operated with the e-fuels methane, hydrogen and methanol. The MethGrid network is investigating how heat, electricity and gas can be intelligently networked locally via microgrids.

REACH NET ZERO CARBON IN OPERATIONS AND FACILITIES BY

2030

Picture - Accel aircraft

75%

REDUCTION IN EMISSIONS BY NEW AIRCRAFT CO_2 EMISSIONS BY 2050

NET-ZERO EMISSIONS ENERGY BUSINESS BY

2050

WE AIM TO REDUCE THE CARBON INTENSITY OF THE ENERGY PRODUCTS WE SELL BY

2035	2050
30%	65%
compared to 2016	compared to 2016

Case Study

We intend to meet our customers' demand for cleaner energy, keeping in pace with society. With this approach, we want to contribute to achieving a net-zero world

Official commitment

Shell is aiming to become a net-zero emissions energy business by 2050 or sooner. We intend to meet our customers' demand for cleaner energy, keeping in pace with society. With this approach, we want to contribute to achieving a net-zero world, where society stops adding to the amount of greenhouse gases (GHGs) in the atmosphere.

Alongside this in December 2017, Shell announced its Net Carbon Footprint ambition. Our plan is to reduce the Net Carbon Footprint of the energy products we sell in step with society's progress towards meeting the Paris Agreement. Globally, we aim to reduce the carbon intensity of the energy products we sell by 30% by 2035 and by 65% by 2050 compared with 2016, keeping in pace with society

Lighthouse initiative

Shell believes that clean hydrogen, in conjunction with electrification and energy efficiency can play a key role in the transition to climate neutrality

At the Shell Rhineland Refinery near Cologne in Germany, we are working to install a hydrogen proton exchange membrane (PEM) electrolyser. It will have a peak capacity of 10 megawatts and produce 1,300 tonnes of hydrogen a year.

The electrolyser will also help balance the local power grid, by enabling the refinery to make and then store hydrogen when power supplies from variable renewable sources, such as wind power, are high. The plant will be built by ITM Power and operated by Shell. This project, REFHYNE, will be under development until 2022, and is funded by the European Commission.

Case Study

Philips committed to long term CO_2 reduction targets reducing total CO_2 equivalent emissions from its industrial and non-industrial sites by 75% by 2025, and 90% by 2040

PHILIPS

Official commitment

In 2015, during the COP21 UN Climate Conference in Paris, Philips committed to become carbon neutral in its operations (i.e. its industrial and non-industrial sites, business travel and logistics) by the end of 2020. Next, in 2018, Philips committed to long term CO2 reduction targets reducing total CO2 equivalent (tCO2e) emissions from its industrial and non-industrial sites by 75% by 2025, and 90% by 2040, compared to their 2015 emissions, together with a commitment to reducing indirect greenhouse gas emissions across its entire value chain by 4% by 2025, and 11% by 2040, compared to 2017. As a health technology industry-first, Philips has had its CO2 emission targets assessed and approved by the Science Based Targets initiative (SBTi) – a collaboration between the CDP, the United Nations Global Compact (UNGC), the World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) aimed at driving ambitious corporate climate action.

Lighthouse initiative

Philips confirmed it had delivered on its carbon neutral ambition at the beginning of 2021. It has developed a programme that links to its full value chain, ranging from EcoDesign to energy-efficiency improvement measures, on-site renewables, green electricity sourcing to green logistics. One lighthouse project that Philips worked on related to the sourcing of green electricity through so-called Power Purchase Agreements. Together with DSM, Google and Nouryon (formerly AkzoNobel Specialty Chemicals)) it founded the Dutch Wind Consortium. Subsequently, the Consortium closed two Power Purchase Agreements in the Netherlands, with the Krammer and Bouwdokken windfarms in the Zeeland province. A case study on this unique consortium has been written by the Business Renewable Centre and the Rocky Mountain Institute.

REDUCING TOTAL CO_2 EQUIVALENT (TCO_2E) EMISSIONS FROM ITS INDUSTRIAL AND NON-INDUSTRIAL SITES BY

2025	2040
75%	90%

compared to their 2015 emissions

Bouwdokken windfarm, The Netherlands

REDUCE CO_2 EMISSIONS BY

33%

2017 - 2030

REACH NET ZERO CARBON BY

2050

Case Study

Saint-Gobain committed to reduce by 20% our CO_2 emissions between 2010 and 2025 and had already achieved -14.5% by the end of 2019

SAINT-GOBAIN

Official commitment

Climate action has been at the core of Saint-Gobain's business strategy for a long time, which made us reduce our CO_2 emissions by 15% between 2010 and 2019.

In 2019, we signed the pledge "Business Ambition for 1.5°C", thus committing to net-zero carbon emissions by 2050, in line with the objective of limiting the rise in temperatures to less than 1.5°C worldwide compared to the pre-industrial era.

We set new ambitious 2030 goals (33% absolute reduction for scope 1 and 2 vs 2017, 16% absolute reduction for scope 3 vs 2017), approved by Science-Based Targets and supported by an average yearly investment of 100 M€ for the next 10 years.

We support the Net Zero Carbon Buildings Commitment of the World Green Building Council and advocate for a more sustainable built environment.

Lighthouse initiative

In Europe, the construction and building industry is accountable for around 40% of the energy-related carbon emissions. Saint-Gobain is making a major contribution to decarbonising the whole value chain of the built environment. To do so, there are four main levers, on which we can come into play:

- We provide energy efficiency solutions, which rapidly offset the energy needed for their production by allowing major energy gains throughout their lifespan.
- We support the development of renewable energies by providing solutions for energy industrial players and utilities.
- We offer solutions for lightweight construction that steer building design towards much less carbon-intensive options compared to traditional construction.
- And we committed ourselves to reach net zero carbon emissions, an ambition that will help us put lower carbon materials and systems onto the market.

Case Study

SAP is serious about climate change and aims to achieve a net-zero carbon footprint of SAP's operations by 2025

Official commitment

SAP has been serious about climate change since the beginning of our sustainability journey 10 years ago. Our strategic objectives include:

- Carbon Neutral by 2025: Achieve a net-zero carbon footprint of SAP's operations by 2025.
- Investment in Livelihoods Carbon Fund: funding large-scale ecosystem restoration, agroforestry, biodiversity preservation, and clean energy projects in developing countries to enable climate action and improve people's lives .
- Business Ambition for 1.5°C: Committed science-based target to limit global temperature rise to 1.5 degrees
- Zero Waste: Phase out single-use plastics by the end of 2020

SAP joined key initiatives:

- Global Plastic Action Partnership with a vision for a plastic-free ocean by 2030.
- Ellen MacArthur Foundation's leading in transitioning to a circular economy.
- CEO Carbon Neutral Challenge to support business transitioning to a low-carbon economy.

Lighthouse initiative

The Climate 21 programme is a co-innovation initiative between SAP and our customers, in which technology is developed to track, analyse, and report the carbon footprint of customers' products along the entire value chain.

The first product in this program, the SAP Product Carbon Footprint Analytics application supports enterprises trying to make their operations better prepared for the business reality where sustainability is a strategic and economic imperative. It allows for tracking of CO_2 throughout supply chains, which is a very difficult data set to assemble, manage, and trend. The application delivers transparency by plant, profit or cost centre on the carbon emissions of a product across the entire value chain, including production, raw materials, energy use, and transport. Producers can integrate data from product databases and third-party solutions to understand the emissions breakdowns.

PHASE OUT SINGLE-USE PLASTICS BY THE END OF

2020

ACHIEVE A NET ZERO-CARBON FOOTPRINT BY

2030

Case Study

Siemens has been one of the first global industrial companies to commit towards carbon neutrality by 2030

SIEMENS

Official commitment

Already in September 2015, Siemens announced its intention to cut the carbon footprint of its operative business and to become climate neutral by 2030. All Siemens production facilities and buildings worldwide are to achieve a net zero-carbon footprint by 2030. With this announcement Siemens has been one of the first global industrial companies to commit towards carbon neutrality by 2030 and set a clear signal even before the adoption of the Paris Agreement.

By setting this goal, Siemens expresses its firm belief that companies play a pioneering role in the fight against climate change. This programme not only benefits humanity and the environment, but also comes with sustainable economic advantages for the company.

We invest in energy efficiency and the deployment of distributed energy systems. We have reduced the average emissions from our car fleet and are increasingly purchasing electricity from renewable energy sources.

Lighthouse initiative

Siemens has started a number of climate action initiatives of which we mention only two examples:

- At the factory in Mohelnice, Czech Republic, a comprehensive set of energy efficiency measures are implemented with support of EU subsidies. It is expected that the project measures will save approximately 2,000 tons of CO_2 emissions per year.
- Siemens UK has launched a carbon reduction Investment Fund to support Siemens' global commitment of being carbon neutral by 2030. During the financial year 2019, the fund of £240k was created by charging UK businesses an internal carbon price of £13 per tonne of carbon emissions from gas and electricity. This specific price was set in order to raise enough seed funding for 5-10 projects as part of the pilot project phase.

Case Study

At the end of 2019 the Group had already achieved a reduction in its carbon emissions of almost 33% compared to 2005 levels

Smurfit Kappa

Official commitment

Smurfit Kappa is targeting (November 2020) net zero fossil CO_2 emissions by 2050 and is also increasing its existing intermediate 2030 carbon reduction target by 15% to a level of 55%.

At the end of 2019 the Group had already achieved a reduction in its carbon emissions of almost 33% compared to 2005 levels.

Smurfit Kappa will have its new target validated by the Science Based target initiative seeking alignment with the Paris Agreement.

The Group is also supporting the recommendations of the Taskforce for Climate related Financial Disclosures. Smurfit Kappa group CEO Tony Smurfit: 'We are proud to support the EU Green Deal objectives to reach net zero fossil CO_2 emissions by 2050.'.

Lighthouse initiative

A greenhouse gas (GHG) emissions reduction project

Founded in 1851, Nettingsdorf is one of Smurfit Kappa's most efficient paper mills and one of the leading producers of kraftliner in Europe. The mill produces approximately 450,000 tonnes of paper annually and has seen a 34% increase in productivity since becoming part of Smurfit Kappa in 1995.

By investing €134 million recently in a new recovery boiler, an advanced new steam turbine and upgrading the water treatment plant, the sustainability and efficiency of the mill was greatly increased.

The innovative new boiler and steam turbine further boosts the mill's energy optimisation. By recovering energy from the biomass contained in black liquor from pulp production, the new boiler will decrease CO_2 emissions by 40,000 tonnes, which equates to 65% of the current emissions at the site, and 2.4% of those from Smurfit Kappa Europe.

TARGETING NET ZERO FOSSIL CO_2 EMISSIONS BY

2050

SOLVAY WILL REDUCE GREENHOUSE GAS EMISSIONS BY

26% **2030**

Case Study

Solvay has set itself several climate objectives for 2030, one being to phase out coal usage in energy production wherever renewable alternatives exist

SOLVAY

Official commitment

At Solvay, we are using science to solve key environmental and societal challenges. With our sustainability plan, Solvay One Planet, launched in early 2020, we are committed to clearly defined climate actions in our portfolio, operations, and workplace. Inspired by the United Nations Sustainable Development Goals, Solvay will reduce greenhouse gas emissions by 26% by 2030 and align trajectory with the "well below 2°C increase" of the Paris Agreement.

We will eliminate the use of coal, as no new coal-powered plants will be built, and phase out coal usage in energy production wherever renewable alternatives exist. Moreover, Solvay intends to reduce pressure on biodiversity by 30% in areas such as water eutrophication and marine ecotoxicity. Finally, in terms of concrete internal actions, Solvay will start switching to electric or hybrid company cars as of 2021.

Lighthouse initiative

Solvay constantly works to accelerate the climate and energy transition in line with the Paris Agreement. As communicated in our Solvay One Planet strategy and described here above, Solvay has set itself several climate objectives for 2030, one being to phase out coal usage in energy production wherever renewable alternatives exist.

To exemplify this commitment, we intend to invest €130M in Solvay's Soda Ash plant in Torrelavega, Spain. Indeed, one of the coal-fired boilers will be replaced with a Refused Derived Fuel (RDF) boiler with a biogenic content of around 60% meaning less carbon emissions not to mention also the contribution to the circular economy. The use of a cleaner fuel boiler replacing a coal boiler will be another milestone from an innovative and environmental point of view in such a competitive market.

Case Study

Sonae and Sonae Capital as supporter of the Paris Agreement aspire to achieve climate neutrality of operations by 2040

SONAE CAPITAL

SONAE INDUSTRIA

Official commitment

Sonae and Sonae Capital as supporters of the Paris Agreement and the EU Green Deal, aspire to achieve climate neutrality of operations (scope 1+2) by 2040 (excluding the energy business under Sonae Capital). Sonae Indústria is working towards reaching climate neutrality.

Lighthouse initiative

In 2020, Sonae Capital (CapWatt), in a partnership with Sonae Arauco, built a biomass-powered production facility to support businesses decarbonisation. The €50M investment leverages the best available technologies to generate renewable energy from biomass and power Sonae Arauco's sustainable wood-based panel production processes. Half of the biomass comes from unavoidable waste from the production of wood panels, while the remainder is sourced from forest residue unsuitable for other wood uses and crucial for forest management improvement and forest fire risk reduction.

This facility consumes 300K tons of biomass annually, enough to satisfy 100% of the thermal energy needs of the plant and generate an additional 83 GWh/year of decentralized renewable energy. As a result, almost 90% of all energy consumption at the facility is generated from renewable sources.

This partnership, with the integration of renewable energy and sustainable production, is a clear example of how circular bioeconomy can boost climate change mitigation by increasing carbon storage, reducing landfill and facilitating fossil energy replacement.

ALMOST

90%

OF ALL ENERGY CONSUMPTION AT THE FACILITY IS GENERATED FROM RENEWABLE SOURCES

REACH NET ZERO CARBON BY

2025

Case Study

Telefónica is at the forefront in the race for carbon neutrality. Our key target is to achieve net-zero emissions in our main markets by 2025[1]

Telefónica

Official commitment

Telefónica is at the forefront in the race for carbon neutrality. Our key target is to achieve net-zero emissions in our main markets by 2025[1], and extend this commitment to our operations in HISPAM and our value chain by 2040 at the latest.

In addition, Telefónica is committed to achieving:

- More energy efficiency: reduce energy consumption by 90% per unit of traffic in 2025, compared to 2015.
- More renewable energy: continue to use 100% of electricity from renewable sources, promoting its development with long-term agreements and self-generation (HISPAM 100% RE by 2030).
- Reduce CO_2 emissions in our value chain by 39% in 2025 and reach net-zero in 2040.
- Get our customers to reduce, with our Eco Smart solutions, 5 million tons of CO_2 in 2025.

Lighthouse initiative

In the framework of Telefónica's Energy Efficiency Programme, in 2019 we conducted 189 initiatives on energy efficiency and the reduction of GHG emissions in our networks and offices, with which we managed to save 313 GWh. In this way, we avoided the emission of more than 105,000 tons of CO_2. Last year, we reduced energy consumption by 72% per unit of traffic, compared to 2015.

In addition, thanks to our Renewable Energy Plan, 81.6% of our global electricity consumption comes from renewable sources (100% in our operations in Spain, UK, Germany and Brazil), which is equivalent to the average annual consumption of 1,325,000 households. Thus, we have prevented more than a million CO_2 emissions into the atmosphere.

1 Scope 1+2. Reduce by 90% and neutralise remaining emissions in the 4 main markets. -75% CO_2 emissions reduction with HISPAM by 2025. Targets validated according to the 1.5ºC scenario by the Science Based Targets initiative (SBTi)

Case Study

We are committed to contribute to the Paris Agreement (COP21) objective to keep the global temperature increase below 2°c

TITAN CEMENT GROUP

Official commitment

We have adopted a climate change mitigation strategy, which is reflected in our environmental policy and drives our Group CO_2 Initiative, targeting to achieve 35% reduction, by 2030 below 1990 level.

We continuously build on our CO_2 Initiative, which includes actions per plant, taking both conventional and innovative actions to mitigate CO_2 emissions. We are committed to contribute to the Paris Agreement (COP21) objective to keep the global temperature increase below 2°C and we are supportive of the European Commission's Green Deal vision of carbon neutrality by 2050.

As part of our Environmental, Social and Governance (ESG) targets for 2025 and beyond, we have set new ambitious CO2 reduction targets across our supply chain. You may see them here.

Lighthouse initiative

TITAN Cement is the owner of the company "ST Equipment & Technology" (STET), which is the global leader in industrial tribo-electrostatic separation. STET's separation technology is efficient and cost effective at recycling fly ash from coal combustion, thereby reducing landfill deposits, while beneficiated fly-ash can be used by cement and concrete producers to reduce their carbon footprint, contributing at the same time to the new model of circular economy.

STET offers its unique technology and services to customers in other industries as well, such as construction, mining, food & nutrition, and animal feed. In addition, The strong technical capability of STET is centred on the multidisciplinary concept of a contemporary research centre and a team of scientists, design engineers and technical research staff committed to working with knowledgeable commercial partners. STET's global coverage has expanded on six continents providing services to customers anywhere in the world.

TARGETING CO_2 REDUCTION OF

2030

35%

below 1990 level

REACH NET ZERO CARBON EMISSIONS BY

2050

Case Study

This ambition is already in action as TotalEnergies has achieved a 6% reduction of this intensity since 2015, the best performance amongst the majors

TotalEnergies

Official commitment

TotalEnergies' ambition is to get to net-zero emissions by 2050, together with society, for its global business across its production and energy products used by its customers. TotalEnergies takes 3 major steps towards achieving this ambition:

- Net-Zero across TotalEnergies' worldwide operations by 2050 or sooner (Scopes 1 & 2).
- Net-Zero across all its production and energy products used by its customers in Europe by 2050 or sooner (Scopes 1, 2 & 3) with an interim commitment of 30% reduction of scope 3 emissions by 2030[2].
- 60% or more reduction in the average carbon intensity of energy products used worldwide by TotalEnergies customers by 2050, with intermediate steps of 15% by 2030 and 35% by 2040 (Scopes 1, 2 & 3).

This ambition is already in action as TotalEnergies has achieved a 6% reduction of this intensity since 2015, the best performance amongst the majors, developing the Group as a broad-energy company.

Moreover, TotalEnergies is committed to reducing its absolute worldwide scope 3 emissions by 2030[2]

Lighthouse initiative

As part of this ambition, TotalEnergies wants to be a leader in biofuels, both as a producer and as a retailer. Therefore, TotalEnergies announced in September 2020 that it will convert its Grandpuits oil refinery in France into a zero-crude platform. By 2024, with an investment of more than 500 M€, the platform will focus on four new industrial activities:

- production of renewable diesel primarily intended for the aviation industry.
- production of bioplastics: PLA (poly lactic acid), biodegradable and recyclable.
- plastics recycling based on an innovative chemical recycling process, allowing the production of polymers with identical properties to virgin polymers.
- operation of two photovoltaic solar power plants.

Crude oil refining at the platform will be discontinued in 2021 and storage of petroleum products in 2023.

2 In reference to 2015

Case Study

Vodafone has committed to helping its business customers reduce their carbon emissions by a cumulative total of 350 million tonnes CO_2e globally between 2020 and 2030

vodafone

Official commitment

Vodafone is committed to building an inclusive and sustainable digital society. We have committed to reaching full value chain Net Zero emissions by 2040 (against a 2020 baseline) and switching to 100% renewable electricity by July 2021 in Europe and by 2025 globally.

We have an approved 2030 1.5C Science Based Target: by 2030 we will reach Net Zero emissions in our own operations and halve the emissions in our value chain. Most importantly, we are supporting society's transition to a low carbon future by enabling our customers to reduce their emissions. We have set a target of enabling the reduction of 350m tonnes CO_2e between 2020 and 2030.

Lighthouse initiative

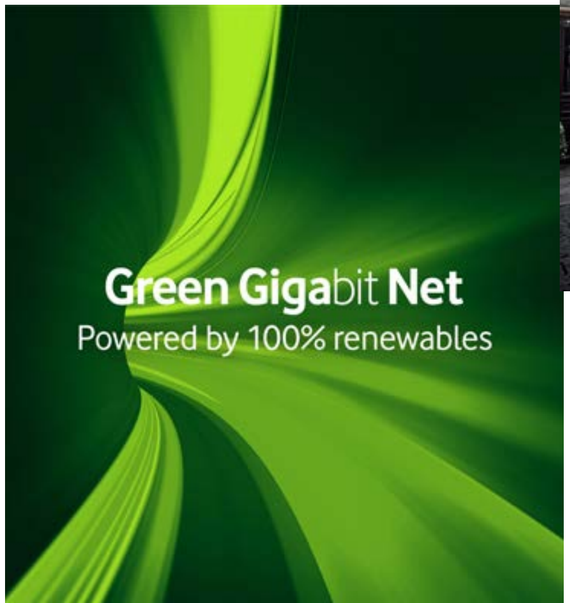
Vodafone has committed to helping its business customers reduce their carbon emissions by a cumulative total of 350 million tonnes CO_2e globally between 2020 and 2030, greater than the total annual carbon emissions of Italy for 2019.

Carbon reductions are mainly delivered through our IoT services, including logistics and fleet management, smart appliances, smart metering and manufacturing activities. For example, in the city of Guadalajara, Spain, 13,500 LED lights were connected to a central management system, reducing street lighting energy consumption by 68%. In addition to IoT, other savings can be made through healthcare services, cloud hosting and teleworking.

In FY19/20, our technology and services helped our customers save 6.9 million tonnes of CO_2e, nearly four times the emissions generated from Vodafone's own operations.

REACH 'NET ZERO' CARBON EMISSIONS BY

2040



IN 2021 WE WILL EXPAND OUR OFFERING TO INCLUDE BATTERY ELECTRIC HEAVY DUTY TRUCKS

2021

Case Study

Electric propulsion will become a cornerstone for commercial vehicles, with green energy supplied by batteries or hydrogen fuel cells depending on application.

VOLVO

Official commitment

Transport and infrastructure is a pre-requisite for any society to prosper, and with a growing world population, urbanization and booming e-commerce, the demand for transport will continue to increase. At the Volvo Group, we will meet that demand with solutions that are considerably safer, cleaner and more efficient than today´s.

We are committed to the Paris climate agreement. From a lifecycle perspective, the vast majority of emissions occur during the use phase of our products and therefore our first priority is to develop solutions that reduce the CO2 footprint. It is our ambition that by 2040, all our products enable our customers to go fossil fuel free. We will track our contribution towards a fossil free transport system using the criteria set up by the Science Based Target initiative, SBTi.

Lighthouse initiative

Electric propulsion will become a cornerstone for commercial vehicles, with green energy supplied by batteries or hydrogen fuel cells depending on application.

- Today, our range of battery electric vehicles and machines includes city buses, medium duty trucks, compact excavators, and electric drivelines for industrial- and marine applications.
- From 2021 we will expand our offering to include battery electric heavy duty trucks.
- In the second half of the decade we aim to start series production of fuel cell powered commercial vehicles and machines.
- By 2030, approximately 35% of our vehicles sales will consist of electrical alternatives.

The transition to electric solutions is dependent on the access to electricity and hydrogen from clean sources and on a rapid expansion of the charging infrastructure. De-carbonizing the transport industry is a joint effort where we work together with customers, authorities, energy companies and other business partners.

The European Round Table for Industry (ERT) is a forum that brings together around 55 Chief Executives and Chairmen of major multinational companies of European parentage, covering a wide range of industrial and technological sectors. ERT strives for a strong, open and competitive Europe as a driver for inclusive growth and sustainable prosperity. Companies of ERT Members are situated throughout Europe, with combined revenues exceeding €2 trillion, providing around 5 million direct jobs worldwide - of which half are in Europe - and sustaining millions of indirect jobs. They invest more than €60 billion annually in R&D, largely in Europe.

www.ert.eu