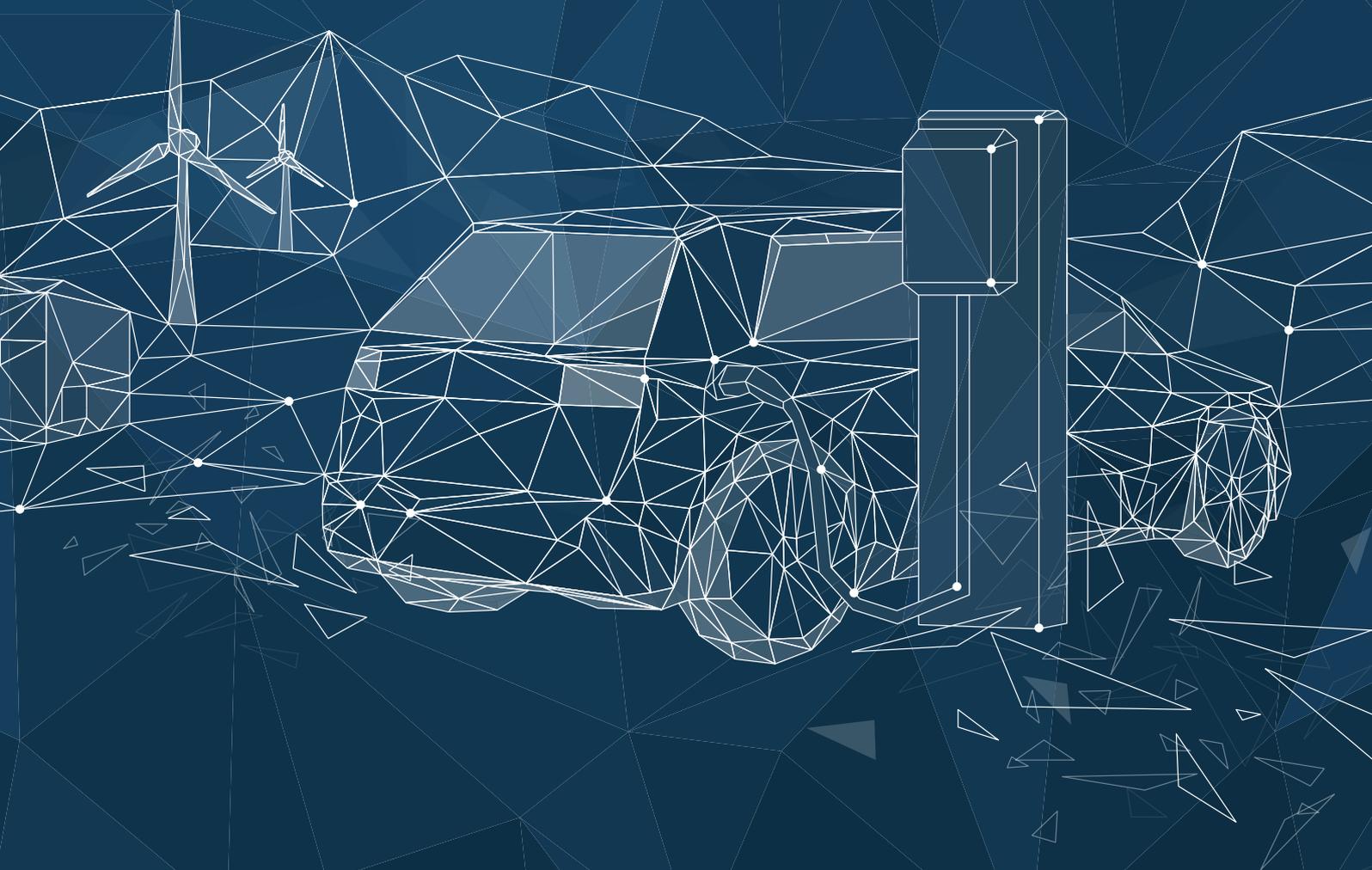


DECARBONIZATION



PARTICULAR RESPONSIBILITY FOR CLIMATE PROTECTION

Climate change is one of humanity's key challenges. The speed of global warming has rapidly increased in the last three decades. Stopping it is a challenge for us all. According to the calculations of the Intergovernmental Panel on Climate Change (IPCC), the transport sector accounts for around a fifth of global greenhouse gas emissions. As one of the world's largest automotive manufacturers and mobility providers, we are aware of our responsibility and have defined the decarbonization of our Group and its products as a focus area and therefore a key element of our corporate strategy.

We are committed to the Paris Climate Agreement, which aims to keep the increase in global temperature by 2050 to well below two degrees Celsius. By 2050, we want our whole Group to become net carbon neutral. We have set important milestones and intermediate goals for ourselves along the way: by 2030, we want to reduce the CO₂ emissions of our passenger cars and light commercial vehicles by 30% per vehicle over their entire life cycles, compared with the base year of 2018. Alongside the Group's electric offensive, we are focusing to a greater extent on integrating renewably generated electricity in the use phase and switching our production plants' external power supply to renewable energy.

Decarbonization occupies a key position in the NEW AUTO Group strategy and is one of six focus topics in the Group initiative to improve ESG performance. The commitment to climate protection is also a core part of our "goTOzero" environmental mission statement, which stands for a net carbon-neutral way of doing business.

Reporting According to TCFD Recommendations

For the first time, we are reporting our activities on climate protection in detail in accordance with the guidelines of the Task Force on Climate Related Financial Disclosures (TCFD), which was set up by the G20's Financial Stability Board. These guidelines create a coherent framework for voluntary and consistent reporting of an entity's climate-related financial risks and opportunities. This chapter on decarbonization is structured accordingly.

CLIMATE PROTECTION CENTRALLY MANAGED

The Group Board of Management is the Group's highest sustainability body. The Chairman of the Board of Management has cross-functional overall responsibility for sustainability. The Group Steering Committee for Sustainability bears the main responsibility for climate protection along the value chain as the highest body below the Board of Management. Product and portfolio topics are managed by the Group Steering Committee for CO₂.

At least twice a year, the Group Steering Committee for Sustainability reports information about corporate-responsibility and sustainability topics – e.g. about handling the risks and opportunities of climate change – and the Group Steering Committee for CO₂ reports information about product-related greenhouse gas emissions to the Group Board of Management, which makes key decisions on topics relevant to climate protection. For example, the Group plans to invest around € 89 billion in cutting-edge areas such as hybridization, electric mobility and digitalization by 2026. This equates to around 55% of capital expenditure and all the Group's research and development costs in the planning period. € 52 billion alone is earmarked for investment in electric mobility.

The Group Board of Management is also the highest internal decision-making level for environmental issues. The relevant Group steering committees, such as the Group Steering Committee for Sustainability or for the Environment and Energy, are responsible for managing environmental protection issues throughout the Group. Other bodies oversee important individual aspects for our products – for example CO₂ and exhaust emissions. These include the Group Steering Committee for CO₂ and the Group Steering Committee for Fleet Compliance and Exhaust Emissions. They report to the Board of Management on various topics: the implementation of the NEW AUTO Group strategy, the decarbonization program, risk management, business plans, setting and pursuing targets, and requirements for handling climate-related topics. For Volkswagen, climate-related topics have an important strategic and operative significance – e.g. with respect to regulatory requirements and the corresponding performance of our products and also our Group's ongoing transformation process. In addition to having Group-wide responsibility for sustainability, the Board of Management regularly consults with Volkswagen's Sustainability Council on climate protection.

Remuneration of the Board of Management Linked to Decarbonization Progress

The Volkswagen Group has linked the remuneration of the members of its Board of Management to, among other things, the development of the decarbonization index as the core climate-protection-related key indicator in the Group. This serves as a measurement tool for the CO₂ emissions of the brands of the EU-27, China and US regions that manufacture passenger cars and light commercial vehicles over the entire life cycle. The Volkswagen Group's Remuneration Report provides further information on how key sustainability criteria are taken into account in the Board of Management's remuneration.

 > www.volkswagenag.com > Investor Relations > Corporate Governance > Remuneration

MANAGEMENT OF GROUP-WIDE CLIMATE PROTECTION MEASURES

The Group Board of Management member responsible for production regularly informs the Group Board of Management on sustainability, environmental and energy-related topics. The member of the Board of Management is responsible for all production and environmental activities, including activities connected with climate-friendly mobility. The Group-wide management of environmental protection is the responsibility of the member of the Board of Management responsible for production and of the Group Steering Committee for the Environment and Energy, which is supported by numerous specialist bodies.

Climate-related topics are coordinated and managed by regular meetings of the Group steering committees, by internal and external stakeholder engagement and by continuous communication with the heads of the Group's and the brands' various research and development units and other Group functions.

Volkswagen's Group Head of Environment provides reports to the Group Board of Management on environment- and energy-related topics in their capacity as Head of the Group Steering Committee for the Environment and Energy. The Division Head of the Group Strategy and General Secretariat provides reports to the Chairman of the Group Board of Management in their capacity as Head of the Group Steering Committee for Sustainability and regularly informs the Group Board of Management on sustainability- and environment-related topics. The positions described have the task of coordinating and managing the sustainability, environmental and CO₂ activities decided by the Group Board of Management.

The Volkswagen Group's Climate-Related Risk and Opportunity Analysis

The Group identifies both risks resulting from climate change (physical risks) and risks and opportunities due to the shift toward a decarbonized economy (transitional risks and opportunities).

I. Transitional risks

a. Politics & law

Emissions standards

Compliance with fleet and exhaust-emission limits can be technically challenging and require significant investment. Breaches of limits may also result in significant financial penalties. The Volkswagen Group closely coordinates technology and product planning with its brands so as to implement existing legal requirements and avoid breaches of limits.

Carbon pricing

Volkswagen supports ambitious carbon pricing, as this promotes the transformation to climate-friendly electric mobility in line with Group strategy. An increasingly effective

carbon price, particularly in Europe, may, however, also lead to additional costs in energy and material consumption. The Group is countering this risk by switching its energy supply to renewable energies in the long term and integrating corresponding quotas for the use of renewably generated electricity in supplier-side procurement requirements.

Additional costs or earnings losses may result from a mandatory tightening of emission reduction targets or early divestitures of the Group portfolio's high-emission products. The Group counters this risk through certification of the conformity of its self-imposed decarbonization targets in accordance with the Paris Climate Agreement by independent and internationally recognized organizations such as the Science Based Targets initiative.

b. Technology

Increasing model diversity

The increasing diversity of models as part of the electric offensive and shorter product life cycles come with a global increase in vehicle start-ups. The technical systems and processes involved are complex, which means there is a risk that vehicle start-ups may be delayed. The Group counters this risk by identifying weak points in product creation early and on the basis of experience, with the aim of protecting vehicle start-ups in respect of quantity, quality and timing.

c. Market

Emission-based vehicle taxation

Potential increases in vehicle taxes based on CO₂ emissions – as is already the case in many European countries – may lead to demand shifting in favor of smaller segments and engines and have an adverse financial impact for the Group. The Group counters this risk by constantly developing new and fuel-efficient vehicles and alternative drive technologies. The electrification of the portfolio and the Group's drive and fuel strategy form the basis for this.

d. Reputation

Reporting & communication

Critical media reports or defensive communication by the Group in relation to its CO₂ emissions, reduction targets and the decarbonization strategy might lead to reputational damage and, as a consequence, to reductions in the demand for the Group's products. The Group counters the risk through regular communication regarding its carbon footprint, emission reduction targets, and electrification and decarbonization strategy in the annual and sustainability reports and in its stakeholder management.

II. Physical risks

a. Acute

Extreme weather events

Potential disruptions of the supply of critical input factors, such as semiconductors, caused by the impact of weather events such as floods or winter storms may potentially lead to production downtime that has a financial impact for the Group. The Group counters the supply risk with strategic allocation of quantities available to the brands, prioritization of components and the intensification of business relationship management with suppliers.

b. Chronic

Water availability

If the climate impacts water availability, this can lead to a need for site-related investments or cause added costs as a result of any adjustment measures needed or alternative supply routes. The Group counters this risk by assessing the climate-related vulnerability of production sites and deriving appropriate countermeasures using environmental analyses.

III. Opportunities

a. Products

Sales potential

The transformation of transportation and the associated transition to lower-emission and electric mobility open up new sales potential for fuel-efficient vehicles, electric vehicles and other alternative drives. The Volkswagen Group is laying the groundwork to open up the sales potential of the transformation of transportation with its brands based on coordinated technology and product planning and the associated electric offensive.

b. Efficiency

Cost savings

Decarbonization measures can go hand in hand with tapping efficiency potential. These include, for example, measures for more efficient LED lighting, modernized heat supply and cooling at the sites or also optimized washing and drying processes in production. The Group identifies and taps such potential by systematically recording and assessing reduction measures to be implemented on the basis of various decision-making criteria as part of the decarbonization program. Furthermore, the Group has a tool that provides additional incentives for implementing efficiency measures in the form of its CO₂ fund.

c. Market

Capital market performance

A positive performance on CO₂ and reporting in line with capital market requirements may positively impact rating outcomes and the Group's capital market conditions. ESG criteria are therefore an integral component of the NEW AUTO Group strategy with the aim of achieving sustainable improvements in capital market performance. Furthermore, the Group is gearing its reporting even more systematically to capital market requirements (e.g. TCFD). Volkswagen published its first Green Finance Report during the reporting year. The Green Finance Framework systematically links our corporate objective of CO₂ neutrality by 2050 with our financing strategy.

> Sustainability Management

Scenario Analysis as a Decision-Making Basis for Climate Protection

Volkswagen is a member of the Mobility Multiple (MoMo) working group of the International Energy Agency (IEA). The Group helped develop the model itself and uses model data and assumptions in a variety of contexts. MoMo uses various IEA ETP (Energy Technology Perspectives) scenarios, including 2DS (2 °C Scenario) and B2DS (Beyond 2 °C Scenario). We have focused on the target years 2025 and 2030 here. These describe the milestones on the way to net carbon neutrality by 2050. We have conducted analyses up to 2050, as this was the maximum timeframe covered by the model. We have therefore concentrated the investigations on the relevant reference years of 2025 and 2030, as these represent reference years for internal KPIs.

The scenario analysis focused on the areas of production, sales and technology, the impact of products, and materials procurement. In respect of production-related emissions, the analysis showed that a significant reduction in emission intensity per vehicle will be needed to achieve the UN climate goals, particularly in view of increasing unit sales. With respect to the development of the vehicle sector, the analysis showed that electrification is going to grow considerably in importance; internal combustion engines will, however, retain a substantial market share in the next decade, even in a B2DS scenario. These results are necessary to make a well-founded decision regarding our sales planning and materials production. They are integrated into our decarbonization index scenarios to assess the reduction per vehicle over the entire life cycle. The market- and product-related results support and affirm our decision confirmed by the NEW AUTO Group strategy to invest massively in electric mobility and in increasing the efficiency of the internal combustion powertrain.

DECARBONIZATION PROGRAM TARGETS WHOLE LIFE CYCLE

In order to achieve its targets, the Volkswagen Group is implementing a comprehensive and holistic decarbonization program that covers the whole life cycle of the vehicles. It is built on three key principles, which at the same time represent a setting of priorities: the top priority is measures with which CO₂ emissions can be avoided or reduced. In second place follow measures with which we can gradually shift the energy supply in the entire value chain to renewable energy. Finally, we offset unavoidable CO₂ emissions through climate protection projects that meet the high international standards.

The electrification of our vehicle fleet and the associated cut in CO₂ emissions in the use phase mean that the relevance of the supply chain in the decarbonization of the Volkswagen Group is continuously increasing. The Volkswagen Group therefore systematically identifies the biggest drivers of CO₂ emissions in the supply chain and defines measures to reduce them.

One identified focus here is steel. The Volkswagen Group is therefore in close communication with selected steel manufacturers in order to accelerate the switch to carbon-neutral products. For example, the Group subsidiary Scania has entered into a cooperation with the start-up H2 Green Steel. For the ID. models, for example, the Volkswagen Passenger Cars brand is going to use additional sustainable components this year, including battery cases and wheel rims made of green aluminum and tires produced with low emissions. The ID. family's carbon footprint can be improved by around two metric tons per vehicle in the next few years through ten focus components. For new vehicle projects, Volkswagen wants to make CO₂ emissions a key contract-award criterion for relevant supplier contracts in the future.

We are tackling the challenge that higher CO₂ emissions initially arise in the supply chain during the transition to electric mobility and shares of the use phase are shifting to production. This is because of the difficulty of raw material extraction and the energy-intensive processes in manufacturing batteries, which are also used in our supply chain. All suppliers (new contract awards) of high-voltage batteries are already contractually obliged to use certified power from renewable sources in their production processes. This stipulation was expanded to include additional requirements in relevant lower levels of the value chain and has been integrated into our contract awards during the reporting year. CO₂ emissions in battery manufacturing are therefore falling.

More information on decarbonization measures in the upstream levels of the value chain can be found in the "Responsibility for supply chains and business" chapter.

On the key topic of battery cells, we want to take a pioneering role in Germany and worldwide and are making targeted investments in our own production capacity to this end. For example,

Volkswagen Group Components has significantly expanded the production of battery systems for the latest generation of e-vehicles at its Braunschweig plant. Following the first stage of expansion with the maximum capacity of 250,000 battery systems, the second expansion stage with the same capacity started in 2021. In total, the site will now be able to install up to 500,000 batteries for models based on the modular electric drive matrix (MEB) each year following complete ramp-up. In addition, Volkswagen Group China started construction of a production plant for battery systems in Hefei (Anhui Province) in the reporting year. The plant will initially supply between 150,000 and 180,000 high-voltage battery systems for Volkswagen Anhui's all electric vehicles based on the Group's MAB platform.

Volkswagen Group Components opened a modern laboratory for cell research and development in Europe in 2021, located in Salzgitter. The new unified battery cell for the volume segment will roll off the production line at the gigafactory in Salzgitter from 2025. By 2030, the Volkswagen Group wants to operate six cell factories with a production output of 240 GWh in Europe together with partners and in this way guarantee supply security.

Volkswagen also owns a stake in Swedish battery company Northvolt AB, which is going to build a factory for the production of lithium ion batteries that should start production in 2024. We supported our partner with US\$ 620 million in a financing round to expand capacity in the areas of production, recycling, and research and development in the Northvolt Ett gigafactory in Skellefteå in northern Sweden.

E-mobility as a Key Factor of Decarbonization

Compared to vehicles with an internal combustion engine, electric vehicles have less of an impact on the environment, as they produce no local emissions during use. Our calculations show that the current carbon footprint of electric vehicles is already better on average in Europe in most markets than comparable gasoline or diesel vehicles over the entire life cycle as well.

The consistent electrification of our vehicle fleet opens up the path to sustainable, emission-neutral mobility for our customers. We plan to invest around € 52 billion in electric mobility across the Group by 2026. Electric vehicles' share in sales in our core markets of the EU, the US and China should rise to more than 50% by 2030. In the EU alone, the Group wants to achieve a share of sales of at least 60% at this time and for the Volkswagen Passenger Cars brand 70%. As a result, the Group would substantially exceed EU Green Deal targets aimed at tightening fleet emission threshold values. The new electric vehicles are manufactured at eight sites in Europe, China and the US. The modular electric drive matrix (MEB) serves as the technical backbone of the e-offensive and is used in many more of our electric models. We saw the market launch of additional e-models from different brands in 2021, including the Volkswagen ID.4, Volkswagen ID.6 (China), ŠKODA ENYAQ iV, Audi Q4 e-tron, Audi Q4 Sportback e-tron, Audi e-tron GT and Porsche Taycan Cross Turismo.

Renewable Energy for Vehicle Use

Around 75% of a car's CO₂ emissions arise in the use phase ("well to tank" and "tank to wheel"). A key factor in achieving carbon-neutral e-mobility is consistently charging vehicles with 100% renewably generated electricity. This is the only way that almost half of all CO₂ emissions can be avoided compared with the normal EU electricity mix.

By supplying energy from renewable sources via our subsidiary Elli (Electric Life), we can offer our customers the option of being emission-free in the use phase too. Volkswagen Naturstrom, which is almost 100% carbon neutral, is generated by wind, solar and hydroelectric power plants in Germany, Austria and Switzerland. In order to set up fast charging infrastructure, Volkswagen founded the joint venture IONITY with other OEMs. IONITY had set up 400 fast charging stations on major highways across Europe by 2020. Along with its partners, the Group wants to operate around 18,000 public fast charging points in Europe by 2025. This represents a fivefold expansion of the fast charging network compared to today and corresponds to about one third of the total demand predicted for 2025 on the continent.

This will be achieved through a series of strategic partnerships in addition to IONITY. For example, BP wants to construct around 8,000 fast charging points across Europe together with Volkswagen. In cooperation with Iberdrola, Volkswagen will, in particular, cover main traffic routes in Spain. In Italy, Volkswagen wants to collaborate with Enel to expand the fast charging network both along freeways and in urban areas. Volkswagen wants to spend about €400 million for the European program as a whole by 2025. Volkswagen wants to expand the public fast charging network in the US and China too. Electrify America is planning around 3,500 fast charging points in North America by the end of the reporting year. In China, Volkswagen is planning a total of 17,000 fast charging points by 2025 through the CAMS joint venture.

Volkswagen supports the construction of wind farms and solar parks

In addition, the Volkswagen Group is the first car maker to directly support the expansion of renewable energy on an industrial scale in the future. New wind farms and solar parks are to be constructed in several regions of Europe by 2025. Contracts for the first projects were already signed with energy company RWE in the reporting year. In Germany, Volkswagen supported the construction of a solar plant with a total capacity of 170 million kWh each year. This was completed in Tramm-Göthen in Mecklenburg in northeastern Germany by the end of 2021 and was constructed entirely without any state subsidies. Incorporating around 420,000 solar modules, it is the largest independent solar project in Germany. It is planned that all projects together will generate around 7 terawatt hours (TWh) of additional green electricity by 2025. This should even better cover the electricity needs of the electric vehicles brought to market and mean a net carbon neutral use phase can be achieved for the electric fleet. In addition, in the reporting year, the supply of around 1 TWh was

contractually agreed through entering into partnerships with electricity suppliers.

E-cars will be part of energy systems in the future

Volkswagen will integrate the electric car in private, commercial and public energy systems in the future. This will allow green electricity from the solar plant to be stored in the vehicle and fed back into the home network if needed. Not only will customers be more independent of the public power grid, they will also save money and reduce CO₂ emissions. Models based on Volkswagen's own MEB platform will support this technology from 2022 onwards. Volkswagen also plans to offer a complete package with all technical modules and digital services for bidirectional charging. The technology is soon to be used on a larger scale – for example in residential buildings, businesses or in the general power grid.

Climate Protection in Manufacturing

Since 2010, Volkswagen has increased vehicle production from 7.3 million to 8.0 million vehicles (an increase of 10%). Although absolute energy consumption increased by 6%, at the same time absolute greenhouse gas emissions reduced by 27%. Volkswagen wants to continue this trend and reduce greenhouse gas emissions in production by 50.4% in absolute terms compared to 2018 by 2030, which corresponds to a 1.5 °C trajectory. By 2021, absolute greenhouse gas emissions had already been decreased by 20.7%. Key to this are increasing energy efficiency and switching to a renewable power supply as important components of the decarbonization strategy. Nine production sites are already operated on a carbon-neutral basis, including compensation measures: Brussels and Győr (Audi), Zwickau and Dresden (Volkswagen), Zuffenhausen and Leipzig (Porsche), Crewe (Bentley Motors), Vrchlábí (ŠKODA) and Santa Agata (Lamborghini).

The Volkswagen Group has made progress in supplying its plants with electricity from renewable energies since 2019. The percentage of electricity purchased externally rose from 95 to 96% at EU production sites within one year. By 2023, all EU sites are to be supplied with 100% electricity from renewable sources. By 2030, the same target is planned for all global sites outside China.

A total of 43 production sites within the EU and ten additional sites outside the EU were fully converted to an external electricity supply generated from renewable energies. This meant that 100% renewably generated electricity was used at 53 Group sites in 2021.

In 2021, 49% of the Group's total global electricity consumption (including China) at its production sites was accounted for by renewable electricity – an increase of 9% compared with the previous year. The Volkswagen Group is currently working with its Chinese partners to develop its own targets for its Chinese production sites. The high proportion of coal-fired power in the Chinese electricity mix and the highly regulated electricity market make this project particularly challenging.

Volkswagen is also paying particular attention to converting its own electricity generation. The conversion of the power plants in Wolfsburg from coal to gas, which commenced in 2019, is expected to reduce operational emissions by 60% from 2023 onwards, which equates to annual savings of 1.5 million metric tons of CO₂.

In 2021, greenhouse gas emissions by the Group decreased by 20,000 metric tons CO₂ compared with the previous year. The increased percentage of renewable energies used to supply production sites played a key role in achieving this decrease.

In addition, Volkswagen is working at full speed on advancing energy-efficiency projects in its 120 production facilities. Across the Group, 1,544 measures for saving energy were implemented in 2021 alone.

GOTOZERO IMPACT LOGISTICS

In order to achieve the climate targets and contribute to the decarbonization of the Group, Volkswagen Group Logistics is working together with colleagues from Brand Logistics in the goTOzero Impact Logistics initiative. Continuous optimization of the transport network and logistics processes can reduce emissions. In addition, the use of new, low-emission technologies in the transportation of production materials and finished vehicles is being reviewed and pushed.

The measures the Volkswagen Group has taken to achieve carbon-neutral logistics going forward include moving shipments from road to rail and the complete avoidance of CO₂ through the use of green electricity on electric railroad lines in Germany in collaboration with Deutsche Bahn AG.

Volkswagen is one of the first carmakers to transport most of its new vehicles on the North Atlantic using low-emission LNG ships (LNG – liquefied natural gas). After the first two LNG car carriers entered service in 2020, Volkswagen Group Logistics is going to use four more ships with dual fuel engines that can be powered with liquid gas from the end of 2023 and run using renewably generated fuels in the future. By using liquid gas, Volkswagen aims to reduce the ships' CO₂ emissions. In European ship transportation, the Group already operates two car carriers with biofuel produced from plant-based waste material – such as waste oil from the food industry.

Volkswagen also plans to tap potential for cutting emissions in internal mobility processes in the future. For example, for planning and organizing business travel by air and rail, a carbon calculator is to be trialed for the Board of Management and top management in a pilot project.

CO₂ Fund Funds Decarbonization of the Group's Own Processes

The Volkswagen Group has an internal CO₂ fund that proportionally funds projects around the world that make a contribution to reducing greenhouse gas emissions and are transferable to as

many sites, brands and companies as possible. Up to €25 million per year is available for this. At the end of the 2021 reporting year, a number of successful projects were completed. These included measures for decarbonizing the sales network as part of the Sustainability@Retail initiative. In other areas of business, projects range from the construction of a biogas plant for the ŠKODA brand in India to supporting technologies to increase the proportion of recycled plastics for vehicle components. New projects have already been decided for 2022 as well.

Carbon-Neutral Handover of Electric Vehicles

For a number of the Group's electric vehicles, Volkswagen has decided to make their handover to customers net carbon neutral. For as long as we cannot avoid CO₂ emissions and cannot use renewable energies everywhere, we will do this by voluntarily offsetting the remaining greenhouse gas emissions from the supply chain, production and logistics of MEB vehicles from the Volkswagen Passenger Cars, Volkswagen Commercial Vehicles, SEAT and ŠKODA brands in Europe and of selected vehicle types from the Porsche and Audi brands based on the PPE platform (Premium Platform Electric). We expect electrification and the associated net carbon-neutral delivery in Europe to increase the need for offsetting for the next years, which totaled 6.1 million metric tons of CO₂ for the Group (excluding China) in 2021.

Offset projects in line with high international standards

We offset unavoidable emissions from the life cycle phases, such as from the supply chain, production, etc., through climate protection projects with high certification standards, such as the Verified Carbon Standard (VCS) in combination with the Climate Community and Biodiversity Standards (CCB) or the Gold Standard. For the quality assurance of offsetting projects, we assess the projects with regard to compliance with standards, credibility, site selection, project size and the contribution to achieving the United Nations Sustainable Development Goals. To underpin our commitment to climate protection projects and be able to develop our own projects in accordance with the highest standards, we established a joint venture for offset projects during the reporting year.

Use of technical carbon sinks and carbon removal from the atmosphere

We recognize the need to tap additional potential by creating technical carbon sinks and associated projects for carbon dioxide removal to achieve the decarbonization goals. And we are running our own research projects to this end. Among other things, Volkswagen Group Innovation's "Climate Engineering" technology building bundles all the Group's initiatives on carbon dioxide removal approaches to leverage synergies for all the brands, the entire Group and our customers. One key focus is activities for evaluating direct-air-capture technologies and their industrialization to establish broad access to affordable negative emissions for industry and society in the short to medium term. For the acceleration of previous efforts on the way to decarbonization, the Group has signed a memorandum of understanding for the development of relevant projects to permanently remove CO₂

from the atmosphere with its Icelandic project partner Carbfix, which turns CO₂ into natural stone through mineralization in a certified process.

European Commitment in the CEO Alliance

The Chairman of the Board of Management of the Volkswagen Group, together with the CEOs of ten further companies with their registered offices in Europe, expressly acknowledged the EU's Green Deal and the associated climate protection targets. The CEO Alliance for Europe's Recovery, Reform and Resilience supports the goal of making the EU the leading region in the world in climate protection, accelerating investment, driving innovation and thus creating future-proof jobs. The members of the alliance see themselves as an "Action Tank" and collaborate on a range of concrete joint projects: an EU-wide charging infrastructure, integration of EU energy systems, a digital Carbon Footprint Tracking system, sustainable buildings, electric buses for Europe, a value chain for green hydrogen and the establishment of European battery production. The alliance consists of companies from various sectors and European nations.

On the occasion of the European Commission's presentation of the Fit for 55 legislative package, the CEO Alliance issued policy

recommendations for a progressive and ambitious approach. The CEOs' proposals particularly include strong carbon price signals, rapid measures for decarbonizing mobility and transport, the transformation of the building sector and a rapid restructuring and renewal of the energy system and all EU member states.

In 2021, the CEO Alliance also expressed support for carbon pricing across industries and countries and called for political decision-makers in Europe to set a strong price signal. Another proposal is a European carbon pricing system that would include measures to simultaneously achieve a social balance and emissions reduction. In a contribution to the debate in 2021, the Chairman of the Board of Management of the Volkswagen Group proposed a minimum price of € 60 per metric ton of CO₂ from 2023 in Europe. This figure should rise to € 100 by 2026. The alliance is also calling for a change to the EU Emissions Trading System ETS (for electricity and heavy industries) and additional sector-specific emission trading systems for the areas of mobility, transportation and buildings. These systems could then converge from 2030.

THE MANAGEMENT OF CLIMATE-RELATED RISKS

The quarterly risk process is used at all Group brands, key Group companies and Volkswagen Financial Services AG and Volkswagen Bank GmbH to identify and manage acute risks. The risks and management measures are documented in the Risk Radar risk management IT tool.

As part of the risk assessment, a score is calculated for each risk by multiplying the likelihood of occurrence by the potential extent of the damage. This enables comparison of the risks. The extent of the damage is calculated from the criteria of financial loss and reputational damage and the potential threat to adherence to external legal requirements. A score between 0 and 10 is assigned to each of these criteria. The measures implemented to manage and control risk are taken into account in the risk assessment (net perspective).

The score for a likelihood of occurrence of more than 50% in the analysis period is classified as high; for a medium classification, the likelihood of occurrence is at least 25%. For the criterion of financial loss, the score rises in line with the loss; the highest score of 10 is reached when the potential loss is upwards of € 1 billion. The criterion of reputational damage can have characteristics ranging from local erosion of confidence and loss of trust at local level to loss of reputation at regional or international level. The potential threat to adherence to external legal

requirements is classified based on the influence on the local company, the brand or the Group.

The result is a risk score of between 0 and 200 as an expression of the risk assessment. A score of 0–10 for the likelihood of occurrence is multiplied with a score of 0–20 for the extent of the damage.

Risk reporting to the committees of Volkswagen AG takes place quarterly depending on materiality thresholds. Acute risks from a risk score of 40 or potential financial loss of € 1 billion or more are presented to the Board of Management and the Audit Committee of the Supervisory Board of Volkswagen AG. The quarterly risk process covers acute risks for our business including risks for the achievement of our sustainability goals and thus also risks associated with climate change. The focus is on acute risks for the next 24 months (short and medium term). In addition, long-term risks requiring short- and medium-term counter-measures are identified and managed using the quarterly risk process. We also use competition, environmental and market studies to identify risks.

DEFINITION AND PURSUIT OF AMBITIOUS DECARBONIZATION TARGETS

The Volkswagen Group wants to become a net carbon neutral company by 2050. Compared to 2015, the company wants to reduce the carbon footprint of its passenger cars and light commercial vehicles by 30% per vehicle by as early as 2025. To achieve this goal, offset action is also planned alongside carbon reduction measures and converting to renewable energies.

In 2021, the Group intensified its decarbonization targets, significantly strengthening its ambitions: the Volkswagen Group is aiming to reduce the CO₂ emissions of its passenger cars and light vehicles by 30% in production and the use phase between 2018 and 2030. The plan goes beyond the existing intermediate goals for 2025 because the goal for 2030 is to be achieved through pure CO₂ reduction. The Science Based Targets initiative (SBTi) has confirmed to the Volkswagen Group that the Company fulfills the conditions for limiting global warming to “well below two degrees Celsius” with its decarbonization target. Furthermore, during the reporting period Volkswagen committed to increase the level of its ambition to 1.5 degrees Celsius, and the SBTi is currently assessing this.

The decarbonization target for 2030 covers not only passenger cars and light commercial vehicles but also a target for heavy trucks and buses from Scania, which represents a sub-target for the Group. Scania is committed to reducing absolute Scope 1 and Scope 2 greenhouse gas emissions by 50% by 2025 compared with the base year of 2015. The Scope 3 greenhouse gas emissions from the use of vehicles sold are to be reduced by 20% per vehicle kilometer by 2025, also compared with a 2015 baseline. The SBTi confirmed to Scania that these targets are at a level that allow global warming to be limited to 1.5 °C. MAN also adopted a commitment in the reporting year and is aiming for SBTi certification of the decarbonization target.

The Group’s previous target of reducing CO₂ emissions by 30% per vehicle between 2015 and 2025 remains an intermediate goal. Because this also includes climate projects offsetting carbon, it is not verified by the SBTi.

The level of ambition for the decarbonization targets is considered a minimum requirement for the Group brands, which are also free to set higher targets themselves. For example, Volkswagen wants to reduce its CO₂ emissions per vehicle in the EU by 40% and significantly exceed the Group-wide target of 30% by 2030 (base year of 2018). Porsche aims to become a net carbon-neutral company by 2030.

Decarbonization Index for Target Achievement Measurability

In the decarbonization index (DCI), we have a meaningful measuring instrument that makes our progress and interim results in this area public and verifiable. The DCI is calculated based on the CO₂ emissions over the entire life cycle of the brands of the Europe (EU 27, UK, Norway and Iceland), China and US regions

that manufacture passenger cars and light commercial vehicles. In this index, the use phase is calculated over 200,000 km and with reference to region-specific fleet values without legal flexibilities. The intensity of the CO₂ emissions from the electricity used to charge electric vehicles is also calculated on the basis of region-specific energy mixes. Maintenance of the vehicles is not taken into account here. Our vehicle life cycle assessments, which are used as the data basis for calculating supply chain and recycling emissions, have been verified externally and independently in accordance with the ISO 14040 standard. During the reporting period, luxury brands Bentley, Lamborghini and Bugatti were added to the DCI calculation process.

The DCI calculation methodology is regularly adjusted depending on internal and external requirements, such as new test cycles for fleet emissions. In order to present a methodologically consistent time series, published DCI values can therefore also be adjusted to the new methodology and thus changed. The DCI computational logic changed during the 2020 reporting period as a result of the testing methodology for fleet values being changed. Given the fleet regulation rules in force, in 2021 the test cycle for measuring consumption and exhaust gas data was changed from NEDC (New European Driving Cycle) to WLTP (Worldwide Harmonized Light-Duty Vehicles Test Procedure). As a result of the more realistic test cycle, higher consumption is reported and emissions recorded in the use phase increase accordingly.

The DCI is to be decreased
by **30%**
by 2030 compared with the
base year of 2018.

In the reporting year, the DCI value averaged 45.9 metric tons of CO₂ per vehicle. Compared to the WLTP-adjusted value for 2020, that represents a reduction of 1.7 metric tons of CO₂ per vehicle. The electrification of the portfolio combined with the use of renewable energies in production and the use phase is showing a significant impact.

TRANSPARENCY ON CO₂ EMISSIONS AS A BASIS FOR IMPROVEMENTS

Every year, we calculate the Group’s carbon footprint using the Scope 1 to 3 inventory, in line with the requirements of the internationally accepted Greenhouse Gas Protocol (GHG). On this basis, we can determine the success of the measures we have put in place and identify other areas where we can take action.

Not shown are additional CO₂ compensation projects, e.g. for the carbon-neutral delivery of electric vehicles. The compensation volume in the reporting period ran to 6.1 million metric tons of CO₂.

This equates to 0.9 metric tons of CO₂ per vehicle for all vehicles included in the Decarbonization Index.

In line with the Scope 3 standards published by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI), we are reporting CO₂ emissions for 13 out of a total of 15 Scope 3 categories in 2021. According to this, around 16% of all Scope 3 emissions are in the “Purchased goods and services” emissions category, while 76.7% are in the “Use phase” emissions category (well to wheel). To calculate use-phase emissions in the DCI and in the Scope 3 GHG inventory, fleet values not including any legal flexibilities are used.

The calculation of CO₂ emissions in the use phase of the Scope 3 GHG inventory is based on a Group fleet value representing the global passenger cars and light commercial vehicles fleet in the three major regions (Europe [EU 27, UK, Norway and Iceland], the USA and China). In order to provide a picture that is as complete as possible, we also collect data on emissions in this category that are produced during the production and transportation of fuels (“well to tank” emissions).

Fleet CO₂ emissions in Europe (EU27+2)¹

In the reporting period, the Volkswagen Group’s EU (EU27+2) passenger car fleet (not including Lamborghini and Bentley) emitted an average of 119 g CO₂/km (WLTP)² in line with statutory measurement bases, compared with a statutory target of 121 g CO₂/km (WLTP)². This means that the Volkswagen Group exceeded the EU’s fleet CO₂ target.

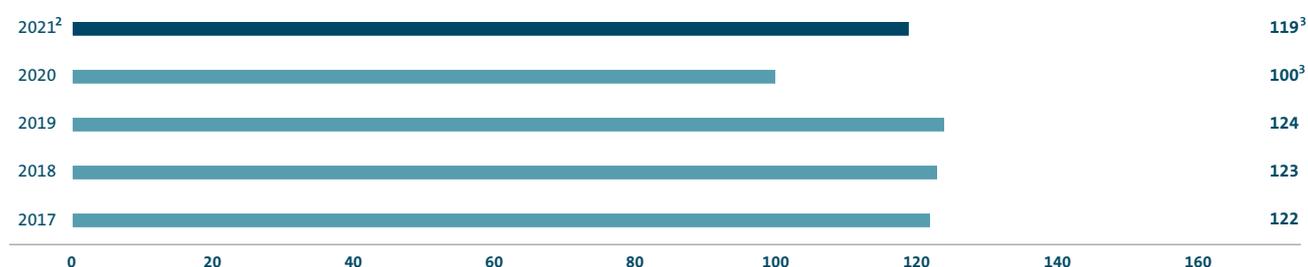
As small volume manufacturers with an independent fleet, the Lamborghini and Bentley brands are assessed under European CO₂ legislation and both exceeded their individual targets.

Bentley and Lamborghini will be incorporated in the Volkswagen Group’s new passenger car fleet in the EU from 2022 onwards. The European Commission is pursuing a target of a 15% reduction in CO₂ by 2025, which corresponds to a CO₂ target of less than 105 g CO₂/km for our EU new passenger car fleet. A 55% reduction is proposed for 2030, which corresponds to a CO₂ target of less than 60 g CO₂/km. We expect our EU new passenger car fleet to be able to meet the target for 2025 and outperform the target for 2030.

The Volkswagen Group’s new light commercial vehicles fleet in the EU emitted an average of 202 g CO₂/km (WLTP) in the 2021 reporting period as per statutory measurements bases,² compared with a statutory target of 198 g CO₂/km (WLTP)². Contrary to what was originally planned, the target was missed due to the shortage of semiconductors and the resultant limited availability of vehicles. The target for the CO₂ pool established with other manufacturers was reached. All the figures mentioned are subject to confirmation of the CO₂ data in the context of official publication by the European Commission. The European Commission is pursuing a target of a 15% reduction in CO₂ by 2025, which corresponds to a CO₂ target of less than 175 g CO₂/km for our EU new light commercial vehicle fleet. A 50% reduction is proposed for 2030, which corresponds to a CO₂ target of less than 115 g CO₂/km. We expect our EU new light commercial vehicle fleet to be able to meet the target for 2025 and outperform the target for 2030.

CO₂ EMISSIONS OF THE VOLKSWAGEN GROUP’S EUROPEAN (EU27+2) NEW PASSENGER CAR FLEET

in grams per kilometer (WLTP)



¹ Belgium, Malta, Bulgaria, the Netherlands, Denmark, Austria, Germany, Poland, Estonia, Portugal, Finland, Romania, France, Slovakia, Greece, Slovenia, Ireland, Spain, Italy, Sweden, Croatia, the Czech Republic, Latvia, Hungary, Lithuania, Luxembourg, Cyprus + Iceland, Norway.

² The European Commission switched its calculation of CO₂ fleet emissions from NEDC to WLTP in 2021.

³ Subject to confirmation of the CO₂ data in the context of official publication by the European Commission.

In the United Kingdom and Switzerland/Liechtenstein markets, the Volkswagen Group’s fleets narrowly missed the statutory targets for the 2021 reporting period.

CO₂ fleet emissions in the USA

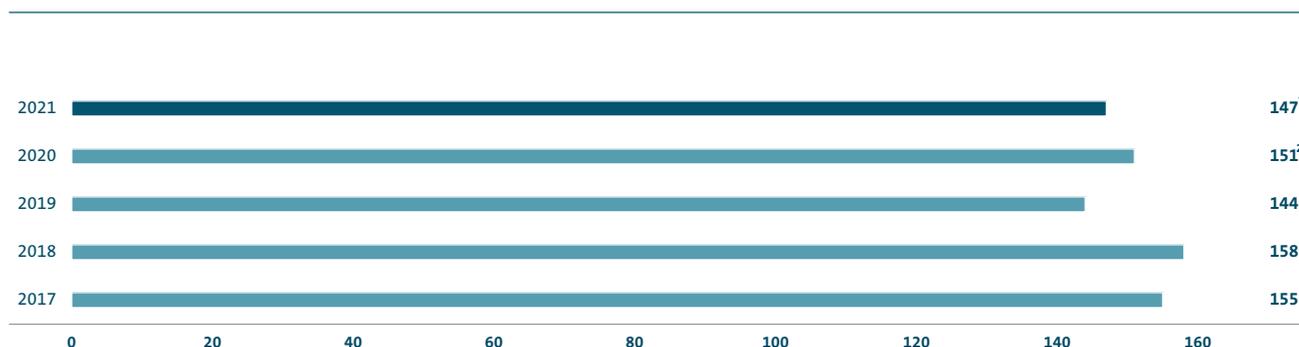
In the USA, the emissions community – consisting of Group brands Volkswagen Passenger Cars, Audi, Lamborghini, Bentley, Porsche and Bugatti – undertakes to comply with both the Greenhouse Gas (GHG) and Corporate Average Fuel Economy (CAFE) regulations, which every manufacturer has to comply with in relation to passenger cars and light commercial vehicles, factoring in credits for “air conditioning” and “off cycle credits”. Due to the delay in the confirmation by the authorities of model years differing from the calendar year, internal calculations are used to determine the figures for the current and preceding model year. The passenger car and light commercial vehicle fleet’s GHG

CO₂ figure for model year 2021 (internal data as of September 2021) is an average of 147 g CO₂/km (model year 2020: 151 g CO₂/km) compared with a statutory target of 142 g CO₂/km (model year 2020: 139 g CO₂/km). By applying the statutory flexibility provided for regarding GHG and in CAFE as well as externally acquired credits, the Volkswagen Group succeeded in complying with applicable requirements – subject to confirmation by the authorities – for model year 2021. The figure mentioned for model year 2020 is subject to confirmation by the EPA and CARB authorities.

We anticipate a CO₂ target of around 110 g CO₂/km in the USA for 2025 and therefore expect to be able to achieve this target. We will increase the electric vehicle proportion of our new vehicle fleet to well over 40% by 2030 and are therefore within the current Administration’s target range.

VOLKSWAGEN GROUP CO₂ EMISSIONS ACCORDING TO THE GHG PROTOCOL FOR PASSENGER CARS AND LIGHT COMMERCIAL VEHICLES IN THE USA

in grams per kilometer by model year



¹ Subject to the submission of the MY21 final MY report and the subsequent confirmation by the EPA and the CARB (internal data as of September 2021).
² Subject to confirmation by the EPA and the CARB (MY20 final MY report submitted but not yet confirmed).

MANAGING TARGET ACHIEVEMENT IN DECARBONIZATION

The two levers with the greatest influence on greenhouse gas emissions across the entire life cycle of Volkswagen products are the Group's electric offensive and the Renewable Energies strategy. This strategy involves the integration of renewably generated electricity into the use phase of electric vehicles and plug-in hybrid electric vehicles and switching plants' external power supply to renewable energy globally. Around 90% of the decarbonization targeted by the Group can be realized through electrification of the fleet and switching to green energy.

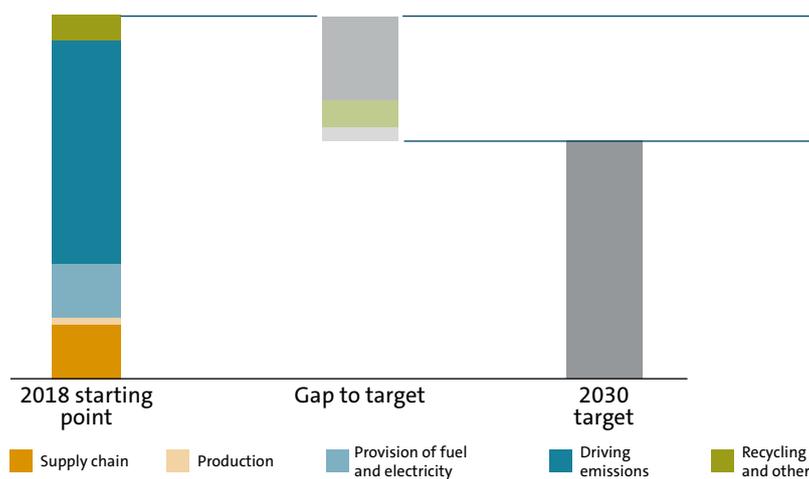
Measures will be implemented and managed through a decarbonization program that is being rolled out for the entire Group, for all brands and regions. The Group Steering Committee for Sustainability is responsible for the program and target achievement. The Decarbonization Project Center that we founded ourselves and which includes experts from all brands and departments is responsible for strategy and target development and also for implementation. We use a predefined process overseen by the management of the Decarbonization Project Center to check measures with which we can achieve the objective of decarbonization. All production locations and the brands and regions have prepared decarbonization roadmaps. The degree of achievement of our targets is measured with a tracking system. If we miss the target, we will implement corrective measures.

In the reporting year, TRATON SE launched its own decarbonization program that is connected with the existing decarbonization program for passenger cars and light commercial vehicles via interfaces. The considerable CO₂ footprint of heavy commercial vehicles means the Volkswagen Group expects this step and the associated measures to result in significant progress in reducing greenhouse gas emissions.

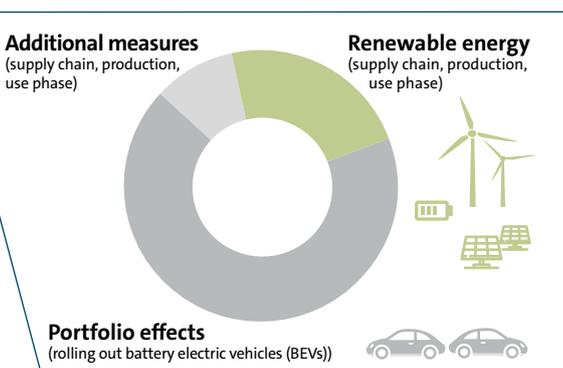
Internal carbon pricing tools are an integral component of our decarbonization controlling. When managing the portfolio, we work with shadow prices to integrate emission-related risks into decision-making processes and with internal emissions trading to optimize reduction paths of CO₂ fleet compliance. In the decarbonization program, we assess the efficiency of reduction measures using abatement costs and aggregate these in an abatement cost curve. In the course of this, we work with an internal carbon price or abatement costs of up to € 20 per metric ton of CO₂, which is reviewed annually based on target achievement and adjusted by a resolution of the Board of Management.

RENEWABLE ENERGY IS A KEY LEVER FOR GROUP'S DECARBONIZATION TARGET

Roadmap for the DCI reduction measures [metric tons of CO₂e per vehicle]



Measures to close the gap to the target



Source: Volkswagen AG

Schematic illustration

DECARBONIZATION KPIS

KPI	Unit	2021	2020	Notes and comments
Decarbonization Index WLTP (NEDC) (strategic KPI)	metric tons of CO ₂ /vehicle	45.9	47.6 (43.0)	Passenger-car manufacturing brands and light-commercial-vehicle-producing brands in the Europe (EU 27, United Kingdom, Norway and Iceland), China and USA regions. As a result of a more specific data set, the emissions recorded in the DCI decreased by 0.6 metric tons of CO ₂ /vehicle in 2021. Projects in the supply chain (closed-loop management of aluminum scrap and renewable energy for battery cell production) and our green electricity measures in the use phase led to a reduction of total emissions in the DCI by 0.5 metric tons of CO ₂ /vehicle. The DCI for 2020 and 2021 is reported without taking offset measures into account. To enable comparability, the DCI reported in 2020 was adjusted in line with the new calculation assumptions (WLTP).
Average emissions of the new passenger car fleet (strategic KPI)				
EU ¹	g CO ₂ /km	119	99.9	Excluding Lamborghini and Bentley
USA	g CO ₂ /km	147	151	
Alternative drive technologies in the Group				Volkswagen Group production: Volkswagen Passenger Cars, Audi, ŠKODA, SEAT, Volkswagen light commercial vehicles
Worldwide				
Gas drives (natural gas and LPG)	Number of vehicles produced/percentage change	35,192/ -24.0	46,326/ -61.0	
Hybrid drives	Number of vehicles produced/percentage change	239,998/ +18.9	201,852/ +265.2	
All-electric drives	Number of vehicles produced/percentage change	427,946/ +112.2	201,675/ +82.1	
Alternative drives (total)	Number of vehicles produced/percentage change	703,136/ +56.3	449,853/ +57.7	
Europe				EU 27, United Kingdom, Norway and Iceland
Gas drives (natural gas and LPG)	Number of vehicles produced/percentage change	34,917/ -23.6	45,700/ -42.4	
Hybrid drives	Number of vehicles produced/percentage change	198,550/ +46.7	135,367/ +383.7	
All-electric drives	Number of vehicles produced/percentage change	289,389/ +65.0	175,369/ +165.9	
Alternative drives (total)	Number of vehicles produced/percentage change	522,856/ +46.7	356,436/ +105.7	
Product carbon footprint (DCI)	metric tons of CO ₂ /vehicle	45.9	47.6 (43.0)	

¹ The European Commission switched its calculation of CO₂ fleet emissions from NEDC to WLTP in 2021.

KPI	Unit	2021	2020	Notes and comments
Scope 1 GHG emissions	in million metric tons of CO ₂	4.74	4.34	
of which Volkswagen AG	in million metric tons of CO ₂	2,21	2,22	
Scope 1 GHG emissions	in kg of CO ₂ /vehicle	476	438	
of which Volkswagen AG	in kg of CO ₂ /vehicle	3,51	2,8	
Scope 2 GHG emissions	in million metric tons of CO ₂	2.42	2.80	
of which Volkswagen AG	in million metric tons of CO ₂	0.14	0.11	
Scope 2 GHG emissions	in kg of CO ₂ /vehicle	290	304	
of which Volkswagen AG	in kg of CO ₂ /vehicle	221	136	
Scope 3 GHG emissions ¹	in million metric tons of CO ₂	364.14	411.13 (368.94)	WLTP (NEDC)
Scope 3 GHG emissions in the Volkswagen Group				
Purchased goods and services	in metric tons of CO ₂ /in %	58,092,388/ 16.0	61,301,008/ 16.6	

¹ In the Scope 3 GHG inventory, the methodology used in the "Franchise" category was enhanced in 2021. This is expected to result in an increase in reported emissions in this category. Validated actual figures for the reporting year will be reported from the 2022 reporting year onwards.

Doing business in an environmentally sustainable way is one of the central challenges of our time. The EU has defined criteria for determining the corporate degree of environmental sustainability. With our taxonomy-aligned investments in development activities and in property, plant and equipment, we are today already shaping our future in an environmentally sustainable way as envisaged by the EU taxonomy.

BACKGROUND AND OBJECTIVES

As part of the European Green Deal, the European Union (EU) has placed the topics of climate protection, the environment and sustainability at the heart of its political agenda in order to achieve climate neutrality by the year 2050. To this end, the EU Action Plan on financing sustainable growth was developed that aims to reorient capital flows towards sustainable investment, to mainstream sustainability in risk management and to foster transparency and longtermism in financial and economic activity. The Action Plan comprises ten measures and centres around the EU taxonomy (Regulation (EU) 2020/852 and associated delegated acts).

The EU taxonomy is a classification system for sustainable economic activities. An economic activity is considered taxonomy-eligible if it is listed in the EU taxonomy and can potentially contribute to realizing at least one of the following six environmental objectives:

- Climate change mitigation
- Climate change adaptation
- Sustainable use and protection of water and marine resources
- Transition to a circular economy
- Pollution prevention and control
- Protection and restoration of biodiversity and ecosystems.

An activity is only considered environmentally sustainable, i.e. taxonomy-aligned, if it meets all three of the following conditions:

- The activity makes a substantial contribution to one of the environmental objectives by meeting the screening criteria defined for this economic activity, e.g. level of CO₂ emissions for the climate change mitigation environmental objective.
- The activity meets the Do-No-Significant-Harm (DNSH) criteria defined for this economic activity. These are designed to prevent significant harm to one or more of the other environmental objectives, e.g. from the production process or by the product.
- The activity is carried out in compliance with the minimum safeguards, which apply to all economic activities and relate primarily to human rights and social and labor standards.

FIRST-TIME REPORTING FOR FISCAL YEAR 2021

Under the EU taxonomy, the Volkswagen Group is required to report on the climate change mitigation and climate change adaptation environmental objectives for the first time for fiscal year

2021; the disclosure requirements extend to the share of economic activities that are taxonomy-eligible and that are not taxonomy-eligible in sales revenue, capital expenditure and operating expenditure. The figures reported relate to the consolidated companies included in the Volkswagen Group's financial statements. Volumes and financial data for our Chinese joint ventures are therefore excluded. As the EU taxonomy is being applied for the first time, prior-year figures are not provided.

The wording and terminology used in the EU taxonomy are currently subject to some uncertainty in interpretation. Our interpretation is set out below.

In addition to the current disclosure obligations, we have voluntarily assessed our business activities for taxonomy alignment. We already report the relevant figures for passenger cars and light commercial vehicles, and for our hydrogen activities in the Power Engineering Business Area.

ECONOMIC ACTIVITIES OF THE VOLKSWAGEN GROUP

In its Group strategy NEW AUTO – Mobility for Generations to Come, the Volkswagen Group is driving its transformation towards becoming one of the world's leading providers of sustainable mobility. We pay particular attention here to the use of resources and the emissions of our product portfolio, as well as those of our sites and plants.

The Volkswagen Group's activities in its vehicle-related business with passenger cars, light commercial vehicles, trucks, buses and motorcycles cover the development, production and sale of vehicles and extend to our financial services and other vehicle-related products and services. Activities in these areas are suited under the EU taxonomy to making a substantial contribution to the environmental objective of climate change mitigation by increasing clean or climate-neutral mobility.

The Volkswagen Group's activities in the Power Engineering Business Area comprise the development, design, production, sale and servicing of machinery and equipment. These activities also fall under the environmental objective of climate change mitigation.

The analysis of the economic activities in the context of the EU taxonomy has not revealed any activities that contribute specifically to the environmental objective of climate change adaptation.

The table below sets out the allocation of our activities in the vehicle-related business and in Power Engineering to the economic activities listed in the EU taxonomy under the environmental objective of climate change mitigation. Changes may be made to the economic activities in future as the rules around the EU taxonomy dynamically evolve.

Economic activity in accordance with the EU taxonomy	Description of economic activity	Allocation in the Volkswagen Group
Environmental objective: mitigating climate change		
3. Manufacturing		
3.2 Manufacture of equipment for the production and use of hydrogen	Manufacture of equipment for the production and use of hydrogen.	Power Engineering
3.3 Manufacture of low-carbon technologies for transport	Manufacture, repair, maintenance, retrofitting, repurposing and upgrade of low-carbon vehicles, rolling stock and vessels.	Vehicle-related business
3.6 Manufacture of other low-carbon technologies	Manufacture of technologies aimed at substantial greenhouse gas emission reductions in other sectors of the economy, where those technologies are not covered by other economic activities in the manufacturing sector.	Power Engineering
9. Professional, scientific and technical activities		
9.1 Close to market research, development and innovation	Research, applied research and experimental development of solutions, processes, technologies, business models and other products dedicated to the reduction, avoidance or removal of greenhouse gas emissions for which the ability to reduce, remove or avoid greenhouse gas emissions in the target economic activities has at least been demonstrated in a relevant environment, corresponding to at least Technology Readiness Level 6.	Power Engineering

Economic activities in vehicle-related business

Economic activity 3.3 Manufacture of low-carbon technologies for transport

We allocate all activities in our vehicle-related business associated with the development, production, sale (including financial services), operation and servicing of vehicles to this economic activity. This includes all passenger cars, light commercial vehicles, trucks, buses and motorcycles manufactured by us, irrespective of their powertrain technology, and also includes genuine parts.

In our vehicle-related business, we have detailed the vehicles manufactured by us by model and powertrain technology and analyzed the CO₂ emissions associated with them in accordance with the WLTP. In this way, we have identified those vehicles among all of our taxonomy-eligible vehicles that meet the screening criteria and with which the substantial contribution to climate change mitigation is measured. These include all of the Volkswagen Group's all-electric vehicles. Until December 31, 2025, they also include passenger cars and light commercial vehicles with CO₂ emissions of less than 50 g/km. This encompasses the majority of our plug-in hybrids. Buses meeting the EURO VI standard (Stage E) are also included until December 31, 2022.

At this stage, other activities that are directly associated with the primary vehicle-related business and that in our view should also be allocated to this economic activity have not yet been included or have been interpreted as not yet being taxonomy-eligible. This is because, as the rules of the EU taxonomy currently stand, it is still unclear where to record them in accordance with the EU taxonomy. These activities particularly include the sale of engines and power-trains, as well as parts deliveries, the sale of non-Group products and production under license by third

parties. Hedging transactions and individual activities that we present primarily under Other sales revenue in the consolidated financial statements do not conform to the descriptions of economic activities in the EU taxonomy, and we have therefore initially classified them as not being taxonomy-eligible.

Economic activities in Power Engineering

In the Power Engineering Business Area, we have analyzed our activities with respect to their classification under the EU taxonomy and, with the exception of the heavy fuel oil engine new building business and individual components for the extraction and processing of fossil fuels, have identified them as taxonomy-eligible.

Economic activity 3.2 Manufacture of equipment for the production and use of hydrogen

Our activities relating to the manufacture of equipment for the production and use of hydrogen that meet the screening criteria and make a substantial contribution to the climate change objective are taxonomy-eligible. One example is the use of green hydrogen. At Volkswagen, these include the power-to-X technology for the production of low-carbon or carbon-neutral synthetic fuels, as well as components for the storage of hydrogen.

Economic activity 3.6 Manufacture of other low-carbon technologies

The description of this economic activity means that only those technologies manufactured for the purpose of reducing greenhouse gas emissions substantially in other sectors of the economy are taxonomy-eligible. At Volkswagen, this comprises all new-build activities that enable the use of gas and climate-neutral synthetic fuels (e.g. manufacturing of gas and dual-fuel engines),

all industrial solutions for energy storage and sector coupling (e.g. heat pumps) and all solutions for carbon capture, storage and usage; it also includes subsea compression (subsea compression close to the wellhead for the extraction of natural gas). These activities are rounded off by the service and after-sales business, comprising the upgrading and modernization of existing equipment. For example, we retrofit existing maritime fleets with technology that makes it possible to reduce CO₂ emissions.

Economic activity 9.1 Close to market research, development and innovation

The description of this economic activity includes applied research in technologies for the reduction or avoidance of greenhouse gas emissions. We allocate our licensing business to this economic activity. This business provides our development services in the form of production documents, based on which our licensees are authorized to manufacture corresponding gas and/or dual-fuel engines.

For economic activity 3.2 Manufacture of equipment for the production and use of hydrogen, we meet the screening criteria that are a requirement for the substantial contribution to the climate change mitigation objective. Given that the new reporting obligations and the requirements specified therein have only very recently been introduced, it was not yet possible to provide corresponding proof of economic activities covered by 3.6 Manufacture of other low-carbon technologies and 9.1 Close to market research, development and innovation.

DO NO SIGNIFICANT HARM (DNSH)

The DNSH criteria were analyzed in the reporting year for economic activities covered by 3.3 Manufacture of low-carbon technologies for transport and 3.2 Manufacture of equipment for the production and use of hydrogen.

In the vehicle-related business, an analysis was performed for each vehicle production site where passenger cars, light commercial vehicles, trucks and buses are or will be produced that meet the screening criteria for the substantial contribution of economic activity 3.3 Manufacture of low-carbon technologies for transport, or that are to meet them in future according to our five-year planning. Of the approximately 30 sites included, the majority are located in the EU, with some in the United Kingdom, Turkey, the USA, Mexico, Brazil and China.

For the Power Engineering Business Area, an analysis was performed for each site that produces relevant components for systems or is responsible for supply chains that meet the screening criteria for the substantial contribution of economic activity 3.2 Manufacture of equipment for the production and use of hydrogen, or that are to meet them in future according to our five-year planning. There are two such sites, located in Germany and Sweden.

Below, we set out our interpretation and describe the main analyses we used to examine whether there was any substantial

harm to the other environmental objectives. The assessments confirm that we meet the requirements of the DNSH criteria in the reporting year for the sites producing passenger cars and light commercial vehicles. The outcome of the evaluation of the two Power Engineering sites was also positive.

Climate change adaptation

We performed a climate risk and vulnerability assessment to identify which production sites may be affected by physical climate risks. The physical climate risks we identified were assessed on the basis of the lifetime of the relevant fixed asset.

Volkswagen's climate-based DNSH assessment is based on Representative Concentration Pathway (RCP) scenario 8.5 to the year 2050 and thus assumes the highest concentration of CO₂ according to the Intergovernmental Panel on Climate Change (IPCC). The relevance of the identified threats was assessed for the local environment and, if appropriate, the measures needed to mitigate the risk were developed.

Sustainable use and protection of water and marine resources

We evaluated our economic activities with respect to the sustainable use and protection of water and marine resources looking at the three following criteria: preserving water quality, avoiding water stress, and an environmental impact assessment (EIA) looking at the impact on water, or a similar process. We based the analysis primarily on ISO 14001 certificates, the findings of official approval procedures and other external data sources in relation to regions exposed to increased risks.

Transition to a circular economy

Environmentally compatible waste management in the manufacturing process, reuse and use of secondary raw materials and a long product lifespan are a major part of Volkswagen's environmental management system. Volkswagen defines clear and unambiguous guidelines on the circular economy in its environmental principles, in its overall factory white paper and in its goTOzero strategy.

The product-related requirements for passenger cars and light commercial vehicles are reflected in the implementation of the statutory end-of-life vehicle requirements in conjunction with the type approval of the vehicle models. In addition to this, each brand has targets and measures for the use of recycled materials in new vehicles.

Pollution prevention and control

The DNSH criteria for this environmental objective require that the economic activity in question does not lead to substances listed in a variety of EU chemical regulations and directives being manufactured, placed on the market or used. Approval and monitoring processes are implemented with the aim of ensuring compliance with the legislation specified in the DNSH criteria.

Protection and restoration of biodiversity and ecosystems

In order to verify adherence to the requirements on biodiversity and ecosystems, the relevant areas were identified. Where biodiversity-sensitive areas are located close to a production site, we checked whether a nature conservation assessment had been performed and whether nature conservation measures had been defined in the environmental approvals and subsequently implemented.

MINIMUM SAFEGUARDS

The minimum safeguards consist of the OECD Guidelines for Multinational Enterprises, the United Nations Guiding Principles on Business and Human Rights, the Fundamental Conventions of the International Labour Organisation (ILO) and the International Bill of Human Rights. Below, we describe the main analyses we used to examine whether the minimum safeguards are adhered to.

The Volkswagen Group has 120 production sites in 83 countries, including those of the Chinese joint ventures. We conducted human rights risk assessments for 782 controlled Group companies worldwide; this included all sites that were also examined under the DNSH criteria.

For the risks identified in the analysis, the companies received risk-specific measures to be implemented by the end of 2021.

Key Performance Indicators in accordance with the EU Taxonomy regulation

The EU taxonomy defines sales revenue, capital expenditure and operating expenditure as the key performance indicators that must be reported on. Disclosures on taxonomy eligibility are mandatory for fiscal year 2021. We have voluntarily assessed our business activities for taxonomy alignment and already report the relevant figures for passenger cars and light commercial vehicles, and for our hydrogen activities in the Power Engineering Business Area.

The financial figures relevant for the Volkswagen Group are based on the IFRS consolidated financial statements for fiscal year 2021. Where possible, the figures have been directly assigned to an economic activity. In our vehicle-related business, for example, we compiled the financial figures based on the vehicle model and powertrain technology. This applies both to the vehicles themselves and to the corresponding financial services and other services and activities. Only where this was not possible for capital expenditure and operating expenditure, the figures were broken down using allocation formulas. In the vehicle-related business, we based the allocation formulas on the long-term sales plan and the capacity and utilization planning at the individual sites. In the Power Engineering Business Area, we used allocation formulas based on planned sales revenue. This data and planning form part of the medium-term financial planning for the next five years, on which the Board of Management and Supervisory Board have passed a resolution.

Sales revenue

The definition of turnover in the EU taxonomy corresponds to sales revenue as reported in the IFRS consolidated financial statements, which amounted to € 250.2 billion in fiscal year 2021 (see also note 1 “Sales revenue” in the notes to the consolidated financial statements).

Of this total, € 225.4 billion, or 90.1% of Group sales, was attributable to economic activity 3.3 Manufacture of low-carbon technologies for transport and classified as taxonomy-eligible. This includes sales revenue after sales allowances from new and used vehicles, including motorcycles, from genuine parts, from the rental and lease business, and from interest and similar income, as well as sales revenue directly related to vehicles, such as workshop and other services.

Of the taxonomy-eligible sales revenue, € 21.3 billion meet the screening criteria used to measure the substantial contribution to climate change mitigation. This includes all of our all-electric vehicles, the majority of the plug-in hybrids, and the buses meeting the EURO VI standard (Stage E).

Taking into account the DNSH criteria and minimum safeguards, sales revenue of € 21.1 billion attributable to our passenger cars and light commercial vehicles, accounting for 8.5% of consolidated sales revenue, was taxonomy-aligned. Of this amount, € 14.6 billion, or 5.8% of consolidated sales revenue, was attributable to our all-electric models (BEVs).

In the Power Engineering Business Area, the majority of our taxonomy-eligible sales revenue was attributable to economic activity 3.6 Manufacture of other low-carbon technologies (€ 2.4 billion). A further € 13 million was contributed by economic activity 9.1 Close to market research, development and innovation. Our activities that fall under economic activity 3.2 Manufacture of equipment for the production and use of hydrogen recorded taxonomy-aligned sales revenue of € 5 million, taking into account the DNSH criteria and minimum safeguards.

Of the Volkswagen Group's total sales revenue in fiscal year 2021,

- € 227.8 billion, or 91.0%, was taxonomy-eligible sales revenue and
- € 21.2 billion, or 8.5%, was taxonomy-aligned sales revenue.

SALES REVENUE

Economic activities	Sales Revenue		Substantial Contribution to Climate Change Mitigation		Compliance with DNSH Criteria	Compliance with minimum Safeguards	Taxonomy-aligned Sales Revenue	
	€ million	% ¹	€ million	% ¹	Y/N	Y/N	€ million	% ¹
A. Taxonomy-eligible activities	227,787	91.0	21,268	8.5	Y/N	Y	21,152	8.5
Vehicle-related business								
3.3 Manufacture of low-carbon technologies for transport	225,380	90.1	21,264	8.5	Y/N	Y	21,147	8.5
of which taxonomy-aligned BEVs (passenger cars and light commercial vehicles)	–	–	–	–	Y	Y	14,579	5.8
Power Engineering								
3.2 Manufacture of equipment for the production and use of hydrogen	5	0.0	5	0.0	Y	Y	5	0.0
3.6 Manufacture of other low-carbon technologies	2,390	1.0	–	–	–	–	–	–
9.1 Close to market research, development and innovation	13	0.0	–	–	–	–	–	–
B. Taxonomy-non-eligible activities	22,413	9.0						
Total (A + B)	250,200							

¹ All percentages relate to the Group's total sales revenue.

Capital expenditure

Capital expenditure for the purposes of the EU taxonomy refers to the following items in the IFRS consolidated financial statements: additions to intangible assets, additions to property, plant and equipment, and additions to lease assets and investment property. These are reported in the notes to the 2021 consolidated financial statements in note 12 “Intangible assets”, note 13 “Property, plant and equipment” and note 14 “Lease assets and investment property”. Additions from business combinations, each of which is reported under “Changes in consolidated Group”, are also included. By contrast, additions to goodwill are not included in the calculation.

In fiscal year 2021, additions in the Volkswagen Group as defined above amounted to

- €9.1 billion from intangible assets,
- €10.7 billion from property, plant and equipment and
- €29.1 billion from lease assets (mainly vehicle leasing business) and investment property.

Additions from changes in the consolidated Group, which amounted to €5.1 billion in fiscal year 2021, can also be added to this figure. These mostly related to Navistar. Total capital expenditure to be included in accordance with the EU taxonomy therefore came to €54.0 billion.

All capital expenditure attributable to our vehicle-related business is associated with economic activity 3.3 Manufacture of low-carbon technologies for transport. Taxonomy-eligible capital expenditure for the vehicle-related business amounted to €53.5 billion, or 99.1% of the Group’s capital expenditure.

To determine the substantial contribution in the vehicle-related business, we compiled the financial figures based on the vehicle model and powertrain technology, in the same way as for sales revenue. Where possible, capital expenditure was directly attributed to vehicles. It was included, if the vehicles in question make a substantial contribution to the climate change mitigation objective. We did not include any capital expenditure directly attributable to vehicles that do not meet the screening criteria. Capital expenditure that was not clearly attributable to a particular vehicle was taken into account on a proportionate basis using

allocation formulas. In our vehicle-related business, we used model- and brand-specific allocation formulas based on the long-term sales plan and the capacity and utilization planning for the Group companies. Depending on the primary business activity, allocation formulas from the long-term sales plan were used for sales companies, for example, and allocation formulas based on the capacity and utilization planning were used for production companies. This means that capital expenditure on sites that according to our medium-term planning will only produce vehicles meeting the screening criteria for the substantial contribution in the next five years was counted in full via the allocation formula. In contrast, capital expenditure on sites that only produce vehicles not meeting the screening criteria was not counted under the allocation formula. Calculated in this way, capital expenditure relating to vehicles that meet the screening criteria for the substantial contribution amounted to €14.4 billion.

Taking into account the DNSH criteria and minimum safeguards, capital expenditure of €14.2 billion on our passenger cars and light commercial vehicles was taxonomy-aligned. This represented 26.2% of the Group’s total capital expenditure. This figure includes additions to capitalized development costs of €3.5 billion and additions to property, plant and equipment of €3.8 billion for our all-electric passenger cars and light commercial vehicles (BEVs).

Taxonomy-eligible capital expenditure in the Power Engineering Business Area has been allocated to economic activity 3.6 Manufacture of other low-carbon technologies. Capital expenditure was broken down based on planned sales revenue. Taxonomy-eligible capital expenditure amounted to €65 million.

Of the Volkswagen Group’s total capital expenditure in fiscal year 2021,

- €53.6 billion, or 99.2%, was taxonomy-eligible capital expenditure and
- €14.2 billion, or 26.2%, was taxonomy-aligned capital expenditure.

CAPITAL EXPENDITURE

Economic activities	Capital Expenditure		Substantial Contribution to Climate Change Mitigation		Compliance with DNSH Criteria	Compliance with minimum Safeguards	Taxonomy-aligned Capital Expenditures	
	€ million	% ¹	€ million	% ¹	Y/N	Y/N	€ million	% ¹
A. Taxonomy-eligible activities	53,596	99.2	14,437	26.7	Y/N	Y	14,165	26.2
Vehicle-related business								
3.3 Manufacture of low-carbon technologies for transport	53,531	99.1	14,437	26.7	Y/N	Y	14,165	26.2
of which additions to capitalized development costs for BEVs (passenger cars and light commercial vehicles)	–	–	–	–	Y	Y	3,504	6.5
of which additions to property, plant and equipment for BEVs (passenger cars and light commercial vehicles)	–	–	–	–	Y	Y	3,760	7.0
Power Engineering								
3.2 Manufacture of equipment for the production and use of hydrogen	–	–	–	–	–	–	–	–
3.6 Manufacture of other low-carbon technologies	65	0.1	–	–	–	–	–	–
9.1 Close to market research, development and innovation	–	–	–	–	–	–	–	–
B. Taxonomy-non-eligible activities	443	0.8						
Total (A + B)	54,039							

¹ All percentages relate to the Group's total capital expenditure.

Operating expenditure

The operating expenditure reported by us for the purposes of the EU taxonomy comprises non-capitalized research and development costs, which can be taken from note 12 “Intangible assets”. We also include the expenditure for short-term leases recognised in our consolidated financial statements, which can be found in note 33 “IFRS 16 (Leases)”, and expenditure for maintenance and repairs.

The allocation of operating expenditure to the economic activities followed the same logic as that described for capital expenditure.

All operating expenditure attributable to the vehicle-related business is associated with economic activity 3.3 Manufacture of low-carbon technologies for transport and has been classified as taxonomy-eligible.

Where possible, non-capitalized research and development costs were directly attributed to vehicles. It was included, if the vehicles in question make a substantial contribution to the climate change mitigation objective. We did not include any non-capitalized research and development costs directly attributable to vehicles that do not meet the screening criteria. Non-capitalized research and development costs that were not clearly attributable to a particular vehicle were taken into account on a proportionate basis using allocation formulas. For these and other operating expenses, the same allocation formulas were used as for capital expenditure.

Taxonomy-eligible operating expenditure in the Power Engineering Business Area falls under economic activity 3.6 Manufacture of other low-carbon technologies. As with capital expenditure, operating expenditure was broken down on the basis of planned sales revenue.

OPERATING EXPENDITURE

Economic activities	Operating Expenditures		Substantial Contribution to Climate Change Mitigation		Compliance with DNSH Criteria	Compliance with minimum Safeguards	Taxonomy-aligned Operating Expenditures	
	€ million	% ¹	€ million	% ¹	Y/N	Y/N	€ million	% ¹
A. Taxonomy-eligible activities	9,911	99.2	3,463	34.7	Y/N	Y	3,265	32.7
Vehicle-related business								
3.3 Manufacture of low-carbon technologies for transport	9,702	97.1	3,463	34.7	Y/N	Y	3,265	32.7
Power Engineering								
3.2 Manufacture of equipment for the production and use of hydrogen	–	–	–	–	–	–	–	–
3.6 Manufacture of other low-carbon technologies	209	2.1	–	–	–	–	–	–
9.1 Close to market research, development and innovation	–	–	–	–	–	–	–	–
B. Taxonomy-non-eligible activities	81	0.8						
Total (A + B)	9,992							

¹ All percentages relate to the Group's total operating expenditure.