



2024 **ESG at ENGIE**

**ESG**



# CONTENTS

## 00 GENERAL INFORMATION ..... P.03

---

## 01 ENVIRONMENT ..... P.11

- > CLIMATE ..... P.11
- > NATURE ..... P.37

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## 02 SOCIAL / SOCIETAL ..... P.56

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## 03 GOVERNANCE ..... P.62



# ENGIE KEY FIGURES



**98,000** Employees

**32%** Women in management

**31** Countries



**€73.8 bn**

In revenues

**€13.4 bn**

EBITDA excl Nuclear

**€15.6 bn**

EBITDA

**€7.3 bn**

In growth investments

**€25 bn**

Green bonds issued since 2014



▶ Wind and solar power in France

▶ Independent producer of hydroelectricity in Brazil

▶ Gas infrastructures operator in Europe



**48 Mt**

Of greenhouse gas emissions (scopes 1&3) from energy generation

**305,600 km**

Of gas and electricity transmission and distribution networks



**22.1 M** B2C energy supply and service contracts

**+200,000** B2B customers



▶ Hydraulic operator in France

▶ Largest developer of wind and solar power in Europe

**46 GW<sup>(1)</sup>**

Of installed capacity in Renewables (+4.2 GW in 2024)

**2.6 GW**

Of battery storage in operation

(1) Including a 0.8 GW adjustment related to a change in definition



# AN ORGANIZATIONAL STRUCTURE FOCUSED ON ENERGY TRANSITION

## NORTHAM



North America:

Canada, United States

## SOUTHAM



Central and South America:

Brazil, Chile, Colombia, Mexico, Peru

## EUROPE



Belgium, German, Italy, Netherlands, Poland, Portugal, Romania, Slovakia, Spain, United Kingdom

## FRANCE

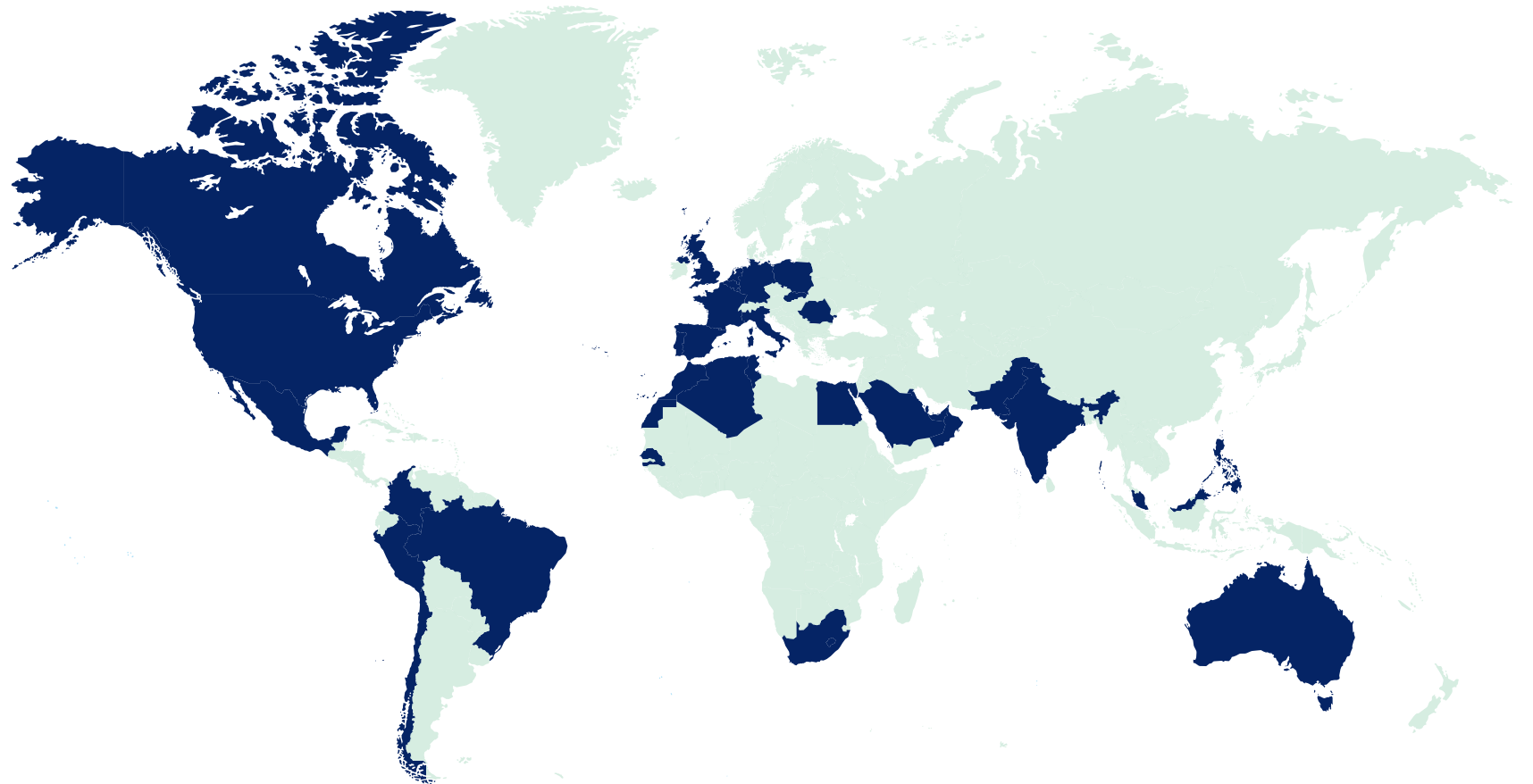


## AMEA



Asia, Middle East, Africa, Australia

India, Malaysia, Pakistan, Philippines, Singapore, Gulf Cooperation Council (Bahrain, Kingdom of Saudi Arabia, Kuwait, Oman, Qatar, United Arab Emirates), Algeria, Tunisia, Senegal, Egypt, South Africa, Morocco, Australia



● Renewables and Flex Power ● Networks ● Local Energy Infrastructures ● Supply and Energy Management ● Nuclear

# ESG IN INDUSTRIAL PROJECTS

## ➤ ESG criteria in the industrial projects' decisions an operationalization of the Group's purpose

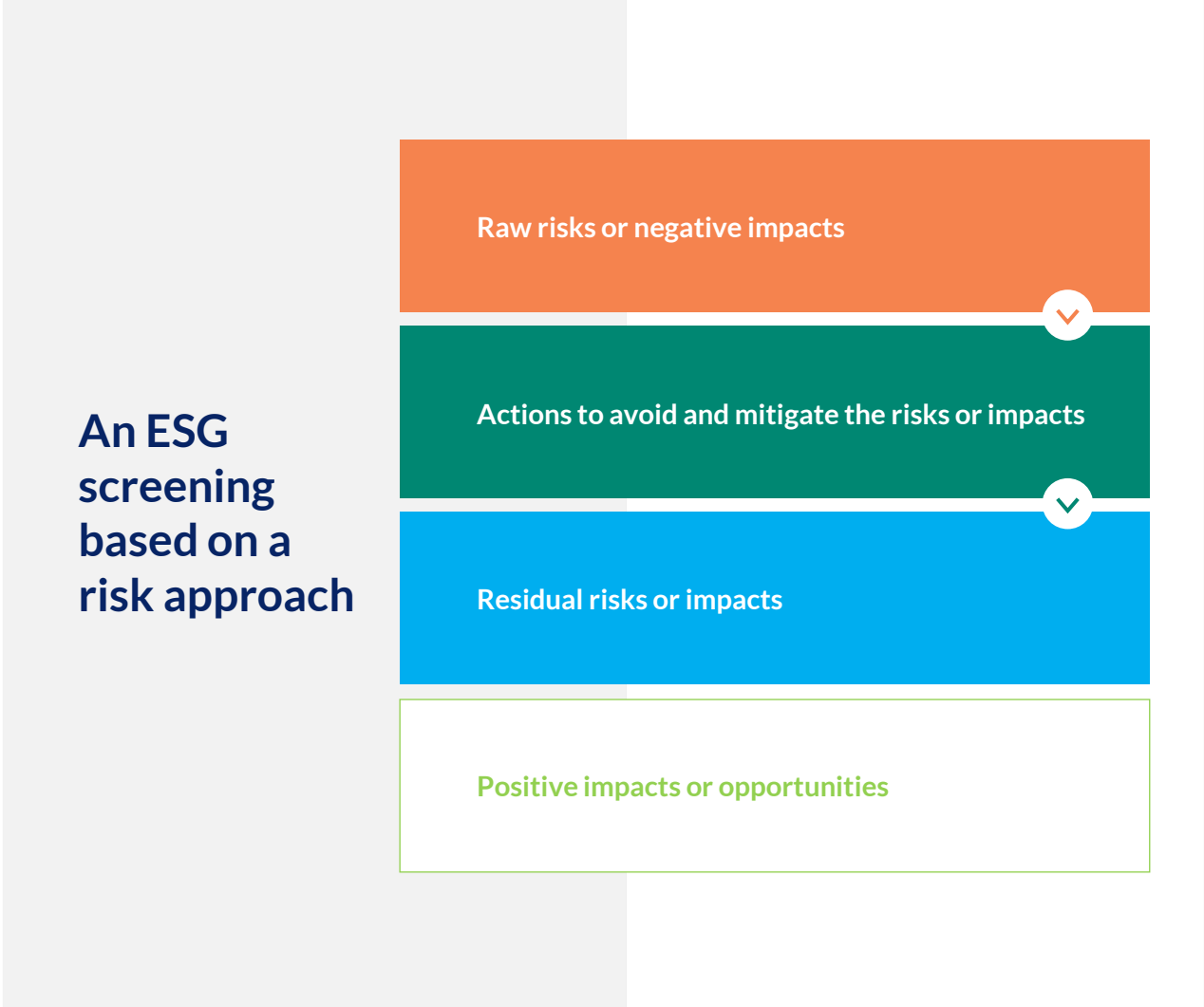
10 criteria assessed as early as possible in the projects:

- > Climate mitigation
- > Climate adaptation
- > Water
- > Biodiversity
- > Pollution
- > Circular economy
- > Stakeholders' engagement (including indigenous people and local communities)
- > Sustainable procurement
- > Just transition
- > Controversies

Results of the ESG screening reviewed during the decision committees at GBU, Group and Board levels.

**Actions identified** to mitigate the impacts and risks must respect the mitigation hierarchy 'Avoid, Reduce, Offset'.

The ESG screening will accompany the project **throughout its entire lifecycle**, from development to operation and ultimately dismantlement. It will continuously **evolve and be enriched over time**. Upon the Final Investment Decision, it will be handed over from the business developer to the project manager, serving as a crucial tool in drafting the environmental and societal plans aligned with the purpose and ESG policies of the Group.



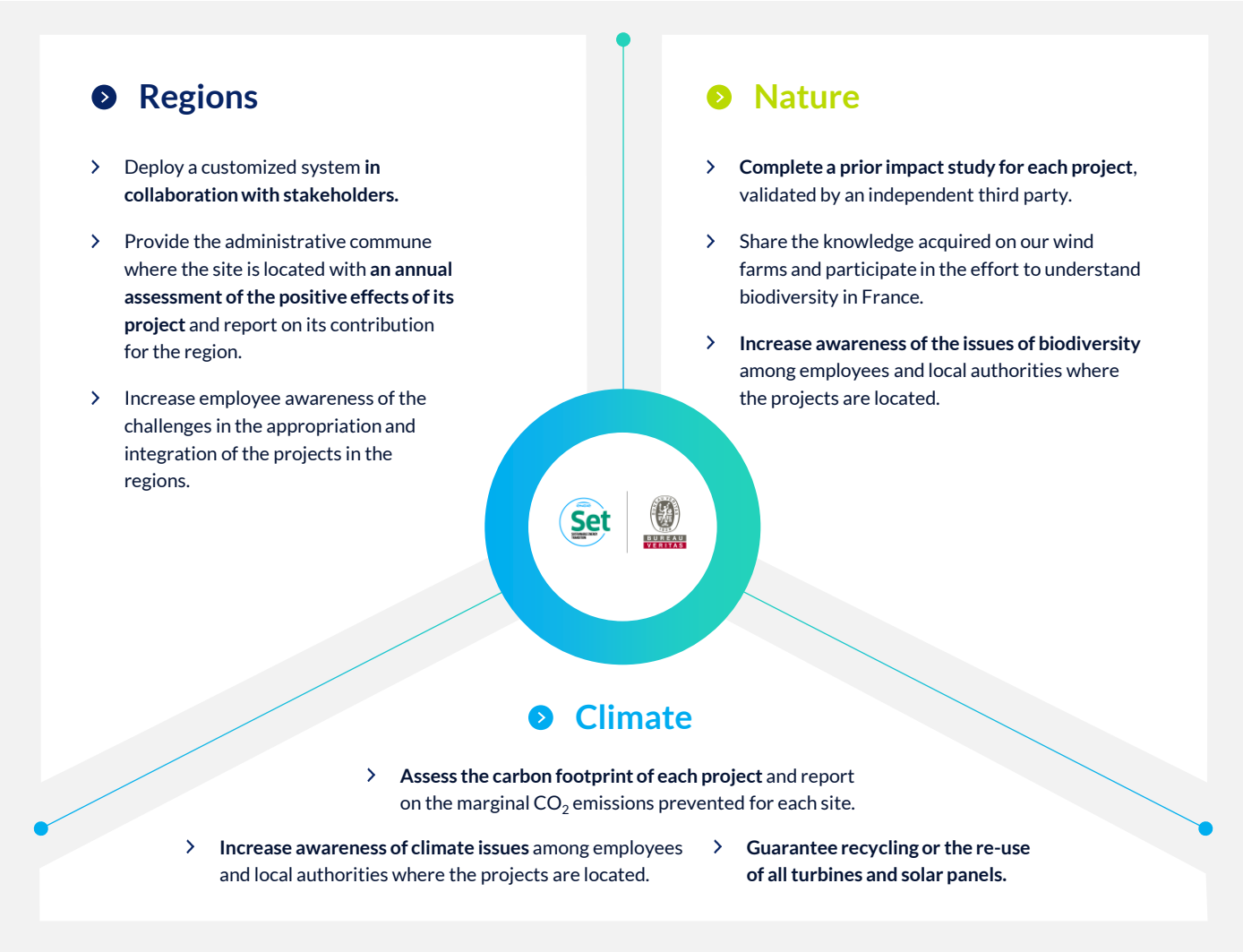
# ESG ON THE FIELD – SET LABEL



Launched in 2022, jointly designed with Bureau Veritas, SET is a label which certifies the integrity of ENGIE’s approach to its renewable energy projects.

The Group extended SET to all regions in which it develops, builds and operates solar and onshore wind projects. So far, **11 countries have been audited and certified**: France, Belgium, Brazil, South Africa, Chile, India, Mexico, Spain, Italy, the United States, and Canada, which represents nearly **85% of the onshore solar and wind activities**.

These certified countries rigorously implement the commitments stipulated by ENGIE, from the design to the decommissioning of a wind or solar project. The SET label is a real guarantee of quality and certifies the know-how of ENGIE’s employees and their commitment alongside local actors.



# ENGIE'S CONTRIBUTION TO SUSTAINABLE DEVELOPMENT GOALS

ENGIE's commitments as part of its strategy to accelerate the transition toward a carbon-neutral world are contributing to 14 Sustainable Development Goals of the UN's Agenda 2030



## 6 SDGS FOR WHICH ENGIE'S CONTRIBUTION IS KEY

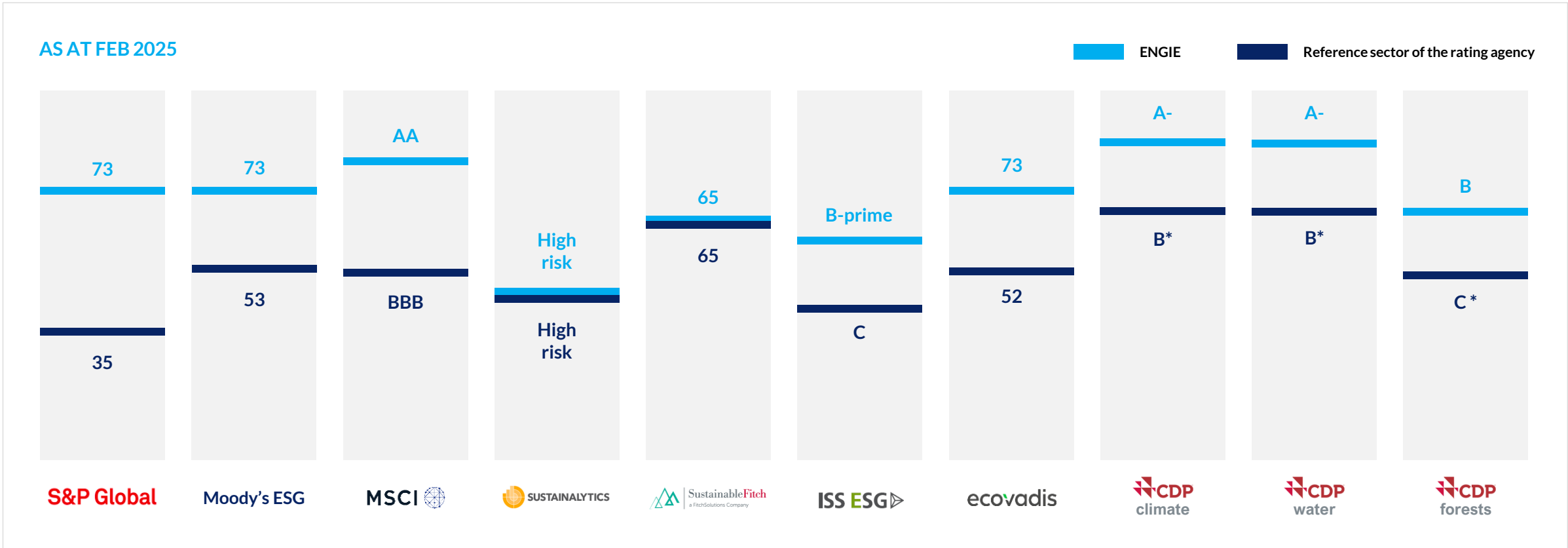
- 5 GENDER EQUALITY**  
ENGIE is committed to equal opportunities for women and men and to women fully participating and accessing managerial positions without discrimination
- 7 AFFORDABLE AND CLEAN ENERGY**  
ENGIE contributes to universal access to energy, the development of renewable energy and improved energy efficiency.
- 8 DECENT WORK AND ECONOMIC GROWTH**  
ENGIE contributes to the economic and social development of regions and prioritizes the health and safety of everyone everywhere in the world.
- 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**  
ENGIE mobilizes its R&I to modernize and green its networks and works to share value with its stakeholders.
- 11 SUSTAINABLE CITIES AND COMMUNITIES**  
ENGIE contributes to the city of tomorrow through its urban planning tools and its clean energy and services offering.
- 13 CLIMATE ACTION**  
Driven by its purpose and strategy, ENGIE promotes energy efficiency and renewable electricity production.

## 8 SDGS FOR WHICH ENGIE'S CONTRIBUTION IS SIGNIFICANT

- 3 GOOD HEALTH AND WELL-BEING**  
By increasing its clean energy generation, ENGIE improves living conditions. Its employees all benefit from social protection.
- 6 CLEAN WATER AND SANITATION**  
Access to, and preservation and rationalized use of this shared asset are incorporated into the Group's water management strategy
- 10 REDUCED INEQUALITIES**  
ENGIE contributes to local economic development by participating in a just transition and providing access to jobs without discrimination.
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION**  
Optimized use of its resources and waste and the promotion of sustainable practices in its value chain are part of ENGIE's purpose.
- 14 LIFE BELOW WATER**  
Preserving the oceans and their flora and fauna is crucial for the balance of the ecosystems. ENGIE is a signatory of the Sustainable Ocean Principles
- 15 LIFE ON LAND**  
ENGIE is committed to mitigating its impact on life on land by working for the preservation of ecosystems (act4nature - biomass).
- 16 PEACE, JUSTICE AND STRONG INSTITUTIONS**  
ENGIE excludes any form of corruption and deploys forums for dialog to improve the transparency of its communication.
- 17 PARTNERSHIPS FOR THE GOALS**  
ENGIE is forging solid relationships with a broad panel of partners and is now a recognized player in the regions.

# LATEST ENGIE ESG RATINGS

ENGIE is listed in the main extra-financial indices : Dow Jones Best-In-Class World Index, Euronext Sustainable World 120, Euronext Sustainable Europe 120, Euronext Sustainable Euro 120, Euronext Sustainable France 20 ,CAC 40 ESG, MSCI EMU ESG et Europe ESG.



\* 2023 sectorial data



# ENGIE'S PURPOSE: ALIGNING FINANCIAL AND NON-FINANCIAL PERFORMANCE

	2022 <sup>(1)</sup>	2023	2024	Objective 2030 (former objective)
<b>Planet</b> Respecting planetary limits by acting in particular for the Paris Agreement				
<b>Tier 1 objectives</b>				
GHG emissions related to energy production (Sc 1 & 3) (MtCO <sub>2</sub> e)	59.5	51.8	48.3	26/36 (43)
GHG emissions from the use of sold products (MtCO <sub>2</sub> e)	61.3	52.5	52.6	36/46 (52)
Share of renewable electricity capacities (%)	38%	41%	43%	58%/66% (58%)
Avoided GHG emissions by our products and services (MtCO <sub>2</sub> e)	28	25	36	65/85 (45)
Share of top 250 preferred suppliers (excluding energy purchase) certified or aligned SBT (%)	23%	24%	44%	100%
<b>People</b> Building a new and more inclusive world of energy together				
<b>Tier 1 objectives</b>				
Lost time injury frequency rate for Group employees, temporary workers and subcontractors (per million hours worked)	2.0	1.8	1.7	1.5 <sup>(2)</sup>
Percentage of women in Group management (%)	30%	31%	32%	40%-60%
W/M pay equity	1.73%	1.92%	1.85%	<2%
<b>Profit</b> Ensuring responsible performance shared between employees, shareholders and stakeholders				
<b>Tier 1 objectives</b>				
Economic net debt to EBITDA ratio	2.8x	3.1x	3.1x	below or equal to 4.0x
Dividend policy payout ratio	65%	65%	65%	65-75%
Guidance NRIs (€bn)	Achieved	Achieved	Achieved	objective per year



ENGIE's contribution to the Sustainable Development Goals:

■ Key contribution    ■ Relevant contribution via Tier 2 objectives

(1) Restated from EQUANS disposal

(2) This indicator has been extended from 2024 onwards to cover all people working for the Group with an increased ambition for the 2030 target from 1.8 to 1.5



▶ GENERAL INFORMATION

▶ ENVIRONMENT

▶ CLIMATE

▶ NATURE

▶ SOCIAL SOCIETAL

▶ GOVERNANCE

# 1

# ENVIRONMENT



▶ GENERAL INFORMATION

▶ ENVIRONMENT

▶ CLIMATE

▶ NATURE

▶ SOCIAL SOCIETAL

▶ GOVERNANCE

# 1

# ENVIRONMENT CLIMATE

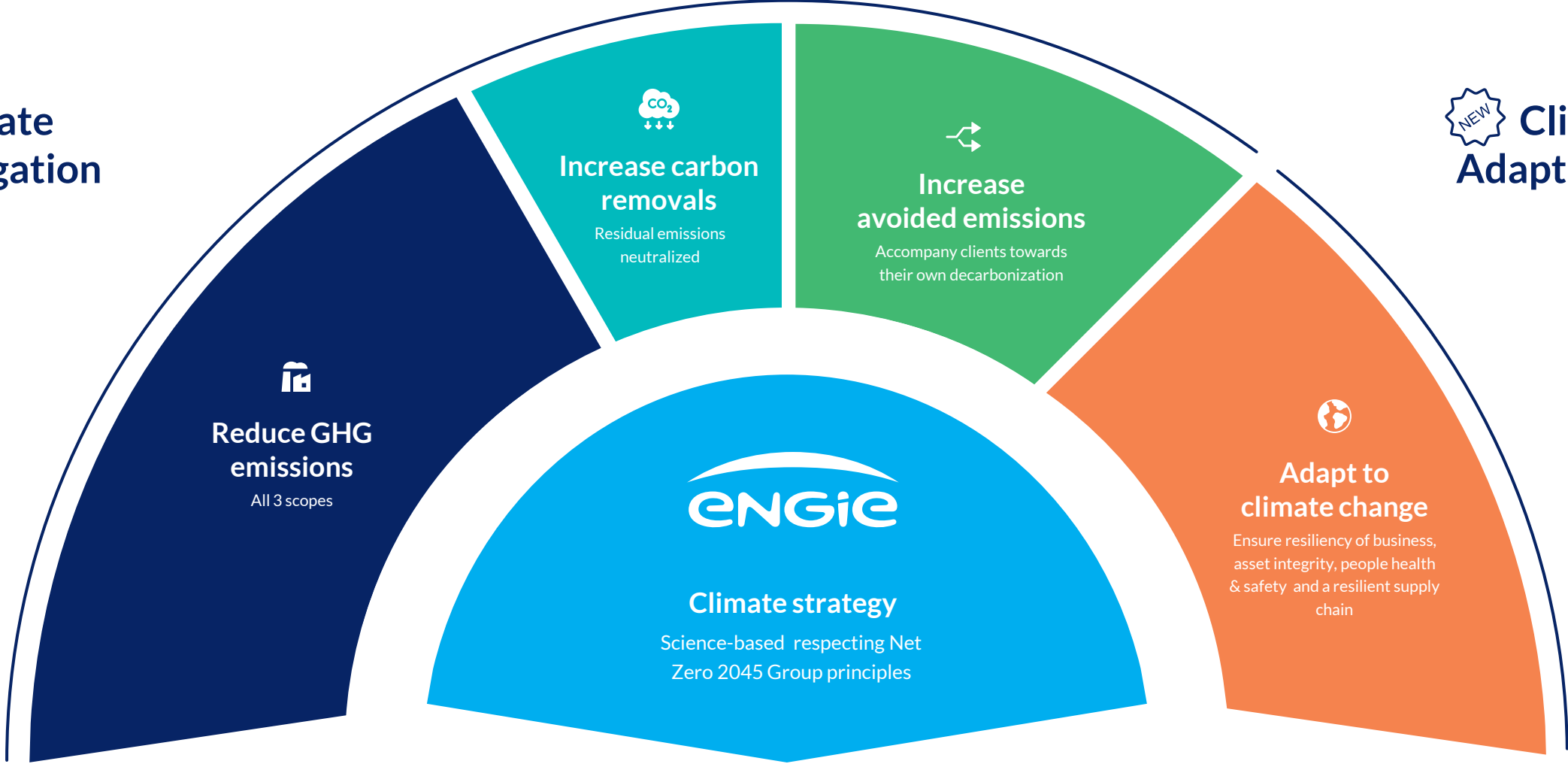
# A COMPREHENSIVE CLIMATE STRATEGY



## Climate Mitigation

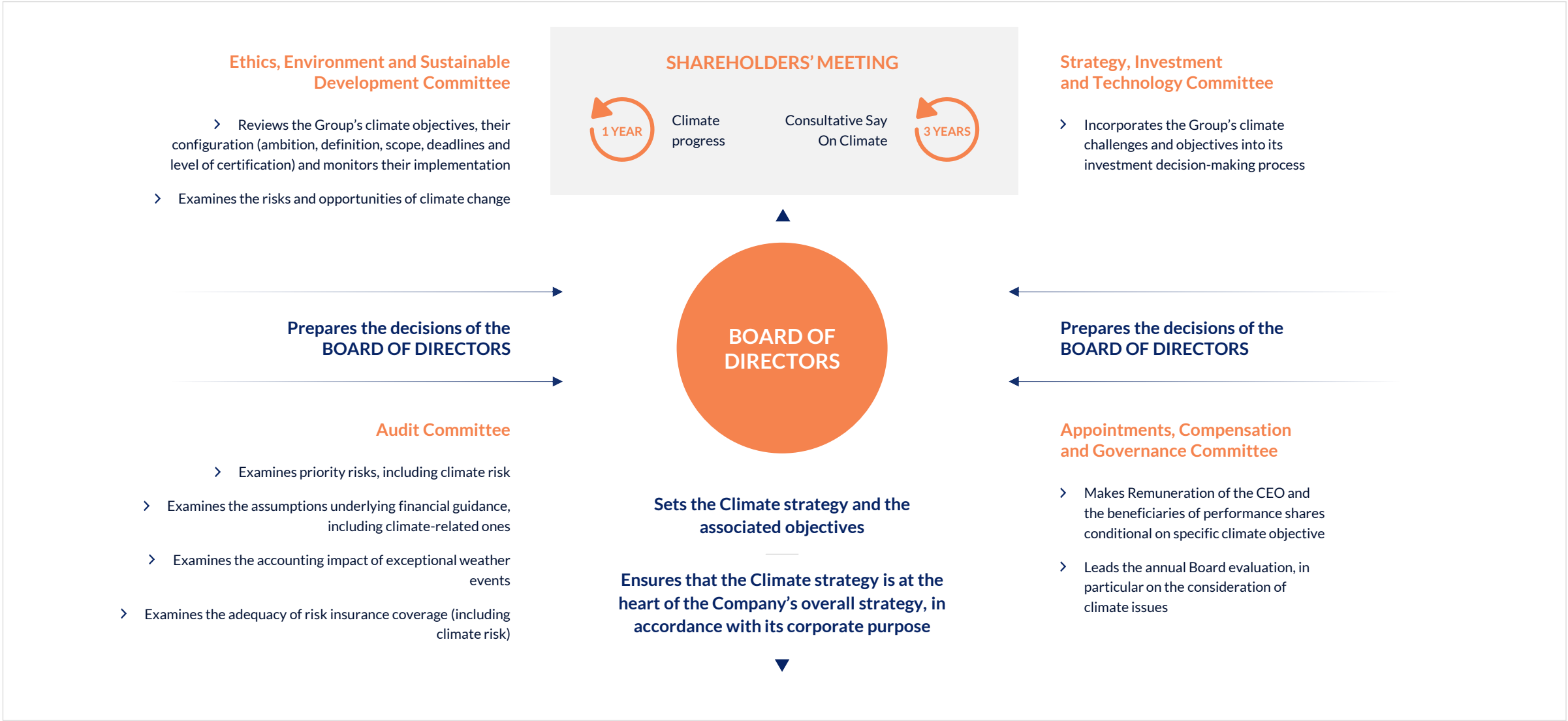


**NEW** Climate Adaptation





# CLIMATE GOVERNANCE





### Chief Executive Officer

## EXECUTIVE COMMITTEE

- › Implements the Group's Climate strategy
- › Validates the Group's Climate strategy
- › Arbitrates the Climate trajectory among GBUs
- › Supports each of the 2030 ESG objectives (including 10 climate objectives)
- › Conducts risks reviews

### Executive Vice President

in charge of General Secretariat, Strategy, Research & Innovation and Communication

### Executive Vice Presidents

in charge of the GBUs

### Executive Vice President

in charge of Finance, ESG and Procurement

#### Strategy Department

- › Defines carbon price scenarios
- › Examines the outlook for the energy markets and trends in demand

#### Ethics and Compliance Department<sup>(1)</sup>

- › Oversees the Group's vigilance plan, including climate issues

#### GBUs / entities

- › Ensure the operationalization of the Climate strategy (investments and divestments, new products, projects, etc.)
- › Deliver projects and performance in line with climate trajectories (annual CO<sub>2</sub> budget allocated by the Executive Committee) to the GBUs and follow-up every quarter

#### ESG Department



- › Defines climate policy
- › Oversees climate reporting (including TCFD)
- › Coordinates the implementation of the Climate strategy

#### Finance Department

- › Ensures that investment decisions are consistent with the Group's climate commitments through their compliance with CO<sub>2</sub> budgets and analyses including carbon pricing

(1) Reporting to the Legal, Ethics and Compliance Department

# CLIMATE STRATEGY – DETAILED UPDATED TARGETS

Main emission reduction targets	Scope (footprint coverage 2024)	2017	2023	2024	OLD 2030	TARGET 2030	TARGET 2035	TARGET 2040
Total Group GHG emissions (Mt CO <sub>2</sub> e) 	1, 2, 3 (100%)	265	158	157	n.a.	120 / 140	80 / 110	40 / 70
GHG emissions from energy generation (Mt CO <sub>2</sub> e)	1, 3.15 (31%)	107	52	48	43	26 / 36	16 / 26	7 / 17
GHG emissions from commodity (energy and fuels) <sup>1</sup> sales (Mt CO <sub>2</sub> e) 	3.3.D & 3.11 (52%)	104	81	82	n.a.	63 / 83	37 / 57	12 / 32
of which fuels <sup>2</sup> sales (Mt CO <sub>2</sub> e)	3.11 (33%)	78	53	53	52	36 / 46	22 / 32	7 / 17

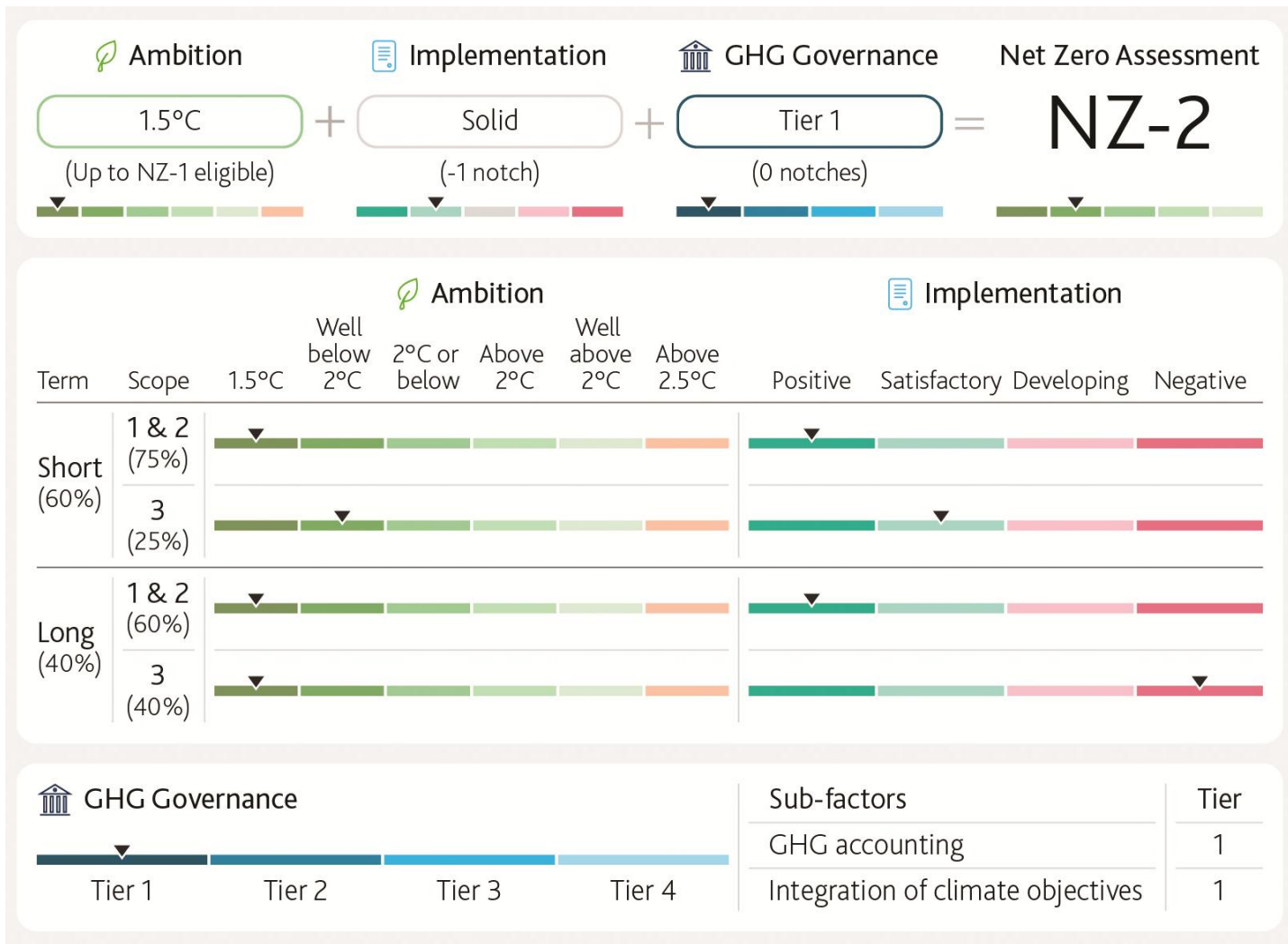
Other climate mitigation targets	Scope (Carbon footprint coverage)	2017	2023	2024	OLD 2030	TARGET 2030
Methane emissions from gas infrastructures (MtCO <sub>2</sub> e)	1 (1%)	2.2	1.5	1.0	-30%	-50%
Carbon neutrality on Ways of Working (Mt CO <sub>2</sub> e)	1, 2, 3.6, 3.7 (<0.5%)	n.a.	0.26	0.32	0	0
Avoided emissions through low carbon products (Mt CO <sub>2</sub> e)	n.a.	n.a.	25	36	45	65 / 85
Share of renewable capacity in electricity production (@100%)	n.a.	23%	41%	43%	58%	58% / 66%
Share of Top 250 preferred suppliers (excluding energy purchase) certified or aligned SBT	n.a.	n.a.	24%	44%	100%	100%

To reflect the volatility of the Energy sector and the resulting CO<sub>2</sub> impacts, the Group has chosen to present its targets in the form of ranges. The most ambitious part of the range represents the best level that seems possible to reach if market conditions, sobriety and the climate effect allow it. The other part of the range represents the maximum level of emissions that the Group undertakes not to exceed.

(1) Mainly electricity and gas

(2) Mainly gas

# MOODY'S ASSESSMENT



In February 2024, Moody's assessed ENGIE's transition plan with a rating of

# NZ-2

This assessment is based on the prior objectives of the Group's climate strategy

- > Ambition: 1.5°C
- > Implementation: "solid" level

A summary of the assessment is available below along with the full report directly on the Moody's website:

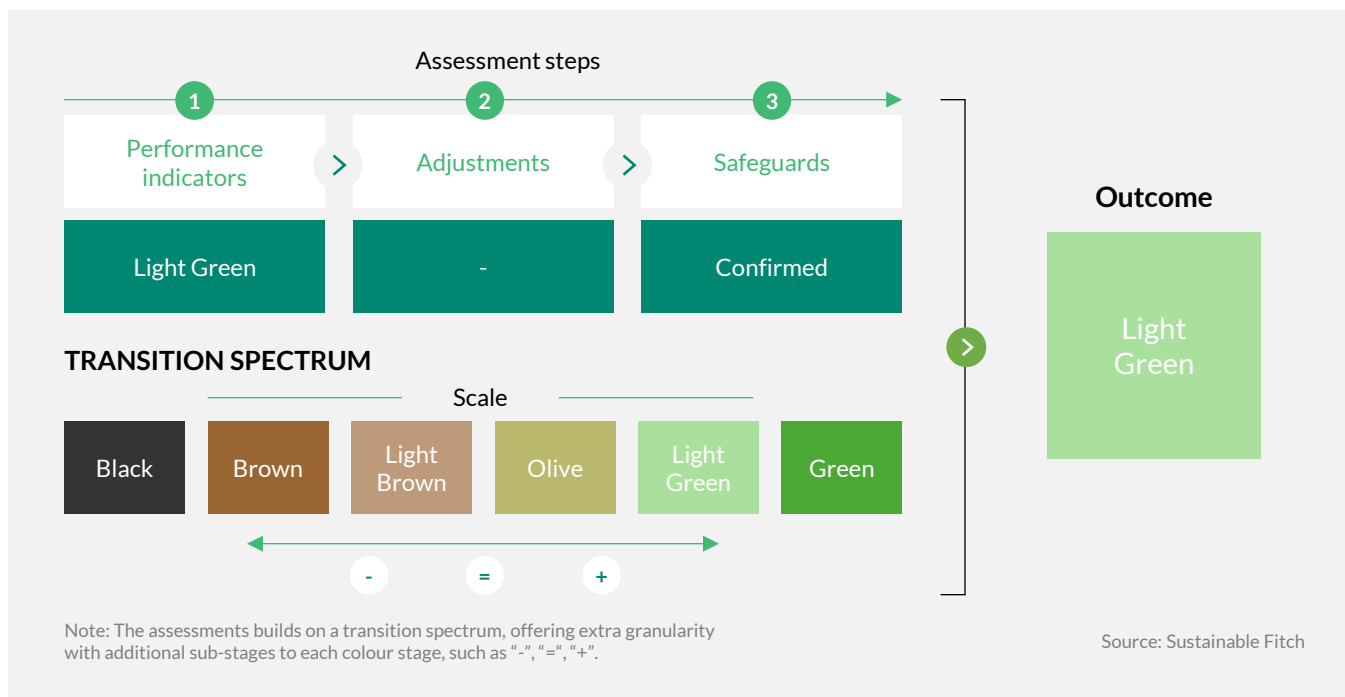
[http://www.moody.com/researchdocumentcontentpage.aspx?docid=PBC\\_1388307](http://www.moody.com/researchdocumentcontentpage.aspx?docid=PBC_1388307)



# SUSTAINABLE FITCH ASSESSMENT

This assessment, as of December 2024, is therefore based on the prior objectives of the Group's climate strategy

## ENGIE-TRANSITION ASSESSMENT PROCESS



## ENGIE'S TRANSITION PLAN AND PATHWAY – STRENGTHS AND WEAKNESSES

<p><b>+</b></p> <p>Comprehensive long-term targets aiming for net zero by 2045</p>	<p><b>+</b></p> <p>Overall, a solid track record of GHG emissions reductions</p>
<p><b>+</b></p> <p>Substantial investments in Greenland decarbonizing activities</p>	<p><b>+</b></p> <p>Renewables account for a rising share of production capacity and revenue</p>
<p><b>-</b></p> <p>No firm commitment to phase out fossil fuel-based generation</p>	<p><b>-</b></p> <p>Some material categories not covered in interim Scope 3 targets</p>

The outcome of Sustainable Fitch's Transition Assessment for Engie S.A. is 'Light Green -', indicating an advanced transition plan featuring ambitious and largely comprehensive long-term and interim targets, including net-zero absolute Scopes 1, 2 and 3 emissions by 2045.

These are backed by a credible business transformation plan to steadily reduce the share of fossil fuel-based activities and products in Engie's business mix and ramp up investment in green technologies such as wind and solar.

Engie has a strong track record implementing its transition plan. Its total carbon footprint declined by 40% since 2017, driven largely by the declining fossil fuel-based generation as a share of total installed capacity, while a small but material share of its revenue now comes from transition-related products and services.

ENGIE's investment decisions are consistent with its climate goals, with the largest capex allocated to greening or decarbonizing activities in 2023.

# TPI ASSESSMENT

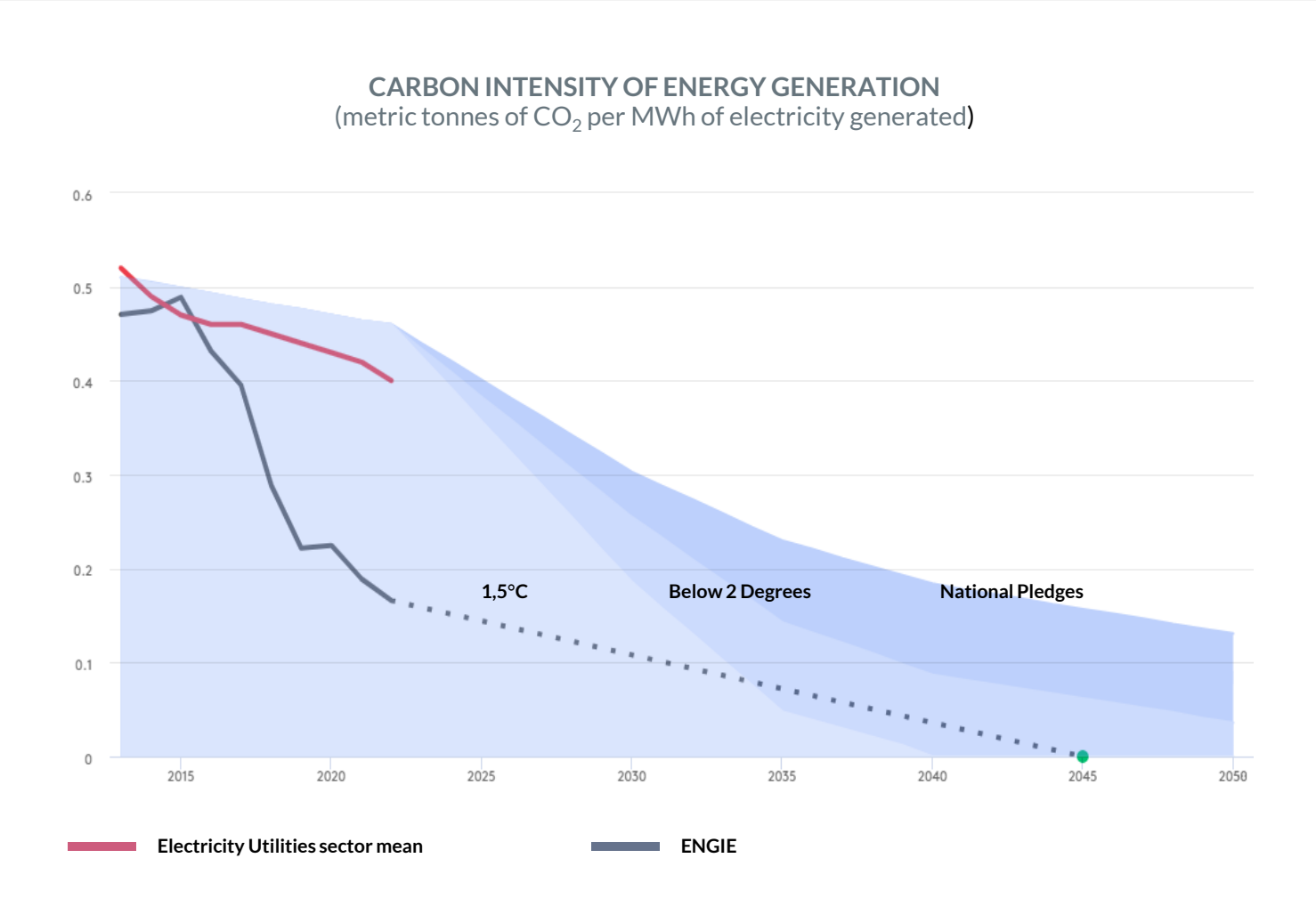
The Transition Pathway Initiative, a partner of the Climate Action 100+, also regards the Group as 1.5°C-aligned by 2030. The analysis is based on the IEA's 2022 Net Zero Emissions scenario.

The results are presented below.

▶ <https://www.transitionpathwayinitiative.org/companies/engie>

<p><b>Management Quality</b> Number of assessments: 7</p> <p><b>5/7</b></p> <p>Transition Planning and Implementation</p>	<p><b>Carbon Performance</b> Number of assessments: 7</p> <table border="0"> <tr> <td>Short-term alignment in 2027</td> <td>Medium-term alignment in 2035</td> <td>Long-term alignment in 2040-50</td> </tr> <tr> <td><span style="color: green;">●</span> 1.5 Degrees</td> <td><span style="color: yellow;">●</span> Below 2 Degrees</td> <td><span style="color: yellow;">●</span> Below 2 Degrees</td> </tr> </table>	Short-term alignment in 2027	Medium-term alignment in 2035	Long-term alignment in 2040-50	<span style="color: green;">●</span> 1.5 Degrees	<span style="color: yellow;">●</span> Below 2 Degrees	<span style="color: yellow;">●</span> Below 2 Degrees
Short-term alignment in 2027	Medium-term alignment in 2035	Long-term alignment in 2040-50					
<span style="color: green;">●</span> 1.5 Degrees	<span style="color: yellow;">●</span> Below 2 Degrees	<span style="color: yellow;">●</span> Below 2 Degrees					

This assessment, as of June 2024, is therefore based on the prior objectives of the Group's climate strategy.



# SBTi – A “WELL BELOW 2°C” CERTIFICATION OBTAINED IN FEBRUARY 2023 FOR THE PREVIOUS 2030 TRAJECTORY

SBTi commitments	Scope (Carbon footprint coverage 2024)	2017 <sup>1</sup>	2023	2024	TARGET 2030
Reduce carbon intensity of energy generation & consumption (gCO <sub>2</sub> /KWh)	1, 2 (14%)	304	-57%	-64%	-66%
Reduce carbon intensity of purchases and generation of energy for resale (gCO <sub>2</sub> /KWh)	1, 3.15, 3.3.D (49%)	327	-35%	-38%	-56%
Reduce other emissions, including scope 3 from procurement, capital goods and upstream emissions of purchased fuels and electricity (MtCO <sub>2</sub> eq.)	3.1, 3.2, 3.3 A&B (16%)	132	-38%	-35%	-32.5%

## FOR ENERGY PRODUCTION

ENGIE beyond the requirements of “Well below 2°C”: **66% reduction instead of 55%**

1.5°C trajectory =  
**66% to 78% reduction**  
between 2017 and 2030

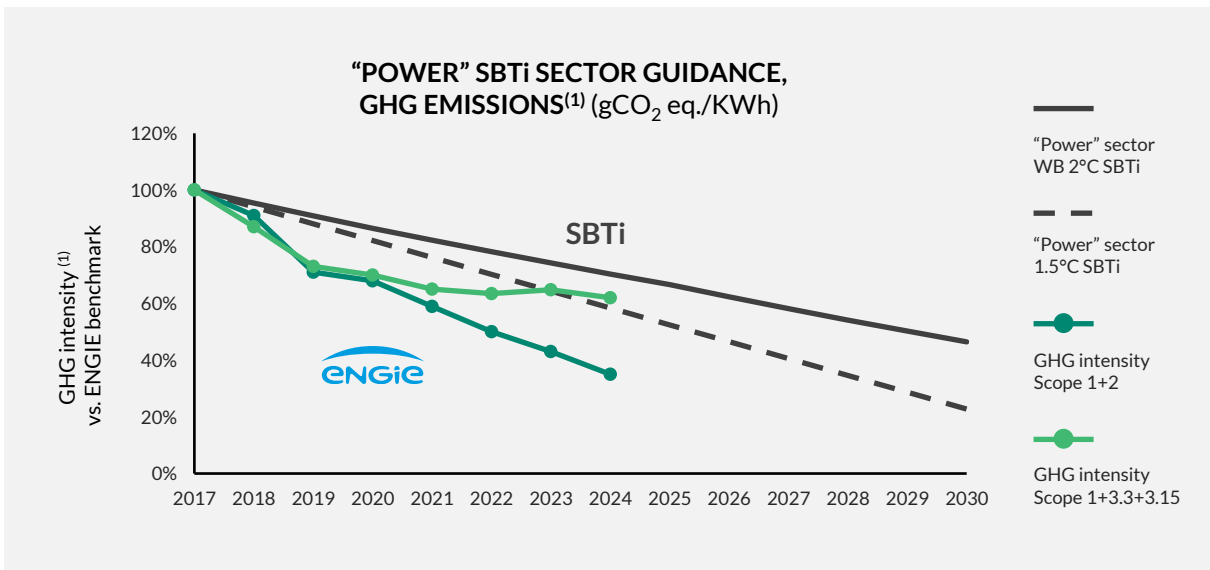


### ENGIE operational targets by 2030

- > Coal phase-out by 2027
- > 95 GW of renewable and storage capacity
- > 20 TWh of local green energy production
- > 10 TWh of biomethane production
- > 4 GW of hydrogen production by 2035
- > 50 TWh of biomethane capacity connected to French networks
- > 10,000 km of electricity transmission line
- > 300 TWh of electricity sales (B2B and B2C)

## FOR ENERGY SALES

1.5°C trajectory =  
**56% to 80% reduction**  
between 2017 and 2030

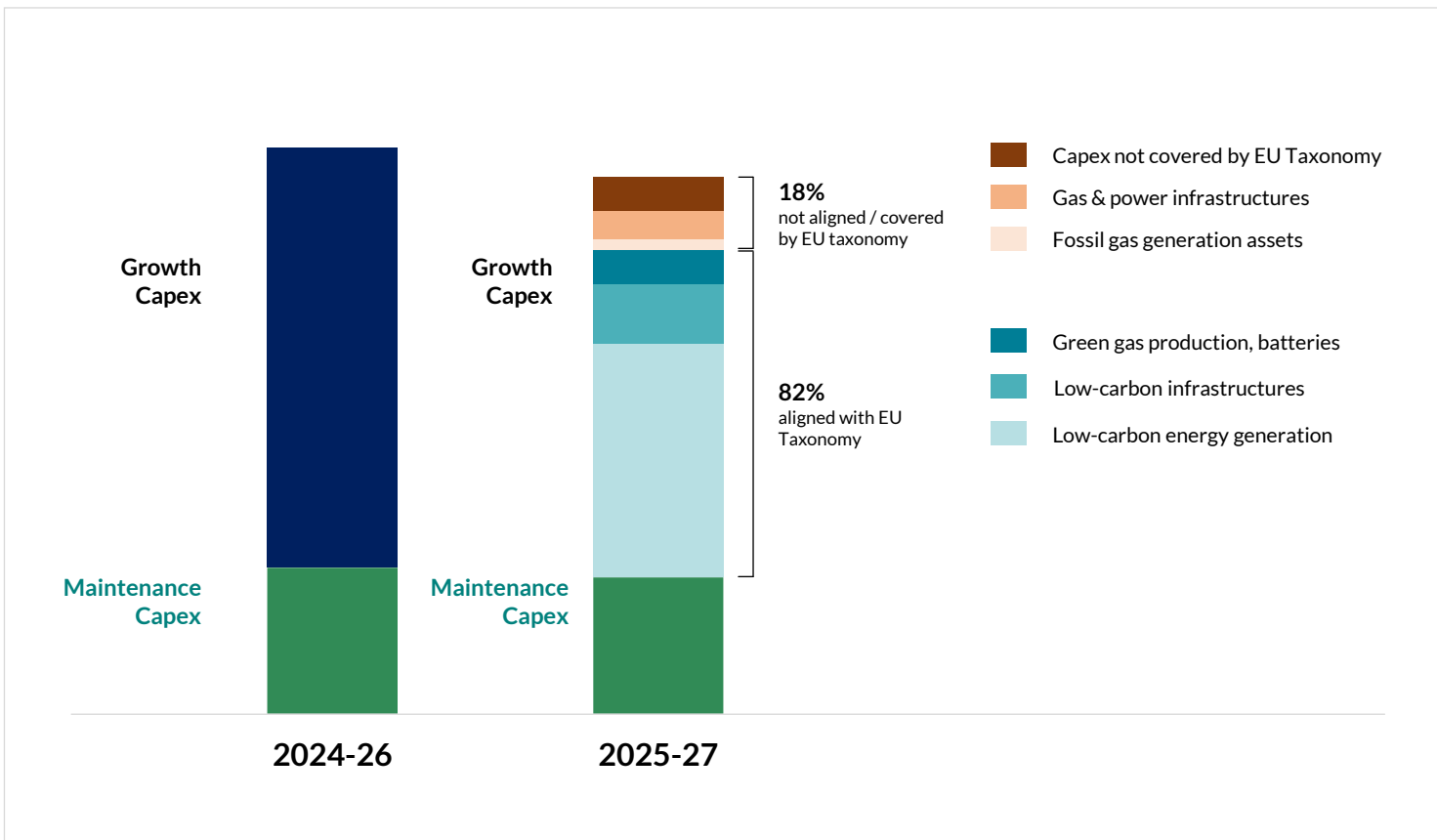


(1) Restated data

# SIGNIFICANT INVESTMENTS TO DELIVER ON STRATEGY

€21-24 billion of Growth Capex over 2025 to 2027

Over 80% aligned with EU Taxonomy



Over 80% of these Capex are aligned with the European Taxonomy.

As an indication, this would correspond to the development of:

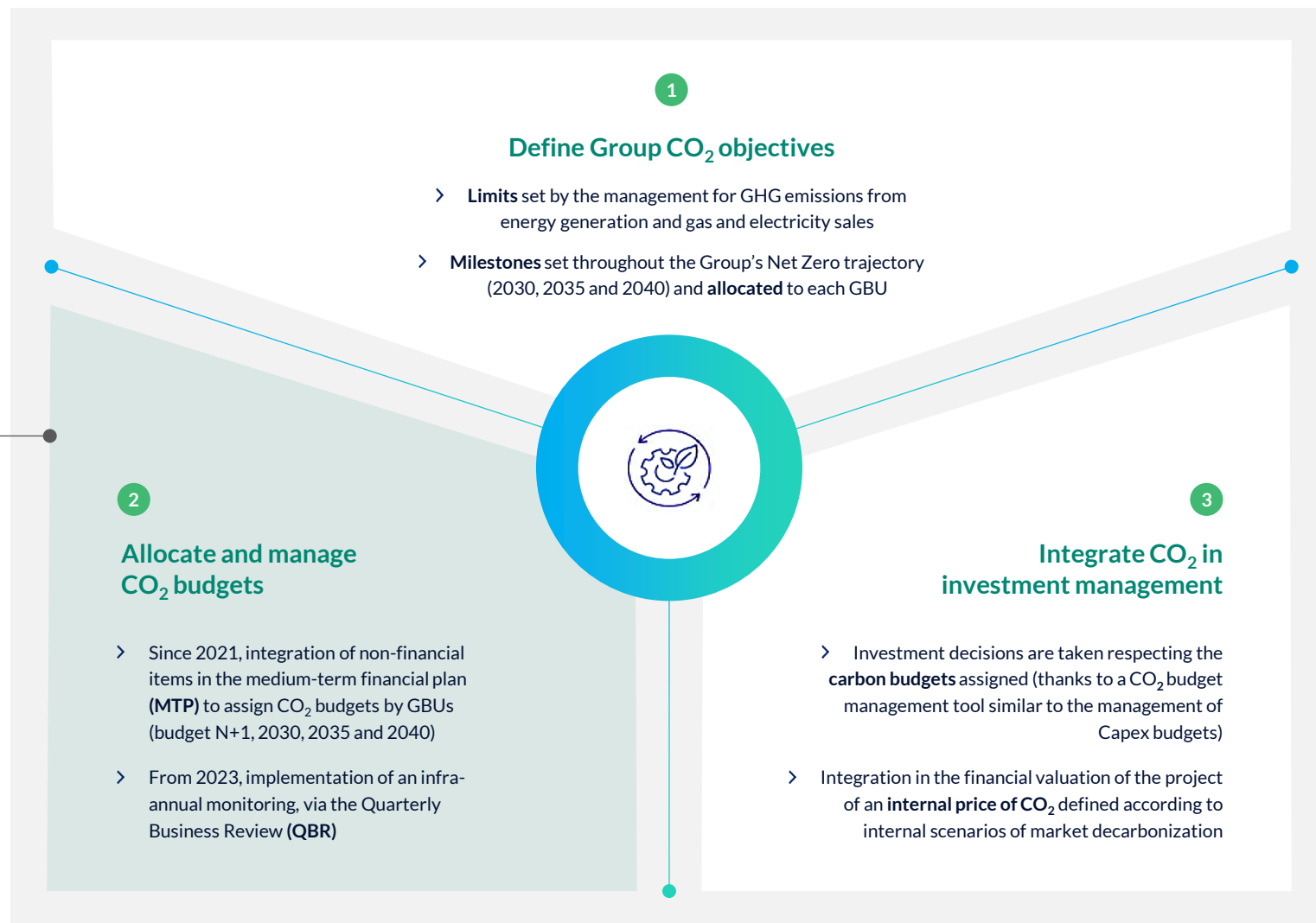
- > **Low carbon energy generation (€13 to 14 billion)**
- > **Low carbon infrastructures:** electric and gas infrastructures, low carbon mobility and heating and cooling networks (**€3 to 4 billion**)
- > **Green gas production** (biogas, biomethane and hydrogen) as well as storage capacities such as batteries (**€1 to 2 billion**)

Regarding the **18%** not aligned with the European Taxonomy

- > **Less than €1 billion relate to centralized or decentralized generation assets** which today operate with fossil gas, but which have the capacity to decarbonize by 2045.
- > **Between €1 to 2 billion relates to gas & power infrastructures.** Given the thresholds of the Taxonomy, these infrastructures are not considered eligible to date but will change over time with the increase in the volumes of renewable gas and electricity in the networks.
- > Finally, part of CAPEX is not aligned because it is not covered by the European Taxonomy. This notably includes the development of **digital solutions and gas & electricity sales (between €1 to 2 billion).**



# OPERATIONALIZATION TO DELIVER ON CLIMATE COMMITMENTS



# KEY DECARBONIZATION LEVERS: SIGNIFICANT PROGRESS IN 2024 TO REACH TARGETS



# DECARBONIZATION LEVERS: COAL PHASE-OUT

Commitment to phase-out of coal by 2025 in continental Europe and 2027 for the rest of the world

## Coal power generation capacity

(GW@100%)



Merit order for a 'just transition' that benefits all stakeholders

01. Closing



02. Conversion



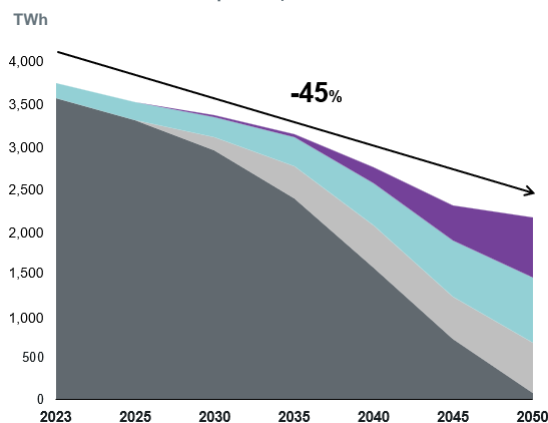
03. Disposal



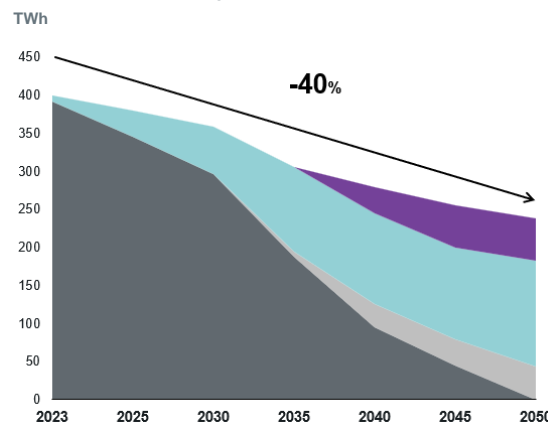


# ENGIE GREENING METHANE SCENARIO IN EUROPE BY 2050

### Methane demand | Europe-15



### Methane demand | France



Natural Gas
  Biogas & Biomethane  
 Gas + CCS
  E-methane

**Methane demand will decrease by 45% by 2050.** It will be fully decarbonized through biomethane, e-methane, and natural gas with carbon capture and storage (CCS).

> **Overall trend:**

Methane demand is set to reduce by 45% by 2050 at Europe scale, and 40% in France. At the same time methane supply will be progressively decarbonized.

By 2050 the European methane supply mix will be split roughly evenly between biomethane/biogas, e-methane, and natural gas with CCS. Biomethane in France will represent closer to 60% of the decarbonized methane supply mix in 2050 given the higher biomethane potential.

> **Industry maturity:**

All three low-carbon sources of methane require industrialization efforts. Biomethane/biogas account for a small share of methane demand today (<5% at European scale) and its production will need to be multiplied by 1.5x by 2030 and 5x by 2050. CCS and e-methane are still at early stages today and are anticipated to breakthrough only towards the middle of this and next decade respectively.

> **Local production vs imports:**

Europe import dependence of natural gas today stands roughly at 85%. By 2050 we estimate methane dependency to reduce to 55%, primarily driven by European biomethane production. The remaining imports will be associated to e-methane, which we assume the vast majority to be imported, and natural gas (assumed to be imported in the same proportion as today) with CCS.

# OGMP 2.0

Oil & Gas Methane Partnership 2.0 (OGMP) aimed at reducing methane emissions of the infrastructures



CH<sub>4</sub><sup>(1)</sup> intensity of 0.125 % by 2025



-80% CH<sub>4</sub> emissions in 2025 compared to 2016



CH<sub>4</sub> emissions reduction: -40% in France -45% in the UK & -35% in Germany in 2025 compared to 2016



-30% CH<sub>4</sub> emissions in 2025 compared to 2015



CH<sub>4</sub><sup>(1)</sup> intensity of 0.093% by 2028



OGMP members



Methane emissions from gas infrastructures account for **less than 1% of the carbon footprint** of the Group (**5% of Scope 1**) and are therefore considered to be non-material.

They are linked to gas infrastructures controlled or operated by the Group and are **mainly due to safety venting** procedures.

ENGIE has been committed for many years to reducing its methane emissions, which represented **0.96 Mt CO<sub>2</sub> eq. in 2024**.

**2024 marked a major step forward in Latin America:** Mejillones in Chile, TAG in Brazil and DSO & TSO in Mexico joined the OGMP 2.0 (Oil & Gas Methane Partnership) initiative managed by the United Nations Environment Programme.

This initiative aims to **minimize methane emissions** and **share an internationally recognized reporting framework**.

They join the French entities (GRDF, NaTran (ex. GRTGaz), ELENGY and STORENGY) and Romanian ones (Distrigaz Sud Retele) which already committed to this initiative.

Beyond these commitments, ENGIE has set itself the overarching objective of **reducing methane emissions from its global gas infrastructures** (transport, distribution, LNG terminals and storage) **by 50% between 2017 and 2030**.

(1) CH<sub>4</sub> emissions / Volumes of distributed gas

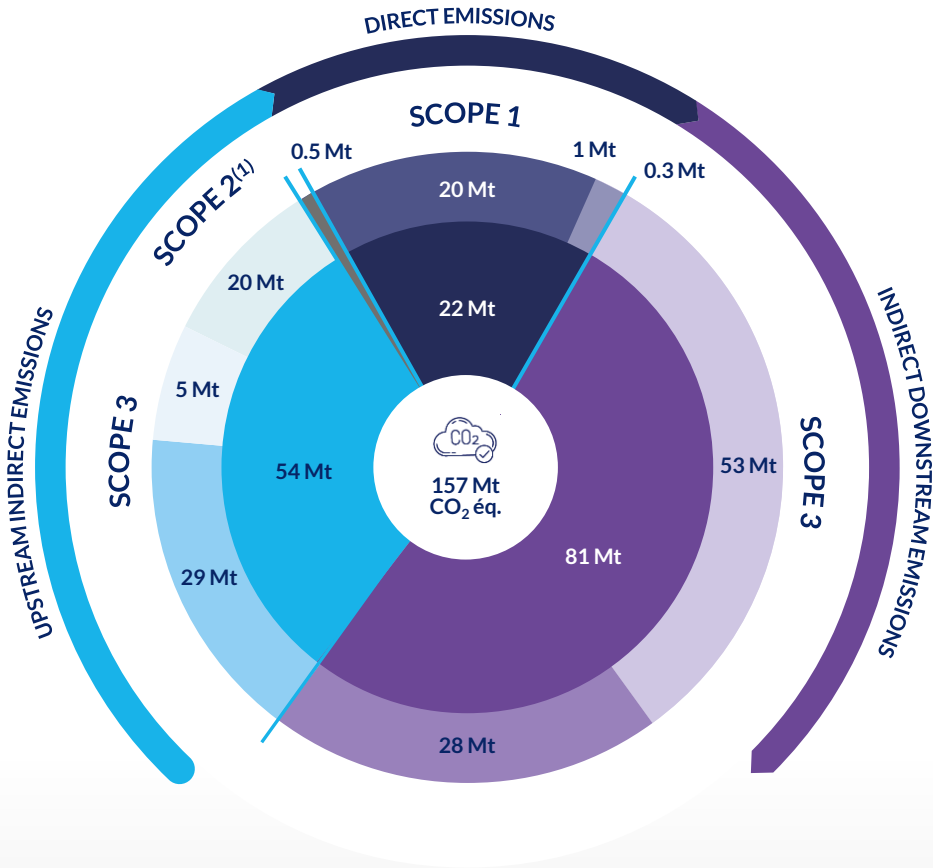
# ENGIE'S 2024 CARBON FOOTPRINT

>80%

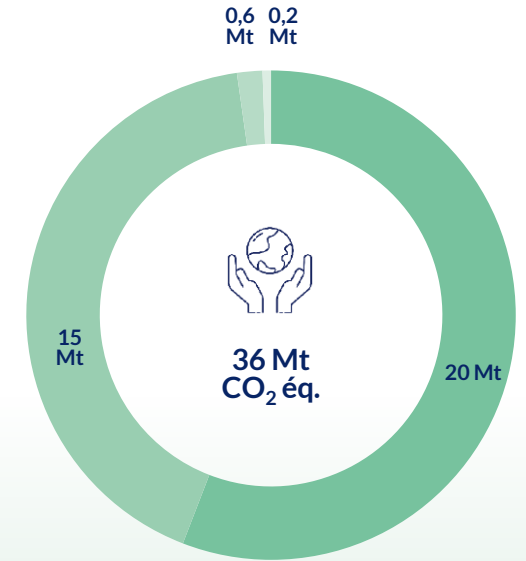
of Group emissions are related to energy production & gas, electricity and heat sales activities

-41%

A carbon footprint in constant reduction since 2017



## AVOIDED EMISSIONS



## Decarbonization of customers

- 20 Mt Renewable energy & gas generation
- 15 Mt Resales of renewable energy & gas
- 0,6 Mt Electricity storage
- 0,2 Mt Energy services

### Scope 3 upstream

- 29 Mt Purchased energy sold to end users
- 5 Mt Procurement & capital goods
- 20 Mt Upstream chain of fuel & electricity

### Scope 2

- 0.5 Mt Purchased electricity & heat

### Scope 1

- 20 Mt Energy generation
- 1 Mt Gas infrastructures
- 0.3 Mt Other activities (incl. vehicle fleet)

### Scope 3 downstream

- 28 Mt Investments (incl. energy generation of equities)
- 53 Mt Use of sold products (fuel sales)

# ENGIE'S CARBON FOOTPRINT (GHG PROTOCOL)

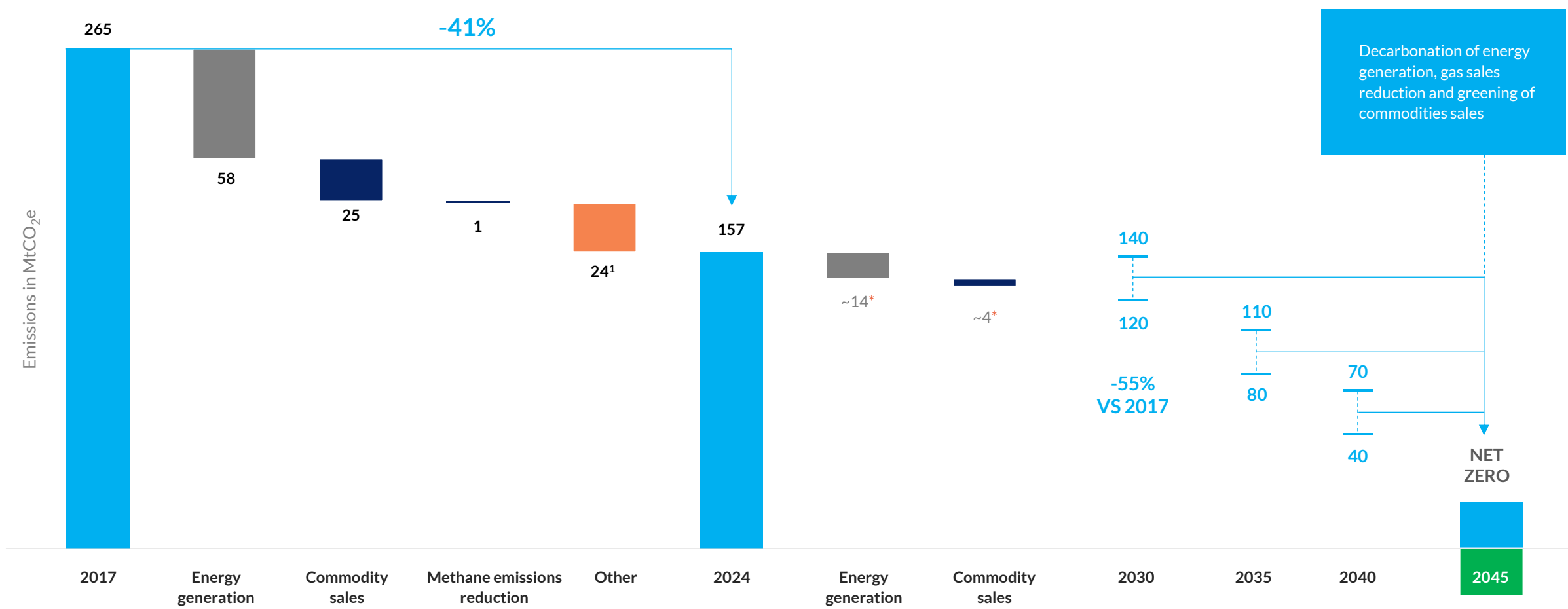
EMISSIONS (tCO <sub>2</sub> e)	2017	2023	2024	Variation 2024-2017
<b>Scope 1</b>	<b>80,489,233</b>	<b>24,496,514</b>	<b>21,947,533</b>	<b>-73%</b>
Energy generation	76,377,307	22,243,521	20,435,596	
Gas infrastructures	2,597,138	1,962,875	1,243,469	
Methane emissions from gas infrastructures	2,252,850	1,453,447	960,448	
Other emissions from gas infrastructures	344,288	509,428	283,021	
Other activities	1,514,788	290,118	268,467	
<b>Scope 2 - Location-based</b>	<b>926,480</b>	<b>654,073</b>	<b>502,325</b>	<b>-46%</b>
<b>Scope 2 - Market-based</b>	<b>N/A</b>	<b>847,043</b>	<b>808,754</b>	<b>-</b>
<b>Scope 3</b>	<b>183,634,772</b>	<b>133,337,361</b>	<b>134,715,937</b>	<b>-27%</b>
1. Purchased goods and services	14,868,671	5,936,639	3,231,943	
2. Capital goods	2,947,153	3,051,298	1,789,419	
3. Fuel-and energy-related activities	58,046,707	41,451,946	48,902,239	
Upstream emissions of purchased fuels and electricity (3.3A. / 3.3.B. / 3.3.C.)	32,010,577	12,918,744	19,519,425	
Generation of purchased energy sold to end users (3.3.D.)	26,036,130	28,533,202	29,382,814	
6. Business travel	N/A	43,177	57,252	
7. Employee commuting	N/A	56,591	69,553	
11. Use of sold products	77,635,767	52,536,380	52,583,063	
15. Investments	30,136,474	30,259,065	28,082,468	
Energy generation of equities	30,136,474	29,969,276	27,818,655	
Other investments	0	289,789	263,813	
<b>TOTAL SCOPE 1, 2<sup>1</sup> AND 3</b>	<b>265,050,485</b>	<b>158,487,948</b>	<b>157,165,195</b>	<b>-41%</b>

(1) Location-based



# EVOLUTION OF THE GROUP'S CARBON FOOTPRINT

CHANGE IN TOTAL ENGIE GHG EMISSIONS TO 2030

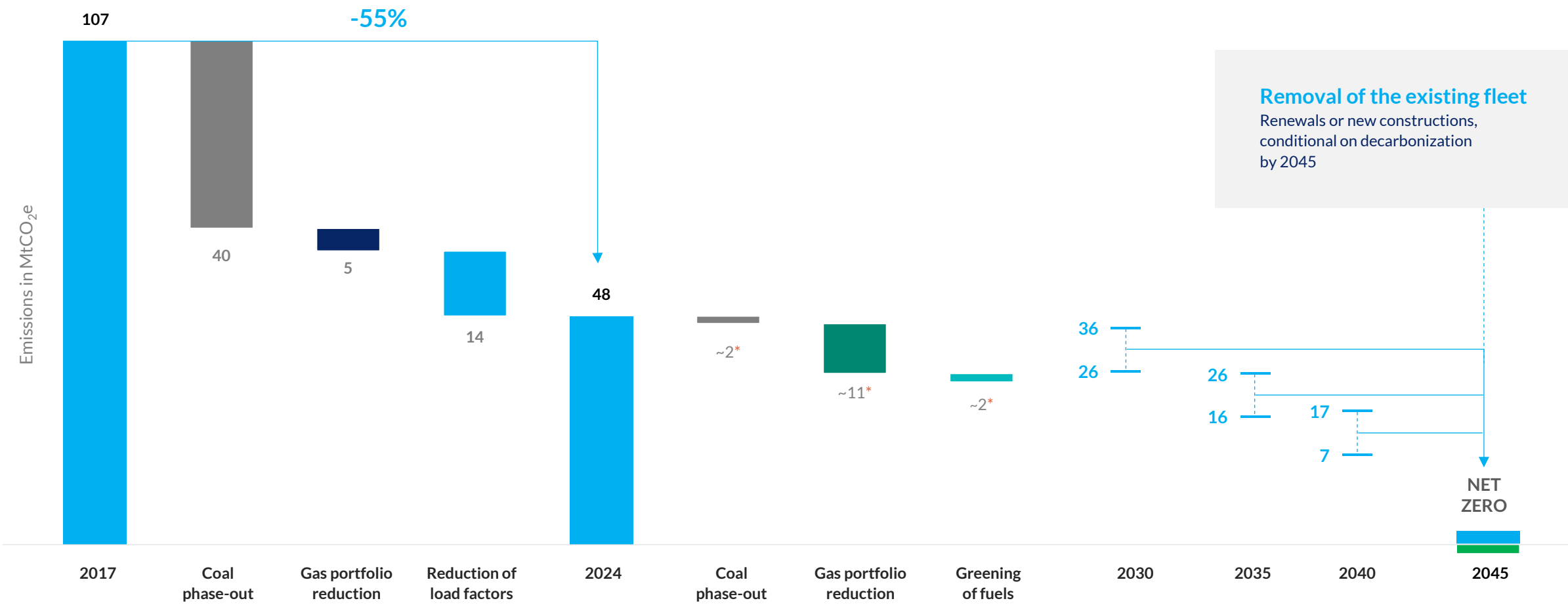


(1) including a reduction of 13 Mt CO<sub>2</sub>e in the upstream chain of purchased fuels (category 3.3.A) due to less coal and gas being consumed; 12 Mt CO<sub>2</sub>e in the upstream chain of purchased goods and services (categories 3.1 and 3.2) due to lower purchase volumes and a change in methodology; and 1 Mt CO<sub>2</sub>e in scope 1. Note that this change includes an increase of 3 Mt CO<sub>2</sub>e in the generation of purchased energy sold to end users (3.3.D.)

\* These data are forward-looking estimates, updated annually at the time of the Medium-Term Plan (MTP). They are not targets and are shared as part of the Group's approach to transparency with regard to external parties

# ENERGY GENERATION

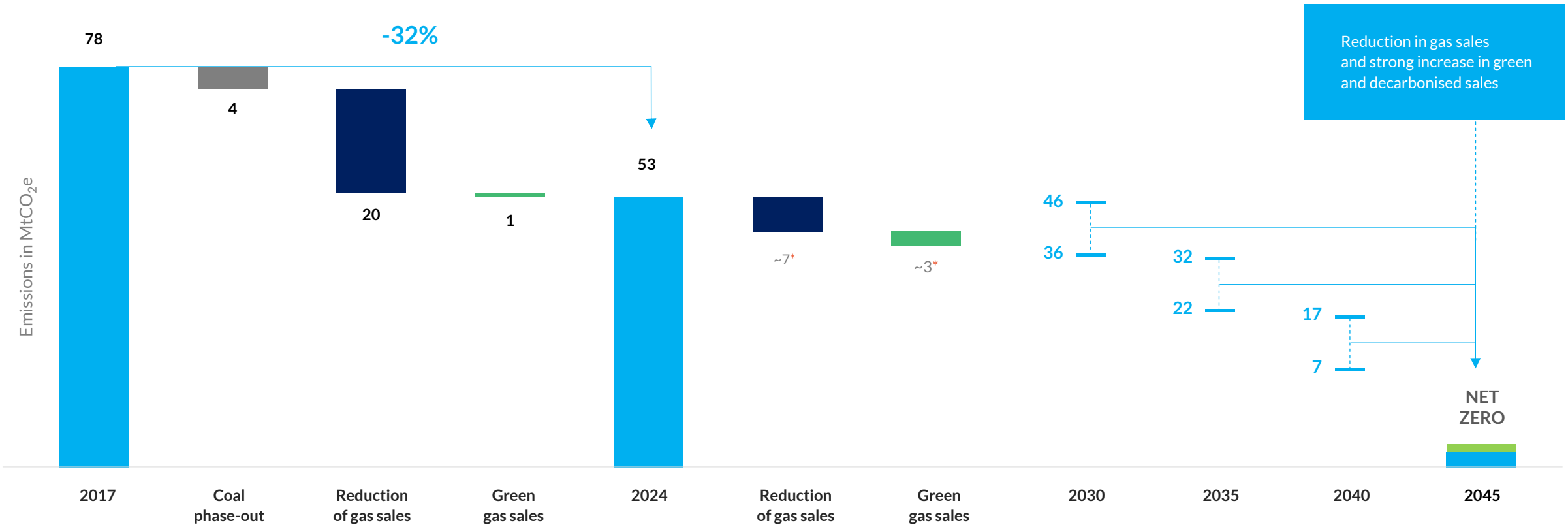
CHANGE IN GHG EMISSIONS RELATED TO ENERGY GENERATION TO 2030 (SCOPES 1+3)



\* These data are forward-looking estimates, updated annually at the time of the Medium-Term Plan (MTP). They are not targets and are shared as part of the Group's approach to transparency with regard to external parties

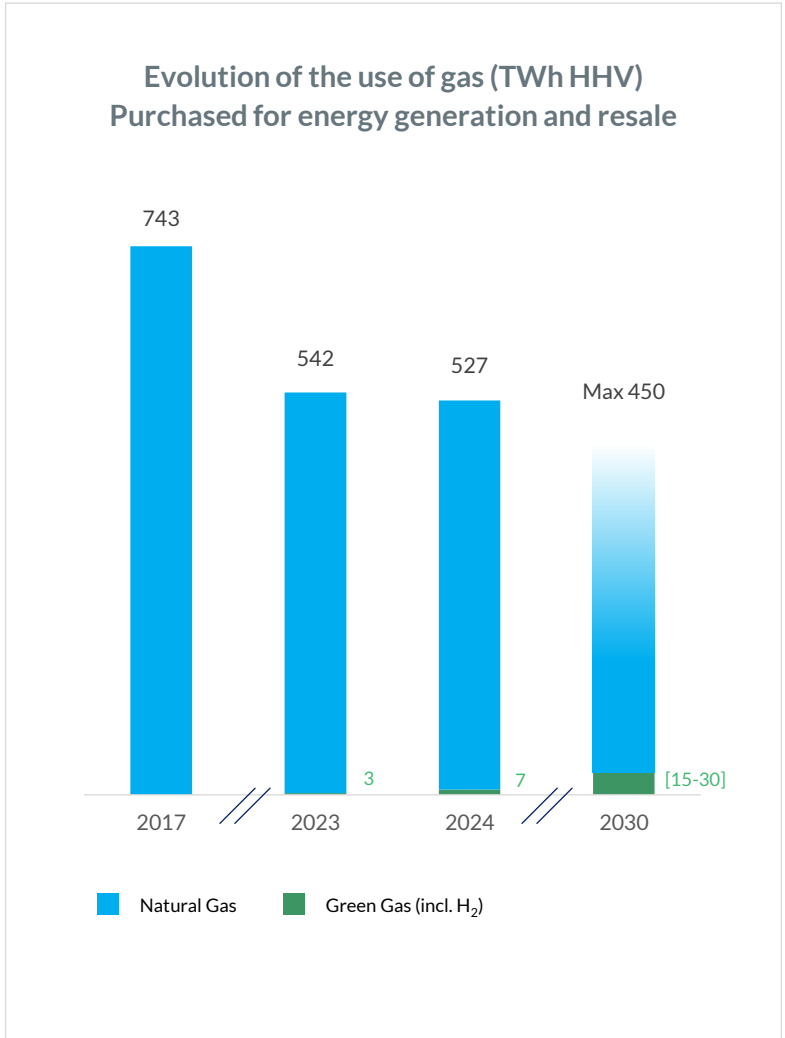
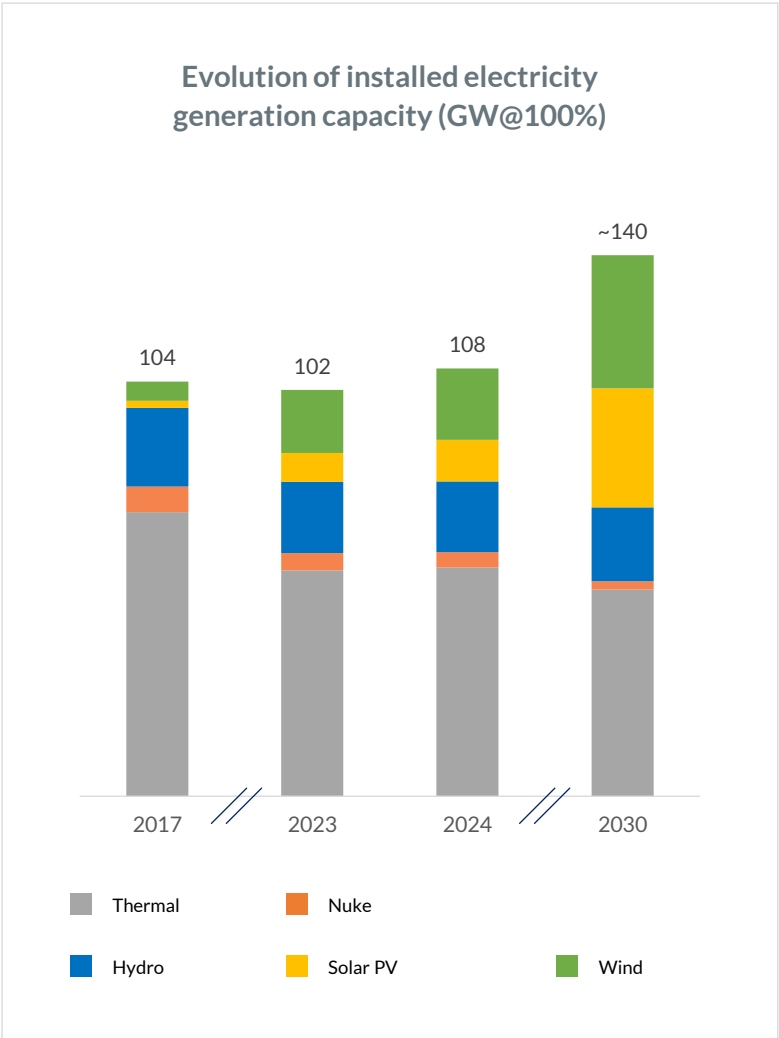
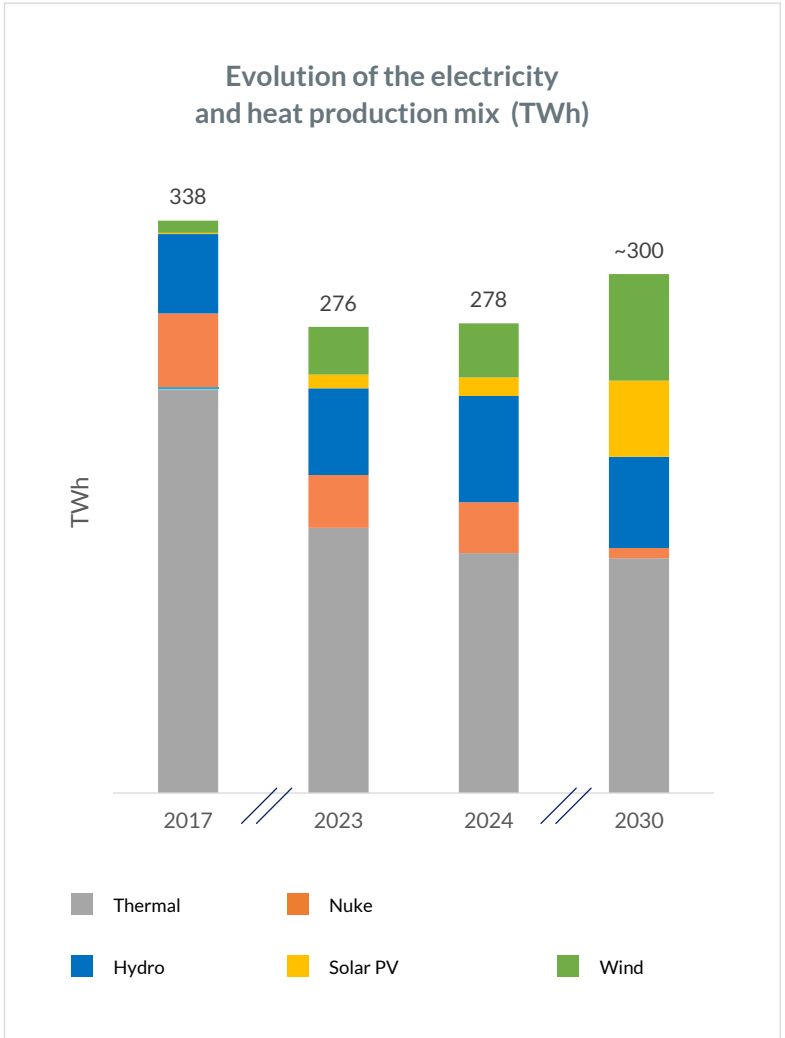
# FUEL SALES

CHANGE IN GHG EMISSIONS RELATED TO FUEL SALES TO 2030 (SCOPE 3.11)



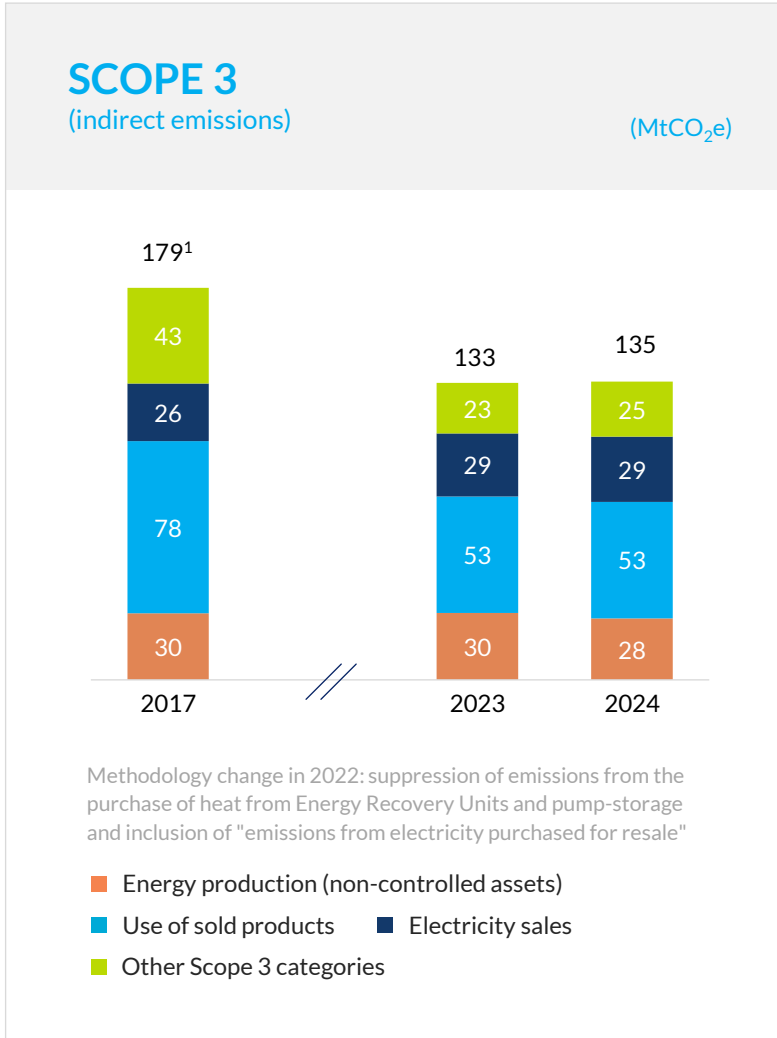
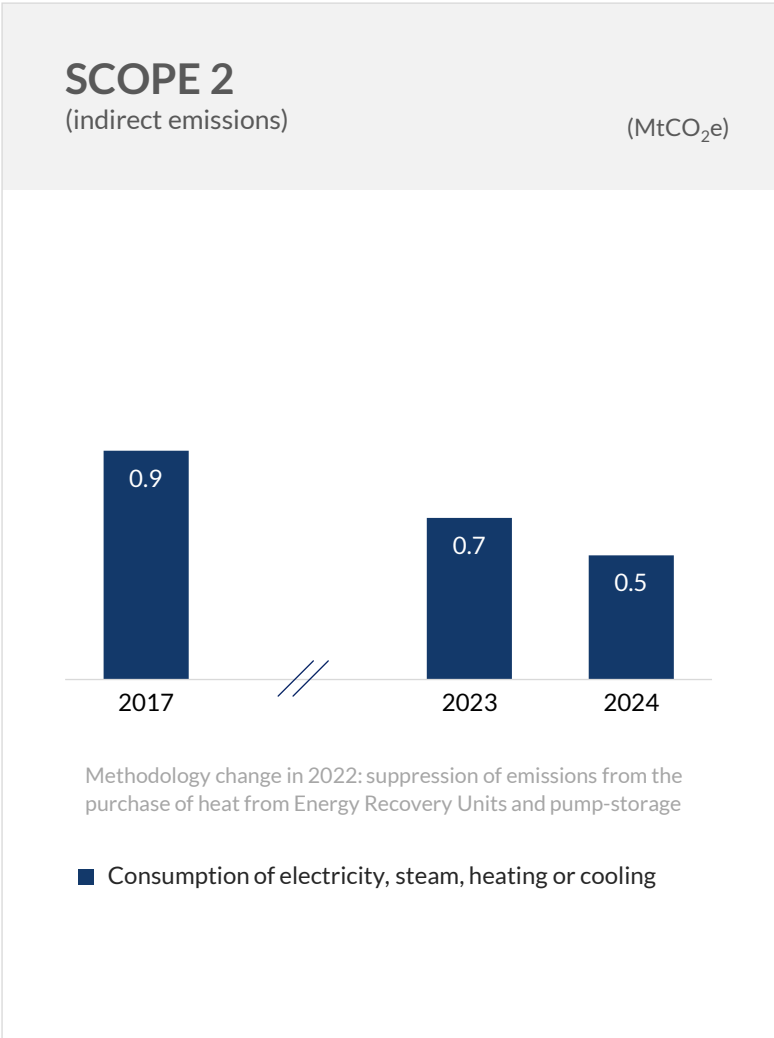
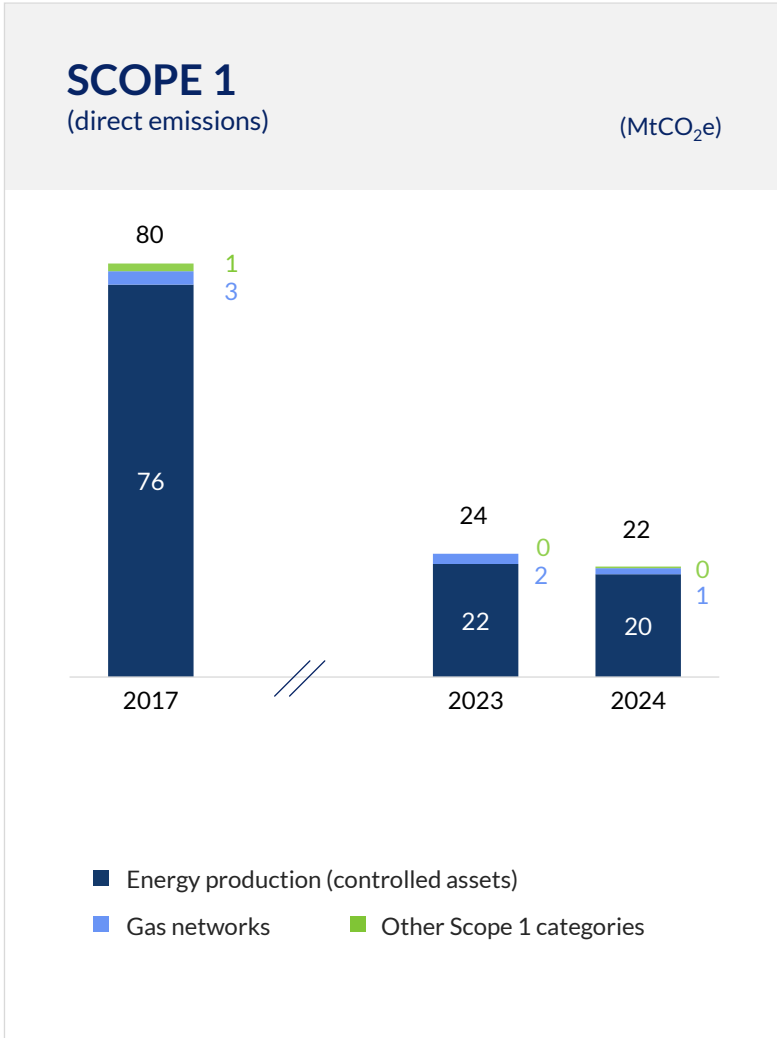
\* These data are forward-looking estimates, updated annually at the time of the Medium-Term Plan (MTP). They are not targets and are shared as part of the Group's approach to transparency with regard to external parties

# DECARBONIZING ENERGY GENERATION AND USE OF GAS



In 2024, the Group applied a methodological change to the calculation of conversion to bring it into line with market practice. The conversion coefficient from thermal energy to electrical energy has been adjusted from 0.61 to 1. This applied also to historical data. 2030 data are forward-looking estimates, updated annually within the medium-term plan (MTP). They are not targets and are shared in a spirit of transparency towards external stakeholders.

# OVER -40% OF GROUP'S GHG EMISSIONS SINCE 2017



(1) Restated data

# CARBON REMOVAL



**ENGIE Net Zero by 2045 commitment consists of first reducing its GHG emissions by at least 90% and then contributing to increasing carbon sinks within and beyond its value chain to neutralise its residual emissions.**

The Group is also committed to reach carbon neutrality in its ways of working by 2030.

It should be noted that all GHG emission reduction targets are expressed in gross emissions, meaning induced emissions are separate from sequestered emissions. The use of offsetting will not call into question the achievement of emission reduction targets.

In 2024, the Group did not generate any carbon sequestration or storage in its operations or in its value chain. **It did, however, cancel 1,721 tCO<sub>2</sub> of carbon credits for its own account.** Significant volumes will begin from 2030, to deliver the Net Zero objective on ways of working.

The Group also cancels credits on behalf of its customers, often through offers of offset products. In these cases, it complies with all local regulations.

> **Solutions considered**

In the short term (2030), the Group will **mainly use carbon credits from nature-based solutions** (such as afforestation, reforestation, regenerative agriculture or mangroves). The carbon credits use **recognised standards** (such as Gold Standard & Verra VCS) and apply the regulations in force in the countries where they are used. Several supply contracts are under discussion, but none have been signed at this stage.

In the longer term (2045), ENGIE will **rely on negative emissions technology solutions** due to its integration within the energy production value chain. As an energy company, the Group will have access to very large volumes of **biogenic CO<sub>2</sub>**. For example, bioenergy-based carbon capture technologies (BE-CCS) such as the capture and sequestration of biogenic CO<sub>2</sub> in digesters or in thermal power stations running on biomass (biogas, biomethane or wood).

> **Creation of a carbon desk**

To give itself the resources it needs to achieve its aims, ENGIE has created a dedicated office (Carbon Desk) within its Global Energy Management (GEMS) entity, **in order to source high-quality carbon credits, for both the Group's needs and those of ENGIE's customers.**

# ADAPTING TO CLIMATE CHANGE








## ▶ ANALYZING THE IMPACT OF CLIMATE CHANGE ON ENGIE ACTIVITIES

## ▶ DEPLOYING GROUP-WIDE MEASURES TO MOBILIZE STAKEHOLDERS ON CLIMATE RESILIENCY






- 01. Partnership with IPSL (Institut Pierre Simon Laplace) to build indicators reflecting the exposure of ENGIE activities to climate risks under medium and high global warming trajectories (RCP4.5 and RCP8.5)
- 02. Cross-analysis of technology sensitivity data with exposure to climate risks to identify vulnerabilities

### IMPACTS MODELLED

#### ▶ Integrity of assets (extreme events)

						
Heat waves	Extreme winds	Floods	Water stress	Landslides	Wildfires	Coastal erosion

#### ▶ Business impact (incl. production & demand of energy)

				
Solar production	Wind production	Hydro production	Thermal production	Heat & cold demand

#### ▶ Health and safety of employees and subcontractors (heat stress)

#### ▶ Supply chain of fuels

Inclusion of climate risk in the selection criteria of the Group's geographic and technology portfolio (at national and local level)

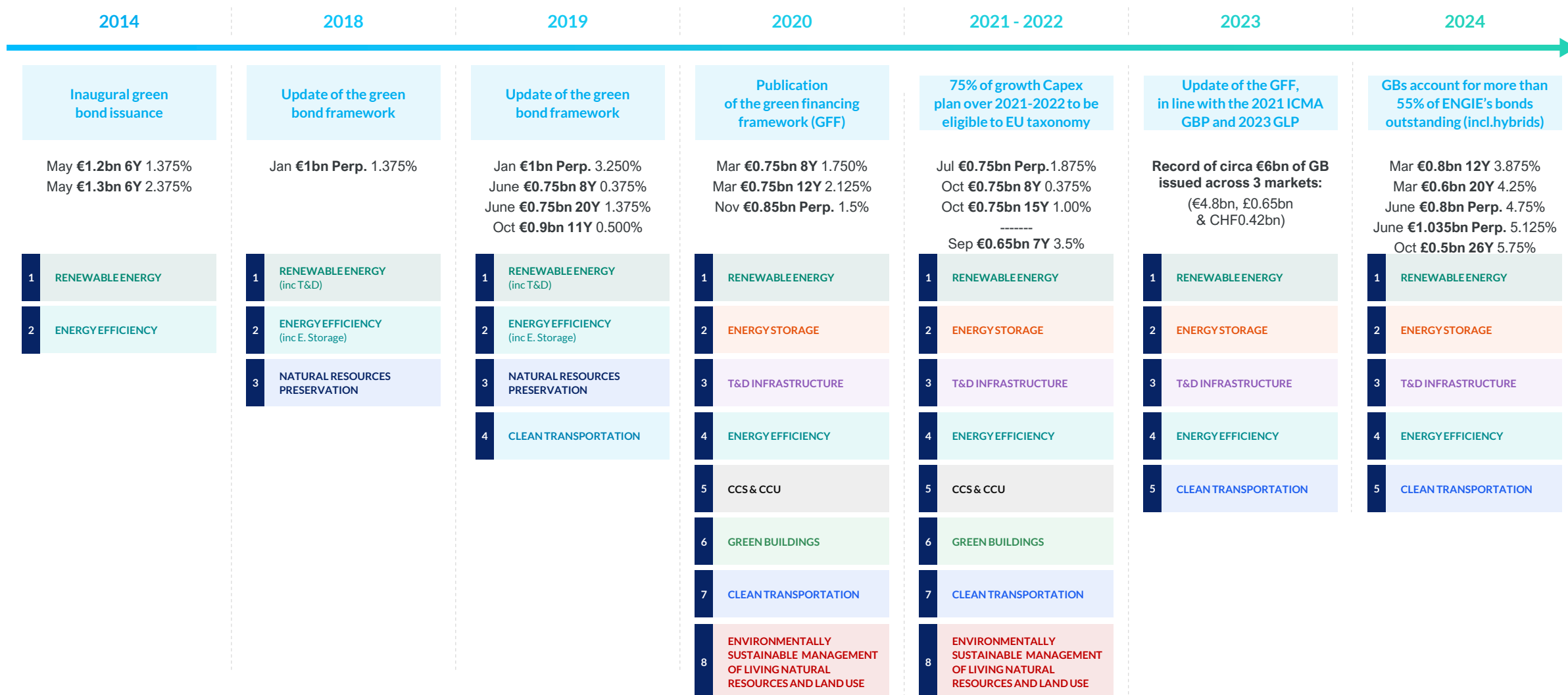
Climate risk analysis and implementation of adaptation plans when necessary for all new projects and existing sites



# ENGIE IS AT THE FOREFRONT OF THE GREEN BOND MARKET



ENGIE is one of the world's top issuers in green bonds with close to €21bn issued since 2014, of which €6bn in 2023



# ENGIE'S COMMITMENT TO THE GREEN BOND MARKET



ENGIE is among the world's top issuers in green bonds with

**€25bn**  
ISSUED SINCE 2014

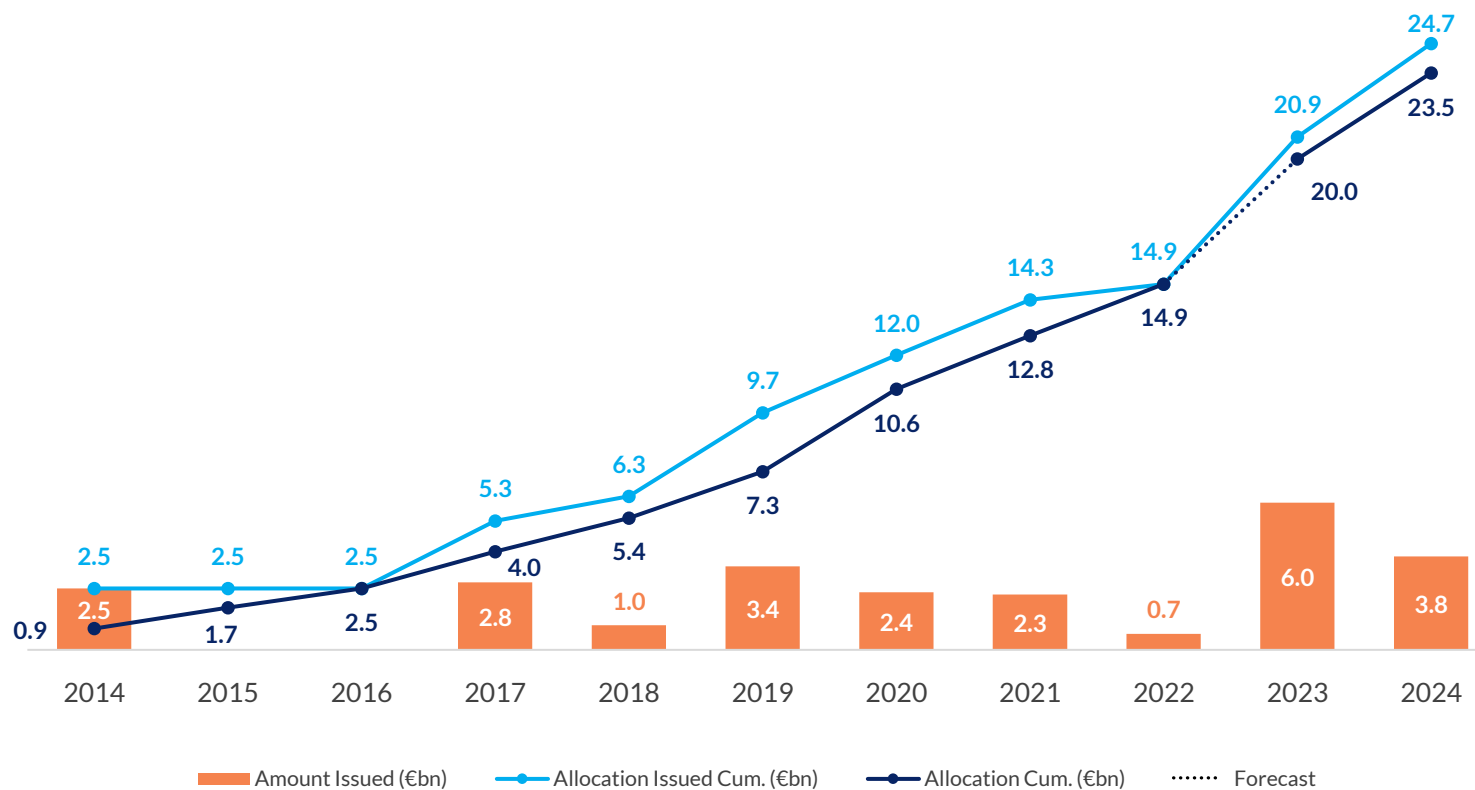
A green bond (GB) is a bond that is specifically earmarked to raise financing for climate and environmental projects.

Allocations to green projects are verified and reported annually (in the URD).

These bonds carry the **same credit rating** as the issuers' other debt obligations.

## Historical issuance and allocation

€bn as at 31 Dec 2024





▶ GENERAL INFORMATION

▶ ENVIRONMENT

▶ CLIMATE

▶ NATURE

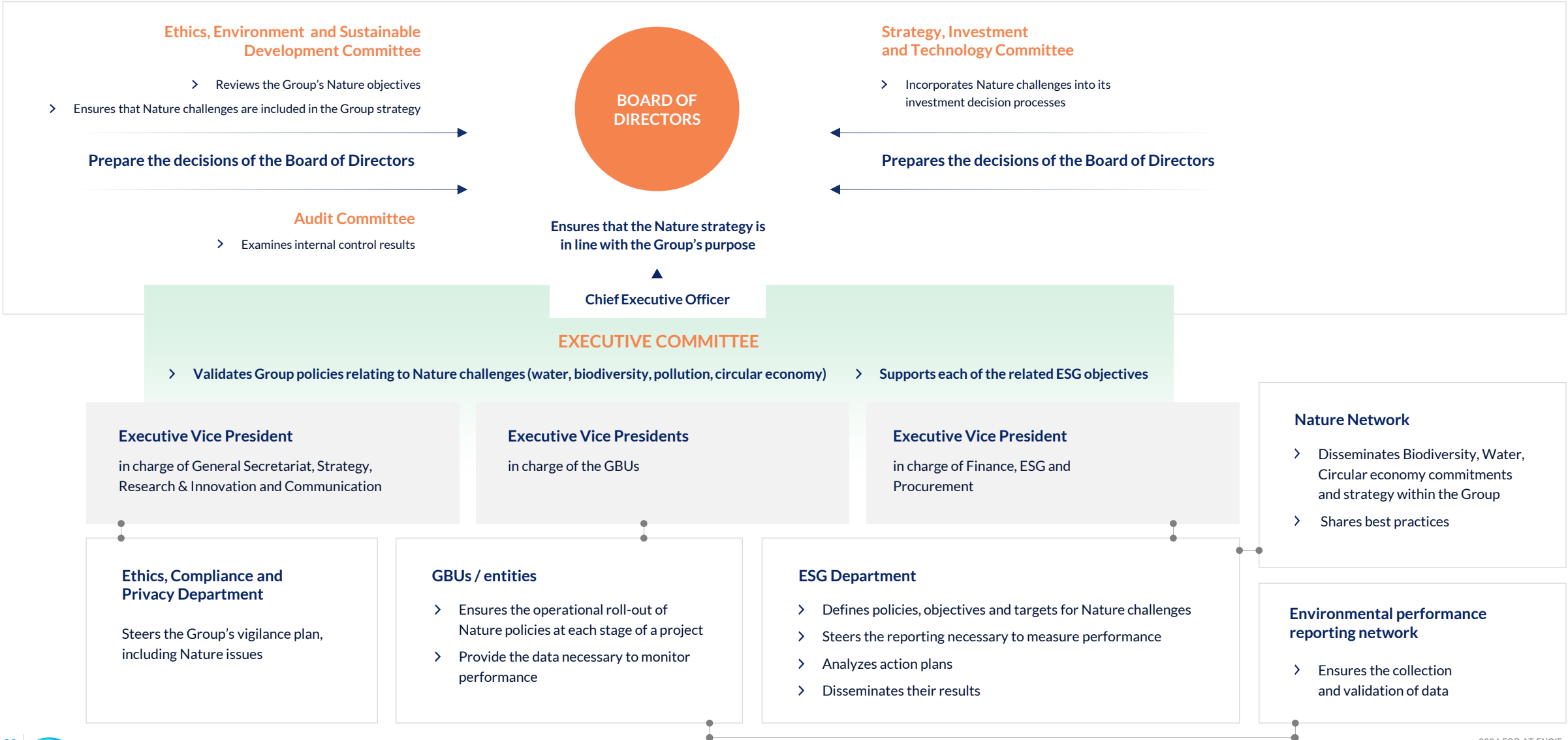
▶ SOCIAL SOCIETAL

▶ GOVERNANCE

# 1

# ENVIRONMENT NATURE

# NATURE GOVERNANCE



# ENGIE AS AN EARLY MOVER IN FAVOR OF NATURE






# COMMITMENTS AND OBJECTIVES ON NATURE

Global Nature objective	2022	2023	2024	TARGET 2030
Rate of industrial activities with an environmental plan established in consultation with stakeholders	53%	66%	76%	100%


Water 	2022	2023	2024	TARGET 2030
Fresh water consumption per energy produced in m <sup>3</sup> /MWh	0.301	0.275	0.239	0.1

Pollution	2022	2023	2024	TARGET 2030
NOx emissions reduction rate vs 2017	-46%	-63%	-75%	-75%
SOx emissions reduction rate vs 2017	-34%	-95%	-98%	-98%
Total particulate emissions reduction rate vs 2017	-21%	-54%	-64%	-60%




# COMMITMENTS AND OBJECTIVES ON NATURE

Biodiversity 	2022	2023	2024	TARGET 2030
Rate of industrial sites with natural management of green spaces without the use of chemical plant protection products	34%	58%	63%	100%
Use of at least 40% local / endemic plants and no use of invasive species for all planting operations	-	ND	ND	100% of sites compliants
Continued development of action plans for sites qualified as priority sites, whatever the activity, located in or near a biodiversity-sensitive area	60%	62%	88%	100% in 2028
Application of the «avoid-reduce-compensate» sequence to the Group's development projects worldwide	80%	90%	91%	100% in 2025
Financial or technical contribution to the implementation of nature-based solutions (NBS) in local areas	1	0	4	2025: 10 projects compliant with the IUCN standard
Contribution to the preservation of Ramsar listed wetlands in the vicinity of our sites, in collaboration with the relevant stakeholders. This contribution may be financial or technical, depending on local needs.	-	-	4	5 projects / year
Integrated biodiversity criteria in lifecycle assessments in order to perform an in-depth analysis of the impacts on biodiversity related to the Group's activities throughout the value chain	4	2	2	2 activities / year till 2025
Publication of an analysis of direct and indirect impacts and dependencies, as well as risks and opportunities, for each type of activity. Definition of a positive nature trajectory	-	-	On going	End 2025
Raising awareness of biodiversity among all employees	2,533	2,065	1,536	2023: 3,000 employees / year 2024 and 2025: 5,000 employees / year
Sharing of biodiversity data, including non-regulatory data, on the GBIF (Global Biodiversity Information Facility) platform	-	12	30	As a minimum, one instance of data sharing compliant with the GBIF format / country / year as of 2023
Financing research to improve knowledge of biodiversity conservation by 2030	4	4	4	Number of theses: three by 2025
	1	2	2	Number of internships: five by 2025
	2	2	2	Number of academic partners: two by 2025



# COMMITMENTS AND OBJECTIVES ON NATURE

<b>Circular economy</b> 	2022	2023	2024	Target 2030
Non-hazardous waste generation reduction rate vs 2017	-47%	-73%	-63%	-80% by 2030
Hazardous waste generation reduction rate vs 2017	-94%	-93%	-92%	-95% by 2030
Increase the proportion of biomethane production connected to our networks in France	8.5	11	13	50 TWh / year by 2030
Increase the ambition of biomethane production in Europe	0.5	0.9	1.2	10 TWh / year in 2030

<b>Biomass</b>	2022	2023	2024	Target 2030
Sourced woody biomass traceable and certified	85%	100%	100%	100% maintained
New-built biomethane units: use of single-digit percentage at most of energy crops <sup>1</sup>	-	-	XX	Yearly
Acquired biomethane units: phase-out plan implementation within 10 years – one-digit percentage for remaining energy crops <sup>2</sup>	-	-	XX	Yearly

(1) ENGIE's biomethane units that are newly built must use a very low proportion of energy crops. The annual feedstock tonnage across the country must have energy crops as a single-digit percentage at most

(2) If acquired existing biomethane plants are running with energy crops, a plan to phase out from energy crops, as soon as possible and the latest within 10 years (just transition for farmers), is implemented. If some dedicated energy crops shall remain, the average annual tonnage in the total portfolio of the country should represent a one-digit maximum percentage.



# PARTNERSHIPS AND COMMITMENTS

## OUR MAIN PARTNERSHIPS

### ENGIE x UICN France

[Link](#)



ENGIE and the French Committee of the International Union for Conservation of Nature have been linked since 2008 through a partnership agreement aimed at helping the Group to integrate biodiversity more fully into its activities.

### ENGIE x UNEP/WCMC

[Link](#)



ENGIE and UNEP/World Conservation Monitoring Center have been linked since 2023 through a partnership agreement aimed at helping the Group to establish its trajectory towards "nature positive".

## OUR COMMITMENTS

### ENGIE x Now For Nature

[Link](#)



Share of nature strategies campaign to set out how the nature crisis is addressing by companies, in a public and accessible way.

### ENGIE x act4nature

[Link](#)



International initiative to develop the mobilization of companies in favour of biodiversity through pragmatic commitments supported by their CEOs.

### ENGIE x Entreprises Engagées pour la nature

[Link](#)



French initiative to commit companies to biodiversity as part of the National Biodiversity Strategy 2020-2030.

# INVOLVEMENT IN EXTERNAL NATURE FRAMEWORKS



## Taskforce on Nature-related Financial Disclosure (TNFD)

- ▶ Member of the TNFD forum, follow-up of the works
- ▶ Group-wide implementation of the LEAP (Locate-Evaluate-Assess-Prepare) method in 2024
- ▶ Measuring the ENGIE's biodiversity footprint with the Global Biodiversity Score



## Science-Based Targets on Nature

- ▶ Member of the corporate engagement program
- ▶ Contribution to the first pilot phase on step 1
- ▶ Follow-up of the works



## Nature-based solutions

- ▶ Implementation of the IUCN (International Union for Conservation of Nature) standard to validate nature-based solutions



# IMPACTS ON NATURE

ENGIE has assessed the dependencies of its activities on biodiversity using the results of the WBCSD's sectoral work Energy Pathway, [\(Roadmap to Nature Positive: Foundations for the energy system - World Business Council for Sustainable Development \(WBCSD\)\)](#)

Fuel type	Land-/Water-/Sea-Use Change			Resource Exploitation		Climate Change	Pollution				Invasive Species and others	
	Terrestrial ecosystem use	Freshwater ecosystem use	Marine ecosystem use	Water use	Other resource use	GHG emissions	Non-GHG air pollutants	Water pollutants	Soil pollutants	Solid waste	Disturbances	Biological alterations/ Interferences
Coal power stations		High		High		High	High	Medium	Medium	Medium	High	
Storage & Transportation	High	High	High	High		High	High	High	Low		High	High
Other thermal power stations		High	Low	High		High	Medium	Low	Medium	Low	High	
Gas distribution & Retail	High		High			High				Medium		
Wind	High	Low	Medium					Low	Low	Low	Medium	
Solar	High			Medium				Low	Low	Low		
Biomass	High			High		Medium	High	High		High	High	High
Hydropower	High	High		High		Medium		High	High			High
Geothermal				High		Medium		High	High		High	
Nuclear power stations	High	High		High		Low	Low	Medium	Low	High	High	
Water utilities	High	High		High				Low	Low			
Biomass/Gas	High		High	High		High	High	High	Medium	Medium	High	High
Geothermal/Gas		High	Low	High		High		High	High	Low	High	
Gas/Coal		High	Low	High		High	High	Medium	Medium	Medium	High	
Gas/Gas distribution	High	High	High	High		High	Medium	Low	Medium	Medium	High	

■ Very High
 ■ High
 ■ Low
 ■ Data not available scientifically for the energy sector

# DEPENDENCIES ON NATURE

ENGIE has assessed the dependencies of its activities on biodiversity using the results of the WBCSD's sectoral work Energy Pathway, [\(Roadmap to Nature Positive: Foundations for the energy system - World Business Council for Sustainable Development \(WBCSD\)\)](#)

Fuel type	Direct physical Inputs				Enabling production processes					Mitigating direct impacts				Protecting from disruption					
	Fibers & other materials	Genetic materials	Ground-water	Surface water	Pollination	Ventilation	Soil Quality	Water flow maintenance	Water quality	Bio-remediation	Mediation of sensory impacts	Dilution by atmosphere & ecosystems	Filtration	Buffering	Climate regulation	Disease Control	Flood & storm protection	Mass stabilization & erosion control	Pest control
Coal power stations			Medium	High				Medium	Low	Low			Low		Low		Medium	Low	
Storage & Transportation															Medium		Medium	High	
Other thermal power stations			Medium	High				Medium	Low	Low			Low		Low		Medium	Low	
Gas distribution & Retail								Low	Low				Low		Medium		Medium	High	
Wind															High		Medium	Medium	
Solar			Low	Low											High		Medium	Medium	
Biomass	High		Medium	Medium				Medium	Low	Low			Low		Low		Medium	Low	
Hydropower			Medium	High				High	Low	Low			Low		High		High	High	
Geothermal			High	Medium				Medium	Low	Low			Low		Low		Medium	Low	
Nuclear power stations			Medium	High				Medium	Low	Low			Low		Low		Medium	Low	
Water utilities			High	High			Medium	High	High	Medium	Low		Medium	Low	Medium		Medium	Low	Low
Biomass/Gas	High		Medium	Medium				Medium	Low	Low			Low		Medium		Medium	High	
Geothermal/Gas			High	Medium				Medium	Low	Low			Low		Low		Medium	Low	
Gas/Coal			Medium	High				Medium	Low	Low			Low		Low		Medium	Low	
Gas/Gas distribution			Medium	High				Medium	Low	Low			Low		Medium		Medium	High	

■ Very High
 ■ High
 ■ Medium
 ■ Low
 ■ Data not available scientifically for the energy sector

# BIODIVERSITY

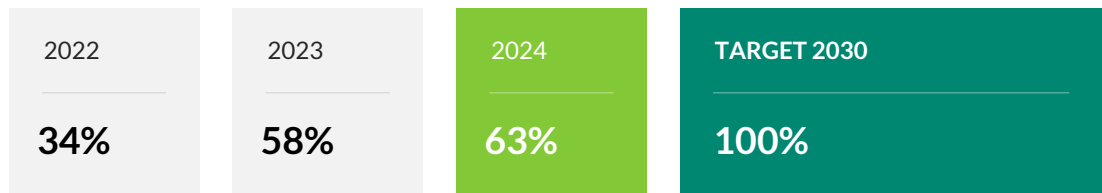
The integration of the biodiversity concerns in the Group's activities is assessed through 3 interconnected main objectives. Out of the 935 industrial sites in 2024, 590 (63%) of them have avoided the use of chemical phytosanitary products and manage their green spaces with respect of natural rhythms and ecosystems, 714 are located near a biodiversity-sensitive area and 88% of these have developed an action plan.

To enhance the integration of nature issues, ENGIE has implemented the LEAP approach which allows a deeper and broader analysis of the impacts. As a result, in 2024, 58 sites of the 935 are considered as priority material sites.

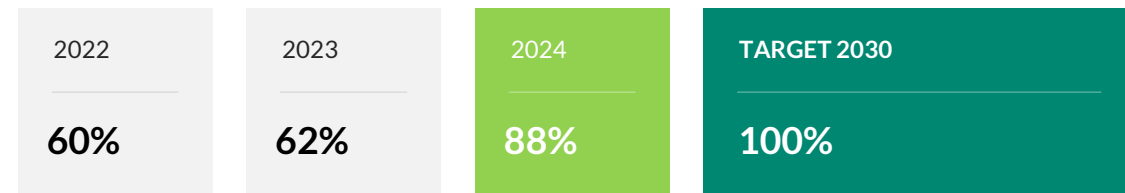
## MAIN OBJECTIVES



Rate of industrial sites with natural management of green spaces without the use of chemical plant protection products



Continued development of action plans for sites qualified as **priority sites**, whatever the activity, located in or near a biodiversity-sensitive area (<15km)



In 2024, implementation of the LEAP methodology for CSRD, new assessment of **priority material sites** according to five criteria:

- Proximity to protected areas
- IUCN Red List of Threatened Species
- Ecosystem integrity levels
- Water stress zones
- Sectorial impacts and dependencies of industrial activities

2024  
**58 sites**

## MAIN TOOLS



LEAP (Locate, Evaluate, Assess, and Prepare) methodology developed by the **Taskforce on Nature-related Financial Disclosures (TNFD)** is an integrated approach for identifying and assessing nature-related issues



The Integrated Biodiversity Assessment Tool (IBAT) is a comprehensive resource that provides access to critical biodiversity data to help organizations assessing risks on biodiversity



Global Biodiversity score for the biodiversity footprint



# POLLUTION

Air pollution	2022	2023	2024	Target 2030
NOx emissions reduction rate vs 2017	-46%	-63%	-75%	-75%
SOx emissions reduction rate vs 2017	-34%	-95%	-98%	-98%
Total particulate emissions reduction rate vs 2017	-21%	-54%	-64%	-60%

## AIR

Some of the Group’s activities, such as thermal power plants, heating plants, LNG terminals and compression stations, emit atmospheric pollutants, mainly nitrogen oxides (NOx) and particulate matters.

The Group ensures not only that it complies with current regulations but **also implements the best available techniques** at the various energy generation sites to reduce emissions as much as possible. These emissions are permanently monitored and any limits that are exceeded are declared to the local authorities.

In addition to compliance with regulations, ENGIE also works to reduce atmospheric pollutant emissions and has set objectives for 2030.

## WATER

The main impact of water discharges is temperature variation due to the use of water for cooling power plants and heating LNG.

The Group discharges few substances into the aquatic environment. The main substances discharged are residues from water disinfection.

## SOIL

Due to prior industrial activities, the Group has a few sites where decontamination measures need to be implemented.

Pollution risks are identified at the design stage of a project and structures are dimensioned accordingly, with facilities adapted to avoid impacts (chemical product discharge, for example).

Particular attention is also paid to pollution risks when decommissioning plans are drawn up for sites. All measures are taken to limit risks and, where appropriate, decontaminate when necessary.

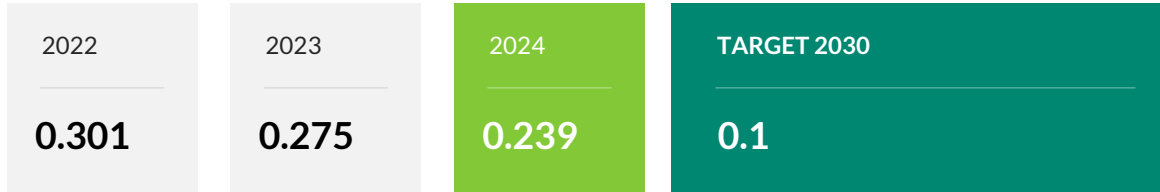




# WATER

## MAIN OBJECTIVES

Fresh water consumption per energy produced in m<sup>3</sup>/MWh



### Commitments:

- CEO Water Mandate six core elements
- Business Leaders' Open Call to Accelerate Water Action Open (Positive Water Impact)

## MAIN ACTIONS

- Implementation of action plans for sites located in high or very high water stressed area based on the water stress indicator of Aqueduct tool, in consultation with stakeholders
- Identification of potential collective actions in the priority river basins listed in the Water action Hub
- Reduction of the water consumption

In 2024, **152** sites are located in extreme water stress areas and **194** in high water stress areas.

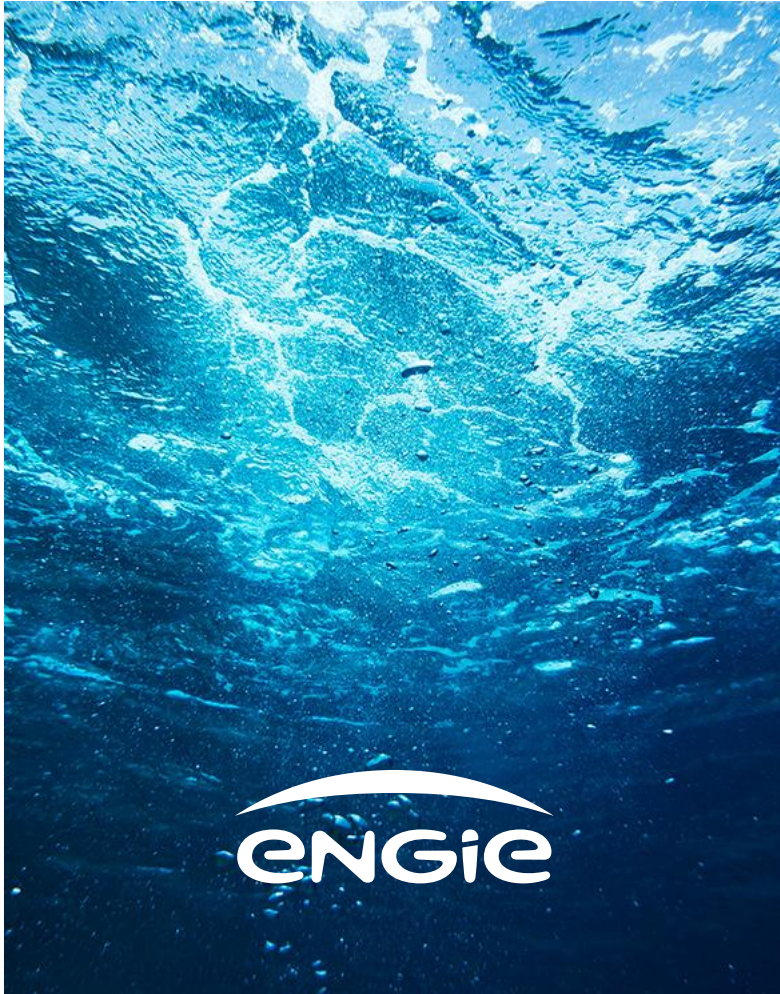
Among the sites in extreme water stress areas, **seven** have significant freshwater needs (freshwater consumption higher than 100,000 m<sup>3</sup>/year) and have implemented action plans to reduce pressure on water resources.

### Actions to reduce consumption

- Leak detection
- Water reuse
- Rainwater harvesting
- Appropriate technological choices for new projects



# OCEANS



## COMMITMENT TO THE UN SUSTAINABLE OCEAN PRINCIPLES

### > Ocean health and productivity

Promote healthy marine ecosystems and their productivity for present and future generations.

### > Governance and engagement

Encourage transparent and inclusive governance and stakeholder engagement in ocean management.

### > Data and transparency

Ensure transparency and access to data for better decision-making and sustainable ocean management.

## MAIN AXES FOR ENGIE



Contributing to the preservation of marine ecosystems during the development of offshore wind farms



Reducing the impact of seawater desalination



Improving ecological continuity (blue network) through hydropower generation activities

# FORESTS

## MAIN OBJECTIVES

### TRACEABILITY AND COMPLIANCE

Biomass is traceable and complies with European regulations governing wood (or equivalent) in all cases, to ensure compliance with the European Taxonomy.



### DEFORESTATION AVOIDANCE IN PROJECTS

ENGIE develops projects all over the world, such as renewable energies and linear infrastructures. **For any project, the priority is to avoid any negative impact on biodiversity**, i.e. species and habitats. Applying and respecting the mitigation hierarchy (Avoid - Reduce - Compensate sequence) is part of the Group's ESG roadmap and is an objective of ENGIE's act4nature commitments. Where impacts on species or habitats remain, biodiversity offsets are managed in accordance with the IUCN policy developed in 2016, and with the participation of relevant stakeholders.

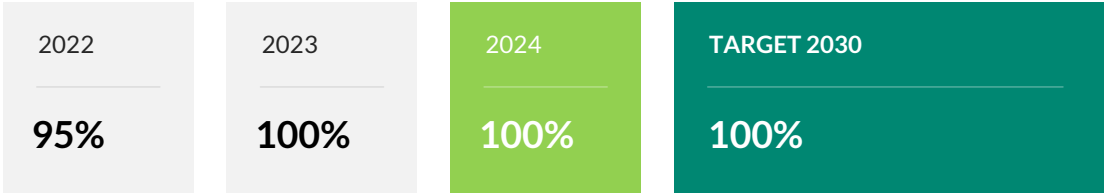
The way in which cut trees are compensated is defined with the relevant stakeholders in such a way as to best preserve the ecosystem, habitats and species. Indigenous peoples and local communities are also listened to and their expectations integrated as far as possible.

### SUSTAINABILITY

**Option a.** Biomass is certified against PEFC non-controversial sources, FSC controlled wood, SBP or an equivalent voluntary scheme recognized by the European Commission under the EU RED II directive.

**Option b.** Where such certifications are not available, a sourcing policy (indicating sustainable forest management that respects ecosystems) is defined and communicated to raw material suppliers, and its application is verified by due diligence on a recurring basis (at least every five years).

The sourcing policy specifies that biomass should not be sourced from high-quality sawlogs or stemwood. In the specific case of plantations, biomass can only come from the products of a plantation if the plantation is certified as indicated in option a. If this is not the case, the biomass may come from plantation residues in accordance with option b.



### USE OF A SUSTAINABLE WOODY BIOMASS

ENGIE is a member of the **Sustainable Biomass Program**. This program provides a standard framework for the use of biomass, while respecting ecosystems and local populations

# CIRCULAR ECONOMY AND WASTE

## OUR COMMITMENT: REDUCE THE QUANTITY OF WASTE

Policies or action plans established to cover or remedy risks	Steering resources or KPIs, objectives	2022	2023	2024
The Group's circular economy policy, which aims to ensure that each site or activity works on the recovery and / or recycling of its waste	<b>2030 operational objectives:</b>			
	<ul style="list-style-type: none"> <li>▶ <b>80%</b> reduction in the quantity of non-hazardous waste disposed of vs 2017 (2,773,419t)</li> </ul>	-47% 1,459,706t	-73% 753,711t	-63% 1,024,545t
	<ul style="list-style-type: none"> <li>▶ <b>95%</b> reduction in the quantity of hazardous waste disposed of vs 2017 (386,783t)</li> </ul>	-91% 33,601t	-93% 26,797t	-92% 31,695t
	<ul style="list-style-type: none"> <li>▶ % of non-hazardous waste recovered</li> </ul>	80%	83%	85%
	<ul style="list-style-type: none"> <li>▶ % of hazardous waste recovered</li> </ul>	21%	24%	22%

Notes
<ul style="list-style-type: none"> <li>▶ The Group relies on local definitions of waste and recovery for its indicators related to the production and recovery of business waste.</li> <li>▶ Only tonnages taken away and weighed on site should be reported as evacuated to avoid inaccurate reporting.</li> <li>▶ The tonnages to be reported can be wet or dry, depending on their state when disposed of: if the waste disposed of was wet, the reported tonnages are wet, if the waste disposed of was dry, the reported tonnages are dry.</li> <li>▶ Exception: if the waste is permanently stored on site, the associated dry tonnages must also be reported as evacuated. In this case, the waste is never recovered.</li> <li>▶ Waste generated by the construction or dismantling of industrial facilities, by the repowering or modernization of facilities, and by land remediation is not covered by business waste indicators.</li> </ul>



# CIRCULAR ECONOMY AND WASTE

## WIND TURBINE RECYCLING

After a service life of 20 to 30 years, wind turbines are either



**Repowered** (replaced at the end of their service life by more modern, higher-performance models) or,



**Dismantled**, which involves dismantling (removal of the rotor, the nacelle, disassembly of the various sections of the mast...), site restoration (excavation of foundations, crane pads and access roads) and recycling of demolition and dismantling waste.

Over 93% of the weight of an onshore wind turbine is recyclable.

On average, they are made up of 90% steel and concrete, 6% resins and reinforcing fibers, and 3% copper and aluminum



The foundations, which represent the plant's largest mass, are made from cement concrete: cement concrete is widely used in industry and construction and is reused as aggregate or used to manufacture new concrete, for example.



The mast, hub, nacelle and electrical cables are also made of various metals (steel, copper, cast iron, aluminum): these products can be 100% recycled in existing dedicated channels.



Blades and nacelle shells are made from composite materials: these consist of glass or carbon fibers mixed with a polymer matrix (epoxy resin, polyester, etc.): certain specialized channels enable these composite elements to be recycled (to create heat or energy, or to be reused in other wind farms), but the methods used to date do not enable these components to be optimally reused.



### Innovation

ENGIE is contributing to the **ZEBRA 100% recyclable wind turbine blade project**, which has unveiled a second recyclable thermoplastic wind turbine blade, and in late 2024 successfully recycled **“Elium” resin and Ultrablade fabrics** from wind turbine blades and production waste, reforming them into reusable materials.

# CIRCULAR ECONOMY AND WASTE

## BATTERY RECYCLING

### Suppliers' key role in recycling

> The economic player responsible with the recycling of the batteries is considered both in Europe and in the US the manufacturer.

> This triggers interest of Chinese and US (Tesla) manufacturers to develop recycling capabilities in a closed loop.

### End of life economic impact for end users (eg. ENGIE):

> As the stationary storage market represents 25% of the whole batteries market (75% for the EV market), recycling is mainly pushed by increasing volumes of EV batteries becoming obsolete.

> Stationary batteries recycling will come at a cost due to the chemical mix (LFP), less valuable in terms of raw materials than the NMC one used in the past mostly in the automotive sector.

> Waste batteries (production scrap + end-of-life batteries) are expected to increase to reach 2 million tons / year by 2030. Currently China is the most advanced in terms of recycling facilities and the trend is supposed to continue.

> Nonetheless, batteries long distance transportation at end of life raises more security problems than when transported for build-out. There will be limits to sending all BESS with end-of-life status back to China. Local recycling facilities should emerge in the US & Europe.

### ENGIE action in recycling & circular economy

> ENGIE joined the **Global Battery Alliance** in September 2024 in order to weight on the topics of the sustainable supply chains and circular economy.

> The association has as a goal to shape norms and traceability wise the above topics worldwide.

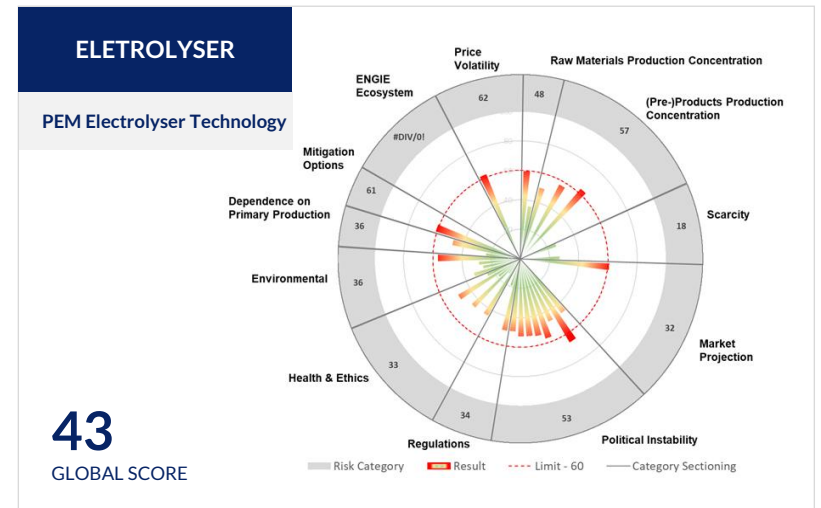
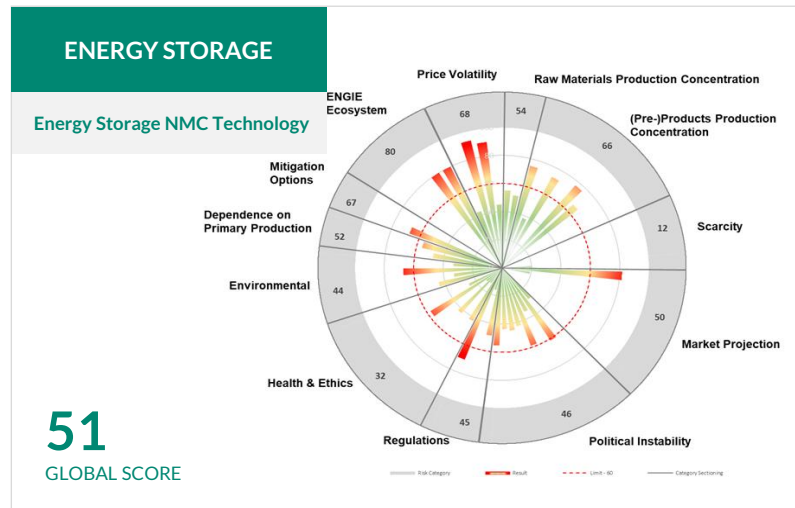
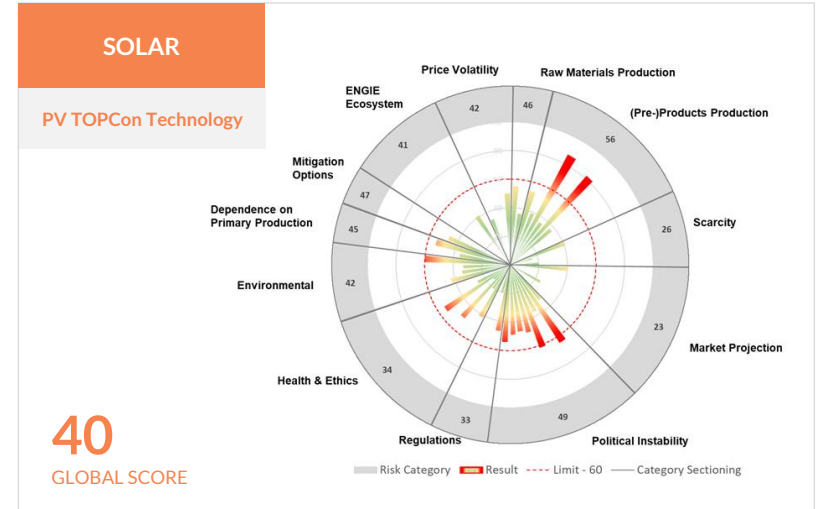
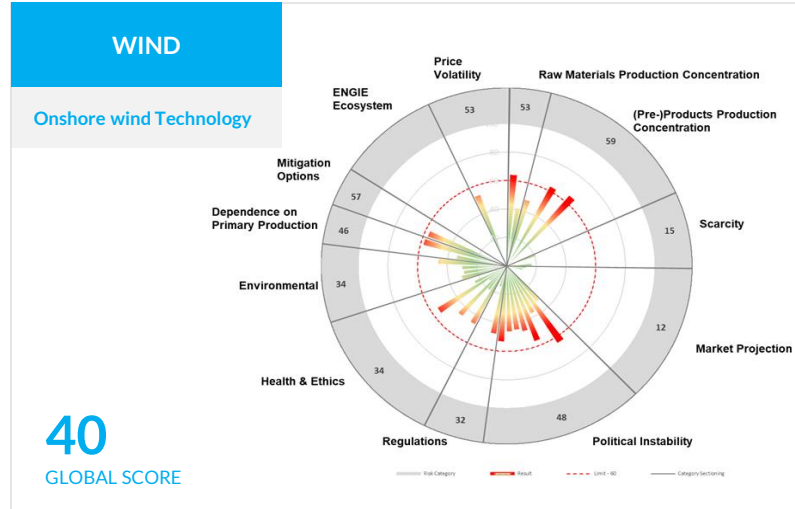


# CIRCULAR ECONOMY AND WASTE

## OUR TOOLS FOR OPERATIONALIZATION

The Materials Risk Passport aims to better understand and anticipate the risks associated with the raw materials used in the Group's technologies, thus facilitating proactive supply management based on 55 risk indicators grouped into 12 categories.

In addition to helping to minimize risks, the tool also strengthens the Group's position in an economy increasingly focused on sustainability and optimized resource management.



NMC: nickel manganese cobalt

PV: photovoltaic

PEM: proton exchange membrane



▶ GENERAL INFORMATION

▶ ENVIRONMENT

▶ CLIMATE

▶ NATURE

▶ SOCIAL SOCIETAL

▶ GOVERNANCE

# 2

# SOCIAL/SOCIETAL



# JUST TRANSITION: A 4-PILLAR STRATEGY

## Just transition policy

Putting people at the heart of the energy transition, in line with the Paris Agreement and the guiding principles of the International Labour Organization

Two prerequisites for a just transition: **collaboration** (no single player can achieve a just transition on its own, and **fiscal justice** (a renewed requirement to reconcile economic performance with fair application of the law in all countries where ENGIE operates).

## The principles implemented

- ▶ **Controlled management of restructuring**, with support for site closures, enhanced employability and skills development, and a common set of guarantees for all employees.
- ▶ **Contributing to the economic and social development** of local communities by building local projects and providing affordable energy.
- ▶ **Contributing to local resilience** by preserving natural resources and neighboring communities and helping to reduce local vulnerability.

## The four-pillar action plan

01.

### CUSTOMERS

- Energy and services for private customers and businesses
- Combating precariousness
- Access to energy

02.

### TERRITORIES & LOCAL COMMUNITIES

- Structured dialogue with local communities
  - Contributing to resilience
  - Engaging with communities
  - Socio-economic footprint

03.

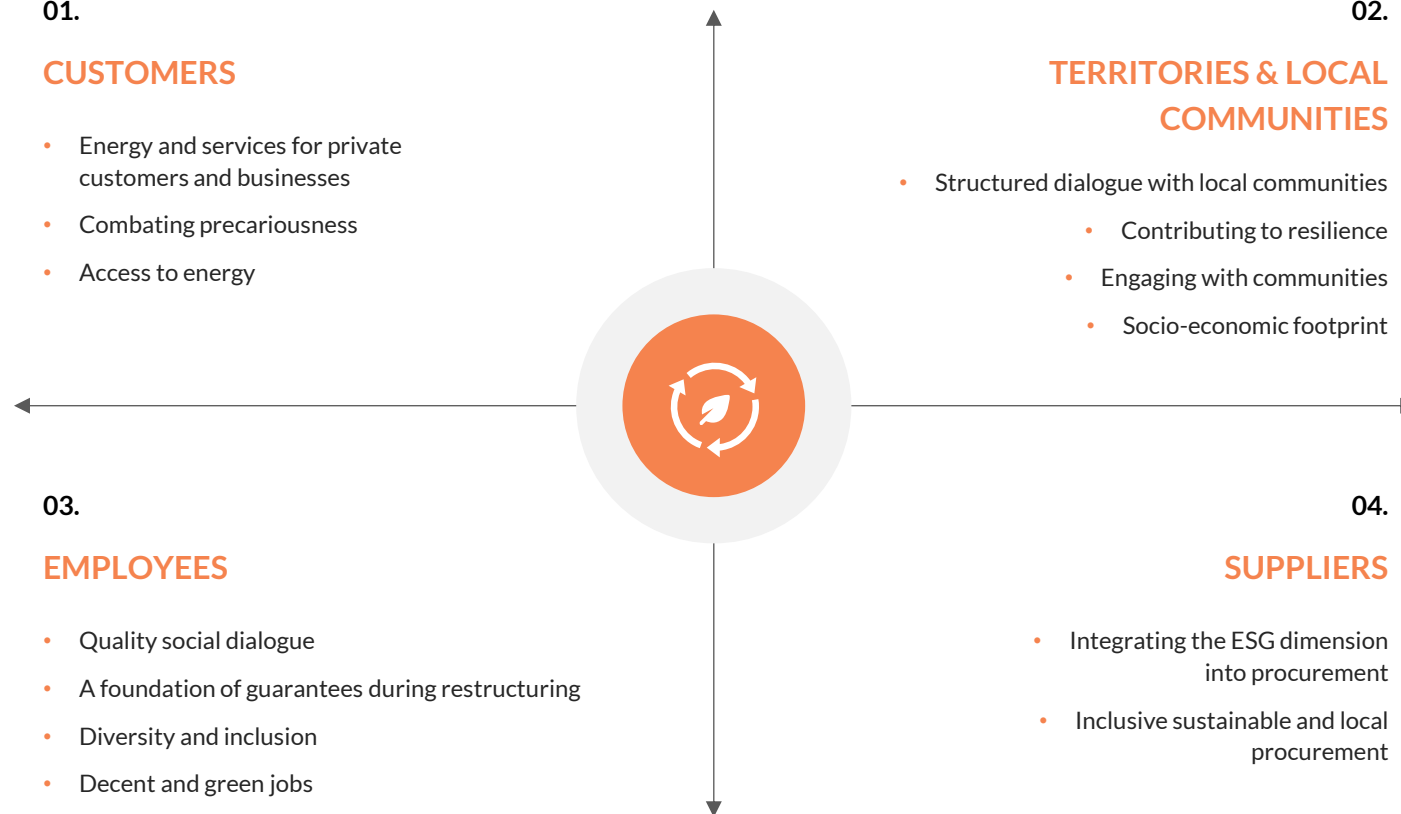
### EMPLOYEES

- Quality social dialogue
- A foundation of guarantees during restructuring
- Diversity and inclusion
- Decent and green jobs

04.

### SUPPLIERS

- Integrating the ESG dimension into procurement
- Inclusive sustainable and local procurement



# JUST TRANSITION: KPIS OF THE ACTION PLAN

PILLAR	ACTION	INDICATOR	2022	2023	2024
EMPLOYEES	Quality social dialogue	Current global agreements		2	2
		European agreements in progress	5	5	5
		Engagement rate (ENGIE&Me) (%)	86	87	87
	Guarantee base for restructuring	Entities concerned by solutions offered to employees (%)	100	100	100
		Employees concerned rate (%)	n.a.	n.a.	5
	Diversity and inclusion	Women in workforce rate (%)	26.1	26.5	28.8
		Women in management rate (%)	29.9	31.2	32.0
		Number of permanent and fixed-term hires	16,974	16,195	15,589
	Decent, green jobs	Number of fatal accidents (employees and subcontractors)	4	6	3
		Accident severity rate (employees)	2	1.8	1.7
		Coverage rate of the ENGIE CARE program (%) <sup>1</sup>	n.a.	62.7 98.6	100
		Number of training hours	2.1 m	2.3 m	1.9 m
Rate of employees trained (%)		83.8	86.1	94.6	
CUSTOMERS	Energy and service offers	Individual customer satisfaction rate (%) <sup>2</sup>	73-90	69-86	65-88
		Number of renewable electricity contracts in portfolio	6 m	6.5 m	7.7 m
	Fighting energy poverty	Number of customers helped	n.a.	1.3 m	1 m
	Access to energy	Number of people impacted who benefited from access to energy	2.5 m	2.5 m	3.1 m
Business customers	Business customers' satisfaction rate (%) <sup>3</sup>	n.a.	80	n.a.	
	Volume of PPAs (GW)	2	2.7	4.3	

PILLAR	ACTION	INDICATOR	2022	2023	2024	
TERRITORIES AND COMMUNITIES	Structured dialogue with territories	Rate of sites covered by a societal plan (%)	46	49	54	
		Rate of sites covered by an environmental plan (%)	53	66	76	
		Number of countries covered by TED label	1	7	10	
	Contributing to regional resilience	Number of employees worldwide	96,454	97,297	97,967	
		Tax paid (bn €)	6.6	5.1	5.8	
	Community involvement	Concrete examples from certain countries over the year under review	Qualitative KPI to be disclosed on ENGIE's website			
	Socio-economic footprint	Socio-economic footprint	Done data	Done data 2022	Done date 2022	
	SUPPLIERS	Integrating the ESG dimension into procurement	Rate of suppliers evaluated with a score above 45 by EcoVadis	24	49	41
			Responsible purchase index	38	54	59

(1) Data by covered entities only available in 2022, range of results of the four pillars for 2023 n.a. not available

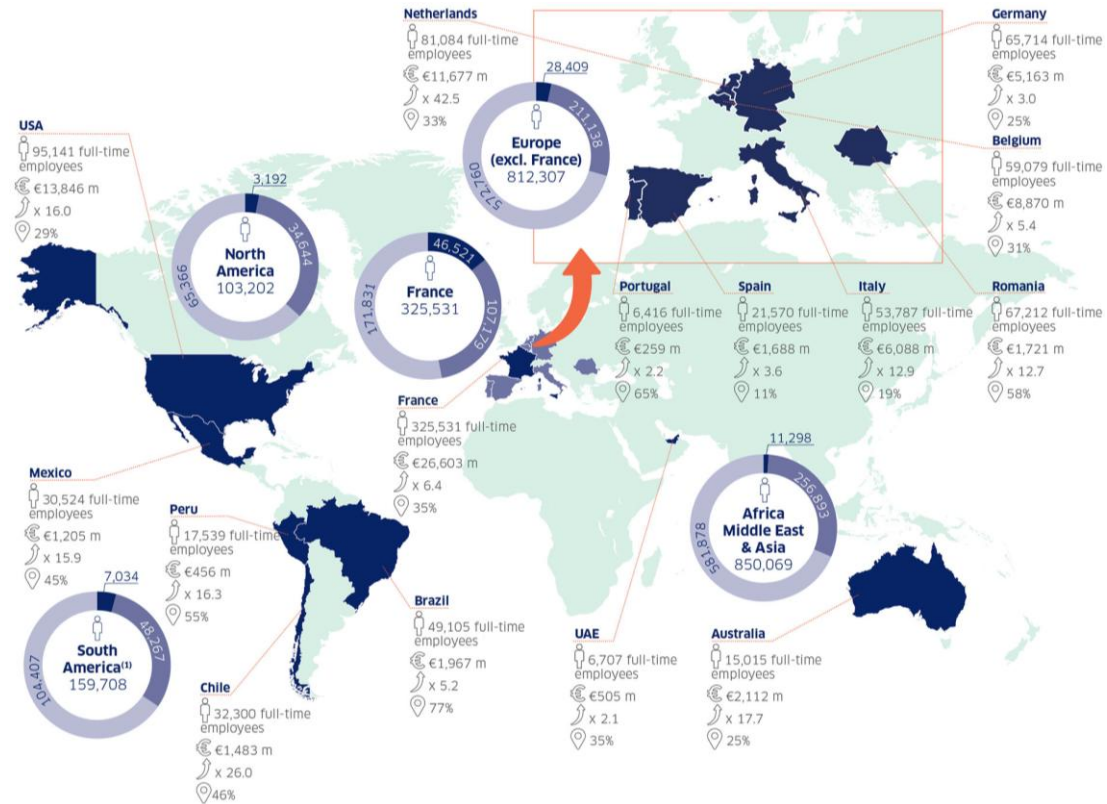
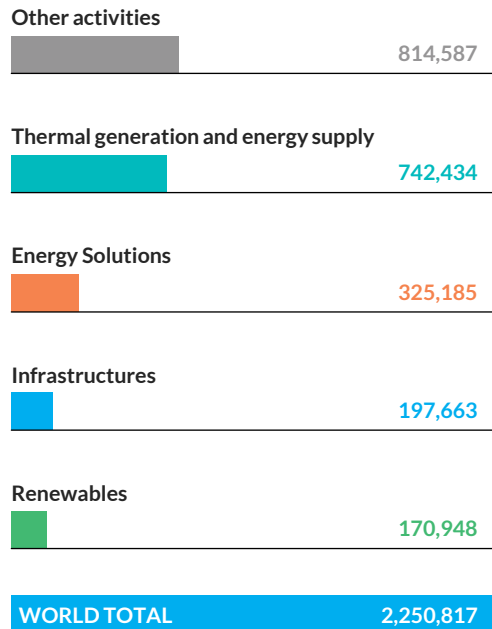
(2) Range of results for the six countries managed by One Retail

(3) Under calculation for 2024, data available end of Q1 2025

# SOCIO-ECONOMIC FOOTPRINT

## Socio-economic footprint of each ENGIE Group business line

In number of jobs supported (in FTE)



### Reading

ENGIE contributes €2,112 million to Australia's GDP and supports 15,015 FTEs in Australia. Each direct ENGIE job in Australia supports 16.7 additional jobs in Australia. 25% of the jobs supported by ENGIE's Australian operations are located in Australia.

- Jobs supported (FTE)** directly, indirectly and incidentally in the area by ENGIE activities worldwide
- Direct jobs (FTE)**  
ENGIE employees in the area
- Indirect jobs (FTE)**  
Employees of the supplier chain located in the area and supported by ENGIE activities worldwide
- Jobs generated (FTE)**  
Employees located in the area and supported by the salaries and taxes paid by ENGIE and its chain of suppliers worldwide
- Contribution to GDP**  
Direct, indirect and incidental value added by ENGIE's activities worldwide
- Local multiplier coefficient**  
Ratio between jobs supported in the country by ENGIE's operations in the country, and ENGIE's direct jobs in the country
- Local presence**  
Percentage of jobs located in the country that are supported by ENGIE's operations in the country

(1) Includes Central America

# STAKEHOLDER DIALOGUE

## CUSTOMERS

INDIVIDUALS, PROFESSIONALS, COMPANIES AND REGIONAL AUTHORITIES

- Marketing studies, consumer panels
- Responses to client consultations
- Satisfaction studies
- Mediation (ENGIE and energy mediators)

## SUPPLIERS

KEY, STRATEGIC, PREFERRED, MAJOR AND OTHER SUPPLIERS

- Consultations via calls for tender
- Exchange on ESG performance via ECOVADIS rating and audits
- Business review by suppliers
- Supplier Days

## EMPLOYEES

EMPLOYEES AND THEIR REPRESENTATIVES  
EMPLOYEE REPRESENTATIVE BODIES AT THE EUROPEAN AND NATIONAL AUTHORITIES AND BODIES

- European Works Council (EWC), French Group Works Council, Local representative bodies
- The world Forum
- ENGIE & ME commitment survey
- Annual internal innovation competition (One ENGIE Awards)
- Theme-based meetings with management (managerial safety visits, business conferences, etc.)

## REGIONS

EUROPEAN AND NATIONAL AUTHORITIES AND BODIES

- Responses to consultations
- Participation in working groups and think-tanks

## INDUSTRIAL PARTNERS

LARGE GROUPS, SMES, START-UPS

- Call for innovative projects
- Support for innovative players via the ENGIE New Ventures investment fund

## FINANCIAL PARTNERS

BANKS, INSURANCE COMPANIES, FINANCIAL ANALYSTS AND RATING AGENCIES

- Organization of roadshows or investor meetings (Capital Market Day, Investor Days, etc.)  
Responses to rating agency evaluation questionnaires

## SHAREHOLDERS

INSTITUTIONAL AND INDIVIDUAL SHAREHOLDERS

- Annual General Meeting of Shareholders
- Meetings with institutional shareholders (governance roadshows )
- Individual shareholders' club
- Organization of meetings and events: site visits, business meetings, etc.

## CIVIL SOCIETY

NGOS, ASSOCIATIONS, RESIDENTS, COMMUNITIES, INDIGENOUS POPULATIONS, PROFESSIONAL ORGANIZATIONS, ACADEMIC INSTITUTIONS

- Information meetings for the general public
- Consultations and meetings, particularly with indigenous populations
- Stakeholder Committee
- Dialogue and Transition Forum
- Scientific council

# STAKEHOLDERS ENGAGEMENT

01.

## Stakeholder committees were organized within the Group in 2024 in order to challenge key strategic issues with external stakeholders

- > Either at corporate level on the theme of double materiality analysis as part of the implementation of the CSRD.

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- > Or at country level, as in Mexico with a meeting on the themes of CSRD, climate change and ESG policy.

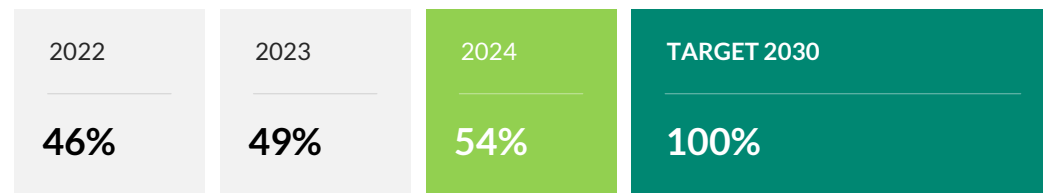
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- > Or at entity level, as in the case of NaTran (ex GRTgaz) (presentation of the company and its 2023 Integrated report, new corporate project and ESG policy, double materiality analysis within the meaning of the CSRD) or ENGIE Green (regulatory impacts on activities; focus on AgriPV).

02.

## Societal plans

Part of industrial activities with a societal plan for stakeholder engagement



03.

## Dialogue & Transition Forum

The Dialogue and Transition Forum aim to enhance and challenge the way the dialogue with stakeholders is implemented.

It is organized in partnership with an international NGO, held three dialogue sessions the year, which were fueled by the various issues encountered by operational staff on the field, as well as those of the NGO and ENGIE operational staff.



▶ GENERAL INFORMATION

▶ ENVIRONMENT

▶ CLIMATE

▶ NATURE

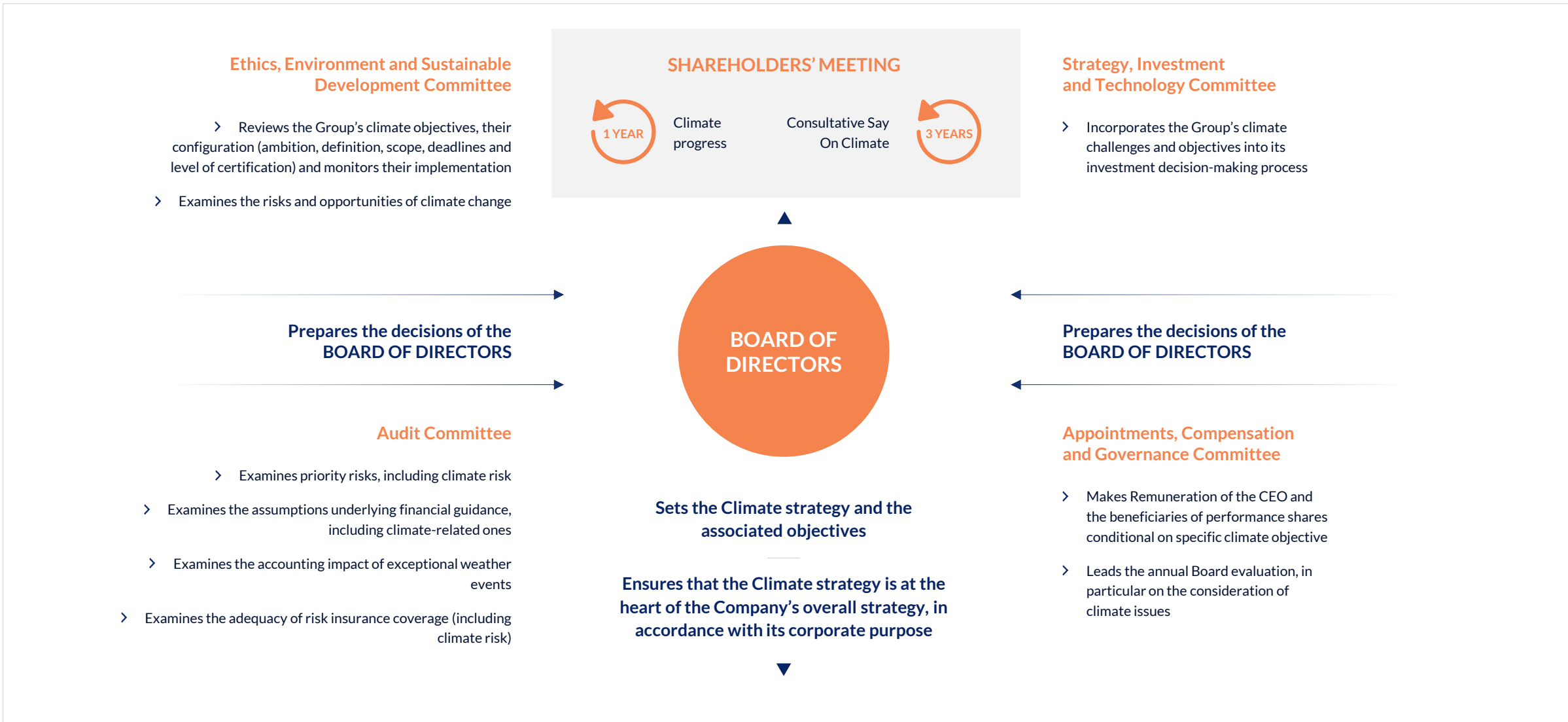
▶ SOCIAL SOCIETAL

▶ GOVERNANCE

# 3

# GOVERNANCE

# CLIMATE GOVERNANCE





### Chief Executive Officer

## EXECUTIVE COMMITTEE

- › Implements the Group's Climate strategy
- › Validates the Group's Climate strategy
- › Arbitrates the Climate trajectory among GBUs
- › Supports each of the 2030 ESG objectives (including 10 climate objectives)
- › Conducts risks reviews

### Executive Vice President

in charge of General Secretariat, Strategy, Research & Innovation and Communication

### Executive Vice Presidents

in charge of the GBUs

### Executive Vice President

in charge of Finance, ESG and Procurement

#### Strategy Department

- › Defines carbon price scenarios
- › Examines the outlook for the energy markets and trends in demand

#### Ethics and Compliance Department<sup>(1)</sup>

- › Oversees the Group's vigilance plan, including climate issues

#### GBUs / entities

- › Ensure the operationalization of the Climate strategy (investments and divestments, new products, projects, etc.)
- › Deliver projects and performance in line with climate trajectories (annual CO<sub>2</sub> budget allocated by the Executive Committee) to the GBUs and follow-up every quarter

#### ESG Department

- › Defines climate policy
- › Oversees climate reporting (including TCFD)
- › Coordinates the implementation of the Climate strategy

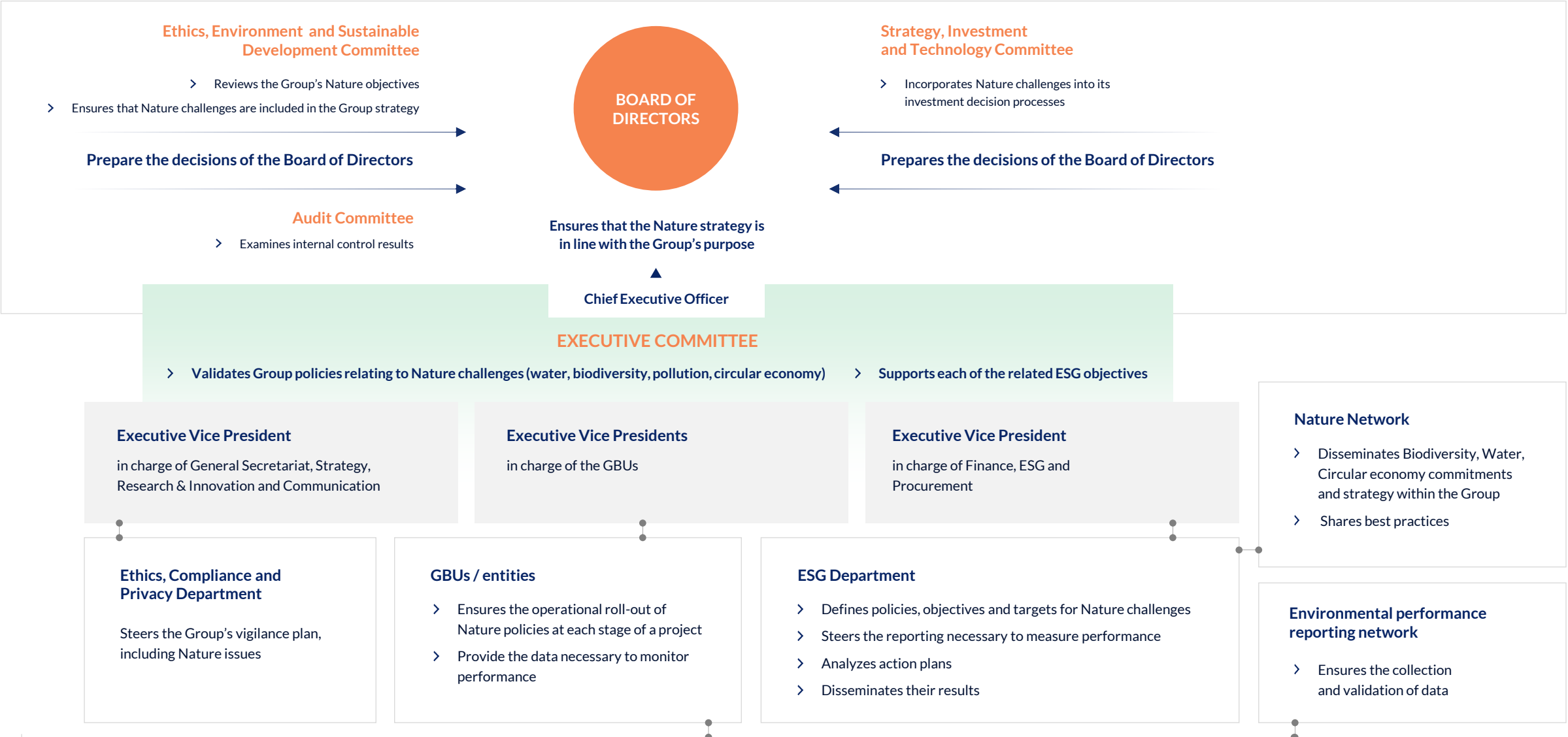
#### Finance Department

- › Ensures that investment decisions are consistent with the Group's climate commitments through their compliance with CO<sub>2</sub> budgets and analyses including carbon pricing

(1) Reporting to the Legal, Ethics and Compliance Department

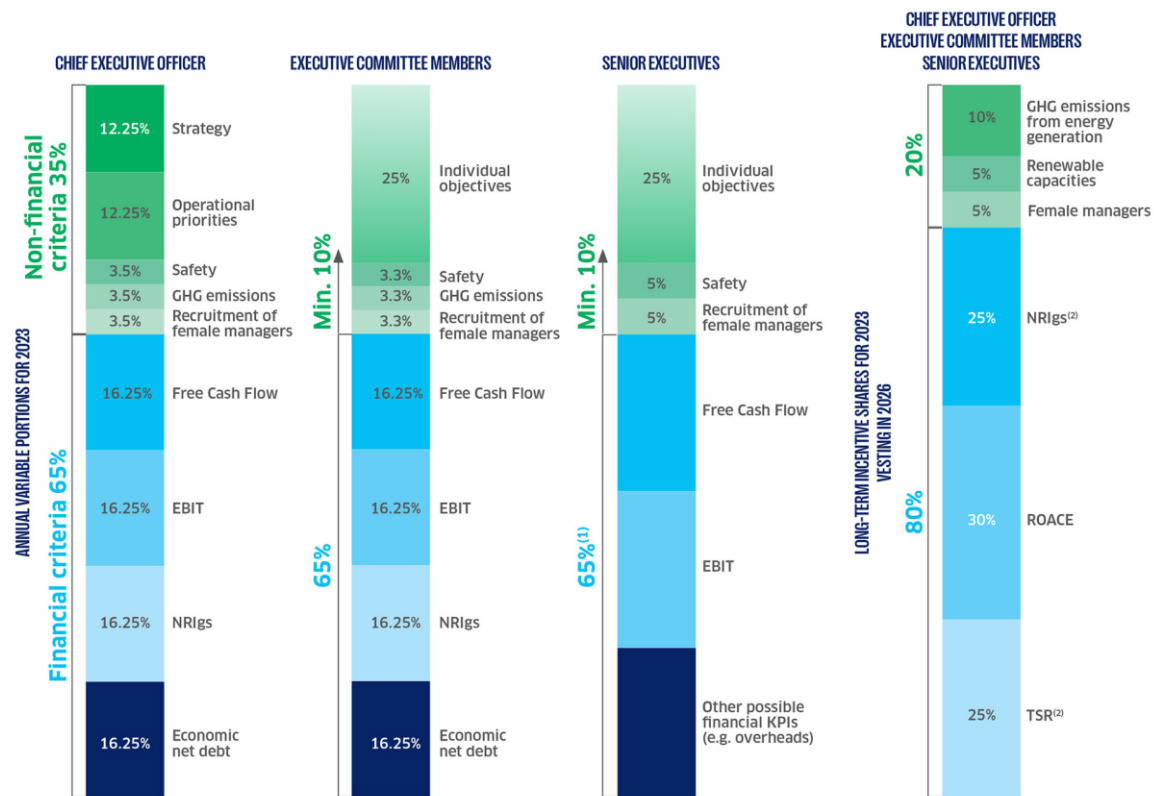


# NATURE GOVERNANCE



# A COMPENSATION POLICY THAT PROMOTES SUSTAINABLE PERFORMANCE

## Proposed annual variable compensation and long-term incentives for 2024



## Success rate in meeting the criteria for the variable annual compensation of the Chief Executive Officer

### FINANCIAL CRITERIA

Success rate: 139.2%

- > Free Cash Flow: 140%
- > EBIT: 136.6%
- > NRIgs: 140%
- > Economic net debt: 140%

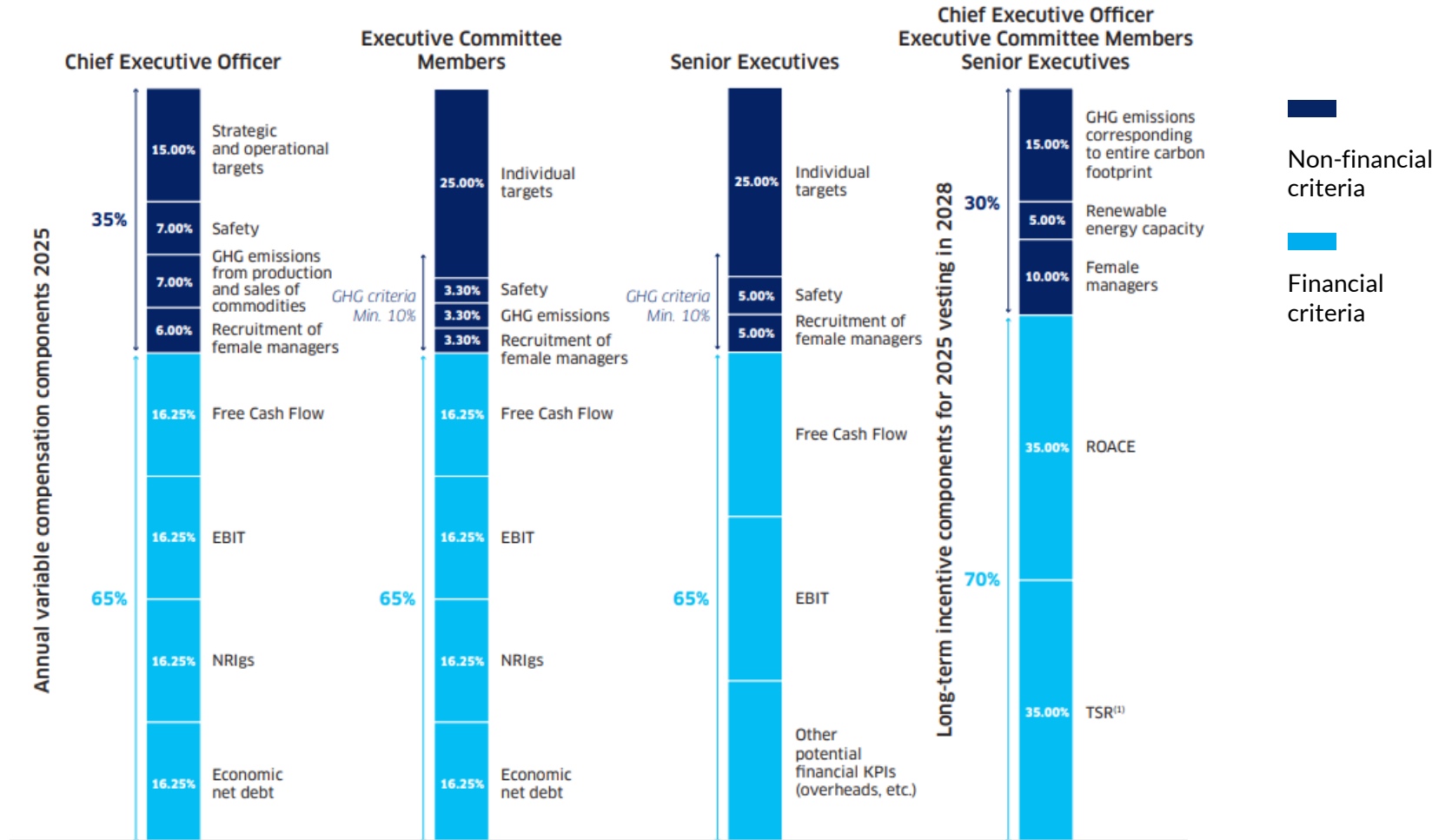
### NON-FINANCIAL CRITERIA

Success rate: 116.5%

- > Strategy: and Operational priorities: 120%
- > Safety: 100%
- > GHG emissions: 140%
- > Recruitment of female managers: 85%

# ESG IN REMUNERATION: 2025 PROPOSAL

## Proposed annual variable compensation and long-term incentives for 2025



(1) Compared to Eurostoxx, Utilities index.