DECEMBER 2023

# IN TRANSITION

**Climate and Alignment Report** 



# FOREWORD BY SLAWOMIR KRUPA





**SLAWOMIR KRUPA** CHIEF EXECUTIVE OFFICER

In a world grappling with climate change and environmental challenges, a bank like Societe Generale has a crucial role to play. Transitioning to a more sustainable world is not an isolated effort; it requires collective and coordinated action, and a constant dialogue with our clients, stakeholders and policymakers to promote a framework conducive to sustainable practices.

## At Societe Generale, our ambition can be summarized in one word: sustainability.

Our CSR objectives, endorsed and overseen by our Board of Directors, are at the heart of our new strategic plan. We have incorporated environmental risks in our framework and we make decisions guided by a deep sense of responsibility, not just to our shareholders, but also to society, in the framework of the United Nations Sustainable Development Goals.

Central to this is our relentless pursuit of decarbonisation across our diverse portfolio of businesses. We recently set new, ambitious targets in our most carbon emitting sectors and seek to align our credit portfolios with the goals of the Paris Agreement. Within our Oil and Gas portfolio, for example, we have embarked on a journey to reduce our upstream exposure by 80% before 2030. We also announced a EUR 1bn transition fund to invest in Green Tech and support nature-based solutions. These commitments aren't mere gestures but pivotal steps so we can have a meaningful contribution to a cleaner, greener future.

The environmental transition, however, will not be accomplished via a switch that magically transports us from the past to the future in an instant. It is a complex and gradual process, one that demands diligence, expertise and attention to the needs of our clients and society.

We know our leadership in ESG is a key responsibility and doing our part is an imperative. The transition needs to be just and inclusive.

We understand the importance of ensuring that energy remains affordable while guaranteeing a secure supply. Striking this balance is crucial to prevent adverse impacts on vulnerable communities and to make sure the benefits of sustainability are enjoyed by all.

Being a leading bank in ESG is not merely about financing mainstream renewable power assets — though we certainly do that. True leadership means envisioning solutions to finance the challenging aspects of the transition: empowering new actors, embracing cuttingedge technologies, and collaborating within coalitions and partnerships to establish pioneering standards that set the bar for a sustainable future.

We are dedicated to being a leader in ESG. Not just in supporting the transition, but also in opening new frontiers. With innovation, determination and a deep-rooted belief in responsible banking, we are forging a path toward a brighter, more sustainable future.

This report serves as a testament to our commitment. It illustrates the reasons behind our endeavors, the subjects we address, and the progress we've made. It is a reflection of our collective efforts toward a sustainable and equitable future, demonstrating our dedication to making a positive impact on the world.

# **CONTENTS**

# INTRODUCTION

Facing a new paradigm	
Tackling the climate challenge as an organisation	

5

6



The Board of Directors validates the climate strategy proposed by the General Management and oversees its implementation 8 The General Management drives and executes the CSR ambition 9 The Sustainable Development Department organises and animates ESG topics including the Group journey to Net Zero 10 The Business Units and Service Units embed transition matters within their own mandates 10



ł	FOREWORD BY PIERRE PALMIERI	12
1	AMBITION & TRANSFORMATION	13
(	Dur CSR ambition	14
A	A Group transformation plan to support the implementation of our CSR ambition: Building Together	15
E	ESG acculturation campaign: a major lever to make rransformation effective	16
( e	Dperationalisation programme "ESG by Design": embed ESG in our processes and tools	17
9	STAKEHOLDERS ENGAGEMENT AND COOPERATION	18
F	Foster client engagementand support transition strategies	19
۱ S	Norking with our peers and industries to develop common standards	20
١	Norking with policy-makers to unlock the transition	21
1	FACKLING CLIMATE CHANGE	22
/ i	Addressing the environmental risks and climate-related mpacts that we strive to manage with our stakeholders	23
5	SUPPORT OUR CLIENTS IN THEIR ENVIRONMENTAL FRANSITION	24
0	Supporting large corporates in their environmental transition	25
F	Promoting entrepreneurs, SMEs and mid-caps environmental transition	28

Individual clients: growing the sustainable and	29
Bevond financial offers, we have the ambition	25
to become the leading global sustainable mobility player	30
Innovation as a key lever to support our clients' transition	31
MANAGE THE POTENTIAL CLIMATE IMPACT OF ACTIVITIES	32
Managing the potential impacts on climate of our operations	33
Managing the impact of our activities by applying a robust E&S framework	34
Managing the impact of our activities by taking concrete decisions and setting targets	35
MANAGE CLIMATE-RELATED RISKS	36



Terminology for environmental risks	39
Incorporating climate risks in the risk management framework	40
Processes and tools for identifying and managing climate risk	42

# CONTENTS



Aligning our portfolio with trajectories based on science	45
KEY CROSS-SECTORAL CONCEPTS	46
Our global economy is fuelled by energy, and acting on energy transition is a priority	47
A system-based approach is needed to transition to a Net-Zero economy	48
All sectors are intertwined, and so are their transition paths	49
To engage on decarbonisation pathways, Corporates can act on six transition levers	50
Transversal low-carbon solutions will help to accelerate climate transition	51
Integrating new challenges raised by the energy transition	52
ALIGNMENT METHODOLOGY	53
Alignment approach to progressively align our credit portfolios with trajectories compatible with a 1.5°C scenario	54
Methodologies and scenarios supporting Societe Generale target setting	55
Climate alignment dashboard: overview of targets set	56

OUR APPROACH SECTOR BY SECTOR	58
THERMAL COAL	59
OIL & GAS	61
POWER	66
CEMENT	71
STEEL	74
AUTOMOTIVE	77
SHIPPING	81
COMMERCIAL REAL ESTATE	84



Key facts and figures	89
Cross reference table - GFANZ	90
Cross reference table - TCFD	92
The three carbon scopes defined by the GHG Protocol	94
Public or private initiatives to which the Group	
is committed or engaged in:	95
Disclaimer	97

# INTRODUCTION

Facing a new paradigm	5
Tackling the climate challenge	
as an organisation	6

# FACING A NEW PARADIGM

Environmental and social challenges, exacerbated by health and geopolitical crises, are the greatest collective challenge of our time. Our global production and consumption patterns as well as our relation to nature have to be reinvented.



HACINA PY GROUP CHIEF SUSTAINABILITY OFFICER

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Fighting climate change will require a real change of paradigm. When considering the economy's development over the past 50 years, the world has been built on the principles of intensive production and consumption far from any notion of sustainability.

The impact on climate and biodiversity are visible everywhere. Decarbonising the economy requires a rethinking of both the models of production and our consumption habits.

Governments, industries, citizens - we all need to be aware of this and take actions in the face of this real paradigm change. Making a gradual transition to greener energies and massively reducing energy use will be key.

The decarbonisation of the economies is a very complex and multifaceted challenge, since it mixes strategic, technological, economic, security and social issues. It is therefore important to develop a holistic approach and a clear-eyed assessment of the social and societal issues.

The opportunity for the various stakeholders to create value is there if we tackle it correctly. It is a chance to generate long term activity, ensure lower dependence on foreign supply chains, and of course create sustainable jobs. All compagnies will need to transform their business models to be sustainable. For banks, this means we must understand the challenges facing different industries and our stakeholders' emerging expectations, while adjusting our activities.

We believe that banks have a key role to play in supporting the transformation of the world economy and accompany our clients in their transition.

This conviction is at the very heart of our Corporate Purpose: **"Building together, with our clients, a better and sustainable future through responsible and innovative financial solutions."** 



## TACKLING THE CLIMATE CHALLENGE AS AN ORGANISATION

Banks have a significant role to play in fostering a more sustainable future by in financing the ecological transition and responding to the challenges of global warming, the preservation of biodiversity and, more generally, by supporting the evolution of production and consumption models. As a bank, we are tackling the climate challenge by fully embedding climate-related issues in our strategy, the way the bank is governed and also when managing our risks and impacts.

According to the recommendations of the Task Force on Climate-related Risk Disclosures (TCFD), this report presents qualitative information related to the strategy, governance and management of climate-related risks.

The bank relies on specific governance, which involves the Board of Directors, General Management and all business lines and functions. In this way, CSR is embedded at every level in the Group's governance ensuring consistency in the implementation of the Group's CSR's ambition and the corresponding alignment of our actions.

Our climate strategy is based on 3 axes: support our clients in their environmental transition, manage the potential impacts of our activities on the climate and manage climate-related risks. This comes along with the development of new solutions to finance the growing capex needs for the transition. Working with our experts, with industrials and engineers, it became obvious that the transition requires a major transformation, implying to work across traditional sectors silos. To adapt to this new paradigm, we launched early 2021 a major transition program called "the Shift", for which we give some details in this report. This is a great move for the bank, enabling us to design relevant decarbonisation or low carbon solutions throughout the different value chains. The first concrete realizations are promising, and we share some of them in this report. Our ambition is to grow this innovation capability at the service of the transition and accompany our clients as a key partner in their transitions. Furthermore, we believe that part of the solutions will be coming from new actors, developing new technologies, and have decided to allocate EUR 1bn to invest in the future leaders of the transition, but also nature-based solutions and impact-based projects.

The path to decarbonisation embarks the whole bank, from business units to service units. We have been investing significant time and effort in the training of our staff, through different channels, and we have been developing tools at the service of innovation. We have collectively learned a lot and strive to continue progressing , with the ambition to contribute very concretely to the environmental transition. This learning leads us to adapt our risk management framework, regarding climate-related issues. The integration of climate-related risks relies on existing governance and processes and follows a classical approach (Identification, Quantification, Risk appetite setting, Control and Mitigation), for which there is a process of continuous improvements. As a result, processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.

With this report, we aim at sharing some of the knowledge with our stakeholders, and we are open to exchange views and ideas!

# GOVERNANCE

The Board of Directors validates the climate strategy proposed by the General Management and oversees its implementation

The General Management drives and executes the CSR ambition

The Sustainable Development Department organises and animates ESG topics including the Group journey to Net Zero

The Business Units and Service Units embed transition matters within their own mandates 10



9

10

# THE BOARD OF DIRECTORS VALIDATES THE CLIMATE STRATEGY PROPOSED BY THE GENERAL MANAGEMENT AND OVERSEES ITS IMPLEMENTATION

The Board of Directors approves the orientations of the Group's CSR ambition based on the recommendations of the General Management. It oversees its implementation and reviews it at least once a year.

Throughout the year, the Board of Directors is assisted by **four sub-committees** which examine every Environmental, Social and Governance (ESG) topics falling under their remit:

- The Risk Committee
- The Compensation Committee
- The Audit and Internal Control Committee
- The Nomination and Corporate Governance Committee

Each topic covered by the committees is subsequently discussed by the Board of Directors.

The Board of Directors' skillsets are reviewed at least once a year with regards to their knowledge to address ESG matters. Each year, the Board Directors receive **dedicated training** to make sure they have a full and updated view on the current and upcoming ESG challenges.

Moreover, since 2022, the Board of Directors is assisted by a **non-voting Director** 

who has a solid expertise in particular on the energy transition and who reviews and challenges proposals from the General Management regarding ESG topics.

Additionally, climate strategy was presented to shareholders as **an item on the agenda at the Annual General Meeting** in 2022 and 2023.

The Chairman maintains an open dialogue with the Group's investors, beyond the Annual General Meeting, engaging in dedicated investor meetings on the Group's ESG strategy.

#### PERFORMANCE CRITERIA AND REMUNERATION REFLECTING THE ESG TRANSFORMATION OF THE GROUP AND OBJECTIVES

Each year, the Board of Directors defines the evaluation criteria that will be used to calculate the Chief Executive Officers' annual variable remuneration and long-term incentives.

- In 2023:
- 20% of the CEOs' annual variable remuneration is linked to ESG performance criteria including but not limited to incorporating CSR considerations into the strategy of all Group businesses and progress towards the ESG objectives of the Group.
- 33.3% of the performance conditions for the vesting of LTIs are for 33.3% related to implementing the Group's commitments to align its corporate lending portfolios with trajectories compatible with the objectives of the Paris Agreement.
- This incentive scheme is not limited to CEOs only. To ensure that the top managers fully endorse its climate strategy, Societe Generale has set similar criteria for the members of its Executive and Group Management Committees.

Furthermore, since 2023 the Group has set ESG annual objectives for a large scope of managers.

#### THE BOARD OF DIRECTORS AND ITS COMMITTEES

Valide CSR strategy (including climate-related strategy) based on the recommendations of General Management

RISK COMMITTEE	COMPENSATION COMMITTEE	NOMINATION AND CORPORATE GOVERNANCE COMMITTEE	AUDIT AND INTERNAL CONTROL COMMITTEE
Assesses ESG risk-related issues and examines all climate stress test results.	Submits recommendations to the Board of Directors on the integration of ESG criteria in executive officers' remuneration.	Prepares the Board of Directors' deliberations on its optimum organisation to deal with ESG-related issues. Examines the Board of Directors' skill sets and how they cover ESG-related topics.	Reviews all regulatory communication related to ESG.

# THE GENERAL MANAGEMENT DRIVES AND EXECUTES THE CSR AMBITION

Within the General Management, one of the two Deputy Chief Executive Officers is directly responsible for overseeing all ESG policies and their effective incorporation into the strategic trajectories adopted by the Group's business units and functions.

To implement the climate strategy, the General Management relies on Group oversight committees:

the Responsible Commitments Committee (CORESP) is chaired by the Deputy Chief Executive Officer in charge of ESG topics. The CORESP decides on new Group E&S commitments, amends Group E&S standards (including sectoral policies), examines subjects with high ESG, ethics or reputation risks.

SOCIETE GENERALE GOVERNANCE BODIES

- the Group Risk Committee (CORISQ) is chaired by the Chief Executive Officer. The CORISQ objectives are to validate the main risk management systems (taxonomy, risk identification, stress testing and Risk Appetite Framework), and for credit, counterparty, market, operational, model and environmental risks:
- to validate the Group's risk appetite before proposing to the Board of Directors for approval,

- to define the Group's main risk policy orientations in the context of risk appetite previously validated by the Board of Directors,
- to monitor compliance with the Group's risk appetite thus defined and rolled out.

Two business oversight committees chaired by the Deputy Chief Executive Officer were established in 2023. Their roles are to review client acceptance and complex transactions, including when an ESG issue arises:

 the Group Client Acceptance Committee (CAC) whose purpose is to approve or reject client on-boarding or confirm the continuation/termination of relationships with the most risky and sensitive clients of the Group.

the Group Complex Transactions & Reputational Risk Committee (CTRC) whose purpose is to review, assess and, as appropriate, approve/reject the heightened legal, regulatory, tax, compliance, accounting, conduct and/ or reputational risks that may arise from (a) the involvement of any Group entities or employees in any complex structured transaction or (b) any new or existing product, transaction, business, service or activity with any client, customer or counterparty.



## GOVERNANCE 9

# THE SUSTAINABLE DEVELOPMENT DEPARTMENT ORGANISES AND ANIMATES ESG TOPICS INCLUDING THE GROUP JOURNEY TO NET ZERO

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In a clear signal of the strategic importance Societe Generale attaches to sustainability, the Sustainable Development Department was reorganised with a reporting to General Management from 1 January 2022. It is tasked with accelerating the integration of sustainability at the heart of the Group's business lines and boosting the Group's positive impact. The Head of the department is a member of the Group Management Committee. The Group Sustainable Development Division assists the Deputy Chief Executive Officer in charge of all ESG policies and their actual translation in the trajectories of business lines and support functions. It supports the Group's ESG transformation. Its main missions are to:

- advise General Management in the definition and strategic steering of the Group's CSR ambition;
- provide expertise and coordinate the definition of E&S standards and methodologies;
- support the CSR transformation of Business and Service Units;
- contribute to promoting the Group's CSR actions and animate the CSR community internally.

#### A SPECIFIC ORGANISATION TO ALIGN OUR CREDIT PORTFOLIO WITH PARIS AGREEMENT TRAJECTORIES EMBEDDED INTO THE GROUP GOVERNANCE

Since 2019, we have been working to build methodologies, identify the relevant scenarios and define metrics and targets to steer our lending activities with the goals of the Paris Agreement.

A dedicated team within the Sustainable Development Department is in charge of producing R&D work and coordinates a network of internal stakeholders to collectively define an ambition sector by sector. Steering committees chaired by the Chief Sustainability Officer involve key stakeholders, fostering greater dialogue and a shared view on the targets and ambition taken.

This organisation is integrated into the existing Group governance and leads eventually to the Responsible Commitments Committee to validate methodologies and targets.

# THE BUSINESS UNITS AND SERVICE UNITS EMBED TRANSITION MATTERS WITHIN THEIR OWN MANDATES

CSR objectives and processes, including climate, are rolled out in the roadmaps of all Business Units and Service Units, which are responsible for the implementation of the Group's ESG policy and the corresponding alignment of their actions.

Going further, at Societe Generale, each Business Unit is invited to rethink its business with regards to better serving its clients and bringing them the most accurate products and services to perform their transition. Our Wholesale businesses have engaged in "the Shift" initiative considering new ways to accompany our clients, new risks to be assessed, new clients to be on-boarded, new business models to finance, in new cross sectoral value chains. And our retail business is adapting its offer to clients' new needs or even facilitate the adoption of new usages thanks to their offer.

Our Service Units are adapting too, making sure that the processes falling under their remit are well designed to support this shift. For instance, our Finance division has developed performance steering indicators, our Risk division is reviewing our risk appetite with regards to new business, our Human Resources division is developing internal expertise, ...

As regards to risks, as the first line of defence (LOD1), the Business and Service units (for their own activities) bear primary responsibility for assessing, managing and monitoring their different risk categories, including climate-related risks.

E&S RISK MANAGEMENT			
INE OF DEFENCE: INESS UNITS / /ICES UNITS	2 <sup>nd</sup> LINE OF DEFENCE: THE RISK AND COMPLIANCE DIVISIONS	3 <sup>rd</sup> LINE OF DEFENCE: GENERAL INSPECTION AND INTERNAL AUDIT	
ssment of counterparties transactions. hition of own governance view complex cases.	Responsible for approving the first line of defence on E&S risks and revising instances of non-alignment.	Responsible for performing independent internal audits.	
	SECOND-LEVEL: PERMANENT CONTROL		
FIF	ST-LEVEL: PERMANENT CONTR	OL	
	PERMANENT CONTROL		

A second line of defence (LOD2) is composed of the Risk, and Compliance departments and is entirely separate from the operational activities. In addition, our General Inspection and Internal Audit division is responsible for the third line of defence (LOD3) and performs independent internal audits.

# STRATEGY

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22

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FOREWORD BY PIERRE PALMIERI AMBITION & TRANSFORMATION STAKEHOLDERS ENGAGEMENT AND COOPERATION TACKLING CLIMATE CHANGE

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# FOREWORD BY PIERRE PALMIER



**PIERRE PALMIERI** DEPUTY CHIEF EXECUTIVE OFFICER

Sustainability is at the heart of our Group strategy. By aligning our activities to broader societal and environmental challenges, we aspire to be a catalyst for positive change. We envision a bank that not only adapts to change but drives it. One that invests in the skills and knowledge of its workforce to manage the challenges and opportunities of tomorrow. A bank committed to shifting its business model aligned to clients' needs as they embark on their own ESG transformation journeys. Facing a collective challenge, we firmly believe collaboration amongst all stakeholders is critical. This is why we work with peers and industries spanning many sectors to develop common standards. We take a co-construction approach, working with clients and third parties to develop solutions. And we actively participate in industry initiatives like the Hydrogen Council, the European Battery Alliance, the Poseidon Principles for shipping, the Aviation Climate-Aligned Finance Working Group, and Sustainable Steel Principles for steel production to help shape policies towards decarbonisation. This goes hand in hand with our experts contributing to policy frameworks with governments across Europe, Asia, and the US.

The transition involves accepting new types of risks in order to finance tomorrow's technologies. It means onboarding new actors who can be the future champions driving the transition. It demands a collaborative effort, pooling the collective intelligence of financiers, engineers and scientists from various industries. As catalysts for change, we have been proactively adapting our strategy for some time. We concentrate on key cross sectorial value chains from road and rail, air transport, agriculture, real estate, and shipping, for example. Our pledge to sustainability is reflected in our commitment to finance climate mitigation. It's reflected in our strong franchises and leading roles in renewable energies. It's also reflected in our support for innovation, as we back emerging leaders developing cutting-edge technologies and new business models, and focusing on transition and impactdriven opportunities. We will also develop our expertise and invest in Nature-Based Solutions for CO<sub>2</sub> sequestration and biodiversity.

Societe Generale's shift toward decarbonisation is mirroring the transformations our clients are undergoing. As a responsible bank, we are navigating this pivotal moment, determined to be one of the key contributors towards a sustainable future.



# AMBITION & TRANSFORMATION

Our CSR ambition	14
A Group transformation plan to support the implementation of our CSR ambition: Building Together	15
ESG acculturation campaign: a major lever to make transformation effective	16
Operationalisation programme "ESG by Design": embed ESG in our processes and tools	17

# OUR CSR AMBITION

We have put sustainability at the core of the Group's strategy. Our CSR ambition is fully aligned with our Corporate Purpose to build, with our clients, a better and sustainable future through responsible and innovative financial solutions.

**POSITIVE LOCAL** 

Support economic

transformation

at a local level

and societal positive

IMPACT

Societe Generale's CSR ambition is based on 4 strategic pillars: 2 pillars constituting the positive transformations linked to the Group's activities - environmental transition and positive local impact, and 2 pillars that form the foundation of a responsible bank - responsible employer and culture of responsibility (governance, culture and conduct).

- Supporting our clients in their

   environmental transition: contributing through our activities to the energy transition, the preservation of biodiversity and the development of a circular economy, while aligning our portfolios with carbon-neutral trajectories.
- 2. Being a catalyst for **positive local impact**: financing local infrastructure and supporting local players, organisations, SMEs and entrepreneurs, be at the forefront of the transition towards sustainable mobility and develop our social and inclusive offer.
- 3. Being a **responsible employer**: enable our employees to reach their full potential, offer them a fulfilling, adapted and efficient work environment and promote their commitment and their power of impact.
- Fostering a culture of responsibility: ensuring ethical and responsible conduct of the Group's activities and a governance integrating sustainability at the highest level.

#### OUR CSR AMBITION IS BUILT ON 4 STRATEGIC PILLARS:



Accompany all our clients in their transition with innovative solutions to support their evolving needs

To support these transformations, Societe Generale has set a dedicated target:

€300bn contribution to

# OVER THE PERIOD 2022-2025

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The achievement of this objective for the Group is well under way.

#### This target is composed of:

- Sustainable bonds
- Financings:
- SPIF (Sustainable and Positive Impact Finance) transactions, which are dedicated to specific projects:
  - Environmental projects (renewable energy, sustainable mobility, sustainable buildings, low-carbon solutions, etc.);

RESPONSIBLE

Offer an attractive,

engaging working

inclusive and

environment

**EMPLOYER** 

- Social projects (financing of health facilities, hospitals, telecommunications infrastructure, financing of local authorities and SMEs or social housing).



Maintain the highest level of governance standards, robust management of our environmental & social impacts and ensuring respect of our commitments

- Advisory mandates on SPIF transactions;

- Sustainability-Linked Loans, which are corporate loans with environmental or social KPIs, whose interest rate varies according to the achievement of these objectives;
- Electric vehicles: financing & leasing

All of the Group's business lines are committed to contributing to this objective of sustainable finance.

STRATEGY 14

# A GROUP TRANSFORMATION PLAN TO SUPPORT THE IMPLEMENTATION OF OUR CSR AMBITION: BUILDING TOGETHER

Facing the new paradigm requires a real transformation across the Group. It is a long-term project, with the need to embed ESG topics into all the bank's business lines and processes. ESG is no longer a subject for specialists; it is a key element of our commercial development, risk analysis, investment decisions and own transformation. This transformation requires to invest massively to rethink our mandates, adapt our business models, adjust our operations, and develop new competencies. To support the implementation of our CSR ambition we have launched a Group transformation plan, "BuildingTogether" aiming to accelerate our journey into the transition.

## **Align objectives:**

**ESG objectives** have been set for a wide circle of managers in the 2023 campaign

### Incentivise:

**Business incentives** have been fixed to facilitate and direct credit origination towards sustainable or positive impact assets

## **Ensure coherence:**

We have deployed tools such as an **ESG maturity grid** through all our Business Units (BUs) and Service Units (SUs) to enable them to drive their ESG transformation through 6 main analysis axis (strategy, business offering, ESG integration, governance, investing in people and ecosystem), ensuring consistency with the Group's ESG ambition. This tool allows BUs/SUs to set ambitions for 2023 and 2025 and to define their ESG roadmap, improve their governance and management tools, and capitalise on good practices between the different entities thanks to the various workshops set up.

## Acculturate and train:

An ambitious ESG training plan is currently being rolled out to all of the Group's employees.

- The Group launched in 2022 an ESG reskilling offer in partnership with the CentraleSupélec school for employees moving from one position to another requiring ESG skills.
- We have conducted a wide acculturation campaign with a series of conferences organised on key topics of the transition such as circular economy, or water issues presented by the OECD (see on next page).

### Adapt:

- We are rethinking our businesses to develop innovative solutions to support clients as they transition their businesses to more sustainable models. On our wholesale business, we launched a programme called "the Shift" to put cross-sectoral expertise into motion and offer a holistic approach to our clients.
- We launched and execute an operationalisation programme,
   ESG by design, aiming to embed ESG in our processes and tools, through our risk management, compliance and financial planning frameworks.

#### AN AMBITIOUS TRAINING PLAN: DEVELOPING A COMMON CULTURE AND SPECIFIC EXPERTISE ADAPTED TO EMPLOYEES' NEEDS

We strive to accelerate the skills development of all Group employees so that everyone can play a major role in the Bank's ESG transformation and support our customers in their transition. In line with this ambition, two strategic objectives have been set:

- Develop a transversal CSR culture with shared common knowledge;
- Support our Business Units/Service Units in their needs to develop technical expertise.

The Group has developed an ESG training plan relying on:

- A large training offer with more than 150 modules in various formats (E-learning, MOOCs, workshops, masterclasses, or podcasts);
- An internal expertise gathering mechanism with 5 levels from fundamental to expert to develop common share knowledge on CSR, sustainable finance, risks, climate, biodiversity or circular economy as well as expertise for expert working on ESG. We set a strong objective with the completion of "Fundamental" level for all employees;



Tailored made training courses have been also developed to address specific targeted population.

## ESG ACCULTURATION CAMPAIGN: A MAJOR LEVER TO MAKE TRANSFORMATION EFFECTIVE

As part of our BuildingTogether plan, we have launched a wide acculturation plan to educate and raise awareness on ESG for employees and clients on the environmental and social challenges and how they can become effective players in this transformation.

We use **a variety of tools**, to create a dynamic and foster good understanding and assimilation of the subject like conferences, roundtables, events, internal challenges and awards, newsletters, internal social networks, giving access to external climate experts and quality resources:

- To go further on awareness-raising, we targeted to roll out the Climate Fresk to 30% of our employees by end 2024. By end of October 2023, more than 23,000 employees throughout the Group have attended "Climate Fresk" workshops. The Climate Fresk aroused enthusiasm among our employees, 500 of whom wanted to become referent animators to contribute to the deployment in the Group;
- At the Group level, a series of conferences have been organised on key topics of the transition such as circular economy, water issues and decarbonisation;

- We created a Club Climate-Energy gathering more than 700 members where analysis on the economic impact of climate and environmental issues on sectors and countries are shared through notes and conferences.
- We sponsor key events on climate and transition in geographies where we are present:
- as a founding partner of the Climate
   Change Summit in Bucharest, initiated
   and supported by BRD, our retail bank in
   Romania. The summit aims to become
   the largest event in Central and Eastern
   Europe dedicated to solutions for climate
   change and the future of the planet. After
   a successfull first edition in 2022, it has
   been renewed in 2023.
- Komerční banka (KB) is a partner of the Green Deal Summit, a one-day event in Czech Republic that brings together around 350 business leaders, politicians, energy and industry leaders among other

guests focusing on how to deliver the European Green Deal, energy supply in Europe, energy renovation of housing, future of hydrogen and investments in green technologies among others. The 2023 event, hosted Ursula von der Leyen, the head of the European Commission and the Czech Prime Minister.

- In France, our retail Bank SG has organised the National Photovoltaic
   Conference in partnership with BPI for 2 years in a row, a dedicated event to SME and local authorities who wish to integrate photovoltaics into their energy supply strategy.
- We also want to embark our other stakeholders in this journey by providing them insights and perspectives. We organise events such as the **Positive Impact Week**, share articles, experts' views and research papers, or even open their mind with some **dedicated podcasts**.

#### OPENING MINDS ON SUSTAINABILITY ISSUES BY LISTENING TO OUR 2050 INVESTORS PODCAST

Societe Generale has launched in 2021 an investigative podcast by creating "2050 Investors", a series of **podcasts on tomorrow's economic and market mega-trends**, ahead of 2050's global sustainability targets. In each episode of "2050 Investors", Kokou Agbo-Bloua, Societe Generale's Head of Economics, Cross-Asset & Quant Research, investigates fundamental topics such as smart cities, tomorrow's mobility, artificial intelligence and inflation.

He provides deep dive analyses, with an ESG lens, into current affairs and trends that relate to the economy, the planet, markets and us.

With this original format, Societe Generale highlights its experts and calls on guests who are public figures, from the world of industry, best-selling authors or even Nobel Prize winners.

This podcast, which has nearly thirty episodes, has received a lot of enthusiastic comments from listeners, it is rated five out of five stars on Apple Podcast.

#### **4**)) 2050 INVESTORS PODCAST



### A TAILORED EVENT TO SPEED UP THE TRANSITION: THE POSITIVE IMPACT WEEK

Societe Generale organises each year the Positive Impact Week, a global conference dedicated to ESG issues, which brings together global decision makers in business, finance, economics and politics.

In 2022, the event provided unique perspectives and insights on the theme **"Reinventing business to accelerate transition"** for our wholesale clients.

- 80+ speakers across 48 sessions and 14 locations, including 18 CEO speakers
- Key topics, such as Hydrogen, Sustainable Fuels, Biodiversity, Circular Economy, Blended Finance, Fair Transition, Industries Transformation...

After seven years dedicated to its wholesale clients, Societe Generale is extending its Positive Impact Week concept to all its types of clients. The 2023 edition focuses on the theme "Explore sustainability from a wide perspective".



## OPERATIONALISATION PROGRAMME "ESG BY DESIGN": EMBED ESG IN OUR PROCESSES AND TOOLS

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#### VALÉRIE VILLAFRANCA HEAD OF

ESG OPERATIONAL TRANSFORMATION

"By leveraging our strengths, embracing

the digital age and working together towards a common ambition, the Group is creating a new chapter of the ESG integration at the heart of the Group."

Climate and Environment changes are impacting deeply our business and risk environment and the way we operate across all activities and the bank processes; all the way from how we plan, strategise and steer the Bank, evaluate our clients and assess transactions, manage our risks and report our activities.

To address this change as efficiently as possible, the Group has engaged in an **ESG multi-year transformation programme** (ESG by Design) in 2022, which objective is to operationalise ESG changes, focusing on the operationalisation of the Group voluntary commitments (e.g., Net Zero Banking Allianc, Sectoral policies) and regulatory requirements. The program covers how financing, investing and own operations businesses are impacted by ESG. The ESG by Design programme is in charge of steering ESG operationalisation across all Group's activities, designing target set up, developing ESG methodologies, processes and tools and helping businesses implement Group set up.

For that purpose, a key principle driving the way we conduct the ESG transformation to ensure coherence is to embed ESG into existing processes, in order to concretely:

- Integrate ESG risk factors in the risk management framework starting with climate stress testing framework and steering of ESG indicators;
- Develop/upgrade processes and IT tools to enhance and industrialise ESG clients and transactions analysis, both on credit and reputational risk, covering physical risk as well as transition risks for climate as well as nature;
- Integrate ESG in the bank financial steering and transactions incentives including operationalisation and monitoring of the portfolio alignment targets;
- Enhance the infrastructure to produce
   ESG reporting including ESG data
   collection and storage;
- Strengthen our disclosure framework to cover CSRD.

The Program is built around different workstreams and a Target Operating Model to ensure that all fit together, just like the

We are investing to operationalise ESG into our day-to-day business, risk, compliance and financial planning and reporting.

pieces of a well-crafted puzzle. This approach ensures that our efforts are well-coordinated, and all contribute to our **collective** success.

## WHOLESALE FINANCING / RETAIL FINANCING / INVESTING / OWN OPERATIONS





# STAKEHOLDERS ENGAGEMENT AND COOPERATION

Foster client engagement and support transition strategies	19
Norking with our peers and industries to develop common standards	20
Norking with policy-makers to unlock the transition	21

## FOSTER CLIENT ENGAGEMENT AND SUPPORT TRANSITION STRATEGIES

To ensure that our clients' transition strategies are coherent with our own sectoral pathways, we engage with them.

Through client engagement, we:

- Better understand and exchange with our clients on their climate transition strategies;
- Feed our assessment of clients' climate-related risks and impacts and understand how clients mitigate them;
- Structure and propose adequate and innovative financing, advisory and partnership solutions for clients' transformations.

Client engagement is even more important in a context where risk and business profiles of corporates are evolving rapidly. It requires co-construction with clients, expertise, continuous training, and high involvement of our teams to identify key risk drivers and opportunities.

To foster client engagement, we capitalise on our internal expertise, put collective intelligence into motion and partner with transition and impact specialists to deliver a constructive dialogue, adapted to each client's specifics.

We need to have top skills and tools to be the most relevant partners to our clients. Various levers are made available to senior bankers and relationship managers to grow their expertise and understand both the transformation challenges of the sectors they cover and the specific risks and opportunities for their clients:

- Sectoral dynamics and challenges:
- Sectorial packs: material and online presentations explaining the main ESG trends of each sector and how the market may be driven due to ESG constraints or opportunities. They have been co-constructed by relationship managers and ESG experts;
- Specific presentations on decarbonisation challenges and levers sector by sector;
- The Industry Climate Vulnerability Indicator (ICVI), developed by the Economic and Sector Studies Department, a risk tool enabling bankers to understand the level of transition risks of a specific industry;
- Webcast conferences called "Businesss hours" where sectoral experts from businesses are confronting their views on sector's challenges and opportunities linked to transition. Aviation, Shipping, Automotive, etc. each sector has been scrutinised, and outlooks from experts shared with the staff;
- The Climate Energy Club: a club with more than 700 members where analysis on the economic impact of climate and environmental issues on sectors and countries are shared through notes and conferences (an average of 180 participants per meeting). Topics include the financial needs for the EU, the US 2050 net-zero transition and the IPCC report.

- Client' Sustainability profile and strategy:
  - The Corporate Climate Vulnerability Indicator (CCVI), developed by the Economic and Sector Studies Department, enables bankers to understand the level of transition risk of corporate clients;
  - The environmental and social analysis of corporates clients enables bankers to understand clients' main environmental and social impacts and how they mitigate them. This analysis also includes the alignment status of clients with our sectoral policies, leading to specific client discussions;
  - The Transition Opportunities Potential ("TOP") tool developed to assess
     clients' climate transition strategies.
     The tool is adapted to each sector
     specifics and based on a transparent
     methodology. It helps senior bankers
     and relationship managers to structure
     and strengthen strategic discussions with
     clients and better support their transition
     strategies with adequate, innovative or
     sustainability-linked solutions.

To foster open dialogue and experience sharing, we organise each year an international and broadcasted event: the **Positive Impact Week** embarking renowned guests and Societe Generale's experts in insightful discussions on transition.

FROM A WIDE PERSPECTIVE

POSITIVE IMPACT.

#### OUR FLAGSHIP EVENT: THE POSITIVE IMPACT WEEK

For 8 years, Societe Generale has been holding an annual **Positive Impact Week** conference that gathers a large community of professionals, industry leaders and decision makers, coming together to delve deep into actionable ideas to accelerate the transition.

This annual event aims to share insight gain valuable insights from renowned experts, and from industry leaders who are fostering positive change and enabling a faster transition.

The 2023 edition is taking place on 27-28 November, online and in-person across selected locations, with more than **80 speakers,** mostly C-suite guests and international experts, discussing with Societe Generale specialists and top executives.

This year's programme is focused on the deep transformation of industries, sectors, value chains, and investment to not only facilitate the transition, but also to speed it up.

It covers a large spectrum of the transition: business transformation, electric mobility, critical minerals, circular economy, sustainable agriculture, aviation, emerging leaders, just transition and much more...

Almost 650 clients attended the 2022 edition listening to more than 100 speakers across 48 sessions and 14 locations.

## WORKING WITH OUR PEERS AND INDUSTRIES TO DEVELOP COMMON STANDARDS



#### HADJIRA HAMDAOUI

HEAD OF CLIMATE QUANTITATIVE STRATEGY TEAM

*"In the pursuit of a sustainable future.* 

it is imperative for us banks to join forces with companies, uniting our financial and industrial innovation capabilities, to lead the way toward decarbonising our economy.

In recognition of the pressing need for action, the shared vision and collaborative spirit will be the key to our success in creating a greener, more sustainable world"

Steering lending portfolios through trajectories compatible with the goals of the Paris Agreement requires methodologies and metrics. We were part of the first banks to join forces to work collectively on developing these methodologies.

Since 2018, we have contributed to the development of the PACTA methodology<sup>(1)</sup> and collaborated with BBVA, BNP Paribas, ING and Standard Chartered (also known as the Katowice Banks) and 2DII to make this methodology applicable to banking portfolios and providing recommendations for improving it.

#### We joined as a founding member the Net-Zero Banking Alliance (NZBA) in 2021

that brings together many banks around the objective of aligning their portfolios and activities with pathways consistent with a maximum temperature rise of 1.5 °C. We are active in different working groups organised by NZBA and GFANZ<sup>(2)</sup> with other banks. By working with our peers, we aim to adopt common and widely recognised methods.

We also joined several working groups gathering financial institutions and major players of the industries to combine our expertise and work collectively on the sectors transition.

We are a founding member of <u>the Aviation Climate-Aligned Finance (CAF)</u> <u>Working Group</u> and the Aluminum Climate-Aligned Finance Working Group. We have joined <u>the Steel Climate-Aligned</u> <u>Finance Working Group</u> as co-leader, alongside five other leading lenders of the steel industry to set the standards paving the way for decarbonisation of the sector. The Working Group has published Sustainable Steel Principles (SSP), the first Climate-Aligned Finance (CAF) agreement for lenders to the steel industry. The SSP are the turn-key solution for measuring and disclosing the 1.5°C alignment of steel lending portfolios. Designed to support the practical achievement of net-zero emissions in the steel industry, they also provide the tools necessary for client engagement and advocacy.

In close collaboration with the principal actors of these sectors, the aim is to define common methodologies to help our clients decarbonise their activities and properly address these sectors' specific challenges.

The Group was the first European bank joining the Hydrogen Council, which brings together more than 120 members contributing to the roll-out of hydrogen as part of the energy transition. The bank aims to bring its expertise in innovative financing and energy advisory to help develop the "low carbon" hydrogen solutions of tomorrow.

As a founding signatory of <u>the Poseidon</u> <u>Principles</u>, alongside ten other banks, the Group supports players in the global shipping sector in their energy transition. The Poseidon Principles aim to promote a low-carbon future for the global shipping industry by integrating climate decisionmaking into portfolio management and lending decisions regarding ship financing.



(1) PACTA (Paris Agreement Capital Transition Assessment) is a methodology developed by the 2° Investing Initiative (2DII) to help investors analyse the extent to which corporate capital expenditures and industrial assets behind financial instruments and portfolios in emissions-intensive industries are aligned with various climate scenarios. (2) GFANZ: Glasgow Financial Alliance for Net Zero

## WORKING WITH POLICY-MAKERS TO UNLOCK THE TRANSITION



#### FRIDA MEKOUI DIRECTOR SENIOR

ADVISOR- PUBLIC AFFAIRS DEPARTEMENT

"Societe Generale's engagement with policy-

makers is performed with the objective of promoting the establishment of a policy framework where banks should not only be incentivised to gradually "reduce their financed emissions", especially on emitting sectors where alignment targets are necessary, but also to "finance emissions reduction" (i.e., net-zero technologies and infrastructures)." As the consequences of climate change and nature degradation are accelerating, it is vital that we continue to act collectively in mainstreaming sustainability into each aspect of the real economy. Financial institutions can play a key role in channeling capital flows towards sustainability goals, and it is critical that conditions are in place to enable the real economy to transition, including supportive measures from policy-makers.

Societe Generale has been actively engaging since 2018 with policy-makers to contribute to their efforts in enabling a policy environment incentivising the real economy transition.

The challenges for banks in scaling sustainable finance and aligning their portfolios with trajectories compatible with 1.5°C scenarios are huge in an economy heading to well above +2°C. Cancelling financed emissions through immediate withdrawals of high-emitting assets or termination of relationships with high-emitting corporate clients would be inefficient to reach the vital decarbonisation of the real economy globally. Hence, Societe Generale's engagement with policy-makers is performed with the objective of promoting the establishment of a policy framework where banks should not only be incentivised to gradually "reduce their financed emissions", especially on emitting sectors where alignment targets are necessary, but also to "finance emissions reduction" (i.e., net-zero technologies and infrastructures).

Financing capacities are abundant, but we observe that bankable low carbon projects are missing. This starts with the need to change demand, to progress to an economy of usage, to switch to more electrification, which implies new public infrastructures, capacity building and skills development.

Public policies have a role to play to facilitate corporates' preference for investing in low-carbon solutions over existing technologies. Some regions have already begun to apply such measures, such as the Inflation Reduction Act in the United States of America which pulled forward and derisked investment across sectors to ease decarbonisation financing. We do also welcome in the EU the European Climate Law, the EU's Fit for 55 package and the European Commission's proposal on the Net Zero Industry Act. From this perspective, any incentives for companies that would ensure a minimum and predictable rate of return on investment over the economic life of the projects would give banks greater visibility over the long-term viability of projects, while limiting technological risk.

Global international banks can play a role to finance real economy transition both regionally and globally, including in emerging and developing countries. Supporting emerging and developing countries in their transition requires an ecosystem of public, multilateral and catalytic funding partners to design blended finance transactions. It is also important that policy-makers continue efforts to thrive for interoperability of sustainability norms globally, to ensure a level playing field for international banks active in emerging and developing countries.



# TACKLING CLIMATE CHANGE

Addressing the environmental risks and climate-related impacts	
that we strive to manage with our stakeholders	23
SUPPORT OUR CLIENTS IN THEIR ENVIRONMENTAL TRANSITION	24
Supporting large corporates in their environmental transition	25
Promoting entrepreneurs, SMEs and mid-caps environmental transition	28
Individual clients: growing the sustainable and socially responsible range of services and products	29
Beyond financial offers, we have the ambition to become the leading global sustainable mobility player	30
Innovation as a key lever to support our clients' transition	31
MANAGE THE POTENTIAL CLIMATE IMPACT OF ACTIVITIES	32
Managing the potential impacts on climate of our operations	33
Managing the impact of our activities by applying a robust E&S framework	34
Managing the impact of our activities by taking concrete decisions and setting targets	35
MANAGE CLIMATE-RELATED RISKS	36

## ADDRESSING THE ENVIRONMENTAL RISKS AND CLIMATE-RELATED IMPACTS THAT WE STRIVE TO MANAGE WITH OUR STAKEHOLDERS

The environmental transition is a huge challenge, which involves climate, economic, social and technological issues.

It is a complex subject, and we are convinced that it requires concerted and collective approaches, with all our stakeholders: public authorities, our peers, our customers, investors, scientists, regulators. The environmental transition pillar of our CSR ambition is supported by our **climate strategy**.

By trying to reconcile short-term issues with a proactive long-term vision, our climate strategy relies on 3 axes:

- Support our clients in their environmental transition especially by developing appropriate advisory and finance solutions;
- Manage the potential impacts of the Group's activities on the climate directly through its own operations or indirectly via its portfolio;
- Manage climate-related risks.







# SUPPORT OUR CLIENTS IN THEIR ENVIRONMENTAL TRANSITION

Companies engaged in the transition are facing unprecedented investment needs, with several trillion euros estimated to be needed each year in the coming decades. Our approach is global, and we support each client in a differentiated way.

In this fast-changing world, our aim is to be the trusted partner of our 25 million customers with our expertise at their service to help them on their pathway to their environmental transition.

We want to be a key partner for our clients in their own decarbonisation journey, not only by providing traditional **green finance** or **investment solutions** but also by understanding their needs and providing them **advice**, **expertise**, **innovation**, and open their horizon to new partnerships and solutions. Beyond supporting our clients, we are **rethinking our businesses** with a cross-sectorial and global approach opening new frontiers on-boarding the champions of the low-carbon economy and new technologies.

We believe these transformations present a unique chance for banks to develop responsible solutions for financing the changing economy and keeping up with societies as they evolve, while also unlocking new business opportunities.

#### To achieve our aim of meeting clients' evolving needs, Societe Generale carefully tailors its service offering by client category.

Reflecting this goal, the Group's teams assist large corporates in their environmental transition. We have launched a programme to rethink the mandate of our activities to better support sectoral developments that promote the decarbonisation of the economy.

Our retail banks put the expertise of its teams at the service of **local businesses and entrepreneurs** to offer them the right supports, tailored to their environment.

The Group has developed a range of specific offers for **individual clients**, notably for electric vehicles and energy renovation.

#### OUR APPROACH TO ACCOMPANY EACH CLIENT IN THEIR TRANSITION:

DEVELOP SUSTAINABLE FINANCE SOLUTIONS AND PRODUCTS MAKE OUR EXPERTISE AVAILABLE TO SERVE OUR CLIENTS

RETHINK OUR BUSINESSES SPEED UP INNOVATION TO SUPPORT THE TRANSITION

## SUPPORTING LARGE CORPORATES IN THEIR ENVIRONMENTAL TRANSITION

## **EMBEDDING SUSTAINABILITY ISSUES**

Societe Generale has a long history of financing the energy transition.

For almost two decades, we have been at the forefront of supporting and facilitating access to renewable energies through numerous projects around the world, providing pioneering solutions in the financing of new technologies, structuring offshore wind and floating solar operations.

Today, the challenge is to go further by accompanying our clients in the adaptation to a low-carbon economy. Our businesses worldwide are gathering their substantial expertise in financial engineering and innovation to bring a full range of financing, investment and cash management solutions according to our clients' needs.

## **Financing solutions**

We constantly seek to use our financial innovation capabilities to provide clients with the finance products they need to expand their positive impact. In addition to conventional finance, Societe Generale has responsible solutions for financing capital goods.

- Green, social and sustainability loans & bonds, whose proceeds aim at financing clearly earmarked projects generating environmental and/or social benefits.
- Sustainability-linked loans & bonds: loans and bonds linking the financing structure to the client's achievements in terms of corporate and social responsibility (CSR) targets.
- Project finance: financial advisory services and arranging capabilities in relation to project financing, in multiple sectors across the world, from energy to infrastructure.

Sustainable Export Finance: instruments that support, guarantee and/or fund export finance transactions that have a clear positive impact on the environment and/or social issues.

## **Diagnosis & Advisory**

Societe Generale incorporates ESG into its business and strategic dialogue with customers. We help our clients to tailor their approaches to the energy transition, advising them in different ways depending on their needs:

- Cross sector expertise: helping corporate clients to deal with the complexity of the transition requires both a sectoral and cross-sectoral approach, as well as technical expertise and knowledge of regulations. This allows us to provide them with the best advice, drawing on the Group's extensive finance and advisory services experience in sectors such as energy, agriculture, property, transport and technology;
- ESG advisory and market access: as part of their investing policies, investors now consider that ESG performance is a key indicator of a company's long-term risk profile, which may significantly impact its liquidity/ attractiveness in the market. Applying our extensive knowledge of the ESG concerns of investors and other stakeholders (including clients, contractors, regulators and ESG rating agencies), our experts support and advise corporate clients on their ESG disclosure and rating process to gain the best market access;
- ESG research: we help investors make informed decisions by combining traditional financial metrics with financially relevant and actionable analysis of ESG issues. The ESG research team systematically integrates ESG criteria into its fundamental equity analysis, valuations and recommendations. This is in addition to the advisory services the ESG research team provides to clients: for example, covering the plethora of new ESG regulations being deployed by states and regulators.

# SUPPORTING LARGE CORPORATES IN THEIR ENVIRONMENTAL TRANSITION

### **Investment solutions**

The Group issues structured notes that incorporate ESG criteria, they are issued in sustainable and positive impact investment formats detailed below. Socially responsible deposits are another element of our Sustainable and Positive Investment offering for corporate clients.

- Positive impact notes: a range of products to give customers the opportunity to invest in tailored products and promote positive impact financing.
- Repackaging of green or social bonds: issuance of bond-repacked notes whose funding source is the yield on a third-party green bond and whose coupon is tailored to the investor's request.

Green, social or sustainable notes issued

**by a third party:** the issuer earmarks the equivalent of the funds raised to finance or refinance sustainable projects or is a recognised pure player in this type of funding.

- Positive contribution notes: the investor contributes by investing in positive-impact initiatives, such as agro-forestry and CO<sub>2</sub> emission reduction, through the voluntary carbon market.
- Socially responsible deposits: we match the funds collected with an equivalent amount in short-term loans to corporates with high ESG ratings (according to an internal methodology), or for commodity finance transactions selected according to ESG criteria.

### **Financial services**

The Group also aims to offer a full range of sustainable solutions for its clients' financial services, cash management and payment solutions needs. ESG offers comprise leasing, export financing, cash management and factoring/reverse factoring solutions that incorporate ESG features.

- Leasing and financial service: we finance sustainable assets in five business segments: Technology, Industrial Equipment, Health, Green Energy, and Transport. Supporting behavioural shift from asset ownership to usage-based models using an asset-life-cycle approach and "full-service solutions"- upgrade, replacement and refurbishment solutions.
- Green, sustainable trade finance: the Group's finance offer focuses on five main sectors: renewable energy, hydrogen, clean transport, waste management and sustainable water use.
- Payments and cash management solutions: a range of sustainable or sustainability performance-linked guarantee solutions, sustainable loans for working capital and sustainable liquidity support.
- Factoring/reverse factoring: receivables financing programmes with built-in E&S indicators to bring clients closer to their social and environmental goals, as well as reverse factoring products with social criteria to optimise supply chain financing by pre-funding supplier payables.



# SUPPORTING LARGE CORPORATES IN THEIR ENVIRONMENTAL TRANSITION

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#### SANDRINE ENGUEHARD

HEAD OF SUSTAINABLE AND POSITIVE IMPACT FINANCE SOLUTIONS

"To accompany our clients driving their transition throughout an increasingly complex environment, we launched "the Shift", as an accelerator of our own transformation. We are fostering collective intelligence on selected key topics to develop new advisory and financing approaches and co-construct solutions with our clients."

## SHIFTING OUR BUSINESS MODELS

Supporting our clients in the transition and encouraging their transition strategy is a fundamental part of our banking business. To keep pace with our customers' changing needs, **we are rethinking our business models** and integrating innovative solutions from our ecosystem of stakeholders.

For our wholesale business, we have decided to put collective intelligence and cross-sectoral expertise into motion to offer a holistic approach to our clients through a programme, called "**the Shift**". To support our client's transformation, more than **400 staff** from various key regions and business lines are working together on **12 strategic activities** articulated around three thematics to:

- Create synergies and develop expertise;
- Onboard and engage staff on ESG challenges.

## **1. STRATEGIC VALUE CHAINS**

Using a cross-sectorial approach and life cycle analysis, we take a holistic view of our clients' business

- 1. Air transportation
- 2. Maritime industries
- 3. Rail and road mobility
- 4. Sustainable food & agribusiness

### 2. NEW BUSINESSES

We support emerging leaders and create new products offers for small scale asset financing and nature-based solutions

- 5. Emerging leaders
- 6. Small scale asset financing and access to energy
- 7. Biodiversity, nature-based solutions and carbon credits

## **3. CROSS FERTILISATION**

We share our knowhow and raise awareness so as to be early movers on less mature technologies and markets

- 8. Hydrogen
- 9. Circular economy
- 10. Decarbonisation solutions
- 11. Real estate
- 12. Healthcare

#### To support new businesses,

Societe Generale is launching a EUR 1bn Transition Investment Fund to be invested in debt and equity to support emerging players and

**new solutions**, with a positive impact finance component, to foster a fair transition and contribute to the financing of the Sustainable Development Goals.

EUR 1bn Societe Generale commitment
EUR 0.7bn equity component
<b>EUR 0.3bn</b> debt component for Energy Transition

In partnership with well-established managers of alternative investments and standalone

EUR 0.7bn Equity Investment Focus
Emerging Leaders of the energy transition (low carbon solutions, renewables, carbon capture and storage, hydrogen) Investment in VC or Growth companies
Nature-based solutions with positive contributions to the protection and restoration of biodiversity
Impact-driven investments contributing to the UN SDGs

## PROMOTING ENTREPRENEURS, SMEs AND MID-CAPS ENVIRONMENTAL TRANSITION

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Jan JUCHELKA

CHIEF EXECUTIVE OFFICER OF KOMERČNÍ BANKA AND GROUP COUNTRY HEAD FOR THE CZECH REPUBLIC AND SLOVAKIA

"Conscious of the challenge SMEs

and entrepreneurs are facing to finance the decarbonisation of their activities, Komerční banka has developed innovative and adaptive financial solutions. As a bank leader in sustainability, we want to be a key partner in their journey to a low carbon economy.

During 2022, we have seen an increase in project funding closely related to energy, especially renewable energy sources."

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Where it has a presence, the Group works alongside and support players of all sizes in their transition. To accompany entrepreneurs, SMEs and mid-caps, we have developed a **comprehensive suite of banking products** centered on switching to a more sustainable business model. They include advice and finance solutions offered in conjunction with leading partners.

# We offer banking products aiming to generate positive impact.

For example, in France:

- Environmental and social loan (PES): the PES is intended to fund with a subsidised rate sustainable development projects (improving energy efficiency, renewable energies, low-carbon transport, waste and water treatment and recycling) and projects that benefit society as a whole.
- Positive impact loans in partnership with EcoVadis and EthiFinance: for companies, non-profits and local or regional authorities to offer finance solutions that incorporate an ESG indicator and a target for this indicator. The interest rate reduces when the target fixed on origination is reached.
- Real estate support thanks to SGFI, the French Retail Banking entity specialised in financing business property. SGFI provide a wide range of positive impact financing that concerns both environmental (frugal consumption habits, bio-sourced materials, respect for biodiversity, etc.) and social aspects (non-profit organisations, regional authorities, health, education, social and affordable housing, disabilities, etc.).

We **tailor solutions** adapted to our clients' specifities and **facilitating their transition journey**.

As each client has a specific challenges and needs, depending on the sector and the location they operate in, we developed **some tailored offers** to help our clients to equip themselves with low carbon technologies.

- In France, the retail network SG launched the 'Pack Solaire', a turnkey solution designed to help mid-caps, SMEs, associations and local authorities in making their decision to invest on photovoltaic panels. First by analysing the opportunity and feasibility of such an installation on their own infrastructures and then by offering them adapted financing solutions. The energy diagnosis is done with a tool designed in partnership with the startup namR.
- Our retail Bank in Czech Republic, Komerční banka, has developed the "Photovoltaic for One Crown" solution, that offers business clients an option to install photovoltaic power plant without having to provide the initial capital thanks to a leasing solution developed with our Equipment finance division, SGEF.



 Thanks to its deep asset and market experience in the Industrial Equipment, Transportation, Technology and Healthcare & Green Energy sectors, SGEF offers financing solutions for the environmental transition assets in order to support its partners and customers across its geographical network especially the SMEs of its 16 countries and their related ecosystems.



- We are also currently launching a similar offer in some African countries where we operate such as Senegal and Morocco.
- In Africa, the Group aims to support the development of SMEs by monitoring social impact, developing a green finance offering and proposing blended finance solutions to innovative SMEs that would traditionally be considered as «high-risk". For this purpose, the Group has opened **9 SME Houses** ("Maison de la PME") including one recently in Mozambique. Societe Generale is the first user of AFD's risk-sharing mechanism.
- In Africa, we aim at supporting the growing demand for financing of decentralised solar power generation projects in Central and West Africa by investing in the Afrigreen impact debt fund. This fund has been launched in 2023 and created by the French asset manager Rgreen Invest and Echosys Advisory to support commercial and industrial consumers in Africa in their energy transition by promoting the adoption of photovoltaic solutions. It targets mainly countries where the grid is unreliable and electricity prices are high.



# INDIVIDUAL CLIENTS: GROWING THE SUSTAINABLE AND SOCIALLY RESPONSIBLE RANGE OF SERVICES AND PRODUCTS

Carbon neutrality by 2050 hinges on profound changes in the ways we consume, travel and produce. It means different food habits, new mobility, energy-efficient houses and consumption patterns where usage supersedes ownership. We are there to accompany our clients in this evolution and have developed specific transition pathways to be there at each step of their journey based on awareness, expertise sharing and bringing them an innovative ecosystem leading to adapted financing solutions.

As a result, we develop for individual clients a range of sustainability focused products and services to encourage environmentally responsible choices, such as advisory and financing on ESG topics specially on energy renovation of housing; financing solutions for clean vehicles, investment of savings to support biodiversity projects or low carbon infrastructures and sustainable real estate offers.

## **Financing & Advisory**

To help our retail clients finance their own energy transition path, we developed our offer with dedicated financial products and services such as products dedicated to finance energy efficient home improvements or fit-outs through interest-free green loans.

- Thanks to our partnership with Hellowatt, we accompany our clients in France in the energy renovation of their residential properties by providing them end to end solutions from energy diagnosis to connection with craftsmen.
- Our retail bank in France, SG, offers a car credit and insurance dedicated to clean vehicles. This loan allows to finance a car or a two-wheeler, with advantageous conditions for a hybrid or electric vehicle. In addition, the

customer benefits from a reduction in his insurance contribution.

- Facilitating the energy renovation of residential properties (diagnosis, advice, networking with local craftsmen, search for energy bonuses ou subsidies, financing of the remainder) thanks to our partnership with Hello Watt.
- Calculating their own carbon footprint using the Carbo calculation engine, linked to their expense registered in their banking account. Raising their awareness is a first step to encourage them to act.
- Our subsidiary BoursoBank has also rolled out a range of all-online eco-responsible loans and special green vehicle loans at a lower rate and with no application fees to incentive their clients in switching to low-carbon solutions.

## Real Estate

Sogeprom, our real estate development subsidiary has made a commitment to reduce its carbon footprint by adhering to its PACTE 3B: low carbon, biodiversity and wellbeing (*"Bas Carbone, Biodiversité, Bien-vivre"*). Its goal is to build and offer sustainable real estate programs embedding biodiversity's protection.

**SGIP** is responsible for marketing properties to the individual customers of SG French retail network looking to invest in real estate. It has changed its listing method to give priority to properties built to high environmental standards, especially as regards biodiversity, and has upskilled its teams to ensure they provide the best possible advice on investments in more sustainable and responsible property.

## **BoursoBank**

BoursoBank has obtained in 2023 the B Corp certification confirming the robustness of its CSR approach.

## Savings

We have developed a broad range of solutions to support individuals who want to direct their savings towards sustainable projects. We offer:

- A new generation of savings that combines responsibility and performance through partnerships with 7 major asset management companies;
- Structured products supporting biodiversity projects thanks to our partnerships with My Tree and Ecotree;
- Finance investment products with a positive impact - projects supported include the construction of water treatment and water supply infrastructures;
- Private equity, private debt and real estate solutions. For instance, Tikeahau's private debt business is a key way of reallocating savings from individuals to European SMEs in transition.

Thanks to our crowdfunding platform **LUMO**, we also offer the opportunity to invest in low carbon infrastructure projects helping directly to finance the energy transition.

## BEYOND FINANCIAL OFFERS, WE HAVE THE AMBITION TO BECOME THE LEADING GLOBAL SUSTAINABLE MOBILITY PLAYER





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Tim ALBERTSEN CHIEF EXECUTIVE OFFICER AYVENS

"With our successful acquisition of Leaseplan in May 2023,

we have the ambition to become the leading global sustainable *mobility player. Avvens currently* owns the largest multi-brand Electric Vehicles (EVs) fleet in the world, with close 500,000 vehicles, which reflects its leading role in the energy transition.

We will continue leading the way to sustainable mobility by always supporting our clients in reducing the carbon footprint of corporate mobility, with electrification and other mobility solutions."

(1) Survey on ALD's key international accounts, 2022. (2) Passenger cars and funded fleet only, in EU, UK, Norway and Switzerland. 2024. (3) Electric Mobility Service Provider.

Market trends such as the changing face of urban mobility, environmental awareness, digital lifestyles with increased "on-demand" mobility, and the shift from ownership to usership, will continue to accelerate in the coming years. Vehicles are increasingly becoming electrified, shared, connected and autonomous, with demand for mobility being strongly impacted by four megatrends: usership, digital, demand for flexible and shared mobility and electrification.

These megatrends are expected to shape the future of the mobility sector for the coming 5 to 7 years and create strong growth opportunities. Our subsidiary Ayvens provides full-service leasing, flexible subscription services, fleet management services and multi-mobility solutions to customers of all sizes, including large corporates, SMEs, professionals and private individuals.

Ayvens's focus is to develop innovative solutions, including digital platforms, to encourage large scale adoption of sustainable

mobility, whether it be through low emission vehicles or multi-mobility solutions.

Ayvens has released their new strategic plan Power UP 2026 with a clear ambition to lead the way to sustainable mobility. 3 main fields of actions were fixed for which Ayvens has announced ambitious targets:

- advising clients about the greenest way,
- making it simple for them to choose electric,
- going beyond electrification and into MaaS (Mobility as a Service).

#### AYVENS AMBITIONS ON DECARBONISATION

Advising our clients about the greenest way Electrification as #1 fleet strategy topic for 94% of corporates<sup>(1)</sup> 1. CONSULTANCY EV enablers e.g., 2. TCO AND CO<sub>2</sub> TOOLS Switch offer EMSP SCOPE<sup>(3)</sup> എന്ര 3. FULL BUNDLED ELECTRIC PRODUCT Reporting, automatic 4. BEST IN CLASS IN-LIFE MGT payment& reimbursement **5. BATTERY MGT & REMARKETING** Energy management 2026 targets 2026 targets

40% of new contracts of new contracts will be EV<sup>(2)</sup> by **2026** will be BEV by **2026** 

50%



**Ouadruple** use 400k drivers connected of our full bundled to our eMSP JV with electric product ChargePoint

Going beyond electrification and into MaaS

Providing flexible and multimodal travel options to all employees of our corporate clients



Helping clients move from Car to Mobility through our end-to-end multimodal solution

## 2026 targets



STRATEGY 30

# INNOVATION AS A KEY LEVER TO SUPPORT OUR CLIENTS' TRANSITION

The new paradigm requires acceleration, reinvention, and more than ever a lot of cooperation. As many startups emerge to offer sustainable solutions, we are building an ecosystem to deliver the best advice and the best solution to our clients, either by forging business partnerships, through incubation of startups or direct equity investments. The construction of this ecosystem makes it possible to address many sustainable development issues and to offer support solutions that meet the needs of clients. Innovation is an important lever for accelerating the implementation of a sustainable economic model.

The representation below is a non-exhaustive illustration of our ESG innovation ecosystem at the end of 2023.



(1) Equity investments. (2) Business Partnership. (3) Startup incubated/Experimentation.

### FOCUS ON OUR INCUBATOR

We initially launched our Global Markets Incubator program in 2018 to boost startups collaborations, mix expertise and deliver innovative solutions to capital markets.

In 2023, we doubled the number of participants and welcomed our first sustainability-focused cohort, in support of its offering for corporate, financial institution and private investor clients, who will benefit from innovative solutions adapted to their ESG goals.

In 2023, eleven new sustainability-focused startups joined the incubator dedicated to developing ground-breaking solutions for the financial industry.

These startups are addressing some of the finance industry's biggest ESG concerns, including carbon emissions quantification, impact tracking and measurement, Voluntary Carbon Markets (VCM) and Biodiversity.

They have participated in a six-month program to rapidly advance, test, deploy and expose their products and services to Societe Generale's business environment.

# MANAGE THE POTENTIAL CLIMATE IMPACT OF ACTIVITIES

Within the Group, we have taken a proactive approach to reducing emissions related to our own operations. We have set ourselves a reduction target by acting on the energy required for our premises, IT, air travel and our vehicle fleet.

We involve our employees in this approach, in particular through the Environment & Energy Efficiency Awards for more than 10 years, which encourages employees to set up innovative projects to reduce our carbon and environmental footprint.

Societe Generale has been committed to align its portfolios since the Paris Agreement in 2015. In 2021, the Group reinforced its commitment by joining the Net Zero Banking Alliance (NZBA) as a founding member, undertaking to align its own operations and portfolios with trajectories aiming to achieve carbon neutrality in 2050 with the ambitious goal of limiting global warming to 1.5°C.

To achieve this goal, Societe Generale manages its impact on climate from its own operations thanks to a proactive approach to reducing emissions. We have set ourselves a reduction target of by acting on the energy required for our premises, IT, air travel and our vehicle fleet. We involve our employees in this approach, through an internal carbon tax coupled with the "Environment & Energy Efficiency Awards" now in its 10<sup>th</sup> edition, which encourages employees to set up innovative projects to reduce our carbon and environmental footprint.

More broadly, we intend to take into account the environmental and social (E&S) issues associated with all our activities, to better control our impact and promote good practices, with an objective of continuous improvement. To this end, we have E&S general principles consisting of public statements on climate, biodiversity and human rights and 10 sectoral policies. We apply these statements and policies and have been continuously strengthening them, most recently with the update of our Oil and Gas policy.

Finally, we manage the potential impact of our business activities by taking concrete decisions and to support the achievement of our mid- and long-term targets.

# Our objective is to reduce our internal carbon footprint by 50% between 2019 and 2030

We have been working on steering the GHG emissions linked to our own operations since 2014. In 2021, we went one step further and announced our objective to **reduce our internal carbon footprint by 50% between 2019 and 2030.** 

At the end of 2022, the Group had reduced its direct carbon footprint by 35% compared to 2019, in line with this target.

Led by the Chief Operating Office and the Sustainable Development Department, a multi year programme is rolled out within and by the whole Group to identify and implement reduction levers, mainly on:

- Air travel and car fleet by reducing the frequency of business travel (travelling less) and using cleaner solutions (travelling better) such as an electric car fleet or carefully selected travel options.
- IT systems: we keep a very sharp eye on our IT carbon footprint and have a special programme in place to reduce it.
- Real estate: by using more renewable energies, coupled with a reduction in energy use thanks to energy-saving measures and optimisation of our building surfaces in connection with changes in ways of working.

### Our employees are actors of our decarbonisation

Alongside the close monitoring of our internal carbon footprint and the follow-up of clear action plans to reduce it, we are encouraging employees to take actions using different approaches.

#### For the last 10 years, we host an **Environment** & Energy Efficiency Awards, which encourages our employees to come up with innovative environmental initiatives, awarding the best of them grants funded by the Group's internal carbon tax. These grants are spent on initiatives that have not only reduced the Group's environmental impact but also generated financial savings. In taxing our entities' carbon emissions (at EUR 25/tCO<sub>2</sub>e since 2022), we hope to encourage greener

habits and efforts to make our buildings more efficient, stimulate low-carbon investment, identify and seize low-carbon opportunities and reduce the environmental impact of our sourcing. The 2022 awards recognised initiatives representing efficiency gains for the Group of EUR 1 million and saving 4,300 tons of  $CO_2$ . Since its creation, it is more than 50 thousands tons that have been avoided thanks to almost 1 thousand initiatives coming from more than 20 countries.

Societe Generale has been engaging with its employees and stakeholders about Green IT for a number of years. Following on from its signature of the Sustainable IT Charter and a series of masterclasses run by experts in the field, it has now turned to gaming as a way of communicating on sustainable IT and helping the Group towards its goal of a 50% reduction in its digital carbon footprint by 2025.

## Developers are invited to take part in the International Green Circle challenge:

a serious game developed by Societe Generale together with CodinGame. The idea behind the game is to get participants thinking about how they can adapt the way they code to reduce their environmental impact. Some 7,300 people representing around a hundred different nationalities took part, with the final leaderboard featuring 61 company teams and 67 university teams.

In 2023, we have launched **a large awareness campaign** on eco-actions and how the Group is acting in reducing its own carbon footprint so our employees can understand what the Group is doing and how they can also act.

#### BREAKDOWN OF THE GROUP'S DIRECT CO2 EMISSIONS IN 2022



	Unit	2019 Location-based	2022 Location-based
Overall Group carbon footprint	tCO <sub>2</sub> e	257,353	167,998
Carbon footprint per occupant	tCO2e/occ.	2.11	1.43
Scope 1	tCO <sub>2</sub> e	26,824	24,777
Scope 2	tCO <sub>2</sub> e	113,792	75,743
Scope 3	tCO <sub>2</sub> e	116,737	67,478

Scope 1 covers direct emissions related to energy consumption and fugitive emissions of fluorinated gases. Scope 2 covers indirect emissions related to energy consumption (external electricity, steam and chilled water). Scope 3 covers GHG emissions from all office paper consumption, business travel, waste, transport of goods and energy consumption of data centres hosted since 2017.

# MANAGING THE IMPACT OF OUR ACTIVITIES BY APPLYING A ROBUST E&S FRAMEWORK

We intend to take into account the environmental and social (E&S) issues associated with all our activities, to better control our impact and promote good practices, with an objective of continuous improvement.

### **Our E&S impact management framework**

The Group published E&S General Principles which define the overall framework of its E&S risk management system for the responsible conduct of its banking and financial activities. Within this framework, 3 transversal statements addressing issues common to all sectors have been developed, as well as 10 sector policies where the Group looks more specifically into certain sectors identified as sensitive from an E&S standpoint and in which it plays an active role. This E&S framework encompasses the initiatives of the banking sector that Societe Generale has joined, including the Equator Principles (EP).

E&S GENERAL PRINCIPLES					
3 Transversal statements	10 Sector policies				
	Agriculture, fisheries and agri-food	<b>*</b>		Dams and hydro- electric power	
Biodiversity	Thermal power stations	食	6-0	Thermal coal	
Climate	Defense and security	$\bigcirc$		Mining	
Human rights	Shipping	Â	ñ	Civil nuclear power	
	Oil & Gas	$\Diamond$	e j	Торассо	

#### POLICIES MAY INCLUDE DIFFERENT TYPES OF CRITERIA:

- E&S exclusion criteria are designed to exclude certain types of corporates, dedicated transactions or services or financial products from the Group's activities.
- E&S priority assessment criteria are criteria for which a specific and

## systematic answer is requested as part of the evaluation process.

• Other E&S assessment criteria are designed to identify other risk factors inherent to the sector in question that also need to be considered as part of an extra-financial assessment.

#### EMBARKING BIODIVERSITY PROTECTION INTO OUR E&S IMPACT MANAGEMENT FRAMEWORK AND THE WAY WE SUPPORT OUR CLIENTS

The world's living natural resources and the preservation of its biodiversity are fundamental in ensuring the continued functioning of the ecosystems on which economic activity and human life depend. These ecosystems supply our nutrition and our clean water, contribute to the control of disease and the regulation of our climate, as well as the pollination of our crops and the formation of our soils. Yet the increasingly rapid reduction of our planet's biodiversity is endangering these vital roles.

As a responsible economic actor, we have made a transversal statement on biodiversity and we have integrated specific criteria aimed at preserving biodiversity as part of our engagment with clients and the financing and investments that we realise into our sector policies.

We are engaged in a collective approach, with proactive commitments structured around the support of our clients in their actions, and awareness raising among our internal and external stakeholders on issues related to preserving and restoring biodiversity. As a signatory of the <u>Act4Nature alliance</u>, Societe Generale has made <u>concrete</u> <u>commitments in favour of biodiversity</u>.

We actively participate in coalitions and working groups aimed at developing common standards and methodologies.

We also participate in two other leading international groups in the field of biodiversity:

- The <u>Taskforce on Nature-related</u> <u>Financial Disclosures</u> (TNFD), an international initiative working on developing a risk management and reporting framework relating to nature allowing organisations (including financial institutions) to identify and evaluate these risks and act accordingly;
- The <u>Science-Based Targets Network</u> (SBTN) is a global network that aims to equip companies with science-based tools to manage their impacts and their dependencies regarding nature over the whole of their value chain.

# MANAGING THE IMPACT OF OUR ACTIVITIES BY TAKING CONCRETE DECISIONS AND SETTING TARGETS

## Reinforcing regularly our sector policies...

## to support the achievement of our mid- and long-term targets

### 2020

#### Thermal Coal

- Disengage from companies which have not made commitments to exit the thermal coal sector.
- Stop providing new financial products and services to any company with mining or power thermal coal assets which is a thermal coal developing company or does not have communicated a transition plan aligned with the 2030/2040 thermal coal phase out objectives of Societe Generale.

#### Oil and Gas

Stop new financing of Oil and Gas onshore extraction in the US (Reserve Based Lending).

## 2021

#### Unconventional Oil and Gas

New exclusion criteria on new dedicated transactions and clients active in the extraction and production of these categories of hydrocarbons<sup>(1)</sup>.

#### Societe Generale Assurances:

Exclusion of its direct investments in the companies whose turnover linked to non-conventional fossil fuels:

is over 10%, for titles already held;

■ is over 5%, for new investments.

## 2023

#### Oil and Gas

- Stop providing financial products and services dedicated to upstream Oil & Gas greenfield projects<sup>(2)</sup>.
- Phase-out exposure<sup>(2)</sup> on upstream Oil & Gas private pure players and reinforce engagement with energy sector clients, particularly on their climate strategy.

2025	2030	2040	2050
<ul> <li>Sustainable finance: reach €300bn contribution</li> <li>Oil and Gas: reduce upstream<sup>(3)</sup> exposure by 50% between 2019 and 2025</li> </ul>	<ul> <li>Thermal Coal: reduce exposure to zero by 2030 for companies in EU and OECD countries</li> <li>Oil and Gas: reduce upstream<sup>(3)</sup> exposure by 80% between 2019 and 2030</li> <li>Oil and Coat reduce absolute or here</li> </ul>	• Thermal Coal: reduce exposure to zero by 2040 worldwide	Contribute to reach worldwild carbon neutrality by 2050
<ul> <li>Societe Generale Assurances:</li> <li>Reduce the carbon footprint of its equity and corporate bond portfolios by 30% by 2025 compared to 2018:</li> </ul>	<ul> <li>Oil and Gas: reduce absolute carbon emissions by 70% between 2019 and 2030 (scope 1, 2 and 3 end-use)</li> <li>Power Generation: reduce carbon emission intensity to 125 gCO<sub>2</sub>e per kWh by 2030</li> <li>Steel: reach a "Sustainable STEEL Principles" alignment score of 0 by 2030</li> </ul>		
■ Double the part of green investments between 2020 and 2025, in order to reach to €5.6 billion	<ul> <li>Cement: reduce carbon emission intensity to 535 kgCO<sub>2</sub>e/t cement by 2030</li> <li>Automotive: reduce carbon emission intensity to 90 gCO<sub>2</sub>e/v-km by 2030</li> <li>Commercial Real Estate: reduce carbon emission intensity to 18 kgCO<sub>2</sub>e/m<sup>2</sup> by 2030<sup>(5)</sup></li> <li>Own operations: reduce scope 1, 2, as well as Scope 3<sup>(4)</sup> GHG emissions by at least 50% by 2030</li> </ul>		

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<sup>(1)</sup> See Societe Generale O&G sector policy. (2) Effective as of 1<sup>st</sup> January 2024. (3) Absolute CO<sub>2</sub> scope 1 and 2 over the whole O&G chain and scope 3 of the upstream segment. (4) Scope 3 covers GHG emissions from all office paper consumption, business travel, waste, transport of goods and energy consumption of data centres hosted since 2017. (5) 2030 target is reliant on portfolio mix and shall be adapted accordingly with the corresponding CRREM targets in case of change of this mix. Based on the current portfolio mix (asset type and country), it translates into a target of 18 kgCO<sub>2</sub> e/m<sup>2</sup>.
# MANAGE CLIMATE-RELATED RISKS

### Identifying climate-related risks as an aggravating factor of existing risk categories

To describe climate-related risks, we distinguishes physical risks to transition risks as suggested by the Task Force on Climate-related Financial Disclosure (TCFD).

**Physical Risk** refers to the financial impact of climate change including more frequent extreme weather events and gradual changes in climate

**Transition Risk** refers to the risk of financial losses for an institution as a direct or indirect results of the process of adjustment towards a lower-carbon and more environmentally sustainable economy.

Climate-related risks are not a new category of risk for the Group, but rather an aggravating factor for existing categories, such as credit risk, market risk, operational risk, insurance risk and liquidity risk. The table below illustrates how climate-related risks, physical and transition, can impact the different existing risk categories (without considering the materiality of these impacts for Societe Generale's businesses).

RISK	PHYSICAL	TRANSITION
Credit and counterparty credit risk	Physical risk could increase the probability of default of clients (retail and corporate clients, sovereigns, financial institutions) by directly causing damage to their assets in affected areas (since production facilities, warehouses, services and decision-making centres can all be vulnerable to the impacts of physical events) or indirectly affecting their business model by disrupting supply chains, trade routes or markets. In the event of default, physical risks could make it even more difficult for the Group to recover part of its exposure, for example because the value of any pledged collateral or recoverable value has been reduced due to a higher flood risk.	Transition risks, especially for sectors affected by low-carbon transition policies (higher carbon prices, for instance), could affect the ability of clients (retail and corporate clients, sovereigns, financial institutions) to generate revenues and meet their financial commitments if they do not take the measures needed to adapt their business models, or if they cannot finance the necessary adaptation measures (such as research and development to develop low-carbon alternatives for products and services). Transition risks could also have an indirect impact on the value of client assets. For example, the value of fossil fuel reserves, such as coal and oil, are likely to fall as economies move to lower-carbon models, creating what are known as "stranded assets", in turn reducing the value of collateral used to secure funding.
	In addition to credit risk (defined above) for Group counterparties, another distir to that counterparty, a factor that is sensitive to changes in market conditions. A	active characteristic of counterparty credit risk is its dependence on the degree of exposure transition or physical risk can have an impact on market sentiment or conditions.
Market	Severe and acute physical events may lead to shifts in market sentiment and could result in sudden repricing. For example, hurricanes affecting business premises in certain areas may impact market expectations regarding their ability to generate revenue, and therefore the value of their stock.	Transition risks arising from regulatory, legal, technological or market sentiment drivers may bring about abrupt repricing of securities and derivatives, cause liquidity to dry up or asset decorrelation. The value and liquidity of products associated with sectors vulnerable to transition risk could reduce over time and assets could become decorrelated from other sectors.

RISK	PHYSICAL	TRANSITION		
Operational	Physical events could have an impact on Societe Generale's own sites and on its ability to continue to provide services to its clients.	Failure to comply with disclosure requirements on transition risk could expose the Group to legal proceedings or fines. Failure to meet public pledges to transition to a low-carbon economy could lead to reputational risk that could stigmatise banks and reduce revenue as clients are displaced. An additional reputational risk could also arise if external stakeholders perceive a commitment as inappropriate or not going far enough.		
	Increasingly frequent and severe physical events could have an impact on the non-life (fire, accident and general insurance) insurance business.			
Insurance	Physical and transition risks could change the value of the assets in which the premiums collected by the insurance businesses are invested in. Asset devaluation triggered by transition risk could affect the ability of insurance businesses to meet their financial commitments.			
Liquidity	Damage to clients' property caused by increasingly frequent physical events could impact banks' liquidity risk through customers' demands for liquidity to repair the damage. A major weather event that disrupts an important financial services centre or data centre could trigger an operational event that prevents the Group from operating in a key financial market.	Non-alignment of the Bank's activities with the objectives of the Paris Agreement could have a negative effect on its extra-financial rating. A downgrade could exclude its securities from the investment universe of some asset managers. A regulatory change by a major central bank to impose stricter ESG criteria for eligible collateral could cut into the Group's ability to pledge certain assets to that central bank's monetary operations.		
	An abrupt repricing of securities in response to extreme weather events or a sud- thereby affecting liquidity buffers.	den shift to a more restrictive carbon policy may reduce the value of banks' high quality liquid assets,		
Reputation	ESG – especially environmental – concerns have moved ever higher on the agen to reputational risk either directly (by failing to deliver on its sustainability promi sustainability commitments could result in litigation and risk to its image that co	da for economic stakeholders and public opinion leaders. In the short term, the Bank could be exposed ses) or indirectly (the knock-on effect of damage to a client's reputation). Failure to deliver on its uld cause a negative commercial impact for the Group.		
Compliance and legal	The environmental risks considered likely to have a significant impact on compliance risk in the medium to long term are primarily the risk of non-compliance with sustainability commitments. These risks are based on i) risk of non-compliance with laws or not delivering on the Bank's voluntary environmental and social commitments, especially those published in its sector policies; ii) risk of non-compliance with regulations on sustainable investment.			

### Managing climate-related risks relying on the overall risk management processes

Climate-related risks are included in the Group-wide process that aim to continuously identify all significant or potentially significant risks. The integration of climate-related risks relies on existing governance and processes and follows a classical approach (Identification, Quantification, Risk appetite setting, Control and Mitigation), for which there is a process of continuous improvements. As a result, processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management. Details on how Societe Generale manages climate-related risk are available in the following Risk Management chapter.

# **RISK MANAGEMENT**

39

40

42

Terminology for environmental risks Incorporating climate risks in the risk management framework

Processes and tools for identifying and managing climate risk

Environmental factors are related to the quality and functioning of the natural environment and of natural systems. They can give rise to negative financial impacts through a variety of risk drivers.

Environmental risks are not a new category of risk for the Group, but rather an aggravating factor for existing categories, such as credit risk, market risk, operational risk, insurance risk and liquidity risk.

This approach is aligned with current European supervisory and regulatory standards.

Climate risks are one component of environmental risks.<sup>(1)</sup>

# TERMINOLOGY FOR ENVIRONMENTAL RISKS

The Group uses the risk terminology suggested by the Task Force on Climate-related Financial Disclosure (TCFD) to describe climate, and by extension, environment risks: physical risks and transition risks.

#### TRANSITION RISK: DEFINITION AND MAIN CATEGORIES

Transition risk refers to the risk of financial losses for an institution as a direct or indirect result of the process of adjustment towards a lower-carbon and more environmentally sustainable economy.

Transition risk can be affected by different risk drivers such as:

- Policies: climate-related policy action or potentially disordered mitigation strategies could have an impact on asset prices in carbon-intensive sectors.
- Technology: technological changes may, for instance, make existing technologies obsolete or uncompetitive, changing their affordability and affecting the relative pricing of alternative products.
   Such technological changes might trigger a repricing of assets.

Preferences and behavior of customers and investors: these elements could affect institutions, for example through increasing litigation against counterparties on certain environmental issues, culminating in increased costs, damage to reputation or dissatisfied clients.

#### PHYSICAL RISK: DEFINITION AND MAIN CATEGORIES

Physical risk refers to the financial impact of environmental degradation, as well as of a changing climate, including more frequent extreme weather events and gradual changes in climate. Physical risk can materialise at a local level (linked for example to natural disasters affecting a specific location) or at a sectoral level (linked to climatic or biodiversity events, such as the lack of water resources) affecting the entire value chain. These physical risks may have financial implications for organisations, such as direct damage, supply shocks (to take possession of goods or indirect impacts on the supply chain) or demand shocks (affecting downstream destination markets).

Physical risk can be categorised as:

- Acute: heightened severity and increasing frequency of extreme or high impact weather events (such as flood or heat stress) may result in financial impacts, such as reduced revenue, lower output caused by impacts on the value chain, increased capital costs (e.g. to repair damage to facilities), devaluation of assets as damage increases in frequency or increased insurance cost
- Chronic: progressive shifts in meteorological conditions (increasing temperatures, rising sea levels, etc.) or in how ecosystems function could lead to negative financial impacts, such as reduced revenue or lower output due to the adverse impact on business models and production facilities in some sectors (e.g. impact of rising temperatures on agricultural output), asset devaluation in affected areas (e.g. erosion of property value in coastal areas subject to flooding) or higher costs or capital losses following damage to assets and infrastructure.

(1) Detailed presentation of ESG risk management available in chapter 4.13 "Environmental, Social and Governance risks" of the 2023 Universal Registration Document.

# INCORPORATING CLIMATE RISKS IN THE RISK MANAGEMENT FRAMEWORK

As aggravating drivers for the other risks already addressed by the Group's risk management framework, climate-related risks are managed based on the existing governance framework and processes according to a standard approach: identification, quantification, definition of risk appetite, risk control and mitigation.

#### IDENTIFYING CLIMATE-RELATED RISKS

The identification of ESG risk factors<sup>(1)</sup> is based on a dual process:

Annual risk identification: the Group defines a list of risk factors and transmission channels<sup>(2)</sup> to be examined before each annual risk identification exercise based on regulatory changes, the publication of reference documents (BIS, EBA, ECB, etc.)<sup>(3)</sup> and continuous identification of risks.

Based on these elements, an assessment is carried out to assess whether the risk vectors are likely to have a significant impact on the different categories of risk factors (using expert judgment). For each risk, the identification of potential risks is then refined by carrying out a materiality assessment. An aggregation of these assessments is finally carried out, in order to provide a global view of the impact of ESG risk factors on all categories and risk factors defined in the internal risk taxonomy;

• Continuous risk identification: the ongoing risk identification sub-process is integrated into the Group's daily risk management and is based on various processes to assess whether a risk is likely to be considered significant and included in the risk inventory, and to identify any new risks.

The model for identifying climate risk drivers derives from the Group's overall risk identification framework. The process applies right across the Group and aims to identify all risks that are or might be material. Comprehensive and holistic, it covers all risk types and all Group exposures.

This is a two-pillar approach to risk identification:

- Risk Management Governance and Core Committees such as the CORISQs, the CORESPs, or COFI<sup>(4)</sup> at Group or Business Unit level or the New Product Committees;
- a series of exercises aimed at identifying additional risks.

The Economic and Sector Studies Department, under the independent supervision of the Group Chief Economist, is continuing to developan in-house methodology to identify and score transition and physical risk.

The methodology includes an annual update to keep pace with changes in regulations and wider political, economic and technological developments. Climate considerations are furthermore incorporated by the department in the Group's economic scenarios.

Transmission channels are the mechanisms by which ESG risks impact financial risk (such as credit risk, market risk, etc.). They are defined by the EBA as "the causal chains that explain how these risk drivers impact institutions through their counterparties and invested assets". There are different types of transmission channels through which risks materialise.

For Group counterparties or the assets held by the Group they may be: lower profitability, lower real estate value, lower household wealth, lower asset performance, increased cost of compliance, and higher legal costs. For example:

- physical risk could increase the probability of default of clients (retail and corporate clients, sovereigns, financial institutions) by directly causing damage to their assets in affected or indirectly affecting their business model by disrupting supply chains, trade routes or markets.
- transition risk arising from regulatory, legal, technological or market sentiment drivers may bring about abrupt repricing

of securities and derivatives, cause liquidity to dry up or asset decorrelation.

#### QUANTIFYING CLIMATE RISKS AND CLIMATE STRESS TESTS

Stress testing for climate risk is a valuable tool to assess how resilient institutions are to changes in the market. The set of scenarios includes future developments in the energy transition, carbon emissions trajectories or severe climate events.

The Group has made significant progress in recent years with developing and onboarding of tools and methodologies to include climate risk in its overall stress tests. In 2022, the Group approved the principle of including a climate stress test in its stress test framework.

The stress test should be conducted at least once a year over medium and long time horizons and may encompass both transition and physical risks. It can either be overall or specific to a portfolio. The Group was also included in the ECB's climate risk stress test exercise in the first half of 2022. In 2023, the Group ran its first internal climate stress test on credit on physical and transition risks.

(1) ESG Risk Factor can be defined as the negative materialisation of current or prospective ESG factors through Societe Generale counterparties or invested assets. ESG factors may negatively impact Societe Generale' financial performance by materialising through risk types, such as credit risk, which are primarily affected by an institution's exposure to its counterparties and invested assets (2) Transmission channels are the mechanisms by which ESG risks impact financial risk (such as credit risk, etc.). They can be defined as the causal chains that explain how these risk drivers impact institutions through their counterparties and invested assets. (3) BIS: Bank for International Settlements, EBA: European Banking Authority, ECB: European Central Bank. (4) CORISQ (Group Risk Committee, CORESP (Responsible Commitments Committee, COFI (Group Finance Committee).



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#### MICHALA MARCUSSEN

GROUP CHIEF ECONOMIST AND HEAD OF ECONOMIC AND SECTOR STUDIES

"Climate scenarios are

key, not just for risk management and strategic planning, but also to build common understanding with our clients, paving the way for innovative solutions that support investments for a sustainable future. Recent crises have had an accelerating impact on several dimensions of the climate

transition. Corporate and households alike are taking steps to win energy efficiency and secure sustainable supply. Government measures, such as Next Generation EU and the US Inflation Reduction Act, aim to secure both the energy transition and to support near-term economic growth".

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### **RISK APPETITE**

Risk appetite is determined at Group level and attributed to the businesses and subsidiaries. Monitoring of risk appetite<sup>(1)</sup> is performed according to the principles described in the Risk Appetite Framework governance and implementation mechanism<sup>(2)</sup>.

Concerning ESG risks (Environmental, Social & Governance), the assessment and management of the impact of ESG risk factors on credit risk is based in particular on the establishment of exclusion lists, portfolio alignment indicators (oil and gas and electricity production for example) and sensitivity analyses.

In general, credit granting policies must comply with the criteria defined within the framework of the Group's Social and Environmental Responsibility (CSR) policy, which is broken down through:

- The general environmental and social principles and the sectoral and crosscutting policies appended to them.
   Sector policies cover sectors considered potentially sensitive from an environmental, social or ethical point of view;
- The targets for alignment with the objectives of the Paris agreement, which the Group has set itself, starting with the sectors with the highest CO<sub>2</sub> emissions;
- Commitment to granting sustainable financing classified as Sustainable and Positive Impact Finance and to sustainability linked transactions.

An assessment of climate vulnerability (particularly in terms of transition risk) must be provided by the Business Unit for certain specific sectors and may have an impact on the internal rating so that it incorporates the client's adaptation strategy.

#### GOVERNANCE OF CLIMATE RISK MANAGEMENT AND MITIGATION

The Group uses a range of tools and indicators to measure, manage and mitigate ESG risks:

- Alignment measures: the Group has publicly set itself 7 alignment targets as part of its climate strategy (on thermal coal, oil and gas, power generation, Automotive, Cement, Steel, and Commercial Real estate);
- Tools to assess the climate vulnerability of its counterparties (the Corporate Climate Vulnerability Indicator or CCVI), the industries in which its clients operate (the Industry Climate Vulnerability Indicator or ICVI) and sovereigns (the Sovereign Climate Vulnerability Indicator or SCVI);
- E&S guidelines and general policies: the Group has developed an E&S risk management framework based on its E&S General Principles and sector policies.

The Group has also defined appropriate internal governance structures and decisionmaking processes to manage its ESG risks.

Furthermore, the Group seeks to mitigate climate risks through its commitments, its sector policies and risk diversification (both sector and geographical diversification) and the various specific tools it has adopted for such purposes<sup>(2)</sup>.

### **SCENARIOS**

Strategic planning requires the use of forward-looking scenarios as it is important to consider how various situations might affect climate risks and opportunities.

Analysing different scenarios is a way of exploring a series of plausible possible futures in terms of climate change and offers a logical foundation on which to base reasoning and strategy for those possible futures. It is an approach designed to minimise the risk of bias introduced through expert judgements and can help forge connections with existing frameworks as they are built out.

The Economic and Sector Studies Department has been developing its climate analysis on macro and sector impacts for several years and integrates climate considerations, carbon price and economic policy actions into the Group economic scenario, and is enhancing this to include more sector level granularity.

The department also has an advisory role, making recommendations to the Environmental Risk Committee on which scenarios are best suited to the various risk assessment exercises.

(2) See section 4.2.1 "Risk Appetite" page 175 of the 2023 Universal Registration Document.

<sup>(1)</sup> Risk appetite is defined as the level of risk that the Group is prepared to accept to achieve its strategic and financial goals.

### SECTOR MONITORING

The Group regularly reviews its entire credit portfolio through analyses by business sector. To do this, it relies on industry sector studies (including a one-year anticipation of sectoral risk) and on sectoral concentration analyses.

In addition, the Group periodically reviews its exposures to the portfolio segments presenting a specific risk profile, within the framework of CORISQs at Group level or at Business Unit level.

These identified sectors or sub-portfolios are, where appropriate, subject to specific supervision through portfolio exposure limits and specific granting criteria. The limits are monitored either at General Management level or at Business Unit management level depending on the materiality and the level of risk of the portfolios. As a complement, targeted sector-based research and business portfolio analyses may be requested by General Management, the Risk Department and/or the businesses, depending on current affairs. In that respect, certain sectors weakened in 2022 by the Russian-Ukrainian crisis and its effects (for example the energy sector in Europe) or that could impacted in 2023 by the situation in the Middle East have been subject to dedicated monitoring or a specific focus.

Portfolios specifically monitored by the CORISQ include:

 Individual and professional credit portfolio (retail) in metropolitan France and in International Retail Banking in Europe. The Group defines in particular a risk appetite target concerning the minimum share covered by Crédit Logement guarantee for real estate loans granted to individuals;

- Oil and gas sectors, for which the Group has defined a specific approach adapted to the different types of activities, sectors players or geographies;
- Commercial real estate scope (i.e. corporates acting mainly as investors or developers in the field of real estate activities, to the benefit of third parties), on which the Group has defined a framework for origination and monitoring of exposures and limits according to the different types of financing, geographical areas and/or activities;
- Leveraged finance, for which the Group applies the definition of the scope and the management guidelines recommended by the ECB in 2017 (guidance on leveraged transactions). The Group continues to pay a particular attention to the Leverage Buy-Out (LBO) sub-portfolio, as well as to the highly-leveraged transactions segment;

- Exposures on hedge funds is subject to a specific attention. The Group incurs risk on hedge funds through derivative transactions and its financing activity guaranteed by shares in funds. Risks related to hedge funds are governed by individual limits and global limits on market risks and wrong way risks;
- Exposures on shadow banking are managed and monitored in accordance with the EBA guidelines published in 2015 which specify expectations regarding the internal framework for identifying, controlling and managing identified risks. CORISQ has set a global exposure threshold for shadow banking.

# PROCESSES AND TOOLS FOR IDENTIFYING AND MANAGING CLIMATE RISK

The following processes and tools – currently at varying stages of maturity – all help the Group consider the impact of transition and physical risks on a range of risk factors and portfolios.

#### CLIMATE VULNERABILITY INDICATORS (CVI)

The purpose of the Climate Vulnerabilities Indicators (CVI) is to measure environmental risks of Sovereigns (SCVI), Industries (ICVI) and Corporates (CCVI) in terms of transition and physical risks. Transition risks are assessed for an orderly scenario, while physical risks are assessed for a business-as-usual scenario, assuming that no further steps are taken beyond presently engaged policies. The impact of the transition on the credit risk of Societe Generale's corporate clients has been identified as the Group's main immediate climate risk. It was therefore the first area of focus for the Group when developing its climate risk framework. In order to assess this impact, the Group gradually incorporated a Corporate Climate Vulnerability Indicator (CCVI) and an Industry Climate Vulnerability Indicator (ICVI) into the credit risk assessments it performs on its most exposed counterparties in particularly vulnerable sectors. After a first version of the CCVI released in 2017 and of the ICVI released in 2019, a second version with a new methodology links ICVI and CCVI for consistency and comparability across sectors, and with an option to link to the Sovereign Climate Vulnerability Indicator (SCVI). The methodology ensures differentiation on notation through each corporate's climate disclosures & strategy and allows tracking of performance over time. The SCVI and ICVI scores are set centrally by the Economic and Sector Studies Department, under the independent supervision of the Group Chief Economist, while the CCVI score is proposed on the basis of a questionnaire by the first line of defence (LoD1) and approved by the second line of defence (LoD2).

#### INDUSTRY CLIMATE VULNERABILITY INDICATOR (ICVI) FOR THE TRANSITION

The Transition ICVI score reflects the corporates conceptually least advanced on climate strategies of each segment, to ensure that it does not underestimate the risks.

The assessment is set for all the industry sector (excluding financial activities) split into just over 100 segments at a global geographical level and is performed with a documented questionnaire.

Independent experts set the final ICVI Transition score on a 11-level scale of -5 (Extremely negative) to +5 (Extremely positive), drawing on both qualified and quantified inputs.

The ICVI score is based on the assessment of one environmental driver: Emissions at risks and three economic drivers:, Costs at risks, Revenues at risks and Assets at risks.

The assessment covers the entire value chain (Scope 1, 2 and 3) as transition risks can affect multiple aspects of the counterparty's business (its supply chain, its operations & assets and its market).

#### CORPORATE CLIMATE VULNERABILITY INDICATOR (CCVI) FOR THE TRANSITION

In addition to characteristics of an industry, transition risk at the corporate level also depends on the corporate's individual actions. The CCVI is derived as the sum of the ICVI and the Corporate Climate Questionnaire score. The same 11-level scale ranging is used to assess transition risk at the corporate level. Integration of specificities of the corporate can lead to a different scoring than applied to the corresponding industry.

The Corporate Climate Questionnaire assesses the climate strategy of individual corporates through a set of just under 40 questions grouped under three headings:

- quality of disclosure for GHG emissions and energy use;
- credibility of targets regarding decarbonation of the activity, green revenues, opportunities and investments;
- governance regarding management incentives, strategy or policies.

The CCVI score forms part of the credit rating tool and will be regularly reviewed.

#### SOVEREIGN CLIMATE VULNERABILITY INDICATOR (SCVI)

The Sovereign Climate Vulnerability Indicator (SCVI) expresses how vulnerable a country is to climate-related risks, with a view to assessing the direct impact on the associated country risk, i.e. on the country's ability and willingness to honour its external debt commitments.

Developed in-house, the SCVI assesses vulnerability to both physical and transition risks and is designed for use with a range of different climate change scenarios. It is based on publicly available and well recognised data sources (World Bank, Food and Agriculture Organisation, etc.). For each variable, countries are ranked from least vulnerable to most vulnerable and the indicator is then calculated as an average of these rankings.

SCVI assesses both physical risk (vulnerability to both extreme weather events and physical changes due to rising global temperatures) and transition risk (vulnerability to the risks associated with shifting to a lower-carbon economy).

#### IDENTIFYING HOW PHYSICAL RISK AFFECTS CREDIT RISK, USING SCENARIO ANALYSIS

The Group has opted to focus on developing its own in-house tools to identify physical climate-related risks. Its R&D work on the impacts physical risks can have on its portfolios began with the French retail mortgage portfolio, where it can pinpoint the precise location of the assets financed. It is much harder to locate all assets, facilities and sites owned by the Group's corporate borrowers, as explained below.

The Group also took part in the ECB's stress tests, gaining valuable insight for its study on the physical risks affecting its Corporate portfolio. Publication of data in Pillar 3 on physical risks also improved apprehension of related climate hazards.

#### TREATING PHYSICAL RISK AS PART OF THE GROUP'S OPERATIONAL RISK

Societe Generale defines operational risk as the risk of losses resulting from human error, external events, or inadequacies or failures in processes or systems. It assesses the physical risks to its assets and operations as part of its operational risk monitoring. The Group performs analysis region by region and the results feed into its business continuity plans (BCPs) designed to address local risks.

A climate event could impact some or all of its facilities and human or technical resources. The Group has thus developed an approach to assess how climate change could affect its most sensitive sites and data centres by increasing the risks of flooding, heatwaves and black-outs, as well as the consequences of such events (for staff, buildings and IT) as covered by its existing BCPs. For certain specific locations, the Group's assessment includes additional scenarios, such as typhoons and heavy rains in Hong Kong, or hurricanes and snowstorms in New York. Some of these scenarios (such as flooding from the Seine in France or flooding of Chennai in India) are included in the internal models used to calculate operational risk capital requirements.

# **METRICS & TARGETS**

45

46

53

58

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Aligning our portfolio with trajectories based on science KEY CROSS-SECTORAL CONCEPTS ALIGNMENT METHODOLOGY OUR APPROACH SECTOR BY SECTOR

# ALIGNING OUR PORTFOLIO WITH TRAJECTORIES BASED ON SCIENCE

Societe Generale has been at the forefront of sustainable and positive impact finance since 2001, developing a strong renewable energy franchise, while contributing to the UNEP "Positive Impact Finance Initiative" as a Founding Member. We have since then developed an extended technical expertise, with teams contributing actively to the environmental transition.

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"The decarbonisation objectives derived from the Paris Agreement call for investments of a magnitude hardly observed before. We are facing a complete change of paradigm, which requires to rethink the way we produce, consume and interact. This is a significant opportunity but also a major source of disruption if we do not engage collectively and act proactively"

HACINA PY GROUP CHIEF SUSTAINABILITY OFFICER

•••••

The COP 21 summit in Paris in 2015 marked a turning point, ushering in a new era of heightened environmental awareness and commitment to addressing climate change on a global scale. It acted as a catalyst, creating unprecedented global cooperation and action on climate issues.

This is when Societe Generale announced its first objectives to restrict coal business and to step up on renewables energies. We have not stopped since then to reinforce our ambition and to tackle other fossil energies.

We started to work on aligning our credit portfolios with the goals of the Paris Agreement and published a common alignment methodology in 2020 together with other international banks. In 2021, we went one step further by joining the Net-Zero Banking Alliance as a Founding Partner. This decision marked the determination to accelerate the transition by aligning our lending portfolios for the most emissive sectors with net-zero emission pathways by 2050, consistent with a maximum temperature rise of 1.5°C above pre-industrial levels by 2100.

Conscious that decarbonisation is a global challenge that needs to be addressed collectively, we are working with our clients and with our peers to accelerate the transition.

In order to develop transparency and accountability, we contribute to many

working groups alongside our peers in various sectors to support research and development in the area of sustainable finance and decarbonisation – developing partnerships and entering alliances with expert organisations such as the Poseidon Principles, the Hydrogen Council or more recently in sectors such as steel, aviation and aluminium with a goal to develop common standards and comparability across industries.

We are committed to demonstrate progress toward net zero and work is on-going. We realise that this is going to be an iterative process, requiring to adapt and improve our framework, as data availability progresses, low carbon technology becomes available, and, last but certainly not least, as demand, driven by regulation and incentives, starts to align with the goals of the Paris Agreement.

We expect governments, policy makers and other key stakeholders to help accelerate some of the trends we start to observe, and some technologies will only reach scale and risk-acceptance with strong incentives of any kind. We regularly share our expertise and views on how policies should support and help the decarbonisation.

We cannot wait for all stars to align and are happy to share in this report our first decisive steps in a number of highly carbon intensive sectors. For each sector analysed, we have defined the main decarbonisation challenges and the key drivers, having previously engaged into technical discussions with our clients to understand their own vision and decarbonisation strategy. This field-based knowledge, coupled with science-based input and collective works with our peers to define relevant alignment methodologies have enabled us to set our alignment objectives.

Our strategy for this first wave of alignment work has been twofold :

- Reduction of our fossil fuel CO<sub>2</sub> footprint in absolute terms, by stopping certain activities and terminating some relationships;
- Reduction of the carbon intensity of our portfolios in the other sectors, by reducing our support to the most carbon intensive activities while growing our financing for low carbon solutions.

Some technologies that will allow sectors to get to net zero are not mature yet and could be available at scale only after 2030 or even after 2040. This explains why we have started on the most carbon intensive sectors to set 2030 intermediate targets that represent the necessary steps and efforts required on the path to net zero by 2050 based on current knowledge.



# **KEY CROSS-SECTORAL CONCEPTS**

Our global economy is fuelled by energy, and acting on energy transition is a priority	47
A system-based approach is needed to transition to a Net-Zero economy	48
All sectors are intertwined, and so are their transition paths	49
To engage on decarbonisation pathways, Corporates can act on six transition levers	50
Transversal low-carbon solutions will help to accelerate climate transition	51
Integrating new challenges raised by the energy transition	52

# OUR GLOBAL ECONOMY IS FUELLED BY ENERGY, AND ACTING ON ENERGY TRANSITION IS A PRIORITY

We are a leading energy bank embracing the broad and deep transformation of our energy systems to drive our transition.

# Energy use flows through all sectors

The energy sector is the main source of greenhouse gas emissions. Energy-related CO2 emissions account for around 75% of global CO<sub>2</sub> emissions. However, most of these emissions do not come from the upstream segments of the energy value chain, but from energy consumption in the various economic sectors: industry, transport and real estate. Some primary energy sources, like natural gas, are also used as raw materials in some sectors, such as hydrogen or plastic production. All economic sectors depend on energy sources either as a direct combustion fuel, for heat or for electricity production. As energy is essential to all economic activities, acting on energy is the most powerful decarbonisation lever for all sectors.

### The transformation of our energy system will drive decarbonisation

The energy sector is undergoing a transformation towards a more decentralised and lower-carbon model. Distributed generation has been made possible by technology developments in renewable energy, low-carbon vehicles and batteries. The IEA projects 38% of renewables in the power mix in 2027<sup>(1)</sup>. Solar PV and wind costs are becoming more competitive with fossil fuels each year. They decreased by at least 55% between 2015 and 2022 depending on the technology whereas the energy crisis highlighted the volatility of fossil fuels-based generation costs which spiked in 2022<sup>[2]</sup>. Today, companies across sectors can produce low-carbon energy for themselves or others, thus contributing to each other's decarbonisation. This decentralisation is offering more opportunities to source competitive low-carbon energies.

### As a leading energy bank, Societe Generale has built unique expertise and a track record on energy systems across its different business units

**Production** – We support the deployment of renewable power assets across regions and innovate low-carbon fuels like hydrogen.

**Distribution** – Infrastructure being the backbone of the energy transition, we finance the reinforcement of power grids, and leverage our different business lines to foster the development of new energy infrastructure like EV recharging networks.

**Consumption** – We develop innovative financing solutions to decarbonise the energy supply of our customers, such as solar rooftop assets for corporate clients, energy retrofit for real estate players.



# A SYSTEM-BASED APPROACH IS NEEDED TO TRANSITION TO A NET-ZERO ECONOMY

Energy systems are at the core of our economies. Building sustainable energy models will be key to enable a global transition potential.

### Almost 75% of global CO<sub>2</sub> emissions are related to energy.

Energy-related  $CO_2$  emissions reached 36.8 Gt in  $2022^{(1)}$ . As most  $CO_2$  emissions come from the use of fossil energy sources, which is spread across sectors, they are all somewhere on all value chains consuming these energy sources.



(1) IEA, CO<sub>2</sub> emissions in 2022. Source: <u>https://ourworldindata.org/ghg-emissions-by-sector</u>

# ALL SECTORS ARE INTERTWINED, AND SO ARE THEIR TRANSITION PATHS

We focus cross-industry expertise decarbonisation and use an integrated approach when working with our clients on their transition.

### All economic sectors are interconnected and interdependent.

They provide services and products to one another, share challenges but also solutions. For those reasons, it is important to look at the economy as an intricate multidimensional system, understand each sector's dependencies before setting associated targets.

As illustrated in the figure opposite, materials are exchanged across all the economic sectors. No industry is isolated but rather all sectors are pieces of larger value chains.

The primary economic sector provides raw materials to both industry and utility companies who convert resources into final goods and commodities, followed by the tertiary sector of the economy offering services.

But all those sectors are also dependent on each other from the bottom to the top: the utility sector manages everyone's waste, industry provides the extractive industry with equipment, and those upstream sectors need transportation, buildings and financial services.

A value chain-driven approach highlights the potential transition nodes (hard-to-abate emissions, potential negative impacts of transition on biodiversity...) that need to be addressed considering this system as a whole.

Their transition paths are equally intertwined. As an example, how can we imagine the decarbonisation of the telecommunications and electronics sectors without the transition of the mining sector which supplies them critical minerals and drives innovation in recycling?

### We foster a transversal and cross-sectoral approach in our organisation.

At Societe Generale, we are convinced that we cannot help our clients decarbonise – and transition our business activities – without embracing this holistic perspective. In 2021, Societe Generale launched a transformation program, «the Shift» (see Strategy, p. 27) to reshape its organisation and steer its business efforts to better understand the transition of such value chains. Multiple cross-region and cross-business lines workstreams were launched to cover strategic value chains, transversal technologies and new businesses.

### Carbon emissions from one sector impact the carbon footprint of all other sectors in its value chain.

Using a value chain approach ensures that emissions reduction efforts are not limited to the own activity of a company (scopes 1 & 2) but extend to the entire life-cycle of a product (scope 3), upstream to downstream. As each company's scopes 1 & 2 are another company's scope 3, net zero can only be reached if everyone plays their part.<sup>(1)</sup> Adopting a value chain approach also ensures that efforts to reduce emissions in one sector do not lead to increased emissions in another.





All stakeholders must be aligned and incentivised to contribute to decarbonisation efforts. As an example, our shipping teams explore the transition of the entire shipping

(1) GHG Protocol scopes definition to be found in Appendix.

value chain, where port managers, fuel suppliers (energy companies) and innovative digital companies contribute to it.

# TO ENGAGE ON DECARBONISATION PATHWAYS, CORPORATES CAN ACT ON SIX TRANSITION LEVERS

We support our clients in the definition of the most ambitious and realistic decarbonisation pathways considering sectoral specificities.

### Sobriety and circularity



Optimising material uses and promoting reuse/recycling will be a key decarbonisation lever for hard-to-abate sectors. Multiple environmental and social elements call for more circularity and lower primary material consumption. Customers behaviour change can be a driver for sobriety (e.g. preference for train over plane, second-hand fashion market), and some corporates develop service-based business models to adapt to such change.

### Energy efficiency

Energy efficiency measures can be implemented at scale quite quickly in all sectors. Indeed, most technologies already exist (e.g. more efficient electrical appliances) and digital technologies (e.g. sensors) can foster their development.

Against a backdrop of rising energy prices, these energy efficiency measures enable companies to control their costs and become more competitive.

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### Fuel switch

; (**0**):

+<sup>↑</sup>→



Decarbonising the energy supply of all economic sectors using renewable fuels, gases and electricity represents a relatively easy decarbonisation lever for most companies.

This is particularly true for electricity, given the cost competitiveness of renewable energy technologies. Biofuels are alternatives for transportation and biogas can replace coal and natural gas in manufacturing sectors.

### Carbon Capture, **Usage & Storage**



CCUS technologies are a relevant decarbonisation technology for some hard-to-abate sectors with high emissions from their industrial processes.

CCUS technologies are not commercially available today and scenarios forecast a global scale up of these technologies from 2030 onwards.

### Diversification

Diversification refers to the development of new business activities (products, services) with a lower carbon footprint and the development of solutions to decarbonise other sectors. It is relevant to most sectors, as their transition will not take place without an overhaul of their business activities. Automakers involved in electric vehicle (EV) manufacturing and the deployment of EV recharging infrastructure are good examples of such a strategy.

### Exit and closure

The closure of emissive activities/assets will be needed in sectors that are not compatible with climate transition scenarios.

Some companies can decide to exit some markets while developing low-carbon alternatives in parallel (e.g. coal phase out and renewable energy development in the power sector) and considering the social implications of such actions (e.g. employee reskilling).

# TRANSVERSAL LOW-CARBON SOLUTIONS WILL HELP TO ACCELERATE CLIMATE TRANSITION

Transversal low-carbon and carbon removal solutions need to develop at scale to reach net-zero targets even in hard-to-abate sectors.

### Energy efficiency

Energy efficiency measures consist of reducing the consumption of energy to provide the same service/ product: more energy efficient equipment, improved thermal insulation, etc.

Energy efficiency is called the 'first fuel' of the energy transition, being the quickest and most cost-effective CO<sub>2</sub> mitigation option – and helping users reduce their energy bills and strengthening energy security.

It is the largest single measure to avoid energy demand in the IEA NZE Scenario by 2050.

### Biofuels/ E-Fuels

Biofuels and e-fuels are particularly important to decarbonise heavy mobility and the industry.

Biofuels are made from biomass or organic waste. They include ethanol, biodiesel or biogas.

E-fuels, also known as synthetic fuels, are made from low-carbon hydrogen and captured carbon dioxide.

They include e-methane, e-kerosene and e-methanol. Biofuels production needs to reach over 10 EJ by 2030 in the IEA NZE scenario, 40% of which will have to be from waste and non-food crops.

### Low-Carbon Hydrogen (H<sub>2</sub>)

Over 99% of the current hydrogen production comes from natural gas ('grey hydrogen'). Several low-carbon production pathways are being developed: water electrolysis with renewable power ('green'), natural gas reforming with CCUS ('blue'). Low-carbon H<sub>2</sub> can replace fossil fuels in heavy industry and transportation (heavy truck, shipping) and offer energy storage capacity to power grid. Scaling-up low-carbon H<sub>2</sub> requires huge renewable power capacities, the development of CCUS technologies and innovation across industry/ sector applications.

### Nature Based Solutions

Nature Based Solutions (NBS) are actions contributing to the sequestration of carbon via natural reactions.

They include reforestation, regenerative agriculture, mangrove protection, and many more.

NBS offer other benefits than just removing carbon, they contribute to biodiversity conservation, protection against natural disasters or economic development.

NBS projects are cited in different climate transition scenarios, including in the IEA scenarios, which include them in the carbon removal approaches.

### Carbone capture, Utilisation & Storage (CCUS)

CCUS encompass

technologies used to capture  $CO_2$  from industrial fumes and either store it underground or use it as feedstock.

The IEA NZE scenario requires 1.2 Gt CO<sub>2</sub> per year to be sequestrated. Around 40 CCUS commercial facilities are already in operation<sup>(1)</sup>.

Over 500 projects are in various stages of development across the CCUS value chain, but the 50 new capture facilities announced for 2030 will only sequestrate 125 MtCO<sub>2</sub> per year.

Transversal decarbonisation solutions have to be prioritised for the harder-to-abate sectors. All sectors are different and have specific characteristics and requirements that affect the suitability of certain decarbonisation solutions. For example, some industrial sectors involve high-temperature processes that may necessitate the use of hydrogen instead of solar or geothermal heat. Others, like cement, have intrinsic carbon emissions linked to industrial processes with limited to no alternatives. CCUS technologies will be a necessity for them.

# INTEGRATING NEW CHALLENGES RAISED BY THE ENERGY TRANSITION

The deployment of low-carbon technology necessitates new materials to redesign global supply chains. This is particulary meaningful for metals and we integrate these challenges into our energy transition approach.

# Being aware of the global manufacturing challenges.

Low-carbon technologies rely on critical materials and the development of manufacturing supply chains enabling their global deployment. The resources and minerals required vary depending on the technology (e.g. copper and aluminium for electricity networks and electricity-related technologies, rare earths for wind turbines and EV motors).

The transition to clean energy systems is creating a surge in demand for these minerals, with potential challenges due to limited access. Critical material reserves and clean energy production capacities are concentrated in specific geographic areas<sup>(1)</sup>. This creates a risk of potential soaring of material prices, competition between clean energy systems and global supply chain disruptions. Clean energy transition challenges lie in the ability to ramp up supply and develop sustainable manufacturing chains to establish a reliable system able to meet the demands of the energy transition<sup>(2)</sup>.

#### (1) IEA, Special report on Solar PV global supply chain, 2022.

- (2) IRENA, Critical materials for the energy transition: Rare earth elements, 2022.
- (3) Energy Transition Commission, Material and Resource Requirements for the Energy Transition, 2023.
- (4) IEA, Mineral requirements for clean energy transition, 2021.
- (5) PGM: Platinum Group Metals.

# Supporting the development of clean energy supply chains.

Being a leading bank for metals, we grasp the criticality of developing sustainable and reliable supply chains for low-carbon technologies. We support our mining clients in developing their activities by offering innovative financing products.

# SCALE-UP OF CLEAN ENERGY TECHNOLOGIES NEEDED TO ACHIEVE NET-ZERO EMISSIONS BY 2050 ACCORDING TO THE ENERGY TRANSITION COMMISSION<sup>(3)</sup>



#### CRITICAL MINERAL NEEDS FOR CLEAN ENERGY TECHNOLOGIES<sup>(4)</sup>

	Copper	Cobalt	Nickel	Lithium	Rare earths	Zinc	PGM <sup>(5)</sup>	Aluminium
Solar PV	•	•	•	•	•	•	•	•
Wind	•	•	٠	•	٠	٠	•	•
Hydro	•	•	•	•	•	•	•	٠
Electricity networks	•	•	•	٠	•	•	•	٠
Electric vehicles	•	٠	٠	٠	•	•	•	٠
Battery storage	•	٠	٠	٠	٠	•	•	٠
Hydrogen	•	•	٠	٠	٠	•	٠	٠
<ul> <li>High need</li> </ul>	Moderat	te need	Low need					



# ALIGNMENT METHODOLOGY

Alignment approach to progressively align our credit portfolios with trajectories compatible with a 1.5°C scenario	54
Methodologies and scenarios supporting Societe Generale target setting	55
Climate alignment dashboard: overview of targets set	56

# ALIGNMENT APPROACH TO PROGRESSIVELY ALIGN OUR CREDIT PORTFOLIOS WITH TRAJECTORIES COMPATIBLE WITH A 1.5°C SCENARIO

#### ALIGNMENT METHODOLOGY IN 5 STEPS

1. Baseline	2. Decide	3. Plan	4. Report &	5. Operationalise
"Where are we Today?"	"Where we need to be"	"How we get there"	Communicate	Net Zero
Identification of climate relevant exposure across sectors and geographies. Assessment and benchmarking of exposure to high carbon intensity sectors. Measurement of emissions on a given sector – baselining.	Agreement and <b>articulation of</b> <b>a level of ambition</b> to pursue (e.g.'Net Zero Scenario'). Building of sector-specific glide-paths to measure emissions against targets. Definition of a momentum case for key sector and a target pathway that meets the level of ambition.	Identify effective levers to achieve sector targets and determine their impact on emissions and financials. Definition of the use and ambition of strategies such as engagement with companies, exits, offsets and use of green financing.	Implementation of strategies and tools to effectively <b>develop transparency and</b> <b>promote comparable and</b> <b>meaningful communication;</b> <b>comply with regulatory</b> <b>disclosure requirements.</b> Adhesion to standards for reporting consistently and transparently.	Engage with clients to capture green opportunities, support transition and potentially redeploy capital. <b>Embedding implications</b> of net zero into the organisation. Operationalise steering tools and equip senior management.

# METHODOLOGIES AND SCENARIOS SUPPORTING SOCIETE GENERALE TARGET SETTING

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"More than just informing targets, scenarios help us work with our clients to set in motion tangible actions on the road to net zero"

#### MICHALA MARCUSSEN

GROUP CHIEF ECONOMIST AND HEAD OF ECONOMIC AND SECTOR STUDIES

# Societe Generale's major steps in fighting climate change

Since 2018, we have contributed to the development of the PACTA methodology<sup>(1)</sup> and collaborated with BBVA, BNP Paribas, ING and Standard Chartered (also known as the Katowice Banks) and the 2° Investing Initiative<sup>(1)</sup> (2DII) to make the PACTA methodology applicable to banking portfolios, providing recommendations for improving the methodology.

Societe Generale joined NZBA in 2021 as founding member. The Net Zero Banking Alliance (NZBA) and its members are committed to align the banking sector with the Paris Agreement climate goals. These goals include the strengthening of the global response to the threat of climate change by pursuing efforts to limit the temperature increase to 1.5°C. The financial flows would play a key role. The Group has developed a strategic approach to climate change based on three pillars: addressing risks induced by climate change, managing the impact of its activities on climate and supporting clients in their environmental transition, notably by developing financial and advisory solutions aligned to this objective.

# The Net Zero concept and the temperature objective

Carbon Neutrality, or Net Zero, is defined at global level as a balance between emissions and removals. According to the IPCC, 'Net zero carbon dioxide ( $CO_2$ ) emissions are achieved when anthropogenic  $CO_2$  emissions are balanced globally by anthropogenic  $CO_2$ removals over a specified period.'

The Paris Agreement introduces the link between a temperature objective and the Carbon Neutrality target: *'in order to achieve the long-term temperature goal [well below* 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C], [...] so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century'.

As a result, Carbon Neutrality is the point in time where emissions and removals are in balance at global level, whereas the temperature increase depends on cumulative emissions, over time.

The objective, as part of the Net-Zero Banking Alliance, is to combine a Carbon Neutrality goal for  $CO_2$  emissions at global level, consistent with a maximum temperature rise of 1.5°C above pre-industrial levels by 2100.

# Climate scenarios are required to implement these objectives

Performing an exercise of forward-looking target setting requires a projection into decarbonisation pathways laid out in temperature scenarios. These scenarios provide insights of the potential impacts of different policy choices and technological developments on energy systems and greenhouse gas emissions while respecting global carbon budgets. Their aim is to indicate potential pathways for transforming the global energy system to mitigate climate change and achieve sustainable, low-carbon economies.

### The IEA Net Zero Emissions Scenario by 2050 stands out as a reference scenario to these ends

The IEA Net Zero Emissions (NZE) by 2050 Scenario outlines a pathway to achieve global net-zero greenhouse gas emissions by 2050. This scenario is an energy model, as the energy sector is a major contributor to global greenhouse gas emissions across all sectors of the economy. The IEA Net Zero Emissions by 2050 Scenario outlines one possible pathway detailing the actions and timelines that could be engaged by different sectors and stakeholders and that would achieve global net-zero CO<sub>2</sub> emissions from energy combustion and industrial processes by 2050. It also considers other energy-related sustainable development goals, such as energy access for all, or air pollution.

The IEA NZ Emissions by 2050 Scenario respects a carbon budget (or cumulative future emissions) associated with a temperature increase limited to 1.5°C by 2100, with a 50% probability and makes it one of the most prominent scenarios to use as part of an alignment methodology used to set and monitor specific targets.

Yet, in some instances, the IEA NZE scenario lacks granularity which is key when setting targets and trying to translate those targets into concrete actions.

Other sector-specific and reliable scenarios exist and are more relevant for target setting.

The targets are being set using the most relevant scenario depending on the sector.

Societe Generale is influenced by the most robust frameworks for carbon accounting, targets setting, alignment methodologies and disclosure



(1) PACTA (Paris Agreement Capital Transition Assessment) is a methodology developed by the 2° Investing Initiative (2DII) to help investors analyse the extent to which corporate capital expenditures and industrial assets behind financial instruments and portfolios in emissions-intensive industries are aligned with various climate scenarios.

# CLIMATE ALIGNMENT DASHBOARD: OVERVIEW OF TARGETS SET

# ALIGNING OUR PORTFOLIOS AND ACTIVITIES WITH PATHWAYS CONSISTENT WITH A MAXIMUM TEMPERATURE RISE OF 1.5 °C

Prior to joining the Net-Zero Banking Alliance in April 2021, Societe Generale initiated the work of aligning its credit portfolios with the goals of the Paris Agreement and contributed to build (with other banks) the PACTA methodology which helps banks steer their lending portfolios. The PACTA methodology identifies "priority sectors" to align and within those sectors, it identifies the parts of the value chains (called "segments") to be addressed first:

- Oil & Gas: Upstream;
- Coal: Mining;
- Power: Generation;
- Automotive: Manufacturing;

- Steel: Manufacturing;
- Cement: Manufacturing;
- Shipping: Ship owners & operators;
- Aviation: Owners.

Societe Generale's alignment approach has focused on defining a strategy on the most emissive sectors following the PACTA methodology. In 2021, NZBA generalized this way of aligning credit portfolios and confirmed which sectors to address (same sectors as the ones identified by PACTA, adding Real Estate and Agriculture).

Societe Generale's alignment targets are presented in more detail in the following pages, sector by sector.



TARGETS ARE DISPLAYED IN PURPLE

# CLIMATE ALIGNMENT DASHBOARD: OVERVIEW OF TARGETS SET

# ALIGNING OUR PORTFOLIOS AND ACTIVITIES WITH PATHWAYS CONSISTENT WITH A MAXIMUM TEMPERATURE RISE OF 1.5 $^\circ\mathrm{C}$



TARGETS ARE DISPLAYED IN PURPLE

(1) 2022 baseline was estimated based on proxies applied to Societe Generale portfolio distribution by country and asset type. (2) 2030 target is reliant on portfolio mix and shall be adapted accordingly with the corresponding CRREM targets in case of change of the mix. Based on the current portfolio mix (asset type and country), it translates into a target of 18 kgCO<sub>2</sub> e/m<sup>2</sup>.



# OUR APPROACH SECTOR BY SECTOR

71

71

72

73

THERMAL COAL	59
1. Sector Dynamic	59
2. Taking action to phase out Thermal Coal	60
OIL & GAS	61
1. Sector Dynamic	61
2. Aligning Oil & Gas absolute emissions	63
3. Decreasing exposure on upstream Oil & Gas	64
4. Taking Action to Shift	65
POWER	66
1. Sector Dynamic	66
2. Aligning Power	68
3. Taking Action to Shift	69

#### CEMENT

Sector Dynamic
 Aligning Cement
 Taking Action to shift

STEEL	74
1. Sector Dynamic	74
2. Aligning Steel	75
3. Taking Action to Shift	76
AUTOMOTIVE	77
1. Sector Dynamic	77
2. Aligning Automotive	79
3. Taking Action to Shift	80
SHIPPING	81
1. Sector Dynamic	81
2. Aligning Shipping	82
3. Taking Action to Shift	83
COMMERCIAL REAL ESTATE	84
1. Sector Dynamic	84
2. Aligning Commercial Real Estate	86
3. Taking Action to Shift	87

# **1. SECTOR DYNAMIC**

Coal



Coal is the largest emitter of energy-related CO<sub>2</sub><sup>(\*)</sup>, accounting for 42% of emissions in 2022<sup>(1)</sup>, and the largest source of electricity generation worldwide, accounting for 36% of global generation in 2022<sup>(2)</sup>. Reaching the IEA's Net Zero objectives implies a drastic reduction in coal consumption by 2050.

### **Sector dynamics**

Coal supplied 36% of global electricity generation in 2022 (thermal coal) and plays a crucial role in iron and steel production industries (metallurgical coal).

The IEA's NZE scenario forecasts a sharp decrease in coal use, with a 44% reduction between 2022 and 2030 driven by the transition of power generation systems (increasing renewable power outputs) and an additional 85% reduction between 2030 and 2050 driven by low-carbon technology deployment in the industry and faster coal-to-power displacement<sup>(3)(4)</sup>.

However, coal consumption increased in 2021 and 2022<sup>(5)</sup>, due to strong demand for power generation in developing economies and the switch from gas to coal in the context of the global energy crisis.

#### Emission sources<sup>(5)(6)</sup>

CO<sub>2</sub> emissions are spread across the coal value chain:



### **Decarbonisation levers**<sup>(7)</sup>

Closure and exit: power generation emissions can be reduced by using mature low-carbon alternatives<sup>(\*\*)</sup>, and gradually displacing baseload coal-fired power plants. According to the IEA's NZE scenario, coal demand for power generation could be reduced by 92% between 2022 and 2050. However, this incurs multiple socio-economic challenges for coal-dependent economies. As there are limited alternatives to coal in iron and steel processes for the moment, coal demand from the industry is forecast to fall from 2030 onwards, when less mature technologies are scaled in the industrial processes of the steel and iron industries. Thermal coal demand will thus decrease by 50% by 2030 while metallurgical coal demand will decrease by 30% in IEA's NZE scenario.

CCUS: the IEA estimates that half of coal mine methane emissions could be abated with existing technologies. On-site capture and use of methane via degasification or ventilation systems could additionally increase energy recovery for heat production or small-scale power generation. Residual emissions in the steel & iron industry can be addressed with CCUS technologies. However, the installation of CCUS units on coal-fired power plants can be challenged by comparison with low-carbon solutions in the power sector.

#### GLOBAL COAL EMISSIONS ALONG THE VALUE CHAIN (% OF TOTAL COAL EMISSIONS, 2021)



#### THERMAL AND METALLURGICAL COAL DEMAND BY SECTOR IN IEA'S NET ZERO SCENARIO<sup>(5)</sup>



(1) IEA, CO2 emissions in 2022. (2) IEA, Coal. (3) IEA, Net Zero by 2050. (4) IEA, Net Zero Roadmap: A global Pathway to Keep the 1.5°C Goal in Reach. (5) IEA, Coal in Net Zero Transitions. (6) IEA, World Energy Outlook 2022. (7) IEA, Strategies to reduce emissions from coal supply. (\*) Energy-related emissions refer to emissions from energy combustion and industrial processes. (\*\*) Solar, Wind, Hydro...

# 2. TAKING ACTION TO PHASE OUT THERMAL COAL

### Thermal coal policy

- Back in 2016, Societe Generale announced that it would not provide any new financing dedicated to coal mining or coal-fired power plant projects.
- In 2019, Societe Generale published a long-term objective to progressively reduce to zero its exposure to thermal coal in 2030 in EU or OECD countries and in 2040 elsewhere.
- In 2020, the Group published an updated thermal coal sector policy<sup>(1)</sup>, detailing concrete actions taken to reach its long-term objective:
- First, the Group began by disengaging from the most exposed companies (i.e. for which thermal coal accounts for more than 25% of revenue), which have not made commitments to exit the thermal coal sector. The Group has also strengthened the criteria for all other clients and prospects;

- Second, from end of 2021,
   Societe Generale decided to stop providing new financial products and services to any company with mining or power thermal coal assets which is a thermal coal developing company or has not communicated a transition plan aligned with the 2030/2040 thermal coal phase out objectives of Societe Generale.
- For clients that have a transition plan and are still active in the sector, the Group has been engaging with them to ensure their exit from thermal coal is ongoing. The Group wants to accompany those clients who are diversifying into renewables energies (power companies) or the critical minerals in the energy transition (mining companies).

#### FINANCING TO THERMAL COAL (INDEX BASE 100)



#### (1) Societe Generale, Thermal Coal sector policy.

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### 📠 Commercial Real Esta

# 1. SECTOR DYNAMIC



The Oil & Gas sector accounts for more than 50% of energy-related GHG emissions<sup>(1)</sup>. 75% of these emissions are indirect emissions from the end use of oil and gas products, in such way that oil & gas companies should review their entire business strategy.

### Sector dynamics<sup>(2)(3)(4)(5)</sup>

The Oil & Gas (O&G) sector faces a strategic challenge as energy transition and economic development create a simultaneous need to supply both low-carbon and affordable energy. The IEA forecasts two phases in oil and gas production evolution:

- Before 2030: consumption increases, supported by strong energy demand of emerging economies and increasing; use for non-energy purposes (e.g. in the petrochemical industry)<sup>(6)</sup>;
- After 2030: oil and gas production decreases as energy generation processes switch to renewable sources and high-cost projects close sometime before the end of their technical lifetimes, with remaining oil & gas demand being driven by their use for non-energy purposes and with CCUS.

Oil & gas companies face increasing transition risks: more competitive alternative low-carbon technologies, clients' preference and higher willingness to pay for low-carbon energies, growing political and regulatory pressure, and stricter climate-related expectations from investors and lenders. In the mid- to long-term, some O&G projects could become stranded assets. Anticipating the sector's transition is necessary for oil and gas companies and investors to reduce their risks and ensure a just transition for the workers and communities relying on these activities.

Facing those risks, O&G companies can leverage their know-how to seize energy transition opportunities in other sectors (e.g. power, transportation), and direct their fossil fuel production towards non-energy uses (e.g. petrochemical industry). In 2018, around 14% of oil production and 8% of gas production was used as petrochemical feedstock<sup>(8)</sup>. With economic development, demand for petrochemical products increases, creating a shift in refinery outputs from energy products such as gasoline and diesel towards petrochemical feedstock such as naphtha or ethane. IEA's NZE scenario forecasts an increase in petroleum feedstock production share in refineries from 20% in 2020 to almost 60% in 2050<sup>(2)</sup>.

#### Emissions breakdown<sup>(2)(8)(10)</sup>

Around 75% of the oil and gas industry emissions come from end uses downstream of the value chain such as passenger cars, aviation and industry (scope 3 emissions). The remaining 25% come from upstream exploration and production activities, industrial processes and logistics (scope 1 & 2 emissions). They are linked to methane emissions from production and transportation, flaring, operation of upstream facilities, and CO<sub>2</sub> emissions from gas liquefaction. Methane emissions from oil and gas operation accounted for 47% of total oil and gas operations' emissions in 2022<sup>(5)</sup>.

#### DISTRIBUTION OF GHG EMISSIONS ALONG THE OIL & GAS VALUE CHAINS<sup>(5)</sup>



#### SPECTRUM OF GLOBAL SCOPE 1 AND 2 EMISSIONS FROM OIL & GAS OPERATIONS (2022)<sup>(10)</sup>



(1) [EA, Oil Report, 2023. (2) [EA, NetZero by 2050 report. (3) [EA, World Energy Outlook, 2022. (4) UNEP, Sectoral risks for the Oil and Gassector, 2023. (5) [EA, The Oil and GasIndustry in Energy Transitions, 2020. (6) S&P, Petrochemical Feedstocks, 2022. (7) IEA, CO<sub>2</sub> emissions in 2022. (8) IEA, World Energy Outlook, 2018. (9) IPCC guidelines for GHG inventories, 2019. (10) IEA, Emissions from oil and gas operations in Net Zero Transitions, 2023. (\*) Venting CO<sub>2</sub>: CO<sub>2</sub> removed from gas to avoid its solidification during gas liquefaction.

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# **1. SECTOR DYNAMIC**



The transition of oil & gas companies will mostly be related to their capacity to progressively switch from oil & gas to low-carbon energy-based business activities. Many of them have potential synergies to leverage to diversify their activities.

#### Decarbonisation levers<sup>(1)(2)(3)</sup>

Oil & gas companies can act on different levers:

**Energy efficiency:** direct GHG emissions (scope 1 & 2) can be reduced through specific actions:

- Tackling methane emissions and stopping routine gas flaring;
- Implementing energy efficiency measures for oil & gas extraction, refining and logistics.

**Diversification:** the reduction of their scope 3 emissions (larger scope) will mean the development of low-carbon energy/power products and solutions to their final clients.

- Renewable fuels like biofuels, biogas and low-carbon hydrogen to address the low-carbon energy needs of their clients.
- Diversification across the power value chain to seize the electrification megatrend. It involves the development of both large-scale power assets (on/offshore wind, solar) and distributed power generation.
- Some companies have started to work on carbon capture technologies, leveraging their industrial know-how and financial capabilities.

Oil & gas companies can participate in the energy transition, leveraging their energy market expertise, existing client portfolio and financial capacity to develop low-carbon energies and carbon/energy services offers for their end clients<sup>(4)</sup>.

Along the oil & gas value chain, companies have specific decarbonisation levers and synergies they can leverage to reduce their scope 3 emissions:

- Upstream exploration and production companies possess infrastructure and engineering capabilities to develop offshore wind power generation capacity;
- Midstream and distribution companies can leverage their transport infrastructure to distribute low-carbon liquid and gaseous fuels such as biomethane and hydrogen;
- Refining companies can use biofeedstock and waste to produce biofuels and petrochemical products. They can also take energy efficiency measures to reduce their operational emissions and potentially integrate CCUS capacities to tackle residual emissions.

#### GLOBAL METHANE EMISSIONS AND POTENTIAL SAVINGS BY OPERATIONS



2022

# DECARBONISATION LEVERS FOR OIL & GAS COMPANIES ALONG THE VALUE CHAIN



Midstream companies

<sup>(4)</sup> IEA, The Oil and Gas Industry in Energy Transitions, 2020. (5) IPCC guidelines for GHG inventories, 2019.

<sup>(6)</sup> IEA, Marginal abatement cost curve for Oil and Gas-related methane emissions.

<sup>(7) &</sup>lt;u>IEA, Methane emissions from Oil & Gas operations</u>. (\*) Global Warming potential (100-year horizon) = 29.8 taken from the IPCC Sixth Assessment Report.

# 2. ALIGNING OIL & GAS ABSOLUTE EMISSIONS

The O&G production is expected to reduce in an NZE economy; using an intensity metric for aligning our portfolio can be misleading as it can improve while actual emissions will rise as O&G production increases. Using an absolute metric (scope 1, 2 and 3 end-use) on the other hand, provides a clear ambition to reduce the total carbon output on the entire value chain.

### Scope

#### BOUNDARY

#### Upstream, midstream and downstream O&G companies

Upstream refers to exploration, development and production. Midstream activities relate to transport, storage, liquefaction and export terminals of oil, natural gas or LNG. Downstream generally consists in the refining and distribution activity.

#### EMISSIONS

Scope 1 – CO<sub>2</sub>e for Upstream, Midstream and downstream. Scope 2 – CO<sub>2</sub>e for Upstream, Midstream and downstream. Scope 3 – CO<sub>2</sub>e for Upstream.

#### **FINANCING ACTIVITIES**

All loan-related products are included General. Purpose and dedicated loans are included.

### Methodology

#### CALCULATION METHODOLOGY

PCAF

### SCENARIO

IEA Net Zero by 2050

#### METRICS

Absolute emission metric: tCO<sub>2</sub>e

### Scope 1 emission $(tCO_2e)$ + Scope 2 emissions $(tCO_2e)$ + $(tCO_2e)$ Scope x portfolio emissions (tCO<sub>2</sub>e)

=  $\sum_{Compagny}$ Compagny emissions (tCO2e) Bank financing (€) EVIC or Compagny debt + equity (€)

#### **KEY ASSUMPTIONS AND LIMITATIONS**

Inconsistency of data availability of Methane (CH<sub>4</sub>) emissions within operational scopes.

### **Target & Progress**





#### DATA PROVIDERS

IEA World Energy Outlook, S&P IHS Markit

# **3. DECREASING EXPOSURE ON UPSTREAM OIL & GAS**

The amount of financing granted to one sector remains the easiest metric to understand. To tackle quickly and effectively the O&G sector, we decided to gradually reduce the exposure on the sector, with an intermediary milestone in 2025, showing we are acting now, irrespective of the energy source (oil or gas).

### Scope

#### BOUNDARY

Oil & gas Producers (Upstream)

#### EMISSIONS

N.A.

#### **FINANCING ACTIVITIES**

All loan-related products are included General purpose and dedicated loans are included.

### Methodology

#### CALCULATION METHODOLOGY

PACTA methodology for Banks

### SCENARIO

IEA Net Zero by 2050

#### METRICS

Exposure

#### **KEY ASSUMPTIONS AND LIMITATIONS**

Floating Production Storage and Offloading (FPSOs) are out of scope since they have marginal influence over investment decisions to exploit new resources or pursue new strategic options.

## **Target & Progress**



#### **PROGRESS** (INDEX BASE 100)



#### DATA PROVIDERS

Company reporting

# 4. TAKING ACTION TO SHIFT

## **Clients and assets**

- Since 2018, Societe Generale no longer finances the production of oil from oil sands and any type of oil production in the Arctic
- In 2020, Societe Generale was one of the first global banks to commit to a short-term objective of reducing its exposure to upstream oil & gas by 20% by 2025, which was achieved in advance.
- In 2023, the Group reinforced its ambition by announcing a new objective of reduction of its upstream oil & gas exposure by 80% by 2030 and announced concrete and immediate actions:
- Stop providing financial products and services dedicated to upstream Oil & Gas greenfield projects;
- Phase-out its exposure on upstream Oil & Gas private pure players;
- Reinforced climate strategy assessment and engagement with clients with upstream activities;

- Systematic attention on methane emissions reduction target and routine flaring elimination for companies active in upstream.
- The Group developed a corporate transition assessment tool for the oil & gas sector. This assessment includes a client's carbon footprint, climate commitments, diversification of activities, the level of investments devoted to activities in support of the energy transition and the governance put in place to implement climate ambition. This tool helps bankers to have a constructive dialogue with oil & gas clients around their decarbonisation and diversification plans. The Group wants to accompany the most advanced players from the sector who will be key in new energy sources, such as hydrogen and renewable energies, low carbon mobility, and CCUS.

### Industry and peers

- Societe Generale joined the Hydrogen Council, which brings together more than 120 member companies from across the various industrial and energy sectors involved in the hydrogen value chain: energy, oil and gas, chemicals, commodities, metals and mining, equipment manufacturers, cars and trucks, and other forms of transport (air, rail, shipping). Societe Generale intends to play an active role developing its clients through financial and advisory support.
- Societe Generale is part of the NZBA oil & gas working group.



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**OLIVIER MUSSET** GLOBAL HEAD OF ENERGY

"The Energy Group at Societe Generale is committed to reaching

carbon neutrality vis-a-vis the indirect emissions of our oil & gas credit portfolio by 2050. We are well on track with achieving the ambitious intermediary targets we put in place for reducing our indirect carbon footprint and will continue accompanying our oil & gas clients in helping them transition to a low carbon economy." .....

## **Flagship deals**

Societe Generale supports the decarbonisation and diversification of its clients in advanced economies and emerging countries through advisory and financing solutions.

Societe Generale is acting as exclusive financial advisor the Northern Endurance Partnership that will use innovative carbon capture technology

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Northern Endurance

and Subsea CO2 Storage

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Partnership

and subsea CO, storage to power the UK's first zero-carbon industrial cluster. The Northern Endurance Partnership is a collaboration amongst three international energy companies - **bp**, **Equinor** and **Total Energies**.

Societe Generale advised and arranged financing for the development of the Rangebank Battery Energy Storage System project. This 200 MW/400 MWh battery energy storage system

will be built by Shell Energy

Australia and Eku Energy

to provide enough storage

capacity to power 80,000 homes

for an hour during peak periods.



MAR 2022

Societe Generale also supports emerging leaders in developing alternative solutions to fossil fuels.



Societe Generale was mandated to provide advisory services for the development and financing of pioneering e-fuels installations for HIF Global in Chile, Uruguay and the United States.

# 1. SECTOR DYNAMIC



Power generation accounts for 42% of energy-related global CO<sub>2</sub> emissions<sup>(1)</sup>. With electrification a major decarbonisation lever for multiple energy-intensive sectors, the decarbonisation of power generation and the transformation of power systems are crucial to meet net-zero objectives.

### **Sector dynamics**

Electrification is undoubtedly a major trend in the energy transition. It will gradually become the backbone of our energy systems, as it is a powerful lever for decarbonisation in all sectors (transport, building and industry). The IEA's NZE scenario forecasts global electricity generation to increase two-and-a-half-times from 2022 to 2050<sup>(2)</sup>, driven by several factors:

- Population and economic growth;
- Electrification of end uses especially in the industry (e.g. use of electric arc furnaces for steel manufacturing), and transport (EVs);
- Expansion of hydrogen production via electrolysis (renewable power + water).

This increase in power consumption includes energy efficiency improvements, limiting the final energy consumption to 53% of what it would be without energy efficiency measures in 2050<sup>(3)</sup>.

#### Emissions breakdown<sup>(5)(6)(7)</sup>

In 2022, electricity generation accounted for 42% of energy-related emissions, among which:



Emissions from the power sector have increased between 2020 and 2022 due to power

demand rise in developing countries and gas-to-coal switching. However, the emission intensity of electricity decreased by 6% between 2000 and 2022. Also, wind and solar generation growth met 80% of global electricity demand growth in 2022. EMBER, an energy think tank, projects clean power generation growth to exceed demand growth in 2023, resulting in a fall in fossil generation, with new production capacity being used for peak production, and a decrease in global power generation emissions.

#### **Decarbonisation levers**

**Wind and Solar generation:** wind and solar share in global electricity production increased by 2% in 2022, reaching 12% of global production<sup>(5)</sup>. IEA's NZE scenario forecasts electricity production from wind and solar technologies around 70% of global production in 2050<sup>(3)</sup>. These renewables offer low-cost electricity production alternatives. Therefore, they benefit from broad political support and strong momentum in the installation of renewable capacity (+9% per year between 2015 and 2022)<sup>(7)(8)</sup>.

Low carbon generation and infrastructure development: IEA's NZE scenario relies on additional production capacities from nuclear and hydropower, as well as storage capacity development and infrastructure modernisation to support the electrification of end uses and related electricity demand growth while ensuring grid stability and flexibility<sup>(9)</sup>.

#### ELECTRICITY DEMAND BY SECTOR IN IEA'S NZE SCENARIO



#### DISTRIBUTION OF POWER GENERATION TECHNOLOGIES IN GLOBAL PRODUCTION IN IEA'S NZE SCENARIO (%)



(1) IEA, CO<sub>2</sub> emissions in 2022. (2) IEA, Net Zero Roadmap: A global Pathway to Keep the 1.5°C Goal in Reach. (3) IEA, Net Zero by 2050. (4) EMBER, Global Electricity Review, 2023. (5) EMBER, Electricity Data Explorer.
 (6) Our World in Data, Global CO<sub>2</sub> emissions. (7) IEA, World Energy Outlook, 2022. (8) IRENA, Renewable Energy Capacity Statistics, 2023. (9) IEA, Tracking clean energy progress, 2023.

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# 1. SECTOR DYNAMIC



The decarbonisation of the power generation mix poses multiple challenges, including the intermittency of renewable power generation and the availability of critical minerals necessary to the scale up of low-carbon technologies.

### Challenges

Electricity is a major pillar in IEA's NZE scenario, and decarbonising the power sector is necessary to significantly reduce emissions. This relies principally on the displacement of fossil fuel power generation and low-carbon generation, mostly renewable, in parallel to addressing the strong demand growth for electricity<sup>(1)</sup>.

However, the deployment of low-carbon power generation capacities comes with challenges:

- The intermittency of renewables, with impact on energy security and power grid balance;
- The development of supply chains for renewable power generation technologies.

This increase in power consumption includes energy efficiency improvements, limiting the final energy consumption to 53% of what it would be without energy efficiency measures in 2050<sup>(3)</sup>.

**Renewable intermittency:** diversification of the power mix, with network and interconnection development the main lever of electricity security and grid stability in a fast-growing renewable electricity mix. To address electricity demand growth and align with the IEA's NZE scenario, annual investment in power grids must double by 2030 to reach over USD 700 bn<sup>(2)</sup>. The IEA's NZE scenario identifies two additional levers to reduce disruption risks to the power system and grid unbalance:

- Pairing renewable power generation assets with short – and long-term stationary storage systems (battery, hydropower/ hydrogen). Battery systems must be scaled up to align with the massive deployment of renewables and electrification in the NZE scenario;
- Supporting behavioural change and demand side response to smooth peaks in electricity demand. Public policies must be adapted to enable the introduction of such measures.

**Supply chain development:** the growth of low-carbon power generation technologies will put a strain on the entire supply chain, with knock-on effects up to the extraction of raw materials (e.g. copper), limited access to their reserves, and competition among end uses (e.g. electric mobility). This will create challenges for the energy transition<sup>(3)</sup>.

The concentration of equipment manufacturing (e.g. solar modules) amid growing geopolitical tension increases the risk of supply chain disruption. Upstream suppliers and power generation companies are expected to support the development of sustainable and reliable supply chains for low-carbon generation equipment to ensure the continuous growth encompasses IEA's NZE scenario<sup>(4)</sup>.

#### POWER SECTOR VALUE CHAIN AND EMISSIONS MATERIALITY



# DECARBONISATION LEVERS FOR POWER COMPANIES ALONG THE VALUE CHAIN

ﷺ Upstream mining ⊶ & manufacturing	Power generation	全 Power transmission & distribution
Switch to transition material mining (e.g. nickel, cobalt)	Switch to low-carbon power generation technologies	Reduce power losses during transportation <sup>(1)</sup>
Covered in the corresponding sectors' sections: Oil & gas Coal	Develop hydrogen capacities and related infrastructure for transport/storage	
	Capture and use/storage of residual emissions	

The power transmission and distribution segment is not responsible for high quantities of emissions. Its players can act on reducing power demand by optimising their activities and limiting losses. (1) <u>[EA, Net Zero by 2050.</u> (2) <u>[EA, Tracking clean energy progress, 2023.</u> (3) <u>[EA, Mineral requirements for clean energy transition, 2021.</u> (4) <u>[EA, Special report on Solar PV global supply chain, 2022.</u>

# 2. ALIGNING POWER

As power generation is expected to grow while shifting from fossil fuel generation to low-carbon sources, a target in intensity has been set to accompany the decarbonisation of this sector.

### Scope

#### BOUNDARY

The scope of this portfolio focuses on counterparties active in the power generation segment as it represents most emissions within the power sector. The list is based on sectoral classification and internal knowledge.

#### EMISSIONS

The indicator covers Scope 1 and 2 GHG emissions, resulting from 1) the combustion of fossil fuels to produce electricity and 2) the purchase of electricity, heat and cold for the counterparty's own needs. Scope 3 emissions are not included as they are minimal in the overall power generation lifecycle.

#### **FINANCING ACTIVITIES**

All loan-related products are included. General purpose and dedicated loans are included.

### Methodology

#### CALCULATION METHODOLOGY

#### PACTA methodology for Banks

#### SCENARIO

#### IEA Net Zero by 2050

#### METRICS

The indicator is based on an emissions intensity metric which allows to monitor GHG emissions per unit of electricity generated expressed in  $gCO_2e/kWh$ .

#### Scope 1 & Scope 2 emissions (gCO<sub>2</sub>e) Power production (kWh)

#### **KEY ASSUMPTIONS AND LIMITATIONS**

Model focused on three most  $CO_2$  emitting technologies: Coal, Oil and Gas. Renewable energies and nuclear are considered as Zero- $CO_2$  emitters.

## **Target & Progress**

BASELINE & TA	RGET		
gCO₂e/kWh	2019	2030	% reduction
Societe Generale Portfolio	221	125	43%
IEA NZE 2050	468	138	71%

#### PROGRESS



#### DATA PROVIDERS

IEA World Energy Outlook, S&P IHS Markit

# 3. TAKING ACTION TO SHIFT

## **Clients and assets**

- Back in 2016, Societe Generale announced that it would not provide any new financing dedicated to coal-fired power plant projects.
- In 2019, Societe Generale published a long-term objective to progressively reduce to zero its exposure to thermal coal power in 2030 in EU or OECD countries and in 2040 elsewhere.
- Under "the Shift" initiative, bankers from different business lines and geographies have been working together to:
- Build further expertise on renewables (onshore, offshore, floating), hydrogen, storage, transmission and distribution networks, small scale power assets and decentralizsed energy;
- Identify the emerging leaders
   of tomorrow that are developing
   new power technologies, biogas and
   biomethane, and providing innovative
   products or services or developing
   pipelines of clean energy projects;

- To support all energy transitions makers at each of their development stages,
   Societe Generale has decided to launch a EUR 1 billion transition investment initiative which is two-fold:
- EUR 0.3 billion debt,
- EUR 0.7 billion equity component
- for which investment focus is Energy Transition, nature-based solutions and impact driven investments.
- The Group is developing a corporate transition assessment tool (TOP) for the power sector, helping bankers have a constructive dialogue with clients around their decarbonisation and diversification plans.

### Industry and peers

Societe Generale is historically an active member of French Wind Association, Syndicat des Energies Renouvelables and of the Hydrogen Council. JÉRÔME DEFLESSELLES HEAD OF ENERGY BUSINESS INITIATIVES

*"As energy bankers, our objective at* 

Societe Generale is to support our clients as energy transition makers to help them grow and go through their own challenges.

Societe Generale has supported the energy transition early on and is recognised for its expertise and its continuous support of the sector.

2023 is another year of innovation with many initiatives that represent a strong testimony of Societe Generale's commitment to sustainable finance and the low carbon economy."

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💒 Cement 📔

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# 3. TAKING ACTION TO SHIFT

### **Flagship deals**

Societe Generale supports the transition of the power sector along the value chain:



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In 2022, Societe Generale US acted as Joint Lead Arranger and Hedge Provider for the financing of a **335 MW residential solar portfolio for the solar and storage developer Sunrun** (USD 600 million).

sunru	n
Sunrun Poseidon	Portfolio
Residential Solar Port Financing	olio Project
USD 600,000,000	
Joint Lead Arranger & Provider	Hedge
DEC 2022	USA

.....

In August 2022, Societe Generale was the Mandated Lead Arranger & Hedge Provider for the **Ishikari Offshore wind** (112 MW) & **battery storage** (100 MW/180 MWhr) project in Japan developed by Pattern and Green Power.

Rattern 5-	227
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ttery Storage Proj	ject
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ndated Lead Arra dge Provider	inger &
G 2022	JAPAN

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Ish Ba

# Societe Generale is making direct investments in funds supporting energy and ecological transition

 In 2023, participating in the last EUR 140 million private placement round,
 Societe Generale became a strategic investor in EIT Inno Energy.

Through this strategic partnership, Societe Generale will support the development of InnoEnergy's current portfolio of 200 startups and support its strategy of large industrial actors by providing valuable access to its full range of financing and advisory services and to its own eco-system of clients and investors.



In 2023, Societe Generale joined a consortium of multiple international investors such as the European Investment Bank and Proparco in the EUR 87.5 million closing of the Afrigreen Debt Impact Fund. Afrigreen will finance on-and off-grid solar power plants for small and medium-sized commercial and industrial consumers in Africa and help bridge the funding gap through direct lending and asset-based debt facilities for regional and international developers.

AFRIGREEN



Societe Generale acted as sole Financial Advisor, MLA, Sole Hedge Execution Bank, Hedge Provider and Account Bank in the financing to support the construction of the **NeuConnect Interconnector** between Germany and the UK. The project



(EUR 2.8 billion investment) will have a triple impact supporting the energy transition, increasing competition among generators for the benefit of end consumers and strengthening security of supply across Germany and the UK.

### Lumo embarked in an ambitious scale-up

- Lumo, a fully-owned subsidiary, is an online crowdfunding platform which has supported more than 200 energy transition projects in France since its creation. The strategy has been widened in 2023 to support any type of project having a Positive Impact, be it energy transition, circular economy, smart mobility, etc.
- Lumo is providing sponsors with senior, mezzanine, convertible debt or with equity.
- Lumo will extend its activities outside France in 2024, thanks to a European Agreement which is expected to be reached before YE23.





Societe Generale acted as Green Loan Coordinator, Agent Mandated Lead Arranger and Lender for the EUR 133 million loan in coordination with **Senegal's Agence Nationale des Energies Renouvelables** for the **installation of** 

Coordinate Labor Solar Street Lights BPI A. E. Buyer Credit 8. Tried Commercial Laan CUR 132,225,005 + FUR 70,460,477 Green Loan Coordinator, Agent, Mandate Lead Arranger B. Londer DC2021 SNRGAL

100,000 solar-powered streetlights across Senegal.

This transaction will foster renewable integration in Senegal's public services.

### Pack Solaire, a solution to facilitate solar panel installation relying on an ecosystem of key partners

In 2023, the French retail network of Societe Generale launched the **'Pack Solaire'**. This solution targets corporates, association and local authority clients to help them install solar panels. The bank has set up a diagnosis tool in partnership with NamR, a startup specialised in the analysis of building data and developed an expert network to realise detailed assessments of its clients' needs. Eventually Societe Generale facilitates the realisation of the works and operations by providing financing to the clients.



Cement

### ing 📗 Commercial Real Est

# 1. SECTOR DYNAMIC

#### DECARBONISATION LEVERS (see page 50) ↔ 😵 🎓 🔶 🛇

The cement sector accounts for 7% of global anthropogenic  $CO_2$  emissions, emission levels comparable to those of India<sup>(1)</sup>. The cement sector's direct carbon intensity should decrease from 0.58 tCO<sub>2</sub> per ton in 2022 to 0.47 tCO<sub>2</sub> per ton produced by 2030, in line with the IEA NZE scenario<sup>(2)</sup>.

### **Sector dynamics**

Cement is one of the main constituents of concrete, with a few substitutes. With demand driven by urbanisation and infrastructure development (mainly in developing countries), cement demand is set to increase by 45% by 2050<sup>(3)</sup>. This makes it all the more important to decarbonise its production.

### Emissions breakdown<sup>(3)</sup>

Cement is a hard-to-abate sector, with around 90% of the cement industry's emissions being direct, linked to the production of clinker.

- 50% 60% of emissions are inextricably linked to cement manufacturing.
   The chemical reaction of limestone decomposition used to produce clinker, the main component of cement, results in the production of CO<sub>2</sub> during the process.
   These emissions are hard to abate as there is no viable alternative to the calcination of limestone for clinker production.
- 30% 40% come from the combustion of fossil fuels to reach the temperature needed for this reaction to occur (> 1,400 °C).
- The remaining emissions come directly or indirectly from other activities including quarrying & transport, grinding & preparation of raw materials, cooling and mixing and construction.

#### **Decarbonisation levers**<sup>(1)(2)(4)</sup>

The IEA NZE scenario identified several decarbonisation levers for the cement sector:

- Efficiency in construction and concrete manufacturing, limiting the demand for cement production;
- Efficiency in the cement production and reduction of the clinker/cement ratio, reducing emissions intrinsic to production;
- Use of alternative fuels<sup>(\*)</sup> in cement production, reducing fossil-fuel combustion;
- Use of CCUS technologies to abate the remaining emissions.

The remaining emissions are tackled through global decarbonisation of the power sector, and  $CO_2$  recarbonation<sup>(\*\*)</sup> according to various sectoral scenarios.

Due to technology maturity levels, net zero scenarios define a decarbonisation timeline relying on evolving technologies<sup>(4)</sup>:

- By 2030, production processes, energy efficiency improvement, fossil fuels reduction and clinker/cement ratio reduction will be critical;
- By 2050, CCUS will be essential for reducing emissions intrinsic to cement production.
   CCUS will require R&D investment before being deployed commercially after 2030.

#### CEMENT SECTOR'S VALUE CHAIN AND EMISSIONS MATERIALITY



METRICS & TARGETS 71

 <sup>(1)</sup> IEA, Net Zero Roadmap: A global Pathway to Keep the 1.5°C Goal in Reach. (2) IEA, Net Zero by 2050 report.
 (3) World Economic Forum, Net-Zero Industry Tracker, 2022. (4) Global Cement and Concrete Association, Getting to net zero.
 (\*) Alternative fuels are derived from non-primary materials i.e. waste or by-products; it can be biomass, fossil or mixed (fossil and biomass) alternative fuels. (\*\*) Recarbonation is the process of CO<sub>2</sub> uptake by concrete. (\*\*\*) GCCA decarbonisation pathway also considers the concrete sector, which represents a minor share of the cement/concrete sector.
Cement

### 2. ALIGNING CEMENT

As cement production will still be necessary despite concentrating most emissions from the sector, an intensity target has been set on manufacturers

#### Scope

#### BOUNDARY

#### **Cement manufacturing companies**

The scope of this portfolio focuses on counterparties active in the cement manufacturing segment as it represents the most emissions within the cement value chain.

#### EMISSIONS

CO<sub>2</sub>e emissions from:

 Gross scope 1 emissions: Gross emissions are the total Scope 1 emissions from a cement plant, including (i) fossil fuel combustion and (ii) use of substitution fuels such as different types of waste (old tires, grease, organic solvent, painted wood...)

and;

 Scope 2 emissions cover the emissions from electricity consumption.

#### FINANCING ACTIVITIES

All loan-related products are included. General purpose and dedicated loans are included.

#### Methodology

#### CALCULATION METHODOLOGY

#### PACTA methodology for Banks

#### SCENARIO

#### IEA Net Zero by 2050

As the IEA Net Zero by 2050 scenario does not provide sector-specific scope 2 pathways, the Group uses the scope 2 decarbonisation pathway developed by SBTi in consultation with the IEA.

#### METRICS

Emission intensity metric: kg CO<sub>2</sub>e/t cement

Scope 1 & Scope 2 emissions (kgCO<sub>2</sub>e) Cement production (tcement)

#### **KEY ASSUMPTIONS AND LIMITATIONS**

The IEA NZE2050 scenario and data from Asset Resolution are expressed in tons of cement produced. However, company-reported data is mostly in terms of cementitious products, thus including production from cement substitutes such as slag.

The difference is likely to be small: in the order of 1% according to 2018 data from the GCCA Getting the Numbers Right project.

#### **Target & Progress**

BASELINE & TARGET						
kgCO₂e/t cement	2022	2030	% reduction			
Societe Generale Portfolio	671	535	20%			
IEA NZE 2050	580	463	19%			

#### PROGRESS



#### DATA PROVIDERS

Company reporting, Asset Resolution

### **3. TAKING ACTION TO SHIFT**

#### **Clients and assets**

- Under "the Shift" initiative, bankers from different business lines and geographies have been working together to:
  - Build expertise on cement's decarbonisation challenges and new industrial processes, energy efficiency and technologies (CCUS, Hydrogen...) to decarbonise the sector:
- Identify the emerging leaders of tomorrow that are developing low-carbon cement and innovative building material solutions that can reduce the carbon footprint of the real estate & infrastructure sectors.
- Societe Generale's clients are major cement manufacturers that have, for most of them, defined CO<sub>2</sub> emissions targets and are already engaged in their decarbonisation journey. Bankers maintain a close dialogue with them on their transition strategy to understand their needs and challenges.
- The Group plans to develop a corporate transition assessment tool for the construction and building materials sector, including cement, to further help bankers to have a constructive dialogue with clients around their decarbonisation strategy.
- Working on corporate and/or project finance, we structure 'brown-to-green' financing solutions to support corporate or site-level decarbonisation of key cement clients as well as large-scale brownfield retrofits, greenfield zero emissions. We structure Sustainability-linked bonds or loans with incentives based on ambitious transition indicators (carbon intensity, absolute emissions, etc.), as well as green use-of-proceeds financing.

#### **Flagship deals**

Societe Generale acted as ESG Structuring Advisor and Active Bookrunner on the first Sustainabilitylinked bond in the building materials industry for EUR 850 million which was issued by **HOLCIM**. The bond's coupon was linked to a target to reduce emissions to 475 kgCO<sub>2</sub> per ton of cementitious material by 2030. Since then, Societe Generale has assisted LafargeHolcim in updating the framework on several occasions, most recently in August 2023, to reflect the latest sustainability

targets and expand the framework to also cover green use of proceeds financing, aligned with the EU taxonomy's criteria for manufacturing of cement.

Societe Generale has a historical presence in some emerging markets such as in Africa, where the infrastructure deficit remains a challenge.

Financing the development of such infrastructure and the production of critical building materials like cement is an integral part of Societe Generale's commercial and impact strategies in the continent.

In April 2022, Societe Generale acted as arranger and lender for a EUR 52 million loan to CBI Ghana to finance the construction of the first African clay calciner to partially substitute clinker Cement,



leading to a significant reduction of the CO<sub>2</sub> intensity. Societe Generale's support will enable CBI Ghana's cement production to achieve levels of sustainability in line with EU Taxonomy requirements.

In February 2023, Societe Generale was one of the banks in the financing (EUR 242 million facility) arranged by the IFC to finance Sococim Industries - the largest integrated cement producer in Senegal



and a subsidiary of the French group Vicat - in the construction of a more performant production line. Societe Generale Senegal will act as administrative agent to manage the local currency financing with the other lenders.



CO-HEAD OF DIVERSIFIED INDUSTRIES



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HOLCIM

EUR Senior Unsecured

EUR 850,000,000

Structuring Advisor & Joint Bookrunner

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Sustainability-Linked Bond

SWITZERLAND NOV 2020

HOLCIM

"Cement being critical in the construction industry but also one of the most emitting building materials, industry players have had to massively invest in the reduction of their environmental footprint over the past few years. Most of our clients have set 2030 objectives for the emissions intensity of their cement production activities. Two strategies - often combined - have been followed to date:

- Organically through investments reducing the emissions intensity of cement (e.g. reduction of the clinker-to-cement ratio, substitution of fossil fuels with alternative fuels, increased usage of alternative raw materials, renewable energy, as well as new technologies such as carbon capture or electrification solutions);
- Through product portfolio rebalancing by acquiring companies active in light materials (insulation, waterproofing, wood-based materials) or recycling, and selling certain cement operations.

We have supported our clients on both strategic avenues with a recognised deep understanding of the industry reshaping that is accelerating." . . . . . . . . . . . . . .

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🖅 Steel

#### Commercial Real Esta



DECARBONISATION LEVERS (see page 50) ↔ 🚱 🎓 🕂 🛇

The steel sector represents 7% of energy-related CO<sub>2</sub> emissions<sup>(1)</sup>. According to the IEA's Net Zero scenario<sup>(2)</sup>, the carbon intensity of the sector must decrease by 24% before 2030 compared to 2022.

#### **Sector dynamics**

Steel is an essential resource in many sectors, including construction, automotive, shipping, aviation, machinery and consumer goods. Population growth and economic development in emerging countries drive steel demand. The World Economic Forum projects global steel demand to rise by 30%<sup>(°)</sup> by 2050<sup>(3)</sup>. Steel is also a key component of low-carbon technologies (e.g. wind turbines).

#### **Emission sources**

Steelmaking emissions are linked to fuel consumption and iron reduction processes. Three production routes exist and present different emission profiles:

- Blast Furnace Basic Oxygen Furnace (BF-BOF), relying on coal and coke for energy and process purposes;
- Direct Reduced Iron Electric Arc Furnace (DRI-EAF), relying on natural gas or coal and electricity;
- EAF-Scrap, a secondary EAF production route using scrap metal as an input relying on electricity.

#### Decarbonisation levers<sup>(4)(5)(6)(7)(8)</sup>

The IEA's NZE and industrial roadmaps identify three levers to reduce steel industry's emissions:

 Reduction of steel primary production through material efficiency and scrap use;

- Diversification of production processes towards less CO<sub>2</sub>-intensive routes;
- Scaling of carbon capture technologies to tackle residual emissions.

Resource efficiency and circularity/Energy

efficiency: the IEA forecasts that material efficiency in steel-dependent sectors (e.g. manufacturing of lighter vehicles in the automotive industry) could reduce demand by around 20% by 2050<sup>(4)</sup>. Change in material inputs with scrap use and secondary steel production are thus essential for the transition of steel-consuming industries.

**Fuel or process switch:** primary steel production will be required to meet 60% of steel needs by 2050<sup>(3)</sup>. Diversification of production routes towards less carbon-intensive ones, switching from coal to other reducting agents such as hydrogen can reduce the steel's industry carbon footprint. However, the limited commercial viability of low-carbon production routes hinders the potential deployment of low-carbon steel today. Technological innovation and hydrogen-based production routes, for which project announcements are increasing, will be crucial to unlock the potential of so-called'green steel'.

**CCUS:** as a complement to the deployment of low-carbon production routes, the IEA envisages CCUS technologies. However, they will play a small role in decarbonising the steel sector and will be scaled up from 2030 onwards.

#### STEELMAKING PROCESSES AND ASSOCIATED CO<sub>2</sub> EMISSIONS



#### DIRECT CO<sub>2</sub> INTENSITY ANNU. (TCO<sub>2</sub>/TSTEEL) (SCOP

SECTOR IN THE IEA NET ZERO

SCENARIO, 2020-2030

#### ANNUAL CO<sub>2</sub> EMISSIONS (SCOPE 1 & 2)

REDUCTION PER DECARBONISATION LEVER (GT CO<sub>2</sub>) IN THE MISSION POSSIBLE PARTNERSHIP STEEL SCENARIO, 2020 - 2050<sup>(6)</sup>



(1) <u>IEA, Net Zero Roadmap: Aglobal Pathway to Keep the 1.5</u>°C Goal in Reach. (2) IEA, Iron and Steel report, 2022. (3) <u>World Economic Forum, Net-Zero Industry Tracker</u>, 2022. (4) <u>IEA, Net Zero by 2050, 2021. (5)</u> IEA, Iron and Steel Technology Roadmap, 2020.
 (6) <u>Mission Possible Partnership – Making Net-Zero Steel Possible</u>. (7) <u>OECD</u>, Assessing steel decarbonisation progress, 2022. (8) <u>IEA, Energy Technology Perspectives, 2020.</u> (\*) In the IEA's NZE scenario, considering material efficiency measures, steel demand grows by 12% by 2050. (\*\*) Scrap represents 15–25% of metallic input for primary path production.

🚽 🛃 Steel

### 2. ALIGNING STEEL

Given the various decarbonisation levers on this sector, we chose the SSP score to adequately address primary and secondary steel pathways.

#### Scope

#### BOUNDARY

#### Steel manufacturing companies

The Sustainable STEEL Principles (SSP) define an in-scope counterparty as an entity that (i) produces a minimum of 250 kilotons p.a. of crude steel at the group-level and (ii) generates 20% or more of total revenue through crude steelmaking activities at the group-level.

Societe Generale applied the thresholds recommended by the SSPs. In addition, eligibility of a client and its inclusion in the alignment score calculation was ultimately confirmed by its presence in the CRU database and the availability of data for that client.

#### EMISSIONS

**Fixed-boundary system as per the SSP.** The scope is centered on crude steel manufacturing and excludes upstream (from iron and coal mining) and downstream emissions (beyond coating).

#### FINANCING ACTIVITIES

All loan-related products are included. General purpose and dedicated loans are included.

#### Methodology

#### CALCULATION METHODOLOGY

Sustainable STEEL Principles (recognised as a valid methodological framework by NZBA).

#### SCENARIO

IEA Net Zero by 2050

#### METRICS

#### Portfolio Alignment Score as defined by the SSP.

The alignment score distinguishes the primary and the secondary steel pathways and evaluates a borrower's alignment against two 1.5°C scenarios (the IEA NZE and the Mission Possible Partnership's Technology Moratorium scenario - MPP TM).

- A score of zero or below zero means that a company is aligned with the IEA NZE and MPP scenarios;
- A score between zero and one means that it is aligned with the MPP TM scenario only; and
- A score above one means that it is misaligned with a 1.5°C scenario.

#### KEY ASSUMPTIONS AND LIMITATIONS

The definition of the client scope is complex as identifying clients which actually produce crude steel is not trivial given the varying degrees of integration and diversification of players along the value chain.

The data quality remains a challenge and the calculation of the score is very sensitive to the scrap share and intensity assumptions. As such, restatements might be necessary in the coming years to refine the scope, data and calculations.

#### **Target & Progress**

<b>BASELINE &amp; TARGET</b>		
Alignment score	Baseline NA	Target 2030
Societe Generale Portfolio	NA	0



#### DATA PROVIDERS

CRU for 2022 with the aim to collect data directly from clients starting 2023

#### 🔣 Steel

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### **3. TAKING ACTION TO SHIFT**

#### **Clients and assets**

- Under "the Shift" initiative, bankers from different business lines and geographies have been working together to:
  - Build expertise on steel decarbonisation levers such hydrogen based and DRI solutions:
- Identify the emerging leaders of tomorrow that are developing new low carbon solutions for the steel sector.
- Leveraging on the expertise built, bankers maintain a close dialogue with clients on their transition strategy, to understand their needs and challenges in order to accompany them in their transition.
- The Group plans to develop a corporate transition assessment tool (TOP) for the metals and mining sector, including steel, to further help bankers have a constructive dialogue with clients around their decarbonisation strategy.

#### Industry and peers

- The Group joined the Sustainable STEEL Principles as a vice-chair and founding member in collaboration with the Rocky Mountain Institute and five other major lenders in the global steel industry. Under the Sustainable STEEL Principles framework, the Group has committed to disclosing the carbon emissions of its lending portfolio, and taking a leadership role in supporting its clients with net-zero transition plans and financial advisory.
- Societe Generale has been engaged in the NZBA steel sector working group as co-chair to define guidelines for the financial sector alignment with climate objectives regarding their steel industry lending portfolio. This working group plans to consider the Sustainable STEEL Principles as one avenue for achieving banks' NZBA commitments for the steel sector.

In 2021, the Group acted as Financial Advisor for the EUR 3.3 billion financing of the H2 Green Steel project, aiming to produce ..... Hagreen steel H2 Green Steel Green Project Financing

**Flagship deals** 

2.5 mt of low-carbon steel starting from 2025/2026. This project will rely on green hydrogen generated from renewable power to reduce the carbon emissions of the steel manufacturing process.

In 2022, Societe Generale acted as Exclusive Financial Advisor for the acquisition of John Lawrie Metals by ArcelorMittal. John Lawrie Metals has access to diversified sources of high-quality scrap steel from the UK's oil and gas industry.



Financial Advisor

ArcelorMittal acquisition of John Lawrie Metals is part of its strategy to increase the use of scrap steel in both its electric arc furnace and blast furnace routes of steelmaking to lower CO<sub>2</sub> emissions.



LENAIG TRENAUX GLOBAL HEAD OF METALS, MINING AND INDUSTRIES

"As a founding member of the SSP

and the NZBA (Net-Zero Banking Alliance), Societe Generale is committed to the decarbonisation of the steel industry.

Our ambition is to accompany our existing clients as they implement their transition strategies while also delivering tailor-made financing solutions to low-carbon ventures.

H2 Green Steel is the emblematic example of how we support innovative emerging leaders to achieve this purpose.

The work we have done together to structure the debt package over the past years illustrates very well how we collaborate with our clients to achieve our common ambition for a low carbon steel industry."

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Automotive

### 1. SECTOR DYNAMIC



The automotive sector (cars and vans) represented 10% of energy-related global  $CO_2$  emissions in  $2022^{(1)}$ . Alignment with climate objectives requires a swift reduction of 40% – 50% of the sector's  $CO_2$  emissions by 2030.

#### Sector dynamics

The IEA's NZE scenario forecasts an increase in the global passenger car fleet by more than 60% by 2050, reaching close to 2 billion vehicles<sup>(2)</sup>.

Public policies to phase out internal combustion engines in Europe, Canada and California by 2040 create a policy pressure on automotive markets to develop the manufacturing of low-carbon technology (BEV, PHEV, FCEV<sup>(\*)</sup>) vehicles<sup>(3)</sup>. The IEA's NZE scenario forecasts a 100% share of low-carbon technology<sup>(\*\*)</sup> vehicles in new vehicle sales by 2050<sup>(2)</sup>, while in Europe the Parliament has voted a plan to ban petrol and diesel engine cars by 2035.

#### Emission sources<sup>(4)(5)(6)</sup>

Light-duty vehicle emissions comprise:

- 'Well-to-Wheel' emissions including:
- 'Well-to-tank' emissions linked to upstream fuel production – Fuel Supply;
- 'Tank-to-wheel' emissions linked to fossil fuel combustion – Tailpipe.
- Manufacturing emissions linked to the material production and manufacture of vehicles.

#### 'Well-to-Wheel' emissions: internal

combustion engine vehicles' emissions mostly come from fuel supply and combustion, accounting for 65%-80% of total life-cycle emissions ('Well-to-Wheel' emissions). Battery and fuel cell electric vehicles have different emission profiles, as they have no 'tank-to-wheel' emissions linked to fuel combustion. However, they present indirect emissions linked to the generation of electricity that will power the vehicle. Thus, their carbon footprint varies depending on their geography and the decarbonisation of the electricity generation mix of the EV recharging infrastructure, which is necessary to limit 'well-to-tank' emissions of electric vehicles by 2050.

**Manufacturing emissions:** the remaining emissions from the automotive sector are linked to the production and maintenance of the vehicles themselves. This encompasses the manufacturing of vehicles by car manufacturers and the manufacturing of batteries in giga factories. These emissions represent a varied share of the global carbon footprint of vehicles depending on their propulsion technology:

- For internal combustion engine vehicles, they represent around 10% of total life-cycle emissions;
- For electric vehicles, they represent around 50% of total life-cycle emissions.

These emissions come from the production of manufacturing materials (e.g. steel, aluminium) and as such, reducing the carbon footprint of the automotive sector's supply chain is key to further reducing light-duty vehicles' emissions by 2050.

#### BREAKDOWN OF INTERNAL COMBUSTION ENGINE VEHICLES' EMISSIONS<sup>(4)</sup> (%)



#### BREAKDOWN OF INTERNAL COMBUSTION ENGINE AND BATTERY ELECTRIC VEHICLES' EMISSIONS AND SHARE OF LOW-CARBON VEHICLES SALES EVOLUTION IN THE NZE SCENARIO<sup>(2)</sup>

Share of low-carbon technology vehicles sales (% of total sales)<sup>(5)</sup>



Emission intensity of ICEV<sup>(\*\*\*)</sup> and BEV<sup>(6)</sup> (2021, gCO<sub>2</sub>e/km)



(1) IEA, Cars and Vans. (2) IEA, Net Zero by 2050. (3) IEA, EV outlook 2023. (4) McKinsey, The zero-carbon car. (5) IEA, Net Zero Roadmap: A global Pathway to Keep the 1.5°C Goal in Reach.

(6) International council on clean transportation. (\*) BEV: Battery Electric Vehicle// PHEV: Plug-in Hybrid Electric Vehicle// FCEV: Fuel Cell Electric Vehicle. (\*\*) Low-carbon technology vehicles are defined as vehicles with low to zero tank-to-wheel emissions. They rely on electric propulsion. (\*\*\*) ICEV: Internal Combustion Engine Vehicle.

### 1. SECTOR DYNAMIC



Transition towards electric vehicles will be key to reducing the automotive sector's carbon footprint. Due to their positioning along the value chain, car manufacturers must adapt their production to support the sector's evolution.

#### Decarbonisation levers<sup>(1)(2)(3)(4)(5)</sup>

The IEA's NZE scenario relies on three main decarbonisation levers for the automotive sector:

- Technology transition towards electric mobility (EVs, FCEVs);
- Improvements in energy efficiency;
- Modal shifts.

Fuel switch: technology transition towards electric mobility reduces demand for fossil fuels from the automotive sector. In the IEA's NZE scenario, the share of EVs in total vehicle' sales reaches 100% in 2050<sup>(1)</sup>. Nevertheless, this transition must be supported by the decarbonisation of the power generation system via a massive deployment of renewable generation sources. Additionally, charging infrastructure development is necessary to foster e-mobility - particularly for light-passenger vehicles. Globally, the stock of new charging points has been growing at a 47% rate per year<sup>(2)</sup>. The IEA's 2023 scenario update upgrades the role of EVs, reflecting the significant increase of EV sales pushed by policy support and scaling up manufacturing supply chains. However, biogas and low-carbon hydrogen will play smaller roles in the near and longer terms due to a limited resource base and end use competition<sup>(3)</sup>.

**Energy efficiency:** lighter vehicles consume less fuel or electricity over the same distance, improving the fuel efficiency. In the IEA's NZE

scenario, fuel efficiency represents a 41% energy consumption reduction lever between 2020 and 2050. However, the share of heavy vehicles and SUV in total sales continues increasing in Europe by around 2% per year<sup>(4)</sup>.

**Sobriety and circularity:** behavioural shifts such as car sharing, switch from ownership to usage, phasing out polluting cars from large cities or reducing speed limits, and modal changes from cars to public transport or other low-carbon transport connects decarbonisation of the transport sector with urban and public initiatives.

Among the automotive value chain, companies have specific levers to reduce their carbon intensity:

- Car manufacturers are expected to adapt their production chains to produce EV and H<sub>2</sub> vehicles. They have a specific role to play as changes in car production will have a knock-on effect up and down the value chain, increasing demand for low-carbon fuels and reducing the share of ICEV in total sales. They can also increase the energy efficiency of the sector with lighter vehicles (design optimisation, switch from steel to aluminium);
- Fuel suppliers should produce low-carbon liquid fuels and the supply infrastructure. They also can contribute to the large-scale deployment of EV recharging infrastructure and even renewable energy generation capacity to power the infrastructure.

### DECARBONISATION LEVERS FOR AUTOMOTIVE PLAYERS ALONG THE VALUE CHAIN



#### PUBLICLY AVAILABLE LIGHT-DUTY VEHICLE CHARGING POINTS<sup>(4)</sup> (GLOBAL, THOUSANDS, 2015–2022)<sup>(\*)</sup>



(1) IEA, Net Zero by 2050. (2) IEA, EV outlook 2023. (3) IEA, Net Zero Roadmap: A global Pathway to Keep the 1.5°C Goal in Reach. (4) IEA, Cars and Vans. (5) International council on clean transportation, 2021. (\*) Based on IEA's country submission. (\*\*) CAGR: Compound Annual Growth Rate.

### 2. ALIGNING AUTOMOTIVE

Societe Generale's strategy focuses, for the time being, on the use phase of internal combustion engines, which represents more than two thirds of the greenhouse gases emitted over the vehicle life-cycle. This scope will likely evolve in the coming years to encompass upstream emissions as the materiality of these sources increases and dedicated pathways become available.

#### Scope

#### BOUNDARY

Car manufacturers, including their financial captives, but excluding the value chain upstream (auto manufacturers' suppliers, ...) and downstream (car dealer, ...).

Consumer Finance and Ayvens will be treated separately and are not included in the boundary.

#### **EMISSIONS**

Average CO<sub>2</sub>e Scope 3 end-use emissions intensity (in gCO<sub>2</sub>/ vehicle-kilometer of new cars put on the market) The metric focuses, to date, on tank-to-wheel emissions which excludes:

- Scope 1 & 2 emissions from clients;
- Upstream Scope 3 emissions of the supply chain;
- Well-to-tank emissions.

The metric coverage might evolve should data and pathways become available for these emission sources.

#### **FINANCING ACTIVITIES**

All loan-related products are included. General purpose and dedicated loans are included.

#### Methodology

#### CALCULATION METHODOLOGY

PACTA methodology for Banks

#### SCENARIO

IEA Net Zero by 2050 provides net-zero emission pathways for tailpipe emissions intensities (in gCO<sub>2</sub>e/km). However, the IEA intensity projections are based on the stock of vehicles, i.e., the average intensity of all the vehicles on the road in 2030. Societe Generale's target is based on a different metric, the average intensity of new cars sold in a given year by their clients. In the absence of a similar metric provided by the IEA to benchmark our target, we compared our target with the IEA trajectory between 2020 and 2030 (-47% vs. -51% for Societe Generale's target). We will review our target in the coming years, should the IEA disclose a benchmark based on annual vehicle sales.

#### METRICS

Emission intensity metric: gCO<sub>2</sub>e/v-km

Scope 3 emissions ( $gCO_2e$ ) Vehicle — kilometers (v — km)

#### **KEY ASSUMPTIONS AND LIMITATIONS**

Finding reliable data on car manufacturers' average fleet intensity is key to this exercise. A comparative review of different data providers and company disclosure showed that emission intensity figures can vary by 20-30% depending on the source. The local norms and calculation methods specific to each market make it difficult to have a transparent and homogenous assessment. Societe Generale will aim to collect the average intensity directly from car manufacturers themselves moving forward to improve accuracy.

#### **Target & Progress**

BASELINE & TARGET						
gCO₂e/v-km	2021	2030	% reduction			
Societe Generale Portfolio	184	90	51%			
IEA NZE 2050		<106	50%			



#### DATA PROVIDERS

#### Asset Impact

#### 🔚 Commercial Real Esta

### 3. TAKING ACTION TO SHIFT

#### **Clients and assets**

- Under "the Shift" initiative, bankers from different business lines and geographies have been working together to:
  - Build expertise on critical raw material mining, active materials for batteries, gigafactories, battery technologies, electric and hydrogen charging stations and infrastructure, assistance driving system and battery recycling;
- Identify Emerging Leaders developing low-carbon solutions for the sector such as Fuel Cell Hydrogen and electric batteries.
- We structure equity and debt financing solutions for our clients active in the sector.

The Group is developing a corporate transition assessment tool (TOP) for the automotive sector, further helping bankers to have a constructive dialogue with clients around their journey toward electrification and digital transition.

#### Industry and peers

Societe Generale joined the Hydrogen Council, which brings together more than 120 member companies from across the various industrial and energy sectors involved in the hydrogen value chain: energy, oil and gas, chemicals, commodities, metals and mining, equipment manufacturers, cars and trucks, and other forms of transport (air, rail, shipping). Societe Generale intends to play an active role developing its clients through financial and advisory support.



#### Nicolas Sanson

MANAGING DIRECTOR HEAD OF AUTOMOTIVE & MOBILITY

"Transaction after transaction, our clients appreciate (i) our access to a global investor base for hydrogen and battery opportunities,

(ii) our structuring expertise in negotiating the best contractual terms for governance and liquidity and

(iii) our experience in assessing the validity of business plans, now under increasing scrutiny.

Investor committees are indeed more and more selective and focused on the short-term ability of a company to deliver a breakeven EBITDA or even cash flow, even in fast growing industries such as hydrogen or battery technology."

**NB** HYDROGEN IS VERY UNDERPLAYED IN THE SECTION 'FUEL SWITCH' ON P29.

#### **Flagship deals**



Societe Generale is acting as Exclusive Financial Advisor to Meridiam on its EUR



200 million equity investment in Verkor C. EUR 850 million series C. The financing will fund the construction of Vektor's first gigafactory in France with an initial capacity of 16 GWh p. a..

Societe Generale has been mandated by Verkor SAS as Lead Debt Financial Advisor in order to advise and



assist the company in securing a project debt finance solution to finance the development of their flagship 16GWh electric vehicle ("EV") battery manufacturing plant in Dunkirk, France, and which aims at supplying EV batteries to Renault. Societe Generale has been mandated by Envision AESC as Debt Financial Advisor in order to advise and assist the company in securing a

Debt Financial Adviso

ONGOING FRANCE

CENVISION AESC Battery Manufacturing CIVID all activity and better CIVID all activity and better





Stellantis

2023

STELLANTIS

Acquisition of 33.3% of Symbio 🌱 🖘 M 🖬 D

Sole Financial Advisor

. . . . . . . . . . . . . . .

Ξ,

EUR 9.081.419.583

Porsche AG

FRANCE

OCT 2022

EUR 900,000,000

The Group acted in 2023 as Sole Financial Advisor for Stellantis, in its acquisition of a 33.3% stake in Symbio based on a EUR 900 million enterprise value, leader of **low-carbon hydrogen mobility**.

Societe Generale acted as Joint Bookrunner for Porsche AG, on track to achieve their **ambitious roadmap of 80% electrified vehicles** by 2030. This IPO was the largest in Europe since the beginning of the century. The Group acted as a Sole Structuring Bank, Mandated Lead Arranger, Underwriter, Hedging Bank and Agent on a EUR 400 million Green Loan financing package for the electric vehicle charging infrastructure company Allego. This

Allego> Allego refinancing & upsize Uurs 140,000,000 Det Discharge Bas Agerer

DEC 2022

deal was the largest senior debt financing in the electric vehicle charging infrastructure segment and **supports Allego in building a pan-European charging network for electric vehicles.** 

#### 💮 Shipping 📃 Commerci

#### DECARBONISATION LEVERS (see page 50) △ 🖗 🏦 🗇 🕂 🛇

Accounting for over 80% of the world's trade<sup>(\*)</sup>, the shipping sector contributes to 2–3% of global emissions<sup>(1)</sup>. A shift to alternative fuels will be necessary to fully decarbonise the sector. It should achieve a 7% annual decline of emissions between 2022 and 2050 to be in line with IEA's NZE<sup>(5)</sup>, on the entire value chain.

#### Sector dynamics<sup>(1)(3)(4)</sup>

The shipping sector's emissions could more than double by 2050 as globalisation continues to drive shipping demand, reaching 1.7 GtCO<sub>2</sub> in 2050 in IEA's Reference Technology Scenario. The former International Maritime Organisation (IMO) strategy has been strengthened in July 2023: reduction of the international shipping well-to-wake emissions by at least 70% and strive for 80% by 2040, compared to 2008's emission levels, and a strengthening of the requirements on ships'efficiency design and fuel use. Shipping, as an efficient freight transport mode with low carbon intensity at 5 gCO<sub>2</sub>/ton-km<sup>(\*\*\*)</sup>, also holds potential to contribute to decarbonising the overall transportation sector and reducing the logistics-related emissions of multiple sectors.

1. SECTOR DYNAMIC

#### Emissions breakdown<sup>(1)(2)</sup>

International shipping of commercial ships including bulk carriers, container ships and tankers are the key carbon emitters in the sector given its scale of operations accounts for approximately 85% of the global fleet. The sector's carbon footprint is materially tied to its reliance on carbon intensity oil-based marine fuels (e.g. heavy/light fuel oil, diesel/ gas oil) and other fossil fuels which covers more than 99% of its total energy demand.

#### Decarbonisation levers<sup>(4)(5)(6)</sup>

The shipping sector is a hard-to-abate sector that faces long lifetime of vessels and

a lack of commercially available low-carbon fuel options considering it needs a high energy density fuel. Electricity, for instance, plays a smaller role being only suitable for short-distance shipping routes (~200 km).

#### From now to 2030:

- Optimisation of operational and energy efficiency is the most mature decarbonisation solution (e.g. high efficiency propeller, waste-heat recovery system, route and loading optimisation, etc.);
- Switch to low-carbon fuel such as ammonia as primary low-emissions fuel, biofuels and hydrogen with limited parts due to their relatively high costs contributes to major emissions reduction, with potential for scaling up<sup>(\*\*)</sup>.

#### From 2030 and after:

Two candidates could account for 60% of the shipping energy use in 2050 in the NZE:

- Green ammonia produced from the Haber Bosch process using hydrogen and nitrogen;
- Hydrogen derived from several processes including electrolysis using renewable power.

Scaling-up low-carbon fuels production and infrastructure faces challenges as competition with other sectors (e.g. aviation) is likely. Due to a limited number of low-carbon solutions, this sector is the only one that does not achieve zero emissions by 2050 in the NZE.

#### SHIPPING SECTOR'S VALUE CHAIN



#### CARBON INTENSITY REDUCTION RATE OF WELL BELOW 2°C AND 1.5°C CO<sub>2</sub>E EMISSION TRAJECTORIES (RELATIVE TO 2020 BASELINE, SBTI CALCULATIONS)<sup>(7)</sup>



(1) IEA, International Shipping. (2) IEA, NetZero By 2050. (3) IMO, Revised GHG reduction strategy for global shipping adopted, 2023. (4) IMO, Energy Efficiency of Ships, Fuel Report, 2022. (5) IEA, NetZero By 2050. (3) IMO, Revised GHG reduction strategy for global shipping adopted, 2023. (4) IMO, Energy Efficiency of Ships, Fuel Report, 2023. (5) IEA, NetZero Roadmap: Aglobal Pathway to Keep the 1.5°C Goalin Reach, 2023. (6) SBTI, Science Based Target Setting for the Maritime Transport Sector, 2023. (7) IMO, Energy Efficiency of Ships, Fuel Report, 2022. (\*) In terms of freight transport volume. (\*\*) Other low-carbon production means are under development such as wind propulsion. (\*\*\*) Relative to aviation at 435 gCO<sub>2</sub>/ton-km and road freight at 80 gCO<sub>2</sub>/ton-km.

Steel 👝

### 2. ALIGNING SHIPPING

As a signatory of the Poseidon Principles, Societe Generale is committed to implement a trajectory aligned with net-zero GHG emissions by 2050.

#### Scope

#### BOUNDARY

**The Poseidon Principles** apply to dedicated financings of vessels only and do not include corporate loans:

- Included: Cargo and Passenger vessels;
- Excluded: Military ships, submarines, Inland waterway and vessels used for production as well as construction.

#### EMISSIONS

Direct emissions from the shipping industry (or the **"tank-to-wake"** approach) as per the IMO 2018 scenario.

The **"well-to-wake"** approach refers to the entire process of fuel production, delivery and use onboard ships (scope 1), and all emissions produced when the fuel is burned (scope 3).

#### FINANCING ACTIVITIES

- Included: exposure dedicated to vessel's financing (secured with mortgage and unsecured for cruise);
- **Excluded:** general corporate propose loans.

#### Methodology

#### CALCULATION METHODOLOGY

**Poseidon Principles** (recognised as a valid methodological framework by NZBA) that uses a carbon intensity metric known as the **Annual Efficiency Ratio ("AER")**, using the parameters of fuel consumption, distance travelled, and deadweight at maximum summer draught ("DWT"). AER is reported in unit **grams of CO<sub>2</sub> per tonne-mile** (gCO<sub>2</sub>/dwt-nm).

#### SCENARIO

2018 International Maritime Organisation (IMO) (1).

#### METRICS

**Portfolio Alignment Score as defined by the Poseidon Principles:** the alignment score compares the annual carbon intensity of a vessel with the decarbonisation trajectory at the same point in time defined by the IMO scenario:

- A positive alignment score means a vessel is misaligned (above the decarbonisation trajectory);
- A negative or zero score means a vessel is aligned (on or below the decarbonisation trajectory).

#### **KEY ASSUMPTIONS AND LIMITATIONS**

The annual efficiency ratio (AER) is highly influenced by the operations of the vessels which may negatively impact cruise alignment. The 2018 IMO scenario is not a net-zero scenario. The Poseidon Principles committed to implement a trajectory aligned with net-zero GHG emissions by 2050, consistent with a maximum temperature rise of 1.5C above pre-industrial levels by 2100. As a signatory of the Poseidon Principles, we are engaged in discussions with the association and we aim to align our portfolio with a net-zero pathway by 2050. A new IMO scenario (net-zero), based on a well-to-wake swapproach, was just released and is under study.

#### **Target & Progress**

BASELINE & TARGET				
Alignment score	Baseline NA	Target 2030		
Societe Generale Portfolio	NA	0		

#### PROGRESS

Cargo vessels climate alignment score in 2022: -2,7% Passenger vessels climate alignment score in 2022: 6.9%



#### DATA PROVIDERS

- Manual collection of data from customers Clients (Data concerned are fuel type used, distance traveled and vessel gross tonnage)
- IMO provides the carbon factors

<sup>(1)</sup> The Poseidon Principles committed to implement a trajectory aligned with net-zero GHG emissions by 2050, consistent with a maximum temperature rise of 1.5C above pre-industrial levels by 2100. As a signatory of the Poseidon Principles, we are engaged in discussions with the association, and we aim to align our portfolio with a net-zero pathway by 2050.

### **3. TAKING ACTION TO SHIFT**

#### **Clients and assets**

- In September 2023, Societe Generale announced that the Group will not provide dedicated financial products and services to Floating Production Storage and Offloading ("FPSOs") associated with Greenfield upstream oil and gas fields anymore. After 2025, this exclusion will be extended to any new FPSOs financing.
- Under "the Shift" initiative, bankers from different business lines and geographies have been working together to:
  - Build expertise on new shipping segments such as transport of captured CO<sub>2</sub> via ships, offshore wind farm installation as well as ammonia and methanol cargo shipping;
  - Identify the emerging leaders of tomorrow that are developing new onboard carbon capture, wind powered ships, Hydrogen Fuel Cells and other low-carbon solutions for the sector
- We are helping clients to secure zero carbon fuel supply, identifying opportunities for procurement of ammonia, methanol and biofuels.
- The Group is developing a corporate transition assessment tool (TOP) for the shipping sector, helping bankers have a constructive dialogue with clients around their decarbonisation and transition journey.
- We prioritize zero-carbon, zero-carbon-ready or low-carbon vessels and the refinancing of vessels whose operational efficiency is in alignment with Poseidon Principles.

#### Industry and peers

Societe Generale is one of the founding signatories of the Poseidon Principles,

launched in 2019 together with other banks financing the shipping industry and in collaboration with the Global Maritime Forum. The Poseidon Principles aim to promote a low-carbon future for the global shipping industry by integrating climate decision-making into portfolio management and lending decisions regarding ship financing.

Societe Generale has also announced that it has joined the Getting to Zero coalition, which aims to develop and deploy commercially viable deep-sea zero-emission vessels by 2030.

### **Flagship deals**

In 2023, Societe Generale signed an agreement to support Eurazeo as sole advisor with the fundraising and deployment of capital of its new initiative, Eurazeo Maritime Upgrade Fund. This new financing vehicle, in the form of private debt fund, is dedicated to supporting the transition towards a more sustainable maritime sector. The objective

is to enable shipowners to ..... transition towards a greener FURAZEO Sole Advisor Eurazeo Maritime Upgrade Fund

€1.500.000.000

FRANCE/GLOBAL

future through a sale and leaseback scheme that will target both new vessels with alternative propulsion systems and existing on-the-water fleet upgrades.

In 2022, Societe Generale acted as Green Loan Coordinator, NZD interest rate swap arranger and lender in the NZD 350 million (approximately EUR 210 million) financing of two rail-enabled diesel-electric hybrid ferries. These ferries, equipped with hybrid electric battery/ dieselpowered engine, are anticipated to achieve 40% reduction in CO2-e emissions vs. the FY12 baseline emissions from the existing vessels. The new ferries link road and rail networks between the North and



South islands, hence being part of the infrastructure project crucial to the local community. KiwiRail plans to switch to fully electric engines in the future to ensure the vessels stay below the trajectory for net-zero emissions by 2050.

In 2020, Societe Generale acted as a MLA. Bookrunner, Underwriter, Sustainability-linked Swap provider and Sustainability coordinator in the USD 250 million portfolio refinancing of Seaspan. This transaction was the first sustainabilitylinked loan and sustainability-linked swap in the containership leasing industry.

The loan's coupon is linked to environmental KPIs:

Vessels' performance: alignment of the carbon intensity of the collateral vessels with the IMO 2050 decarbonisation trajectory;

Sustainability-linked chartering: % of the sustainability-linked charters entered within a year.



. . . . . . . . . . . . . . .

Seaspan Corporation

USD 250,000,000

DEC 2020

Sustainability-Linked Portfolio Refinancing

MLA, Bookrunner, Underwriter, Sustainability-linked Swap provi sustainability coordinator

. . . . . . . . . . . . . .

HONG KONG

💿 seaspan

PAUL TAYLOR GLOBAL HEAD OF

MARITIME INDUSTRIES

"Just as the entire ecosystem bears shared responsibility for emissions.

so the burden of the investment to come will be shared.

In line with Societe Generale's own internal 'big shift' to focus on the energy transition's value chains, the bank has built the expertise to provide finance and the strategic and capital advisory services which are now required across the entire maritime ecosystem." .....



### 1. SECTOR DYNAMIC

 $CO_2$  emissions from buildings operations reached an all-time high of around 10 GtCO<sub>2</sub> in 2021. Aligning with the 1.5°C scenario requires deep systemic changes including stronger energy efficiency policies and building codes as well as an investment scale-up in the sector.

#### Sector trends

The building sector was responsible for ~37% of CO<sub>2</sub> emissions and 34% of energy demand globally in 2021.

Global floor area in the building sector is expected to increase by 55% between 2022 and 2050 according to IEA's NZE scenario. 80% of floor area development will take place in emerging economies.<sup>(1)</sup>

The building sector is currently "not on-track" with the NZE scenario, according to the IEA, as building operational emissions reached an all-time high in 2021, 5% above the 2020 levels and 2% above the 2019 pre-pandemic levels.

To get on track with the NZE scenario, Emissions are expected to fall by 9% per year on average until 2030, more than halving by the end of the decade.

Reaching the 2030 global annual investment levels needed in NZE Scenario will require a cumulated investment in energy efficiency of at least USD 3.8 trillion between 2023 to 2030.

#### **Regulatory landscape**

Energy efficiency and clean buildings policies continue to expand globally but they remain insufficient to meet the IEA NZE Scenario.

The IEA states that "stronger policy support such as minimum performance standards and building energy codes will be required to put the buildings sector on track with the Net Zero Emissions by 2050 Scenario".

In the EU in particular, the Renovation Wave<sup>(2)</sup> strategy was published in 2020 as part of the European Green Deal. It contains regulatory, financing and enabling measures to double the annual energy renovation rate of buildings by 2030 and to foster deep renovation. It includes in particular a revision of the Energy Performance of Buildings Directive (EPBD) which is currently undergoing interinstitutional negotiations. Under the EPBD. Member States are mandated to define energy performance standards and a long-term renovation strategy to support the renovation of residential and non-residential buildings in their country. The EPBD also encompasses the gradual introduction of minimum energy performance standards to trigger renovation of the worst performing buildings.<sup>(3)</sup>

While EU is at the forefront in terms of ESG regulation, in the US, cities and states are also active; in Asia, we observe national strategies rather than a coordinated regional strategy. Australia is currently working on a local taxonomy.

#### **Emission sources**

Around 80% of the building sector's emissions are operational emissions from energy consumption for space heating, water heating, cooking, cooling, electric appliances. The remaining 22% are embodied emissions which represent upstream emissions linked to building materials and construction.

In the commercial real estate sector, the emission intensity and breakdown is highly dependent on the type of commercial activities undertaken (office, retail, etc.).

DECARBONISATION LEVERS (see page 50) ♪ ☆ ★ ◇





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### **1. SECTOR DYNAMIC**

This decade is crucial for implementing the measures required to achieve the NZE Scenario. Energy efficiency and phasing out fossil fuels are key drivers to decarbonise buildings.

#### Decarbonisation levers<sup>(1)(2)(3)(4)</sup>

Four main challenges lie ahead for decarbonising the commercial real estate sector:

- Deploying massively best-in-class building management practices. Building management practices and technologies such as building automation and smart energy management systems can lead to up to 35% of energy savings at a very competitive cost;
- Increasing the pace of the energy renovation of the existing building stock.
   Since today's buildings will represent around 80% of the total building stock in 2050, ramping up the renovation rate is essential to reach net zero by 2050;
- Scaling-up deep renovation. The IEA estimates that retrofitting 20% of the existing building stock to a zero-carbon-ready level by 2030, through deep renovation, is necessary to reach the NZE scenario. This means achieving an annual deep renovation rate of 2.5% from now to 2030 and beyond. Currently, the annual renovation rate is of 1% and most of these are shallow renovations;

Ensuring new buildings are as energy efficient as possible. New buildings will be operating in the next decades and will likely not undergo significant renovation before 2050. They therefore need to be already aligned with net-zero scenario requirements. Minimum performance standards and building energy codes therefore need to be implemented and strengthened across countries.

Two main levers are identified in the NZE scenario to reduce the building sector's operational emissions:

- Energy efficiency which includes behavioural changes, improved building envelope, energy-efficient appliances and material-efficient building design but also digitalisation and efficient energy management;
- Fuel switch which includes electrification (e.g. through heat pumps) and the switch to renewable sources. In the NZE scenario, fossil fuels reach 2% of final energy consumption in 2050 while the consumption's share increases to 66%.

#### ENERGY INTENSITY OF COMMERCIAL BUILDING BY BUILDING TYPE<sup>(5)</sup> (KWH/M<sup>2</sup>/Y)



### DIRECT CO<sub>2</sub> EMISSIONS REDUCTIONS BY MITIGATION MEASURE IN BUILDINGS IN IEA'S NZE SCENARIO<sup>(1)</sup>



<u>IEA, Net Zero by 2050.</u> (2) <u>IEA, Buildings.</u> (3) <u>WBCSD, Net-Zero Buildings.</u>
 <u>IEA, Net Zero Roadmap: A global Pathway to Keep the 1.5°C Goal in Reach.</u>
 <u>UNEP, Global status report for building and construction, 2022.</u>

### 2. ALIGNING COMMERCIAL REAL ESTATE

With renovation and energy efficiency being the major levers to reduce emissions in the real estate sector, allocating more financings and services to the decarbonisation of the sector will be key to reach the net-zero objectives.

#### Scope

#### BOUNDARY

Societe Generale activities encompass many types of commercial real estate financing, asset classes, geographies and clients. The initial scope for portfolio alignment is limited to the financing of real estate for professional investors as identified by the Q4 2022 ACPR Survey of Real Estate Professionals.

Are included in the boundary buildings used for commercial purposes where the building owner / investor leases, uses, or operates the property to conduct income generating activities. This includes offices, warehouses, industrial buildings, hotel, retail, healthcare, student accomodations as well as residential multifamily properties.

#### EMISSIONS

The scope is limited to the operational phase of the building i.e. scope 1 emissions (e.g., use of natural gas or heating oil for heating purposes) and indirect Scope 2 emissions (linked to electricity usage or district heating). Emissions are based on a whole building approach i.e. including tenants consumption. Embodied emissions released during the lifecycle of building materials (including extraction, manufacturing, transport, construction, and disposal) are excluded due to limited data availability.

#### FINANCING ACTIVITIES

All loan-related products are included. General purpose and dedicated loans are included. Market products, in particular CMBS are excluded.

#### Methodology

#### CALCULATION METHODOLOGY

Portfolio weight approach:

Portfolio Emission Intensity =  $\frac{\sum_{n} Emission Intensity_n \times Financing_n}{\sum_{n} Financing_n}$ 

Where **n** stands for credit loan wheter secured or unsecured

#### SCENARIO

#### CRREM v2.02

The Carbon Risk Real Estate Monitor's Second Version provides geographical and asset level scenarios.

As the IEA Net Zero by 2050 scenario does not provide country and asset type specific pathways, the Group decided to select CRREM V2.02 as the reference scenario. The CRREM is based on the IEA's estimations for global pathways and is consistent with the IEA NZE scenario.

#### METRICS

Emission intensity metric:  $kgCO_2e/m^2$ 

Scope 1 & Scope 2 emissions (kgCO<sub>2</sub>e) Surface area (m<sup>2</sup>)

#### **KEY ASSUMPTIONS AND LIMITATIONS**

Limited data is currently available on the actual energy and emission performance of assets and clients in Societe Generale's portfolio. Energy Performance Certificates are currently being collected; however, in the meantime, and in the absence of a mature data provider for this sector, proxies from CRREM were used to estimate Societe Generale's baseline. The proxies are calculated based on country and asset type distribution.

#### **Target & Progress**

BASELINE & TARGET				
kgCO2e/m²	<b>2022</b> <sup>(1)</sup>	2030 <sup>(2)</sup>	% reduction	
Societe Generale Portfolio	49	18	63%	



#### DATA PROVIDERS

CRREM: Carbon Risk Real Estate Monitor V2 (2023) intensity emissions

(1) 2022 baseline was estimated based on proxies applied to Societe Generale portfolio distribution by country and asset type. (2) 2030 target is reliant on portfolio mix and shall be adapted accordingly with the corresponding CRREM targets in case of change of the mix. Based on the current portfolio mix (asset type and country), it translates into a target of 18 kgCO<sub>2</sub> e/m<sup>2</sup>. Our ability to reach the target by 2030 will be highly dependent on new rules and incentives from policy makers, as well as more homogenized energy efficiency standards.

### **3. TAKING ACTION TO SHIFT**

#### **Clients and assets**

- Societe Generale will further engage concrete actions with clients to accompany their transition and to steer our portfolio:
- At client level: assess the transition strategy of clients,
- At transaction level: improve the collection of performance data of the assets financed and evaluate the decarbonation plan for under-performing assets,
- Further develop the offer to finance the decarbonation of the sector (e.g renovation).
- Under the Shift initiative, bankers from different business lines and geographies have been working together to:

- Build expertise around energy efficiency buildings and related topics: from optimised asset management, to building retrofits in a view to help real estate clients implementing new business models regarding energy sourcing/production, energy efficiency and EV charging stations;
- Understand challenges faced by the industry in their decarbonisation journey: the ability to collect usage data at scale, the necessity of tenants' engagement, the lack of consistent framework among jurisdictions (etc.);
- Identify concrete levers/solutions to contribute to the decarbonisation of Commercial Real Estate sector, including through value-added partnerships when relevant.
- Leveraging on the expertise built, bankers will accompany the transition on Commercial Real Estate sector through a comprehensive view on clients' decarbonisation pathway while offering relevant innovative solutions. Societe Generale structures Green, Social. Sustainability-Linked Loans / Bonds, supported by ambitious transition indicators. We are also planning to structure Transition and Brown-to-Green financings.

#### Industry and peers

- Societe Generale has been engaged in the NZBA real estate sector through a leading role.
- The Group also acts as member of some sector initiatives with initiatives such as Observatoire de l'Immobilier Durable, IFPImm, AFREXIM.



. . . . . . . . . . . . . .

JÉRÔME GATIPON BACHETTE GLOBAL HEAD OF REAL ESTATE STRUCTURED FINANCE

"While a guarter of the building sector

emissions stems from Commercial Real Estate, our priority within Societe Generale is to pro-actively engage our clients in their transition and decarbonisation strategy by 2030 while addressing their needs through tailored financing and adapted sustainable solutions to preserve the financed assets' cashflow and value. In a fast-evolving Real Estate market, the collective involvement and commitment of all real estate players, including lenders, will be essential to further support the Net-Zero transition of the sector." .....

### **Flagship deals**

Societe Generale supports the transition of the real estate sector and the improvement of construction and renovation practices, designing financial support for public institutions and private companies.

.....

FREY

FREY

Sustainability-Linked

2023

EUR 80,000,000

Co-arranger

FRANCE

Through innovative financing project, with a positive impact, both socially and environmentally, Societe Generale acted, in 2022, as sole mandated lead arranger, sole underwriter and green structuring agent for a 7-year EUR 185 million non-recourse

..... 

financing to accompany EQT

Logement Accessible Français ion-recourse Mortgage-backed EUR 185,000,000 Sole MLA, Underwriter, Hedge Provider, Lender, Facility & Green Structuring Agent FRANCE

mortgage-backed Green

Exeter and Mobicap for the development of a portfolio of 50 Mobicap residences specially designed for people with reduced mobility, with high ESG standards.

In 2023, Societe Generale supported the real estate company FREY for its EUR 80 million Sustainability Linked Loan based on three environmental indicators:

- Certification of its asset portfolio: attaining the BREEAM<sup>(1)</sup> certification level Very Good for the assets under construction and BREEAM In-Use certification for the assets in operation;
  - Installation of electric vehicle charging infrastructure to reduce its users' carbon footprint;
  - Reduction of its CO<sub>2</sub>e emissions (including all scopes, in validation process by SBTi.

In addition, Societe Generale helps its real estate clients in pursuing their climate engagements. For example, in 2022, the Group supported INEA in its EUR 120 million Sustainability Linked Loan based on ..... two indicators:

- Reduction of its portfolio's inĕa

2022



Co-arranger

FRANCE

energy consumption, to align with the 'Dispositif Eco-énergie tertiaire' 2030 objectives; Reduction of the non-recycled waste share in its assets under exploitation.

In 2022, the Group acted as Mandated Lead Arranger, underwriter and Senior Lender and Green Advisor ..... INVESTCORP Project Grain Headquarter - IFAD

Non-recourse Mortgage-backed Real Estate Green Financing EUR 69,500,000 MLA, Underwriter, Senior Lender, Green advisor, Agent and Hedge ITALY MAR 2022 of a EUR 69.5 million nonrecourse mortgage-backed Green financing provided to Investcorp to acquire a LEED platinum<sup>(2)</sup> building to accommodate the International Fund for Agricultural Development.

(1) BREEAM In-use certification is a performance standard assessing the asset and management performance of a building. (2) LEED certification provides a framework for healthy, highly efficient and cost-saving green buildings based on social, environmental and governance indicators.

# APPENDIX

Key facts and figures	89
Cross reference table - GFANZ	90
Cross reference table - TCFD	92
The three carbon scopes defined by the GHG Protocol	94
Public or private initiatives to which the Group	95
Disclaimer	96

### KEY FACTS AND FIGURES

#### We take decisive steps on Oil & Gas

- Highly ambitious reduction targets on Oil & GAS exposure far beyond the IEA scenario:
- -80% upstream exposure by 2030 vs. 2019, with an intermediary step in 2025 at -50% vs. 2019
- Stop financing upstream Oil & GAS pure players and new greenfield projects
- Reinforce engagement with Oil & GAS clients based on their transition ambitions

#### Launch of EUR bn

Transition Investment Fund focused on:

- Energy transition
- Nature-based solutions
- Impact-driven investments for the UN SDGs

#### EUR 300bn to support sustainable finance 2022-2025. At the end of 2022, the Group had contributed more than €100 billion.

#### BoursoBank

Our Subsidiary BoursoBank becomes a **B** Corp

B

#### We set portfolio alignment targets on the most emissive sectors



#### We cut down our own operations GHG emissions

by -35% at end 2022 in line with our objective of

-50% by 2030 vs. 2019.

#### We roll out:

- an ambitious ESG training plan: +150 modules, a reskilling programme, a 5 levels of training framework:
- and a wide acculturation campaign including the objective to deploy the Climate Fresk to 30% of our employees by end 2024: +23,000 employees trained (Oct. 2023) thanks to +500 internal animators.

#### We have been rewarded



Best Investment Bank for Sustainable Financing



ESG Infrastructure Bank of the Year – Global and APAC

Outstanding Leadership

in Sustainable Project

ESG Infrastructure

& Energy Bank Award

Finance in Western Europe

#### 2023 Global 100 Ranking Table

#### Societe Generale ranked for the **1**<sup>st</sup> time

as one of the world's Top 100 most sustainable companies in the world

#### We are well recognised by extra-financial rating agencies

Agencies	Best		:	Score	è	٧	Vorst	Position versus peers
MSCI ESG Research		AA	A	BBB	BB	В	CCC	TOP 5% Banks Worldwide
SUSTAINALYTICS a Morningstar company	0 Low risk	19.6	30	40			80	TOP 14% Banks Worldwide
Moody's   es	100	69	50		30		0	TOP 1% All Companies Worldwide
Member of Dow Jones Sustainability Indices Powered by the E&P Global CEA	100	69	50		30		0	TOP 5% Banks Worldwide
ISS <mark>E</mark> SG	A+	C+	С	C-	D+	D	D-	TOP 10% Banks Worldwide

NB: Numbler of companies in each agency universe: MSCI 198 banks; S&P CSA 697 banks; Sustainalytics 366 bank: Moody's ESG Solutions 4.882 companies: ISS ESG 285 banks.

(1) Absolute CO<sub>2</sub> scope 1 and 2 over the whole O&G chain and scope 3 of the upstream segment, (2) Designed by the Sustainable Steel Principles and recognised by the NZBA the alignment score distinguishes between the primary and secondary steel pathways and evaluates a borrower's alignment against two 1.5°C scenarios 'the IEA NZE and the Mission Possible Partnership's Technology Moratorium scenario) depending on its scrap charge. A score of zero or below zero means that a company is aligned with the IEA NZE and MPP scenarios, (3) The cement industry will require technologies (for ex., carbon capture) that are not mature enough to accelerate its decarbonisation. (4) 2022 baseline was estimated based on proxies applied to Societe Generale portfolio distribution by country and asset type. (5) 2030 target is reliant on portfolio mix and shall be adapted accordingly with the corresponding CRREM targets in case of change of this mix. Based on the current portfolio mix (asset type and country), it translates into a target of 18 kg CO.,e/m<sup>2</sup>.

### CROSS REFERENCE TABLE - GFANZ

GFANZ RECOMMENDATION	CHAPTER	PAGE NUMBER			
FOUNDATIONS:					
Organisation 's overall approach to net zero including specific objectives and timelines	Metrics and targets: ALIGNING OUR PORTFOLIO WITH TRAJECTORIES BASED ON SCIENCE	45			
GOVERNANCE:					
<ul> <li>Roles, responsibilities, and remuneration: define board and senior management roles so they have ownership and oversight of net-zero targets, assign individuals and teams to all aspects, regularly review transition plan and update where required.</li> </ul>	Governance - THE BOARD OF DIRECTORS VALIDATES THE CLIMATE STRATEGY PROPOSED BY THE GENERAL MANAGEMENT AND OVERSEES ITS IMPLEMENTATION Governance - THE GENERAL MANAGEMENT DRIVES AND EXECUTES THE CSR AMBITION Governance -THE SUSTAINABLE DEVELOPMENT DEPARTMENT ORGANISES AND ANIMATES ESG TOPICS INCLUDING THE GROUP JOURNEY TO NET ZERO Governance -THE BUSINESS UNITS AND SERVICE UNITS EMBED TRANSITION MATTERS WITHIN THEIR OWN MANDATES	8 9 9 10			
Skills and culture: providing training and development for those implementing and overseeing the plan and implement a change management programme to embed the transition plan in the organisation's culture and practices	Governance - THE BOARD OF DIRECTORS VALIDATES THE CLIMATE STRATEGY PROPOSED BY THE GENERAL MANAGEMENT AND OVERSEES ITS IMPLEMENTATION Strategy - A GROUP TRANSFORMATION PLAN TO SUPPORT THE IMPLEMENTATION OF OUR CSR STRATEGY: BUILDING TOGETHER	8 15			
STRATEGY:					
Implementation strategy					
<b>1. Products and services:</b> aligning existing and new with a 1.5°C pathway, providing education and advice, and supporting portfolio decarbonisation.	Strategy - SUPPORT OUR CLIENTS IN THEIR ENVIRONMENTAL TRANSITION	24 to 31			
<b>2. Activities and decision making:</b> embedding net-zero objectives in decision-making processes.	Strategy - OPERATIONALISATION PROGRAMME "ESG BY DESIGN": EMBED ESG IN OUR PROCESSES AND TOOLS Strategy - MANAGING THE IMPACT OF OUR ACTIVITIES BY APPLYING A ROBUST E&S FRAMEWORK	17 34			
3. Policies and conditions: establishing and applying on priority sectors and activities.	Strategy - MANAGE THE POTENTIAL CLIMATE IMPACT OF ACTIVITIES	32 to 35			

### CROSS REFERENCE TABLE - GFANZ

GFANZ RECOMMENDATION	CHAPTER	PAGE NUMBER
Engagement strategy		
<b>1. Clients and portfolio companies:</b> providing feedback and support to clients and portfolio companies to encourage net zero-aligned transition strategies and having an escalation framework with consequences if engagement is not effective.	Strategy - ESG ACCULTURATION CAMPAIGN: A MAJOR LEVER TO MAKE TRANSFORMATION EFFECTIVE Strategy - FOSTER CLIENT ENGAGEMENTAND SUPPORT TRANSITION STRATEGIES Strategy - SUPPORTING LARGE CORPORATES IN THEIR ENVIRONMENTAL TRANSITION	16 19 27
<b>2. Industry:</b> engage with peers to exchange expertise, work on common challenges, and represent cohesive views to external stakeholders.	Strategy - WORKING WITH OUR PEERS AND INDUSTRIES TO DEVELOP COMMON STANDARDS	20
<b>3. Government and public sector:</b> ensure that lobbying and does not contravene net-zero commitments, review the same for portfolio companies and use engagement levers to encourage consistency.	Strategy - WORKING WITH POLICY-MAKERS TO UNLOCK THE TRANSITION	21
METRICS AND TARGETS:		
Metrics and targets: set targets that support net-zero strategy and priorities (including managed phaseout where relevant) and monitor a range of metrics to assess progress.	Metrics and targets	46 to 87

### CROSS REFERENCE TABLE - TCFD

TCFD RECOMMENDATION	CHAPTER	PAGE NUMBER
GOVERNANCE:		
<b>a.</b> Describe the way in which the Board of Directors supervises climate-related risks and opportunities.	Governance - THE BOARD OF DIRECTORS VALIDATES THE CLIMATE STRATEGY PROPOSED BY THE GENERAL MANAGEMENT AND OVERSEES ITS IMPLEMENTATION	8
<b>b.</b> Describe the management's role in assessing and managing climate-related risks	Governance - THE BOARD OF DIRECTORS VALIDATES THE CLIMATE STRATEGY PROPOSED BY THE GENERAL MANAGEMENT AND OVERSEES ITS IMPLEMENTATION Governance - THE GENERAL MANAGEMENT DRIVES AND EXECUTES THE CSR AMBITION	8 9
and opportunities.	Governance -THE SUSTAINABLE DEVELOPMENT DEPARTMENT ORGANISES AND ANIMATES ESG TOPICS INCLUDING THE GROUP JOURNEY TO NET ZERO	9
	Governance -THE BUSINESS UNITS AND SERVICE UNITS EMBED TRANSITION MATTERS WITHIN THEIR OWN MANDATES	10
STRATEGY:		
<b>a.</b> Describe the short-, medium- and long-term climate-related risks and opportunities identified by the Company.	Strategy - MANAGE CLIMATE-RELATED RISKS Risk Management - INCORPORATING CLIMATE RISKS IN THE RISK MANAGEMENT FRAMEWORK Metrics and targets: ALIGNING OUR PORTFOLIO WITH TRAJECTORIES BASED ON SCIENCE	36 to 37 40 to 42 45
<b>b.</b> Describe the impact of climate-related risks and opportunities on the Company's activities, strategy and financial planning.	Strategy - OPERATIONALISATION PROGRAMME "ESG BY DESIGN": EMBED ESG IN OUR PROCESSES AND TOOLS Strategy - SUPPORT OUR CLIENTS IN THEIR ENVIRONMENTAL TRANSITION Strategy - MANAGE THE POTENTIAL CLIMATE IMPACT OF ACTIVITIES	17 24 to 31 32 to 35
<b>c.</b> Describe the resilience of the Company's strategy, taking into account the different climate scenarios, including the global warming scenario of no more than 2 °C.	Risk Management - INCORPORATING CLIMATE RISKS IN THE RISK MANAGEMENT FRAMEWORK	40 to 42

### CROSS REFERENCE TABLE - TCFD

GFANZ RECOMMENDATION	CHAPTER	PAGE NUMBER
RISK MANAGEMENT:		
<b>a.</b> Describe the processes implemented by the Company to identify and assess climate-related risks.	Risk Management - INCORPORATING CLIMATE RISKS IN THE RISK MANAGEMENT FRAMEWORK Risk Management - PROCESSES AND TOOLS FOR IDENTIFYING AND MANAGING CLIMATE RISK	40 to 42 42 to 43
<b>b.</b> Describe the processes implemented by the Company to manage climate-related risks.	Strategy - OPERATIONALISATION PROGRAMME "ESG BY DESIGN": EMBED ESG IN OUR PROCESSES AND TOOLS Risk Management - PROCESSES AND TOOLS FOR IDENTIFYING AND MANAGING CLIMATE RISK	17 42 to 43
<b>c.</b> Describe the way that the processes used to identify, assess and manage climate-related risks are incorporated into the Company's overall risk management framework.	Risk Management - INCORPORATING CLIMATE RISKS IN THE RISK MANAGEMENT FRAMEWORK	40 to 42
METRICS AND OBJECTIVES:		
<b>a.</b> Provide the metrics used by the Company to evaluate climate-related risks and opportunities in the context of its strategy and risk management processes.	Risk Management - INCORPORATING CLIMATE RISKS IN THE RISK MANAGEMENT FRAMEWORK Metrics and targets - ALIGNMENT METHODOLOGY Metrics and targets - OUR APPROACH SECTOR BY SECTOR	40 to 42 53 to 57 59 to 87
<b>b.</b> Describe the scopes 1 and 2 and, where relevant, scope 3 greenhouse gas emissions and the related risks.	Metrics and targets - OUR APPROACH SECTOR BY SECTOR	59 to 87
<b>c.</b> Describe the objectives set as part of the management of climate-related risks and opportunities and the results obtained in relation to these objectives.	Metrics and targets - CLIMATE ALIGNMENT DASHBOARD: OVERVIEW OF TARGETS SET Metrics and targets - OUR APPROACH SECTOR BY SECTOR ("Target & Progress" section of each sector)	56 to 57 59 to 87

### THE THREE CARBON SCOPES DEFINED BY THE GHG PROTOCOL

We apply the vision and recommendations of the GHG Protocol looking at the entire value chains of the sectors we cover.



#### THE DECARBONISATION OF A SECTOR REQUIRES THE TRANSITION OF ITS ENTIRE VALUE CHAIN

Each value chain encompasses the entire life-cycle of a product or service, including raw material extraction, manufacturing, distribution, use, and disposal. Decarbonising the value chain allows for the evaluation and reduction of emissions associated with upstream suppliers and downstream consumers.

#### **SCOPE 1**

facilities

co,

Production

Emissions refer to direct emissions from sources owned or controlled by a company or organisation.



Emissions cover indirect emissions from the generation of purchased electricity, heat, or steam.

Electricity

grid

#### **SCOPE 3**

Emissions encompass all other indirect emissions that occur along the value chain: emissions from raw material extraction, transportation, product use, and disposal.



E.g. Power purchased from the electricity grid



#### E.g.

Investment (financed emissions) Use of Sold Products (combusting fuels sold to end clients) Upstream & Downstream Transportation and Distribution (purchased logistic services) Employee Commuting and Business Travel

### PUBLIC OR PRIVATE INITIATIVES TO WHICH THE GROUP IS COMMITTED OR ENGAGED IN:



#### Net-Zero Banking Alliance (NZBA) (2021)

Societe Generale is a founding member of the Net-Zero Banking Alliance, bringing together 53 banks worldwide to align their lending and investment portfolios with net-zero emissions by 2050.

www.unepfi.org/net-zero-banking/

#### Net-Zero Asset Owner Alliance (NZAOA) (2021)

Societe Generale Assurances reinforces its commitments on climate by joining the Net-Zero Asset Owner Alliance (NZAOA). Launched in September 2019 at the United Nations Climate Action Summit, the NZAOA gathers institutional investors who have committed to ensure the transi tion of the carbon emissions of their investment's portfolio to net-zero by 2050.

www.unepfi.org/net-zero-alliance/

#### Principles for Responsible Banking (PRB) (2019)

Societe Generale is a founding signatory of the Principles for Responsible Banking (PRB), signed by 130 banks worldwide. Officially presented at the UN General Assembly in September 2019, these principles aim to define the role of the banking sector in building a sustainable future, in line with the United Nations Sustainable Development Goals.

www.unepfi.org/banking/bankingprinciples/

#### **Collective Commitment to Climate Action (2019)**

Societe Generale is a founding signatory of the Principles for Responsible Banking (PRB), signed by 130 banks worldwide. Officially presented at the UN General Assembly in September 2019, these principles aim to define the role of the banking sector in building a sustainable future, in line with the United Nations Sustainable Development Goals.

www.unepfi.org/banking/bankingprinciples/

#### **Collective Commitment to Climate Action (2019)**

We have also joined in 2019 the Collective Commitment to Climate Action, signed by 34 banks to align their lending with the objectives of the Paris Agreement on Climate.

www.unepfi.org/banking/bankingprinciples/collective-commitment/

#### **Positive Impact Finance (2016)**

Societe Generale has pioneered the creation of the UN's Positive Impact initiative which seeks to provide a common language and developing new solutions to finance the Sustainable Development Goals along with its clients.

#### UNEPFI: TCFD pilot (2017-18)

We participated in the Phase 1 of the TCFD pilot during 2017 and 2018 and contributed to the summary report reports produced on transition and physical risks.

www.unepfi.org/banking/tcfd/

#### Finance for Biodiversity Pledge

#### Finance for Biodiversity Pledge (2022)

Societe Generale Assurances and Societe Generale Private Banking signed the Finance for Diversity Pledge to commit to protecting and restoring biodiversity through their finance activities and investments by collaborating and sharing knowledge, engaging with companies, assessing impact, setting targets, reporting publicly on the above before 2025.

https://www.financeforbiodiversity.org/

#### Act4nature international Commitments (2022)

Initiative led by Entreprise pour l'Environnement (EpE), 10 common commitments and Specific, Measurable, Attainable, Relevant, and Time-bound (SMART) individual commitments in favour of nature.

https://www.act4nature.com/



#### Voluntary application of the EU Taxonomy (2019)

Societe Generale joined this working group aiming to provide high-level recommendations on the voluntary application of the EU taxonomy to core banking products.

www.ebf.eu/sustainable-finance/high-level-recommendations-on-thevoluntary-application-of-the-eu-taxonomy-to-core-banking-products/

#### Paris Agreement Capital Transition Assessment (PACTA) pilot (2019)

Societe Generale participated in 2018 in the pilot test of the PACTA tool, developed by 2DII that provides a forward-looking analysis of the transition in key sensitive sectors. https://2degrees-investing.org/resource/pacta/



GLOBAL

ARITIME

FORUM

#### Katowice Commitment (2018)

Societe Generale, with BBVA, BNP Paribas, ING, and Standard Chartered committed to align our lending portfolios with the goals of the Paris Agreement. We have collaborated with the think tank 'The 2° Investing Initiative'.

https://2degrees-investing.org/the-katowice-commitment-one-year-on/

#### Poseidon Principles (2019)



www.poseidonprinciples.org/

#### Getting to Zero coalition (2019)

Societe Generale also announced that it had joined the Getting to Zero coalition, which aims to develop and deploy commercially viable deep-sea zero-emission vessels by 2030. www.globalmaritimeforum.org/getting-to-zero-coalition/

### DISCLAIMER

This document is for information purposes only and is not intended to be comprehensive. It does not constitute investment, legal or tax advice. In no event shall the Group be liable for any use by any party of this document, for any decision made or action taken by any party in reliance upon, or for any inaccuracies or errors in, or omissions from, information contained in the document. This document is for information purposes only and is not intended to be comprehensive. It does not constitute investment, legal or tax advice. In no event shall the Group be liable for any use by any party of this document, for any decision made or action taken by any party of this document, for any decision made or action taken by any party in reliance upon, or for any inaccuracies or errors in, or omissions from, information contained in the document. In case of inconsistencies between this document and the Group's sectoral policies (publicly available on Société Générale's institutional website), the latter shall prevail.

## Targets and forward-looking statements

This document contains climate metrics, targets, and forward-looking statements that require special attention about their use in decision-making. They are based on the current beliefs and expectations of the management of the Group and are subject to significant risks and uncertainties, many of which are beyond the Group's control. There is no assurance that expected results or actions be in line with the targets and forward-looking statements contained in this document. These targets and forward-looking statements are expressed as of the date of the document and the Group undertakes no obligation to publicly revise or update them in light of new information or future events.

#### Cautionary information on data, methodology & third-party verification

The data and any statements made are not guarantees or promises that any metrics, targets, or commitments will be met, and are based on current targets, commitments, estimates, assumptions, developing standard and methodologies and currently available data, which continue to evolve and develop. Some of the information included in this document have been or may have been obtained from public and other sources and the Group has not independently verified it, included the entity's greenhouse gas emissions, entity's science-based targets and emission reduction pathway. The Group makes no representation or warranty regarding its completeness, accuracy, particularly since figures included in this document have not been audited. Any claims of having achieved significant carbon reduction have not been verified by an independent third-party.

### Data quality is subject to improvements

Indicators presented in the document are calculated based on multiple internal and external data and information that are subject to measurement uncertainties. As of today, climate-related data is neither exhaustive nor broadly available while also subject to inconsistencies as is does not follow global standards. Yet, as clients increasingly adopt climate disclosure framework and reporting, the Group expects the accessibility and reliability of external data on emissions will improve over time. The indicators communicated in this document are subject to data uncertainties. Limitations in data collection, verification, and reporting as well as lack of reliable and standardised measurement techniques across the industry impede data consistency. Although improving, this situation represents a key concern for stakeholders engaged in more transparency.

## Methodologies used are still under stabilisation

Existing calculation methodology present significant challenges in terms of consistency, adoptability by industry players, and replicability across sectors. In an effort to tend towards a more market-accepted and consistent way of measuring and reporting emissions, regulatory guidance and requirements have evolved in recent years. These guidance and requirements are still under development and are expected to stabilise over time. As methodologies evolve and data improve, the Group will continue to review the impact on reported baseline which may lead to refining of calculations over time. Any opinions and estimates should thus be regarded as indicative and preliminary.

#### Definitions

The definitions and technical terms used and not defined herein have the meanings assigned to them in the universal registration document of Societe Generale.



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