

Climate policies: 26 European groups put to the test

2ND EDITION - NOVEMBER 2022

4.5 GtCO₂ equivalent – almost as much as the United States' 2021 GHG emissions – to be eliminated and offset by 2050 for 26 European groups, aiming to decarbonise



Foreword – A fast moving context for this second edition of the study

Since the publication of this study's first edition in October 2020, societal and political expectations have strengthened, **due to the increasing frequency of extreme climatic events punctuated with the latest IPCC publications**, along with major geopolitical events. Some non-exhaustive examples:



Long-term impacts of the Covid crisis on logistics and supply chains



The war in Ukraine and the decrease of the Russian energy supply



Condemnation of the French State for climate inaction *



New political commitments in 2021 regarding methane emissions **

NOTES ON THE SUBTITLE OF THE STUDY

The total amount of 4.5 GtCO₂ equivalent includes scopes of emissions 1, 2 and 3 of the 26 analysed groups. It only includes what is being reported by the selected companies for the year 2021: i.e. it dos not include an estimation for missing items in reporting.

In 2021, the United States' GHG emissions were 4.6 GtCO₂ equivalent, according to the IEA Global Energy Review in 2021 (published March 2022). The US are the biggest emitting country after China (11.9 GtCO₂ equivalent).



Foreword – A slightly changed perimeter for the second edition of the study

The revision of the study is an opportunity to integrate **two new groups**, allowing us to broaden our horizons on the strategies adopted and the practices currently in action. This new edition is also enriched with **complementary analyses**.













Executive summary – European companies' climate policies are improving but fell to respond to the stakes with the required ambition and means

Climate reporting is gradually gaining in clarity and completeness, but an extra step is yet to be climbed

- Climate strategies are being structured but still lack mobilizing visions and accountability of leaders
- Climate action plans abound with initiatives but struggle to demonstrate the scale of the groups' transformation

- ► Greater adoption of reporting standards have improved reportings: +60% of the studied companies have adopted the TFCD framework since the 1st edition of this study in 2020.
- ▶ Scope 3 emissions represent on average 90% of total emissions, of which "Use of sold products" represents the majority for most sectors. This scope is not reported exhaustively by companies.

- ▶ One by one European companies align their strategies with the EU objective set in 2018 (carbon neutrality by 2050) and the Paris Agreement, and they refer to it.
- ▶ 58% and more of analysed groups particularly need to work on their climate strategy: ambition, vision, communication, responsibilities. Notably integration structures of climate strategies into global strategies would benefit from being reworked and strengthened, especially for 15 of them.

- ► Concrete and targeted actions with intermediate and quantifiable objectives are set but are still **poorly structured in a global action plan** and have shortcomings when it comes to scope 3.
- ▶ There is an evident lack of vision on the scale of the global transformation initiated by the large number of actions deployed: are there strong structural changes behind it? A quantitative measure is welcomed.



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Appendices

1 / European groups are expected to reduce their greenhouse gas emissions

Climate change: from political ambition to corporate emission reduction commitments



The Paris agreement was adopted in 2015 and is currently ratified by 195 countries. It sets the objective of limiting the rise in temperatures well below 2°C compared to pre-industrial levels by the end of the century.



More and more companies are deciding to set targets for reducing their greenhouse gas emissions (GHG) or even (contributing to) carbon neutrality.

Companies are setting targets to reduce their GHG emissions even when they are not obligated by regulatory frameworks. Why?



Environmental responsibility



Brand image and attractiveness



Control of costs



Preparing for coming regulatory obligations



Growth drivers



Durability and resilience

Climate strategies rely on a equilibrium and an ambition: to decarbonize while preserving value creation, even while creating even more value.

The Greenhouse Gas Protocol distinguishes and defines three scopes of direct and indirect emissions (see Appendix 1):

Scope 1 greenhouse gas emissions includes all <u>direct</u> emissions resulting from emission sources owned or controlled by the entity (including the vehicle fleet).

Indirect emissions, resulting from the organization's activities, but whose actual sources of emissions belong to or are controlled by other entities, are divided into two scopes.

Scope 2 greenhouse gas emissions includes <u>indirect</u> emissions due to the production of electricity, heat or steam consumed by the entity.

Scope 3 greenhouse gas emissions includes all <u>indirect</u> emissions that are not part of scope 2, in particular indirect emissions related to purchases, logistics and transport, sales, (end of) product life.

Carbon neutrality is achieved when the activities of the entity concerned do not emit more greenhouse gases than they absorb, thanks to the reduction of direct and indirect emissions and the offsetting of residual emissions.



Carbon neutrality: limits and advantages of a concept increasingly used by companies

The criticism regarding the concept of "carbon neutrality" has increased since the publication of our first study in October 2020, following abuses of its use in communications (*greenwashing*). These criticisms stem from scientific institutions, ecological associations and businesses alike.



LIMIT 1 - SCIENTIFIC

The notion of carbon neutrality only really makes sense on a planetary scale and over a given period (IPCC, ADEME).



LIMIT 2 - ACCOUNTING

Difficulty accessing quality and up-to-date data, particularly on scope 3, hardly verifiable self-declarations and limits of carbon offsetting



LIMIT 3 - IMPACT

Mismatch with the short-term growth objectives of current leaders (and of those that follow), false impression of simplicity with the Measure, Reduce, Compensate method, etc.

SHOULD WE THEREFORE ABANDON THE NOTION OF CARBON NEUTRALITY?

"All actors must act collectively for carbon neutrality, but no actor should claim to be carbon neutral" - ADEME

If the use of the term "carbon neutrality" is tainted by abuse, its use, conditional on the phrasing "contribution to carbon neutrality", is not without interest. It encourages economic actors to contribute to this global objective by aligning their goals with (inter)national strategies. It effectively mobilizes them around a common objective that encourages a transformation of practices and activities, beyond carbon offsetting. In this second edition of our study, we will therefore use the wording of "contribution to carbon neutrality" and we encourage economic actors to follow ADEME's recommendations.



Source: Sia Partners synthesis 8

Evaluation of corporate climate policies: the essential role of reporting published by companies

The publications of the major European groups are the main source of information used in this study. Compared to the first edition in 2020, we were also able to rely on various standardized structures, which are gaining momentum (see Part 2 of this study).



CLIMATE IMPACT

indicators.

Stakes: evaluation of the ambition and the

Types of indicators:

Mainly quantitative

reporting

transparency, awareness, accountability

Greenhouse gas emissions by scopes

ESG

- **Energy consumption**
- Avoided / saved emissions ("scope 4")

CLIMATE STRATEGY

approach adopted

Types of indicators:

- Mainly qualitative
- Vision, governance, quantitative and qualitative objectives, priorities, risk and opportunity analyses, etc.

CLIMATE ACTION PLAN

Stakes: evaluation of the effective operational implementation of the ambition

Types of indicators:

- Qualitative and quantitative
- Actions to adapt the offer, consumption, HR. processes. investments. innovation, etc.

Two levels to climb in the very short term:



Stakes:

- 2 Indirect emissions and energy consumption
- 1 Direct emissions and energy consumption (own emissions)

Three levels to climb:

Proactive



3 - Medium-term: adaptability and resilience

2 - Short-term: performance and attractiveness

Constrained



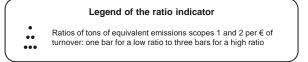
- Very short term: attenuation

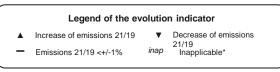


The climate publications of 26 major players in Europe analysed to identify major trends and priority areas for improvement

SECTOR	GROUP	GHG EMISSIONS (SCOPES 1 & 2) IN 2021 (tCO $_2$ e) and Δ	EMISSIONS / CA RATIO
	⊕ вр	45,500,000 ▼	•••
(A)	♣ Shell	74,000,000 ▼	•••
	Total Energies	38,361,483 ▼	•••
Energy	Engie	40,919,641 ▼	•••
	□ EDF	28,011,770 ▼	•••
	Siemens	1,257,000 ▼	••
0	Airbus	834,876 ▼	••
	Schneider-Electric	527,186 ▲	•
Industry	ArcelorMittal	141,262,571 ▼	•••
industry	Saint Gobain	10,446,727 ▼	••
	Michelin	2,793,534 ▼	••
	Veolia	30,121,610 <i>inap</i>	•••
	Bouygues	11,751,000 ▼	•••
4	ACS-Group	2,637,182 ▼	•
<u> </u>	Vinci	2,232,349 ▼	•••
Construction	Eiffage	495,000 ▼	•
	Skanska	230,751 ▼	•

SECTOR	GROUP	GHG EMISSIONS (SCOPES 1 & 2) IN 2021 (tCO $_2$ e) and Δ	
	● BPCE	37,511 ▼	•
^	BNP Paribas	282,872 ▼	•
盒	⊕ HSBC	416,226 —	•
	Deutsche Bank	248,746 ▲	•
Bank	Crédit Agricole	60,009 ▼	•
	Volkswagen	9,593,113 ▲	•••
€	Renault	1,034,222 ▼	••
Automotive	Stellantis	887,285 inap	••
Agribusiness	Danone	1,533,064 ▲	••







2 / Climate reporting is gradually gaining in clarity and completeness, but an extra step is yet to be climbed

Summary - Climate reporting is gradually gaining in clarity and completeness but an extra step is yet to be climbed

Greater adoption of reporting standards led to a significant improvement in the reports published by companies



Access to data



Reporting clarity



Possibilities of comparison



Greater exhaustiveness

+60% of the studied companies have adopted the TFCD framework since the 1st edition of this study in 2020

Scope 3 emissions are not reported exhaustively: a blind spot to be covered as soon as possible

Of the 26 companies analysed:

90%

Scope 3 emissions represent on average 90% of total emissions.

19%

Only 19% of analysed companies measure their scope 3 exhaustively*

Scopes 1 and 2 represent 9% and 1% respectively of remaining emissions, but the weight between the two are reversed for the banking sector, and are similar for the automotive sector (~5% each).

Behind the blind spot of scope 3, two items are specifically sources of difficulties or lack of accountability

The two following scope 3 items represent most of the missing emissions in the reportings**:



74%

Use of product sold



8%

Products and services purchased

In the banking sector, purchases represent 70% of the scope 3, and in construction the weight of this two items are closer (54% sold et 33% purchased).

Reporting standards have led to a significant improvement in the reports published by companies

An increasing number of European companies are using international climate reporting standards compared to 2020, thereby improving access to the data used, the reporting clarity and their overall comprehension. However, some companies sometimes claim to use the methodology of these standards, without being certified or having validated their methodologies and commitments.



IDENTIFY

The **Carbon Disclosure Project (CDP)** provides a structured way to break down emissions sources and emissions intensities over time. Transparency is increased.

The A, A-, B, C, D rating assesses the completeness of reporting, awareness and management of environmental risks, application of best practices in leadership.





STRUCTURE

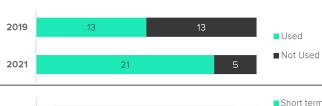
The **Greenhouse Gas (GHG) Protocol** provides industry guidelines for reporting emissions in a clear and understandable format, allowing for complete and consistent reporting of emissions.





ANALYZE

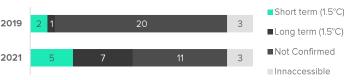
Guidance provided by the **Task Force on Climate Financial Disclosure (TCFD)** helps strengthen the decarbonization strategies for all sectors, leading to optimal capital allocation based on climate-related risks.





Science Based Targets Initiative (SBTI) makes it possible to assess the impact of a company's decarbonization action plan in the medium and long term. They make it possible to prioritize emission reductions related to certain activities.

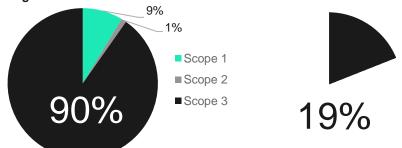
See Appendix 3 for more information





Scope 3 emissions are not reported exhaustively: a blind spot to be covered as soon as possible

The major European groups are beginning to develop their reporting proficiency of GHG emissions. However, a significant step remains to be taken on scope 3: measurement followed by accountability on this scope via integration into strategies.



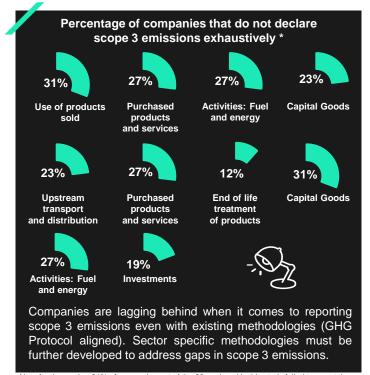
In total for the 26 companies, the emissions in 2021 were **4.5 GtCO2** equivalent. Of those, scope 3 emissions represent ~90%.

Of the 26 companies analysed, 5 of them measured their scope 3 emissions exhaustively*.



TRANSPARENCY: BEST PRACTICE IN REPORTING

Some companies analysed in this study make their emissions databases publicly available.



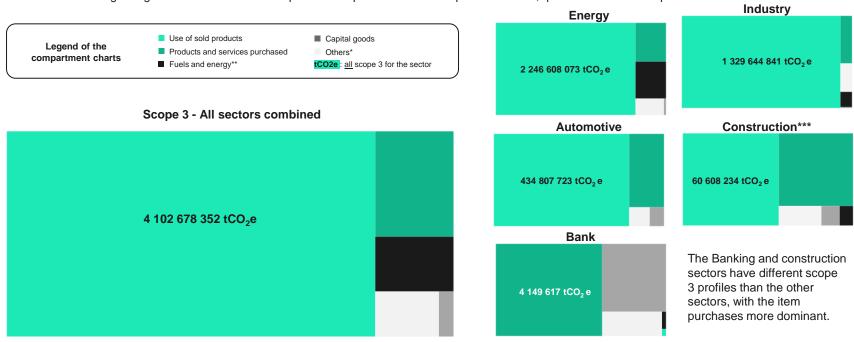
Note for the reader: 31% of companies out of the 26 analysed in this study failed to report the item "use of sold products" (scope 3 emissions reported exhaustively were not represented)



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Focus – Behind the blind spot of scope 3: emissions related to the use of products sold and products and services purchased

The graphs below exemplify the respective importance of each scope 3 item assessed per sector, based on the reports of the companies that communicate their emissions regarding these items. "Use of sold products" represent **74%** of scope 3 emissions, "product and services purchased" 8%.





Synthesis - Climate strategies are being structured but still lack mobilizing visions and accountability of leaders

58% and more of analysed groups need to work on their climate strategy: ambition, vision, communication and responsibilities

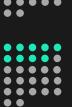


Climate strategies and integration structures into global strategies would benefit from being reworked and strengthened, especially for 15 of the 26 groups



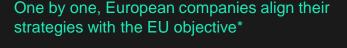


The objective "to achieve carbon neutrality" is set by 23 of the 26 analysed groups, without use of the conditional formulation required: "contributing to"



360

17 of the 26 groups have defined an overall objective of emissions reduction that does not cover their 3 scopes, or not exhaustively





More and more companies define their overall objective for 2045-2050 with intermediary steps, bringing clarity but risking lack of responsibility for leaders.



More and more companies define a carbon neutrality objective fixing a first step of ambition but too often showing communication abuse of a term with scientific meaning.



Neither in 2019 nor for this new edition of the study does a gap can be identified between the sectors: all are much awaited, and none are exemplary, nor peculiarly in advance.



Integrating climate ambition into the company's overall strategy: a cultural change gradually at work and different approaches depending on the sector

DIFFERENT INTEGRATION STRUCTURES OF CLIMATE INTO THE GROUPS' STRATEGIC OBJECTIVES

Reading note: 11 of the 26 groups analysed mention the climate in the overarching objective of their overall corporate strategy.



- In a separate / specific strategy
- In one of the pillars of the global strategy
- Under the overarching objective of the overall strategy

BEST PRACTICES FOR DEFINING AN AMBITIOUS STRATEGY

- Integrating the climate at the heart of the company's overall strategy and working on a message, a positive and mobilizing vision
 - Example: Danone draws a parallel between the historical value of the Group, human health, and the health of the planet.
- Complementing it with a detailed climate strategy in its own right
- Defining ambitious and meaningful objectives, on the same horizons as the overall strategy
- Adapting the organization of the company to better take into account the climate strategy with clear and concrete responsibilities / accountability
- Carrying that strategy towards sectorial lobbies to have them evolve

DIFFERENT PRIORITIES FOR THEIR CLIMATE STRATEGIES

How do companies approach the issue depending on their sector? This is structuring for the action plan that arise from the strategy.



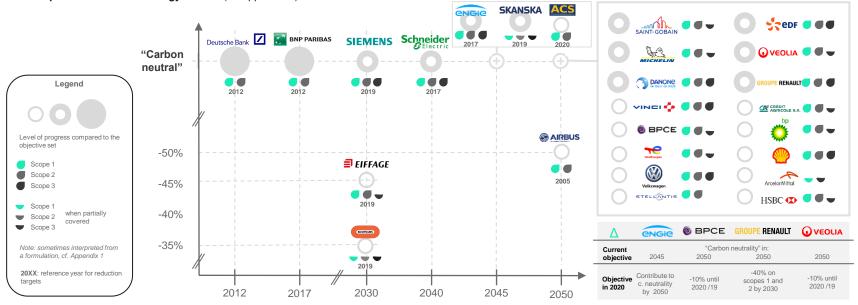
THE MAIN OBSTACLES TO DEFINE AN AMBITIOUS STRATEGY

- A logic of integrating the climate as a "peripheral" or "third pillar" strategy which does not promote a clear and mobilizing vision
- A concept that can shake up the core business, practices and culture
- A discrepancy or even a contradiction between the climate objectives and the short-term financial objectives of leaders and future leaders
- Scope 3 emissions not sufficiently controlled and not sufficiently integrated into the scope of responsibility (see part 2 of the study)



More and more groups are committing to drastically reducing their emissions, including for some on their scope 3 emissions

The European groups have all set ambitious targets to reduce their greenhouse gas emissions, even committing to achieve carbon neutrality. However, none of the groups having made such a commitment have revised their formulations of a "contribution" to carbon neutrality. They have not clarified through their publications, the use of this notion, which only has value at a global level (scientifically speaking). The ambitions presented in this matrix are those set for the most distant deadline, but many groups have also defined intermediate milestones. Financial institutions are set to re-evaluate their scope 3 emissions following the publication of a finance sector specific GHG methodology in 2021 (cf. Appendix 2).





4 / Climate action plans abound with initiatives but struggle to demonstrate the scale of the group's transformation

Synthesis - Climate action plans abound with initiatives but struggle to demonstrate the scale of the group's transformation



Two of the five banks analysed have already achieved their objective of carbon neutrality (including through the use of offsetting) on their scopes 1 and 2. However, **the main challenge for this sector are the recipients of their financing.** The climate strategies of European banks are therefore divided into three parts: 1) put an end to the financing of the most polluting energies (from extraction to power plants) as soon as possible, 2) increase low and zero carbon investments, 3) offer low and zero carbon financial products. Banks are under pressure to go faster on all three parts.



The selected manufacturers have set themselves ambitious targets for 2050, with intermediate quantified targets. For these actors, climate strategies are based on a variety of levers: energy efficiency of industrial processes and buildings, supply of energy from renewable sources, use of recycled materials, optimization of transport and logistics, development of a range of components or key products required for the energy transition. None of these levers should be underestimated and manufacturers must go beyond the incremental action approach currently being performed on each of them.



Compared to other sectors, the emission reduction targets of the construction sector are less ambitious. Emissions during the construction phase are mainly due to the **building materials used**, construction **machinery** used, and the **energy consumption during the lifetime of the constructed buildings**. The development of certified green buildings must promote emission reductions during the design and construction phase.



Energy and oil companies have set targets for investments in or for production capacities of renewable sources of energy. Energy companies (excluding oil companies) are also setting targets to shut down their most emitting assets. These changes are driven in particular by the development of offers for end customers: green gas and electricity supply offer, electric vehicle charging offers and energy efficient renovations. Renewable means of production and innovative offers still only represent a small part of their activities.



Car manufacturers are under strong pressure to reduce their emissions on each of their scopes: from their supply of resources and components to the use of the vehicles sold. They have made quantitative and qualitative commitments to reduce the carbon footprint of their vehicles over their life cycle and deploy the sale of vehicles with low or zero emissions over the next few years.



Bank focus – The main actions to be generalized address the challenge of controlling indirect emissions from funded projects and activities

COMPANY

OPERATIONS / PRACTICES*

FINANCING SOLUTIONS*



- Sobriety (including travel) encouraged via a remuneration criterion
- Energy efficiency of buildings and data centres (ISO 14001, ISO 9001)
- Purchase of renewable electricity (37% in 2020), low carbon (72% in total)
- Funding of several compensation programs

- €30 billion invested in renewable energies by 2025
- 2030; end of exposure to coal in the European Union and the OECD
- 2040: end of exposure to coal in the world
- No support for Arctic drilling or unconventional mining





- Low carbon purchases, mobility practices (train vs plane, electric vehicles for fleets, carpooling, teleconferencing, etc.) and the environmental impacts of digital tech.
- Green Weighting Factor to promote green financing by allocating capital as a function of its impact on the climate
- €24 billion to finance the energy transition by 2024
- Natixis Assurances will devote nearly 10% of its new investments to green assets each year, with a target of 10% green assets in its total outstandings, by 2030 at the latest.



- 100% of energy from renewables (RE100) in 2021
- Compensation of the 73 ktCO₂e residual emissions (Livelihoods)
- Required Transition Score: Customer Engagement and Adaptability
- Use of ESG criteria at Amundi and Crédit Agricole Assurance



- Finance 1/3 of all the energy transition projects in France in 2022
- Doubling the size of the green loan portfolio to €20 billion in 2021
- End of funding for the most polluting extractive activities: offshore in the Arctic, coal mines and power stations, etc.



- Supply of 100% renewable electricity by 2025 (85% in 2021)
- Reduction of total energy consumption by 20% by 2025
- Compensation programs for residual emissions (225 ktCO₂e)
- Introduction of the GHG accounting and reporting standard for the financial industry (2022)



- €200 billion in financing and sustainable investment portfolio by 2023
- End of funding for coal mines by 2025, new projects in the Arctic (since the end of 2020), oil sands projects, hydraulic fracturing in regions under hydraulic stress





- 100% renewable electricity by 2030, 90% by 2025 (RE100)
- More efficient management of buildings, videoconferencing solutions to reduce the use of transport
- Developing the use of ESG criteria

- €100 billion in financing and sustainable investment by 2025
- Phasing out of coal financing (2030 2040), no financial services for new offshore gas and oil projects in the Arctic, tar sands, large dams or source of deforestation



Banks also offer various tools for financing the energy transition: green bonds, low-carbon funds, loans for individuals and SMEs (purchase of electric vehicles, energy efficiency), etc. It is by exploiting these multiple approaches that the banks believe they are reversing the balance of power between polluting energies and low-carbon energies: a strategy that must continue to accelerate.



Industry focus – Actions around improving energy efficiency and renewable energy supply are key 1/2

COMPANY

OPERATIONS / PRACTICES*

PRODUCTS AND SOLUTIONS*



- Reduction of energy consumption by 20% (2015 2030)
- Improve fuel efficiency by 1.5% per year
- Compensation of residual emissions
- Energy efficiency of infrastructure and production processes

First zero-emission commercial aircraft by 2035











- Research and investments to replace fossil fuels in processes by exploiting factory waste Carbon capture and storage, renewable electricity supply (solar capacities, PPA**), energy efficiency of infrastructures, iron recycling
- infrastructure (wind power in particular)
- Modular and reusable iron components for building construction





- Energy efficiency of sites (158 ISO 50 001 certified sites)
- Use of recycled raw materials in processes
- Internal carbon prices for operations (€50/t) and R&D (€100/t) Supply of renewable energy in industrial processes (18.9% in 2020)



High-performance insulation solutions (which offset the emissions linked to their production in 3 months)

Low carbon iron used in electric vehicles (engine, structure) and renewable energy

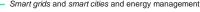
- Lower weight of car components
- Carbon footprint criterion when selecting suppliers



- 90% renewable electricity by 2025, 100% by 2030 (RE100)
- Doubling of energy productivity (2005 2030)
- Commitment by suppliers to reduce their emissions by 50%
- Compensation of residual emissions and internal carbon price



- Saving customers 800 million tons of CO₂ (2018 2020 Supply of green electricity to 50 million people (2005 - 2025)
- Smart grids and smart cities and energy management





- Improve building energy efficiency by 10% (2021 2030)
- 78% renewable electricity supply in 2021 and 100% by 2030
- Compensation and internal carbon price (\$40/tonne)
- Reduction of emissions linked to the vehicle fleet



- € 5.5 M€ invested in R&D, in part to develop sustainable solutions in 2022
- Design and construction of renewable infrastructures (Siemens Energy)
- Charging infrastructure and batteries for electric vehicles
- Intelligent management of buildings, public transport and rail



The financial challenge of energy consumption will not only increase (progressively higher carbon taxation and energy supply crisis in Europe) but also go hand in hand with a public image issue which is concretising via ESG criteria established by industrial customers. Manufacturers count on energy efficiency programs, internal carbon price systems and local or owned electric capacity productions.



Industry focus – Actions around improving energy efficiency and renewable energy supply are key 2/2

COMPANY

OPERATIONS / PRACTICES*

PRODUCTS AND SOLUTIONS*



- Promotion of the circular economy through recycling (610 kt), recovery of materials from treated waste (20%) and energy recovery from treated waste (30%)
- Increase in the share of electricity from renewable energies at production sites (46% in 2020)
- Greenpath, an offer of 100 solutions to reduce the carbon footprint of customers
- Reduction in the tonnage of waste sent to landfill (-50% between 2010 and 2050), replacement by recycling, the use of waste as a resource and as a source of energy





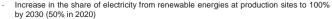
- Full product circularity by 2050 (40% by 2030)
- Internal carbon price for investment projects (€100/t in 2021)
- Sustainable supply of natural rubber (50% by 2025 and 80% by 2030)
- Optimization of means of transport using partnerships and multimodal transport (train, boat, etc.)
- Improved energy efficiency of products by 10% by 2030 compared to 2020 Retreading and end-of-life recovery

Agribusiness focus – Actions around improving energy efficiency and the circular economy are central

COMPANY

OPERATIONS / PRACTICES*





- Improvement of the energy efficiency of production sites (-50% in 2030)
- Sustainable packaging (100% reusable, recyclable or compostable by 2025)
- Compensation of residual emissions via the Livelihoods Carbon Funds

PRODUCTS AND SOLUTIONS*



- Lanjarón and Horizon Organic aim to be certified carbon neutral by 2025 and Font Vella by 2030.
- Eliminating deforestation from the supply chain (2020) and promoting regenerative agriculture



Construction focus – In compliance with the constraints imposed by the contracting authority, the actions initiated relate to tools and materials

COMPANY

OPERATIONS / PRACTICES*

PRODUCTS AND SOLUTIONS*



- Reforestation programs (Vias)
- Greening of company fleets (Clece)
- Sustainable certification awarded to 45% of infrastructure projects by 2025
- ISO 14001 certified



Increase in the share of green certified buildings (Hochtief, Dragados)



equipment





Experimentation with industrial solutions for modular wood construction, materials reuse and recycling platforms, use of biosourced materials, use of "low carbon" concrete, bioclimatic design of structures, "low carbon" supply chain, etc.

- Eco-design and eco-construction: positive energy buildings, eco-districts, "low carbon" constructions
- Construction and operation of renewable energy infrastructure
- Energy optimization of buildings and public transport





- Design of "low carbon" buildings
- Biosourced materials, proximity criteria, wood traceability
- Carbon performance criteria in the variable compensation of the executives

- Renewable infrastructure: design, construction, operation, maintenance

Certified green buildings and positive energy buildings (96% in 2021)

- Construction of "low carbon" buildings (Eiffage Immobilier)
- Electric mobility and carpooling infrastructure
- Energy management of buildings and neighborhoods



- Recycling materials to produce cement that emits up to 50% less carbon (for the same durability, strength and quality)
- Development of less energy-consuming equipment for quarries
- Measurement of the carbon footprint of building materials
- Ÿ





- Renewal of the vehicle fleet (light, utility) and construction machinery
- Eco-design of buildings, high energy performance

- Public transit and renewable energy infrastructure
- Installation and operation of electric and hydrogen charging stations, road improvements (carpooling, bus, intermodality)

Reduction of the CO₂ footprint of construction materials using the EC3 tool developed

with Microsoft and exploitation of AI to improve the energy efficiency of construction

- Eco-design and eco-construction of buildings





These five players are capable of designing and building certified green buildings, but the development of this offer is also based on changes in the criteria (ESG and financial) of calls for tenders. They are nevertheless working on two key subjects for their sector: the reduction of emissions from construction machinery and emissions related to the use of construction materials.



Energy focus – The transition of asset portfolios towards low-carbon production systems and uses are crucial

COMPANY

OPERATIONS / PRACTICES*

PRODUCTS AND SOLUTIONS*

Reduction of (40%) oil and gas production by 2030, and no exploration in new countries

Diversification towards products with lower carbon intensity: renewable electricity,





- CO2 capture projects
 - Bonus of approximately 37,000 employees partly linked to the achievement of greenhouse gas emission targets
- Internal accreditation system for Advancing Low Carbon activities





- End of electricity production using coal by 2030
- Doubling of renewable electricity capacities between 2014 and 2030 (60 GW)
- Tripling of electricity storage capacities between 2018 and 2035 (10GW)
- Compensation of residual emissions



- Electric Mobility Plan and Storage Plan (10GW by 2035)
- Nuclear energy, innovation in hydrogen, closure of oil and coal power plants
- Recycling of wind turbines (90%) and photovoltaic panels (85%)

\$5 billion per year invested in low-carbon energies by 2050

Installation of charging infrastructure for electric vehicles

Offers and solutions for individuals and businesses, PPA***



- Implementation of an internal carbon price since 2015
- Significant greening of the fleet by 2030
- Priority choice of Science Based Target certified suppliers
- Five-year digital sobriety strategy





- 80GW of renewable energy capacity
- Closure of coal assets, investments in hydrogen
- Electric vehicle charging infrastructures
- Offers and solutions for consumers, access to energy

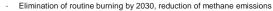




- Remuneration criteria (emissions, new energy activities)
- Improving the energy efficiency of infrastructures
- Low-carbon electricity consumption, hydrogen and biofuels
- Carbon capture or compensation, monitoring of methane leaks

- biofuels, hydrogen
- Electric vehicle charging (NewMotion)





€450 million invested to improve energy efficiency (2018 - 2025)

Integration of a CO₂ price and CEO compensation criteria

CCUS** and compensation, coal → gas to produce electricity



- Gross renewable electricity capacity of 100GW in 2030
- Batteries and electricity storage (Saft, Automotive Cell Company)
- Electric vehicle charging infrastructure
- Offers and solutions for end consumers



For energy players, the key take away regards the diversification of assets and activities, in favor of the various renewable energies, charging infrastructures for electric vehicles, batteries and means of storing electricity. A transition that involves the application of internal carbon prices and the establishmet of criteria for variable compensation, as well as research and innovation to withdraw from fossil fuels.



Automotive focus – Various actions relating to both processes and marketed products

COMPANY

OPERATIONS / PRACTICES*

PRODUCTS AND SOLUTIONS*



- Reduction of energy consumption and optimization of logistics
- Responsible purchasing and use of sustainable packaging
- Supply of renewable energy (45% in 2021)



- Electric vehicle batteries (Automotive Cell Company)
- Optimization of vehicle equipment and architecture
- Electric and hybrid vehicles, with the objective of a 100% electric range by 2030





- 65% reduction in well-to-wheel emissions for all vehicles sold in 2030
- Increase in the share of renewable energies at production sites to 100% by 2030 Reduce supply chain emissions by 30% and manufacture all vehicles using 33% recycled materials by 2030
- Electric and hybrid vehicles
- Flexible services for transporting goods and people (car sharing, carpooling, leasing and pay-to-use)
- Extension of vehicle and battery life, as well as access to infrastructure





- Reduction of 30% in emissions over the life cycle of passenger cars and light commercial vehicles between 2015 and 2025
- Use of remanufactured and recycled parts, optimization of logistics
- Replacement of coal with natural gas, renewable energy supply

- 60% electric vehicles by 2030 in the European Union-
- Electric, hybrid and gas vehicles
- Electric vehicle charging infrastructure
- Lithium-ion battery plant project (late 2023-early 2024)



Apart from reducing the emissions linked to the use of vehicles (mainly through targets aiming to develop electric vehicles), car manufacturers are also striving to act on the production phases (sourcing renewable energy, recycled and remanufactured materials, battery plant projects for electric vehicles) and logistics. Following dieselgate, the sector was called upon to become aware of its impacts and to make significant changes.

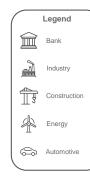


Note: this icon is used to put light on some actions and ease reading of the pages. These actions are representatives of what needs to be systematized and reinforced in all companies and sectors. It does not mean that the company is the first to do this action, nor that the other companies have not adopted it.



Good practices are emerging and can be replicated in other sectors

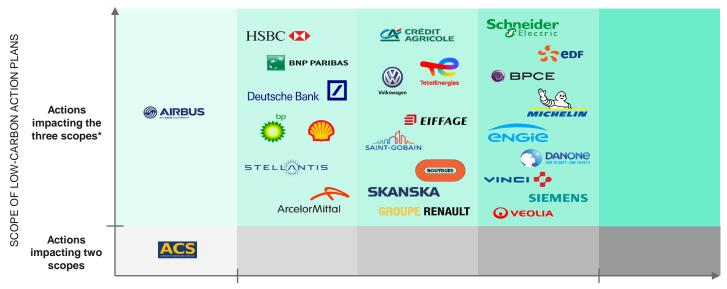
	ACTIONS	SECTOR(S)*	EXAMPLE(S)
	Define a commercial policy and objectives		Bouygues wants to offer a portfolio of low-carbon solutions to its customers. EDF wants to double its renewable electricity capacities between 2014 and 2030 to reach 60 GW.
OFFER	Define exit targets for the most polluting energies	坐 宣	By 2040 BNP Paribas wants to exit the coal sector. BP is committed to reducing oil and gas production by 50% by 2030, and not to launch exploration in new countries.
	Proceed product by product		Airbus wants to offer a zero-emission commercial aircraft from 2035. Saint-Gobain is working to reduce the weight of vehicle components. Low-carbon fuels are being deployed in sectors that are difficult to transform.
	Targeting disadvantaged populations	# 1	Engie offers off-grid renewable energy access solutions in Africa. Schneider Electric facilitates access to communications and light for disadvantaged people.
INTERNAL	Integrating the carbon factor into decision-making processes	* 4	Many groups have developed internal tools for measuring the carbon emitted by the activities, purchases, products, projects financed and are testing or already using an internal carbon price.
	Reduce scope 1 and 2 emissions	All	Improving the energy efficiency of buildings, machines, IT systems and data centers, digital sobriety strategies (Engie), limiting travel, greening fleets.
PROCESS	Better control of purchases and logistics	* 🗎 🔔 👄	Some groups are strengthening their environmental policy (coal, deforestation, drilling in the Arctic, controversial extraction techniques and working conditions). Others even go so far as to support their suppliers in reducing their emissions. Many are increasing their supply of electricity, or even energy from a renewable source (RE100 initiative in particular), including through PPAs**. Volkswagen uses an LNG* ship to transport its vehicles. TotalEnergies and Stellantis have created a joint venture to produce batteries for electric vehicles in Europe.
	Improving industrial practices and processes	* 4	Tankers are working to reduce methane leaks and non-emergency flaring. Schneider Electric wants to eliminate SF6 gas from all its products by 2025. TotalEnergies wants to eliminate routine burning on its facilities by 2030. Several manufacturers are working on recycling and the use of recycled and remanufactured materials, developing the recovery of heat, CO ₂ capture and storage projects, etc.



* Sectors for which the action is mainly observed

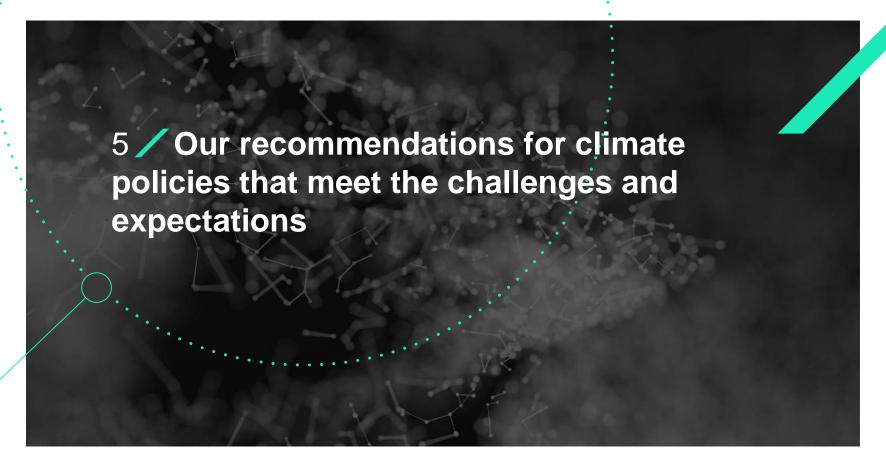
Groups must move from emerging practices and solutions to mainstream and structuring practices and solutions

The actions already taken or planned by European groups demonstrate a gradual awareness of their responsibility with regard to their greenhouse gas emissions. Overall, companies list many initiatives: the challenge now is to change scale and include scope 3 emissions.



DEGREE OF COMPLETENESS AND CLARITY OF CLIMATE ACTION PLANS*





1 - Climate reporting



Measure the 3 scopes of emissions in their entirety, without geographical or perimeter exception, etc.



Publish emissions in a clear and understandable format, along with a description of emission sources



Present historical data for the same emission sources



Evaluate emissions using location and market based methods. while choosing the highest of the evaluations



If certain emissions are excluded. clearly indicate why they are not included.



Document activity data and emission intensities for the entire company, including subsidiaries

Powerful indicators to assess the adaption of business models

A real transparency on the extent and the dynamics of the transformations undertaken by the companies must be put forward instead of simply listing the projects undertaken. Suggested indicators:



- Share of installed GW corresponding to renewable energy production capacity for energy companies
- Percentage of products corresponding to lowcarbon products (across the entire life cycle)
- Share of investments financing low-carbon projects and activities
- Share of revenue corresponding to low-carbon activities





The first methodological basis to be used to construct such indicators are those of the European taxonomy currently under construction, as well as the recent publication of the Financial Industry Standard by the GHG Protocol and the PCAF.





2 - Climate strategy

The mobilization of leaders (political support) embodying a real desire for ambition and an openness to change and questioning

Appropriation of the strategy by employees: participation in the construction, responsibilities, communication, change management



Full responsibility: not to brush off its responsibility regarding scope 3, vis-à-vis suppliers, on the use of products, and to go beyond the opposition of climate objectives with social objectives (example: access to energy)

A global vision integrating the cost of inaction: expectations of customers, employees, positioning of competitors, climate risks and strengthening of regulations

A clear and structured methodology to deal with and prioritize the multitude of issues and impacts



Aim to <u>contribute</u> to carbon neutrality by 2050 for <u>all</u> the perimeters of the 3 scopes



Set intermediate emission reduction targets: immediate action and responsibility (maximum 5 years)



Work on the climate message and its coherence with the company's culture and overall strategy, leading to employee engagement

3 - Climate action plan

1 - DEFINE STRONG ACTIONS TO ACT ON THE THREE SCOPE OF EMISSIONS 1/2

Legend Scope 1 Scopes impacted by Scope 2 the type of action Scope 3



Define quantitative objectives concerning the range of offers in order to industrialize green products and solutions



Share of green buildings designed and constructed



Acceleration of renewable energy financing



Add a proximity and/or climate criterion in the purchasing policy or even relocate key activities



Guarantee that the company's activities have no impact on deforestation (tracing, guarantees)



Improving the energy efficiency of buildings and industrial processes



4 4 6 年 6

Sectors in the industry must optimize their logistics and integrate supply risks.

♣ ♣ 命 育

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As well as the furniture and food industry

Short term optimization of processes and projects on the medium-term

Valorization of eco-products, financing of the circular economy

Developing circular

economy: recycling and

use of recycled and

remanufactured materials.

recuperation heat, etc.

Focus - Three levels of renewable energy supply certificates (cf. recommended action next page)

A renewable energy certificate represents one MWh of electricity produced from a renewable energy source (RES). Not all have the same value



1 - Guarantee of origin

RES source without driving the creation of new production capacities



2 - APP

RES directly financed by the investment, but using electricity of fossil origin in the event of insufficient renewable energy production



3 - 24/7 APP

RES and storage capacities directly financed by the investment: limited recourse to fossil fuels

Easy to implement / Limited costs

3 - Climate action plan

Legend

Scopes impacted by the action typology Scope 3

1 - DEFINE STRONG ACTIONS TO ACT ON THE THREE SCOPE OF EMISSIONS 2/2.



Source 100% renewable energy via PPAs, selfproduction, heat recovery, etc. (see focus on previous page for additional information)

Gradually switch to RES, especially

with regards to industrial processes



Develop sobriety: reduce excessive transport, travel, energy consumption, waste, illuminated advertising, lights outside work hours, etc.

All*



Define a 100% greening target for the company's fleet of vehicles

AII*



Review IT practices with regard to environmental impacts and integrate climate criteria into IT purchases

must implement a All* sobriety and IT strategy in sectors using videos and data storage intensively



Offsetting residual emissions: reforestation and forest

protection programs

With an AII* exhaustive follow-up in the long and very long term

2 - ENSURE THAT AMBITIONS ARE ACHIEVED WITHIN SET TIMES



Structure the actions into an action plan (define, classify, prioritize, quantify, plan, monitor) in order to ensure the consistency, relevance. means and effective achievement of the commitments made



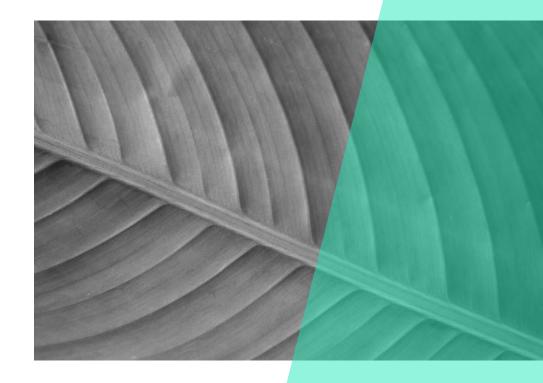
Define responsibilities for each objective, such as the addition of variable compensation criteria linked to the achievement of managers and management



Set and use an internal carbon price across the entire value chain of the organization

SIAPARTNERS confidential

Appendices



Appendix 1 – The three emission scopes defined by the GHG Protocol

The Greenhouse Gas (GHG) Protocol is a private organization that has developed a **standard for measuring, reporting and managing greenhouse gas emissions.** Since its first publication in 2001, **sector specific instructions** have been developed. The standard **distinguishes three scopes** of emissions: **one for direct emissions and two for indirect emissions**. The **GHG Protocol** is the **main standard** for measuring greenhouse gases used by companies **around the world**. The sub-standards used in this study were the Corporate, Value-Chain and Financial Industry standard

SCOPE 1

All direct emissions resulting from emission sources owned or controlled by the organization (including vehicle fleet).

SCOPE 2

Indirect scope 2 emissions correspond to emissions due to the production of electricity, heat or steam consumed by the organization.

Indirect emissions are a consequence of the organization's activities, but the actual sources of emissions are owned or controlled by other entities. The GHG Protocol distinguishes indirect emissions into two scopes: 2 and 3.

SCOPE 3

The other indirect emissions are grouped together in scope 3:

- 1 Goods and services purchased
- 2 Capital goods
- 3 Activities related to fuel and energy not included in scopes 1 and 2
- 4 Upstream transport and distribution
- 5 Waste generated in the processes
- 6 Business trips
- 7 Employee journeys
- 8 Upstream Leased Assets
- 9 Downstream transmission and distribution
- 10 Production of products sold
- 11 Use of products sold
- 12 End of life of products sold
- 13 Downstream Leased Assets
- 14 Franchises
- 15 Investments



Appendix 2 – The GHG Protocol for the financial industry

Source of illustration: GHG Protocol website

The GHG Protocol for the finance industry was developed with the PCAF for use in the 2021 reporting cycle. It responds to the need for a globally harmonized, robust and transparent method to consistently measure and disclose financed emissions (Investments - Item 15 of the GHG Protocol Scope 3). It will directly link financing to the emissions of the majority of the global economy. This will allow investors to have greater transparency regarding their investments emissions, whilst the public (regulators by extension) will have a clearer picture of the global streams of money fuelling emissions. The evolution of regulation could lead to an asset's carbon footprint becoming as relevant as its credit risk in guiding bank terms. This would lead to a reduced flow of investments towards the fossil fuel sector and an increase towards renewable energies, energy efficient infrastructures and innovative financial products. The methodology has been developed for six asset classes (outlined below), which will be modified and expanded upon through use cases in the near future.

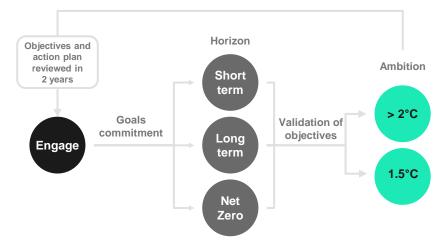




Appendix 3 – The Science Based Targets initiative

The Science Based Initiative Targets (SBTi) urges companies to set targets to reduce their greenhouse gas emissions that are consistent with the 2015 Paris climate agreement, according to the latest scientific knowledge base. It is a private organization resulting from the collaboration between the CDP, the UN Global Compact, the World Resources Institute and the WWF. The companies initially commit to setting objectives within 2 years, then once set, the SBTi foundation validates (or not) its compliance. Of the 26 groups analyzed in this document: 6 have committed to setting targets (and are therefore within the two-year period or in the process of being validated by the SBTi) and 7 have had their emission reduction targets validated.







The SBTi accreditation process begins with the commitment and is then followed by the validation (or not) of an ambition (1.5°C or >2°C) set on a specific horizon (short term, long term or net zero)



Appendix 4 – The greenhouse gas emission reduction targets of the selected groups

BNP Paribas

Carbon neutrality achieved in 2017 on scopes 1 and 2

Airbus

-50% of emissions between 2005 and 2050 on scopes 1, 2 and large transport

ACS-Group

Carbon neutrality by 2045 on scopes 1 and 2

BP

Carbon neutrality by 2050 of operations and upstream of gas and oil production

Stellantis

Carbon neutrality by 2050 for scopes 1 and 2

BPCE

Carbon neutrality by 2050 on scopes 1, 2 and 3

ArcelorMittal

Carbon neutrality by 2050 on scopes 1, 2 and 3 in Europe

Bouyques

-35% of emissions between 2017 and 2030 on scopes 1, 2 and 3a**

EDF

Carbon neutrality by 2050 on scopes 1,2 and 3

Renault

-60% of scope 1 and 2 emissions by 2030. **- 40%** of emissions related to the use of products sold by 2030

Agricultural credit

Carbon neutrality by 2050 on scopes 1 and 2

Saint Gobain

Carbon neutrality by 2050 on scopes 1, 2 and 3*

Eiffage

-46% of scopes 1 and 2 emissions by 2030. - **30%** of scopes 3 emissions by 2030

Engie

Carbon neutrality in 2045 on scopes 1, 2 and 3

volkswagen

Carbon neutrality by 2050 on scopes 1, 2 and 3

Deutsche Bank

Carbon neutrality achieved in 2012 on scopes 1, 2 and pro. travel

Schneider Electric.

Carbon neutrality by 2040 on scopes 1, 2 and 3

Skanska

Carbon neutrality by 2045 on scopes 1, 2 and 3

Shell

Carbon neutrality by 2050 on scopes 1 and 2, -65% product carbon footpring / 2017

Danone

Carbon neutrality by 2050 on scopes 1, 2 and 3

HSBC

Carbon neutrality by 2050 on scope 1 and on scope 2 by 2030

Siemens

Carbon neutrality by 2030 on scopes 1 and 2 (operations)

Vinci

Carbon neutrality by 2050 on scope 1. - 40% of scopes 1 & 2 emissions and -20% on scope 3 by 2030

TotalEnergies

Carbon neutrality by 2050 on scopes 1, 2 and for Europe 3 as well.

Michelin

Carbon neutrality by 2050 on scopes 1 and 2

Veolia

Carbon neutrality by 2050 on scopes 1 and 2. **-40%** of scope 2 emissions by 2034

* If scope identical to the intermediate objective of 2025 ** 3a is defined as "other indirect emissions" by Bouygues



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