CLIMATE NOTEBOOK 2024

SAINT-GOBAIN

OVERVIEW

As a worldwide leader in light and sustainable construction, Saint-Gobain is at the heart of climate change issues.

This document is meant to share our concerns, our vision, our strategy and our actions regarding climate-related issues, with our all stakeholders.

You can find more detailed information in Saint-Gobain's annual financial and non-financial reporting, as well as additional data and resources about our CSR and climate-related roadmap and actions online at https://www.saint-gobain.com/en/corporate-responsibility/our-pillars/climate-change.

On climate-related issues, check out in particular Saint-Gobain's 2023 Universal Registration Document, pp. 52-55, pp. 106-125 and our non-financial results pp. 152-151), available online at https://www.saint-gobain.com/en/press/corporate-publications)

EDITORIAL

Benoit Bazin

Chairman and Chief Executive Officer

Addressing climate change is an urgent call to action for every sector of the economy. The construction industry and the built environment, contributing to nearly 40% of global greenhouse gas emissions, stands at the forefront of this battle. With its unique position, the sector holds both the potential and the solutions necessary to tackle the challenge. By focusing on creating quality housing and improving living conditions and well-being for all, the construction industry can lead the charge toward a more sustainable future.

Decarbonizing the built environment is not just a goal - it's a critical priority. This encompasses not only the construction of new buildings but also the renovation of existing ones, many of which will still be in use in 2050. Whether dealing with residential, commercial or public buildings, every aspect of the sector must be mobilized to reduce carbon emissions.

This is a monumental challenge that requires collective effort from every player in the economy and society. Active in 76 countries, Saint-Gobain is at the heart of this vital endeavor. We are actively engaged, striving to enhance our industrial and logistic processes and introduce innovative solutions that significantly cut carbon emissions over the lifetime of construction.

Our corporate purpose - "Making the World a Better Home" -, perfectly aligned with our vision to be the worldwide leader in light and sustainable construction, drives our commitment and our future development. It is a mission that we take on with great commitment. Together, we can turn the tide and build a more sustainable and desirable world.

Claire Pedini

Senior Vice-President, Human Resources and Corporate Social Responsibility

Our corporate social responsibility has been for a long time at the heart of our actions and the Group's strategy. At a time when climate issues are becoming ever more pressing, we keep working resolutely to maximize our positive impact for our customers in the built environment and all players in our value chain and to minimize our footprint.

The ambition to contribute to a decarbonated home, one of the three pillars of our CSR strategy, follows the same logic: it does engage all the dimensions of Saint-Gobain and guides our actions. This means both continuing to develop our offer to enable our customers to reduce their own carbon footprint, and resolutely pursuing our efforts to minimize our emissions.

All global megatrends are connected. The consumption of raw materials or water also has an impact on the climate, which is why our contribution to the fight against climate change also involves the search for more performance with less.

We cannot do this alone, which explains why a major part of our efforts is devoted to creating positive interactions with all our stakeholders, both internal and external. The excellent results we have achieved so far, and the high standards and enthusiasm of our employees, are a source of motivation and confidence for us in the future.

1 INTRODUCTION

CLIMATE CHANGE:
calling on all players to work together

2050 NET ZERO CARBON

1.5°C

Goal set by the 2015 Paris Agreement to limit global warming

37%

share of buildings in annual CO_2 emissions worldwide

GLOBAL CONTEXT

Climate change is a major threat to natural, economic, social and geopolitical stability. The increasing frequency and intensity of extreme weather events underscore the urgency of taking radical action to decarbonize the economy on a global scale. Global CO_2 emissions continue to rise, threatening our ability to meet the goal of limiting global warming to 1.5°C, as agreed in the 2015 Paris Agreement.

Construction is one of the most significant industries in terms of climate change, accounting for 37% of annual global CO_2 emissions. This is mainly due to the operation of buildings and the production of building materials. **However, innovative technologies and more sustainable construction methods can help transform this sector.** Efforts to renovate existing buildings are also essential, as more than 80% of existing buildings will still exist in 2050.

WHY WE TAKE ACTION

Fighting climate change requires the cooperation of various stakeholders, including the public, governments and businesses. With this in mind, all value chains in new construction, renovation of existing buildings and industry need to adapt and/or transform. In line with the Paris Agreement, Saint-Gobain is committed to contributing to the “net zero emissions” goal by 2050, with interim targets to reduce emissions by 2030.

At Saint-Gobain, we are actively working to reduce the impact of our own operations and offer innovative solutions to help our customers reduce their carbon footprint.

In the face of climate risks, local action makes it possible to rely on resilient local ecosystems that are more conducive to the development of a low-carbon economy. **The ability to initiate local partnerships is an essential asset for us in terms of long-term risk management.**

OUR STRATEGY:
contributing to the “net zero emissions” goal

Our approach to climate change is based on a dual commitment to maximize our positive contribution and minimize our footprint. To make this possible, we strive to engage all of our stakeholders on climate-related issues.

MAXIMIZE OUR IMPACT

We maximize our positive impact by developing a range of solutions[1] that help our customers reduce their own carbon footprint:

- providing solutions that deliver benefits during the operational phase of buildings. Specifically, this means designing, manufacturing and marketing solutions that **improve energy efficiency and reduce CO_2 emissions;**
- providing solutions that make it possible to **decarbonize an industrial process or a manufactured product.** Examples of such solutions include the additives developed by our Construction Chemicals Business Unit to reduce the carbon content of buildings;
- providing **low-carbon solutions** by reducing emissions from our operations (scopes 1 and 2) and from our value chain (scope 3) to reduce carbon in buildings.

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MINIMIZE OUR FOOTPRINT

We minimize our own carbon footprint through **action plans built around two main stages:**

- **between 2017 and 2030,** our “Carbon 2030” roadmap aims at:
  - achieving an absolute CO_2 emission reduction goal of 33% (scope 1 and 2) and of 16% (scope 3)[2];
  - innovating and testing industrial processes in order to achieve the objective of “net zero emissions” by 2050 in all three scopes.
- **between 2030 and 2050:** the innovation pathways identified during the implementation of the 2030 Carbon Roadmap will be deployed in order to achieve at least 90% reduction of our scope 1, 2 and 3 emissions.

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ENGAGE OUR STAKEHOLDERS

To achieve our goals, we need to **build lasting relationships and fruitful interactions with our stakeholders** throughout our value chain:

- with our **employees,** via training programs (in order to help them understand climate-related issues) and by providing resources to enable our them to take action (such as carbon funds or by encouraging them to work together on sponsorship projects to accelerate the renovation of housing);
- with our **partners** (suppliers, customers, lobbying partners, international institutions and governments), to accelerate the transition to a more sustainable construction sector and low-carbon industries;
- with **local authorities and communities** by engaging in public debate on local climate issues, providing training in sustainable construction, and supporting associations that help vulnerable populations.

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1 • A solution is to be understood as a combination of systems, products and services, proposed by Saint-Gobain to its clients and that matches a specific expectation. For example : renovating a building façade while reducing the long term CO2e impact of the building’s operation.

2 • These targets have been validated by the Science Based Targets initiative (SBTi), which considers them to be in line with the Paris Agreement and a 1.5°C change limit trajectory.

CONTRIBUTING
to a decarbonized home

Saint-Gobain's ambition is to contribute to the emergence of a fair, sustainable economy aligned with the goals of the Paris Agreement. In this context, the word "home" refers to the planet we all share, as mentioned in Saint-Gobain's corporate purpose: "Making The World a Better Home".

ASSESSING AND MITIGATING THE RISKS WE FACE

We work daily on two types of risks:

Physical risks
The three major physical risks are increased frequency and/or intensity of potentially destructive events, resource scarcity and global temperature rise. Even though these risks have a limited potential financial impact, Saint-Gobain's Risk and Insurance Department continuously assesses the risks to which the Group's sites are exposed throughout the world and the risks related to the effects of climate change.

Transition risks
The Group anticipates the technological risk associated with the substitution of existing products with low-carbon options by investing in the development of breakthrough technologies and eco-innovative solutions to meet customer expectations. Two internal carbon prices were set up in 2016 to support the viability of Saint-Gobain's projects and strategy. These two prices are regularly updated.

OPPORTUNITIES ASSOCIATED WITH DECARBONIZING CONSTRUCTION AND ADAPTING TO CLIMATE CHANGE

At Saint-Gobain, **we are also working to optimize and reduce our energy consumption.** In anticipation of the increase in the cost of high-emission products that would result from stricter regulations and expected changes in consumer and customer preferences, Saint-Gobain is encouraging the development of low-carbon materials and processes throughout its value chain.

In addition to our efforts to contribute to the "net zero carbon" goal in our operations, we promote renewable energy and develop energy efficiency solutions for our customers to help them meet the climate and environmental challenges they face.

Saint-Gobain addresses the risk of raw material scarcity by actively promoting the transition to a circular economy, reducing consumption, substituting renewable or recycled raw materials for non-renewable raw materials, extending the life or use of our products or systems, and reducing material intensity.

WORKING TOWARDS A JUST TRANSITION

Intensive urbanization and population growth are leading to a growing need for housing. In many regions, cities are both exposed to major risks associated with climate change and the place where vulnerable populations have difficulty accessing adequate housing.

Just transition measures are critical to achieving climate goals, with attention to disadvantaged communities and upholding the right to housing. National transition plans and efforts to address climate emergencies could exacerbate the impact on vulnerable populations and increase inequalities; the success of climate action plans will therefore depend largely on local social conditions and societal readiness.

Light and sustainable construction can have direct positive social impacts. For example, renovation programs to improve energy efficiency reduce energy bills for end users - which is crucial for weaker sections of the population - and help create new jobs linked to the development of circularity.

Saint-Gobain's local organizations are working to help the construction market adapt to climate change, with programs tailored to their specific exposure to climate risks. They also support initiatives that combine affordable housing and sustainable construction, in partnership with various stakeholders, including NGOs.

Also check out **the Saint-Gobain Group Foundation,** supporting solidarity projects to benefit local communities.

WEBSITE

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2 MAXIMIZE OUR IMPACT

Mark Rayfield
Senior Vice-President, CEO of the North America Region

“Consumers drive demand. The technology is available to us today to build the sustainable homes we need; and to do so economically. We must help educate homeowners and contractors to see the value in building in a more sustainable manner. By leveraging sustainable solutions such as insulation, they can improve the energy efficiency of their homes, thus participating in the worldwide effort to limit climate change.

MAXIMIZE

IMPLEMENTING A SOLUTIONS-BASED APPROACH:

placing our business model at the very heart of the fight against climate change

At Saint-Gobain, we are committed to designing and producing solutions that combine performance and sustainability, in order to minimize their environmental impact. The Group aspires to meet its customers' expectations in terms of quality, efficiency and cost by designing solutions tailored to local conditions, as each region of the globe faces specific challenges.

40%

Buildings account for 40% of the European Union's energy consumption

ENERGY EFFICIENT RENOVATION

Energy efficiency is at the heart of our offering. By developing thermal insulation solutions for buildings, **Saint-Gobain enables its customers to significantly reduce their energy consumption.** For example, Isover insulation materials allow buildings to be heated and cooled more efficiently. As a result, users can make substantial savings, while **reducing their environmental footprint.**

LOW-CARBON SOLUTIONS

Saint-Gobain is also committed to promoting and distributing low-carbon solutions, **designed to minimize their carbon footprint throughout their life cycle, from production to the end of use.** These solutions meet the highest sustainability standards while maintaining high performance, with the ambition of **helping customers to achieve their sustainability goals.**

DECARBONIZATION OF INDUSTRY

Saint-Gobain plays **a key role in the decarbonization of several sectors, such as glass and cement industries, by developing technologies and processes that reduce the use of fossil fuels and greenhouse gas emissions.** For example, the Group has created EnviroAdd, a new range of cement activators, which diversifies the composition of cement and makes possible to reduce their carbon footprint by up to 11%, while maintaining their performance. Saint-Gobain is also working on projects to recycle materials and improve manufacturing processes to promote a circular economy.

MAXIMIZE

INNOVATING TO MEET CLIMATE-RELATED GOALS:

delivering light construction solutions worldwide

Unlike traditional construction, where solid walls bear the weight of the building, light construction consists of creating a skeleton onto which lightweight façade systems and non-load-bearing interior partitions are added. For Saint-Gobain, with its extensive expertise in this field, light construction is at the heart of its contribution to a greener economy.

REINVENTING CONSTRUCTION

Light construction reduces the environmental impact of the construction process, optimizes resource consumption and delivers superior performance. While this approach is traditional in certain markets, such as single-family homes in the United States and Scandinavia, it is set to expand rapidly around the world because of the critical advantages it offers, particularly in terms of construction speed. This is true not only in emerging countries, - where dynamic demographics are generating strong demand for new housing - but also in a number of developed countries, - where there is a shortage of housing - and in all places where skilled labor is in short supply. Light construction techniques offer significant advantages in terms of ease of construction, conversion and deconstruction; the aim is to **build faster, better and cheaper.** Saint-Gobain has extensive expertise in wood construction, which offers significant growth potential in many markets and across all construction segments.

Light construction solutions such as façade systems and lightweight partitions also bring significant benefits in terms of the quantity of materials consumed (-79% in the case of a residential building) and **greenhouse gas emissions,** making **a decisive contribution to the objectives of decarbonizing construction** and moving towards a circular economy. Prefabrication techniques involve manufacturing the various components of a building in a factory, including the water and electricity circuits, and assembling them on site. They provide a solution to the challenge of labour shortages; by reducing production and construction costs, they also save time and enable the delivery of more affordable housing, meeting both the imperatives of protecting household purchasing power in developed countries and providing decent, comfortable homes for all in emerging economies.

LEVER FOR CHANGE: THE BENEFITS OF LIGHT CONSTRUCTION

-50%

of embodied carbon[1] in the structure and envelope of buildings over the entire life of materials

-50%

in raw materials consumption

Up to

50%

lighter than conventional construction

Up to

20 TO 30%

of productivity gains at certain stages of construction (pouring screed, erecting walls or facades, etc.)

1 • "Embodied carbon" denotes emissions associated with the manufacture and implementation of building materials throughout their life cycle, from extraction of the raw materials to their end of life. They can represent up to 50% of a building's CO_2 emissions. Embodied carbon is linked just as much to new builds as renovations – insulating a heat-leaking structure, renovating a roof, or even simply replacing the carpet or refreshing the painting.

MAXIMIZE

DECARBONIZING INDUSTRY

CONSTRUCTION CHEMICALS

The main criticism of concrete stems primarily from the environmental footprint of its main ingredient: cement, whose main component, clinker, is obtained by mixing crushed limestone and clay, which are then heated to very high temperatures. This step emits CO_2 and consumes a considerable amount of energy, and is ultimately responsible for most of concrete's carbon footprint. Several levers can be used to reduce this phenomenon, among which adding activators in cement formulation, allowing for a reduction in clinker quantity (at the same level of performance), and admixtures. **Construction chemicals therefore stand at the forefront of the transformation of the construction industry.** This category of solutions brings together all the chemical components used to bond, join, seal, protect, reinforce and perfect various construction materials, both in new build and renovation projects, for buildings and infrastructure (tunnels, bridges, roads, railways, dams, etc.).

The innovative technologies developed by Saint-Gobain make it possible to **reduce energy consumption, lower the carbon footprint of cement and concrete, and promote a more circular economy. They play a key role in the transition to low-carbon construction** and are an essential component of the Group's strategy to be the worldwide leader in light and sustainable construction.

At Saint-Gobain, construction chemicals represent more than 270 industrial production sites in 76 countries. This global market is currently estimated to be worth between 80 and 90 billion euros, with annual growth far outstripping that of the construction market in general.

LOW-CARBON TRANSITION IN OTHER INDUSTRIAL SECTORS

In the glass industry, Sefpro's products and services enable customers to make a successful technological transition to low-carbon glass by electrifying and reducing energy consumption to reduce CO_2 emissions.

For the end of life of glass industry furnaces, Valoref - a Saint-Gobain company specializing in the treatment and recovery of refractory brick waste - offers a used ceramic collection service. The recovery of waste takes place mainly during the repair or reconstruction of furnaces. Valoref ensures the collection, treatment and recovery of waste from the customer's industrial sites, offering a truly comprehensive waste management service. The waste collected is mainly recycled in the refractory production chain. The other recycling circuits are the production of construction materials such as mortar or tiles and other industrial additives.

MAXIMIZE

ANTICIPATING RISKS, accelerating the transition

Climate-related disasters (heatwaves, drought, forest fires and flooding due to extreme rainfall, etc.) are multiplying and generating increasingly costly losses. There is therefore a strong dynamic emerging around the need to adapt buildings and cities to climate change.

WE PROVIDE OUR CLIENTS WITH SOLUTIONS TO DEAL WITH A VARIETY OF HAZARDS

For each hazard type, solutions are available in order to mitigate the risks:

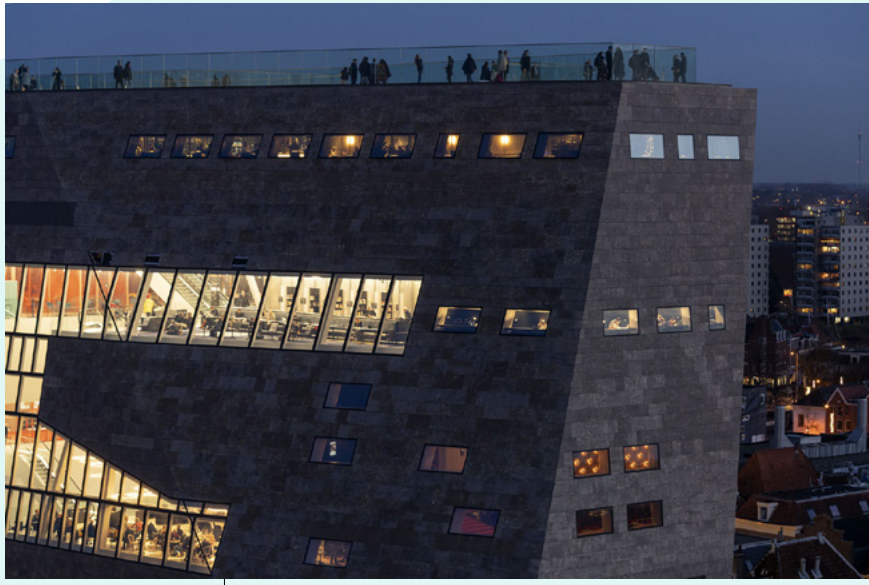
- **Extreme heat:** insulation and photovoltaic panels;
- **Storms and heavy winds:** waterproof cladding, impact-resistant glazing, window seals, under-roofing and roof cladding;
- **Heavy rains:** rain screens or cladding system, waterproofing products ;
- **Flooding:** water-repellent finishes, water-resistant materials.

WE STRIVE TO ANTICIPATE THE RISKS FOR OUR OWN OPERATIONS

At Saint-Gobain, we have taken action so as to anticipate the risks we face regarding our existing sites:

- **Reviewing critical equipment lists** for sites and reviewing our business continuity plans, that must take into account climate-related risks;
- **Establishing detailed topographical analyses** of our sites around the world;
- **Reviewing our level of alert preparedness** and our **risk management procedures** (before, during and after events);
- **Installing barriers,** particularly for access to basements.

Concerning the building of new sites and the projects of site extensions, we review in particular design and construction procedures.



Saint-Gobain designed the Cool-Lite SKN 176 solar thermal triple-glazed glass that enabled the Forum Groningen, designed by NL Architects, to win the BNA architecture prize for “the building with the greatest added value for customers and society”.

3 MINIMIZE OUR FOOTPRINT

Montserrat de la Fuente Trabanco
Glass Industrial Director
and Group coordinator
for the industrial CO_2 roadmap

“Innovation is a critical avenue in our quest to minimize our greenhouse gas emissions. This is why we are focusing a large part of our efforts in this area. In our glazing, gypsum, insulation and mortar businesses, for example, almost 50% of R&D is dedicated to decarbonization.

MINIMIZE

REDUCING OUR CARBON FOOTPRINT:
speeding up our efforts

At Saint-Gobain, we are working resolutely to reduce our own greenhouse gas emissions, even as the scope of our business grows steadily (€47.9 billion in sales in 2023 vs. €38.1 billion in 2020).

AVENUES FOR ACTION

In 2020, SBTi[1] validated Saint-Gobain's emission reduction targets for 2030: 9 million tonnes of CO_2 (scope 1 and 2) in 2030, i.e. an absolute reduction of 33% between 2017 and 2030, and a 16% reduction (scope 3) over the same period. In 2023, we worked on improving our scope 3 assessment to understand the levers and develop digital performance monitoring tools. At the end of 2023, the Group had reduced its emissions by 34% (scope 1 and 2) as compared to 2017. This absolute target reflects the ambition to decouple CO_2 emissions from the Group's financial growth. In order to contribute to the "net zero emissions" goal by 2050, Saint-Gobain is taking action on three main priorities:

- **switching to low-carbon energies;**
- **changing our products** and their composition, in particular to include more recycled materials;
- **improve our logistics** via route optimization and low-impact transportation methods.

1 • SBTi stands for "Science Based Targets initiative". The SBTi is a corporate climate action organization that enables companies and financial institutions worldwide to play their part in combating the climate crisis. Cf. https://sciencebasedtargets.org/

2 • CAPEX stands for "capital expenditure".

HOW WE ACT IN OUR DAY-TO-DAY OPERATIONS

Within the Saint-Gobain global organization, each country is responsible for its own greenhouse gas emissions reduction roadmap. Each year, the financial budgets include an assessment of carbon emission reductions, based on planned investments. The carbon roadmap is supported by a CAPEX[2] and R&D investment plan of at least €100 million per year until 2030. In 2023, €223 million of CAPEX and R&D related to the carbon roadmap has been invested.

The 2030 roadmap relies on four main levers to reduce greenhouse gas emissions on the scope 1 and 2:

PAGE 16
- **actions on products** (A)
  This lever is about product optimization and eco-design, including recycling efforts and integration of recycled materials;

PAGE 17
- **industrial excellence** (B)
  This lever refers to industrial process improvements and productivity efforts;

PAGE 18
- **innovation** (C)
  This lever concerns new technologies and improved product composition;

PAGE 19
- **energy** (D)
  This lever implies the use of decarbonized energies.

−34%

Reduction of Saint-Gobain's GES emissions (scope 1 and 2) as of 2023 vs. 2017

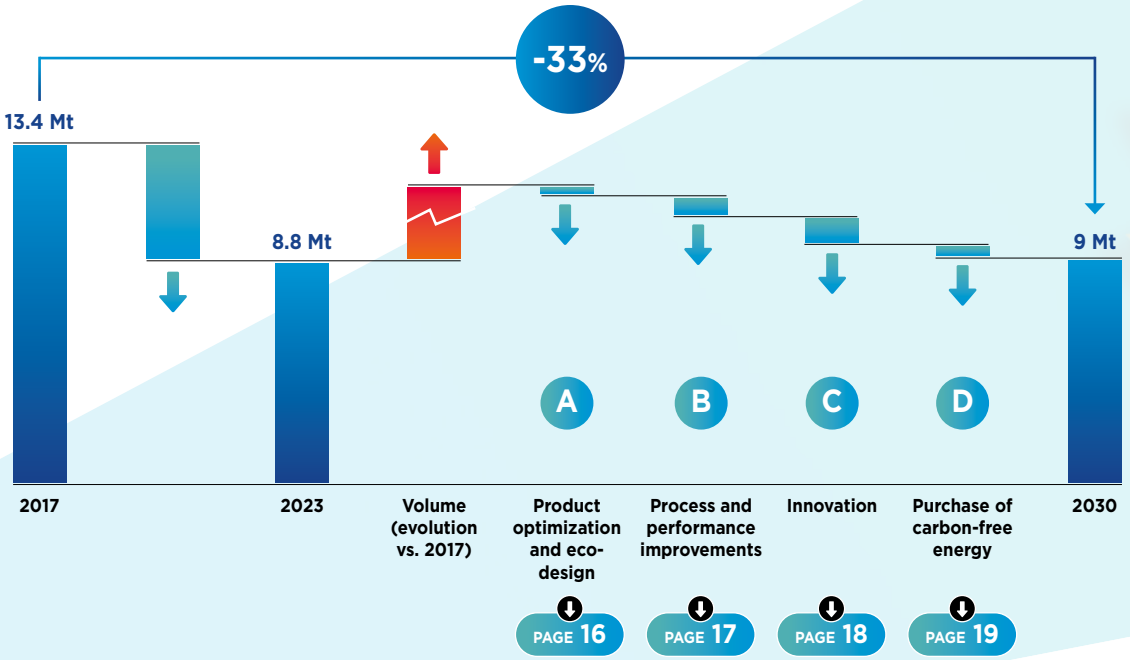
MINIMIZE

SCOPES 1, 2 AND 3 EMISSIONS:
accelerating our actions across our entire value chain

Saint-Gobain's 2030 carbon roadmap includes targets for the scope 1 and 2 as well as a target to reduce scope 3 emissions in its value chain, upstream and downstream of its activities.

SCOPE 1 AND 2

The 2030 roadmap relies on four main levers to reduce scope 1 and 2 emissions: the actions on products (A): product optimization and eco-design, including recycling efforts and integration of recycled materials; industrial excellence (B), i.e. industrial process improvements and productivity efforts; innovation (C) i.e. new technologies and new compositions; and the use of decarbonized energies (D).



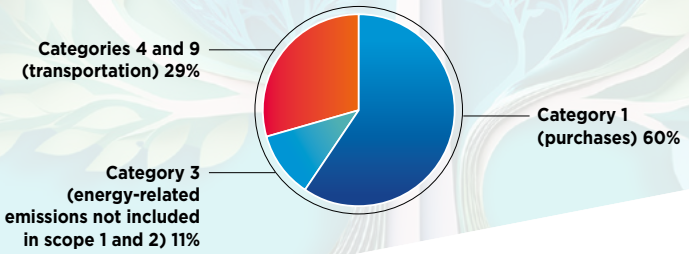
SCOPE 3[1]

The first step is to **improve the identification and measurement of impacts,** while at the same time **raising awareness** among internal stakeholders, in particular buyers and logistics experts, and external partners, primarily suppliers. At Saint-Gobain, we take action in each of the 15 categories of activities, according to the importance of their impact.

Within Saint-Gobain's value chain, three categories of activities are crucial to achieving our scope 3 reduction target:

- category 1: **purchases;**
- category 3: **energy-related emissions not included in scope 1 and 2;**
- category 4: **transportation.**

1 • Scope 3 methodology aligned on Science Based Targets (SBTi).



MINIMIZE

ROADMAP 2030

IMPROVING THE PRODUCTS WE CREATE (A)

EXPLORING
MULTIPLE AVENUES OF ACTION

For example, Saint-Gobain has implemented in several countries the BANTAM program, aimed at making plasterboard lighter by working on industrial processes and product formulations. As a result, some plants have been able to **reduce the weight of their standard plasterboard products by over 20%** compared with their initial weight, for equivalent performance.

As another example, the SLIMWOOL program, rolled out worldwide since 2018, aims to optimize the weight of glass wool, while guaranteeing the product's thermal performance.

Finally, when raw materials emit CO_2 during the production phase, the integration of recycled glass to replace virgin raw materials enables significant reductions in scope 1 emissions. For instance, replacing one tonne of composition with its equivalent in cullet[1] **reduces emissions (scope 1 and 2) by 300 kg of CO_2** for one tonne of cullet as opposed to 100% virgin materials composition.

Placo® is launching a new lightweight plasterboard (up to 6 kg lighter than Placoplatre BA13) that will revolutionize the quality of life of craftsmen and plasterers by simplifying their day-to-day work. What's more, Placo®'s Plume 13 has a major advantage: a smaller environmental footprint thanks to a significant reduction in the use of natural resources and emissions during transport from our Cognac manufacturing plant.

1 • Cullet : broken glass from production waste or the selective collection of waste and recycled content.

MINIMIZE

ROADMAP 2030

AIMING AT INDUSTRIAL EXCELLENCE EVERYWHERE (B)

The WCM industrial excellence program is at the heart of Saint-Gobain's 2030 carbon roadmap. By taking action on productivity and energy efficiency, environmental performance is combined with economic performance.

The deployment of digital technologies and the use of data have profoundly transformed the organization of the Group's factories: machines are increasingly connected in real time, and data analysis enables better control of production processes, faster resolution of any technical issues and, more generally, greater operational efficiency. Plant engineers use data to better understand the complex dynamics of manufacturing lines, enabling them to better control industrial processes and thus improve efficiency, deploy predictive maintenance approaches, and also **reduce variability, defects, waste, energy and raw material consumption, and the emission of greenhouse gases. This represents an essential lever for progress towards the Group's objectives in terms of decarbonization and circularity.**

With production units allowing software and machinery to interact directly, numerous applications are made possible: real-time monitoring of production, automatic alert systems, predictive maintenance or even optimization of product quality by reducing both costs and the quantity of resources and energy used

The widespread collection of data and its processing by algorithms are essential for monitoring the progress made in reducing CO_2 emissions, and in particular the quantified CO_2 reduction targets assigned to each of the Group's plants. At our plasterboard plants, for example, the deployment of sensors and detailed real-time data analysis have enabled us to precisely control gas combustion using an algorithm that adapts the intensity of the dryers.

MINIMIZE

ROADMAP 2030

LEVERAGING INNOVATION IN EVERYTHING WE DO (C)

To ensure the transition towards productions contributing to carbon neutrality, Saint-Gobain relies on its R&D teams to devise industrial processes. Since 2021, programs and demonstrators have been set up in most of the Group's businesses, among which gypsum, glass and insulation.

The first gypsum plants designed to emit minimum levels of carbon are already being built in Norway and Canada. A pilot production run of zero-emission (scope 1 and 2) flat glass was also carried out in France in May 2022. Following this successful trial, a low-carbon glass offer has been proposed to the market in Europe. This new range, called Oraé, has **a low-carbon footprint with a reduction of around 40% compared with the European average.**

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This technical feat was made possible by an R&D program launched in 2022, drawing on the Group's extensive expertise in combustion, glass quality, refractory ceramic materials and industrial furnace design. The program in question is being conducted in collaboration with the independent German laboratory *Gas and Heat Institute Essen* e.V. (GWI), a specialist in industrial gas technologies, and financially supported by the state of North Rhine Westphalia, to the tune of 3.64 million euros. Analysis of the data from these tests will enable the use of hydrogen in the Group's floats to be deployed in the decades to come, when low-carbon hydrogen will be available in sufficient quantities.

At the same time, the Group continued its efforts to develop pilot "net zero carbon" / very low emission (scope 1 and 2) industrial processes. **Saint-Gobain has become the first manufacturer to start a scope 1 and 2 low and zero carbon flat glass production plant in Aniche (France).** This technical feat was achieved by using 100% recycled glass and 100% energy from biogas and decarbonized electricity. Each of Saint-Gobain's industrial processes has set up a net zero carbon production program (scope 1 and 2) and conducted pilot production to test technical solutions.

Just over a year ago, Saint-Gobain achieved the first zero-carbon production of flat glass at its plant in Aniche (Nord), using 100% recycled glass and renewable energies. In September 2023, its Balsta plant in Sweden achieved another world first: manufacturing 300,000 m^2 of plasterboard with green electricity and biogas.

MINIMIZE

ROADMAP 2030

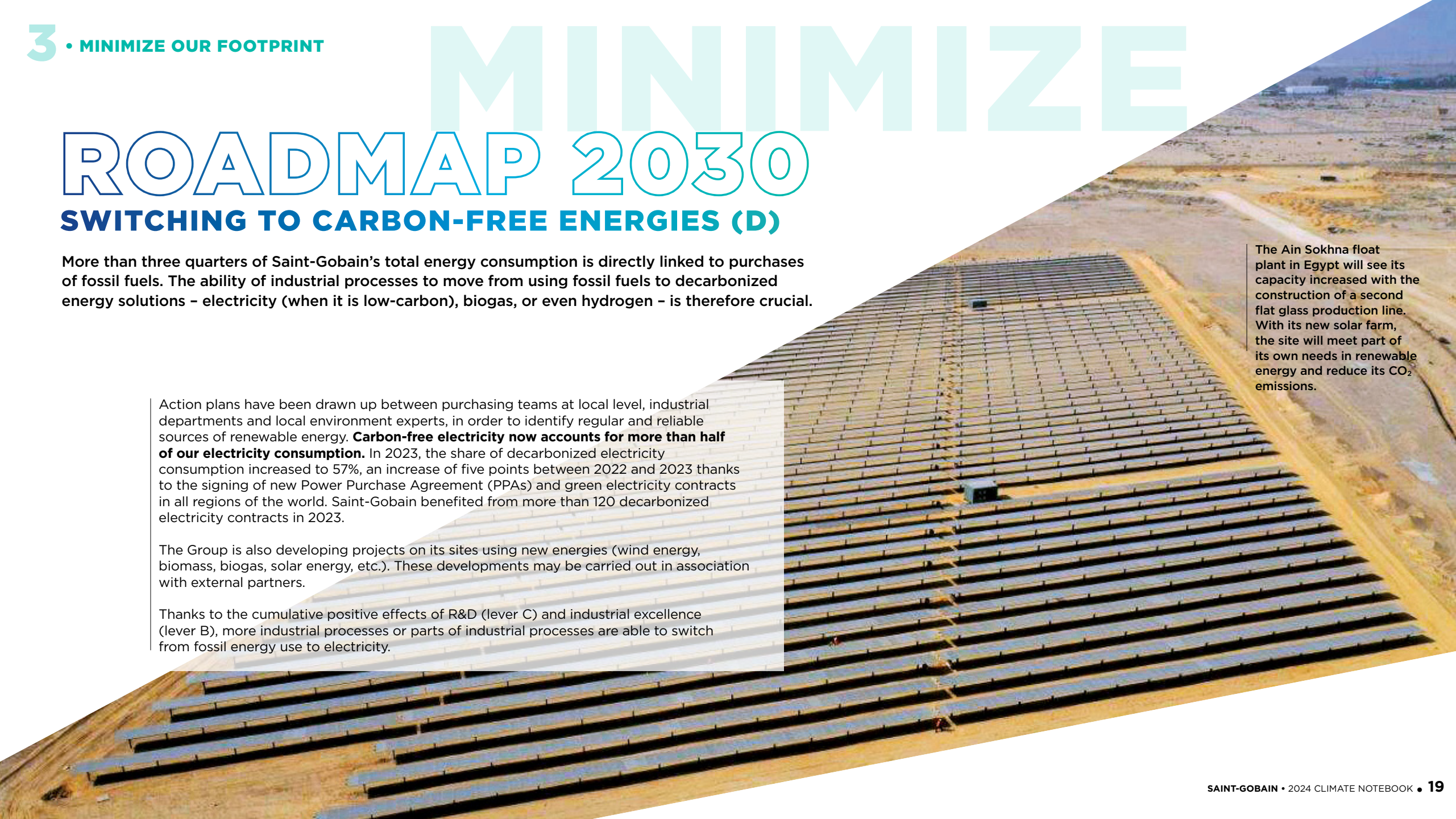
SWITCHING TO CARBON-FREE ENERGIES (D)

More than three quarters of Saint-Gobain's total energy consumption is directly linked to purchases of fossil fuels. The ability of industrial processes to move from using fossil fuels to decarbonized energy solutions – electricity (when it is low-carbon), biogas, or even hydrogen – is therefore crucial.

Action plans have been drawn up between purchasing teams at local level, industrial departments and local environment experts, in order to identify regular and reliable sources of renewable energy. **Carbon-free electricity now accounts for more than half of our electricity consumption.** In 2023, the share of decarbonized electricity consumption increased to 57%, an increase of five points between 2022 and 2023 thanks to the signing of new Power Purchase Agreement (PPAs) and green electricity contracts in all regions of the world. Saint-Gobain benefited from more than 120 decarbonized electricity contracts in 2023.

The Group is also developing projects on its sites using new energies (wind energy, biomass, biogas, solar energy, etc.). These developments may be carried out in association with external partners.

Thanks to the cumulative positive effects of R&D (lever C) and industrial excellence (lever B), more industrial processes or parts of industrial processes are able to switch from fossil energy use to electricity.



The Ain Sokhna float plant in Egypt will see its capacity increased with the construction of a second flat glass production line. With its new solar farm, the site will meet part of its own needs in renewable energy and reduce its CO_2 emissions.

MINIMIZE

ROADMAP 2030

SCOPE 3 EMISSIONS

To reduce our scope 3 emissions, we need to assess them correctly, which means identifying the levers available to us and drawing up action plans for each category.

Saint-Gobain implements actions on purchasing to reduce scope 3 emissions:

- **a digital tool** made available to teams at local level and by category to enable them to estimate scope 3 emissions;
- **communication kits** to share the challenges and objectives of the fight against climate change with suppliers;
- **the collection of information by suppliers** on their emissions on the basis of life cycle analyses verified by independent third parties;
- **integrating the maturity of suppliers' climate commitment** into the general assessment of their performance;
- **the creation of joint action plans** with suppliers to reduce their carbon impact.

With regard to category 3 (energy-related emissions not included in scopes 1 and 2), efforts to reduce fossil fuel consumption and promote the use of low-carbon energy sources will have a positive impact on the reduction of scope 3 emissions.

LOGISTICS AND TRANSPORT INITIATIVES

Optimizing logistics, both upstream and downstream of the value chain, is a key factor in achieving the target of reducing scope 3 emissions by 2030. The Group has equipped itself with a central tool for measuring, analysing and challenging the carbon footprint of its activities. This tool is deployed by country and activity. In partnership with logistics service providers, the Group favours the use of vehicles that comply with EURO V and VI emission standards or promotes the transition to lower-emission fuels for the fleet. Saint-Gobain is committed to using transport modes flexibly, switching to less polluting multimodal transport modes such as rail and river or sea transport wherever possible.

The impact of category 11 related to the use of the products sold is concentrated on two activities: the sale of windscreens in the mobility business and the sale of air conditioning or heating equipment by heating equipment retailers.

For each of the businesses, the Group's direct influence on the reduction of this category is limited. Nevertheless, the teams in the Mobility Business Unit are developing specific products for electric vehicles and are working with their customers on action plans for sustainable mobility. Similarly, the retail chains' purchasing teams are working with their suppliers to reduce the carbon impact of heating during the building's use phase. The banners are also helping to transform the construction industry by training craftsmen and providing information to users.

-16%

Reduction of Saint-Gobain's scope 3 GES emissions as of 2023 vs. 2017

4 ENGAGE WITH OUR STAKEHOLDERS

Irène Skoula
Director Energy & Buildings at C40

"The building infrastructure sector is complex, global, and fragmented. No single actor can achieve the scale and pace of the transition required. Stakeholder engagement is essential, and collaboration is key. Using an inclusive approach for industry, workers, and the community can help deliver the sustainable construction we all want.

ENGAGE

ACTING TOGETHER
with all our value chain

To achieve our decarbonization goals, all Saint-Gobain's stakeholders must get involved. This means not only devising roadmaps, but also "going the extra mile" by mobilizing internal and external parties in the rollout of these roadmaps.

80%

target percentage of employees to be trained via workshops by 2025

MOBILIZING OUR EMPLOYEES

To engage employees in the Group's roadmap, it is essential that they understand the issues related to climate change. To this end, Saint-Gobain has decided that by the end of 2025, 80% of its employees will be made aware of the issues via ad-hoc workshops ("climate fresk").

This training program, based on collective intelligence and accessible to all, enables employees to understand climate change and its systemic nature in a collaborative manner, and to reflect together on the opportunities for individual and corporate action. To achieve this ambitious objective, more than 1,600 facilitators have been trained within the Group.

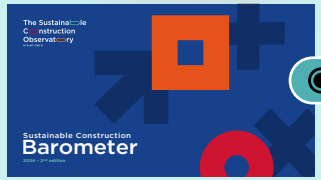
4 TALKS

Four "Sustainable construction talks" were organized: in Paris (July 2023), in Dubai (December 2023, during the COP28), and in New York, during the "Climate Week" (September 2023 and September 2024).

MOBILIZING OUR EXTERNAL STAKEHOLDERS

Beyond the transformation of its own model, Saint-Gobain wishes to play a leading role and involve its stakeholders in this approach, across the entire value chain of the markets in which it operates. This is why the Group has launched the **Sustainable Construction Observatory.**

- As part of this initiative, Saint-Gobain is publishing a Barometer of Sustainable Construction, enabling progress in this area to be monitored and measured on a global scale.
- We also publish the digital magazine "Constructing a Sustainable Future", in order to promote best practices.
- Finally, the Group organizes meetings around the world, the "Sustainable Construction Talks", to encourage the exchange of ideas with our stakeholders on the challenges and opportunities of sustainable construction. The challenges of sustainable construction are everyone's responsibility; it is only by working together that we can meet them.



3 WALK THE TALK

HOW WE PUT OUR APPROACH INTO PRACTICE

ORAÉ:

THE FIRST LOW-CARBON GLASS ON THE MARKET

Thanks to its qualities, Oraé contributes to the decarbonization of buildings and accelerates the development of the circular economy.

WATCH THE VIDEO

MAXIMIZE OUR IMPACT

Oraé offers the same performance, quality and aesthetics as the standard Planiclear solution, with a much smaller carbon footprint.
It can be used for new buildings or renovations, in residential or non-residential buildings.
Oraé can replace conventional clear glass of the same thickness, whatever the application.

The cullet used to produce glass does not emit CO_2 during melting, which also requires less energy than using virgin raw materials. The use of low-carbon energy sources, such as biogas and green electricity, further reduces the emissions associated with glass production. Oraé reduces embodied carbon and energy consumption while the building is in use, thereby considerably cutting CO_2 emissions.

According to its verified EPD[1], Oraé float glass has a CO_2 footprint of only 6.64kg CO_2 eq./m^2 for a 4 mm thick Oraé glass, which means a 42% reduction compared to the Planiclear solution.

MINIMIZE OUR FOOTPRINT

Introducing one tonne of cullet into glass production reduces CO_2 emissions by up to 700 kg (scopes 1, 2 and 3) and cuts raw material consumption by 1.2 tonnes.

The recycled material comes mainly from glass processing plants, as well as glass recovered from buildings. Thanks to the development of the Saint-Gobain Glass Recycling network, which aims to ensure the circularity of discarded glass, the use of recycled glass is increasing every year.

Digital tools optimize flows between sites, reducing transport-related emissions.
On the way back to the plant, trucks can be loaded with cullet from processing offcuts.

ENGAGE WITH OUR STAKEHOLDERS

All professionals in the construction sector, whatever their expertise, can measure the impact of Oraé on the carbon footprint of their architectural projects.

For the production of Oraé glass, cullet is required; this development required the creation of collection and reprocessing networks. It is in this spirit that Saint-Gobain signed partnership agreements from 2019 with several companies specializing in the recovery of end-of-life windows. At the same time, Saint-Gobain is developing several cullet sorting lines in its flat glass manufacturing sites, to ensure optimal sorting before adding this secondary material to the product mix.

1 • Environmental Product Declaration

6

ADDENDUM

COMPLEMENTARY INFORMATION

FIGHTING CLIMATE CHANGE:
2023-2024 highlights

-34% OF CO2e EMISSIONS AS COMPARED TO 2017

Scope 1 and 2 CO2e emissions reduced by 34% in 2023 versus 2017 (in absolute terms), in line with the 1.5°C trajectory of the Paris Agreement and the 2030 target validated by the Science Based Targets (SBTi) initiative.

LOW-CARBON SIDING SOLUTIONS

We have started producing very low-carbon siding (scope 1 and 2 emissions down 96%) at our US production sites in McPherson (Kansas), Social Circle (Georgia) and Williamsport (Maryland). This result was made possible by the total electrification of production processes at these three sites and the use of 100% renewable electricity. Saint-Gobain plans to achieve zero net carbon emissions (scope 1 and 2) at all its siding sites in the United States over the next few years.

DECARBONIZED PLASTERBOARD

In 2023, Saint-Gobain launched 100% decarbonized production of plasterboard at its plant in Fredrikstad, Norway.

DECARBONIZED CONCRETE

As a structural material endowed with many qualities – including thermal inertia and fire protection – concrete is, and will remain, an essential building material, alongside bio-sourced materials. Because of the way its components, notably cement, are produced, concrete alone accounts for nearly 8% of CO_2 emissions worldwide. Decarbonizing the sector is therefore a priority to enable its transformation. Thanks to the additives we market, the carbon footprint of certain cements can be divided by five, making a significant contribution to the objective of combating climate change.

LOW-CARBON GLASS

Saint-Gobain was the first manufacturer in the world to achieve pilot production of flat glass with more than 30% hydrogen, reducing the site's direct CO_2 emissions by 70% (scope 1).

RENEWABLE ENERGY PROCUREMENT

Saint-Gobain signed a renewable electricity purchase agreement (PPA) in India with Vibrant Energy to supply wind-solar electricity to six Saint-Gobain sites. This 20-year agreement enters into force in 2024, with a view to increase the Group's proportion of renewable electricity in India to 65% in 2025.

TALKS

Since the Sustainable Construction Observatory was launched by Saint-Gobain, we have organized one in Paris on energy renovation in Europe, two during the Climate Week in New York, focusing on the challenges of mitigating and adapting to climate change, and another one at COP28 in Dubai on promoting sustainable construction in developing countries.

CLIMATE FRESK

Saint-Gobain has rolled out the Climate Fresk, a collaborative and recreational program of workshops enabling people to understand the effects of the human activities on the climate change. Our goal is to reach 80% of our employees trained by 2025.

AT A GLANCE:
our climate action plan

MAXIMIZE OUR IMPACT

GLOBAL CONTEXT

Global share of buildings and construction in annual CO_2 emissions worldwide: **37%**

- **9%** Embodied carbon emissions
- **28%** Emissions related to use

OUR SUSTAINABLE AND EFFICIENT SOLUTIONS

Objective 100%
Share of sales generated by products covered by a verified LCA or EPD in 2030

-1,300 Mt CO_2
Emissions avoided thanks to our solutions*

Objective 75%
of the Group's sales made through our sustainable solutions in 2025

* CO_2 avoided during their lifespan (base year: 2020 sales)

MINIMIZE OUR FOOTPRINT

SCOPE 1 AND 2

8.8 Mt of CO2e at the end of 2023
4 levers to achieve our "net zero emissions" objective

- Product optimization and ecodesign
- Process and performance improvement
- Innovation
- Purchase of carbon-free energy

2017	2030	2050
13.4 million tonnes of CO_2e	-33%*	0 net emissions

* Objectives validated by SBTi and aligned with the Paris Agreement

SCOPE 3

20 Mt of CO2e at the end of 2023*
Purchasing and transport represent 85% of scope 3

- Improve data quality
- Onboard partners to improve the consistency of CO_2 assessment
- Optimize transportation: routes and means

* Scope and methodology aligned with SBTi – 2022 data

- CAPEX and R&D investment: at least 100M€ per year from 2020 until 2030
- Integration of CO_2 reduction objectives into short- and long-term remuneration packages

ENGAGE WITH OUR STAKEHOLDERS

CIVIL SOCIETY
Mobilizing in face of the climate crisis

MARKET
Training young people in construction jobs

INVESTORS
Driving financial investments towards sustainable solutions

LOCAL COMMUNITIES
Helping those in need to have access to a decent home

EMPLOYEES
Supporting commitment through education on climate issues

REGULATORY AUTHORITIES AND PUBLIC AFFAIRS PARTNERS
Contributing to accelerate the transition

GLOSSARY

CAPEX

CAPEX refers to a company's investment expenditure capitalized on the balance sheet. It consists of all expenditures incurred by a company relating to its physical investments.

CARBON ROADMAP

A carbon roadmap is an initiative providing a common vision for achieving net zero emissions. It sets out a clear trajectory, via action plans and key performance indicators.

CATEGORY

The "scope 3 standard" of the Greenhouse Gas Protocol has defined 15 scope 3 categories, both upstream and downstream of a given business' operations.

GHG

GHG or Greenhouse Gases: gaseous components that absorb infrared radiation emitted by the Earth's surface and thus contribute to the greenhouse effect. The increase in their concentration in the Earth's atmosphere is one of the factors behind global warming.

LIGHT CONSTRUCTION

Unlike traditional construction with solid, load-bearing walls (bricks, cement, etc.), light construction consists of producing a frame made of wood, metal, concrete, or a combination of these materials to which light façade systems and non-load-bearing interior partitions are attached. This type of construction, partially or fully carried out on site or prefabricated, reduces the environmental impact of construction and optimizes resource consumption while ensuring superior performance. Saint-Gobain offers a complete range of lightweight construction solutions, which accounts for 40% of the Group's sales: from prefabrication to kitting services to complete façade or partition solutions.

NET ZERO CARBON

Balancing between CO_2 emissions and absorption.

PPA

PPA or Power Purchase Agreement: electricity purchase contracts for the medium or long term (five to 20 years) between an electricity producer, often from renewable sources, and an organization that consumes it directly without going through an electricity supplier.

SBTi

SBTi or Science-Based Targets initiative is the result of a collaboration between CDP, the United Nations Global Compact, the World Resource Institute (WRI), the World Wide Fund for Nature (WWF) and one of the commitments of the We Mean Business coalition, the Science-Based Targets initiative defines and promotes best practices in science target setting and independently assesses and approves corporate targets to accelerate the transition to a low-carbon economy.

SCOPE

This term refers to the three main families of an organization's greenhouse gas emissions, as defined by the international standard of the Greenhouse Gas Protocol. scope 1 corresponds to direct emissions; scope 2 corresponds to emissions related to the production of the energy used; scope 3 corresponds to the direct and indirect emissions of the organization's various stakeholders – suppliers, service providers, customers – in its value chain upstream and downstream of its activity.

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