

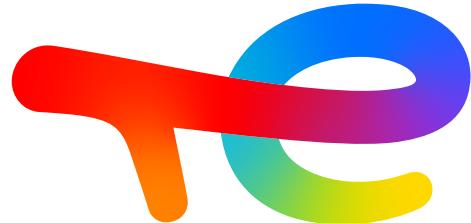
In 2024, TotalEnergies  
celebrates 100 years!



Pioneers  
for  
**100**  
years

# Universal Registration Document 2023

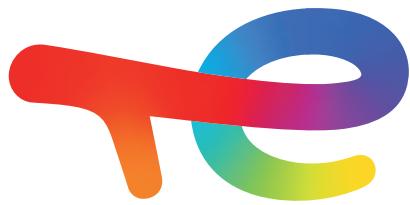
including the Annual Financial Report



**TotalEnergies**

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**TotalEnergies**

## **Universal Registration Document 2023**

including the Annual Financial Report

"I certify, that the information contained in this Document d'enregistrement universel (Universal Registration Document) is in accordance with the facts and makes no omission likely to affect its import.

I certify, to the best of my knowledge, that the Statutory and Consolidated Financial Statements of TotalEnergies SE (the Corporation) have been prepared in accordance with applicable set of accounting standards and give a true and fair view of the assets, liabilities, financial position and profit and loss of the Corporation and of all the entities included in the consolidation, and that the rapport de gestion (management report) of the Board of Directors as referenced in the cross-reference list included on page 667 of this Document d'enregistrement universel (Universal Registration Document) presents a fair view of the development and performance of the business and financial position of the Corporation and of all the entities included in the consolidation, taken as a whole, and describes the principal risks and uncertainties they face."

On March 29, 2024

**Patrick Pouyanné**

Chairman and Chief Executive Officer



This Universal Registration Document was filed on March 29, 2024 with the French Financial Markets Authority (Autorité des marchés financiers), as the competent authority under Regulation (EU) 2017/1129, without prior approval in accordance with Article 9 of said Regulation.

This Document d'enregistrement universel (Universal Registration Document) may be used for the purposes of a public offer of financial securities or the admission of financial securities to trading on a regulated market only if supplemented by a transaction note and, if applicable, a summary and all amendments to the Document d'enregistrement universel (Universal Registration Document). The group of documents then formed is approved by the French Financial Markets Authority in accordance with Regulation (EU) 2017/1129.

This Universal Registration Document is a reproduction in PDF format, translated in English, of the official version of the Universal Registration Document prepared in format XHTML filed with the AMF on March 29, 2024 and available on the AMF website. This reproduction is available on our website [totalenergies.com](http://totalenergies.com).

This document has not been approved by the UK Financial Conduct Authority and does not constitute a Universal Registration Document within the meaning of applicable UK law.



# 1

# Presentation of the Company – Integrated report

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## 1.1 TotalEnergies at a glance

### 1.1.1 An integrated energy company

TotalEnergies is a global integrated energy company that produces and markets energies: oil and biofuels, natural gas and green gases, renewables and electricity. Our more than 100,000 employees are committed to provide as many people as possible with energy that is

#### VALUES ANCHORED IN OUR DAILY ACTIVITIES

Safety, Respect for Each Other, Pioneer Spirit, Stand Together and Performance-Minded are what drive us. These values guide daily the actions and relations of the Company with its stakeholders.

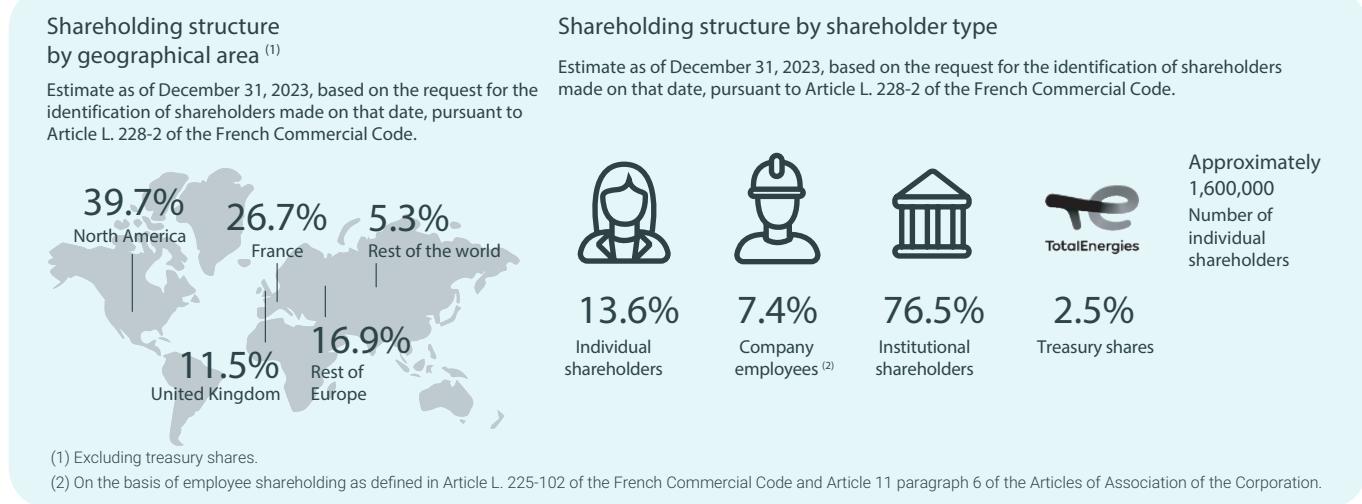
These five strong values also require all of TotalEnergies' employees to behave in an exemplary manner. Priority is given to safety, security, health, the environment, integrity in all its forms (including the fight against corruption, fraud and anti-competitive practices) and human rights.

#### OUR PROFILE

##### Our employees



##### Our shareholders



Our climate ambition : NET ZERO EMISSIONS BY 2050, together with society

more reliable, more affordable and more sustainable. Active in about 120 countries, TotalEnergies places sustainability at the heart of its strategy, its projects and its operations.

It is through the strict adherence of our employees to these values and to this course of action that our Company intends to build strong and sustainable growth for ourselves and for all of our stakeholders.

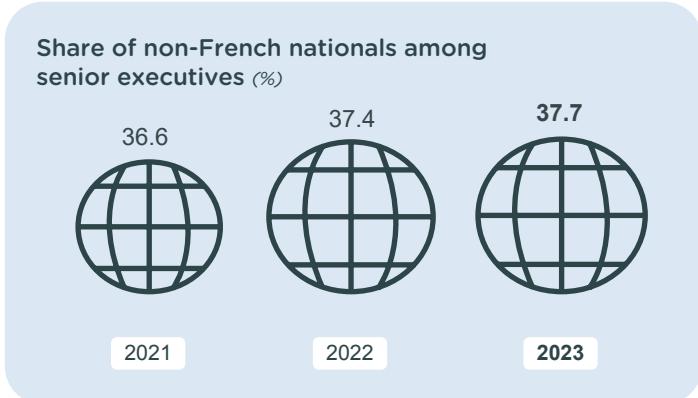
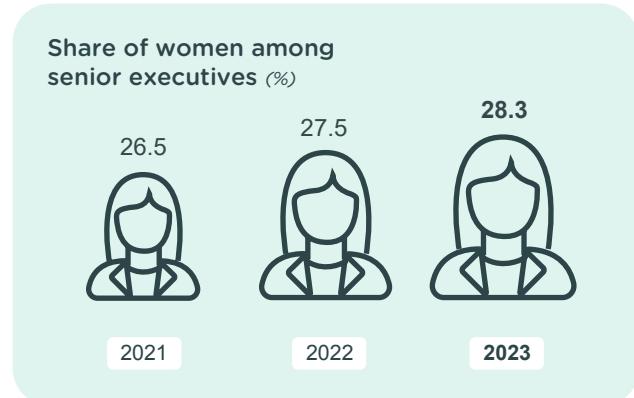
In this way, we deliver on our commitment to better energy.

## 2023 KEY FIGURES

### Financial indicators<sup>(1)</sup>



### Extra-financial indicators



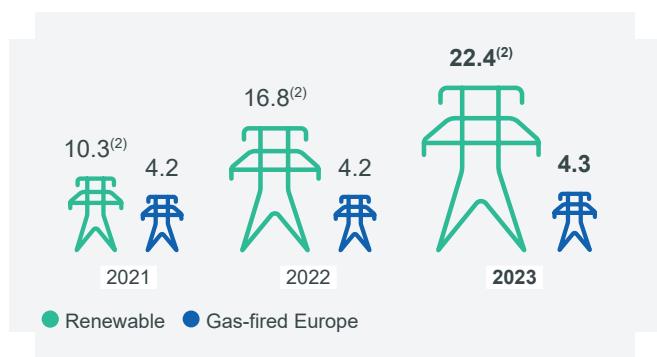
(1) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 of this chapter for reconciliation tables.

(2) Subject to approval by the Shareholders' Meeting on May 24, 2024.

(3) Excluding leases; 10.9% including leases.

## OUR OPERATIONAL PERFORMANCE

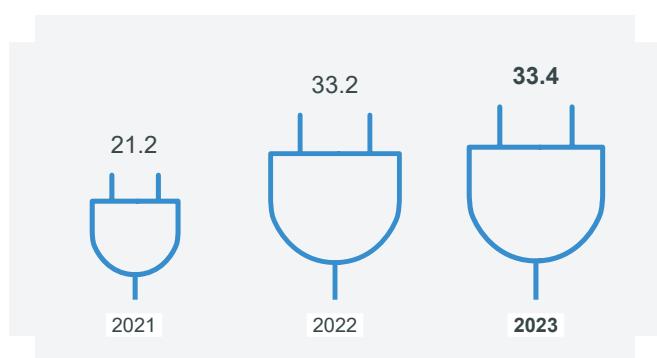
**Gross installed power generation capacities<sup>(1)</sup>**  
(GW)



**Portfolio of gross renewable power generation capacities at year-end 2023<sup>(2)</sup> (GW)**



**Net power production<sup>(3)</sup>**  
(TWh)



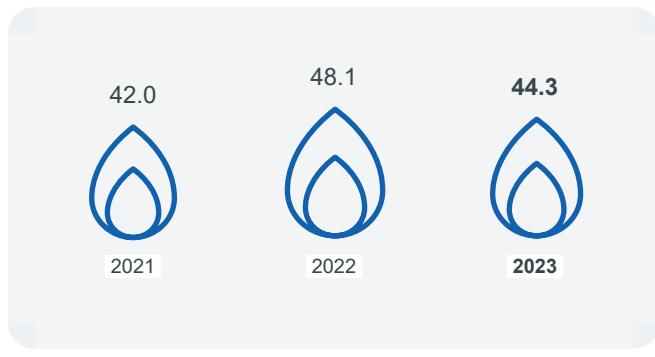
**Power sales - number of BtB and BtC client sites**  
(millions)



**Gas sales - number of BtB and BtC client sites**  
(millions)



**LNG sales volumes**  
(Mt)



**LNG production**  
(Mt)



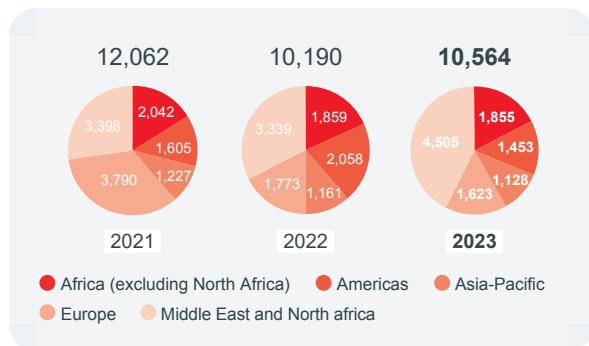
(1) Excluding combined-cycle gas plant in Taweelah, United Arab Emirates.

(2) Includes 20% of Adani Green Energy Ltd's gross capacity effective first quarter 2021, 50% of Clearway Energy Group's gross capacity effective third quarter 2022, and 49% of Casa dos Ventos' gross capacity effective first quarter 2023.

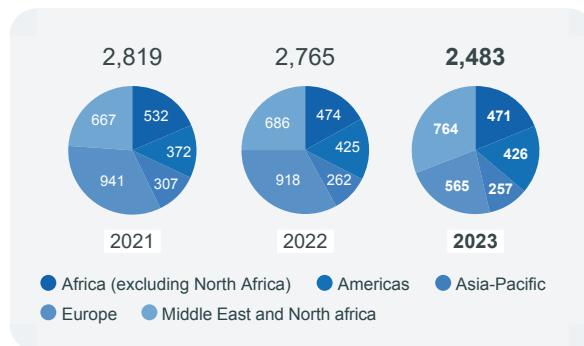
(3) Solar, wind, hydroelectric and gas flexible capacities.

## OUR OPERATIONAL PERFORMANCE

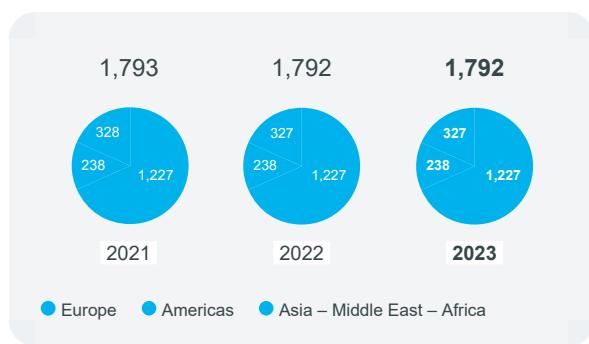
**Hydrocarbon proved reserves<sup>(1)</sup> by geographic areas**  
(Mboe)



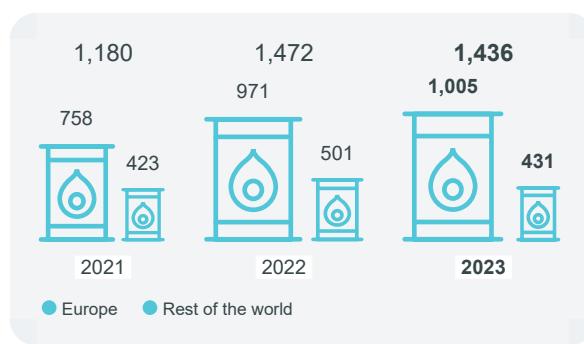
**Hydrocarbon production by geographic area**  
(kboe/d)



**Crude oil refining capacity<sup>(2)</sup>**  
(kb/d)



**Refinery throughput<sup>(3)</sup>**  
(kb/d)



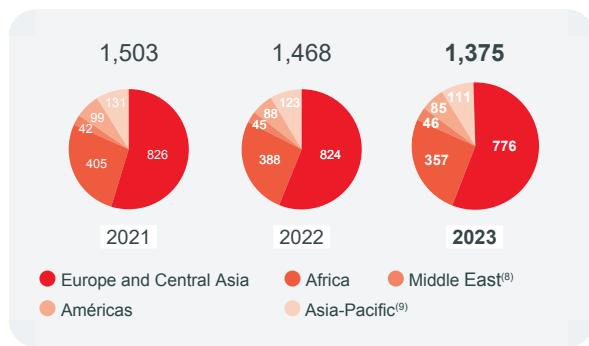
**Petrochemical production capacity by geographic area**  
(kt)



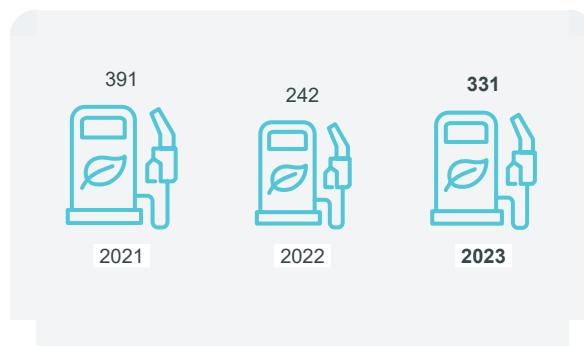
**Petrochemical products production volume**  
(kt)



**Marketing & Services<sup>(7)</sup> petroleum product sales**  
by geographic area (kb/d)



**Production of biofuels**  
(kt)



(1) Based on SEC rules (Brent at \$83.27/b in 2023, \$101.24/b in 2022 and \$69.23/b in 2021).

(2) Capacity data based on crude distillation unit stream-day capacities under normal operating conditions, less the average impact of shutdowns for regular repair and maintenance activities.

(3) Includes refineries in Africa that are reported in the Marketing & Services segment.

(4) Including 50% of the joint venture between TotalEnergies and Borealis.

(5) Including interests in Qatar, 50% of the capacities of Hanwha TotalEnergies Petrochemical Co. Limited and 37.5% of SATORP in Saudi Arabia.

(6) Olefins.

(7) Excluding trading and bulk refining sales.

(8) Including Turkey.

(9) Including Indian Ocean islands.

## 1.1.2 Our history: an energy transition in progress

The Company was founded on March 28, 1924. Ever since it took its first steps in oil production in Iraq back in 1927, the Company has continually transformed and forged a reputation for its pioneering spirit, whether extending its geographical reach or innovating and pushing back the boundaries of technology. This ability to constantly adapt has also been demonstrated over the years through its successful partnerships with such companies as Petrofina, Elf Aquitaine and, more recently, Saft, Mærsk Oil and Direct Energie.

In an effort to meet the challenges of a largely net zero future, the Company is pursuing a new strategy to become an integrated energy company by developing its activities in electricity, mainly renewables, which will play a key role in the energy system of tomorrow's world.

By changing its name to TotalEnergies in 2021, the Company has ensured that its identity reflects the strong ambition driving the Company, namely to be a world-class player in leading the energy transition and reaching net zero by 2050, together with society. The pioneering spirit that has powered it since day one continues to guide it in achieving this transition.

Creation in Brussels of the Compagnie Financière belge des Pétroles, known as Petrofina.

**1920**

The IPC is awarded a 75-year concession on March 14.

**1925**

CFP shares are first traded on the Paris Stock Exchange.

**1929**

Start of production of the Gonfreville refinery in Normandy (France), with an annual capacity of 900,000 tons of crude oil.

**1933**

**1924**

**Creation of the Compagnie française des Pétroles (CFP)**  
On September 20, 1923, the French President of the Council Raymond Poincaré entrusts an important mission to Ernest Mercier: create a «tool capable of carrying out a national oil policy». Six months later, the Compagnie française des Pétroles is born on March 28, 1924.

**1927**

**Initial discovery at the Kirkuk field in Iraq**  
CFP makes its first discovery, under an agreement with the government of Iraq. Oil rises to the surface in Kirkuk, a field with considerable reserves. This marks the beginning of TOTAL's adventure in the Middle East.

**1939**

**Discovery of the Saint-Marcel gas field, the first hydrocarbon reserves found in France**  
Creation of Régie Autonome des Pétroles (RAP), which later becomes the Elf Group, to explore a vast area around Saint Gaudens.

**1941**

**Creation of Société nationale des pétroles d'Aquitaine (SNPA).**

**1954**

**Launch of the TOTAL brand by CFP**  
At the beginning of the 1950s, the leaders of CFP and CFR (Compagnie Française de Raffinage) decide to create their own distribution network, and a brand for it. The new TOTAL brand and logo are adopted in 1954.



**1951**

**SNPA discovers the Lacq gas field in France**  
The gas rises from a depth of 3,450 meters at extremely high pressure. The specialist crews take five days and four nights to harness the eruption. Lacq is later found to be a gigantic natural gas field containing some 262 billion cubic meters.



**First offshore well on Umm Shaif (Abu Dhabi).**

**Launch of the Elf brand**  
A countrywide campaign, "Red circles are coming" introduces France to the Elf brand starting on the night of April 27, 1967.

**1956**

**Discovery of the Edjeleh, Hassi R'Mel (gas) and Hassi Messaoud (oil) fields in the Algerian Sahara**  
The exploration campaigns that SN Repal and CFP-A had initiated in 1946 result in the discovery, in 1956, of huge oil fields in Edjeleh and Hassi Messaoud and gas reserves in Hassi R'Mel.

**1958**

**1961**

**Discovery of the first offshore fields in Gabon**  
The Anguille field is the first one found.

**1970**

**Elf takes control of Antar.**  
TOTAL takes a permit in Indonesia, and goes on to find the Bekapai field in 1972 and the gigantic Handil field in 1974.

The Girassol field on Block 17 in Angola starts production.

## 2001

## 2000

Following the merger of Fina in 1999, TOTAL acquires Elf Aquitaine. The new Group is called TotalFinaElf and is the world's fourth largest oil major.

## 1991

CFP, which had become Total-CFP in 1985, becomes TOTAL.

## 1983

Birth of the company Atochem, an SNEA subsidiary, the merger of ATO Chimie, Chloé Chimie and part of Péchiney Ugine Kuhlmann.

## 1976

Creation of Société nationale Elf Aquitaine (SNEA), the merger of ERAP and SNPA.

## 1974

The Group acquires Hutchinson-Mapa, a specialist in rubber processing.

## 1971

The Ekofisk field in the North Sea starts production.

TotalFinaElf changes its name to TOTAL.

## 2003

### Acquisition of Direct Energie

On July 6, 2018, TOTAL announces the completion of the acquisition of Direct Energie and the launch of a tender offer on the company. This operation enables the Group to accelerate its integration downstream along the full gas and power value chain and to reach critical mass in the French and Belgium markets, where it is growing fast.

### TOTAL acquires Engie's LNG business and becomes the world's number-two liquefied natural gas player.

TOTAL acquires exploration and production company Mærsk Oil & Gas A/S in a share and debt transaction. This acquisition makes TOTAL the second largest operator in the offshore North Sea.

## 2018

## 2019

### Acquisition of 26.5% in the Mozambique LNG project

This acquisition stems from an agreement with Occidental to acquire Anadarko's assets in Africa, and expands TOTAL's position in liquefied natural gas.

### Investment in the solar energy sector with the acquisition of 60% of the US company SunPower

On June 15, 2011, TOTAL and SunPower Corp. announce the success of TOTAL's friendly tender on SunPower to create a new global leader in the solar industry.

## 2011



## 2016

### Acquisition of Saft Groupe

On July 18, 2016, TOTAL acquires Saft Groupe, a world leading designer and manufacturer of advanced technology batteries for industry, complementing its portfolio with electricity storage solutions, a key component of the future growth of renewable energies.

### Acquisition of Lampiris in Belgium.

## 2017

### Launch of Total Spring in France.

## 2020

### TOTAL states its new climate ambition: carbon neutrality by 2050

On May 5, 2020, TOTAL announces its ambition of reaching net zero emissions by 2050, together with society, from the production to the use of the energy products by the customers.



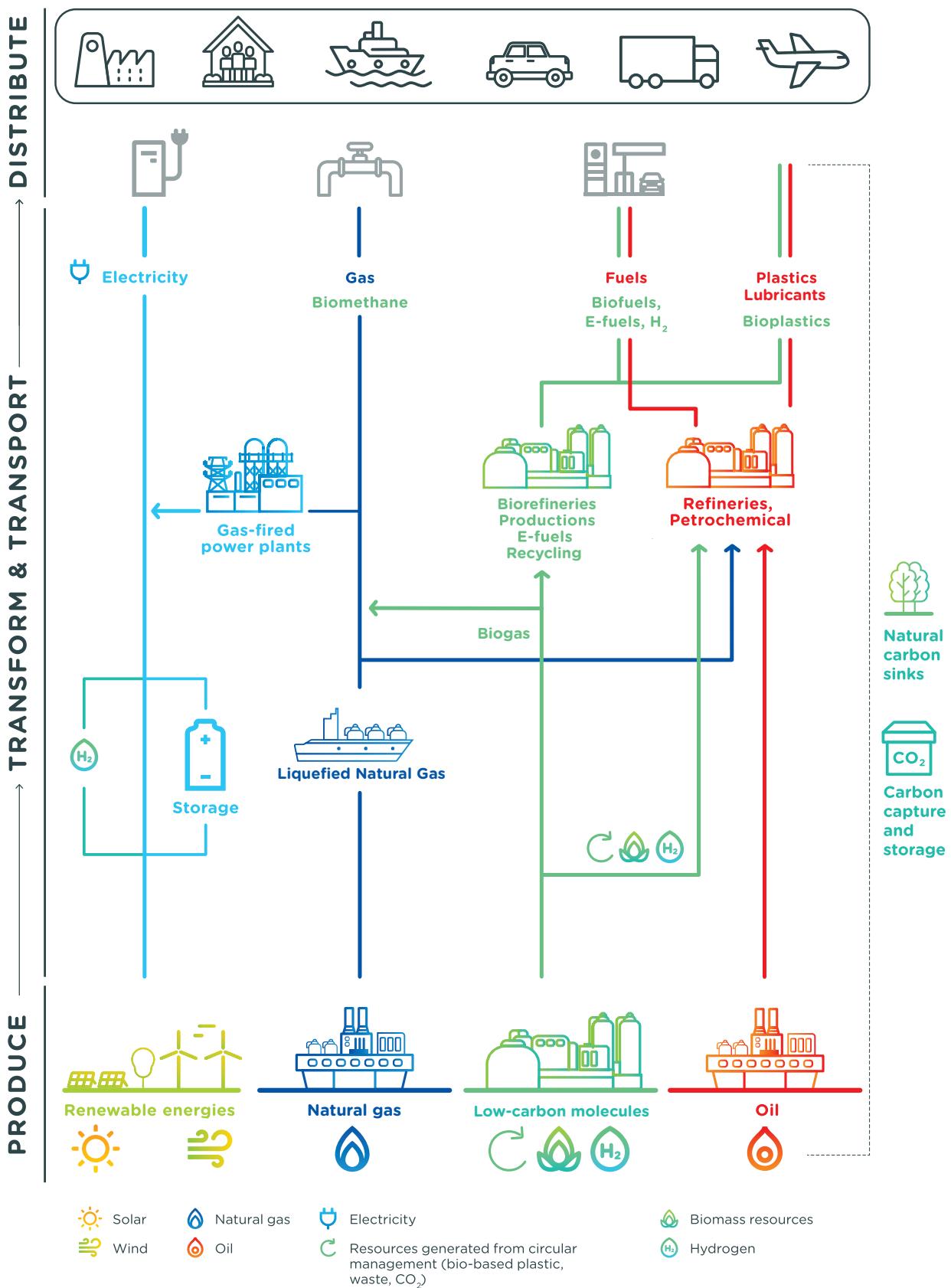
**2050 net zero emissions, together with society**

## 2021

TOTAL becomes TotalEnergies and turns into a multi-energy company with the ambition of being a major player in the energy transition.

### 1.1.3 Our business model

Integrated value chain



## Resources and ecosystem

### Proven expertise

- ⦿ **102,579** employees
- ⦿ Nearly **170** nationalities
- ⦿ More than **740** business-related competencies
- ⦿ More than **461,000** days of training
- ⦿ More than **400** talent developers to help employees along their professional development path

### A responsible innovation

- ⦿ R&D budget: **\$774 million**
- ⦿ **15** R&D centers worldwide
- ⦿ More than **250** patent applications in 2023

### Top-tier industrial and commercial assets

- ⦿ **22.4 GW<sup>(1)</sup>** of gross installed renewable power generation capacities
- ⦿ More than **60,000** operated and supervised EV charging points
- ⦿ Proved reserves of **10.6 Bboe** and hydrocarbon production of **2,483 kboe/d**
- ⦿ **16** refineries including **1** biorefinery (La Mède); **1** biorefinery currently being converted (Grandpuits) ⦿ **26** petrochemical sites including **6** integrated platforms (refining-petrochemicals)
- ⦿ **84** specialty chemicals production sites ⦿ **37** production sites operated (lubricants and greases)
- ⦿ Close to **14,600** service stations in approximately **60** countries

### Solid financials

- ⦿ Cash flow from operations excluding working capital (CFFO): **\$35.9 billion**
- ⦿ Net investments: **\$16.8 billion**
- ⦿ Gearing ratio (excluding leases): **5.0%**
- ⦿ Pre-dividend organic cash breakeven: **\$22.2/b**

### Geographic reach

- ⦿ Present in about **120** countries
- ⦿ Hydrocarbon exploration and production in about **50** countries

### Environment

- ⦿ Fresh water withdrawal: **102 Mm<sup>3</sup>**
- ⦿ Net primary energy consumption: **157 TWh** (operated perimeter)

## Shared value creation

### Employees

- ⦿ **\$9.2 billion** payroll (including social security charges)
- ⦿ More than **€200 million** for training
- ⦿ **92.1%** of employees on permanent contracts and women account for **41.2%** of employees hired on permanent contracts
- ⦿ **85.6%** of employees hired by the Company and **67.1%** of managers hired were non-French nationals

### Customers

- ⦿ Sales: **\$237 billion**
- ⦿ **3<sup>rd</sup>** largest LNG player worldwide with **44.3 Mt** of LNG sold in 2023, including **15.2 Mt** from equity production of the Company
- ⦿ **33.4 TWh** of net power production, including **18.9 TWh** from renewable sources
- ⦿ **100.9 TWh** of gas delivered to **2.8 million** BtB and BtC clients sites
- ⦿ **52.1 TWh** of power delivered to **5.9 million** BtB and BtC clients sites
- ⦿ Close to **75** products and solutions bearing the Ecosolutions label by TotalEnergies
- ⦿ More than **10,000** patents in force worldwide

### Suppliers

- ⦿ **\$30 billion** worth of purchases of goods and services, from a network of more than **100,000** suppliers, supporting hundreds of thousands of direct and indirect jobs worldwide

### Shareholders

- ⦿ **\$7.5 billion** distributed as dividends<sup>(2)</sup>
- ⦿ Approximately **1.6 million** individual shareholders
- ⦿ More than **65%** of employees are shareholders

### Communities

- ⦿ Fostering social and economic development in host countries with contributions amounting to **\$12,745 million** in income tax, **\$11,909 million** in production taxes paid by EP activities, **\$2,342 million** in employer social charges and **\$18,183 million** in excise taxes
- ⦿ A global integrated local development approach (in-country value)

### Climate

- ⦿ Reducing GHG emissions (Scope 1+2) from operated facilities from **46 Mt CO<sub>2</sub>e** in 2015 to **35 Mt CO<sub>2</sub>e** in 2023
- ⦿ Reducing methane emissions<sup>(3)</sup> from operated facilities by **50%** between 2010 and 2020 and by **47%** between 2020 and 2023
- ⦿ Scope 3<sup>(4)</sup> GHG emissions at **355 Mt CO<sub>2</sub>e** in 2023, below the level of 2015
- ⦿ Reducing Scope 3 GHG emissions of the petroleum products sold worldwide by **35%** in 2023, compared to 2015
- ⦿ Reducing life carbon intensity<sup>(5)</sup> of energy products sold by **13%** between 2015 and 2023

Data as of December 31, 2023.

(1) Includes 20% of Adam Green Energy Ltd's gross capacity effective first quarter 2021, 50% of Clearway Energy Group's gross capacity effective third quarter 2022 and 49% of Casa dos Ventos' gross capacity effective first quarter 2023.  
 (2) Excluding dividends paid to non-controlling minority interests.  
 (3) Excluding biogenic methane.  
 (4) GHG Protocol – Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).  
 (5) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

## 1.2 Our ambition and our progress

### 1.2.1 Global challenges: more energy, less emissions

Energy is an essential resource, everywhere indispensable for living: for food, lighting, heating and cooling, transport, healthcare, construction and trade.

Historically, energy demand has grown in line with demographic growth and rising living standards, as illustrated hereafter since 2000.

The world's population is set to grow by almost 2 billion additional inhabitants by 2050. This prospect will have significant implications for achieving the UN's Sustainable Development Goals (SDGs) to improve prosperity and social well-being while protecting the environment and biodiversity.

In the **countries of the Global South**, where access to energy is already one of the limiting factors in human development, populations aspire to improve their quality of life.

In **OECD countries**, energy has enabled socio-economic development that no country is prepared to forego.

The IPCC reiterated in 2021<sup>(1)</sup> that global warming is the consequence of greenhouse gases (GHG) emissions linked to human activities, and warned of the environmental and socio-economic impacts of this already tangible climate change.

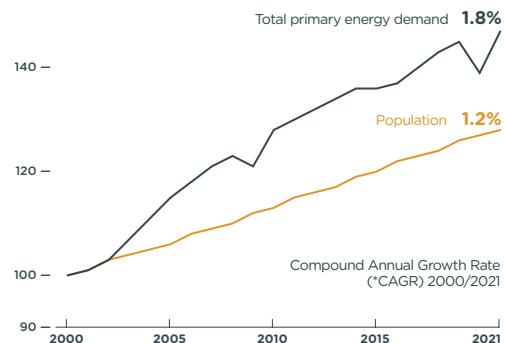
#### "TotalEnergies supports the Paris Agreement."

Since the Paris Agreement in 2015, States have jointly pledged "to strengthen the global response to the threat of climate change, in the context of sustainable development and the fight to eradicate poverty, in particular by holding the increase in global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels".

The energy system must therefore be transformed, because energy is at the heart of this global climate challenge: GHG emissions linked to the production or use of energy account for over 60% of global emissions in 2021 (ref. IPCC & IEA), as the global energy system is still 80% relying on fossil fuels.

There is an urgent need to accelerate the development of a decarbonized energy system, while maintaining the current energy system at a level sufficient to meet global demand and organize a just, orderly and equitable transition of energy systems.

#### Evolution of total primary energy demand (TPED) and world population growth<sup>(2)</sup> (Base 2000 = 100)



### 1.2.2 Global challenges: COP28 and actions to be taken

TotalEnergies welcomes the agreement reached in Dubai that calls for "transitioning away from fossil fuels" in a "just, orderly and equitable manner." Within this framework, TotalEnergies notes with interest the agreement's reference to transitional fuels such as gas.

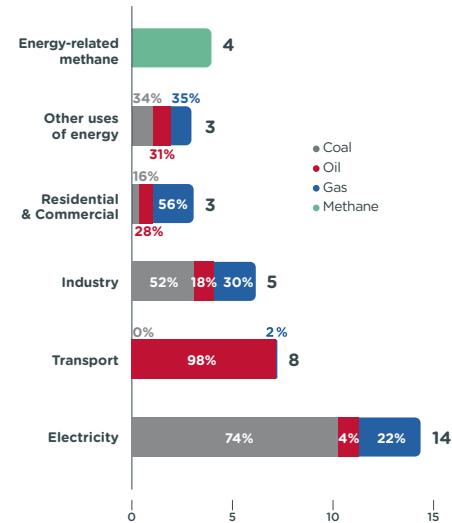
TotalEnergies supports the objectives of tripling the amount of renewable energy and doubling energy efficiency by 2030, as well as slashing methane emissions within that time frame. These objectives are at the heart of TotalEnergies' roadmap for 2030.

This agreement reinforces TotalEnergies' transition strategy, which aims, on the one hand, to contribute to the development of a new decarbonized energy system based on electricity and renewables, in which gas plays a useful role as a flexible transitional energy; and, on the other hand, to support a just, orderly and equitable transition away from fossil fuels, notably in emerging countries that legitimately aspire to economic and social development for their populations.

Given the energy-related emissions as shown in the chart hereafter, **reducing the associated emissions implies in the short term:**

- Minimising the share of coal in the electricity mix, starting from OECD countries,
- Decarbonizing the road transport sector (currently 90% powered by petroleum products),
- Aiming for the elimination of methane emissions from fossil fuel production processes.

#### Global GHG emissions from fossil fuel combustion in 2021 - 37 Gt CO<sub>2</sub>e<sup>(3)</sup>



To achieve this, massive investments are needed, not only in renewable energy, but also in electricity networks and systems enabling to ensure the availability of the new electricity system.

Another challenge is to **reduce fossil fuel consumption at the right pace**. In the Global South, fossil fuels remain an affordable solution for providing growing populations with access to energy, and therefore greater prosperity.

(1) Climate Change 2021: The Physical Science Basis and other assessment reports 6.

(2) Oxford Economics, TPED-Enerdata.

(3) IEA, CO<sub>2</sub> Emissions in 2022, Greenhouse Gas Emissions from Energy Data Explorer (update 2023).

In OECD countries, an accelerated transition means retiring existing assets at country, industry and household levels, and investing in new low-carbon assets.

The transition will not take place without **social acceptability** (both between North and South and within OECD countries) and without genuine efforts in terms of **climate justice**.

Accelerating the pace of investment in low-carbon energies requires **strong cooperation between the private and public sectors**:

- In OECD countries, simplify and speed up the permitting process to accelerate the deployment of grids and renewable energies.
- Actively support the transition of the Global South through (i) the development of multilateral financial guarantees essential to project financing and (ii) the deployment of training programs to support the local implementation of new technological solutions.

## 1.2.3 A two-pillar multi-energy strategy

### 1.2.3.1 TotalEnergies stays the course of its balanced integrated multi-energy strategy...

TotalEnergies reaffirms the relevance of its balanced integrated multi-energy strategy considering the developments in the oil, gas and electricity markets. Anchored on two pillars, Oil & Gas, notably LNG, and electricity, the energy at the heart of the energy transition, the Company is in a very favorable position to take advantage of energy prices

evolution. Thanks to the refocusing of the Oil & Gas portfolio on assets and projects with low breakeven and low GHG emissions, and to the diversification into electricity, notably renewable, through an integrated strategy from production to customer, the Company is implementing its transition strategy while ensuring an attractive shareholder return policy.

### 1.2.3.2 ...responsibly producing low cost, low emission Oil & Gas

While drastically lowering the emissions from its operations, TotalEnergies plans to grow its Oil & Gas production by 2-3% per year over the next five years, predominantly from LNG, thanks to its rich low cost low emission Upstream portfolio.

TotalEnergies plans to launch the production of its portfolio of high-return oil projects (Brazil, Gulf of Mexico, Iraq, Uganda) recently enriched with exploration successes in Suriname and Namibia.

The Company plans notably to develop a top-tier pipeline of LNG projects (Qatar North Field Expansion, Papua LNG, Energía Costa Azul LNG and Rio Grande in the US, Mozambique LNG) while leveraging its leading position in Europe in regasification and its leading LNG exporter position in the United States.

The key indicator of our progress on this pillar is the reduction in Scope 1+2 emissions because our first duty as a producer of hydrocarbons is to reduce the GHG emissions linked to their production.

### 1.2.3.3 ...and developing a profitable and differentiated Integrated Power model to create a future cash engine of the Company

TotalEnergies is replicating its integrated Oil & Gas business model into the electricity value chain to achieve a profitability (ROACE<sup>(1)</sup>) of ~12% for the Integrated Power segment, equivalent to Upstream Oil & Gas ROACE at 60 \$/b, above the returns of the traditional Utilities model.

this segment was \$2.2 billion in 2023 and will be more than \$4 billion in 2028, becoming net cash-flow positive at that time.

The Company is building a world class cost-competitive portfolio combining renewable (solar, onshore wind, offshore wind) and flexible assets (CCGT, storage) to deliver low-carbon electricity available 24/7. In particular, TotalEnergies is leveraging its scale effect in equipment purchase to optimize its investment costs and industrialize its renewable assets through digital to lower operating costs. TotalEnergies also uses the strength of its balance sheet to keep market exposure, allowing it to capture additional margins in a market exposure.

Additionally, TotalEnergies invests in low-carbon molecules (biofuels and biogas, as well as hydrogen and its derivatives: e-fuels and SAF).

The Company aims to grow its power generation to more than 100 TWh by 2030, investing around \$4 billion per year; the generated cash flow of

The key indicator of our progress to measure our transition towards low-carbon energy products is the lifecycle carbon intensity<sup>(2)</sup> of the products used by the Company's customers. It divides the lifecycle emissions (from production to final use) of our energy products sold (Scope 1+2+3) by the quantity of energy supplied (g CO<sub>2</sub>e/MJ). The reduction in carbon intensity<sup>(3)</sup> reflects the lower carbon content of the energy sold to our customers and the Company's progress in implementing its transition strategy.

## 1.2.4 A Net Zero Company by 2050 together with society

TotalEnergies reaffirms its ambition to be a major player in the energy transition and shares a vision of what its activities could be to achieve carbon neutrality by 2050, together with society.

- about 25% of its energy, equivalent to 50 Mt/year of low-carbon energy molecules in the form of biogas, hydrogen, or synthetic liquid fuels from the circular reaction: H<sub>2</sub> + CO<sub>2</sub> → e-fuels;
- around 1 Mboe/d of Oil & Gas (about a quarter of the production in 2030, consistent with the decline envisaged by the IEA's Net Zero scenario), primarily liquefied natural gas (about 0.7 Mboe/d, or 25-30 Mt/year) with very low-cost oil accounting for the rest. Most of that oil would be used in the petrochemicals industry to produce about 10 Mt/year of polymers, of which two thirds would come from the circular economy.

### By 2050, TotalEnergies would produce:

- about 50% of its energy in the form of electricity, including the corresponding storage capacity, totaling around 500 TWh/year, on the premise that TotalEnergies would develop about 400 GW of gross renewable capacity;

(1) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

(2) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

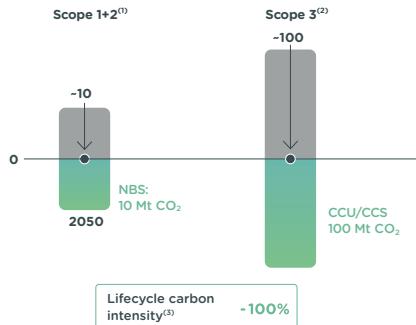
(3) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

### That Oil and Gas would represent:

- about 10 Mt CO<sub>2</sub>e/year of Scope 1 residual emissions, with methane emissions aiming towards zero (below 0.1 Mt CO<sub>2</sub>e/year); those emissions would be offset in full by projects using nature-based solutions (natural carbon sinks).
- Scope 3<sup>(1)</sup> emissions totaling about 100 Mt CO<sub>2</sub>e/year. To get to net zero together with society, TotalEnergies would contribute to "eliminate" the equivalent of 100 Mt/year of CO<sub>2</sub> generated by its customers by developing carbon utilization (CCU) and carbon capture and storage (CCS) solutions of approximately 100 Mt CO<sub>2</sub>e/year.

In 2050, our trading portfolio would be aligned with our productions and sales portfolio.

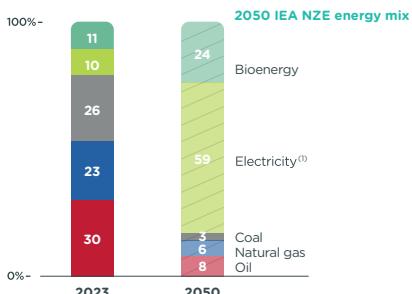
### TotalEnergies net zero vision 2050 (Mt CO<sub>2</sub>e)



- (1) From operated facilities.  
(2) GHG Protocol - Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).  
(3) Lifecyle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

### Global energy system according to the IEA in 2050

#### Total primary energy demand mix - Worldwide



(1) Hydro, solar, wind and nuclear.

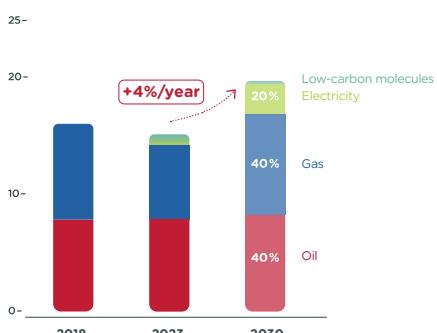
### 1.2.5 2030: Our objectives for more energy and less emissions

Over the decade 2020-2030, TotalEnergies' energy transition strategy based on two pillars is reflected in the production and sales targets shown below.

#### Production

We plan to increase our energy production (oil, gas and electricity) by 4% per year between 2023 and 2030, while reducing emissions (Scope 1+2 and methane) from our operated facilities.

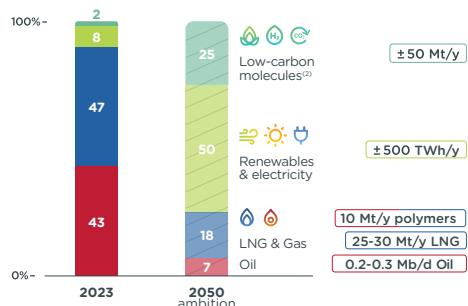
#### Energy production (in PJ/d)



+ 4%/year  
of energy production  
between 2023  
and 2030

### Vision of TotalEnergies sales in 2050

#### TotalEnergies energy sales mix



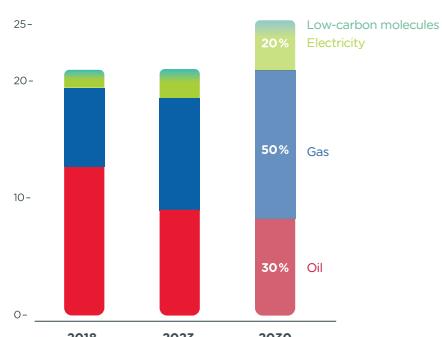
(2) Biofuels, biogas, hydrogen and e-fuels/e-gas.

#### Sales

We are aiming to reduce the carbon intensity<sup>(2)</sup> of our sales by 25% by 2030 compared to 2015.

Taking these factors into account, we are developing our sales mix to reach 20% electricity by 2030, with a higher proportion of gas sales than oil sales.

#### Energy sales (in PJ/d)



- 25%  
lifecyle carbon  
intensity of energy  
products sold<sup>(1)</sup>

(1) Lifecyle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(1) GHG Protocol - Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(2) Lifecyle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

## 1.2.6 How TotalEnergies' 2030 objectives compare to the IEA scenarios

Reducing GHG emissions at our operated facilities (Scope 1+2) is key to our ambition to supply more energy while curbing GHG emissions. Our objective of cutting net Scope 1+2 emissions from our operated activities by 40% is consistent with the reduction targets of the European Union's "Fit-for-55" program (a 37% decrease between 2015 and 2030) and the IEA's 2023 Net Zero Emissions (NZE) scenario (a 31% decrease between 2015 and 2030).

Our targets for lowering the lifecycle carbon intensity<sup>(1)</sup> of energy products sold (a 15% reduction by 2025 and a 25% reduction by 2030) put the Company on a trajectory close to the Announced Pledges Scenario (APS) in the IEA's World Energy Outlook 2023, which assumes that the States parties to the Paris Agreement fulfill all their net zero objectives.

An independent third party (Wood Mackenzie) has audited the calculations made and the trajectories presented.

## 1.2.7 A strategy to reduce our client's emissions

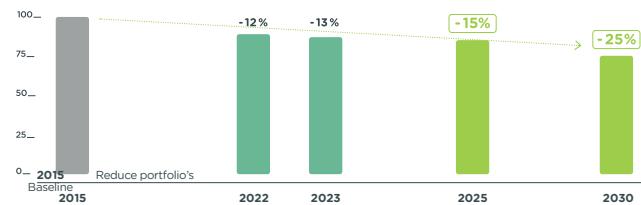
By 2030, we intend to reduce the emissions linked to the energy we supply to our customers by 25% compared to 2015. In other words, we intend to decrease by 25% the carbon intensity<sup>(2)</sup> of energy products sold, which accounts for the lifecycle emissions (Scope 1+2+3) of our energy products per unit of energy sold (g CO<sub>2</sub>e/MJ).

Indeed, by offering to our clients an increasingly **decarbonized** portfolio, we contribute to the energy transition and help our clients **reduce their emissions**.

**In 2023 we maintained our progress thanks to sales growth of renewable energy by notching a 13% reduction in the lifecycle carbon intensity<sup>(3)</sup> of our products compared to 2015.**

Growth in electricity will drive more than half the reduction in its lifecycle carbon intensity<sup>(4)</sup> between 2015 and 2030. The other factors will be the reduction in sales of petroleum products **coupled with an increase in gas production** (particularly LNG) and sales of products derived from biomass. Lastly, lower emissions from our facilities will contribute to 10% of the intensity<sup>(5)</sup> reduction.

**Lifecycle carbon intensity<sup>(6)</sup> of energy products sold**  
(base 100 in 2015)



**Levers for reducing the lifecycle carbon intensity<sup>(7)</sup> of energy products sold (2015-2030)**



(1) Biofuels, biogas, hydrogen and e-fuels/e-gas.

## 1.2.8 Supporting our customers in their decarbonization journey

As a producer of renewable power, biogas and biofuels, a supplier of natural gas and electricity and a leader in electric mobility, we are also helping our customers reduce their emissions with our customized solutions and developing CO<sub>2</sub> storage solutions for industrial customers.

Established in 2022, TotalEnergies OneB2B Solutions boasts more than thirty experts who assist our largest customers across nearly a dozen industries in fulfilling their ambitions for the energy transition, thanks to solutions tailored to their needs. Over the past 2 years, we engaged 334 large B2B clients on their Scope 1+2.

(1) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).  
 (2) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).  
 (3) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).  
 (4) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).  
 (5) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).  
 (6) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).  
 (7) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

## 1.3 Our orderly energy transition

### 1.3.1 Climate Impact of our strategy: Our 2023 Progress and 2025-2030 Objectives

			Objectives			
			2022	2023	2025	2030
<b>Scope 1+2 Emissions on Operated Activities</b>	Scope 1+2 emissions	Mt CO <sub>2</sub> e	40	35	< 38	25-30 <sup>(a)</sup>
Net Zero in 2050	vs 46 Mt in 2015	-13%	-24%			> -40% <sup>(a)</sup>
	Methane emissions	kt CH <sub>4</sub>	42	34		
	vs 64 kt in 2020	-34%	-47%	-50%	-80%	
	Lifecycle carbon intensity <sup>(b)</sup> of energy products sold Scope 1+2+3	100 in 2015	-12%	-13%	-15%	-25%
<b>Indirect Emissions</b>		Mt CO <sub>2</sub> e	410 Mt in 2015	389 <sup>(d)</sup>	355	< 400
Net Zero in 2050, together with society	Scope 3 <sup>(c)</sup> Worldwide	out of which Scope 3 Oil	254 <sup>(d)</sup>	227		
		350 Mt in 2015	-27%	-34%		-40%

(a) Net emissions, including nature-based carbon sinks from 2030.

(b) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(c) GHG Protocol – Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(d) Excluding COVID-19 impact during first half of 2022.

### 1.3.2 Oil: Today's energy

#### 1.3.2.1 Producing oil differently: focus on low cost and low-carbon intensity oil assets

In 2023, global demand for petroleum products reached 101.8 Mb/d, i.e. +2.3 Mb/d compared to 2022, and should continue to grow over the decade according to the IEA (105.7 Mb/d by 2028)<sup>(1)</sup>. These demand forecasts remain dependent in particular on population and economic growth, market penetration pace of low-carbon technology innovations such as electric vehicles and changes in behavior.

In addition, it will evolve in a differentiated way according to the specific energy transition roadmaps of the various countries.

Thus, demand for oil could start to decline around 2030, but at a slower rate than the current natural decline rate of existing fields (around 4% per year).

TotalEnergies therefore believes that new oil projects are still needed to meet this demand and to keep prices at an acceptable level in order to

create the conditions for a just transition that allows people time to adapt their energy use. In 2023, TotalEnergies produced 1.4 Mb/d of oil, equivalent to its 2019 level, representing around 1.5% of world production.

The first responsibility of TotalEnergies as an oil producer is to produce differently, meaning while minimizing emissions.

To that end, we approve hydrocarbon projects on the basis of performance criteria, notably technical costs and carbon intensity (Scope 1+2). We operate our fields in accordance with strict requirements concerning safety, emissions reduction and environmental impact. The cash flow generated by these Oil & Gas activities contributes to accelerating our investments in renewable energy.

#### 1.3.2.2 Relentlessly reducing our Scope 1+2 emissions, Oil & Gas

Our primary responsibility as a producer of fossil fuels is to substantially reduce emissions on our facilities. We are resolutely continuing to reduce emissions from our operated sites. Across the 2015 scope of our Oil & Gas activities, emissions from our operated assets fell by more than 34% from 2015 levels, dropping from 46 to 30 Mt CO<sub>2</sub>e in 2023 (a decrease by 36% for Oil & Gas operated upstream and a decrease by 32% in Refining & Chemicals).

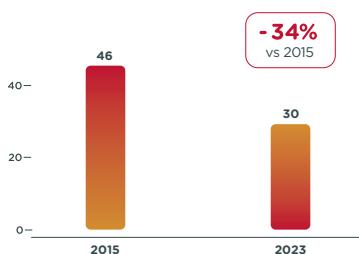
In 2023, with more than 140 GHG emissions reduction projects coming to fruition, we reduced our emissions by 1.5 Mt CO<sub>2</sub>e across our operated assets.

These ongoing reduction efforts have made it possible to reduce the Scope 1+2 equity intensity of our Upstream Oil & Gas assets, from 20 kg CO<sub>2</sub>e/boe in 2020 to 18 kg CO<sub>2</sub>e/boe in 2023<sup>(2)</sup>. These results put us among the players with the best intensities in the industry.

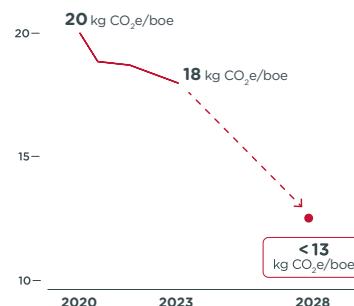
(1) Source IEA Oil June 2023.

(2) Equity Oil & Gas Upstream intensity is calculated excluding integrated LNG assets.

### Scope 1+2 from operated Oil & Gas facilities (Mt CO<sub>2</sub>e)



### Scope 1+2 Upstream intensity, equity basis (kg CO<sub>2</sub>e/boe)



### 1.3.2.3 Scope 1+2 emissions reduction by 2030

#### Scope 1+2 emissions reduction objectives

TotalEnergies reaffirms its decarbonization objective, which aims to reduce its Scope 1+2 net emissions by -40% to 2030 compared to 2015, net of 5-10 Mt of natural carbon sinks.

Our objectives include emissions generated by the growth strategy in electricity we have pursued since 2015, which has prompted us to create a flexible power generation portfolio of plants (CCGT).

In 2023, GHG emissions from our operated assets were 24% lower than in 2015, standing at close to 35 million tons of CO<sub>2</sub>e. Between 2022 and 2023, the reduction in these emissions is 13%. It is mainly due to lower

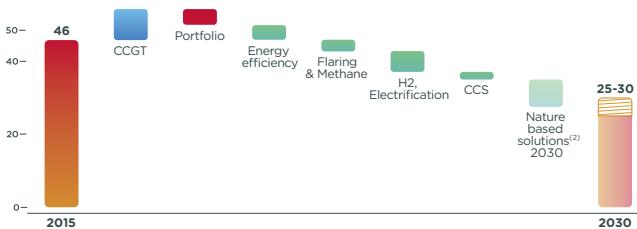
#### Scope 1+2 emissions from operated facilities (Mt CO<sub>2</sub>e)



utilization rate of CCGTs, emissions reduction projects, such as for example the reduction of burning in Angola and Nigeria, and the improvement of energy efficiency.

To achieve our 2030 target, we are mobilizing every tool at our disposal to avoid and reduce emissions from our operations. Compensation from natural carbon sinks will only begin from 2030 onwards, to offset residual emissions in pursuit of our objective, on the basis of a consumption of about 10% of our stock of carbon credit units per year.

#### Scope 1+2 from operated facilities: levers to reach our -40% target in 2030<sup>(1)</sup> (Mt CO<sub>2</sub>e)



(1) Net of nature-based carbon sinks.

(2) NBS credits will be used from 2030, from 5 to 10 Mt/y.

### 1.3.2.4 Our energy efficiency plan: \$1 Billion over 2 years

#### Energy efficiency plan - 2023 Progress

Generating energy savings in our operations is beneficial in several ways: we contribute to the collective campaign for energy efficiency, we help to reduce our carbon emissions and we lower our costs.

In September 2022, TotalEnergies launched a plan to accelerate energy efficiency gains at its operated sites worldwide. We are investing \$1 billion in efforts to further reduce our energy use.

This plan, centered on four key levers, will support the measures adopted over the past several years within the Company's business segments. Each business segment has developed a plan to accelerate its energy savings, with more than 150 initiatives logged at Exploration & Production, over 200 projects at Refining & Chemicals and more than 40 initiatives at Marketing & Services and Gas, Renewables & Power.

To keep up with these efforts, a growing number of sites are ISO 50001 certified. The projects already identified which will be launched in 2024 should make it possible to achieve the reduction objective of 2 Mt CO<sub>2</sub>e.

#### Enhancing energy efficiency at our operated facilities



##### OPERATIONS OPTIMIZATION

- In E&P<sup>(1)</sup>, deployment of high-performance air filters to improve the operation of gas turbines on all our operated assets.
- Optimization of steam networks in all refineries and petrochemical sites.
- CCGT shutdown and restart procedures in France revised to reduce GHG emissions.



##### ELECTRICITY AND RENEWABLES

- In Argentina, preparation for the connection of the Neuquén E&P<sup>(1)</sup> installations to the electricity network.
- In Nigeria, launch of the solarization project on OML58 (Upstream asset).
- In the Marketing & Services segment, pursuing and accelerating the solarization of our service station networks which can be combined with storage capacities (batteries).



##### DIGITAL LAND MONITORING

- Digital twins of our CCGTs developed to optimize their operation.
- In the Marketing & Services business unit in France, implementation of electrical sub-metering on new station sites to manage consumption by zone on the same installation.



##### ASSET DESIGN IMPROVEMENT

- In European refineries: electrification of compressors, thermal integration and optimization of furnace efficiency.
- In our CCGTs in France, installation of variators on pumps and compressors.

(1) Exploration & Production.

### 1.3.3 Gas: a transition fuel

#### 1.3.3.1 Liquified Natural Gas: a key fuel for the energy transition

In the gas markets, TotalEnergies focuses on Liquefied Natural Gas (LNG), which can be shipped everywhere in the world and thus contributes to energy security, as it has been the case in Europe since 2022 with the strong reduction of Russian pipeline gas deliveries.

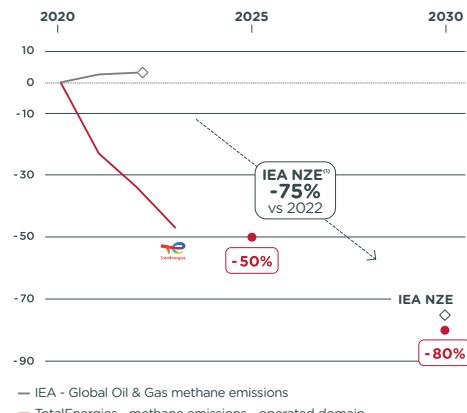
The growth of renewable electricity, intermittent and seasonal by nature, will require an increase in flexible power generation resources. The flexible production of gas-fired power plants, which emit half as much GHG as coal-fired power plants for the same amount of electricity produced<sup>(1)</sup>, enables to secure electricity generation which does not depend on weather conditions contrary to renewable energy, and to face demand fluctuations.

In addition, natural gas plays an essential role in reducing emissions from power generation as a replacement of coal, particularly in Asia where this one still accounts for a very large part of the electricity mix of many countries (e.g. 63% in China, 72% in India)<sup>(2)</sup>.

With diversified positions, and in particular its leading position of exporter in the United States - over 10 Mt in 2023 - TotalEnergies is the 3<sup>rd</sup> world's largest LNG player, with 44 Mt sold in 2023. The Company intends to consolidate its position as an integrated player by developing a first-class portfolio that will enable it to achieve 50% growth in volumes between 2023 and 2030.

#### 1.3.3.2 Aiming for Zero methane emissions

##### Methane emissions on operated facilities (in % vs 2020)



(1) 2023 Update, "Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach" report.

Methane is a greenhouse gas with a global warming potential 30 times higher than that of CO<sub>2</sub> and a much shorter atmospheric lifetime<sup>(3)</sup>. This makes reducing methane emissions a priority in efforts to mitigate global warming. To date, more than 150 countries have signed the Global Methane Pledge launched in Glasgow in 2021, which aims to reduce methane emissions by 30% from 2020 levels by 2030. Anthropogenic methane emissions come mostly from energy, waste and agriculture. Around 25%<sup>(4)</sup> come from the Oil & Gas industry. TotalEnergies believes that it is the industry's responsibility to aim for zero methane emissions by 2030 and wants to set an example for the industry. Our plan is based on three actions: eliminating routine flaring, eliminating vents and repairing leaks as soon as they are detected.

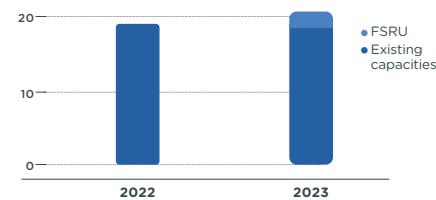
##### Reducing the carbon footprint of the LNG portfolio

TotalEnergies aims to gradually reduce GHG emissions of the value chain, from the production of the gas to end use.

In addition to efforts to reduce methane emissions, initiatives are being implemented throughout the whole chain. The electrification of liquefaction plant processes is helping to reduce LNG's carbon footprint today, and tomorrow this reduction will be reinforced by CO<sub>2</sub> capture and storage projects.

We are also working to reduce shipping emissions by renewing our fleet of chartered LNG carriers with modern, high-performance vessels.

##### Growing LNG regasification capacity in Europe (in Mt)



##### Continuous excellence in our operations

TotalEnergies has already reduced its operated methane emissions by more than 60% since 2015, date of the Paris Agreement, even though the Oil & Gas industry as a whole has maintained an almost constant level of emissions over this period, according to IEA estimates. In early 2022, TotalEnergies set very ambitious, specific targets for the decade ahead that call for a 50% reduction from 2020 levels by 2025 and 80% by 2030<sup>(5)</sup>. These targets cover all of the Company's operated assets and go beyond the 75% reduction in methane emissions from Oil & Gas by 2030 (vs 2020) as recommended by the IEA when creating the NZE scenario. TotalEnergies is making rapid progress towards this objective: in 2023, our operated methane emissions were 34 kt, down 47% vs 2020. TotalEnergies now aims to reach its 2025 target of -50%, one year ahead of schedule, in 2024.

TotalEnergies is a signatory of the Oil & Gas Decarbonization Charter launched at COP28, which includes the ambition "Aiming for near-zero Upstream methane emissions by 2030". In line with this collective ambition, TotalEnergies is strengthening its methane intensity<sup>(6)</sup> target of less than 0.1% by 2030 on its gas facilities, by extending it to all its operated Upstream Oil and Gas facilities.

At the same time, TotalEnergies is fully assuming its leadership role in the fight to collectively reduce methane emissions.

##### Our drone-based methane detection and quantification technology made available to several national oil companies

TotalEnergies works alongside its partners to implement best practices on its non-operated assets.

The Company is a pioneer in the detection and quantification of emissions in real-life conditions. After deploying its AUSEA (Airborn Ultralight Spectrometer for Environmental Application) drones at all its upstream operated sites worldwide, TotalEnergies has performed in 2023 the first AUSEA flights on non-operated assets during four campaigns in: Qatar, Brazil, Azerbaijan and the United Arab Emirates.

(1) IEA 2023, Life Cycle Upstream Emission Factors (Pilot Edition).

(2) Source: Enerdata.

(3) Around 12 years compared with centuries for CO<sub>2</sub>. Global Warming Potential of 80 over 20 years and 30 over 100 years (Source: IPCC 6<sup>th</sup> Assessment Report).

(4) IEA Global Methane Tracker 2023, License CC BY 4.0.

(5) Excluding biogenic methane.

(6) Methane emissions intensity in relation to commercial gas produced.

TotalEnergies has also announced in recent months the signing of five cooperation agreements with national oil companies to make its AUSEA methane emissions detection and quantification technology available: Petrobras in Brazil, SOCAR in Azerbaijan, Sonangol in Angola, NNPC<sup>(1)</sup> in Nigeria and ONGC<sup>(2)</sup> in India.

## Highlights

- OGMP 2.0 Gold standard

In its "An Eye on Methane" report for 2023, the United Nations Environment Programme (UNEP)<sup>(3)</sup> confirmed TotalEnergies' Gold Standard status for the 3<sup>rd</sup> year in a row, and rated our strategy for engaging partners in our non-operated assets as "all-stars"<sup>(4)</sup>. Each year, this report reviews the deployment by Oil & Gas companies of the Oil & Gas Methane Partnership's OGMP 2.0 framework, which was

created in 2020 to guide reporting on methane in the Oil & Gas industry. The framework encourages companies to continue improving their reporting of operated and non-operated emissions and focuses on performing on-site measurements to verify that estimates are exhaustive and accurate.

- Support for the World Bank's new methane trust fund

TotalEnergies was the first company to announce a contribution of \$25 million over the period 2024-2030 to the Global Flaring and Methane Reduction (GFMR) trust fund launched by the World Bank at COP28. The GFMR will target, finance and support strategic projects to eliminate routine flaring and reduce methane emissions in countries with the greatest emissions reduction potential.

### 1.3.3.3 Expanding geological carbon storage to reduce our emissions and those of our customers

The IEA's NZE scenario<sup>(5)</sup> includes the use of CCS<sup>(6)</sup> up to of 6 Gt CO<sub>2</sub> per year in 2050, to reduce part of the emissions from residual Oil & Gas consumption, as well as those from industrial processes (cement, lime, steel, etc.). This capacity is more than 100 times greater than the 45 Mt CO<sub>2</sub> per year currently captured worldwide.

Our CCS strategy gives priority to decarbonizing our activities in order to reduce Scope 1+2 emissions from our Upstream Oil & Gas assets, refining and LNG plants. For example, at the Snøhvit liquefaction plant, where we are a partner alongside Equinor, around 8 Mt of native CO<sub>2</sub> have been stored since 2008. Similarly, the native CO<sub>2</sub> separated in the new NFE and NFS LNG liquefaction trains currently under development will be stored by QatarEnergy. The same will be true for the native CO<sub>2</sub> separated on Cameron LNG to be stored in the Hackberry CCS storage facility in the context of a new train project by Cameron LNG. Finally, for our Ichthys LNG asset in Australia, we are studying a native CO<sub>2</sub> storage solution for start-up before 2030. The study of CCS solutions on our assets therefore complements the efforts already mentioned to reduce emissions (electrification, energy efficiency, flaring reduction, etc.).

The Company also invests in CO<sub>2</sub> storage projects for third parties ("Storage as a Service"), offering CO<sub>2</sub> storage solutions to large industrial customers who can thus reduce their Scope 1 emissions and secure the future of their activities. By 2023, we have already invested around \$100 million in this business. We will continue to invest heavily in storage projects, both for our own assets and for third parties, to achieve our objective of developing more than 10 Mt CO<sub>2</sub> of storage capacity by 2030.

Europe is at the heart of this CCS strategy. Our Company is one of the incumbent operators in the North Sea and has recognized operational and geological expertise in the area. The United Kingdom, Norway and Europe have set themselves objectives, regulations and provided significant financial support to promote the cross-border deployment of CCUS<sup>(7)</sup>. We are currently developing five projects in the North Sea that will provide decarbonization solutions for our assets and those of our customers. Our ambition is to continue to acquire new exploration permits to increase our CO<sub>2</sub> storage capacity after 2030.

We are also investigating the use of carbon in various forms (CCU<sup>(8)</sup>).

#### Carbon storage projects in Europe



### 1.3.3.4 Offsetting residual emissions with natural carbon sinks

Natural areas preservation and restoration can be a lever for achieving net zero emissions worldwide by 2050.

Only in 2030 will TotalEnergies begin voluntary offsetting of its residual emissions via NBS (Nature Based Solutions) carbon credits, and will offset only Company's Scope 1+2 residual emissions.

We are working to build a high-quality portfolio and are paying close attention to the integrity and permanence of the emissions reductions and sequestration achieved by the activities financed in this way.

We are in favor of strengthening a global framework of trust to further reinforce robust and recognized voluntary crediting mechanisms.

We are investing in forestry, regenerative agriculture and wetlands protection projects. Our strategy aims to combine and balance the value of people's financial revenue from agriculture and forestry and the value of the benefits to soil, biodiversity, the water cycle and the production of carbon credits. When that approach is successful, the local standard of living improves and degradation of the land diminishes – as do emissions. This search for balance among different practices makes a just transition possible.

(1) Nigerian National Petroleum Company Limited.

(2) Oil and Natural Gas Corporation.

(3) 3<sup>rd</sup> International Methane Emissions Observatory report.

(4) « All-stars of non-operated joint venture engagement: TotalEnergies has submitted one of the most comprehensive strategies for engaging its non-operated joint ventures. The company has provided detailed information on how it is supporting, progressing and collaborating with each non-operated joint venture. It has also provided detailed observations on its reconciliation attempts and a gap analysis process. In addition, TotalEnergies is providing technology access and support to its non-operated joint venture operators. » (Source IMEO report 2023).

(5) IEA 2023; Net Zero Roadmap, 2023 update, License CC BY 4.0.

(6) Carbon Capture & Storage.

(7) Carbon Capture Utilization & Storage.

(8) Carbon Capture & Utilization.

At 2023 year end, our stock of credits stood at just under 11 million out of which the very large majority is certified by VERRA VCS standard (> 99%; the remaining < 1% being certified by the Australian Carbon Credit Units Scheme of the Australian Government). We have allocated \$100 million annually for these projects, and the cumulative budget pledged for all of these campaigns amounts to nearly \$725 million over their cumulated lifespan, with the accumulated credits expected to total 44 million in 2030 and 71 million in 2050.

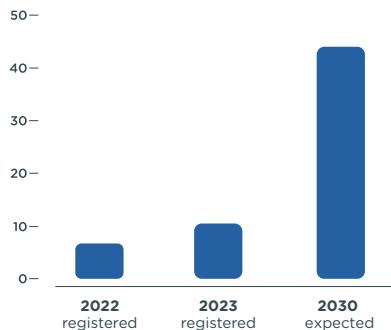
The final tally of credits obtained will be determined once the projects have been completed. If such a stock of 44 million credits is built up in 2030 and on the basis of a consumption of 10% of the stock per year from 2030, then TotalEnergies would use around 5 million credits per year from 2030 onwards.

#### **Highlight: Invest in a fund**

In 2023, the Company has made the decision to invest \$100 million over 15 years in the projects of the Nature Based Carbon fund managed by Climate Asset Management, which focuses on preserving or restoring

three types of ecosystems: degraded natural forests, grasslands impacted by human activity and wetlands.

#### **Cumulated credits generated from the 11 sanctioned projects by the end of 2023 (million credits)**



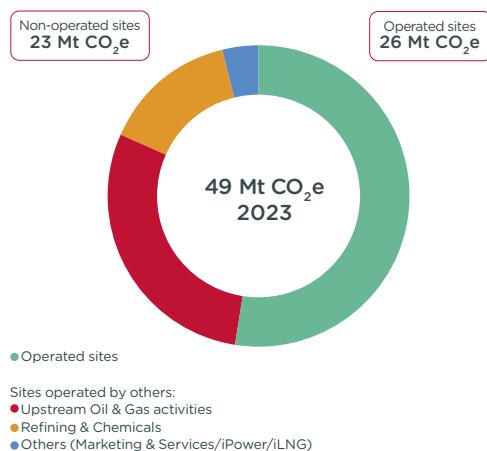
#### **1.3.3.5 Actively working with our partners on non-operated assets**

Our Scope 1+2 emissions based on equity share amounted to 49 Mt CO<sub>2</sub>e in 2023. Half of those emissions are attributable to our interests in sites we operate; the remaining being from our interests in sites operated by our partners. We are actively mobilizing our partners to reduce emissions from assets they operate.

At Exploration & Production, a dedicated team is tasked with sharing best practices with our partners at non-operated assets, such as deploying a decarbonization roadmap that includes an energy assessment, reduction of methane venting and routine flaring, and improving energy efficiency, particularly for gas turbines and compressors. We use the projects conducted at our operated sites to illustrate ways our partners can reduce their Scope 1+2 emissions and encourage uptake.

Upstream emissions can also be reduced by reinjecting the CO<sub>2</sub> extracted with the gas produced. This reinjected volume currently represents almost 2 Mt per year, in Company's equity share, particularly in Brazil, and is set to grow significantly as associated gas production increases.

#### **Scope 1+2 based on equity share - 2023**



#### **COP28: signing of the Oil & Gas Decarbonization Charter**

At COP28, a major initiative between national and international oil companies was launched to reduce the industry's GHG emissions: the Oil & Gas Decarbonization Charter (OGDC). This initiative brings together more than 50 companies, two-thirds of which we are partner with, representing over 40% of the world's oil production. This is an historic step forward, as it brings together for the first time international oil companies (IOCs) & national oil companies (NOCs) from this sector around concrete objectives not only to act on their emissions (net-zero operations by 2050 or earlier, elimination of routine flaring by 2030 and aiming for near zero Upstream methane by 2030) but also to report on their actions. TotalEnergies was one of the first companies to sign the Charter, and its CEO Patrick Pouyanné was chosen to represent the IOCs on the OGDC's three-person co-chairmanship, formed by the CEOs of ADNOC, Aramco and TotalEnergies.

#### **1.3.3.6 What are the relevant indicators for reducing GHG emissions worldwide?**

We are ambitious in our targets for direct emissions (Scope 1+2), which are controlled in our operated facilities. We have defined medium and long-term targets and action plans aimed at Net Zero by 2050.

We are also ambitious in helping our customers reduce their emissions - through our multi-energy strategy, which makes a wider range of energies available to our customers, including low-carbon energies. We track progress through the decarbonization index of our sales (life cycle carbon intensity<sup>(1)</sup> of energy products sold). We have been leading among our peers in terms of actually achieving decarbonization of our energy products sales mix since 2015.

As part of its contribution to the energy transition of its clients, we are thus developing activities in the production and sales of low-carbon electricity. We also produce and sell liquified natural gas, which is a necessary transition fuel for building a reliable, low-carbon power system, complementing renewable energies that are intermittent by nature. Moreover, gas helps to decarbonize power generation in many countries, since burning gas rather than coal to produce electricity emits half as much CO<sub>2</sub> for the same amount of energy produced (refer to point 1.3.3.9).

(1) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

In this respect, setting objectives to drastically reduce TotalEnergies's global indirect emissions (Scope 3)<sup>(1)</sup> in absolute value, without an evolution of the overall structure of energy demand, is in reality not relevant to reduce global GHG emissions.

Most of the emissions reported under Scope 3 by TotalEnergies correspond to the direct emissions (Scope 1) of the consumers of these products: the use of these products depends on their decisions and needs.

In this context, an absolute reduction target for Scope 3 for a company like TotalEnergies, without any change in energy systems and therefore without the reduction of the corresponding Scope 1 of energy users, would lead to a shift of this demand towards other suppliers, notably the national oil companies of producing countries which account for more than 70% of the world market (compared with around 1.5% for TotalEnergies).

### 1.3.3.7 Helping our customers reduce their own emissions

By 2030, the Company's two-pillars balanced transition strategy aims to result in a sales mix of energy products with the view to final use whose lifecycle carbon intensity<sup>(2)</sup> of energy products sold would be reduced by 25%, which means:

- for an equivalent quantity of energy, the carbon content of energy products would be reduced by 25% ("less emissions for same energy")
- for an equivalent quantity of emissions (Scope 1+2+3), the Company would supply 33% more energy to its customers ("more energy for same emissions").

Furthermore, by 2030, energy products sold such as LNG and low-carbon electricity might contribute to enabled emissions reductions<sup>(3)</sup> of around 150 Mt CO<sub>2</sub>e (around 100 Mt CO<sub>2</sub>e coming from Gas & LNG sales and around 50 Mt CO<sub>2</sub>e coming from Renewables). These reductions, which will result from our customers decisions to substitute more carbon-intensive energy products with less carbon-intensive ones, and therefore reduce their own Scope 1+2 (use of gas or renewables to generate electricity instead of fossil fuels), will definitely contribute to lower global GHG emissions.

### 1.3.3.8 Anticipating changes in demand by adapting our sales of petroleum products

A significant part of TotalEnergies' Downstream refining and marketing activities are located in Europe.

The European Union with its Green Deal and its "Fit for 55" regulatory package, has the ambition to be the first carbon-neutral continent by 2050.

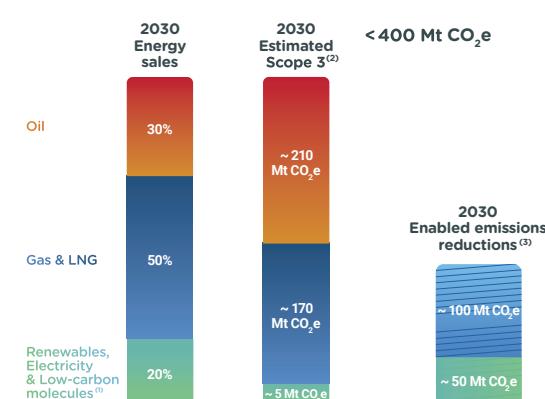
These major trends are leading us to accelerate the transition of our Downstream activities in Europe to reduce our exposure to petroleum products and to develop in new mobilities. Thus, at a global level, we expect to reduce our sales of petroleum products by 40% by 2030, so that we do not sell or refine more fuel than our oil production. This means, in particular, that our service-station networks have to adapt to lower demand for fuels, notably through disposals in Europe.

Conversely, this strategy is leading us to develop actively in new mobilities: in low-carbon molecules, we have initiated the conversion of its refineries into biorefineries in Europe; in electric mobility, the Company is accelerating our growth with a plan to deploy charging points on major corridors and motorways and in large cities in Europe. In hydrogen, we are notably developing a European network of hydrogen stations for trucks, in partnership with Air Liquide.

This strategy would have no effect on lowering global greenhouse gas emissions, and therefore no positive impact on climate, and would be contrary to the interests of our Company and its shareholders.

This strategy could be counter-productive for TotalEnergies' customers, as the Company has set as a goal to ensure their energy supply security while supporting them in their own decarbonization journey.

Reminder: under Scope 3, since 2016 TotalEnergies has reported Category 11 emissions related to the end use by its customers of products sold, i.e. linked to their combustion to obtain energy. Since 2023, TotalEnergies has published an estimate of indirect emissions related to the other Scope 3 categories, in accordance with the classification used by the GHG Protocol and Ipica. We are also implementing action plans to reduce the emissions of the other categories.

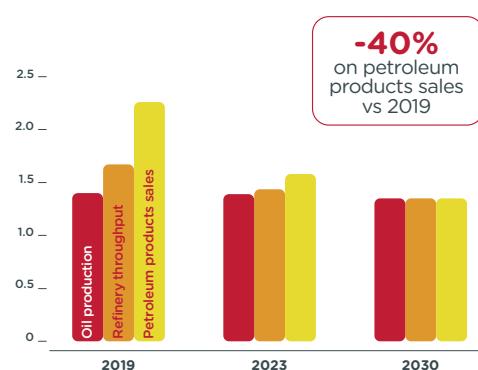


(1) Biofuels, biogas, hydrogen and e-fuels/e-gas.

(2) GHG Protocol – Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(3) Calculation methodology described in point 5.11.4 of chapter 5.

**Oil production, refinery throughput and petroleum product sales (Mboe/d)**



(1) GHG Protocol – Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(2) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(3) Calculation methodology described in point 5.11.4 of chapter 5.

### 1.3.3.9 Reduction of emissions enabled by our sales of gas

Gas-fired power plants are a flexible resource for power generation and can be mobilized quickly; as a result, they offer a secure backup for grids designed to be powered increasingly by intermittent renewable sources. CCGTs discharge half the greenhouse gases of the coal or fuel oil-powered plants<sup>(1)</sup> that still, in some countries, account for the majority of power generation capacity. The use of coal accounts for 36% of power generation and 74% of GHG emissions associated with electricity, while natural gas accounts for 23% of generation and 22% of emissions<sup>(2)</sup>.

LNG, which can be shipped by sea, can flexibly supply many gas-fired power plants. A large percentage of the natural gas we sell goes to the electricity industry.

Given the positive role played by natural gas, TotalEnergies is aiming to increase its share of the sales mix by 2030, and has made the decision not to set a gas Scope 3<sup>(3)</sup> reduction target. When fuel-oil or coal-fired power generation is replaced by gas-fired power generation, GHG emissions fall, whereas TotalEnergies' gas Scope 3<sup>(4)</sup> increases.

We have estimated the reductions of emissions enabled to which our 2023 sales of LNG may have contributed. To do that, we identified the likely

competing source of flexible power generation for each LNG-receiving country. The calculation is based on generation mix and emission factors issued by Enerdata and IEA<sup>(5)</sup>, for each country<sup>(6)</sup> and generation mean.

We estimate that our customers' use of LNG has enabled emissions reduction by about 70 Mt CO<sub>2</sub>e in 2023.

#### Estimated enabled emissions reductions by renewable electricity sales by 2030

Similar approach as the one described above-mentioned has been taken to estimate enabled emissions reductions for our sales of renewable electricity: the methodology compares emissions from the country's alternative non-renewable mix (following the methodology applied by IRENA) and the ones from solar and wind generation. The applied emission factors (published by IEA) cover the entire life cycle of power generation<sup>(7)</sup>. Non-renewable production mixes are based on IEA<sup>(8)</sup> projections by country<sup>(9)</sup> or, if unavailable, by region<sup>(10)</sup>. Thus, by 2030, the emissions reductions enabled by a portfolio of 100 GW of gross capacity have been estimated at around 50 Mt CO<sub>2</sub>e.

### 1.3.4 Electricity: the energy of decarbonation

#### 1.3.4.1 Our major development in electricity: an integrated approach

Electricity demand, which is vital to the success of the energy transition, is expected to grow sharply, as decarbonization is at the heart of the roadmaps of countries committed to carbon neutrality by 2050.

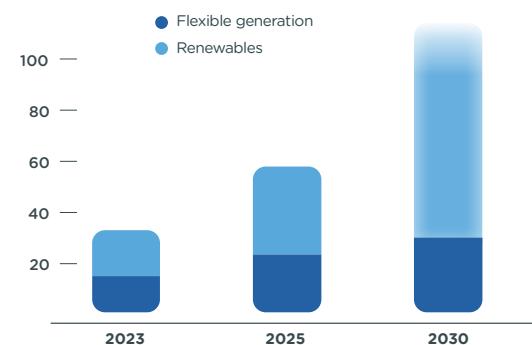
In response, Integrated Power, a new pillar of the Company's strategy, is developing an integrated model encompassing the entire value chain, from power generation to sales and trading activities, with a profitability target of ~12% ROACE<sup>(11)</sup>.

TotalEnergies net electricity production target is to produce more than 100 TWh by 2030, thanks to a 4 to 5-fold increase in renewable production (19 TWh in 2023) and a 2-fold increase in flexible assets production (15 TWh in 2023). As part of its ambition to achieve carbon neutrality by 2050, TotalEnergies is building a competitive portfolio of renewable (solar, onshore and offshore wind) and flexible (CCGT, storage) assets to provide its customers with less and less carbon-intensive electricity available 24/7.

The Company's levers to grow with a return on average capital employed of ~12% are selectivity in its choices of projects; integration across the entire electricity value chain; cost control using our project management and offshore development skills; mobilizing external financing at

competitive rates and making partial divestments to accelerate cash flow generation and diversify our portfolio's exposure.

#### Development of a differentiated profitable integrated model Electricity generation - Company share (TWh)



(1) IEA 2023; Life Cycle Upstream Emission Factors (Pilot Edition).

(2) The rest of power generation is generated by hydro (15%), solar and wind (10%), nuclear (10%) and fuel-oil and other renewables. Data for 2021 provided in WEO 2023 from IEA and confirmed for 2022 by Enerdata.

(3) GHG Protocol – Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(4) GHG Protocol – Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(5) Generation mix for 2022 issued by Enerdata and emission factors for 2021 issued by IEA (data published in September 2023).

(6) For this calculation, Germany, France, Belgium Luxemburg and the Netherlands are considered as a single power and gas system. For France, emission factors published by RTE have been considered.

(7) Combustion and upstream emission factors published in September 2023 by IEA for the year 2021.

(8) STEPS scenario of the World Energy Outlook 2023.

(9) For Brazil, India and the United States.

(10) For Subsaharan Africa, rest of America, Asia-Pacific (excluding China), Europe and Middle-East North Africa.

(11) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

### 1.3.4.2 Our renewable electricity capacity build-up

We are executing our roadmap in renewable electricity.

At year-end 2023, TotalEnergies reached a gross installed production capacity of 22 GW of renewable electricity and intends to continue developing these activities to reach 35 GW by 2025 and 100 GW by 2030, a level that would bring us among the world's top five producers of renewable electricity (wind and solar) excluding China.

**Gross installed capacity of renewable electricity generation (GW)**

#### + 6 GW IN 2023

Of gross capacity in 2023, including:

- United States - Myrtle, Danish, Clearway (+2 GW)
- United Kingdom - Seagreen (+0.9 GW)
- Brazil - Casa dos Ventos (+0.7 GW)
- India (+0.7 GW)
- France (+0.6 GW)



### 1.3.4.3 Developing electric mobility

TotalEnergies plans to invest more than \$1 billion in electric mobility between 2024 and 2028, developing a network of high-power electric charging stations along motorways, major roads and in urban hubs in Europe. By 2028, the Company's ambition is to have 1,000 high power charging sites in Europe.

In addition to this network adapted to road roaming, TotalEnergies supports its B2B customers in their transition to electric mobility by offering services for the deployment and supervision of charging stations at the workplace, as well as at employees' homes. For heavy duty trucks in particular, the Company is developing a tailor-made offer for road haulers, with smart charging and green electricity supply solutions in addition to in-depot charging. To meet their charging needs outside their depots, TotalEnergies plans to install high power charging points suited to this type of vehicles along European corridor from 2024 onwards.

The Company is also developing its recharging network in a number of cities around the world, with a portfolio of over 30,000 charging points in operation or under deployment in Paris, London, Brussels and Singapore.

Finally, TotalEnergies supports its individual customers at home, with home charging solutions that include an energy supply contract or on the road with subscription offers allowing access to a very large network of charging stations.

From the production of renewable electricity to the operation of charging services, the Company is present across the entire electric mobility value chain.

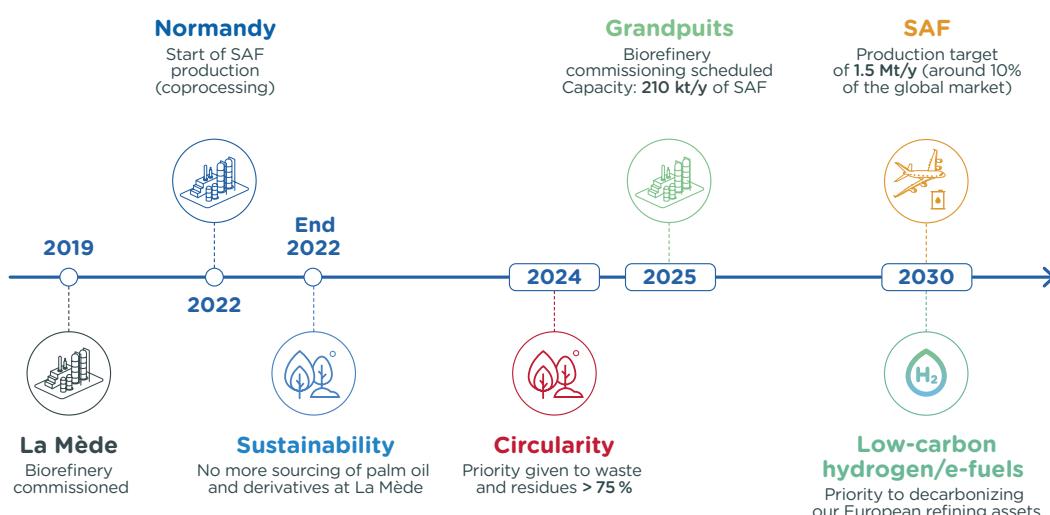
## 1.3.5 New low-carbon energy and innovations to achieve Net Zero by 2050

### 1.3.5.1 New low-carbon energy

The energy transition also requires the development of low-carbon energy based on the conversion of biomass and waste or the production of e-fuels combining hydrogen with CO<sub>2</sub> used as a raw material.

TotalEnergies is thus developing these new energy: biofuels, biogas, hydrogen and e-fuels.

#### Transforming our industrial sites to produce new low-carbon energy



## Biofuels

Today, biofuels emit 50% less CO<sub>2</sub> than their fossil fuel equivalents<sup>(1)</sup>, making them a decarbonization pathway for liquid fuels. Because demand is strong, this is a high-margin market, but access to feedstocks (plants, residues, sugar, etc.) remains a barrier to growth. Among these biofuels, TotalEnergies favors the production of Sustainable Aviation Fuel (SAF) to decarbonize the aviation industry. To avoid land use conflicts, TotalEnergies is developing solutions based on primarily food industry waste and residues (used oils, animal fats). Our aim is to increase the share of circular feedstocks to more than 75% as from 2024 in its production of biofuels.

## Biogas

Biogas, produced from the decomposition of organic waste, is a renewable gas. Injected into gas networks in the form of biomethane, it contributes to the decarbonization of natural gas uses.

TotalEnergies' gross production capacity of 1.1 TWh/year eq. biomethane has almost doubled compared with 2022. The Company now intends to

### 1.3.5.2 Focus Sustainable Aviation Fuel (SAF)

TotalEnergies intends to become a major player in the production of SAF (Sustainable Aviation Fuel), with a target of 1.5 Mt/year by 2030.

This production is currently being developed on our existing platforms in Europe, the Middle East and Asia, notably Grandpuits, Normandie, La Mède and SATORP.

- **Grandpuits:** The biorefinery is scheduled to come on stream in 2025. It plans to process 420 kt/year of feedstock, mainly waste and residues, to produce up to 285 kt/year of SAF by 2028. In 2022, TotalEnergies has joined forces with SARIA (European leader in the collection and valorization of organic materials into sustainable products) to guarantee the supply of lipidic feedstock.
- **Normandy:** TotalEnergies plans to increase SAF production from 130 kt/year in 2025 to 160 kt/year by 2027.
- **La Mède:** Since 2022, biodiesel produced at La Mède has already been used to produce SAF at the TotalEnergies plant in Oudalle, near Le Havre. In 2024, TotalEnergies plans to continue to invest in the site, so as to be able to process up to 100% waste from the circular economy (used oils and animal fats) and will produce locally 14 kt/year of SAF by 2025.
- **SATORP:** For the first time in the Middle East, SATORP has succeeded in co-processing used cooking oil to produce a fuel that meets all the quality criteria of the SAF ISCC+ certified specifications.

### 1.3.5.3 Innovating to accelerate the energy transition

Each year, TotalEnergies devotes around \$1 billion<sup>(2)</sup> to R&D and innovation and mobilizes more than 3,500 employees.

#### R&D at TotalEnergies

In 2023, 65% of our R&D focused on new energies (renewable electricity, low-carbon molecules), batteries and reducing our environmental footprint (methane, CCUS, water, biodiversity, etc.). This evolution of our research and innovation towards new low-carbon energy points to the Company's future.

One of the missions of our new OneTech branch, created in 2021 to meet the Company's new challenges and mobilize the teams, is to provide solutions for reducing CO<sub>2</sub> emissions and improving the energy efficiency

pursue its development through growth, mainly in Europe and the United States, with a 2030 target of 10 TWh of net production.

## Hydrogen and e-fuels

### a. Hydrogen

The production of green hydrogen will require the massive deployment of renewable electricity production capacities, to which TotalEnergies is contributing through its investments and the development of the Integrated Power segment. For our operations, our priority is to decarbonize the hydrogen consumed in our European refineries by 2030. TotalEnergies aims to replace carbon based or grey hydrogen by green hydrogen, produced by electrolysis of water using electricity from renewable energy sources.

### b. Synthetic fuels, e-fuels

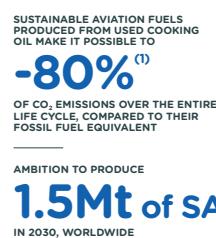
CO<sub>2</sub> can be combined, in reaction with renewable hydrogen, to produce synthetic fuels or gas. In 2023, TotalEnergies is setting milestones in its synthetic fuels roadmap.

#### ● Partnerships

- In Japan, TotalEnergies has partnered with ENEOS Corporation to study the feasibility of a SAF production unit at the ENEOS refinery in Wakayama. The planned unit, which would have a production capacity of 335 kt/year of SAF, would process waste or residues from the circular economy.
- In China, TotalEnergies is studying with its partner Sinopec the development of SAF production of around 230kt/year. This unit would mainly process local residues and waste.

Beyond the SAF currently produced from used cooking oil, our mission is to prepare the next generation of aviation fuels, such as e-SAF.

Together with Masdar, the UAE Civil Aviation Authority, Airbus, Falcon Aviation Services and Axens, TotalEnergies has demonstrated the potential for converting methanol into SAF. Based on the use of renewable electricity, it could enable the production of e-SAF from CO<sub>2</sub> converted into methanol.



(1) Panorama 2020 - Biofuels incorporated into fuels in France, published by the Ministry of Ecological Transition and Territorial Cohesion.

of our projects from the design phase, as well as to accelerate innovation in all our assets. To that end, OneTech mobilizes integrated teams working on the design, construction and operation of our energy facilities, right including R&D, reinforced by the development, testing and deployment of innovative external solutions for our assets to cope with identified issues in our operations.

#### Leveraging digital technology to reduce our emissions

TotalEnergies' Digital Factory brings together around 300 developers, data scientists and other digital specialists with the objective to develop digital solutions to optimize our industrial assets (environmental impact, availability, costs) or to offer new services to our customers.

(1) According to the European Directive 2018/2001 named RED II.  
(2) R&D budget excluding Hutchinson.

## 1.4 Our sustainability ambitions and targets

### OUR APPROACH TO SUSTAINABLE DEVELOPMENT

Energy is at the heart of the most daunting challenges of the 21<sup>st</sup> century, defined in the U.N.'s 2030 Agenda in the form of its 17 Sustainable Development Goals (SDGs).

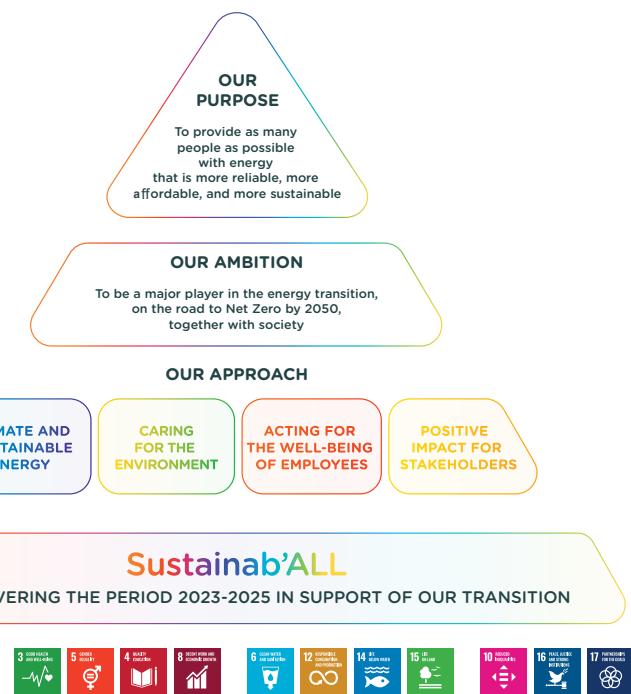
To achieve its 2050 Net Zero Ambition, together with society, the Company affirms its purpose: to provide as many people as possible with energy that is more reliable, more affordable and more sustainable, and places sustainability at the heart of its strategy, its projects and its operations.

Our commitment is based on the values defined in our Code of Conduct and our approach to sustainability is structured around 4 axes:

- climate and sustainable energy,
- caring for the environment,
- acting for the well-being of employees,
- having a positive impact for stakeholders.

To help our collective corporate culture evolve in favour of sustainable development, we have mobilized our 100,000 employees through the progress plans defined at each of our sites as part of the Sustainab'ALL program, in which the Company sets out its material contribution to sustainability.

Through workshops, more than 27,000 employees took part in 2022 in the setting up of 10 indicators related to the SDGs. In 2023, nearly 250 of the Company's most important sites, business units, divisions or subsidiaries<sup>(1)</sup> representing 94.4% of employees, defined a local action plan built around the 10 sustainable development indicators with objectives to be achieved within their own scope by 2025. These action plans are linked to the activities of the entity concerned, its specificities and local issues. These plans form the Sustainab'ALL program through which TotalEnergies gives concrete expression to its contribution to sustainable development.



### BUSINESS ETHICS COMMITMENTS

TotalEnergies operates in many different countries with disparate and complex economic, social and cultural environments, where governments and civil society have especially high expectations of the Company as an exemplar. Within this context, TotalEnergies strives to act as a vehicle for positive change in society by helping to promote ethical principles in every region where it operates.

Accordingly, TotalEnergies is committed to respecting internationally recognized human rights wherever it operates, especially the Universal Declaration of Human Rights, the Fundamental Conventions of the International Labour Organization (ILO), the U.N. Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises and the Voluntary Principles on Security and Human Rights (VPSHR).

The Company refrains from resorting to artificial or aggressive tax planning and in particular is committed not to create subsidiaries in countries generally acknowledged as tax havens and to repatriate or liquidate existing subsidiaries, where feasible.

Furthermore, TotalEnergies is fully committed to fighting corruption and has adopted a policy of zero tolerance in that area.

In addition to that commitment, it lends active support to initiatives promoting greater transparency. TotalEnergies publishes in its Universal Registration Document an annual report covering the payments made by the Company's extractive companies (fully consolidated entities) to governments and the full list of its consolidated entities, together with their countries of incorporation and operations.

The Company also publishes a tax transparency report which provides additional information on the taxes paid in its main countries of operation.

TotalEnergies publishes a report based on the EITI (Extractive Industries Transparency Initiative) guidelines in November 2020 designed to promote transparency in the trade of raw materials. In accordance with the EITI framework, of which it has been a member since 2002, TotalEnergies advocates for the disclosure by countries of their petroleum contracts and licenses.

(1) Excluding Hutchinson.

## VOLUNTEERING PROGRAM

In 2018, the Company introduced a worldwide employee community volunteering program called *Action!*, designed to give its employees the time and opportunity to do more to foster development in its host regions. *Action!* lets volunteer employees devote up to three workdays a year to

local community projects that fall within the scope of the TotalEnergies Foundation program.

By the end of 2023, the program had been implemented in 100 countries, and more than 42,000 inclusive projects had been carried out by close to 20,000 employees since the program's launch.

## TARGETS AND PROGRESS INDICATORS

Whether with regard to safety, health, climate, the environment or shared growth, TotalEnergies manages its operations with the aim of working in a sustainable, active and positive manner in all of the Company's host countries. The Company was one of the first in the industry to publish

measurable improvement targets in these areas. Refer to point 5.13 of chapter 5 for a detailed presentation of the performance indicators of the Company.

### Safety/Health

Protecting the safety of its employees, stakeholders and facilities is a priority for TotalEnergies, as is protecting the health of all people directly or indirectly involved in its activities.

SAFETY		Facts
Targets		
Avoiding the occurrence of a major industrial accident		No major industrial accidents in 2023
Zero fatal accidents		2 fatalities in 2023
Continuously decrease the TRIR and achieve a TRIR of 0.62 by 2024. The 2023 target was 0.65		A TRIR <sup>(1)</sup> of 0.63 in 2023
HEALTH		Facts
Target		
Protecting the health of employees at work		100% of employees with specific occupational risks received regular medical monitoring in 2023 <sup>(2)</sup>

(a) TRIR (Total Recordable Incident Rate): number of recorded incidents per million hours worked.  
(b) Data provided by the WHRS.

### Climate

#### Targets

##### 2030 worldwide targets (Scope 1+2)

- Reduce GHG emissions (**Scope 1+2**) from operated facilities from 46 Mt CO<sub>2</sub>e in 2015 to less than 38 Mt CO<sub>2</sub>e by 2025. By 2030, the target is a reduction of at least 40% of the net emissions<sup>(a)</sup> compared to 2015 for its operated activities, i.e., 25 Mt CO<sub>2</sub>e to 30 Mt CO<sub>2</sub>e
- Reduce **methane emissions**<sup>(b)</sup> from operated facilities by 50% between 2020 and 2025, and by 80% between 2020 and 2030
- Maintain the **intensity of methane emissions** at less than 0.1% of commercial gas produced at operated gas
- Reduce **routine flaring**<sup>(c)</sup> to less than 0.1 Mm<sup>3</sup>/d by 2025, with the goal of eliminating it by 2030

##### 2030 worldwide targets (Scope 3)

- Maintain Scope 3<sup>(d)</sup> GHG emissions related to its customers' use of energy products to a level lower than 400 Mt CO<sub>2</sub>e by 2025 and 2030
- Reduce **Scope 3<sup>(d)</sup>** GHG emissions from the **petroleum products** sold worldwide by more than 30% by 2025 compared to 2015. By 2030, the target is a reduction of at least 40%

##### 2030 worldwide target (carbon intensity)

- Reduce the **lifecycle carbon intensity**<sup>(e)</sup> of **energy products** used by customers by more than 25% compared to 2015; by 2025, the target reduction is at least 15% (**Scope 1+2+3**)

#### Facts

- A GHG emission reduction (Scope 1+2) from operated facilities from 46 Mt CO<sub>2</sub>e in 2015 to **35 Mt CO<sub>2</sub>e** in 2023
- Methane emissions<sup>(2)</sup> already reduced by **50%** between 2010 and 2020 and by **47%** between 2020 and 2023
- A methane intensity of less than **0.1%** for operated gas facilities
- More than **96%** reduction in routine flaring between 2010 and 2023
- Scope 3<sup>(d)</sup> emissions limited to **355 Mt CO<sub>2</sub>e** in 2023, below the 2015 level
- A decrease of the Scope 3<sup>(d)</sup> GHG emissions from the petroleum products sold worldwide in **35%** in 2023 compared to 2015
- A decrease of the carbon intensity<sup>(e)</sup> of energy products used by customers of **13%** between 2015 and 2023

(a) The calculation of net emissions takes into account negative emissions from natural sinks like forests, regenerative agriculture and wetlands.

(b) Excluding biogenic methane.

(c) Routine flaring, as defined by the working group of the Global Gas Flaring Reduction program within the framework of the World Bank's Zero Routine Flaring initiative.

(d) GHG Protocol – Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

(e) Lifecycle carbon intensity of energy products sold (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

## Environment

TotalEnergies places the environment at the heart of its ambition of being a responsible company with a goal to improve the environmental performance of its facilities.

### ENVIRONMENT MANAGEMENT SYSTEM

#### Target

Have the environment management systems of sites important for the environment<sup>(1)</sup>

#### Facts

**100%** of the 79 sites important for the environment certified to the ISO14001 standard in 2023

#### AIR

#### Target

Decrease sulfur dioxide (SO<sub>2</sub>) emissions into the air by **75%** between 2015 and 2030, a target that amounts to not exceeding 15 kt emitted in 2030

#### Facts

**80%** reduction in SO<sub>2</sub> emissions into the air between 2015 and 2023

#### WATER

#### Targets

Reduce the freshwater withdrawal of the sites located in water stress area by **20%** between 2021 and 2030

#### Facts

**7.4%** of reduction in freshwater withdrawal in water stress area (base WRI Aqueduct 2030 V4.0)

Limit the hydrocarbon content of water discharges to below **30 mg/l** for offshore sites

**92%** of the Company's oil sites met the target for the quality of offshore discharges in 2023

Limit the hydrocarbon content of water discharges to below **1 mg/l** for onshore and coastal sites by 2030

**86%** of the Company's oil sites met the new target for the quality of onshore discharges in 2023

#### WASTE

#### Target

Recycle more than **70%** of the waste from sites operated by the Company's subsidiaries (excluding digestate from biogas units)

#### Facts

**61%** of the waste produced by sites operated by the Company's subsidiaries was recycled in 2023

- (a) Production sites of the subsidiaries of the Exploration & Production segment, sites producing more than 250 kt/y in the Refining & Chemicals and Marketing & Services segments, as well as gas-fired power plants in the Integrated Power segment, operated by the Company.

## Biodiversity

### Commitments

- Implement a net zero deforestation policy in new projects on new sites approved from 2022 onwards
- Implement the biodiversity ambition in the 4 areas presented in point 5.5.4 of chapter 5

### Facts

- In 2023, 22 ha net deforestation (81 ha gross deforestation and 59 ha compensated). Projects to compensate for the difference are currently being implemented
- No oil and gas exploration or production activity in the area of natural sites listed on the UNESCO World Heritage List
- No exploration activity in oil fields under sea ice in the Arctic
- **8** biodiversity action plans carried out or in preparation in 2023 for projects located in protected areas<sup>(a)</sup> or aligned with the International Finance Corporation PS6 standard
- **70** biodiversity action plans initiated on sites important for the environment<sup>(b)</sup> at the end of 2023 (2025 objective reached at 90%).
- 119 cumulated citations since 2020 in scientific publications of biodiversity data sets produced by the Company and shared in the database of the Global Biodiversity Information Facility (GBIF) database

(a) Sites located in an IUCN I to IV or Ramsar convention protected area.

(b) Production sites of the subsidiaries of the Exploration & Production segment, sites producing more than 250 kt/y in the Refining & Chemicals and Marketing & Services segments, as well as gas-fired power plants in the Integrated Power segment, operated by the Company.

## Diversity

### Targets

Women to account for **30%** of Executive Committee members and of the G70<sup>(a)</sup> by 2025

Women to account for **30%** of senior executives by 2025 and **30%** of senior managers by 2025

Non-French nationals to account for **45%** of senior executives and non-French nationals to account for **40%** of senior managers

### Facts

**25%** of Executive Committee members and **33.8%** of the G70 are women

**28.3%** of senior executives are women and **25.1%** of senior managers are women

**37.7%** of senior executives are non-French nationals and **36.3%** of senior managers are non-French nationals

(a) Senior executives with the most important responsibilities.

## ADVOCACY AND SECTOR INITIATIVES IN SUPPORT OF THE ENERGY TRANSITION

A successful energy transition requires closer collaboration between all the players involved.

### Support for government action and climate sectorial initiatives and disclosures

TotalEnergies supports the pledges made by nations worldwide to combat global warming as part of the Paris Agreement and publishes its positions on its corporate website (heading sustainability/stakeholder-relationships-advocacy/advocacy-principles).

At COP28, we supported the goal of tripling renewable energy capacity and doubling energy efficiency measures by 2030. We also joined the Oil and Gas Decarbonization Charter (OGDC).

### Collective initiatives supported by TotalEnergies

Axes	Name of the initiative	Perimeter
ENERGY & CLIMATE	● 3x Renewables	Worldwide
	● Oil and Gas Decarbonization Charter	Worldwide
	● OGMP 2.0	Worldwide
	● Aiming For Zero Methane	Worldwide
	● TCFD	Worldwide
	● UAE-France Bilateral Climate Investment Platform	UAE and France
ACTING FOR THE WELL-BEING OF EMPLOYEES	● Global Deal	Worldwide
	● Women's Empowerment Principles - Equality Means Business (UNGP)	Worldwide
	● Closing the gender gap - a call to action (WEF)	Worldwide
	● ILO Global Business and Disability Network Charter	Worldwide
	● The Valuable 500	Worldwide
	● Manifesto for the inclusion of people with disabilities in economic life	France
	● Inclusion and Diversity Pledge (ERT)	Europe
	● LGBT Commitment charter + de l'Autre Cercle (signed again in 2023)	France
	● Elles bougent	France
CARING FOR THE ENVIRONMENT	● Act4Nature International	Worldwide
	● CEO Water Mandate	Worldwide
	● Circular economy commitment AFEP	Worldwide
	● UN Global Compact Ocean Stewardship Coalition	Worldwide
HAVING A POSITIVE IMPACT FOR STAKEHOLDERS	● The Voluntary Principles on Security and Human Rights (VPSHR)	Worldwide
	● The United Nations Guiding Principles on Business and Human Rights as endorsed by the UN Human Rights Council in 2011	Worldwide
	● The United Nations Global Compact Principles	Worldwide
	● The B Team Responsible Tax Principles	Worldwide
	● Partnering Against Corruption Initiative (PACI)	Worldwide
	● Extractive Industries Transparency Initiative (EITI)	Worldwide

### Review of affiliations

TotalEnergies has published a list of its industry affiliations on its website since 2016.

The Company typically cooperates with these organizations on technical subjects, but some take public stances on other issues, such as climate. Since 2019, TotalEnergies has conducted a biannual assessment of the public positions on climate and other issues of the main industry organizations of which it is a member. The Company examines whether those positions are aligned with its own, based on the six principles from its Advocacy Directive. A new review was carried out in 2023. In 2023, most of new associations in the energy field joined by our entities is related to renewable energies and low-carbon technologies.

### Review of affiliations – 6 key principles

#### Scientific position

TotalEnergies recognizes the link established by science between human activities, in particular the use of fossil fuels, and climate change.

#### The Paris Agreement

TotalEnergies recognizes the Paris Agreement as a major step forward in the fight against global warming and supports the initiatives of the implementing States to fulfill its aims.

#### Carbon pricing

TotalEnergies supports the implementation of carbon pricing.

## The development of renewable energies

TotalEnergies supports policies, initiatives and technologies aimed at promoting the development of renewable energies and sustainable bioenergies (biofuels, biogas) as well as energies and technologies aimed at decarbonizing industrial processes transportation, such as hydrogen, carbon capture and electric vehicles.

## The role of natural gas

TotalEnergies promotes the role of natural gas as a transition fuel, in particular as a replacement for coal. TotalEnergies supports policies

aimed at measuring and reducing methane emissions aiming for zero methane emissions. TotalEnergies promotes a policy of reducing greenhouse gas emissions: avoid; reduce by using the best available technologies; offset the minimized residual emissions.

## Carbon offsetting

TotalEnergies supports the carbon offset mechanisms necessary to achieve carbon neutrality, through organized and certified markets ensuring the quality and sustainability of carbon credits.

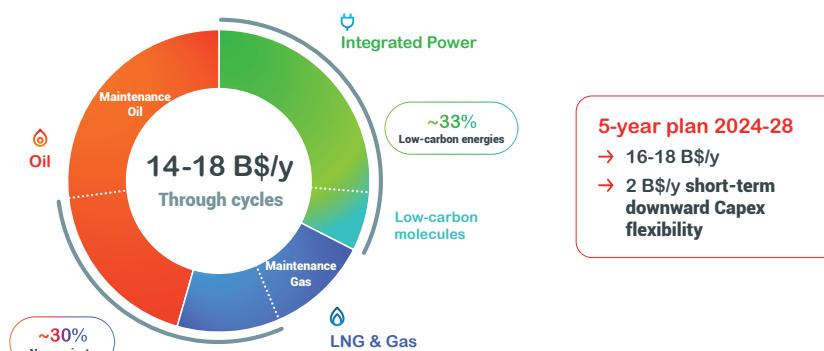
## 1.5 Our investment policy

TotalEnergies' investment policy is designed to support the deployment of its balanced energy transition strategy and its ambition of achieving carbon neutrality (net zero emissions) by 2050, together with society. It is anchored on two pillars: investments for the maintenance and growth of oil and gas production, mainly LNG, on the one hand, and investments for the growth of low-carbon activities, mainly electricity from renewable sources, on the other hand.

In 2023, given the strength of its cash flow generation and of its solid balance sheet, the Company accelerated its transition strategy and invested \$16.8 billion, of which \$5 billion was dedicated to Integrated Power (including in particular the residual acquisition of around 70% of Total Eren for \$1.6 billion, the acquisition of a 34% interest in Casa dos Ventos in Brazil for \$0.5 billion, and the creation of a new joint venture with AGEL in India for \$0.3 billion). In 2024, TotalEnergies expects net investments of \$17 billion to \$18 billion, of which \$5 billion dedicated to Integrated Power.

TotalEnergies plans net investments between \$16 and \$18 billion per year between 2024 and 2028 with downward flexibility of \$2 billion per year. Through cycles, TotalEnergies expects net investments between \$14 billion and \$18 billion per year, along the following lines:

### A disciplined and sustainable investment policy



## 1.5.1 Main investments carried out over the period 2021-2023

Gross investments (M\$)	2023	2022	2021
Exploration & Production	12,378	10,646	7,276
Integrated LNG	3,410	1,249	2,351
Integrated Power	5,497	5,226	3,990
Refining & Chemicals	2,149	1,391	1,638
Marketing & Services	1,273	1,186	1,242
Corporate	153	104	92
<b>Total</b>	<b>24,860</b>	<b>19,802</b>	<b>16,589</b>
Net investments <sup>(a)</sup> (M\$)	2023	2022	2021
Exploration & Production	7,526	10,027	6,523
Integrated LNG	3,159	472	1,151
Integrated Power	4,945	3,521	3,355
Refining & Chemicals	1,922	1,281	1,285
Marketing & Services	(859)	914	923
Corporate	144	88	70
<b>Total</b>	<b>16,837</b>	<b>16,303</b>	<b>13,307</b>
Net acquisitions <sup>(a)</sup> (M\$)	2023	2022	2021
Acquisitions	6,428	5,872	3,284
Assets sales	(7,717)	(1,421)	(2,652)
Other operations with non-controlling interests	–	–	–
<b>Total</b>	<b>(1,289)</b>	<b>4,451</b>	<b>632</b>
Organic investments <sup>(a)</sup> (M\$)	2023	2022	2021
Exploration & Production	10,232	7,507	6,690
Integrated LNG	2,063	519	2,061
Integrated Power	2,582	1,385	1,280
Refining & Chemicals	2,040	1,319	1,502
Marketing & Services	1,065	1,035	1,074
Corporate	144	87	68
<b>Total</b>	<b>18,126</b>	<b>11,852</b>	<b>12,675</b>

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

### Organic investments in 2023

In the Integrated Power segment, organic investments were mainly allocated to solar and wind power plant construction projects, particularly in the United States, France and the United Kingdom.

In the Integrated LNG segment:

- organic investments were mainly allocated to LNG production projects under construction for which the final investment decision has been taken (such as NFE and NFS in Qatar and Rio Grande LNG in the United States), as well as projects under consideration (such as Papua LNG in Papua New Guinea and Marsa LNG in Oman);
- in hydrogen and biogas, organic investments were mainly dedicated to the financing of the joint venture TEH2 (80% TotalEnergies, 20% Eren) and the development of biomethane unit projects under construction or development in France and Poland.

In the Exploration & Production segment:

- most of the organic investments were allocated to the development of new hydrocarbon production facilities, the maintenance of existing facilities, infill well projects for assets already in production as well as exploration activities. Development investments were allocated in particular to the Mero 2 project which started up late 2023 in Brazil, the Absheron project in Azerbaijan commissioned in July 2023 and to the major projects under construction such as Tilenga and Kingfisher in Uganda and the associated cross-border EACOP pipeline project in Uganda/Tanzania, Anchor and Ballymore in the United States, Mero 3 and 4 in Brazil and the redevelopment of Tyra in Denmark;
- in CCS, TotalEnergies has invested in partnerships in the development of carbon storage projects located in the North Sea, which are under construction (Northern Lights in Norway) or under study, such as Aramis in the Netherlands, Northern Endurance in the United Kingdom and Bifrost in Denmark;
- in natural carbon sinks, the Company continued its investments, particularly in inclusive forestry and agricultural management projects.

In the Refining & Chemicals segment, organic investments were dedicated on the one hand to safety and maintenance of the installations (including major shutdowns) and to the energy efficiency program and, on the other hand to the development of new facilities. In particular, they were devoted to the construction, in partnership with the Saudi Arabian Oil Company, of Amiral, a world-scale petrochemical complex in Saudi Arabia, for which the final investment decision was taken in December 2022. They were also devoted to projects intended to improve plants' competitiveness, particularly in Europe such as in Donges (France) where the Company is building a diesel desulfurization unit and to the further development of the project to transform the Grandpuits refinery into a zero-crude platform focusing on new energies and low-carbon activities, which is expected to represent a total investment of more than €500 million by 2025.

In the Marketing & Services segment, organic investments were mainly dedicated to the maintenance of the worldwide network of service stations. TotalEnergies also increased the proportion of its investments dedicated to the deployment of charging infrastructure for electric mobility, mainly in Europe.

### Acquisitions in 2023

In 2023, TotalEnergies' finalized acquisitions amounted to approximately \$6.4 billion (compared to \$5.9 billion in 2022 and \$3.3 billion in 2021).

TotalEnergies accelerated its development in electricity with the residual acquisition of around 70% of Total Eren for a net investment of \$1.6 billion, the acquisition of a 34% interest in a joint venture with Casa dos Ventos in Brazil for \$0.5 billion, and the creation of a new joint venture with AGEL in India for \$0.3 billion.

## 1.5.2 Major planned investments

In accordance with its growth strategy in Integrated Power, TotalEnergies plans to continue its development in the electricity value chain and particularly in renewables with construction projects for solar and wind power plants (notably offshore) and the acquisition of flexible capacities (gas power plants in the United States, batteries in Germany). In particular, the Company intends to continue its investment efforts, particularly on solar and wind projects in the United States, wind projects in Brazil in partnership with Casa dos Ventos. The Company also plans to finalize in 2024 the acquisition of 1.5 GW of flexible power generation capacity in Texas, the acquisition of renewable energy aggregator Quadra Energy in Germany, the acquisition of German battery storage developer Kyon Energy, as well as to make the payment relating to the award of two maritime concessions to develop two wind farms for a total of 3 GW in Germany.

In Integrated LNG, TotalEnergies plans in particular to continue investments dedicated to major LNG production projects for which the final investment decision has already been taken (mainly North Field East and North Field South in Qatar and Rio Grande LNG in United States) as well as the development of LNG production projects that have started (Ichthys LNG and Gladstone LNG in Australia).

## 1.5.3 Financing mechanisms

TotalEnergies self-finances most of its investments with cash flow from operating activities and may occasionally access the bond market. Certain subsidiaries or specific projects may be financed through external financing, notably in the case of joint ventures. These include Ichthys LNG in Australia, Satorp in Saudi Arabia, Mozambique LNG, Cameron LNG and Rio Grande LNG in the United States and Hanwha TotalEnergies Petrochemical Co. in South Korea.

TotalEnergies continued its growth in LNG with the acquisition of 6.25% and 9.375% stakes respectively in the NFE and NFS LNG projects in Qatar and the acquisition of a 17.5% interest in NextDecade (developer of the Rio Grande LNG project).

In Exploration & Production, TotalEnergies focused its efforts on low-cost, low-emission oil projects, with the acquisition of 20% in the SARB and Umm Lulu concession in the United Arab Emirates for a consideration of about \$1.5 billion.

### Divestments in 2023

TotalEnergies completed asset sales amounting to about \$7.7 billion in 2023 (compared to \$1.4 billion in 2022 and \$2.7 billion in 2021). They included in particular:

- in the Exploration & Production segment, for a total amount of approximately \$4 billion, the sale to ConocoPhillips of the 50% interest in Surmont in Canada as well as the sale to Suncor of all the shares in TotalEnergies E&P Canada. TotalEnergies also sold a 40% interest in Block 20 in Angola;
- in the Marketing & Services segment, the sale to Alimentation Couche-Tard of the entire network of service stations in Germany for cash payment received after adjustments and before tax of approximately \$2.4 billion.

Net investments thus amounted to \$16.8 billion in 2023 (compared to \$16.3 billion in 2022 and \$13.3 billion in 2021).

In Exploration & Production, investments in the development of oil and gas projects are planned to be dedicated essentially to the Tilenga and Kingfisher projects in Uganda and the associated EACOP cross-border oil pipeline project in Uganda/Tanzania, as well as to major development projects under way for which the final investment decision has already been taken (GGIP Phase 1 in Iraq, Anchor and Ballymore in the US, or Mero 3 and 4 in Brazil). In addition, TotalEnergies intends to pursue short-cycle development projects, particularly in West Africa and the North Sea.

In downstream, significant portions of the Refining & Chemicals segment's investment budget are earmarked on the one hand for facility safety and maintenance (including major shutdowns) and energy efficiency program and, on the other hand, for the continuation of the project to transform the Grandpuits refinery (France) into a zero-crude platform and the construction, in partnership with the Saudi Arabian Oil Company, of Amiral, a world-scale petrochemical complex in Saudi Arabia.

Investments in the Marketing & Services segment are expected to be mainly allocated, on the one hand, to the maintenance of the global network of service stations and, on the other, to the development of the European electric mobility network.

As part of certain project financing arrangements, TotalEnergies SE has provided guarantees. These guarantees ("Guarantees given on borrowings") as well as other information on TotalEnergies' off-balance sheet commitments and contractual obligations appear in Note 13 to the Consolidated Financial Statements (refer to point 8.7 of chapter 8). TotalEnergies believes that neither these guarantees nor the other off-balance sheet commitments of TotalEnergies SE or any other company of the Company have, or could reasonably have in the future, a material effect on TotalEnergies' financial position, income and expenses, liquidity, investments or financial resources.

## 1.6 Innovation for the transition strategy of TotalEnergies

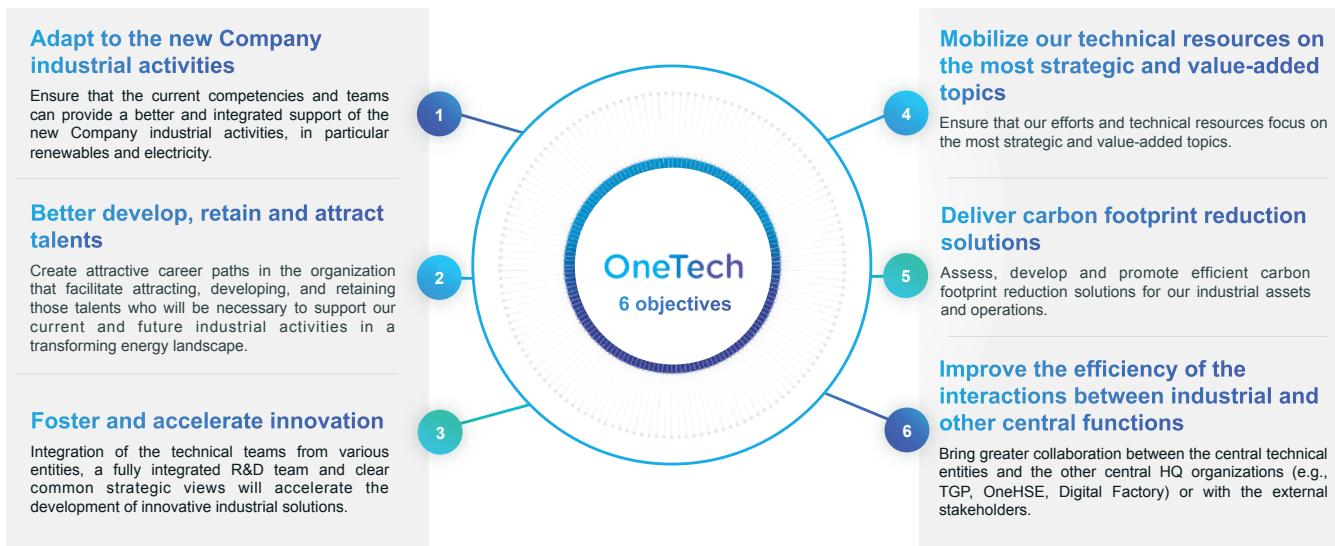
### 1.6.1 OneTech

The creation of the OneTech branch, in September 2021, illustrates the dynamic initiated by General Management to mobilize the teams and respond to TotalEnergies' new challenges in the context of its transition strategy.

The industrial successes and technological advances of TotalEnergies have always been based on the values of the Company, in particular on its pioneering spirit, appetite for performance and on the technical and scientific skills of its teams, which are widely recognized by its peers and partners.

**OneTech pursues six objectives**

### OneTech: engine of the transformation



The centralization of teams within OneTech provides clarity for stakeholders, with easier identification of the technical or R&D contact on each subject for the entire Company.

#### A DEDICATED ORGANIZATION

OneTech's organization is structured around three functional hubs: an Industrial hub, a Research & Development hub and a Support Functions hub.

- the Industrial Hub consists of:
  - the Customer Lines division, the entry point within OneTech for internal customers of the operational branches, coordinates the operational and technical support of OneTech and the mobilization of the resources of the associated Technical Lines that the business segments need. It also carries out technical evaluations of new business opportunities and studies for the preparation of new developments of business unit assets. A team within this division is dedicated to the development and implementation of projects to reduce the carbon footprint of the Company's assets. In 2023, this division set up an entity responsible for deploying new digital solutions to improve the efficiency of the Company's industrial

operations. The deployment concerns in particular the solutions developed by the Digital factory to accelerate the digital transformation of the Company (refer to point 1.6.3);

- the Technical Lines division, which includes the areas of expertise, is the core of the technical and industrial know-how. It brings together within common teams, all the specialists and players in the same technical field who might previously have been present in different entities or different branches, thus promoting synergies between the Company's sites, as well as the sharing of experience, best practices, innovative solutions, knowledge and know-how. In 2023, this direction has put in place a dedicated framework to accelerate innovation and address industrial problems directly linked to the gradual improvement of operations at the Company's sites by identifying and testing mature technological innovations to be deployed in less than a year.

- the Research & Development (R&D) hub consists of the R&D division, which brings together all the Company's R&D activities under a single entity. This hub designs and operates the Company's R&D in response to the needs of business units, anticipates with partners to explore and de-risk new avenues and innovative technologies and then

## 1.6.2 R&D, lever of the transition strategy

To prepare for the future, the Company invested more than \$1 billion in R&D, industrial innovation, digital developments in 2023.

The Company invested \$774 million in 2023 in its own and its subsidiaries' R&D (compared to \$762 million in 2022 and \$849 million in 2021) with a dedicated workforce of more than 3,500 researchers.

In support of its transition strategy, TotalEnergies has significantly reoriented its R&D in recent years. Compared to 28% in 2017, TotalEnergies has decided to devote 65% of the 2024 R&D budget to low-carbon energy (renewables, biomass, batteries, etc.) and to reducing the environmental footprint through CCUS and sustainable development programs.

According to the different scenarios studied by TotalEnergies, achieving the ambition of carbon neutrality (zero net emissions) by 2050, together with society, requires not only the large-scale deployment of proven technologies such as solar photovoltaics, wind power and biofuels but also technological breakthroughs and the development of completely new industrial value chains such as hydrogen, synthetic fuels and carbon capture and storage. The Company is also investing in digital expertise and artificial intelligence (AI) through the development of solutions to accelerate its transition (see point 1.7.3) and that of its customers.

TotalEnergies' transition strategy requires agile R&D, resolutely committed to innovation. R&D activities thus break down according to the principles that underpin the growth strategy, the Company's carbon neutrality ambition and its commitment to sustainable development.

The R&D hub is organized along five lines in a single division:

- the **Power R&D** line focuses on renewable energy production, integrated energy system design and optimization of modes of distributed operation to balance renewable energy. The challenge is to reduce the production costs of low-carbon energy, decarbonize assets, and develop new processes and services. To accelerate the implementation of R&D programs, TotalEnergies has joined forces with the Technical University of Denmark to create a center of excellence in low-carbon energies. This center has three missions: the construction of a new generation hybrid electricity platform, research collaborations on next generation wind technologies and floating wind power, and multi-energy training for employees;
- the **CO<sub>2</sub> & Sustainability R&D** line develops innovative and competitive technologies focusing on increasingly sustainable solutions. These projects concern the capture, storage and use of CO<sub>2</sub>, for sustainable synthetic fuels and the development of low environmental footprint technologies for the entire liquefied natural gas chain, biogas and the hydrogen sector. The work undertaken on water and soil management and the quantification of greenhouse gas emissions contribute to the deployment of technologies with a low-carbon footprint. The development of AUSEA<sup>(1)</sup> by R&D in partnership with the CNRS (the French National Center for Scientific Research) and the University of Reims is an example of the development of innovative and competitive technologies which reinforces the pioneering role of the Company in technologies for reducing methane emissions. This miniature drone-mounted sensor is capable of detecting and quantifying methane and carbon dioxide emissions and
- develop prototypes with the Industrial hub once the proof of concept has been demonstrated. It also develops skills and technological intelligence to capture new business opportunities and emerging technologies in support of TotalEnergies' strategy.
- at the same time identifying the sources of these emissions. This innovative technology has been deployed on the Upstream oil and gas installations operated by the Company and may be deployed beyond its own operated assets within the framework of cooperation agreements;
- the **Fuels & Lubricants R&D** line supports the transformation of the world of transport, new forms of mobility and industry, by developing products to increase the performance of electrical systems and combustion engines and reduce the environmental footprint of existing solutions. TotalEnergies has recently developed an innovative coolant that can be in direct contact with battery cells, allowing more efficient battery cooling than fluids currently on the market. Building on this innovation, TotalEnergies has joined forces with the automotive supplier Valeo, a preferred partner of manufacturers around the world, for its expertise in associated thermal systems in order to design and dimension the best integration of this fluid in the battery pack of electric vehicles and to optimize its performance and reduce the carbon footprint of EVs;
- the **Downstream Processes & Polymers R&D** line pilots and operates research work on the development of sustainable aviation fuels (SAF), the separation of polymers and their recycling with a view to the circular economy and decarbonization of Refining-Chemical industrial units. The development of SAF is a major focus of R&D projects carried out for the decarbonization of the aviation sector. This axis covers the entire value chain, from raw materials to product specifications including conversion processes. Modeling plays a key role in optimizing this entire chain to maximize SAF production. To respond to the challenges of decarbonization of the aviation sector, TotalEnergies has signed a partnership with Safran in 2021 and a partnership with Airbus in early 2024, including an R&D component to accelerate the development of innovative technological solutions;
- the **Upstream R&D** line aims to improve the operational efficiency of exploration and production activities, both in terms of reducing GHG emissions and cutting costs in line with its strategy of portfolio optimization. To respond to the major challenge of geological storage of CO<sub>2</sub>, TotalEnergies has partnered with INRIA (National Institute for Research in Digital Science and Technology) to develop new digital simulation tools to improve the geological characterization of reservoirs and thus monitor the CO<sub>2</sub> to be injected and stored in them. This set of tools combining high-performance computing, geoscience, seismic imaging and ultra-complex mathematical modeling is expected to make it possible to better understand the behavior of carbon stored in deep reservoir rocks and to predict its evolution and changes to the reservoir in the very long term;
- Transversally and in addition to the five R&D lines, the **Anticipation and Portfolio Performance** division carries out prospecting activities for the Company on emerging subjects while seeking to capture technologies that could be disruptive. It also carries out an exploratory activity of innovative solutions and technologies for the Company's existing and future businesses. This division also manages the R&D portfolio for maximum operational efficiency and value creation.

(1) Airborne Ultralight Spectrometer for Environmental Application: technology for detecting methane by drone.

Beyond OneTech's five R&D lines, the Hutchinson and Saft Groupe (Saft) subsidiaries carry out R&D specific to their activities.

- Hutchinson R&D develops solutions with high technological content that meet the challenges of future mobility with an emphasis on sustainable development and electrification. These multi-market solutions are based on five areas of expertise: NVH (Noise Vibration Harshness), Waterproofing, Thermal management, Materials and structures for extreme conditions of use, Power transmission; with the objective of improving customer performance in terms of sustainable development, safety, energy efficiency and comfort.

In 2023, the development of sustainable materials was accelerated to achieve Hutchinson's goal, by 2025, of offering products containing at least 25% biosourced, recyclable or regenerated materials. This objective has already been largely exceeded for certain product lines such as bodywork seals (with more than 70% of materials biosourced), precision seals and pipes for cooling lines. In addition, an innovative elastomer "regeneration" technology is being industrialized, making it possible to regenerate materials from production scraps.

- Saft conducts research to develop ever safer and more efficient batteries, particularly in the field of mobility and storage of renewable energies, using artificial intelligence and big data. In 2023, Saft

unveiled IBIS (Intelligent Battery Integrated System), a smart, more efficient battery for stationary storage and electric vehicles. This technology represents a real breakthrough in the field of mobile and stationary energy storage. Furthermore, an alliance supported by France 2030 and bringing together six partners from the academic and industrial worlds was launched in 2023, under the coordination of Saft, to carry out a research, development and industrialization program for solid lithium-ion batteries. The program aims to develop batteries intended for applications requiring high energy or high power while presenting appropriate safety performance. The program also takes into account issues related to lifecycle analysis and battery recycling in order to help reduce national dependence on critical materials.

To accelerate the Company's transition strategy, R&D activities are carried out relying on its talented people in its 15 R&D centers around the world and its pilot sites, all in a process of open innovation with industrial partners, start-ups and the best research and innovation ecosystems. TotalEnergies mobilizes nearly 1,000 partners per year.

In addition, the Company implements an active intellectual property policy to protect its innovations, maximize their use and differentiate its technology. In 2023, the Company filed more than 250 patent applications.

## 15 TotalEnergies research centers around the world



### 1.6.3 Digital acceleration as a performance lever

In early 2020, TotalEnergies opened a digital factory in Paris that brings together 300 developers, data scientists and other experts, to accelerate the Company's digital transformation. TotalEnergies' goal is to leverage the capabilities of digital tools to create value in all of its businesses.

The Digital Factory aims to develop the digital solutions that the Company needs to improve its operations in terms of both availability and cost, provide its customers with new services, particularly in managing and optimizing energy use, extend its reach to new distributed energies,

and reduce its environmental impact. Its ambition is to generate as much as \$1.5 billion in value per year for the company by 2025 through additional revenue and reductions in operating or investment expenses. Since 2020, more than 80 solutions have been created and are gradually being deployed in the relevant operational entities of the Company. More than 200 deployments have already been carried out.

## 1.7 Our strengths

### 1.7.1 Our employees

#### OUR EMPLOYEES' COMMITMENT AND GROWTH ARE KEY TO OUR SUCCESS

The Company is committed to a transition strategy and can rise to the challenges it faces thanks to the commitment of its workforce. Therefore, TotalEnergies strives to uphold the strictest standards of safety, ethics and integrity, management and social performance wherever its subsidiaries operate. The goal of this approach is to create an environment in which every employee can reach his or her potential and TotalEnergies can continue to drive its transition strategy and to pursue its growth.

TotalEnergies maintains a dialogue with the Company's employees and their representatives, who have a privileged position and role, particularly in discussions with management teams. Social dialogue is one of the pillars of the Corporate project. In order to associate the employees to the major challenges of the Company, the expectations of employees are regularly listened to and discussed. TotalEnergies regularly involves them in participatory processes. For example, the Company is developing exchange formats between members of the Executive Committee and employees, in order to listen and hear to their proposals on key issues for the Company (refer to point 5.6.2.2).

In addition, every two years TotalEnergies conducts an internal opinion survey (TotalEnergies Survey) of employees in order to gather their opinions and expectations regarding their professional situation and their perception of the company, on a local or Company-wide level. By decision of the Executive Committee, an additional short survey, launched in 2023, the TotalEnergies Pulse Survey<sup>(1)</sup>, will take place every other year, to make it possible to measure employee engagement and well-being once a year. The results of this survey, to which nearly 45,000 employees (a participation rate of 77%) responded, indicate that employees have an engagement rate of 82.4% up by 2 points compared to 2022), compared with the benchmark<sup>(2)</sup> of 71.3%. 86% of employees state they are proud to work for TotalEnergies. The results were communicated within all the entities concerned.

As a responsible employer, the Company is convinced that the well-being of employees is an essential source of professional fulfillment, long-term

performance and contributes to the protection of mental health. The Company promotes decent employment and social protection in a work environment that combines performance and conviviality. In 2019, the Company launched "Better Together", the human part of its Company project, in response to employees' expectations and in order to raise the Company's human ambitions to the same height as its business ambition. This project has three ambitions: to develop the talents of every employee, to promote the coaching dimension of managers and to build a company where it is a good place to work together. These ambitions have been translated into concrete projects, in order to quickly anchor the changes in the daily lives of employees. More than 400 talent developers are actively assisting individual employees in their professional development by offering personalized support. Job mobility is now an internal recruitment process that allows employees to apply for available positions in complete transparency. Close to 10,000 vacancies were published in 2023. Functional, geographic mobility and lifelong training are essential levers in order to develop everyone's skills and employability and meet business challenges. Actions to develop the managerial culture have also been taken to empower managers in their role as manager-coaches, to support team development and to improve collective performance.

TotalEnergies launched in 2024 *Care Together by TotalEnergies*. This program foresees a social standards for all employees worldwide, and is part of the Company's drive to develop a culture that fosters well-being, helping each and every one of its employees to maintain their balance in a safe working environment.

To promote a just transition and support TotalEnergies' employees at every stage of the Company's transformation to new energies, the Transforming with our people program was launched in 2022. This program includes not only the implementation of listening, informing and training measures, but also an upskilling and reskilling initiative, and the implementation of a skills map in order to build bridges between current jobs and the jobs of renewables & electricity, and to target key skills.

#### A DIVERSE AND INCLUSIVE COMPANY CULTURE

The diversity of its employees and management is crucial to the Company's competitiveness, appeal and capacity for innovation. TotalEnergies promotes an inclusive corporate culture, at the highest level by the Company Diversity and Inclusion Council, which is chaired by a member of the Executive Committee.

TotalEnergies intends to propose an inclusive working environment to create the collective conditions allowing everyone, whoever they are, to assert their personality, their ideas and their energy to bring the best of themselves to the common project and promote the development of everyone's potential. The variety of opinions and career paths yield both innovative solutions and new opportunities. Thanks to its motivated, enterprising workforce, the Company can carry out ambitious projects and provide every employee with the opportunity to give meaning to their work and find professional fulfillment. With nearly 170 nationalities

represented in its workforce, a presence in about 120 countries and more than 740 professional skills, the Company boasts genuine human potential.

In order to continue the existing momentum, the Diversity roadmap, sets out the targets on gender balance and internationalizing management bodies and senior management:

- 30% of women in the Executive Committee (25% in 2023),
- 30% of women in the G70<sup>(3)</sup> (33.8% in 2023),
- 30% of female senior executives (28.3% in 2023),
- 30% of female senior managers (25.1% in 2023),
- 45% of non-French nationals senior executives (37.7% in 2023),
- 40% of non-French nationals senior managers (36.3% in 2023).

(1) Excluding Hutchinson.

(2) Benchmark established by IPSOS of companies with over 10,000 employees worldwide

(3) Senior executives with the most important responsibilities. Together with the Executive Committee, they form part of the Company's management bodies within the meaning of point 8.1 of the AFEP-MEDEF Code.

The Company has a long-standing commitment to promoting equal opportunity, diversity and inclusion, which constitute, for everyone, a source of development where only expertise and talent count. In 2018, the Company decided to adhere to the Global Business and Disability Network Charter of the International Labour Organization (ILO) and is gradually implementing these principles in its subsidiaries. In France,

## 1.7.2 Our integrated multi-energy model

TotalEnergies' model of value creation is based on integration across the energy value chain, from exploration and production of oil, gas and electricity to energy distribution to the end customer, and including refining, liquefaction, petrochemicals, trading, and energy transportation and storage.

This integrated business model enables the Company to capitalize on synergies among the various businesses while responding to volatility in feed stock prices. Thanks to this business model, the Company's Upstream activities, which are more dependent on the price of oil, can complement its Downstream activities, which – at the bottom of the cycle – enable the Company to generate value-added untapped by the Upstream part of the business. With this integration of its operations across the entire value chain, the Company can manage the bottom of the cycle more effectively and capture margins when the market improves.

## 1.7.3 Our operational excellence

Energy is an industrial sector that demands state-of-the-art know-how and complex facilities that are both flexible and reliable.

### ACKNOWLEDGED TECHNICAL EXPERTISE

Thanks to the technical expertise wielded by the Company's women and men and their ability to manage large-scale projects, TotalEnergies has been able to forge trust-based partnerships with the world's primary producing countries and global consumers. The Company's expertise allows it to provide convincing support to its customers and partners in

### HIGH-PERFORMANCE INDUSTRIAL STREAMLINED ASSETS

TotalEnergies boasts streamlined, high-performance industrial assets portfolio that enable its resilience in its traditional businesses. Moreover, the flexibility of those assets allows the Company to adapt to changing markets. TotalEnergies is one of the world's top 10 integrated producers<sup>(1)</sup>. Its refining and petrochemicals operations are structured around six major integrated complexes (Port Arthur in the United States, Normandy and Antwerp in Europe, Jubail and Qatar in the Middle East and Daesan in South Korea), which provide opportunities for synergies and enhance value creation between those two businesses. The Antwerp facility is the Company's largest refining and petrochemicals complex in Europe.

To meet a growing global demand and respond to market trends, the Company has upgraded and adapted its sites to focus production on higher-value-added products that meet the most stringent environmental standards. TotalEnergies has also invested in making its petrochemicals

TotalEnergies has been a signatory to the LGBT+ (lesbian, gay, bisexual and transgender) commitment charter since 2014. Created by an organization called *L'Autre Cercle*, the charter provides a framework for combating workplace discrimination in France based on an individual's sexual orientation or gender identity. To reaffirm its commitment to inclusion, TotalEnergies re-signed this Charter in 2023.

TotalEnergies is applying this integrated model to the new electricity and renewables businesses within Integrated Power in which the Company has positioned itself, as the second pillar of its growth, in association with the historic Oil & Gas pillar. The Company can leverage those businesses with the know-how and resources inherent in its business model, including a global brand and presence, technical expertise (e.g., in offshore operations and trading) and partnerships with governments and local communities.

Accelerating growth in electricity and renewables will strengthen TotalEnergies' model of value creation and diversify the Company's geographical risk profile. That transition enables to cement the sustainability and resilience of TotalEnergies' value creation model bolstering its ambition of getting to Net Zero (net zero emission).

even the most demanding fields, such as liquefied natural gas, electricity, offshore wind and renewables, deep offshore, refining and petrochemicals, where the Company has developed platforms that are among the industry's top performers.

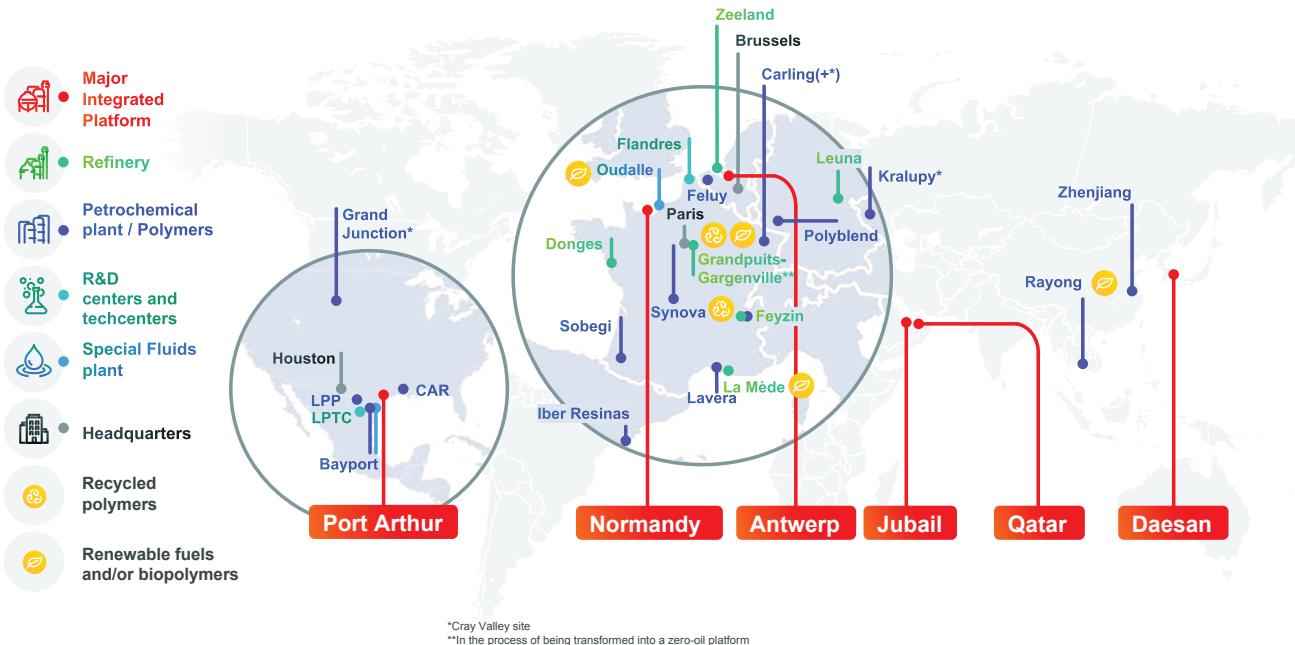
sites more flexible so they can use the most advantageous feedstocks. Most of those sites can now process both naphtha and ethane, to ensure a reliable, cost-competitive supply.

The La Mède biorefinery aims to meet the growing demand for biofuels. Operational as of July 2019, it has a capacity of 500 kt/y of HVO-type<sup>(2)</sup> biodiesel. The HVO technology the Company has selected is French, developed by IFP Energies nouvelles and marketed by its Axens subsidiary. It produces a sustainable, premium biofuel similar to fossil fuels that can be blended into regular fuels in any proportion and has no adverse effect on engines.

TotalEnergies is ramping up its renewable electricity generation capacity – solar, wind and hydroelectricity – to satisfy the surge in electric power needs responsibly.

(1) Based on publicly available information, production capacity at year-end 2021 (refer to point 2.5 of chapter 2).  
(2) Hydrotreated vegetable oil.

## Main sites of Refining & Chemicals at year-end 2023



As part of its strategy to support its Climate ambition to get to carbon neutrality (net zero emissions) by 2050, together with society, TotalEnergies plans to convert its refinery in Grandpuits, France, into a zero-crude platform. By 2024, following an investment totaling more than €500 million, the complex will focus on four new industrial activities: production of renewable diesel mainly for the aviation industry, production of bioplastics, plastics recycling and operation of two photovoltaic solar power plants.

Moreover, the Company is moving ahead with projects to convert its deep offshore oil production complexes into offshore wind power platforms, a strategy that is wholly aligned with its goal of profitable growth in renewables & electricity.

TotalEnergies can also take specific steps to support the conversion of its industrial sites through additional projects that can be conducted at the same time:

- a forward-looking project, led by the relevant segment based on an analysis of market trends, with the goal of modifying a given site's industrial infrastructure in order to restore a long-term competitiveness of the Company;
- a Voluntary Agreement for Economic and Social Development (CVDES), implemented to support the site and its ecosystem (subcontractors, stakeholders, etc.) during this period of change.

### 1.7.4 A global footprint, with local roots

#### A GLOBAL PRESENCE

TotalEnergies has an industrial and retail presence in about 120 countries spanning five continents.

Three regions in particular are the long-standing cornerstones of TotalEnergies' strategy: Europe, the Company's decision-making center; the Middle East, where TotalEnergies is recognized as a preferred partner among producing countries and national companies; and Africa, with its substantial oil and gas production and Company-branded service stations.

The deep geographic roots of the Company and its partnerships built over time are real strengths for accelerating its operational ambitions and moving into the new businesses of renewables and electricity. Over the

past few years, this historic presence has been supplemented by strong development on the American continent through our presence in Upstream in Brazil and LNG in the United States. In addition, TotalEnergies reinforced its presence on the American continent with major acquisitions in Brazil and the United States since 2022.

That global footprint yields the benefits that accrue from economies of scale for the Company's industrial, marketing and retail operations, and also enables a detailed knowledge of end markets, giving TotalEnergies a competitive advantage in addressing the manifold needs of its customers worldwide.

#### CUSTOMER PROXIMITY ACROSS THE WORLD

To cement its strong bond with its customers – both businesses and consumers – the Company strives to focus on close, effective and direct customer relationships. Beyond its sales of products and services, TotalEnergies aims to draw on its retail networks to make its Company-branded service stations "true community hubs," with a comprehensive array of services for users that encompass every form of energy and respect the environment.

In its renewables & electricity businesses, TotalEnergies intends to become integrated across the entire value chain and develop direct, personalized relationships with business and residential customers alike through the use of digital technology.

TotalEnergies is recognized for its know-how in customer service in France. In 2023, TotalEnergies' Consumer Services division won the "Best Customer Service of the year 2024" award, for the fifteenth year in the category Services to motorists<sup>(1)</sup>, which makes the Company the most awarded company of this competition. TotalEnergies Electricité et Gaz France finished on the podium of multi award-winners brands in the field

### SUSTAINABLE VALUE CREATION ALONGSIDE REGIONS AND COMMUNITIES

TotalEnergies' success in building and expanding partnerships worldwide can also be attributed to its strategy of generating value at the local level as part of its growth model. That commitment – carried out systematically and professionally – is a major competitive asset. Whether they target continued growth in LNG or renewable electricity generation, the partnerships with governments and local communities serve a critical function.

The Company maintains a comprehensive, integrated policy, rooted in dialogue with communities and public and private stakeholders, for

### THE ABILITY TO COPE WITH GEOPOLITICAL UNCERTAINTY

In the face of political and geopolitical uncertainty, including tensions sparked by war and conflict, TotalEnergies intends to conduct its operations by leveraging its skills and expertise to benefit each host country, in compliance with applicable legislation and all international

of Customer Experience in 2023 with the award Customer service of the year 2024 in the categories of energy supplier for individuals and energy supplier for businesses<sup>(2)</sup>, the Customer Relationship Podium (6<sup>th</sup> consecutive year), in the category of optimization of customer relationship.

### SUSTAINABLE VALUE CREATION ALONGSIDE REGIONS AND COMMUNITIES

supporting local growth and in-country value. It forges synergies among the various sources of value generation for host countries (employment, subcontracting, infrastructure, support for local industry, socioeconomic development projects, education, energy access, etc.) by capitalizing on the Company's industrial expertise. TotalEnergies intends to maintain this approach over the long term to ensure that its presence in these regions and the major projects it develops to create shared prosperity.

economic sanctions that may be in effect. The Company also ensures that the amount of capital invested in the most sensitive countries to remain at a level that limits its exposure in each country.

### 1.7.5 An ongoing dialogue with our stakeholders

In TotalEnergies' view, dialogue with its internal and external stakeholders is essential for the Company to conduct its business responsibly and integrate the long-term challenges of sustainable development in its strategy and policies.

This dialogue contributes to the identification of the main risks and impacts of the Company's activities, and more broadly to a better understanding of changing trends and the main societal expectations of each of the major categories of stakeholders. It is also a prerequisite to ensuring that the Company is firmly integrated in its host regions, as well as an effective tool for identifying ways to generate value at the local level.

TotalEnergies believes that transparency is an essential principle of action in building a trust-based relationship with its stakeholders and ensuring that the Company is on a path of continuous improvement.

Pending the adoption of an international, standardized extra-financial reporting framework, TotalEnergies is making every effort to report its performance on the basis of the various commonly used extra-financial reporting frameworks. As such, TotalEnergies refers to the Global Reporting Initiative (GRI) standards and those of the Sustainability Accounting Standards Board (SASB), for which detailed tables of correspondence are available on the TotalEnergies website. TotalEnergies' also includes in its reporting the World Economic Forum's core indicators<sup>(3)</sup> (refer to chapter 11). Furthermore, it also follows the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) for its climate reporting.

Wanting to provide the performance indicators to its stakeholders, TotalEnergies publishes additional information on its website on the pages dedicated to its sustainable development approach.

TotalEnergies has structured its dialogue processes with its stakeholders at different levels of the Company, through relays within the organization, requirements included in internal reference frameworks, the deployment of a methodology for conducting local dialogue and a dedicated attention to the professionalization of the teams responsible for fostering that dialogue.

Those measures are designed to develop a long-term, trust-based relationship founded on principles of respect, attentiveness, constructive dialogue, proactive engagement and transparency, consistent with the legitimate need for confidentiality as appropriate. They also ensure that stakeholder warnings or grievances to be gathered and addressed quickly and that potential controversial situations defused.

At a corporate level, each group of stakeholders (employees, employee representatives, customers, investors, shareholders and the financial sector, government officials, suppliers, academics, NGOs and civil society, and the media) has a single point of contact at the corporate level, responsible for responding to their requests, keeping them informed and maintaining an ongoing dialogue in formats appropriate to each concern.

Those stakeholder liaisons also provide advice and support to Company subsidiaries when needed. The One MAESTRO framework provides that subsidiaries should conduct a stakeholder mapping and engage in a structured, ongoing process of dialogue with stakeholders to keep them informed, hear and address their concerns and expectations, report on mitigation actions or compensation, measure their satisfaction and identify ways the subsidiaries can improve their community outreach. This commitment to local dialogue puts special emphasis on residents and communities located near Company facilities.

(1) Category Services to motorists - BVA study. Viséo CI.

(2) Categories energy supplier for individuals and business energy supplier - BVA study. Viséo CI.

(3) Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation, white paper, September 2020.

# 1.8 Our governance

## 1.8.1 A fully committed Board of Directors

### A MOBILIZED BOARD OF DIRECTORS SERVING THE COMPANY'S AMBITION

The Board of Directors defines TotalEnergies' strategic vision and supervises its implementation in accordance with the corporate interest of the Corporation, by taking into consideration the social and environmental challenges of its business activities.

It approves investments or divestments for amounts greater than 3% of shareholders' equity and it is informed of those greater than 1%. The Board may address any issue related to the Company's operations. It monitors the management of both financial and extra-financial matters and ensures the quality of the information provided to shareholders and financial markets.

#### Composition as of March 13, 2024



(a) Excluding the director representing employee shareholders and the directors representing employees, in accordance with the recommendations of the AFEP-MEDEF Code (point 10.3). For more information, refer to point 4.1.1.4 in chapter 4.

(b) Excluding the directors representing employees in accordance with Article L. 225-27-1 of the French Commercial Code and the director representing employee shareholders in accordance with Articles L. 225-23 and L. 22-10-5 of the French Commercial Code.

### Complementary skills to meet strategic challenges of the Company

The Governance and Ethics Committee conducts its work within the framework of a formal procedure so as to ensure that the directors' skills are complementary and their backgrounds are diverse, to maintain an overall proportion of independent members that is appropriate to the Corporation's governance structure and shareholder base, to allow for a balanced representation of women and men on the Board, and to promote

The Board of Directors is assisted by the four committees it has created: the Audit Committee, the Governance and Ethics Committee, the Compensation Committee, and the Strategy & CSR Committee. The duties of the Board of Directors and of the Committees are described in point 4.1.2 of chapter 4.

The composition of the Board of Directors reflects the diversity and complementary of experience, skills, nationalities and cultures that are critical to addressing the interests of all of the Company's shareholders and stakeholders.

### Skills of the directors

	Patrick Pouyanné	Jacques Aschenbroich	Marie-Christine Coisne-Roquette	Lise Croteau	Mark Cutifani	Romain Garcia-Ivaldi	Glenn Hubbard	Maria van der Hoeven	Anne-Marie Idrac	Emma de Jonge	Aneilise Lara	Jean Lemierre	Dierk Paskert	Angel Pobo	Total	Total (%)
Corporate management	✓		✓	✓	✓				✓		✓	✓		✓		9 64%
International	✓			✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		10 71%
Finance, accounting, economics	✓		✓	✓			✓				✓		✓			9 64%
Risk management				✓	✓			✓			✓	✓	✓			6 43%
Governance	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		12 86%
Climate - sustainable development	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓	✓		11 79%
Industry	✓		✓	✓	✓	✓				✓	✓		✓			9 64%
Energy	✓			✓			✓			✓	✓		✓	✓		9 64%
Public affairs, geopolitics	✓		✓		✓		✓	✓	✓		✓	✓	✓	✓		10 71%

The skills of directors are detailed in points 4.1.1.1 and 4.1.1.5 of chapter 4.

## A Board committed to meeting the Company's strategic priorities, with dedicated and involved directors

<b>9</b> meetings of the Board of Directors 97.6% attendance	<b>1</b> executive session chaired by the Lead Independent Director	<b>7</b> meetings of the Audit Committee 100% attendance	<b>5</b> meetings of the Governance and Ethics Committee 96% attendance	<b>3</b> meetings of the Compensation Committee 100% attendance	<b>3</b> meetings of the Strategy & CSR Committee 100% attendance
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### Main activities of the Board of Directors in 2023

<b>Major investments/divestments</b> <ul style="list-style-type: none"> <li>– Spin off project of Canadian oil sands</li> <li>– Approval of the sale of the Canadian subsidiary of TotalEnergies specializing in the production of oil sands to Suncor</li> <li>– Update on the sale project of station networks and fuel card activities in Germany and Benelux</li> <li>– Exercise of the purchase option on the entire capital of Total Eren</li> <li>– Update on the calls for tenders won by the Company in Brazil in the contractual areas of Sépia and Atapu</li> </ul>	<b>Strategy – CSR</b> <ul style="list-style-type: none"> <li>– The Company's 5-year plan</li> <li>– Shareholder return policy</li> <li>– Sustainability &amp; Climate – Progress Report 2023, reporting on the progress made in the implementation of the Corporation's ambition with respect to sustainable development and energy transition towards carbon neutrality and its related targets by 2030 and complementing this ambition</li> <li>– Strategic seminar</li> <li>– The Corporation's policy on gender equality and pay equity</li> <li>– Ethics and Compliance Policy and review of ethics and compliance activities in the Company</li> <li>– Update on relationships between TotalEnergies and Adani Group</li> </ul>
<b>Audit – Risks</b> <ul style="list-style-type: none"> <li>– Update on the 2022 internal audit and 2023 audit plan</li> <li>– Risk mapping</li> <li>– Cybersecurity risk</li> </ul>	<b>Compensation</b> <ul style="list-style-type: none"> <li>– Determination of the compensation for the Chairman and Chief Executive Officer and directors for the 2022 fiscal year</li> <li>– Compensation policy for the Chairman and Chief Executive Officer and directors for the 2023 fiscal year</li> <li>– 2023 performance share plan</li> <li>– Adoption of a clawback policy</li> <li>– Obligation to hold a higher number of shares for the Chairman and Chief Executive Officer and for members of the Executive Committee</li> <li>– 2023 share capital increase reserved for employees</li> </ul>
<b>Governance</b> <ul style="list-style-type: none"> <li>– Terms of mandate of directors and Committees members</li> <li>– Unified management form and renewal of the terms of office of Mr. Patrick Pouyanné</li> <li>– Succession plan</li> <li>– Proposal to be submitted to the Shareholders' Meeting on May 26, 2023 to eliminate double voting rights</li> <li>– Corporate sustainability reporting directive</li> <li>– 2024 work program for the Board of Directors</li> </ul>	

### A UNIFIED MANAGEMENT STRUCTURE, TAILORED TO THE COMPANY'S REQUIREMENTS

Management of the Corporation is assumed either by the Chairperson of the Board of Directors (who then holds the title of Chairman and Chief Executive Officer), or by another person appointed by the Board of Directors with the title of Chief Executive Officer. It is the responsibility of the Board of Directors to choose between these two forms of management under the majority rules described above.

At its meeting on December 16, 2015, the Board of Directors decided to reunify the positions of Chairperson and Chief Executive Officer of the Corporation as from December 19, 2015. Since that date, Mr. Pouyanné has held the position of Chairman and Chief Executive Officer of TotalEnergies SE. After his term of office as director was renewed for a three-year period at the Shareholders' Meeting on May 28, 2021, the Board of Directors reappointed Mr. Pouyanné as Chairman and Chief Executive Officer for the same period, expiring at the end of the 2024 Shareholders' Meeting called to approve the financial statements for fiscal year 2023.

The Board of Directors, at its meeting held on September 21, 2023, after having reaffirmed its support to the quality and the relevance of the strategy implemented, considered that it was highly desirable that Mr. Patrick Pouyanné, Chairman and Chief Executive Officer, continues to drive this strategy's deployment at the helm of the Company. On the proposal of the Governance and Ethics Committee, it therefore

unanimously decided to propose the renewal of the mandate of Mr. Patrick Pouyanné to the Shareholders' Meeting to be held on May, 24 2024. In the frame of the balanced governance implemented since 2015, it also unanimously decided to propose the renewal of the mandate of Mr. Jacques Aschenbroich, who has held the position of Lead Independent Director since May 2023.

#### Unified management form

The discussions held with the Governance and Ethics Committee in the best interests of the Corporation had led to a firm proposal to continue to combine the functions of Chairman and Chief Executive Officer. Indeed, this management form of the Corporation is considered to be the most appropriate for dealing with the challenges and specificities of the energy sector, which is facing major transformations. More than ever, this context requires agility of movement, which the unity of command reinforces, by giving the Chairman and Chief Executive Officer the power to act and increased representation of the Corporation in its strategic negotiations with States and partners of the Company.

#### Balance of power

The unity of the power to manage and represent the Corporation is also particularly well regulated by the Corporation's governance.

The balance of power is established through the quality, complementarity and independence of the members of the Board of Directors and its four Committees, as well as through the Articles of Association and the Board's Rules of procedure, which define the means and prerogatives of the Lead Independent Director, notably:

- in his relations with the Chairman and Chief Executive Officer: contribution to the agenda of Board meetings or the possibility of requesting a meeting of the Board of Directors and sharing opinions on major issues;
- in his contribution to the work of the Board of Directors: chairing meetings in the absence of the Chairman and Chief Executive Officer, or when the examination of a subject requires his abstention, evaluation and monitoring of the functioning of the Board, prevention of conflicts of interest, and dialogue with the directors and Committee Chairpersons;
- in his relations with shareholders: the possibility, with the approval of the Chairman and Chief Executive Officer, of meeting with them on corporate governance issues, a practice that has already been used on several occasions.

The balance of power within the governance bodies, in addition to the independence of its members, is further strengthened by the full

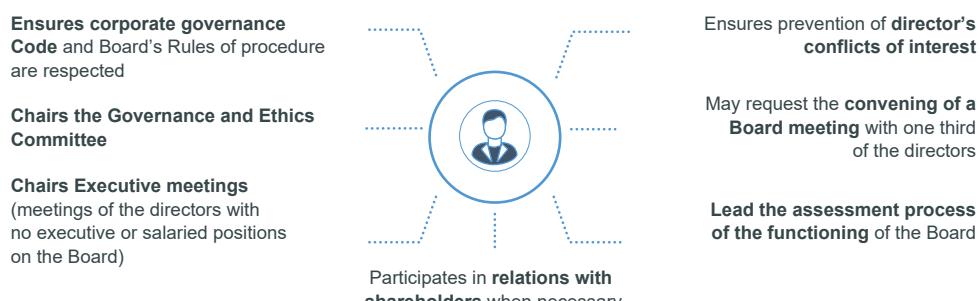
## THE LEAD INDEPENDENT DIRECTOR, REFLECTING A BALANCED DISTRIBUTION OF POWER

Listening to investors and stakeholders, the Board of Directors pays special attention to the balance of power within the Company. It is in this context that the Board of Directors in 2015 amended the provisions of its rules of procedure to provide for the appointment of a Lead Independent Director in the event that the positions of Chairman of the Board of Directors and Chief Executive Officer are combined.

The Lead Independent Director's duties, resources and prerogatives which are described in the Rules of Procedure of the Board are extensive:

- the Chairman and Chief Executive Officer and the Lead Independent Director are the shareholders' dedicated contacts on issues that fall within the remit of the Board of Directors. In his relations with shareholders, the Lead Independent Director has the possibility, with the approval of the Chairman and Chief Executive Officer, to meet with shareholders on corporate governance issues, a practice that has already been used on several occasions;
- in his relations with the Chairman and Chief Executive Officer, the Lead Independent Director contributes to the agenda of Board

### The duties of the Lead Independent Director



## A COMPENSATION POLICY OF THE EXECUTIVE DIRECTOR ALIGNED WITH THE COMPANY'S STRATEGIC TARGETS

The compensation awarded to the Chairman and Chief Executive Officer is indexed to key performance indicators used to measure the success of the Company's strategy.

In order to determine a compensation aligned with the Company's performance, the variable portion of the Chairman and Chief Executive Officer's compensation takes into account both quantifiable targets (financial, Safety and GHG emission evolution parameters) and qualitative criteria (personal contribution).

involvement of the directors, whose participation in the work of the Board and its Committees is exemplary. The diversity of their skills and expertise also enables the Chairman and Chief Executive Officer to benefit from a wide range of contributions.

In addition, the Board's rules of procedure provide that any investment or divestment transactions contemplated by the Company involving amounts in excess of 3% of shareholders' equity must be approved by the Board, which is also kept informed of all significant events concerning the Corporation's operations, in particular investments and divestments in excess of 1% of shareholders' equity.

Lastly, the Corporation's Articles of Association provide the necessary guarantees of compliance with good governance practices in the context of a unified management structure. In particular, they provide that the Board may be convened by any means, including orally, or even at short notice depending on the urgency of the matter, by the Chairman or by one third of its members, including the Lead Independent Director, at any time and as often as the interests of the Corporation require.

meetings and has the possibility to request a meeting of the Board of Directors and to share opinions on major issues;

- in his contribution to the work of the Board of Directors, the Lead Independent Director chairs meetings in the absence of the Chairman and Chief Executive Officer, or when the examination of a subject requires his abstention. He is in charge of the assessment and monitoring of the functioning of the Board, the prevention of conflicts of interest, and dialogue with the directors and Committee Chairpersons.

Since 2016, the Lead Independent Director has organized executive sessions with the directors who do not hold executive or salaried positions on the Board of Directors, during which the directors may discuss the Company's strategic challenges and working practices. The directors are also in regular contact with the members of the management team, including members of the Executive Committee during Board meetings and operational managers during Company site visits. Through those interactions between directors and managers, the directors gain a practical understanding of the Company's activities.

Conscious of the importance of climate challenges, the Board of Directors decided, starting in 2019, to change the criteria for determining the variable portion of the Chairman and Chief Executive Officer's compensation, in particular by integrating a quantifiable criterion related to the change in GHG emissions (Scope 1+2) from operated facilities. This criterion supplements those introduced in 2016 to better take into account the achievements of Corporate Social Responsibility (CSR) and HSE targets of the Company.

The Board of Directors has a proactive approach to this issue. Refer to point 4.3. of chapter 4.

## 1.8.2 An Executive Committee entrusted with implementing the Company's transition strategy

The Executive Committee, under the responsibility of the Chairman and Chief Executive Officer, is the decision-making body of the Company.

It implements the strategic vision defined by the Board of Directors and authorizes the corresponding capital expenditures, subject to the Board of Directors' approval for investments exceeding 3% of shareholders'

equity and any significant transaction outside the scope of the Company's stated strategy, and subject to the Board's review for investments involving amounts exceeding 1% of shareholders' equity.

The Executive Committee meets as often as necessary and generally twice a month.

## 1.8.3 An operational structure built around the Company's business segments

As of December 31, 2023, the Company's organization was based on five business segments:

- an Exploration & Production segment that encompasses the activities of exploration and production of oil and natural gas, conducted in about 50 countries;
- an Integrated LNG segment covering the integrated gas chain (including upstream and midstream LNG activities) as well as biogas, hydrogen and gas trading activities;
- an Integrated Power segment covering electricity generation, storage, electricity trading and B2B-B2C distribution of gas and electricity;
- a Refining & Chemicals segment constituting a major industrial hub comprising the activities of refining, petrochemicals and specialty chemicals. This segment also includes the activities of oil supply, trading and marine shipping;
- a Marketing & Services segment including the global activities of supply and marketing in the field of petroleum products.

The Corporate segment includes the functional and financial activities of a holding company. The Holding's corporate entities include in particular Finance, Security, People & Social Engagement, Communications and Strategy & Sustainability divisions.

TotalEnergies SE is the parent company. It acts as a holding company and drives the Company's strategy.

The Company's operations are conducted through subsidiaries that are directly or indirectly owned by TotalEnergies SE and through interests in joint ventures that are not necessarily controlled by TotalEnergies. TotalEnergies SE has three secondary establishments in France, located in Lacq, Pau and Paris.

The scope of consolidation of TotalEnergies SE as of December 31, 2023, consisted of 1,367 companies, including 192 equity companies. The principles of consolidation are described in Note 1.1 to the Consolidated Financial Statements and the list of companies included in the scope of consolidation can be found in Note 18 to the Consolidated Financial Statements (refer to point 8.7 of chapter 8).

The situation of the direct subsidiaries and shareholdings of TotalEnergies SE, and in particular those with a gross value exceeding 1% of the Corporation's share capital, is shown in the table of subsidiaries and interests in point 10.4.1 of chapter 10.

TotalEnergies holds interests in a limited number of companies that issue financial instruments in France or abroad or whose financial instruments are listed in France or abroad. These companies are mainly the Company's financing vehicles (TotalEnergies Capital, TotalEnergies Capital International, TotalEnergies Capital Canada Ltd) or the operational subsidiaries in its business segments, in particular in Africa, such as TotalEnergies EP Gabon<sup>(1)</sup>. TotalEnergies also holds minority interests in other companies. The changes in the composition of the Company in 2023 are explained in Note 2 to the Consolidated Financial Statements (refer to point 8.7 of chapter 8).

During fiscal year 2023, after exercising its option, TotalEnergies SE, bought the outstanding shares of Total Eren Holding bringing its direct interest to 100%, as well as an additional interest of 24.90% of Total Eren bringing its direct interest to 30.63% and its indirect interest to 100%. TotalEnergies SE did not acquire any other interest in companies with their registered office in France representing more than one twentieth, one tenth, one fifth, one third or one half of the capital of these companies or obtained control of such companies.

Corporate name: TotalEnergies SE

Headquarters: 2, place Jean Millier, La Défense 6, 92400 Courbevoie, France

Registered in Nanterre: RCS 542 051 180

LEI (Legal Entity Identifier): 529900S21EQ1BO4ESM68

EC Registration Number: FR 59 542 051 180

Date of incorporation: March 28, 1924

Term of the Corporation: extended for 99 years from March 22, 2000

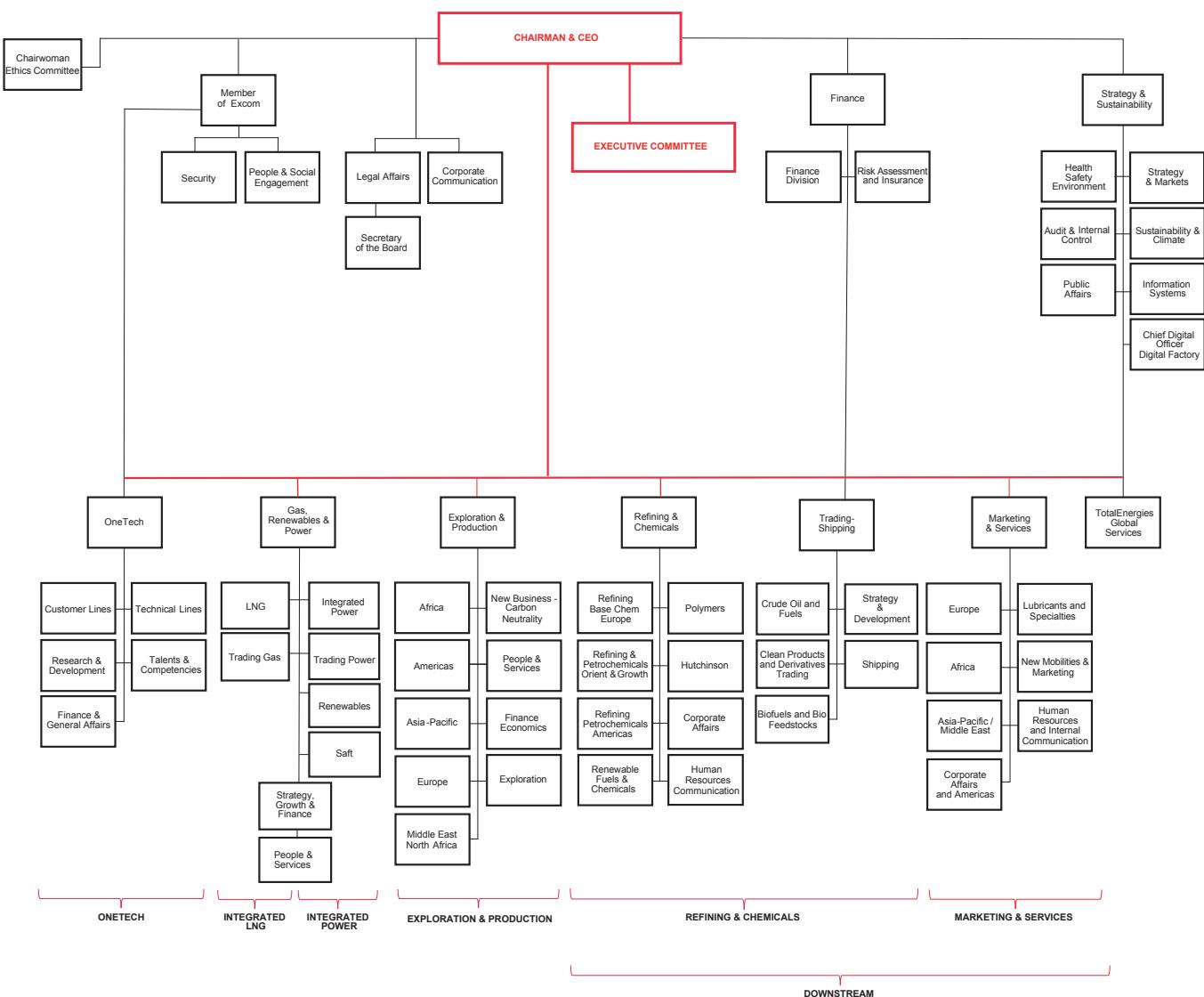
Fiscal year: from January 1 to December 31 of each year

APE Code (NAF): 7010Z

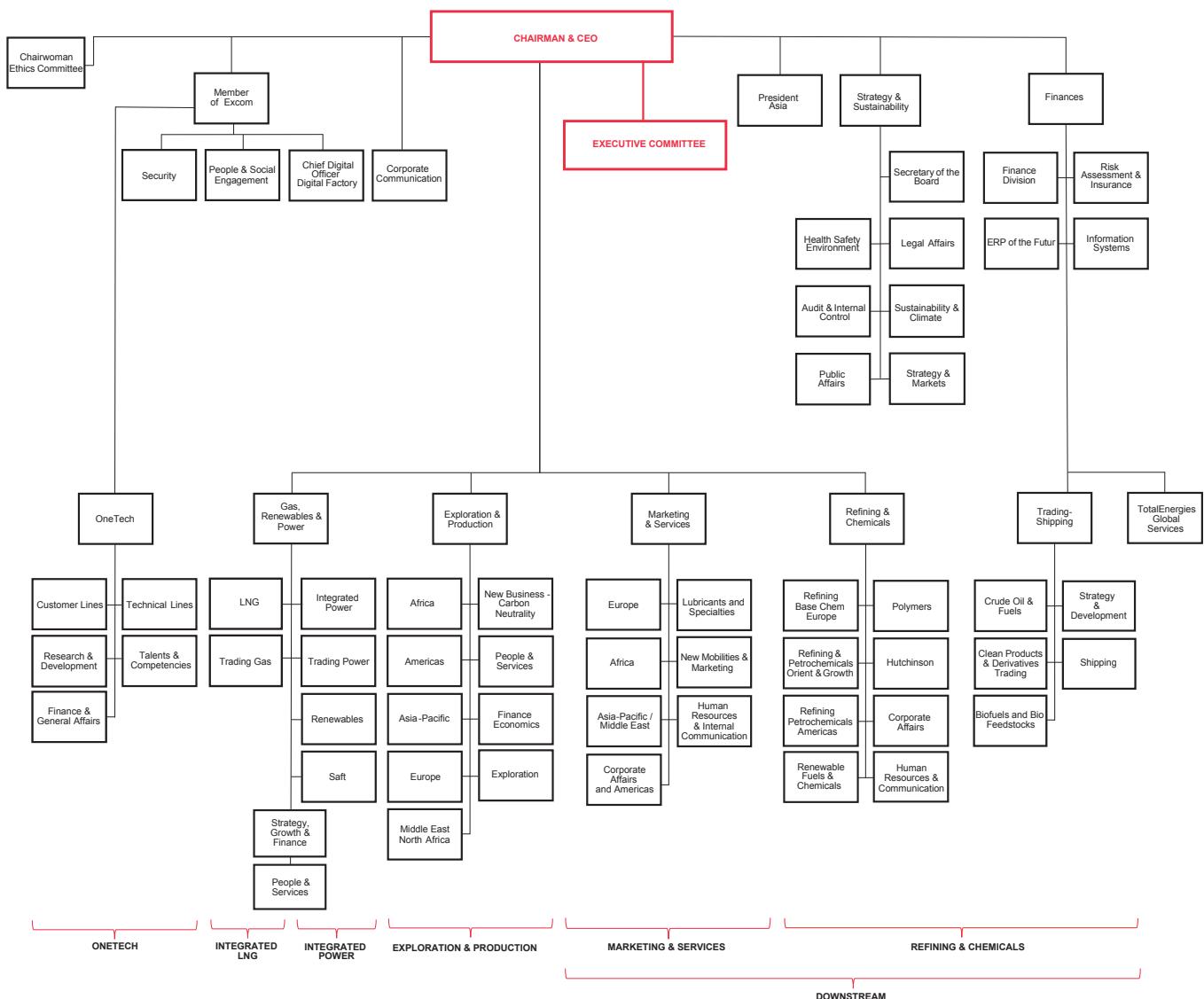
[totalenergies.com](http://totalenergies.com)

<sup>(1)</sup> TotalEnergies EP Gabon is a company under Gabonese law, listed on Euronext Paris. TotalEnergies holds 58.28%, the Republic of Gabon holds 25% and the public holds 16.72%.

## Organisation chart as of December 31, 2023



## Organisation chart as of February 1, 2024



### 1.8.4 Risk management system

TotalEnergies implements a comprehensive risk management system that is an essential factor in the deployment of its strategy. This system relies on an organization at Company level and in the business segments, on a continuous process of identifying and analyzing risks in order to determine those that could prevent the achievement of the goals as well as the analysis of management systems.

The Executive Committee is responsible for identifying and analyzing internal and external risks that could impact the achievement of the Company's objectives. For this purpose, it is assisted by the TotalEnergies Risk Management Committee (TRMC), which makes sure that the Company has mapped the risks to which it is exposed and that efficient risk management systems are suitable.

The TRMC relies notably on the work done by the business segments and functional divisions. The business segments are responsible for defining and implementing a risk management policy suited to their

specific activities. However, the handling of certain cross-functional risks is more closely coordinated by the respective functional divisions.

Regarding commitments, General Management exercises operational control through the Executive Committee's approval of investments and expenses that exceed defined thresholds. The Risk Committee (Corisk) is tasked with reviewing these projects in advance, and in particular, with verifying the analysis of the various associated risks.

The Board of Directors' Audit Committee is responsible for monitoring the effectiveness of the risk management systems as well as of the internal audit. The audit plan, based on an analysis of risks and the risk management systems, is submitted annually to the Executive Committee and the Audit Committee.

For a detailed description of how the internal control and risk management procedures are structured, refer to point 3.3 of chapter 3.

## 1.9 Our financial performance

### 1.9.1 Overview of the 2023 fiscal year

In an uncertain environment, TotalEnergies' balanced transition strategy, which combines growth in Oil & Gas, in particular in LNG, and Integrated Power, delivered strong results in 2023, in line with its objectives.

In 2023, TotalEnergies reported adjusted net income of \$23.2 billion and cash flow of \$35.9 billion. 2023 IFRS net income was \$21.4 billion (€19.8 billion), up 4% year-on-year. This year the Company once again achieved top tier 20% return on equity and 19% return on average capital employed. TotalEnergies invested \$16.8 billion, including 35% for low-carbon energies mainly in power. Ordinary dividends increased by 7.1% and the Company completed \$9 billion in buybacks of its shares, of which \$1.5 billion was linked to the Canadian asset disposals. The Company further reduced net debt, achieving 5% gearing<sup>(1)</sup>, including a \$5 billion positive contribution of working capital. Payout increased to an attractive 46.0% in 2023. In addition, TotalEnergies ensured balanced profit sharing with its employees around the world and in particular in France (average 5% wage increase<sup>(2)</sup>, value sharing bonus<sup>(3)</sup> of at least €2k and support for employees in their energy transition<sup>(4)</sup>) and with its customers through rebates (€1.99 per liter price cap and renewal of the rebate on gas and power prices to private customers).

Total production increased 2% year-on-year (excluding Novatek), driven by strong LNG production growth of 9%, and Exploration & Production generated strong adjusted net operating income of \$10.9 billion and cash flow of \$19.1 billion. TotalEnergies' exploration successes continued in Namibia, Suriname, and Nigeria. The Company reports a reserves replacement ratio of 141% in 2023 and a proved reserves life index of 12 years as of December 31, demonstrating the strength of its project portfolio.

Integrated LNG segment generated annual adjusted net operating income of \$6.2 billion and cash flow of \$7.3 billion, which is lower than the exceptional results in 2022 but higher than 2021 thanks to growth in its portfolio.

Cash flow from Integrated Power segment totaled \$2.2 billion, which is more than double compared to 2022. Integrated Power achieved an ROACE<sup>(5)</sup> of 9.8% in 2023, demonstrating the relevance of the Company's integrated business model. TotalEnergies announced several acquisitions, further enhancing its Integrated Power business model in the US and in Europe: 1.5 GW of flexible CCGT capacity in Texas and a renewable energy aggregator (9 GW) and a battery storage developer (2 GW) in Germany.

Full-year 2023 adjusted net operating income of \$6.1 billion and cash flow of \$8.2 billion were supported by good availability in Europe and still attractive refining margins, although lower compared to historic levels in 2022.

In view of the structural cash flow growth and share buybacks executed in 2023 (5.9% of the share capital), the Board of Directors will propose at the Shareholders' Meeting to be held on May 24, 2024, the distribution of a final 2023 dividend of €0.79/share, resulting in an increase of 7.1% for the ordinary 2023 dividend, compared to the ordinary 2022 dividend, to €3.01/share. Furthermore, the Board of Directors confirmed a shareholder return policy for 2024 targeting >40% CFFO payout, which will combine an increase in interim dividends of 6.8% to €0.79/share and \$2 billion of share buybacks in the first quarter of 2024, which will remain the base level for quarterly buybacks in the current environment.

(1) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

(2) Applicable to employees covered by the Common Corpus of Employee Relations Agreements (SSC) i.e., around 14,000 employees in France.

(3) Applicable to employees covered by the Common Corpus of Employee Relations Agreements (SSC) i.e., around 14,000 employees in France.

(4) Applicable to employees of all fully owned companies in France and of companies in which TotalEnergies holds more than 50% in France, subject to agreement by their governing bodies.

(5) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

### 1.9.1.1 Key figures from TotalEnergies' consolidated financial statements<sup>(1)</sup>

Consolidated data in millions of dollars, except for effective tax rate, earnings per share, number of shares and percentages.

(in M\$)	2023	2022	2021
Adjusted EBITDA <sup>(a)</sup>	50,030	71,578	42,302
Adjusted net operating income from business segments	25,107	38,475	20,209
Exploration & Production	10,942	17,479	10,439
Integrated LNG	6,200	11,169	5,591
Integrated Power	1,853	975	652
Refining & Chemicals	4,654	7,302	1,909
Marketing & Services	1,458	1,550	1,618
Contribution of equity affiliates to adjusted net income	3,000	8,254	4,190
Effective tax rate <sup>(b)</sup>	37.5%	40.9%	37.9%
Adjusted net income (TotalEnergies share) <sup>(a)</sup>	23,176	36,197	18,060
Adjusted fully diluted earnings per share (\$) <sup>(c)</sup>	9.40	13.94	6.68
Adjusted fully diluted earnings per share (€) <sup>(d)</sup>	8.70	13.24	5.65
Fully diluted weighted-average shares ( <i>millions</i> )	2,434	2,572	2,647
Net income (TotalEnergies share)	21,384	20,526	16,032
Organic investments <sup>(a)</sup>	18,126	11,852	12,675
Net acquisitions <sup>(a)</sup>	(1,289)	4,451	632
Net investments <sup>(a)</sup>	16,837	16,303	13,307
Cash flow from operations excluding working capital (CFFO) <sup>(a)</sup>	35,946	45,729	29,140
Debt adjusted cash flow (DACF) <sup>(a)</sup>	36,451	47,025	30,660
Cash flow from operating activities	40,679	47,367	30,410

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

(b) Effective tax rate = (tax on adjusted net operating income) / (adjusted net operating income – income from equity affiliates – dividends received from investments – impairment of goodwill + tax on adjusted net operating income).

(c) In accordance with IFRS rules, adjusted fully diluted earnings per share is calculated from the adjusted net income less the interest on the perpetual subordinated bonds.

(d) Average €-\$ exchange rate: 1.0813 for 2023.

### 1.9.1.2 Environment - liquids and gas price realizations, refining margins

	2023	2022	2021
Brent (\$/b)	82.6	101.3	70.9
Henry Hub (\$/Mbtu) <sup>(a)</sup>	2.7	6.5	3.7
NBP (\$/Mbtu) <sup>(b)</sup>	12.6	32.4	16.4
JKM (\$/Mbtu) <sup>(c)</sup>	13.8	33.8	18.5
Average price of liquids (\$/b) <sup>(d)(e)</sup>	76.2	91.3	65.0
Consolidated subsidiaries			
Average price of gas (\$/Mbtu) <sup>(d)(e)</sup>	6.64	13.15	6.60
Consolidated subsidiaries			
Average price of LNG (\$/Mbtu) <sup>(d)(f)</sup>	10.76	15.90	8.80
Consolidated subsidiaries and equity affiliates			
Variable cost margin – Refining Europe, MCV (\$/t) <sup>(d)(g)</sup>	69.3	94.1	10.5

(a) HH (Henry Hub), a pipeline located in Erath, Louisiana, USA, serves as the official delivery point for New York Mercantile Exchange (NYMEX) futures contracts. It is widely used as a price reference for natural gas markets in North America. The hub is operated by Sabine Pipe Line LLC and is connected to four intrastate and nine interstate pipelines, including the Transcontinental, Acadian and Sabine pipelines.

(b) NBP (National Balancing Point) is a virtual natural gas trading point in the United Kingdom for transferring rights in respect of physical gas and which is widely used as a price benchmark for the natural gas markets in Europe. NBP is operated by National Grid Gas plc, the operator of the UK transmission network.

(c) JKM (Japan-Korea Marker) measures spot LNG trading prices in Asia. It is based on the prices reported in spot market trades and/or bids and offers of LNG collected after the close of the Asian trading day at 16:30 Singapore time.

(d) Does not include oil, gas and LNG trading activities, respectively.

(e) Sales in \$ / Sales in volume for consolidated affiliates.

(f) Sales in \$ / Sales in volume for consolidated and equity affiliates.

(g) This indicator represents TotalEnergies' average margin on variable cost for refining in Europe (equal to the difference between TotalEnergies European refined product sales and crude oil purchases with associated variable costs divided by volumes refined in tons).

(1) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

### 1.9.1.3 Production

Hydrocarbon production <sup>(a)</sup>	2023	2022	2021
Hydrocarbon production (kboe/d)	2,483	2,765	2,819
Oil (including bitumen) (kb/d)	1,388	1,307	1,274
Gas (including Condensates and associated NGL) (kboe/d)	1,095	1,458	1,545
Hydrocarbon production (kboe/d)	2,483	2,765	2,819
Liquids (kb/d)	1,550	1,519	1,500
Gas (Mcf/d)	5,028	6,759	7,203
Hydrocarbon production excluding Novatek (kboe/d)	2,483	2,437	2,508

(a) Company production = E&P production + Integrated LNG production.

Hydrocarbon production was 2,483 thousand barrels of oil equivalent per day in 2023, up 2% year-on-year (excluding Novatek) and was comprised of:

- +4% due to start-ups and ramp-ups, including Johan Sverdrup Phase 2 in Norway, Mero 1 in Brazil, Ikike in Nigeria, Block 10 in Oman, and Absheron in Azerbaijan,
- +1% due to improved security conditions in Nigeria and Libya,
- +1% due to lower planned maintenance and unplanned shutdowns, including at the Kashagan field in Kazakhstan,

- -1% portfolio effect related to the end of the Bongkot operating licenses in Thailand, exit from Termokarstovoye in Russia, disposal of the Canadian oil sands assets and effective withdrawal from Myanmar, partially offset by the entries in the producing fields of SARB Umm Lulu in the United Arab Emirates, of Sépia and Atapu in Brazil, of Ratawi in Iraq, and the increased participation in the Waha concessions in Libya,

- -3% due to the natural field declines.

### 1.9.1.4 Analysis of business segments

#### Exploration & Production

Hydrocarbon production	2023	2022	2021
EP (kboe/d)	2,034	2,296	2,290
Liquids (kb/d)	1,492	1,466	1,437
Gas (Mcf/d)	2,900	4,492	4,662
EP excluding Novatek (kboe/d)	2,034	2,025	2,026

Results (in M\$)	2023	2022	2021
Adjusted net operating income	10,942	17,479	10,439
<i>including adjusted income from equity affiliates</i>	539	1,335	1,230
Effective tax rate <sup>(a)</sup>	50.0%	50.8%	45.2%
Organic investments <sup>(b)</sup>	10,232	7,507	6,690
Net acquisitions <sup>(b)</sup>	(2,706)	2,520	(167)
Net investments <sup>(b)</sup>	7,526	10,027	6,523
Cash flow from operations excluding working capital (CFFO) <sup>(b)</sup>	19,126	26,080	18,717
Cash flow from operating activities	18,531	27,654	22,009

(a) Effective tax rate = (tax on adjusted net operating income) / (adjusted net operating income – income from equity affiliates – dividends received from investments – impairment of goodwill + tax on adjusted net operating income).

(b) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

Exploration & Production adjusted net operating income was \$10,942 million in 2023, down 37% year-on-year, mainly due to lower oil and gas prices.

Cash flow from operations excluding working capital (CFFO) was \$19,126 million in 2023, down 27% year-on-year, mainly due to lower oil and gas prices.

#### Integrated LNG

Hydrocarbon production for LNG	2023	2022	2021
Integrated LNG (kboe/d)	449	469	529
Liquids (kb/d)	58	53	63
Gas (Mcf/d)	2,128	2,267	2,541
Integrated LNG excluding Novatek (kboe/d)	449	413	483

Liquefied Natural Gas (in Mt)	2023	2022	2021
Overall LNG sales	44.3	48.1	42.0
<i>incl. Sales from equity production*</i>	15.2	17.0	17.4
<i>incl. Sales by TotalEnergies from equity production and third party purchases</i>	40.1	42.8	35.1

\* The Company's equity production may be sold by TotalEnergies or by the joint ventures.

For full-year 2023, hydrocarbon production for LNG (excluding Novatek) was up 9% compared to 2022 due to increased supply to NLNG in Nigeria and higher availability of Ichthys LNG in Australia and Snøhvit in Norway.

For full-year 2023, LNG sales were down 8% compared to 2022, mainly due to lower spot volumes related to lower demand in Europe as a result of a milder winter weather and high inventories.

Results (in M\$)	2023	2022	2021
Adjusted net operating income	6,200	11,169	5,591
<i>including adjusted income from equity affiliates</i>	2,103	5,637	2,659
Organic investments <sup>(a)</sup>	2,063	519	2,061
Net acquisitions <sup>(a)</sup>	1,096	(47)	(910)
Net investments <sup>(a)</sup>	3,159	472	1,151
Cash flow from operations excluding working capital (CFFO) <sup>(a)</sup>	7,293	9,784	5,404
Cash flow from operating activities	8,442	9,604	(2,765)

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

For full-year 2023, Integrated LNG adjusted net operating income was \$6,200 million, down 37% year-on-year (excluding Novatek), mainly due to the exceptional environment in 2022 linked to the energy crisis in Europe resulting from the Russia-Ukraine conflict.

Cash flow from operations excluding working capital (CFFO) for Integrated LNG was \$7,293 million in 2023 and was down 25% year-on-year (excluding Novatek), mainly due to lower LNG prices that were partially offset by high margins captured in 2022 on LNG cargoes delivered in 2023.

## Integrated Power

	2023	2022	2021
<b>Net power production (TWh)<sup>(a)</sup></b>	<b>33.4</b>	<b>33.2</b>	<b>21.2</b>
<i>of which power production from renewables</i>	18.9	10.4	6.8
<i>of which power production from gas flexible capacities</i>	14.5	22.8	14.4
<b>Portfolio of power generation net installed capacity (GW)<sup>(b)</sup></b>	<b>17.3</b>	<b>12.0</b>	<b>9.2</b>
<i>of which renewables</i>	13.0	7.7	5.1
<i>of which gas flexible capacities</i>	4.3	4.3	4.1
<b>Portfolio of renewable power generation gross capacity (GW)<sup>(b)(c)</sup></b>	<b>80.1</b>	<b>69.0</b>	<b>43.0</b>
<i>of which installed capacity</i>	22.4	16.8	10.3
Clients power - BtB and BtC (Million) <sup>(b)</sup>	5.9	6.1	6.1
Clients gas - BtB and BtC (Million) <sup>(b)</sup>	2.8	2.7	2.7
Sales power - BtB and BtC (TWh)	52.1	55.3	56.6
Sales gas - BtB and BtC (TWh)	100.9	96.3	101.2

(a) Solar, wind, hydroelectric and gas flexible capacities.

(b) End of period data.

(c) Includes 20% of Adani Green Energy Ltd's gross capacity effective first quarter 2021, includes 50% of Clearway Energy Group's gross capacity effective third quarter 2022 and 49% of Casa dos Ventos' gross capacity effective first quarter 2023.

For the full-year 2023, net power production was 33.4 TWh, up 1% year-on-year as lower generation from flexible capacity, whose utilization rate was exceptional in 2022 due to the energy crisis in Europe, was more than compensated by growing electricity generation from renewables that is related to the integration of 100% of Total Eren and contribution from Clearway in the United States and Casa dos Ventos in Brazil.

Gross installed renewable power generation capacity reached more than 22 GW at year-end 2023. Gross installed renewable capacity grew by nearly 6 GW in 2023.

Results (in M\$)	2023	2022	2021
Adjusted net operating income	1,853	975	652
<i>including adjusted income from equity affiliates</i>	137	201	37
Organic investments <sup>(a)</sup>	2,582	1,385	1,280
Net acquisitions <sup>(a)</sup>	2,363	2,136	2,075
Net investments <sup>(a)</sup>	4,945	3,521	3,355
Cash flow from operations excluding working capital (CFFO) <sup>(a)</sup>	2,152	970	720
Cash flow from operating activities	3,573	66	3,592

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

Integrated Power adjusted net operating income was \$1,853 million in 2023, up 90% year-on-year, demonstrating the performance of its integrated business model along the power value chain: renewables, CCGT, trading, and B2B & B2C marketing.

#### Downstream (Refining & Chemicals and Marketing & Services)

Results (in M\$)	2023	2022	2021
Adjusted net operating income	6,112	8,852	3,527
Organic investments <sup>(a)</sup>	3,105	2,354	2,576
Net acquisitions <sup>(a)</sup>	(2,042)	(159)	(368)
Net investments <sup>(a)</sup>	1,063	2,195	2,208
Cash flow from operations excluding working capital (CFFO) <sup>(a)</sup>	8,171	10,069	5,502
Cash flow from operating activities	9,914	11,787	8,806

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

#### Refining & Chemicals

Refinery throughput and utilization rate <sup>(a)</sup>	2023	2022	2021
Total refinery throughput (kb/d)	1,436	1,472	1,180
France	414	348	190
Rest of Europe	592	623	568
Rest of world	431	501	423
Utilization rate based on crude only <sup>(b)</sup>	81%	82%	64%

(a) Includes refineries in Africa that are reported in the Marketing & Services segment.

(b) Based on distillation capacity at the beginning of the year.

Petrochemicals production and utilization rate	2023	2022	2021
Monomers (kt)	4,896	5,005	5,775
Polymers (kt)	4,130	4,549	4,938
Steam crackers utilization rate <sup>**</sup>	69%	76%	90%

\* Olefins.  
\*\* Based on olefins production from steam crackers and their treatment capacity at the start of the year.

Refining throughput was down 2% year-on-year in 2023 mainly due to a slightly lower refinery utilization rate reflecting the major turnaround schedule of the year.

Petrochemicals production was down 2% year-on-year in 2023 for monomers and 9% for polymers for the same reasons, with monomers

partially compensated by the ramp up of ethane cracker unit in Port Arthur in the United States.

Cash flow from operations excluding working capital (CFFO) was \$5,853 million in full-year 2023 down 24% year-on-year for the same reasons as above, although partially offset by dividends received from equity affiliates.

#### Marketing & Services

Sales (in kb/d)*	2023	2022	2021
Total Marketing & Services sales	1,375	1,468	1,503
Europe	776	824	826
Rest of world	599	644	677

\* Excludes trading and bulk refining sales.

Sales of petroleum products were down by 6% in full-year 2023 due to the lower industrial and commercial demand mainly in Europe and the

disposal of 50% of the fuel distribution business in Egypt, which were partially offset by recovery in the aviation business.

Results (in M\$)	2023	2022	2021
Adjusted net operating income	1,458	1,550	1,618
Organic investments <sup>(a)</sup>	1,065	1,035	1,074
Net acquisitions <sup>(a)</sup>	(1,924)	(121)	(151)
Net investments <sup>(a)</sup>	(859)	914	923
Cash flow from operations excluding working capital (CFFO) <sup>(a)</sup>	2,318	2,365	2,556
Cash flow from operating activities	1,957	3,124	2,333

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

Marketing & Services adjusted net operating income was \$1,458 million for the full-year 2023, decreasing 6% year-on-year due to lower sales.

Cash flow from operations excluding working capital (CFFO) decreased by 2% year-on-year to \$2,318 million in full-year 2023.

### 1.9.1.5 TotalEnergies' Results

#### A. Adjusted net operating income from the business segments

Adjusted net operating income from the business segments was \$25,107 million in 2023, compared to \$38,475 million in 2022 due to lower oil & gas prices and lower refining margins compared to the exceptional environment in 2022.

As of December 31, 2023, the number of diluted shares was 2,373 million.

As part of its shareholder return policy, TotalEnergies repurchased 142.6 million shares for cancellation in 2023 for \$9 billion.

#### B. Adjusted net income<sup>(1)</sup> (TotalEnergies share)

Adjusted net income (TotalEnergies share) was \$23,176 million in 2023. For the full-year 2023, these items amounted to (\$1,792) million, consisting mainly of:

- \$2.0 billion gain on asset sales, including the sale of our retail network in Germany and of our Canadian assets;
- (\$2.2) billion related to asset impairments, primarily related to upstream assets in Kenya and upstream mature assets in Congo, as well as Al Shaheen in Qatar for timing effect of taxes, the Yunlin offshore wind project in Taiwan, divestment projects of Naphtachimie to INEOS and the Natref refinery in South Africa, as well as client portfolios related to goodwill from gas & power marketing activities in Belgium, Spain, and France;
- (\$0.7) billion in inventory effects and effects of changes in fair value;
- (\$0.9) billion in other adjustments, notably the revaluation of Total Eren's previously held equity interest, the devaluation of the Argentine peso, the CCGT Infra-Marginal Income Contribution in France and the exceptional European solidarity contribution.

#### D. Acquisitions - asset sales

Completed acquisitions were \$6,428 million in 2023, mainly related to Integrated Power, including the creation of a new joint venture with AGEL in India and the acquisition of 50% of Rönesans Enerji in Turkey, the acquisition of the remaining 70.4% of Total Eren, a 20% interest in the SARB and Umm Lulu concession in the United Arab Emirates, the acquisition of a 6.25% stake in the NFE LNG project and 9.375% in NFS LNG project in Qatar, and a 34% stake in a joint venture with Casa dos Ventos in Brazil.

Completed divestments were \$7,717 million in 2023 primarily due to the sale of our Canadian assets to ConocoPhillips and Suncor and the sale of our retail network in Germany to Alimentation Couche-Tard, the sale of a 40% interest to ADNOC in Block 20 in Angola and a partial farm down in an offshore wind project off the coast of New York and New Jersey in the United States.

#### E. Net cash flow<sup>(2)</sup>

TotalEnergies' net cash flow was \$19,109 million in 2023 compared to \$29,426 million in 2022, reflecting the \$9,783 million decrease in CFFO and the \$534 million increase in net investments to \$16,837 million in 2023.

2023 cash flow from operating activities was \$40,679 million versus CFFO of \$35,946 million, which reflects positive variation from a working capital release of \$4.8 billion, of which around \$2 billion is related to exceptional fiscal debt variations that are mainly due to the change of the gas and power price cap compensation system in France and the disposal of our German retail network to Alimentation Couche Tard.

TotalEnergies' average tax rate was 37.5% in 2023 versus 40.9% in 2022, mainly due to the lower relative weight of Exploration & Production in Company results, in line with the evolution of oil and gas prices.

#### C. Adjusted earnings (TotalEnergies share) per share

Adjusted diluted net earnings per share were \$9.40 in 2023, based on 2,434 million weighted average diluted shares, compared to \$13.94 in 2022.

(1) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.  
(2) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

## F. Profitability

Return on equity was 20.4% for the twelve months ended December 31, 2023.

(in M\$)	January 1, 2023 to December 31, 2023	January 1, 2022 to December 31, 2022
Adjusted net income (TotalEnergies share) <sup>(a)</sup>	23,450	36,657
Average adjusted shareholders' equity	115,006	112,831
<b>Return on equity (ROE)</b>	<b>20.4%</b>	<b>32.5%</b>

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

Return on average capital employed<sup>(a)</sup> was 18.9% for the twelve months ended December 31, 2023.

(in M\$)	January 1, 2023 to December 31, 2023	January 1, 2022 to December 31, 2022
Adjusted net operating income <sup>(a)</sup>	24,684	38,212
Average capital employed	130,517	135,312
<b>Return on average capital employed<sup>(a)</sup> (ROACE)</b>	<b>18.9%</b>	<b>28.2%</b>

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation tables.

### 1.9.1.6 TotalEnergies SE statutory accounts

Net income for TotalEnergies SE, the parent company, amounted to €11,232 million in 2023, compared to €7,835 million in 2022.

### 1.9.1.7 Proposed dividends and shareholder return policy

#### PROPOSED DIVIDEND

The Board of Directors, at its meeting on February 6, 2024, after having closed the financial statements for fiscal year 2023, decided to propose at the Shareholders' Meeting to be held on May 24, 2024, the distribution of an ordinary dividend amounting to 3.01 euros per share for fiscal year 2023 compared to the ordinary dividend of 2.81 euros per share for fiscal year 2023 compared to the ordinary dividend of 2.81 euros per share for fiscal

year 2022, *i.e.*, an increase in 7.1%. As a consequence, taking into account these three interim dividends of 0.74 euro per share previously decided by the Board of Directors, the final ordinary dividend for fiscal year 2023 amounts to 0.79 euro per share.

#### SHAREHOLDER RETURN POLICY

##### Shareholder Return for 2023

The Board of Directors, at its meeting on February 6, 2024, after having closed the financial statements for fiscal year 2023, decided to propose at the Shareholders' Meeting to be held on May 24, 2024, the distribution of an ordinary dividend amounting to 3.01 euros per share for fiscal year 2023 compared to the ordinary dividend of 2.81 euros per share for fiscal year 2022, *i.e.*, an increase in 7.1%. As a consequence, taking into account these three interim dividends of 0.74 euro per share previously decided by the Board of Directors, the final ordinary dividend for fiscal year 2023 amount to 0.79 euro per share.

In 2023, at its meeting on February 7, the Board of Directors indicated a shareholder return policy for 2023 targeting a pay-out between 35-40%, which will combine an increase in interim dividends of more than 7% to €0.74/share and share buybacks of \$2 billion in the first quarter. In addition, in view of the growth in structural cash flow forecast and the share buybacks carried out in 2022 (5% of the share capital), the Board of Directors proposed to the Shareholders' Meeting the distribution of a final 2022 ordinary dividend of €0.74/share, an increase of 6.4% for the ordinary 2022 dividend to €2.81/share, plus the special dividend of €1/share paid in December 2022.

Following the Board of Directors' meeting on September 27, 2023, TotalEnergies announced to expect to distribute about 44% of its CFFO in 2023 to its shareholders and to increase shareholder distribution guidance to more than 40% of CFFO beyond 2023. Confident in the strong fundamentals of the Company, the clear and disciplined investment policy, and the solid potential for cash generation growth in the coming years, the Board of directors had taken the following decisions:

- in 2023, allocate \$1.5 billion of the Canadian assets' divestment proceeds to share buybacks, to reach \$9 billion for the year. The Company expects to return about 44% of CFFO to shareholders in 2023;
- increase the shareholder distribution guidance to more than 40% of CFFO through the cycles keeping net investments between \$16-18 billion per year over 2024-28 to implement the transition of the Company.

The implementation of these decisions set the return to shareholders to 46% of 2023 cash flow.

In 2022, at its meeting on February 9, 2022, the Board of Directors decided to propose to the Shareholders' Meeting the distribution of a final dividend of 0.66 euro per share for the fiscal year 2021, equal to the previous three interim dividends paid for this fiscal year 2021, thus setting the dividend for 2021 at 2.64 euros per share. The Board of Directors, at its meetings on April 2022, July 2022 and October 2022 decided to distribute a first, a second and a third interim dividends for the fiscal year 2022, respectively, 5% higher than the interim dividends and the proposed final dividend for fiscal 2021, *i.e.* €0.69 per share. In addition to this 5% increase for the interim dividends for the fiscal 2022, the Board of Directors decided to distribute an exceptional interim dividend of €1 per share in December 2022 and to maintain the share buyback program at \$7 billion. The implementation of these decisions sets the return to shareholders to 37.2% of 2022 cash flow.

## Shareholder return policy for 2024

Confident in the strong fundamentals of the Company, which celebrates its 100-year anniversary in 2024, the Board of Directors, at its meeting on February 6, 2024, confirmed a shareholder return policy for 2024 targeting >40% CFFO payout, which will combine an increase in interim dividends of 6.8% to €0.79/share and \$2 billion of share buybacks in the first quarter of 2024, in line with the following cash flow allocation priorities:

- a sustainable ordinary dividend through cycles, that was not cut during the Covid crisis, and whose increase is supported by underlying cash flow growth;
- investments to support of a strategy balanced between the various energies;
- maintaining a strong balance sheet;
- buybacks to share surplus cash flow generated at high prices.

### 1.9.1.8 Annual 2024 Sensitivities\*

	Change	Estimated impact on adjusted net operating income	Estimated impact on cash flow from operations excluding working capital (CFFO)
Dollar	+/- \$0.1 per €	-/+ \$0.1 B	~ \$0 B
Average liquids sales price**	+/- \$10/b	+/- \$2.3 B	+/- \$2.8 B
European gas price - NBP / TTE	+/- \$2/MBtu	+/- \$0.4 B	+/- \$0.4 B
European refining margin marker (ERM)	+/- \$10/t	+/- \$0.4 B	+/- \$0.5 B

\* Sensitivities are revised once per year upon publication of the previous year's fourth quarter results. Sensitivities are estimates based on assumptions about TotalEnergies' portfolio in 2024. Actual results could vary significantly from estimates based on the application of these sensitivities. The impact of the \$-€ sensitivity on adjusted net operating income is essentially attributable to Refining & Chemicals.

\*\* Brent environment at \$80/b.

### 1.9.1.9 Alternative Performance Measures (Non-GAAP measures)

#### A. Adjustment items to net income (TotalEnergies share)

(M\$)	2023	2022	2021
<b>Net income (TotalEnergies share)</b>	<b>21,384</b>	<b>20,526</b>	<b>16,032</b>
Special items affecting net income (TotalEnergies share)	(1,105)	(17,310)	(3,329)
Gain (loss) on asset sales	2,047	1,391	(1,726)
Restructuring charges	(56)	(42)	(308)
Impairments	(2,166)	(15,743)	(910)
Other*	(930)	(2,916)	(385)
After-tax inventory effect: FIFO vs. replacement cost	(699)	501	1,495
Effect of changes in fair value	12	1,138	(194)
<b>Total adjustments affecting net income</b>	<b>(1,792)</b>	<b>(15,671)</b>	<b>(2,028)</b>
<b>Adjusted net income (TotalEnergies share)</b>	<b>23,176</b>	<b>36,197</b>	<b>18,060</b>

\* Other adjustment items for net income for the year amounted to (\$930) million including \$388 million of revaluation of Total Eren's previously held equity interest and (\$1,318) million mainly due to the impact of the European solidarity contribution and of the Electricity Generation Infra-Marginal Income Contribution in France and of the devaluation of the Argentine peso.

#### B. Reconciliation of consolidated net income to adjusted net operating income

(M\$)	2023	2022	2021
<b>Consolidated net income ( a )</b>	<b>21,510</b>	<b>21,044</b>	<b>16,366</b>
Net cost of net debt ( b )	(1,108)	(1,278)	(1,350)
Special items affecting net operating income	(1,384)	(17,559)	(3,388)
Gain (loss) on asset sales	2,047	1,450	(1,726)
Restructuring charges	(56)	(55)	(315)
Impairments	(2,297)	(15,759)	(932)
Other	(1,078)	(3,195)	(415)
After-tax inventory effect: FIFO vs. replacement cost	(694)	531	1,532
Effect of changes in fair value	12	1,138	(194)
<b>Total adjustments affecting net operating income ( c )</b>	<b>(2,066)</b>	<b>(15,890)</b>	<b>(2,050)</b>
<b>Adjusted net operating income ( a - b - c )</b>	<b>24,684</b>	<b>38,212</b>	<b>19,766</b>

### C. Reconciliation of adjusted EBITDA with consolidated financial statements

- Reconciliation of net income (TotalEnergies share) to adjusted EBITDA

(in M\$)	2023	2022	2021
<b>Net income (TotalEnergies share)</b>	<b>21,384</b>	<b>20,526</b>	<b>16,032</b>
Less: adjustment items to net income (TotalEnergies share)	1,792	15,671	2,028
<b>Adjusted net income (TotalEnergies share)</b>	<b>23,176</b>	<b>36,197</b>	<b>18,060</b>
Adjusted items			
Add: non-controlling interests	274	460	331
Add: income taxes	12,939	20,565	9,211
Add: depreciation, depletion and impairment of tangible assets and mineral interests	12,012	12,316	12,735
Add: amortization and impairment of intangible assets	394	400	401
Add: financial interest on debt	2,820	2,386	1,904
Less: financial income and expense from cash & cash equivalents	(1,585)	(746)	(340)
<b>Adjusted EBITDA</b>	<b>50,030</b>	<b>71,578</b>	<b>42,302</b>

- Reconciliation of revenues from sales to adjusted EBITDA and net income (TotalEnergies share)

(in M\$)	2023	2022	2021
<b>Adjusted items</b>			
Revenues from sales	218,945	263,206	184,678
Purchases, net of inventory variation	(142,247)	(171,049)	(120,160)
Other operating expenses	(29,808)	(28,745)	(26,754)
Exploration costs	(575)	(574)	(632)
Other income	504	1,349	1,300
Other expense, excluding amortization and impairment of intangible assets	(288)	(1,142)	(543)
Other financial income	1,221	812	762
Other financial expense	(722)	(533)	(539)
Net income (loss) from equity affiliates	3,000	8,254	4,190
<b>Adjusted EBITDA</b>	<b>50,030</b>	<b>71,578</b>	<b>42,302</b>
<b>Adjusted items</b>			
Less: depreciation, depletion and impairment of tangible assets and mineral interests	(12,012)	(12,316)	(12,735)
Less: amortization of intangible assets	(394)	(400)	(401)
Less: financial interest on debt	(2,820)	(2,386)	(1,904)
Add: financial income and expense from cash & cash equivalents	1,585	746	340
Less: income taxes	(12,939)	(20,565)	(9,211)
Less: non-controlling interests	(274)	(460)	(331)
Add: adjustment (TotalEnergies share)	(1,792)	(15,671)	(2,028)
<b>Net income (TotalEnergies share)</b>	<b>21,384</b>	<b>20,526</b>	<b>16,032</b>

#### D. Investments - Divestments (TotalEnergies share)

- Reconciliation of Cash flow used in investing activities to Net investments

(in millions of dollars)	2023	2022	2021
<b>Cash flow used in investing activities ( a )</b>	<b>16,454</b>	<b>15,116</b>	<b>13,656</b>
Other transactions with non-controlling interests ( b )	–	(50)	(757)
Organic loan repayment from equity affiliates ( c )	(2)	1,630	626
Change in debt from renewable projects financing ( d )*	78	(589)	(356)
Capex linked to capitalized leasing contracts ( e )	259	177	111
Expenditures related to carbon credits ( f )	48	19	27
<b>Net investments ( a + b + c + d + e + f = g - i + h )</b>	<b>16,837</b>	<b>16,303</b>	<b>13,307</b>
of which net acquisitions ( g - i )	(1,289)	4,451	632
Acquisitions ( g )	6,428	5,872	3,284
Asset sales ( i )	7,717	1,421	2,652
Change in debt from renewable projects (partner share)	(81)	279	134
of which organic investments ( h )	18,126	11,852	12,675
Capitalized exploration	1,094	669	841
Increase in non-current loans	1,845	954	1,231
Repayment of non-current loans, excluding organic loan repayment from equity affiliates	(524)	(1,082)	(531)
Change in debt from renewable projects (TotalEnergies share)	(3)	(310)	(222)

\* Change in debt from renewable projects (TotalEnergies share and partner share).

#### Exploration & Production

(in millions of dollars)	2023	2022	2021
<b>Cash flow used in investing activities ( a )</b>	<b>7,260</b>	<b>9,839</b>	<b>6,382</b>
Other transactions with non-controlling interests ( b )	–	–	–
Organic loan repayment from equity affiliates ( c )	–	22	39
Change in debt from renewable projects financing ( d )*	–	–	–
Capex linked to capitalized leasing contracts ( e )	218	147	86
Expenditures related to carbon credits ( f )	48	19	16
<b>Net investments ( a + b + c + d + e + f = g - i + h )</b>	<b>7,526</b>	<b>10,027</b>	<b>6,523</b>
of which net acquisitions ( g - i )	(2,706)	2,520	(167)
Acquisitions ( g )	2,320	3,134	497
Asset sales ( i )	5,026	614	664
Change in debt from renewable projects (partner share)	–	–	–
<b>of which organic investments ( h )</b>	<b>10,232</b>	<b>7,507</b>	<b>6,690</b>
Capitalized exploration	1,081	669	840
Increase in non-current loans	154	78	98
Repayment of non-current loans, excluding organic loan repayment from equity affiliates	(92)	(171)	(191)
Change in debt from renewable projects (TotalEnergies share)	–	–	–

\* Change in debt from renewable projects (TotalEnergies share and partner share).

**Integrated LNG**

(in millions of dollars)	2023	2022	2021
<b>Cash flow used in investing activities ( a )</b>	<b>3,120</b>	<b>(1,052)</b>	<b>1,292</b>
Other transactions with non-controlling interests ( b )	—	—	(757)
Organic loan repayment from equity affiliates ( c )	2	1,499	580
Change in debt from renewable projects financing ( d )*	—	—	—
Capex linked to capitalized leasing contracts ( e )	37	25	25
Expenditures related to carbon credits ( f )	—	—	11
<b>Net investments ( a + b + c + d + e + f = g - i + h )</b>	<b>3,159</b>	<b>472</b>	<b>1,151</b>
of which net acquisitions ( g - i )	1,096	(47)	(910)
Acquisitions ( g )	1,253	27	184
Asset sales ( i )	157	74	(1,094)
Change in debt from renewable projects (partner share)	—	—	—
<b>of which organic investments ( h )</b>	<b>2,063</b>	<b>519</b>	<b>2,061</b>
Capitalized exploration	13	—	1
Increase in non-current loans	570	328	658
Repayment of non-current loans, excluding organic loan repayment from equity affiliates	(131)	(690)	(143)
Change in debt from renewable projects (TotalEnergies share)	—	—	—

\* Change in debt from renewable projects (TotalEnergies share and partner share).

**Integrated Power**

(in millions of dollars)	2023	2022	2021
<b>Cash flow used in investing activities ( a )</b>	<b>4,836</b>	<b>4,100</b>	<b>3,699</b>
Other transactions with non-controlling interests ( b )	—	—	—
Organic loan repayment from equity affiliates ( c )	27	5	12
Change in debt from renewable projects financing ( d )*	78	(589)	(356)
Capex linked to capitalized leasing contracts ( e )	4	5	—
Expenditures related to carbon credits ( f )	—	—	—
<b>Net investments ( a + b + c + d + e + f = g - i + h )</b>	<b>4,945</b>	<b>3,521</b>	<b>3,355</b>
of which net acquisitions ( g - i )	2,363	2,136	2,075
Acquisitions ( g )	2,739	2,661	2,462
Asset sales ( i )	376	525	(387)
Change in debt from renewable projects (partner share)	(81)	279	134
<b>of which organic investments ( h )</b>	<b>2,582</b>	<b>1,385</b>	<b>1,280</b>
Capitalized exploration	—	—	—
Increase in non-current loans	870	397	316
Repayment of non-current loans, excluding organic loan repayment from equity affiliates	(177)	(83)	(26)
Change in debt from renewable projects (TotalEnergies share)	(3)	(310)	(222)

\* Change in debt from renewable projects (TotalEnergies share and partner share).

## Refining & Chemicals

(in millions of dollars)

	2023	2022	2021
<b>Cash flow used in investing activities ( a )</b>	<b>1,953</b>	<b>1,177</b>	<b>1,290</b>
Other transactions with non-controlling interests ( b )	—	—	—
Organic loan repayment from equity affiliates ( c )	(31)	104	(5)
Change in debt from renewable projects financing ( d )*	—	—	—
Capex linked to capitalized leasing contracts ( e )	—	—	—
Expenditures related to carbon credits ( f )	—	—	—
<b>Net investments ( a + b + c + d + e + f = g - i + h )</b>	<b>1,922</b>	<b>1,281</b>	<b>1,285</b>
of which net acquisitions ( g - i )	(118)	(38)	(217)
Acquisitions ( g )	32	15	53
Asset sales ( i )	150	53	270
Change in debt from renewable projects (partner share)	—	—	—
<b>of which organic investments ( h )</b>	<b>2,040</b>	<b>1,319</b>	<b>1,502</b>
Capitalized exploration	—	—	—
Increase in non-current loans	79	53	42
Repayment of non-current loans, excluding organic loan repayment from equity affiliates	(33)	(35)	(67)
Change in debt from renewable projects (TotalEnergies share)	—	—	—

\* Change in debt from renewable projects (TotalEnergies share and partner share).

## Marketing & Services

(in millions of dollars)

	2023	2022	2021
<b>Cash flow used in investing activities ( a )</b>	<b>(859)</b>	<b>964</b>	<b>923</b>
Other transactions with non-controlling interests ( b )	—	(50)	—
Organic loan repayment from equity affiliates ( c )	—	—	—
Change in debt from renewable projects financing ( d )*	—	—	—
Capex linked to capitalized leasing contracts ( e )	—	—	—
Expenditures related to carbon credits ( f )	—	—	—
<b>Net investments ( a + b + c + d + e + f = g - i + h )</b>	<b>(859)</b>	<b>914</b>	<b>923</b>
of which net acquisitions ( g - i )	(1,924)	(121)	(151)
Acquisitions ( g )	84	34	86
Asset sales ( i )	2,008	155	237
Change in debt from renewable projects (partner share)	—	—	—
<b>of which organic investments ( h )</b>	<b>1,065</b>	<b>1,035</b>	<b>1,074</b>
Capitalized exploration	—	—	—
Increase in non-current loans	152	83	105
Repayment of non-current loans, excluding organic loan repayment from equity affiliates	(82)	(87)	(82)
Change in debt from renewable projects (TotalEnergies share)	—	—	—

\* Change in debt from renewable projects (TotalEnergies share and partner share).

## E. Cash flow (TotalEnergies share)

- Reconciliation of Cash flow from operating activities to Cash flow from operations excluding working capital (CFFO), to DACF and to Net cash flow

(in millions of dollars)	2023	2022	2021
<b>Cash flow from operating activities ( a )</b>	<b>40,679</b>	<b>47,367</b>	<b>30,410</b>
(Increase) decrease in working capital ( b )*	5,526	2,831	188
Inventory effect ( c )	(714)	501	1,796
Capital gain from renewable project sales ( d )	81	64	89
Organic loan repayments from equity affiliates ( e )	(2)	1,630	626
<b>Cash flow from operations excluding working capital (CFFO) ( f = a - b - c + d + e )</b>	<b>35,946</b>	<b>45,729</b>	<b>29,140</b>
Financial charges	(505)	(1,296)	(1,520)
<b>Debt Adjusted Cash Flow (Dacf)</b>	<b>36,451</b>	<b>47,025</b>	<b>30,660</b>
Organic investments ( g )	18,126	11,852	12,675
<b>Free cash flow after organic investments ( f - g )</b>	<b>17,820</b>	<b>33,877</b>	<b>16,465</b>
Net investments ( h )	16,837	16,303	13,307
<b>Net cash flow ( f - h )</b>	<b>19,109</b>	<b>29,426</b>	<b>15,833</b>

\* Changes in working capital are presented excluding the mark-to-market effect of Integrated LNG and Integrated Power segments' contracts.

- Reconciliation of cash flow from operating activities to CFFO

### Exploration & Production

(in millions of dollars)	2023	2022	2021
<b>Cash flow from operating activities ( a )</b>	<b>18,531</b>	<b>27,654</b>	<b>22,009</b>
(Increase) decrease in working capital ( b )	(595)	1,596	3,331
Inventory effect ( c )	—	—	—
Capital gain from renewable project sales ( d )	—	—	—
Organic loan repayments from equity affiliates ( e )	—	22	39
<b>Cash flow from operations excluding working capital (CFFO) ( f = a - b - c + d + e )</b>	<b>19,126</b>	<b>26,080</b>	<b>18,717</b>

### Integrated LNG

(in millions of dollars)	2023	2022	2021
Cash flow from operating activities ( a )	8,442	9,604	(2,765)
(Increase) decrease in working capital ( b )*	1,151	1,319	(7,590)
Inventory effect ( c )	—	—	—
Capital gain from renewable project sales ( d )	—	—	—
Organic loan repayments from equity affiliates ( e )	2	1,499	579
<b>Cash flow from operations excluding working capital (CFFO) ( f = a - b - c + d + e )</b>	<b>7,293</b>	<b>9,784</b>	<b>5,404</b>

\* Changes in working capital are presented excluding the mark-to-market effect of Integrated LNG and Integrated Power segments' contracts.

### Integrated Power

(in millions of dollars)	2023	2022	2021
Cash flow from operating activities ( a )	3,573	66	3,592
(Increase) decrease in working capital ( b )*	1,529	(835)	2,973
Inventory effect ( c )	—	—	—
Capital gain from renewable project sales ( d )	81	64	89
Organic loan repayments from equity affiliates ( e )	27	5	12
<b>Cash flow from operations excluding working capital (CFFO) ( f = a - b - c + d + e )</b>	<b>2,152</b>	<b>970</b>	<b>720</b>

\* Changes in working capital are presented excluding the mark-to-market effect of Integrated LNG and Integrated Power segments' contracts.

## Refining & Chemicals

(in millions of dollars)	2023	2022	2021
Cash flow from operating activities ( a )	7,957	8,663	6,473
(Increase) decrease in working capital ( b )	2,641	823	2,041
Inventory effect ( c )	(568)	240	1,481
Capital gain from renewable project sales ( d )	—	—	—
Organic loan repayments from equity affiliates ( e )	(31)	104	(5)
<b>Cash flow from operations excluding working capital (CFFO) ( f = a - b - c + d + e )</b>	<b>5,853</b>	<b>7,704</b>	<b>2,946</b>

## Marketing & Services

(in millions of dollars)	2023	2022	2021
Cash flow from operating activities ( a )	1,957	3,124	2,333
(Increase) decrease in working capital ( b )	(215)	498	(538)
Inventory effect ( c )	(146)	261	315
Capital gain from renewable project sales ( d )	—	—	—
Organic loan repayments from equity affiliates ( e )	—	—	—
<b>Cash flow from operations excluding working capital (CFFO) ( f = a - b - c + d + e )</b>	<b>2,318</b>	<b>2,365</b>	<b>2,556</b>

## F. Gearing ratio

(in millions of dollars)	2023	2022	2021
Current borrowings*	7,869	14,065	13,645
Other current financial liabilities	446	488	372
Current financial assets*, **	(6,256)	(8,556)	(12,183)
Net financial assets classified as held for sale*	17	(38)	(4)
Non-current financial debt*	32,722	36,987	41,868
Non-current financial assets*	(1,229)	(1,303)	(1,557)
Cash and cash equivalents	(27,263)	(33,026)	(21,342)
<b>Net debt ( a )</b>	<b>6,306</b>	<b>8,617</b>	<b>20,799</b>
Shareholders' equity (TotalEnergies share)	116,753	111,724	111,736
Non-controlling interests	2,700	2,846	3,263
<b>Shareholders' equity ( b )</b>	<b>119,453</b>	<b>114,570</b>	<b>114,999</b>
<b>Gearing = a / ( a + b )</b>	<b>5.0%</b>	<b>7.0%</b>	<b>15.3%</b>
<b>Leases ( c )</b>	<b>8,275</b>	<b>8,096</b>	<b>8,055</b>
<b>Gearing including leases ( a+c )/( a+b+c )</b>	<b>10.9%</b>	<b>12.7%</b>	<b>20.1%</b>

\* Excludes leases receivables and leases debts.

\*\* Including initial margins held as part of the Company's activities on organized markets.

## G. Return on average capital employed

### Full-year 2023

(in millions of dollars)	Exploration & Production	Integrated LNG	Integrated Power	Refining & Chemicals	Marketing & Services	Company
Adjusted net operating income	10,942	6,200	1,853	4,654	1,458	24,684
Capital employed at 12/31/2022	65,784	33,671	16,225	7,438	7,593	128,811
Capital employed at 12/31/2023	63,870	36,048	21,511	6,043	7,674	132,222
<b>ROACE</b>	<b>16.9%</b>	<b>17.8%</b>	<b>9.8%</b>	<b>69.0%</b>	<b>19.1%</b>	<b>18.9%</b>

**Reconciliation of capital employed (balance sheet) and calculation of ROACE**

(in millions of dollars)	Exploration & Production	Integrated LNG	Integrated Power	Refining & Chemicals	Marketing & Services	Corporate	Inter-Company	Company
<b>Adjusted net operating income 2023 ( a )</b>	<b>10,942</b>	<b>6,200</b>	<b>1,853</b>	<b>4,654</b>	<b>1,458</b>	<b>(423)</b>	<b>–</b>	<b>24,684</b>
<b>Balance sheet as of December 31, 2023</b>								
Property plant and equipment intangible assets net	84,876	24,936	12,526	12,287	6,696	678	–	141,999
Investments & loans in equity affiliates	2,630	13,905	9,202	4,167	553	–	–	30,457
Other non-current assets	3,451	2,720	1,027	677	1,258	141	–	9,274
<i>Inventories, net</i>	<i>1,463</i>	<i>1,784</i>	<i>689</i>	<i>11,582</i>	<i>3,798</i>	<i>1</i>	<i>–</i>	<i>19,317</i>
<i>Accounts receivable, net</i>	<i>6,849</i>	<i>10,183</i>	<i>7,601</i>	<i>20,010</i>	<i>9,024</i>	<i>683</i>	<i>(30,908)</i>	<i>23,442</i>
<i>Other current assets</i>	<i>6,218</i>	<i>9,782</i>	<i>6,963</i>	<i>2,383</i>	<i>3,465</i>	<i>1,817</i>	<i>(9,807)</i>	<i>20,821</i>
<i>Accounts payable</i>	<i>(6,904)</i>	<i>(11,732)</i>	<i>(8,114)</i>	<i>(33,864)</i>	<i>(10,693)</i>	<i>(798)</i>	<i>30,770</i>	<i>(41,335)</i>
<i>Other creditors and accrued liabilities</i>	<i>(9,875)</i>	<i>(11,653)</i>	<i>(6,985)</i>	<i>(6,152)</i>	<i>(5,707)</i>	<i>(6,300)</i>	<i>9,945</i>	<i>(36,727)</i>
Working capital	(2,249)	(1,636)	154	(6,041)	(113)	(4,597)	–	(14,482)
Provisions and other non-current liabilities	(25,152)	(3,877)	(1,790)	(3,706)	(1,267)	854	–	(34,938)
Assets and liabilities classified as held for sale - Capital employed	314	–	392	137	881	–	–	1,724
<b>Capital Employed (Balance sheet)</b>	<b>63,870</b>	<b>36,048</b>	<b>21,511</b>	<b>7,521</b>	<b>8,008</b>	<b>(2,924)</b>	<b>–</b>	<b>134,034</b>
Less inventory valuation effect	–	–	–	(1,478)	(334)	–	–	(1,812)
<b>Capital Employed at replacement cost ( b )</b>	<b>63,870</b>	<b>36,048</b>	<b>21,511</b>	<b>6,043</b>	<b>7,674</b>	<b>(2,924)</b>	<b>–</b>	<b>132,222</b>
<b>Balance sheet as of December 31, 2022</b>								
Property plant and equipment intangible assets net	87,833	24,189	6,696	11,525	8,120	669	–	139,032
Investments & loans in equity affiliates	2,138	12,065	8,804	4,431	451	–	–	27,889
Other non-current assets	3,069	3,342	327	570	1,050	130	–	8,488
<i>Inventories, net</i>	<i>1,260</i>	<i>2,312</i>	<i>1,836</i>	<i>12,888</i>	<i>4,640</i>	<i>–</i>	<i>–</i>	<i>22,936</i>
<i>Accounts receivable, net</i>	<i>7,312</i>	<i>11,110</i>	<i>12,515</i>	<i>19,297</i>	<i>8,482</i>	<i>1,407</i>	<i>(35,745)</i>	<i>24,378</i>
<i>Other current assets</i>	<i>6,347</i>	<i>21,344</i>	<i>12,914</i>	<i>2,410</i>	<i>3,787</i>	<i>2,455</i>	<i>(13,187)</i>	<i>36,070</i>
<i>Accounts payable</i>	<i>(6,298)</i>	<i>(11,846)</i>	<i>(14,881)</i>	<i>(30,673)</i>	<i>(12,082)</i>	<i>(1,313)</i>	<i>35,747</i>	<i>(41,346)</i>
<i>Other creditors and accrued liabilities</i>	<i>(11,452)</i>	<i>(24,796)</i>	<i>(10,940)</i>	<i>(7,215)</i>	<i>(5,115)</i>	<i>(5,942)</i>	<i>13,185</i>	<i>(52,275)</i>
Working capital	(2,831)	(1,876)	1,444	(3,293)	(288)	(3,393)	–	(10,237)
Provisions and other non-current liabilities	(24,633)	(4,049)	(1,201)	(3,760)	(1,303)	694	–	(34,252)
Assets and liabilities classified as held for sale - Capital employed	208	–	155	–	–	–	–	363
<b>Capital Employed (Balance sheet)</b>	<b>65,784</b>	<b>33,671</b>	<b>16,225</b>	<b>9,473</b>	<b>8,030</b>	<b>(1,900)</b>	<b>–</b>	<b>131,283</b>
Less inventory valuation effect	–	–	–	(2,035)	(437)	–	–	(2,472)
<b>Capital Employed at replacement cost ( c )</b>	<b>65,784</b>	<b>33,671</b>	<b>16,225</b>	<b>7,438</b>	<b>7,593</b>	<b>(1,900)</b>	<b>–</b>	<b>128,811</b>
–	–	–	–	–	–	–	–	–
<b>ROACE 2023 as a percentage ( a / average ( b + c ) )</b>	<b>16.9%</b>	<b>17.8%</b>	<b>9.8%</b>	<b>69.0%</b>	<b>19.1%</b>			<b>18.9%</b>

(in millions of dollars)	Exploration & Production	Integrated LNG	Integrated Power	Refining & Chemicals	Marketing & Services	Corporate	Inter-Company	Company
Adjusted net operating income 2022 ( a )	17,479	11,169	975	7,302	1,550	(263)	-	38,212
<b>Balance sheet as of December 31, 2022</b>								
Property plant and equipment intangible assets net	87,833	24,189	6,696	11,525	8,120	669	-	139,032
Investments & loans in equity affiliates	2,138	12,065	8,804	4,431	451	-	-	27,889
Other non-current assets	3,069	3,342	327	570	1,050	130	-	8,488
<i>Inventories, net</i>	1,260	2,312	1,836	12,888	4,640	-	-	22,936
<i>Accounts receivable, net</i>	7,312	11,110	12,515	19,297	8,482	1,407	(35,745)	24,378
<i>Other current assets</i>	6,347	21,344	12,914	2,410	3,787	2,455	(13,187)	36 070
<i>Accounts payable</i>	(6,298)	(11,846)	(14,881)	(30,673)	(12,082)	(1,313)	35,747	(41,346)
<i>Other creditors and accrued liabilities</i>	(11,452)	(24,796)	(10,940)	(7,215)	(5,115)	(5,942)	13,185	(52,275)
Working capital	(2,831)	(1,876)	1,444	(3,293)	(288)	(3,393)	-	(10,237)
Provisions and other non-current liabilities	(24,633)	(4,049)	(1,201)	(3,760)	(1,303)	694	-	(34,252)
Assets and liabilities classified as held for sale - Capital employed	208	-	155	-	-	-	-	363
<b>Capital Employed (Balance sheet)</b>	<b>65,784</b>	<b>33,671</b>	<b>16,225</b>	<b>9,473</b>	<b>8,030</b>	<b>(1,900)</b>	<b>-</b>	<b>131,283</b>
Less inventory valuation effect	-	-	-	(2,035)	(437)	-	-	(2,472)
<b>Capital Employed at replacement cost ( b )</b>	<b>65,784</b>	<b>33,671</b>	<b>16,225</b>	<b>7,438</b>	<b>7,593</b>	<b>(1,900)</b>	<b>-</b>	<b>128,811</b>
<b>Balance sheet as of December 31, 2021</b>								
Property plant and equipment intangible assets net	86,418	24,901	6,624	11,884	8,578	638	-	139,043
Investments & loans in equity affiliates	6,337	15,891	4,610	3,729	486	-	-	31,053
Other non-current assets	4,441	2,504	855	608	1,105	309	-	9,822
<i>Inventories, net</i>	1,281	1,887	1,344	11,482	3,957	1	-	19,952
<i>Accounts receivable, net</i>	6,621	10,345	6,202	17,280	7,597	746	(26,808)	21,983
<i>Other current asset</i>	5,643	28,256	7,486	2,068	2,802	1,475	(12,586)	35,144
<i>Accounts payable</i>	(6,116)	(12,446)	(6,923)	(28,055)	(9,291)	(857)	26,851	(36,837)
<i>Other creditors and accrued liabilities</i>	(8,645)	(21,547)	(9,546)	(5,333)	(4,687)	(5,585)	12,543	(42,800)
Working capital	(1,216)	6,495	(1,437)	(2,558)	378	(4,220)	-	(2,558)
Provisions and other non-current liabilities	(26,613)	(3,137)	(1,358)	(3,840)	(1,478)	581	-	(33,845)
Assets and liabilities classified as held for sale - Capital employed	308	-	30	-	-	-	-	338
<b>Capital Employed (Balance sheet)</b>	<b>71,675</b>	<b>46,654</b>	<b>9,324</b>	<b>9,823</b>	<b>9,069</b>	<b>(2,692)</b>	<b>-</b>	<b>143,853</b>
Less inventory valuation effect	-	-	-	(1,754)	(286)	-	-	(2,040)
<b>Capital Employed at replacement cost ( c )</b>	<b>71,675</b>	<b>46,654</b>	<b>9,324</b>	<b>8,069</b>	<b>8,783</b>	<b>(2,692)</b>	<b>-</b>	<b>141,813</b>
<b>ROACE 2022 as a percentage ( a / average ( b + c ) )</b>	<b>25.4%</b>	<b>27.8%</b>	<b>7.6%</b>	<b>94.2%</b>	<b>18.9%</b>			<b>28.2%</b>

## H. Payout

(in millions of dollars)	2023	2022	2021
Dividend paid (parent company shareholders) ( a )	7,517	9,986	8,228
Repayment of treasury shares of which buy-backs in view of their cancellation ( b )	9,167	7,711	1,823
Cash flow from operations excluding working capital (CFFO) ( c )	35,946	45,729	29,140
<b>Payout ratio = ( a+b ) / c</b>	<b>46.0%</b>	<b>37.2%</b>	<b>33.4%</b>

## 1.9.2 Liquidity and capital resources

### LONG-TERM AND SHORT-TERM CAPITAL

Long-term capital as of December 31, (in M\$)	2023	2022	2021
Shareholders' equity	119,453	114,570	114,999
Non-current financial debt	40,478	45,264	49,512
Non-current financial assets	(2,395)	(2,731)	(2,404)
<b>Total net non-current capital</b>	<b>157,536</b>	<b>157,103</b>	<b>162,107</b>
Short-term capital as of December 31 (in M\$)	2023	2022	2021
Current financial debt	9,590	15,502	15,035
Net current financial assets	(6,585)	(8,258)	(11,943)
<b>Net current financial debt</b>	<b>3,005</b>	<b>7,244</b>	<b>3,092</b>
Cash and cash equivalents	(27,263)	(33,026)	(21,342)

### CASH FLOW

(in M\$)	2023	2022	2021
Cash flow from operating activities	40,679	47,367	30,410
Gross investments	(24,860)	(19,802)	(16,589)
Total divestments	8,406	4,686	2,933
Other operations with non-controlling interests	(126)	(49)	652
<b>Net cash flow after working capital requirement changes</b>	<b>24,099</b>	<b>32,202</b>	<b>17,406</b>
Dividends paid <sup>(a)</sup>	(7,828)	(10,522)	(8,352)
Share buybacks	(9,167)	(7,711)	(1,823)
Gearing ratio on December 31 <sup>(b)</sup>	5.0%	7.0%	15.3%

(a) Including dividends paid to non-controlling minority interests.

(b) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 for reconciliation table.

The Company's net cash flow after working capital requirement changes was \$24,099 million in 2023, compared to \$32,202 million in 2022. This change was mainly due to a \$9.78 billion decrease in operating cash flow

before working capital changes (CFFO). The Company's gearing ratio excluding lease agreements amounted to 5.0% as of December 31, 2023.

### BORROWING REQUIREMENTS AND FUNDING STRUCTURE

The Company's policy consists in incurring long-term debt at a floating or fixed rate, depending on its general corporate needs and the interest rate environment at the time of issue, mainly in dollars or euros. Long-term interest rate and currency swaps may be entered into for the purpose of hedging bonds at the time of issuance, synthetically resulting in the incurrence of variable or fixed rate debt. In order to partially alter the interest rate exposure of its long-term indebtedness, the Company may also enter into long-term interest rate swaps on an ad-hoc basis.

Long-term financial indebtedness is generally raised by central corporate treasury entities either directly in dollars or euros, or in other currencies exchanged for dollars or euros through currency swaps at issuance, in accordance with the Company's general corporate needs.

As of December 31, 2023, the Company's long-term financial debt, after taking into account the effect of currency and interest rate swaps, was 92% in US dollars and 20% at floating rates; as of December 31, 2022, these ratios were 91% and 21%, respectively.

In addition to its ongoing bond issuance activity, TotalEnergies SE regularly issues perpetual subordinated notes in one or several tranches and also regularly launches tender offers on some of its perpetual subordinated notes as part of their early refinancing. In May 2023, TotalEnergies SE reimbursed €1 billion of perpetual subordinated notes which were reaching their repayment date, without refinancing them.

Thus, the outstanding amount of perpetual subordinated notes issued by TotalEnergies SE as of December 31, 2023, stood at €11.25 billion (amount of €12.25 billion as of December 31, 2022). The details of the portfolio of perpetual subordinated notes issued by TotalEnergies SE is disclosed in Note 9 of chapter 8, in the paragraph "Issuances of Perpetual subordinated notes".

In accordance with IAS 32 provisions "*Financial instruments – Presentation*" and given their characteristics (notably the absence of mandatory repayment and no obligation to pay a coupon except under certain circumstances specified into the documentation of the notes) the perpetual subordinated notes issued by TotalEnergies SE were accounted for as equity.

TotalEnergies has established standards for market transactions under which any banking counterparty must be approved in advance, based on an assessment of the counterparty's financial solidity (multi-criteria analysis including notably a review of its Credit Default Swap (CDS) level, credit ratings, which must be of high standing, and general financial situation).

An overall credit limit is set for each authorized financial counterparty and is allocated amongst the affiliates and the TotalEnergies central treasury entities, according to the financial needs.

To reduce the market valuation risk on its commitments, in particular relating to derivative financial instruments, the Treasury Department has entered into margin call agreements with its counterparties, in compliance with applicable regulations. Moreover, since December 21, 2018 and pursuant to Regulation (EU) No. 648/2012 on OTC derivatives, central counterparties and trade repositories (EMIR), any new interest rate

## CONDITIONS OF USE OF EXTERNAL FINANCINGS

As of December 31, 2023, the aggregate amount of the main committed credit facilities granted by international banks to TotalEnergies SE or some of its subsidiaries was \$11,988 million (compared to \$18,963 million as of December 31, 2022), of which \$11,605 million was unutilized (compared to \$18,510 million unutilized as of December 31, 2022).

TotalEnergies SE has committed credit facilities granted by international banks enabling it to benefit from significant liquidity reserves. As of December 31, 2023, these credit facilities amounted to \$10,559 million (compared to \$17,527 million as of December 31, 2022), of which \$10,559 million was unutilized (compared to \$17,527 million unutilized as of December 31, 2022).

## ANTICIPATED SOURCES OF FINANCING

Investments, working capital, dividend payments and buybacks of its own shares by the Corporation are financed by cash flow from operating activities, asset disposals and, if necessary, by net borrowings.

### 1.9.3 Trends and outlook

#### OUTLOOK

At the start of 2024, Brent prices are navigating around 80 \$/b in an uncertain economic environment. Oil markets are facing geopolitical tensions in the Middle East on one hand and non-OPEC production growth balanced by OPEC+ policy on the other hand. According to the IEA, global oil demand is anticipated to grow 1.2 Mb/d in 2024, which is in line with the average annual demand growth rate during 2000-2023 of 1.2%/y.

LNG markets should remain in tension due to very limited LNG capacity additions expected in 2024 (2%) and growing demand thanks to lower LNG prices. TotalEnergies expects LNG sales above 40 Mt over the year. Given the evolution of oil and gas prices in recent months and the lag effect on price formulas, TotalEnergies anticipates that its average LNG selling price should be stable around \$10/Mbtu in the first quarter 2024.

First quarter 2024 expected hydrocarbon production should be above 2.4 Mboe/d due to the start-up of Mero 2 in Brazil and the disposals of Canadian upstream assets, effective during fourth quarter 2023. For 2024, TotalEnergies anticipates hydrocarbon production will grow 2% compared to 2023 excluding Canada. Production will benefit from several additional project start-ups, including Tyra in Denmark and Anchor in the United States.

Full-year refining utilization rate is expected to increase to above 85% in 2024 with no major turnarounds planned.

#### RISKS AND UNCERTAINTIES

Due to the nature of its business, the Company's activities remain subject to the market risks (sensitivity to the environmental parameters of the oil and financial markets), industrial and environmental risks related to its operations, and to political or geopolitical risks stemming from the global presence of most of its activities.

hedging swap (excluding cross currency swaps) entered into by a TotalEnergies entity is now subject to central clearing.

Finally, since September 1, 2021, TotalEnergies has been applying Delegated Regulation (EU) N° 2016/2251 (supplementing Regulation (EU) N° 648/2012), regarding initial margin calls on certain OTC derivatives not cleared by a central counterparty.

The agreements underpinning credit facilities granted to TotalEnergies SE do not contain conditions related to the Corporation's financial ratios, to its credit ratings from specialized agencies, or to the occurrence of events that could have a material adverse effect on its financial position.

Credit facilities granted to the companies of the Company other than TotalEnergies SE are not intended to fund the Company's general corporate purposes; they are intended to fund either general corporate purposes of the borrowing affiliate, or a specific project.

For the coming years and based on the current financing conditions available in the financial markets, the Corporation intends to maintain this policy.

Momentum continues in Integrated Power growth in 2024 with cash flow before working capital (CFFO) forecasted to increase to between \$2.5 and \$3 billion. The increase is supported by net electricity generation increase to >45 TWh in the context of renewables gross installed capacity increasing by ~6 GW to 28 GW.

In 2024, TotalEnergies expects net investments of \$17-18 billion, of which \$5 billion dedicated to Integrated Power.

Confident in the strong fundamentals of the Company, which celebrates its 100 year anniversary in 2024, the Board of Directors confirmed a shareholder return policy for 2024 targeting >40% CFFO payout, which will combine an increase in interim dividends of 6.8% to €0.79/share and \$2 billion of share buybacks in the first quarter of 2024, in line with the following cash flow allocation priorities:

- a sustainable ordinary dividend through cycles, that was not cut during the Covid crisis, and whose increase is supported by underlying cash flow growth;
- investments to support of a strategy balanced between the various energies;
- maintaining a strong balance sheet;
- buybacks to share surplus cash flow generated at high prices.

Detailed information is given in the Risk Factors section (point 3.1 of chapter 3) of this Universal Registration Document. For more information on internal control and risk management procedures, also refer to point 3.3 of chapter 3.

## RUSSIA: SITUATION OF THE COMPANY AT MARCH 24, 2024

The Company presents in the section below an update on the situation since the invasion of Ukraine by Russia on February 24, 2022 and its impact on its activities carried out by TotalEnergies in connection with Russia.

### Principal activities of TotalEnergies in connection with Russia and principles of conduct

On **March 1, 2022**, TotalEnergies announced that it condemns Russia's military aggression against Ukraine, supports the scope and strength of the sanctions put in place by Europe that will be implemented by the Company regardless of the consequences on its asset management, and that it will no longer provide capital for new projects in Russia.

On **March 22, 2022**, considering the worsening conflict, TotalEnergies reaffirmed its firmest condemnation of Russia's military aggression against Ukraine, which has tragic consequences for the Ukrainian population and threatens peace in Europe. To act responsibly, as a European company and in accordance with its values, **the Company defined clear principles of conduct for managing its Russian related business:**

- Ensure strict compliance with current and future European sanctions, no matter what the consequences on the management of its assets in Russia, and gradually suspend its activities in Russia, while assuring its workforce's safety,
- Provide no further capital of TotalEnergies SE for the development of projects in Russia,
- Do not reverse the purpose of sanctions against Russia: do not unwarrantedly transfer value to Russian interests by withdrawing from assets,
- Help ensure the security of the European continent's energy supply within the framework defined by European authorities, and
- No longer enter into or renew contracts to purchase Russian oil and petroleum products, in order to halt all its purchases of Russian oil and petroleum products as soon as possible and by the end of 2022 at the latest. TotalEnergies announced that since February 25, 2022, it would not trade Russian oil or oil products on the spot markets, including spot trading of Russian natural gas or LNG.

TotalEnergies restated that it did not operate any oil or gas field, or Liquefied Natural Gas (LNG) plant, in Russia and that was a minority shareholder, at that time, in a number of non-state-owned Russian companies: Novatek (19.4%)<sup>(1)</sup>, Yamal LNG (20%)<sup>(2)</sup>, Arctic LNG 2 (10%)<sup>(3)</sup>, TernefteGaz (49%)<sup>(4)</sup> and partner with 20% in the Kharyaga joint venture operated by Zarubezhneft<sup>(5)</sup>, without any activity or operational responsibility on those sites.

On the same day, concerning the Arctic LNG 2 project in particular, given the uncertainty created by technological and financial sanctions on the ability to carry out the Arctic LNG 2 project currently under construction and their probable tightening with the worsening conflict, TotalEnergies SE decided no longer to record proven reserves for Arctic LNG 2 in its accounts.

On **April 27, 2022**, considering the new sanctions adopted by the European authorities on April 8, 2022, notably prohibiting export from European Union countries of goods and technology for use in the liquefaction of natural gas benefitting a Russian company, it appeared that these new prohibitions constituted additional risks on the execution of the Arctic LNG 2 project. As a result, TotalEnergies decided to record in its accounts, as of March 31, 2022, an impairment of 4.1 B\$, concerning notably Arctic LNG 2.

On **July 28, 2022**, in the context of its second quarter and first half 2022 results, TotalEnergies announced that had recorded in its accounts a new \$3.5 billion impairment charge related mainly to the potential impact of international sanctions on the value of its Novatek stake.

On **August 26, 2022**, TotalEnergies restated that in the context of the implementation of its principles of conduct, it would continue its duty to contribute toward securing Europe's gas supply from the Yamal LNG plant within the framework of long-term contracts that it must honor as long as Europe's governments do not impose sanctions on Russian gas.

TotalEnergies had also announced the gradual suspension of its activities in Russia that do not contribute to the security of energy supply of Europe. This included assets producing oil (Kharyaga field) and gas for the local Russian market (Termokarstovoye field) as well as other local businesses (lubricants, batteries) which were mothballed in the first half of 2022.

In accordance with these principles, TotalEnergies had announced on July 6, 2022 the sale of its remaining 20% interest in the Kharyaga oil project to Zarubezhneft. This sale was finalized on August 3, 2022. The Company also announced that it had agreed on July 18, 2022, to sell to Novatek TotalEnergies' 49% interest in Terneftegaz, which operates the Termokarstovoye gas and condensates field in Russia, on economic terms enabling TotalEnergies to recover the outstanding amounts invested in the field. This sale was finalized on September 15, 2022.

On **October 27, 2022**, in the context of its third quarter 2022 results, TotalEnergies announced that had recorded in its accounts a new \$3.1 billion impairment charge related mainly to the potential impact of international sanctions on the value of its Novatek stake.

On **December 9, 2022**, TotalEnergies reiterated that it holds a 19.4% stake in Novatek, that it cannot sell given the shareholders' agreements in effect, as it is forbidden for TotalEnergies to sell any asset to one of Novatek's main shareholders who is under sanctions.

The Company highlighted that in view of the European sanctions in force since the beginning of the war, the two directors representing TotalEnergies on the board of directors of Novatek have to abstain from voting in meetings of the board of directors of this company, in particular on financial matters and that they are therefore no longer in a position to fully carry out their duties on the board, which might become an issue for the governance of this company.

(1) Novatek is a Russian company listed on the Moscow stock exchange in which TotalEnergies held an interest of 19.4% as of December 31, 2023.

(2) Yamal LNG is a Russian company jointly owned by Novatek, TotalEnergies EP Yamal (20.02%), YAYM Limited, and China National Oil and Gas Exploration Development Company (CNOOC), a subsidiary of CNPC, as of December 31, 2023.

(3) Arctic LNG 2 is a Russian company jointly owned by Novatek, TotalEnergies EP Salmanov (10%), CNOOC Dawn Light Limited, CEPR Limited and Japan Arctic LNG, as of December 31, 2023.

(4) Terneftegaz is a company jointly owned by Novatek, and TotalEnergies EP Termokarstovoye SAS (49%) before the sale of its interest finalized on September 15, 2022.

(5) Kharyaga is a non-incorporated joint venture with Zarubezhneft (operator, 40%), Equinor (30%) and Nenets Oil Company (10%). TotalEnergies finalized on August 3, 2022 the sale of its 20% interest in Kharyaga à Zarubezhneft.

Under these circumstances, the Board of Directors of TotalEnergies decided to withdraw the representatives of the Company from the board of Novatek with immediate effect. As a result, as the criteria for significant influence within the meaning of the accounting regulations that apply to the Company are not met, TotalEnergies will no longer equity account for its 19.4% stake in Novatek in the Company's accounts. In addition, TotalEnergies will no longer book reserves for its interest in Novatek.

On **February 8, 2023**, TotalEnergies announced that it had recorded in its accounts for the fourth quarter results a new \$4.1 billion impairment charge related to the deconsolidation of Novatek.

Russian assets were fully impaired in 2022, with the exception of the shares held in the Yamal LNG company. In total, the impact of impairments and provisions recorded in 2022 due to the Russo-Ukrainian conflict amounted to \$(14,756) million in TotalEnergies' net result.

On **November 2, 2023**, the Arctic LNG 2 company was placed under sanctions by the US authorities. TotalEnergies initiated the contractual suspension procedure provided for in the Arctic LNG 2 shareholders' agreement and that of force majeure for the LNG purchase contract from Arctic LNG 2. These procedures, upon their notification, resulted in the suspension of TotalEnergies' rights and obligations under these agreements, thus implying in particular the suspension of the participation of TotalEnergies' representatives in the governance bodies of Arctic LNG 2. As a result, the 10% interest held by TotalEnergies in Arctic LNG 2 is no longer accounted for using the equity method in the Company's accounts as of December 31, 2023 but is recorded under "other investments". As mentioned above, as the shares in Arctic LNG 2 were fully impaired in 2022, this deconsolidation had no impact on the 2023 financial statements.

The Company has also ensured the absence of depreciation to be accounted for on Yamal LNG, by testing the value of its equity accounted investment which amounts to \$4,560 million as of December 31, 2023.

With regard to the participation in Novatek, in the absence of any new event, the assessments and judgments taken into account on December 31, 2022 in the accounting and valuation method remain unchanged at December 31, 2023. As the criteria for significant influence are no longer met within the meaning of IAS 28 "Investments in associates and joint ventures", TotalEnergies' 19.4% interest in Novatek has no longer been accounted for using the equity method in the Company's financial statements since the end of the 4<sup>th</sup> quarter of 2022.

Depending on the developments of the Russian-Ukrainian conflict and the measures that the European and American authorities may take, the activities of TotalEnergies in Russia, in particular those relating to the Yamal LNG asset, could be affected in the future.

The table below presents TotalEnergies' producing assets and entities in Russia as of December 31, 2023, the interest held in the asset or entities (TotalEnergies share in %).

#### Producing assets as of December 31, 2023 in Russia

Exploration & Production segment	Integrated LNG segment
<b>Non-operated:</b> None TotalEnergies no longer equity account for its 19.4% stake in Novatek as of December, 31, 2022.	<b>Non-operated:</b> Yamal LNG (20.02%)

The tables below present the average daily production of liquids and natural gas of TotalEnergies, in Russia, as well as the Upstream Capital Employed per project in Russia as of December 31, 2023.

	Liquids kb/d <sup>(a)</sup>	Natural gas Mcf/d <sup>(b)</sup>	Total kboe/d
Novatek	5	577	111
Yamal LNG	5	577	111
<b>Total</b>	<b>5</b>	<b>575</b>	<b>110.5</b>

(a) Liquids include crude oil, bitumen, condensates, and natural gas liquids (NGL).  
(b) Including fuel gas.

#### Upstream Capital Employed in Russia (M\$)

	December 31, 2023	December 31, 2022
Novatek	0	0
Yamal LNG	4,560	4,626
Arctic LNG 2	0	0
Provisions	(1,822)	(1,752)
<b>Total Upstream Capital Employed</b>	<b>2,738</b>	<b>2,874</b>

## Activities in Russia in 2023

In the Integrated LNG segment, LNG production in Russia was from the Yamal LNG project. This development project of the onshore South Tambey field (gas and condensates) located on the Yamal peninsula was launched in 2013 by the company Yamal LNG. TotalEnergies holds a direct 20.02% interest in the project through its subsidiary TotalEnergies EP Yamal. The project includes a four-train gas liquefaction plant with a nominal capacity of 17.4 Mt/y of LNG.

In addition, TotalEnergies hold a 10% direct interest in the Arctic LNG 2 project (19.8 Mt/y, under construction) since 2019 through its subsidiary TotalEnergies EP Salmanov.

Since July 2021, TotalEnergies has also held a direct interest of 10% via TotalEnergies EP Transshipment in Arctic Transshipment<sup>(1)</sup>, which was established to serve Arctic LNG 2 in order to enable the transfer of LNG cargoes from Arctic LNG carriers (icebreakers) to conventional LNG carriers at transshipment terminals in Murmansk and Kamchatka.

Given the uncertainties that technological and financial sanctions pose on the ability to complete the Arctic LNG 2 project, TotalEnergies has ceased to recognize as proved reserves the resources associated with the Arctic LNG 2 project since December 31, 2021, and has provisioned in its accounts the value of its investments as of March 31, 2022. TotalEnergies no longer recorded reserves from its interest in Novatek.

The American Office of Foreign Assets Control (OFAC) designated, on September 14, 2023 and November 2, 2023, respectively, Arctic Transshipment and Arctic LNG 2 as Specially Designated Nationals with immediate effect subject to temporary exceptions under licenses issued by the OFAC. As a consequence of these designations, US persons are prohibited to deal with those two entities. All non-US persons are exposed to the risk of US secondary sanctions if they provide material support to these entities. Since April 18, 2023, TotalEnergies EP Transshipment has not participated in any governance body and has not paid any cash calls to Arctic Transshipment. The Company is party to an LNG purchase contract with Arctic LNG 2, for which the Company had indicated that it could not terminate it early without exposing itself financially to significant consequences in the absence of economic sanctions, and that it would exercise the force majeure clauses provided for in the contract to interrupt it if sanctions were imposed. On November 2, 2023, Arctic LNG 2 was placed under sanctions by the US authorities. As a result, in accordance with what it announced, on November 7, 2023, TotalEnergies initiated the contractual suspension procedure provided for in the Arctic LNG 2 shareholders' agreement and the force majeure procedure for the LNG purchase contract with Arctic LNG 2. Upon notification of these procedures, TotalEnergies' rights and obligations under these contracts were suspended (refer to point 3.2. of Chapter 3).

In the Marketing & Services segment, TotalEnergies stopped producing lubricants in Russia at the end of May 2022, in accordance with its principles of conduct published on March 22, 2022 and announced the sale of these activities in March 2023 to a company created by the Russian management team of the subsidiary TotalEnergies Marketing Russia.

### 1.9.4 Significant changes

Significant changes in the Company's financial and commercial situation since December 31, 2023, the closing date of the last financial year for which audited financial statements have been published by the

Corporation, are those mentioned above in point 1.9.3, in the Business overview (chapter 2), and in the description of legal and arbitration procedures (point 3.5 of chapter 3).

(1) Arctic Transshipment is a Russian company jointly owned by Novatek (90%) and TotalEnergies EP Transshipment (10%) at December 31, 2023.



# 2

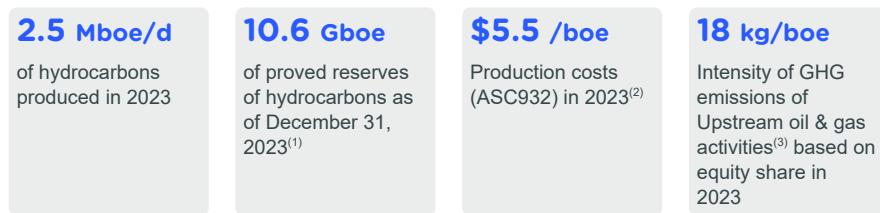
## Business overview for fiscal year 2023

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## 2.1 Upstream oil and gas activities

TotalEnergies' Upstream oil and gas activities encompass the oil and gas exploration and production activities of the Exploration & Production (E&P) and Integrated LNG segments. They are conducted in about 50 countries.

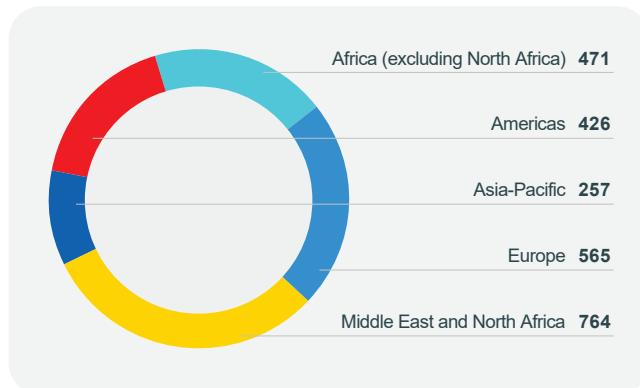
### Main indicators



### Production<sup>(4)</sup>

Hydrocarbon production	2023	2022	2021
Combined production (kboe/d)	2,483	2,765	2,819
Oil (including bitumen) (kb/d)	1,388	1,307	1,274
Gas (including condensates and associated NGL) (kboe/d)	1,095	1,458	1,545
Hydrocarbon production	2023	2022	2021
Combined production (kboe/d)	2,483	2,765	2,819
Liquids (kb/d)	1,550	1,519	1,500
Gas (Mcf/d)	5,028	6,759	7,203
Hydrocarbon production excluding Novatek	2023	2022	2021
Combined production (kboe/d)	2,483	2,437	2,508

### Hydrocarbon production by geographical zone in 2023 (kboe/d)



Hydrocarbon production was 2,483 thousand barrels of oil equivalent per day in 2023, up 2% year-on-year (excluding Novatek) and was comprised of:

- +4% due to start-ups and ramp-ups, including Johan Sverdrup Phase 2 in Norway, Mero 1 in Brazil, Ikike in Nigeria, Block 10 in Oman, and Absheron in Azerbaijan;
- +1% due to improved security conditions in Nigeria and Libya;
- +1% due to lower planned maintenance and unplanned shutdowns, including at the Kashagan field in Kazakhstan;

— -1% portfolio effect related to the end of the Bongkot operating licenses in Thailand, exit from Termokarstovoye in Russia, disposal of the Canadian oil sands assets and effective withdrawal from Myanmar, partially offset by the entries in the producing fields of SARB Umm Lulu in the United Arab Emirates, of Sépia and Atapu in Brazil, of Ratawi in Iraq, and the increased participation in the Waha concessions in Libya;

— -3% due to the natural field declines.

(1) Based on a Brent price of \$83.27/b (reference price in 2023) in accordance with the rules established by the Securities and Exchange Commission (see point 2.1.1 of this chapter).

(2) Production costs for the consolidated subsidiaries, calculated in accordance with ASC 932 standards, excluding special items (refer to point 9.1.5 of chapter 9).

(3) Excluding LNG assets. The GHG emissions intensity of Upstream oil & gas activities is reported on the asset scope, depending on the share of TotalEnergies stake in each asset, whether or not it is operated by the Company.

(4) TotalEnergies production = EP production + production of Integrated LPG.

### Technical costs<sup>(a)</sup>

	2023	2022	2021
Production costs (\$/boe)	5.5	5.5	5.3
Exploration costs (\$/boe)	0.7	0.7	0.9
DD&A (\$/boe)	10.2	11.1	11.5
Technical costs (\$/boe)	16.4	17.3	17.7

(a) Technical costs for the consolidated subsidiaries, calculated in accordance with ASC 932<sup>(1)</sup> standards, excluding special items (refer to point 9.1.5 of chapter 9).

Production costs of the consolidated subsidiaries, calculated in accordance with ASC 932<sup>(1)</sup>, amounted to \$5.5/boe in 2023, same in 2022 and compared to \$5.3/boe in 2021.

### Liquids and gas sale price

Price realizations <sup>(a)</sup>	2023	2022	2021
Average liquids sales price (\$/b)	76.2	91.3	65.0
Average gas sales price (\$/Mbtu)	6.64	13.15	6.60

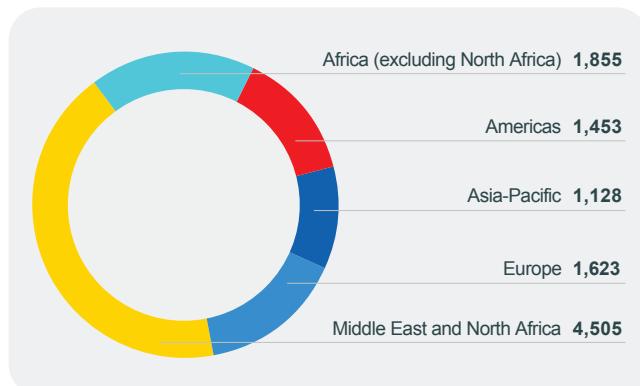
(a) Consolidated subsidiaries.

### Proved reserves

As of December 31	2023	2022	2021
Hydrocarbon reserves (Mboe)	10,564	10,190	12,062
Oil (including bitumen) (Mb)	4,731	5,183	5,050
Gas (including Condensates and associated NGL) (Mboe)	5,833	5,007	7,012

As of December 31	2023	2022	2021
Hydrocarbon reserves (Mboe)	10,564	10,190	12,062
Liquids (Mb)	5,487	5,716	5,843
Gas (Bcf)	27,517	24,093	33,450

### Hydrocarbon proved reserves by geographical zone (in Mboe)



Proved reserves of hydrocarbons established under the SEC rules (Brent at \$83.27/b in 2023) were 10,564 Mboe as of December 31, 2023. The proved reserve replacement rate<sup>(2)</sup>, based on SEC rules (Brent at \$83.27/b in 2023), was 141% in 2023 and 40% over three years. Excluding Novatek, the 3-years proved reserves replacement rates was 106%.

## 2.1.1 Oil and gas reserves

The definitions used for proved, proved developed and proved undeveloped crude oil and natural gas reserves are in accordance with the United States Securities & Exchange Commission (SEC) Rule 4-10 of Regulation S-X as amended by the SEC Modernization of Oil and Gas Reporting release issued on December 31, 2008. Proved reserves are estimated using geological and engineering data to determine with reasonable certainty whether the crude oil or natural gas in known reservoirs is economically producible under existing regulatory, economic and operating conditions.

TotalEnergies' oil and natural gas reserves are consolidated annually, taking into account among other factors, levels of production, field

reassessments, additional reserves from discoveries and extensions, disposals and acquisitions of reserves and other economic factors.

Unless otherwise indicated, any reference to TotalEnergies' proved reserves, proved developed reserves, proved undeveloped reserves and production reflects the TotalEnergies' entire share of such reserves or such production. TotalEnergies' worldwide proved reserves include the proved reserves of its consolidated entities as well as its proportionate share of the proved reserves of equity affiliates. The reserves estimation process involves making subjective judgments. Consequently, estimates of reserves are not exact measurements and are subject to revision under well-established control procedures.

(1) FASB Accounting Standards Codification 932, Extractive industries – Oil and Gas.

(2) Variation of reserves, excluding production: (revisions + discoveries & extensions + acquisitions - disposals)/production for the period.

The reserves booking process requires, among other actions:

- that an internal peer review of technical evaluations is carried out to ensure that the SEC definitions and guidance are followed; and

### **PROVED RESERVES FOR 2023, 2022 AND 2021**

In accordance with the amended Rule 4-10 of SEC Regulation S-X, proved reserves as of December 31 are calculated using a 12-month average price determined as the unweighted arithmetic average of the first-day-of-the-month price for each month of the relevant year, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions. The average reference prices for Brent crude for 2023, 2022 and 2021 were, respectively, \$83.27/b, \$101.24/b and \$69.23/b.

As of December 31, 2023, TotalEnergies' combined proved reserves of oil and gas were 10,564 Mboe (of which 6,835 Mboe were proved developed reserves) compared to 10,190 Mboe (of which 6,990 Mboe were proved developed reserves) as of December 31, 2022. As of December 31, 2023, the reserves were located in Africa (mainly in Angola, Mozambique, Nigeria and Uganda), the Americas (mainly in Argentina, Brazil and the United States), Asia-Pacific (mainly in Australia and Kazakhstan), Europe (mainly in Denmark, Norway, and the United

### **RESERVE SENSITIVITY TO OIL AND GAS PRICES**

Changes in the price used as a reference for the proved reserves estimation result in non-proportionate inverse changes in proved reserves associated with production sharing and risked service contracts (which together represent approximately 27% of TotalEnergies' reserves as of December 31, 2023). Under such contracts, TotalEnergies is entitled to a portion of the production, the sale of which is meant to cover expenses incurred by TotalEnergies. The greater the oil prices decrease, the greater the number of barrels necessary to cover the same amount of expenses. In addition, the number of barrels economically producible under these contracts may vary according to criteria such as cumulative production, the rate of return on investment or the income-cumulative

- that prior to booking proved reserves, management makes the necessary funding commitments required for their development.

For further information concerning the reserves and their evaluation process, refer to points 9.1 and 9.2 of chapter 9.

Kingdom) and the Middle East and North Africa (mainly in Libya, Qatar, the United Arab Emirates and Yemen).

Natural gas and related products (condensates and natural gas liquids) represent approximately 55% of these reserves, and crude oil 45%.

Discoveries of new fields and extensions of existing fields added, excluding Novatek, 716 Mboe to TotalEnergies' proved reserves during the three years 2021, 2022 and 2023 (before deducting production and sales of reserves and without adding any reserves acquired during this period). The revisions over the same period, excluding Novatek, are +1,504 Mboe, mainly due to fields performance, to Arctic LNG 2 project reserves deconsolidation and to the net impact of the changes in hydrocarbon prices in 2021 (increase), in 2022 (increase) and in 2023 (decrease).

expenses ratio. This increase in reserves is partly offset by a reduction of the duration over which fields are economically producible. However, the effect of a reduction in the duration of production is usually inferior to the impact of the drop in prices in production sharing contracts or risked service contracts and consequently lower prices usually lead to an increase in TotalEnergies' reserves, and vice versa.

Finally, for any type of contract, a significant decrease in the reference price of petroleum products that negatively impacts projects' profitability may lead to a reduction in proved reserves, and vice versa.

## **2.1.2 Exploration**

TotalEnergies evaluates exploration opportunities based on a variety of geological, technical, political, economic (including tax and contractual terms), environmental and societal factors.

In line with the Company's strategy, TotalEnergies has increased the selectivity of its exploration investments with a greater focus on oil prospects with low technical costs, low GHG emissions and which can be put into production quickly, and on gas targets, in areas where they can provide feedstock to existing LNG infrastructure and future projects. In addition to these criteria, the Company ensures to balance its exploration investments between mature regions (35%; with a relatively low level of geological risk, situated near existing producing fields and infrastructure), emerging regions (50%; in under-explored areas but where the presence of hydrocarbons is already proven), and in frontier basins (15%; where there is a chance of making major discoveries).

## **2.1.3 Hydrocarbon production**

The average daily production of liquids and natural gas was 2,483 kboe/d in 2023, compared to 2,765 kboe/d in 2022 and 2,819 kboe/d in 2021.

Gas and associated products (condensates and natural gas liquids) represented approximately 44% of TotalEnergies' overall oil and gas production in 2023, compared to 53% in 2022 and 55% in 2021. Crude oil and bitumen represented 56% in 2023, compared to 47% in 2022 and 45% in 2021.

The tables on the following pages set forth TotalEnergies' annual and average daily production of liquids and natural gas by geographic zone and for each of the last three fiscal years.

This approach has led to numerous significant discoveries since 2021, notably in Suriname (discovery of Sapakara South and Krabdagu on block 58, 50%), in Cyprus (discovery of Cronos on block 6, 50%) and in Namibia (discovery of Venus on block 2913B, 40%). In addition, discoveries were made near existing infrastructure in Nigeria (discovery of Ntokon on license OML102, 40%)

In 2023, the Company's exploration expenditure was \$880 million compared to \$800 million in 2022 and 2021, in addition, appraisal activities were mainly devoted to the Venus discovery in Namibia (Venus-1X well test, drilling and testing of Venus-1A) and the completion of the appraisal in Suriname (drilling of Krabdagu-2 and Krabdagu-3).

Consistent with industry practice, TotalEnergies often holds a percentage interest in its fields with the balance being held by joint-venture partners (which may include other international oil companies, state-owned oil companies or public entities). TotalEnergies entities may frequently act as the operator, *i.e.*, meaning the party responsible for the execution of technical production on the fields in which it holds an interest). For further information, refer to the table on producing assets by geographical zone below.

In 2023, as in 2022 and 2021, the Trading & Shipping unit of the Refining & Chemicals segment marketed substantially all of TotalEnergies' liquids production (refer to the table regarding Trading & Shipping's crude oil

sales and supply and petroleum products sales in Section 2.5.2.1 of this chapter).

## PRODUCTION BY GEOGRAPHICAL ZONE

The following table sets forth TotalEnergies' annual liquids and natural gas production by geographical zone.

	2023			2022			2021		
	Liquids Mb <sup>(a)</sup>	Natural gas Bcf <sup>(b)(c)</sup>	Total Mboe	Liquids Mb <sup>(a)</sup>	Natural gas Bcf <sup>(b)(c)</sup>	Total Mboe	Liquids Mb <sup>(a)</sup>	Natural gas Bcf <sup>(b)(c)</sup>	Total Mboe
<b>Africa (excl. North Africa)</b>	<b>127</b>	<b>224</b>	<b>172</b>	<b>131</b>	<b>213</b>	<b>173</b>	<b>145</b>	<b>248</b>	<b>194</b>
Angola	52	45	61	56	44	65	55	47	64
Republic of the Congo	24	7	25	26	9	27	32	11	34
Gabon	6	2	6	6	2	6	8	2	9
Nigeria	45	170	80	43	158	75	50	188	87
<b>Americas</b>	<b>92</b>	<b>356</b>	<b>155</b>	<b>87</b>	<b>383</b>	<b>155</b>	<b>65</b>	<b>396</b>	<b>136</b>
Argentina	3	161	32	2	160	31	2	151	30
Bolivia	2	64	13	2	81	16	2	87	18
Brazil	48	6	49	37	4	38	18	1	18
Canada	31	—	31	37	—	37	33	—	33
United States	8	125	30	9	127	31	9	137	33
Venezuela	—	—	—	—	11	2	1	20	4
<b>Asia-Pacific</b>	<b>39</b>	<b>294</b>	<b>94</b>	<b>33</b>	<b>350</b>	<b>96</b>	<b>40</b>	<b>418</b>	<b>113</b>
Australia	11	176	44	11	163	41	11	167	42
Brunei	1	15	3	<1	16	4	1	18	4
China	<1	62	12	<1	54	10	<1	47	9
Indonesia	—	2	<1	—	3	1	<1	4	1
Kazakhstan	27	28	33	20	18	23	25	26	30
Myanmar	—	—	—	—	23	3	—	46	6
Thailand	<1	11	2	2	73	14	3	110	21
<b>Europe</b>	<b>85</b>	<b>657</b>	<b>206</b>	<b>102</b>	<b>1,251</b>	<b>335</b>	<b>109</b>	<b>1,260</b>	<b>343</b>
Azerbaijan	2	19	5	—	—	—	—	—	—
Denmark	8	18	12	9	19	12	9	19	12
Italy	7	1	7	5	1	6	7	1	7
Norway	50	199	87	45	187	80	49	168	80
Netherlands	<1	19	3	<1	25	4	<1	27	5
United Kingdom	16	190	52	19	229	62	17	217	58
Russia	2	211	40	24	790	171	27	828	181
<b>Middle East and North Africa</b>	<b>223</b>	<b>304</b>	<b>279</b>	<b>201</b>	<b>270</b>	<b>250</b>	<b>188</b>	<b>306</b>	<b>243</b>
Algeria	8	55	19	11	62	22	10	48	19
Egypt	<1	13	3	<1	7	1	—	—	—
United Arab Emirates	127	12	129	114	13	116	99	16	102
Iraq	6	2	6	4	1	4	5	1	5
Libya	32	16	35	26	11	29	29	8	30
Oman	10	53	20	10	27	15	9	26	14
Qatar	40	153	67	36	149	63	36	207	73
Yemen	—	—	—	<1	—	<1	—	—	—
<b>Total production</b>	<b>566</b>	<b>1,835</b>	<b>906</b>	<b>554</b>	<b>2,467</b>	<b>1,009</b>	<b>547</b>	<b>2,628</b>	<b>1,029</b>
<b>Including share of equity affiliates</b>	<b>55</b>	<b>366</b>	<b>122</b>	<b>75</b>	<b>942</b>	<b>250</b>	<b>75</b>	<b>1,037</b>	<b>267</b>
Angola	2	28	7	2	25	6	1	29	7
United Arab Emirates	9	12	11	9	12	12	9	14	11
Oman	9	27	15	10	27	15	9	26	14
Qatar	33	88	49	31	88	47	29	140	54
Russia	2	211	40	23	790	170	26	828	180
Venezuela	—	—	—	—	—	—	1	<1	1

(a) Liquids include crude oil, bitumen, condensates, and natural gas liquids (NGL).

(b) Including fuel gas (144 Bcf in 2023, 179 Bcf in 2022 and in 2021).

(c) Gas conversion ratio: 1 boe = 1 b of crude oil = 5,388 cf of gas in 2023 (5,422 cf of gas in 2022 and 5,458 cf of gas in 2021).

The following table sets forth TotalEnergies' average daily liquids and natural gas production by geographical zone.

	2023			2022			2021		
	Liquids kb/d <sup>(a)</sup>	Natural gas Mcf/d <sup>(b)(c)</sup>	Total kboe/d	Liquids kb/d <sup>(a)</sup>	Natural gas Mcf/d <sup>(b)(c)</sup>	Total kboe/d	Liquids kb/d <sup>(a)</sup>	Natural gas Mcf/d <sup>(b)(c)</sup>	Total kboe/d
<b>Africa (excluding North Africa)</b>	<b>348</b>	<b>614</b>	<b>471</b>	<b>358</b>	<b>584</b>	<b>474</b>	<b>398</b>	<b>681</b>	<b>532</b>
Angola	143	122	166	155	120	178	150	128	175
Republic of the Congo	65	20	69	70	26	75	88	32	94
Gabon	16	5	17	16	5	17	23	4	24
Nigeria	124	467	219	117	433	204	137	517	239
<b>Americas</b>	<b>251</b>	<b>975</b>	<b>426</b>	<b>238</b>	<b>1,048</b>	<b>425</b>	<b>179</b>	<b>1,086</b>	<b>372</b>
Argentina	7	442	87	6	438	85	7	413	81
Bolivia	4	175	35	5	223	45	6	238	49
Brazil	132	17	135	102	10	104	48	3	49
Canada	86	—	86	101	—	101	91	—	91
United States	22	341	83	24	347	85	25	377	92
Venezuela	—	—	—	—	30	5	2	55	10
<b>Asia-Pacific</b>	<b>107</b>	<b>805</b>	<b>257</b>	<b>91</b>	<b>960</b>	<b>262</b>	<b>107</b>	<b>1,145</b>	<b>307</b>
Australia	31	482	120	30	447	113	31	459	116
Brunei	1	42	9	1	45	10	1	50	11
China	<1	170	31	<1	147	27	<1	129	24
Indonesia	—	5	1	—	8	1	<1	11	2
Kazakhstan	74	76	90	54	49	64	67	71	81
Myanmar	—	—	—	—	64	8	—	125	16
Thailand	1	30	6	6	200	39	8	300	57
<b>Europe</b>	<b>232</b>	<b>1,801</b>	<b>565</b>	<b>280</b>	<b>3,427</b>	<b>918</b>	<b>300</b>	<b>3,453</b>	<b>941</b>
Azerbaijan	5	53	14	—	—	—	—	—	—
Denmark	22	50	32	24	51	34	24	52	34
Italy	18	2	18	15	2	15	18	3	19
Norway	138	546	239	123	514	218	135	462	220
Netherlands	<1	52	9	<1	69	12	<1	73	13
United Kingdom	44	521	142	53	626	171	48	594	159
Russia	5	577	111	65	2,165	468	75	2,269	496
<b>Middle East and North Africa</b>	<b>612</b>	<b>833</b>	<b>764</b>	<b>552</b>	<b>740</b>	<b>686</b>	<b>516</b>	<b>838</b>	<b>667</b>
Algeria	24	151	51	31	169	61	28	132	51
Egypt	<1	37	7	<1	19	3	—	—	—
United Arab Emirates	347	34	353	311	35	318	272	42	280
Iraq	17	4	18	11	4	12	13	3	14
Libya	88	42	96	73	32	79	80	23	84
Oman	28	145	55	26	74	40	25	72	39
Qatar	108	420	184	100	407	173	98	566	199
Yemen	—	—	—	<1	—	<1	—	—	—
<b>Total production</b>	<b>1,550</b>	<b>5,028</b>	<b>2,483</b>	<b>1,519</b>	<b>6,759</b>	<b>2,765</b>	<b>1,500</b>	<b>7,203</b>	<b>2,819</b>
<b>Including share of equity affiliates</b>	<b>150</b>	<b>1,004</b>	<b>335</b>	<b>203</b>	<b>2,581</b>	<b>682</b>	<b>206</b>	<b>2,842</b>	<b>732</b>
Angola	4	77	19	4	69	17	4	78	19
United Arab Emirates	24	34	30	25	34	31	24	40	31
Oman	26	73	40	26	74	40	25	72	39
Qatar	91	243	135	84	240	128	80	385	149
Russia	5	577	111	64	2,164	466	71	2,267	492
Venezuela	—	—	—	—	—	—	2	<1	2

(a) Liquids include crude oil, bitumen, condensates, and natural gas liquids (NGL).

(b) Including fuel gas (394 Mcf/d in 2023, 490 Mcf/d in 2022 and in 2021).

(c) Gas conversion ratio: 1 boe = 1 b of crude oil = 5,388 cf of gas in 2023, (5,422 cf of gas in 2022 and 5,458 cf of gas in 2021).

## PRODUCING ASSETS BY GEOGRAPHICAL ZONE

The table below shows TotalEnergies' producing assets at December 31, 2023<sup>(1)</sup> by geographical zone, the year in which TotalEnergies' activities started in the country, the interest held in the asset (TotalEnergies' stake in %) and whether TotalEnergies operates the asset.

Africa (excluding North Africa) Exploration & Production segment		Integrated LNG segment
<b>Angola</b> (1953)	<b>Operated:</b> Girassol, Dalia, Pazflor, CLOV (Block 17) (38.00%), Kaombo (Block 32) (30.00%)	
	<b>Non-operated:</b> Cabinda Block 0 (10.00%)	<b>Non-operated:</b> Angola LNG (13.60%)
<b>Gabon</b> (1928)	<b>Operated:</b> Baudroie Marine G5-143 (90.00%), Pointe Clairette Cap Lopez G6-5 (100.00%), Grand Anguille Marine G6-16 (100.00%), N'Tchengué G6-9 (100.00%), N'Tchengué Océan G6-14 (100.00%), Port Gentil Océan G6-15 (100.00%), Torpille G6-17 (100.00%)	
<b>Nigeria</b> (1962)	<b>Operated:</b> OML 99 Amenam-Kpono (30.40%), OML 99 Ikike (40.00%), OML 100 (40.00%), OML 102 Ofon (40.00%), PML 2/3 (ex OML 130), Akpo/Egina (24.00%)	<b>Operated:</b> OML 58 (40.00%)
	<b>Non-operated:</b> Shell Petroleum Development Company (SPDC) (10.00%), OML 118 Bonga (12.50%), OML 138 (20.00%)	<b>Non-operated:</b> Nigeria LNG (15.00%)
<b>Republic of the Congo</b> (1968)	<b>Operated:</b> Moho Bilondo (53.50%), Moho Nord (53.50%), Nkossa (53.50%), Nsoko (53.50%), Sendji (55.25%), Yanga (55.25%)	
	<b>Non-operated:</b> Lianzi (26.75%)	
Americas		Integrated LNG segment
<b>Argentina</b> (1978)	<b>Operated:</b> Aguada Pichana Este – Mulichinco (27.27%), Aguada Pichana Este – Vaca Muerta (55.00%), Aguada San Roque (24.71%), Rincon La Ceniza (45.00%), La Escalonada (45.00%), Aries (37.50%), Cañadon Alfa Complex (37.50%), Carina (37.50%), Hidra (37.50%), Kaus (37.50%), Vega Pleyade (37.50%)	
<b>Bolivia</b> (1995)	<b>Operated:</b> Incahuasi (50.00%)	
	<b>Non-operated:</b> San Alberto (15.00%), San Antonio (15.00%), Itaú (41.00%)	
<b>Brazil</b> (1975)	<b>Operated:</b> Lapa (45.00%)	
	<b>Non-operated:</b> Libra (19.3%), Iara (22.50%), Atapu ToR Surplus (22.50%), Sepia ToR Surplus (28.00%)	
<b>United States</b> (1957)	<b>Non-operated:</b> Tahiti (17.00%), Jack (25.00%)	<b>Operated:</b> several assets in the Barnett basin (95% on average)
Asia-Pacific		Integrated LNG segment
<b>Australia</b> (2006)		<b>Not operated:</b> several assets in the GLNG (27.50%) <sup>(a)</sup> , Ichthys (26.00%)
<b>Brunei</b> (1986)	<b>Operated:</b> Maharaja Lela Jamalulalam (37.50%)	
<b>China</b> (2006)	<b>Non-operated:</b> South Sulige (49.00%)	
<b>Indonesia</b> (1968)	<b>Non-operated:</b> Sebuku (15.00%)	
<b>Kazakhstan</b> (1992)	<b>Non-operated:</b> Kashagan (16.81%)	

(a) TotalEnergies' interest in the unincorporated joint venture.

(1) TotalEnergies' interest in the local entity is approximately 100% in all cases except for TotalEnergies EP Gabon (58.28%), TotalEnergies EP Congo (85.00%) and Oman (refer to the table foot notes below).

Europe	Exploration & Production segment	Integrated LNG segment
Azerbaijan	<b>Non-operated:</b> Absheron (50.00%)	
Denmark (2018)	<b>Operated:</b> Danish Underground Consortium (DUC) zone (43.20%), comprising the Dan/Halldan, Gorm and Tyra fields, and all their satellites	
Italy (1960)	<b>Operated:</b> Tempa Rossa (50.00%)	
Norway (1965)	<b>Operated:</b> Skirne (40.00%), Atla (40.00%)  <b>Non-operated:</b> Johan Sverdrup (8.44%), Åsgard (7.81%), Ekofisk (39.90%), Eldfisk (39.90%), Embla (39.90%), Tor (48.20%), Flyndre (6.26%), Islay (5.51%) <sup>(a)</sup> , Kristin (6.00%), Kvitebjørn (5.00%), Oseberg (14.70%), Oseberg East (14.70%), Oseberg South (14.70%), Troll (3.69%), Tune (10.00%), Tyrihans (23.15%), Tommeliten Alpha (20.14%)	<b>Non-operated:</b> Snøhvit (18.40%)
Netherlands (1964)	<b>Operated:</b> F15a (38.20%), J3a (30.00%), K1a (40.10%), K2c (60.00%), K3b (56.16%), K4a (50.00%), K4b/K5a (36.31%), K5b (50.00%), K6 (56.16%), L1a (60.00%), L1d (60.00%), L1e (55.66%), L1f (55.66%), L4a (55.66%)  <b>Non-operated:</b> E16a (16.92%), E17a/E17b (14.10%), J3b/J6 (25.00%), Q16a (6.49%)	
United Kingdom (1962)	<b>Operated:</b> Alwyn North (100.00%), Dunbar (100.00%), Ellon (100.00%), Forvie North (100.00%), Grant (100.00%), Jura (100.00%), Nuggets (100.00%), Islay (94.49%) <sup>(a)</sup> , Elgin-Franklin (46.17%), West Franklin (46.17%), Glenelg (58.73%), Culzean (49.99%), Laggan Tormore, Edradour and Glenlivet (all 40.00%), Gryphon (86.50%), Maclare (38.19%), South Gryphon (89.88%), Tullich (100.00%), Ballindalloch (91.80%)  <b>Non-operated:</b> Bruce (1.00%), Markham unitized field (7.35%), Harding (30.00%)	
Russia (1991)	None <sup>(b)</sup>	<b>Non-operated:</b> Yamal LNG (20.02%) <sup>(c)</sup>

(a) The Islay field extends partially into Norway. TotalEnergies EP UK holds a 94.49% interest and TotalEnergies EP Norge 5.51%.

(b) TotalEnergies no longer equity account for its 19.4% stake in Novatek as of December 31, 2022.

(c) TotalEnergies' direct interest of 20.02% in Yamal LNG.

Middle East and North Africa	Exploration & Production segment	Integrated LNG segment
Algeria (1952)	<b>Non-operated:</b> TFT II (49.00%), Timimoun (37.75%), 404a & 208 (12.25%)	
Egypt (2010)	<b>Non-operated:</b> NEHO (25.00%)	
United Arab Emirates (1939)	<b>Non-operated:</b> ADNOC Onshore (10.00%), ADNOC Offshore: Umm Shaif/Nasr (20.00%), Lower Zakum (5.00%), SARB/Umm Lulu (20.00%), ADNOC Gas Processing (15.00%)	<b>Non-operated:</b> ADNOC LNG (5.00%)
Iraq (1924)	<b>Operated:</b> Ratawi (GGIP) (45%)  <b>Non-operated:</b> Halfaya (22.50%)	
Libya (1959)	<b>Non-operated:</b> zones 15, 16 & 32 (37.50%) <sup>(a)</sup> , zones 129 & 130 (15.00%) <sup>(a)</sup> , zones 130 & 131 (12.00%) <sup>(a)</sup> , zones 70 & 87 (37.50%) <sup>(a)</sup> , Waha (20.41%)	
Oman (1937)	<b>Non operated:</b> Block 6 (4.00%) <sup>(b)</sup>	<b>Non-operated:</b> Oman LNG (5.54%), Qalhat LNG (2.04% through Oman LNG), Block 10 (26.55%)
Qatar (1936)	<b>Operated:</b> Al Khalij (40.00%)  <b>Non-operated:</b> North Field-Block NF Dolphin (24.50%), Al Shaheen (30.00%)	<b>Non-operated:</b> North Field-QatarEnergy LNG(2) (ex Qatargas 2) Train 5 (16.70%)

(a) The interest in these assets is now reported according to the TotalEnergies interest in these assets, and no longer according to the interest in the foreign consortium as in previous years.

(b) TotalEnergies' indirect interest (4.00%) in the concession through its 10.00% stake in Private Oil Holdings Oman Ltd.

## 2.1.4 Delivery commitments

The majority of TotalEnergies' natural gas production is sold under long-term contracts. However, most of its North American and United Kingdom production, and part of its Norwegian production, is sold on the spot market. Spot market trading of Russian LNG was halted at the end of 2022.

The long-term contracts under which TotalEnergies sells its natural gas usually provide for a price related to, among other factors, average crude oil and other petroleum product prices, as well as, in some cases, a cost-of-living index. Though the price of natural gas tends to fluctuate in line

with crude oil prices, a slight delay may occur before changes in crude oil prices are reflected in long-term natural gas prices.

Some of TotalEnergies' long-term contracts provide for the delivery of quantities of natural gas that may or may not be fixed and determinable. Such delivery commitments vary substantially, both in duration and scope, from contract to contract throughout the world. TotalEnergies expects to fulfill most of these obligations through the production of its proved reserves of natural gas and, if needed, additional sourcing from spot market purchases.

## 2.1.5 Contractual framework of Upstream oil and gas production activities

Licenses, permits and contracts governing the ownership of oil and gas interests by TotalEnergies' entities have terms that vary from country to country and are generally granted by or entered into with a government entity or a state-owned company or sometimes with private owners. These agreements and permits usually take the form of concessions or production-sharing contracts.

In the framework of oil concession agreements, the oil company (or consortium) owns the assets and the facilities and is entitled to the entire production. In exchange, the operating risks, costs and investments are the oil company's or the consortium's responsibility and it agrees to remit to the relevant host country, usually the owner of the subsoil resources, a production-based royalty, income tax, and possibly other taxes that may apply under local tax legislation.

Production sharing contracts (PSCs) involve a more complex legal framework than concession agreements. They define the terms and conditions of production sharing and set the rules governing the cooperation between the company (the contractor) or consortium (the contracting group) in possession of the license and the host country, which is generally represented by a state-owned company. The latter can thus be involved in operating decisions, cost accounting and production allocation. The contractor (or contracting group) undertakes the execution and financing, at its own risk, of all exploration, development or operational activities. In exchange, it is entitled to a portion of the production, known as "cost oil", the sale of which is intended to cover its incurred expenses (capital and operating costs). The balance of production, known as "profit oil", is then shared in varying proportions, between the contractor (or the contracting group), on the one hand, and the host country or state-owned company, on the other hand.

Today, concession agreements and PSCs can coexist, sometimes in the same country. Even though there are other contractual models, TotalEnergies' license portfolio is comprised mainly of concession agreements.

On most licenses, the partners and authorities of the host country, often assisted by international accounting firms, perform joint venture and PSC cost audits and ensure the observance of contractual obligations.

In some countries, TotalEnergies has also signed contracts called "risked service contracts", which are similar to production sharing contracts. However, the profit oil is replaced by a defined or determinable cash monetary remuneration, agreed by contract, which depends in particular on field performance parameters such as the amount of barrels produced.

Oil and gas exploration and production activities are subject to authorization granted by public authorities (licenses), which are granted for specific and limited periods of time and include an obligation to relinquish a large portion, or the entire portion in case of failure, of the area covered by the license at the end of the exploration period.

TotalEnergies pays taxes on income generated from its oil and gas production and sales activities under its concessions, PSCs and risked service contracts, as required by local regulations. In addition, depending on the country, TotalEnergies' production and sales activities may be subject to a number of other taxes, fees and withholdings, including special petroleum taxes and fees. The taxes imposed on oil and gas production and sales activities are generally substantially higher than those imposed on other industrial or commercial businesses.

## 2.1.6 Oil and gas acreage

As of December 31 (in thousands of acres)	2023		
		Undeveloped acreage <sup>(a)</sup>	Developed acreage
Africa (excluding North Africa)	Gross	67,007	882
	Net	35,312	201
Americas	Gross	14,565	798
	Net	5,940	368
Asia-Pacific	Gross	13,821	1,039
	Net	9,302	317
Europe	Gross	7,819	910
	Net	3,218	221
Middle East and North Africa	Gross	53,805	3,653
	Net	10,868	650
<b>Total</b>	<b>Gross</b>	<b>157,017</b>	<b>7,282</b>
	<b>Net<sup>(b)</sup></b>	<b>64,640</b>	<b>1,757</b>

(a) Undeveloped acreage includes licenses and concessions.

(b) Net acreage equals the sum of TotalEnergies' equity interests in gross acreage.

## 2.1.7 Productive wells

As of December 31 (number of wells)	2023		
		Gross productive wells	Net productive wells <sup>(a)</sup>
Africa (excluding North Africa)	Liquids	1,301	354
	Gas	70	14
Americas	Liquids	136	30
	Gas	2,334	1,609
Asia-Pacific	Liquids	136	67
	Gas	4,363	1,352
Europe	Liquids	611	197
	Gas	465	119
Middle East and North Africa	Liquids	13,036	985
	Gas	194	66
<b>Total</b>	<b>Liquids</b>	<b>15,220</b>	<b>1,633</b>
	<b>Gas</b>	<b>7,426</b>	<b>3,160</b>

(a) Net productive wells corresponds to the sum of TotalEnergies' equity interests in gross productive wells.

## 2.1.8 Productive and dry wells drilled

As of December 31 (number of wells)	2023			2022			2021		
	Net productive wells drilled (a)(b)	Net dry wells drilled (a)(c)	Total net wells drilled (a)(c)	Net productive wells drilled (a)(b)	Net dry wells drilled (a)(c)	Total net wells drilled (a)(c)	Net productive wells drilled (a)(b)	Net dry wells drilled (a)(c)	Total net wells drilled (a)(c)
<b>Exploration</b>									
Africa (excluding North Africa)	2.4	0.4	2.8	0.4	0.9	1.3	1.1	0.8	1.9
Americas	1.6	–	1.6	1.4	1.1	2.5	2.0	1.8	3.8
Asia-Pacific	–	–	–	0.3	–	0.3	–	–	–
Europe	1.3	1.0	2.3	0.2	0.1	0.3	0.2	1.2	1.4
Middle East and North Africa	0.7	0.6	1.3	0.5	0.5	1.0	0.8	–	0.8
<b>Total</b>	<b>6.0</b>	<b>2.0</b>	<b>8.0</b>	<b>2.8</b>	<b>2.6</b>	<b>5.4</b>	<b>4.1</b>	<b>3.8</b>	<b>7.9</b>
<b>Development</b>									
Africa (excluding North Africa)	10.5	–	10.5	6.9	0.1	7.0	4.8	–	4.8
Americas <sup>(d)</sup>	22.8	–	22.8	22.4	–	22.4	14.7	–	14.7
Asia-Pacific	138.8	–	138.8	130.8	–	130.8	127.3	–	127.3
Europe	16.5	0.4	16.9	25.9	–	25.9	42.5	–	42.5
Middle East and North Africa	93.5	–	93.5	55.4	0.7	56.1	54.6	0.2	54.8
<b>Total</b>	<b>282.1</b>	<b>0.4</b>	<b>282.5</b>	<b>241.4</b>	<b>0.8</b>	<b>242.2</b>	<b>243.9</b>	<b>0.2</b>	<b>244.1</b>
<b>Total</b>	<b>288.1</b>	<b>2.4</b>	<b>290.5</b>	<b>244.2</b>	<b>3.4</b>	<b>247.6</b>	<b>248.0</b>	<b>4.0</b>	<b>252.0</b>

(a) Net wells equal the sum of TotalEnergies' equity interests in gross wells.

(b) Includes certain exploratory wells that were abandoned, but which would have been capable of producing hydrocarbons in sufficient quantities to justify completion.

(c) Note: service wells and stratigraphic wells are not reported in this table.

(d) The recompletion activities in Barnett are no longer reported. The 2021 (123.3) data has been restated.

## 2.1.9 Wells in the process of being drilled (including wells temporarily suspended)

As of December 31 (number of wells)	2023	
	Gross	Net <sup>(a)</sup>
<b>Exploration</b>		
Africa (excluding North Africa)	2	0.8
Americas	1	0.4
Asia-Pacific	–	–
Europe	1	0.1
Middle East and North Africa	2	0.7
<b>Total</b>	<b>6</b>	<b>2.0</b>
<b>Other wells<sup>(b)</sup></b>		
Africa (excluding North Africa)	85	23.1
Americas	50	15.7
Asia-Pacific	273	89.2
Europe	32	10.2
Middle East and North Africa	414	53.7
<b>Total</b>	<b>854</b>	<b>191.9</b>
<b>Total</b>	<b>860</b>	<b>193.9</b>

(a) Net wells equal the sum of TotalEnergies' equity interests in gross wells. Includes wells for which surface facilities permitting production have not yet been constructed. Such wells are also reported in the table "Number of net productive and dry wells drilled" above, for the year in which they were drilled.

(b) Other wells are development wells, service wells and stratigraphic wells.

## 2.1.10 Interests in pipelines

The table below shows the main interests held by TotalEnergies entities<sup>(1)</sup> in pipelines, as of December 31, 2023.

Pipeline(s)	Origin	Destination	(%) Interest	Operator	Liquids	Gas
<b>Africa (excluding North Africa)</b>						
<b>Nigeria</b>						
O.U.R	Obite	Rumuji	40.00	X		X
NOPL	Rumuji	Owaza	40.00	X		X
<b>Americas</b>						
<b>Argentina</b>						
TGM	Aldea Brasilera (Entre Rios)	Paso de Los Libres (Argentina–Brazil border)	32.68			X
<b>Brazil</b>						
TSB	Paso de Los Libres (Argentina–Brazil border)	Uruguayana (Brazil)	25.00			X
	Porto Alegre	Canoas	25.00			X
<b>Asia-Pacific</b>						
<b>Australia</b>						
GLNG	Fairview, Roma, Scotia, Arcadia	GLNG (Curtis Island)	27.50			X
<b>Europe</b>						
<b>Azerbaijan</b>						
BTC	Baku (Azerbaijan)	Ceyhan (Turkey, Mediterranean)	5.00			X
<b>Norway</b>						
Frostpipe (inhibited)	Lille-Frigg, Froy	Oseberg	36.25			X
Heimdal to Brae Condensate Line	Heimdal	Brae	16.76			X
Kvitebjorn Pipeline	Kvitebjorn	Mongstad	5.00			X
Norpipeline Oil	Ekofisk Treatment Center	Teesside (United Kingdom)	34.93			X
Oseberg Transport System	Oseberg, Brage and Veslefrikk	Sture	12.98			X
Troll Oil Pipeline I and II	Troll B and C	Vestprosess (Mongstad refinery)	3.71			X
<b>Netherlands</b>						
WGT K13-Den Helder	K13A	Den Helder	4.66			X
WGT K13-Extension	Markham	K13 (via K4/K5)	23.00			X
<b>United Kingdom</b>						
Alwyn Liquid Export Line	Alwyn North	Cormorant	100.00	X	X	
Bruce Liquid Export Line	Bruce	Forties (Unity)	1.00			X
Graben Area Export Line (GAEL)	ETAP	Forties (Unity)	9.58			X
Northern Spur						
Graben Area Export Line (GAEL)	Elgin-Franklin	ETAP	32.09			X
Southern Spur						
Ninian Pipeline System	Ninian	Sullom Voe	16.36			X
Shearwater Elgin Area Line (SEAL)	Elgin-Franklin, Shearwater	Bacton	25.73			X
SEAL to Interconnector Link (SILK)	Bacton	Interconnector	54.66	X		X
<b>Middle East and North Africa</b>						
<b>United Arab Emirates</b>						
Dolphin	North Field (Qatar)	Taweelah-Fujairah-Al Ain (United Arab Emirates)	24.50			X

(1) Excluding equity affiliates other than the Dolphin pipeline.

## 2.2 Exploration & Production segment

The Exploration & Production (EP) segment encompasses the activities of exploration and production of oil and natural gas, as well as the Carbon Neutrality activities, conducted in about 50 countries.

### Main indicators

<b>2.0 Mboe/d</b> of hydrocarbons produced in 2023	<b>\$19.1 billion</b> CFFO* in 2023	<b>\$10.2 billion</b> of organic investments* in 2023
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\* Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

### Production

Hydrocarbon production	2023	2022	2021
EP (kboe/d)	2,034	2,296	2,290
Liquids (kb/d)	1,492	1,466	1,437
Gas (Mcf/d)	2,900	4,492	4,662

### Exploration & Production segment financial data

Results (in M\$)	2023	2022	2021
Adjusted net operating income	10,942	17,479	10,439
<i>including adjusted income from equity affiliates</i>	539	1,335	1,230
Effective tax rate <sup>(a)</sup>	50.0%	50.8%	45.2%
Organic investments <sup>(b)</sup>	10,232	7,507	6,690
Net acquisitions <sup>(b)</sup>	(2,706)	2,520	(167)
Net investments <sup>(b)</sup>	7,526	10,027	6,523
Cash flow from operations excluding working capital (CFFO) <sup>(b)</sup>	19,126	26,080	18,717
Cash flow from operating activities	18,531	27,654	22,009

(a) Effective tax rate = (tax on adjusted net operating income) / (adjusted net operating income – income from equity affiliates – dividends received from investments – impairment of goodwill + tax on adjusted net operating income).

(b) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

Exploration & Production adjusted net operating income was \$10,942 million in 2023, down 37% year-on-year, mainly due to lower oil and gas prices. Cash flow from operations excluding working capital (CFFO) was

\$19,126 million in 2023, down 27% year-on-year, mainly due to lower oil and gas prices.

### 2.2.1 Presentation of the segment

To responsibly produce the oil and gas that the world needs today and to contribute to the Company's transition, the EP articulates its strategy around the following axes:

- meeting global demand for oil and gas by producing resources with low costs and greenhouse gas emissions, particularly gas, the least emitting fossil energy. To do this, the EP intends to put into production more than ten major projects by 2030;
- reducing GHG emissions to reduce the intensity of scope 1+2 emissions of its activities:
  - by conceiving designs that will avoid emissions on new projects as much as possible;
  - by implementing projects to improve energy efficiency, eliminate routine flaring, reduce its methane emissions on its operated sites by a further 50% by 2025 – with the ambition to reach this target a year early, in 2024 – and by 80% in 2030, compared to 2020 by 2030, reduce fuel gas consumption and capture and store emissions on its existing sites.

– while placing sustainable development at the heart of its operations and projects.

The safety of employees, stakeholders and facilities drives the day-to-day implementation of this strategy.

EP relies on the commitment, technical expertise and diversity of its employees, its operational excellence and its local roots, particularly in Africa, Northern Europe and the Middle East.

In order to increase cash flow generation and maximizes the value of its assets, EP is pursuing its efforts to maintain its competitive advantage as a low-cost production to maintain a high level of availability of its facilities and by starting-up its numerous projects on time and within budget.

In addition, TotalEnergies assesses its EP investment projects by considering an environment of \$50/b and a CO<sub>2</sub> price of \$100/t from 2025 in all countries and focuses on projects with technical costs of less than \$20/boe or where the break-even is less than \$30/b and where GHG emissions (Scope 1+2) are less than the average of its portfolio in 2023.

Lastly, the Company continues to dynamically manage its portfolio by restructuring or disposing of its least-performing EP assets and accessing

## 2.2.2 Management of GHG emissions

TotalEnergies aims to achieve carbon neutrality (net zero emissions) by 2050, together with society, and EP contributes to this ambition by working to avoid and reduce emissions on its facilities and developing natural carbon sinks.

The goals of EP in this area, in line with those of the Company, are based on three key elements:

- avoid GHG emissions by prioritizing the production of resources with the lowest impacts in terms of carbon footprint and by designing low-carbon infrastructures and operating procedures;
- reduce GHG emissions by developing and implementing a systematic approach in EP to identify and implement the best available technologies for reducing GHG emissions (Scope 1+2) and, if necessary, storing captured CO<sub>2</sub> underground;

### 2.2.2.1 Reduction of the carbon footprint

The Carbon Footprint Reduction (CFR) entity manages the reduction of GHG emissions from oil & gas assets, both operated and non-operated, and consolidates the efforts made by all EP's subsidiaries in this area to improve energy efficiency, eliminate routine flaring and move towards the elimination of methane emissions on its operated installations by 2030, reduce fuel gas consumption, capture and store emissions on its existing sites.

On operated assets, the CFR entity assists the subsidiaries in implementing projects aimed to:

- reduce GHG emissions (Scope 1+2) from facilities and contributing to the Company's target of reducing GHG emissions 100% operated to 38 Mt CO<sub>2</sub>e by 2025 and 25-30 Mt CO<sub>2</sub>e by 2030;
- reduce routine flaring to less than 0.1 Mm<sup>3</sup>/d by 2025, in order to eliminate it by 2030;
- reduce methane emissions by 50% between 2020 and 2025, and by 80% between 2020 and 2030 and maintain the intensity of methane emissions below 0.1% of commercial gas produced on gas facilities.

At the same time, as part of the Company's overall program to improve the energy efficiency of its facilities (budget of \$1 billion for 2023-2024), EP has identified more than 345 initiatives to be carried out across the entire operated and non-operated scope for a total budget of \$400 million.

### 2.2.2.2 CO<sub>2</sub> capture, storage and utilization

TotalEnergies believes that carbon capture and storage (CCS) is one of the necessary levers for combating climate change and is developing new businesses that will enable its industrial, residential and power-generating customers to capture, store and re-use/recycle their CO<sub>2</sub> emissions, by studying new industrial solutions tested on its own facilities.

Thus, the Company aims to develop CO<sub>2</sub> storage capacity of 10 Mt/y from 2030, for its own facilities and those of its customers. TotalEnergies is developing new business and industrial models associated with this value chain.

new low-cost and low-emission resources, through exploration on the one hand and acquisition of resources already discovered on the other.

- develop natural carbon sinks (nature-based solutions).

To this end, in September 2021, TotalEnergies created a new Carbon Neutrality division within EP, tasked with developing a global approach that will help to generate synergies. This division covers the following activities:

- Carbon Footprint Reduction (CFR) has the mission to reduce EP carbon emissions;
- Carbon Capture and Storage (CCS) has the mission to reduce the Company's GHG emissions (Scope 1+2) and its clients' emissions by developing a transport and storage offer;
- Nature Based Solutions (NBS), whose mission is to develop natural carbon sinks.

The CFR entity also coordinates:

- the communication with partners and operators in order to encourage them to also implement emissions reduction projects on assets that the Company does not operate;
- the implementation of the OGMP 2.0 (Oil and Gas Methane Partnership 2.0<sup>(1)</sup>), initiative to which TotalEnergies subscribed in November 2020. In this context, in 2023, the IMEO (International Methane Emissions Observatory), – UNEP (United Nations Environment Program) has, for the third consecutive year, recognized the efforts of TotalEnergies as a major player in reducing methane emissions, confirming its "Gold Standard" status, and praising the actions implemented towards its partners in this area. Thus, recent cooperation agreements with National Oil & Gas Companies (Petrobras, Sonangol, NNPC, Socar and ONGC) to carry out methane detection and measurement campaigns using AUSEA technology, demonstrate the shared commitment to identify, quantify and reduce methane emissions and encourage the entire oil and gas industry to aim for Zero Methane Emission by 2030.

In addition to the continuous efforts deployed on projects to reduce emissions from existing assets, EP also deploys communication and training actions for employee and partners on climate issues and regarding the need to reduce GHG emissions.

In Norway, in May 2020, TotalEnergies and its partners launched the development of the Northern Lights project (33%), the world's first commercial CO<sub>2</sub> transportation and storage project, with a capacity of 1.5 Mt CO<sub>2</sub>/y for Phase 1. This project, supported by the Norwegian government, is expected to store emissions from two industrial sites located in the Oslo region (a Norcem Cement plant for 0.4 Mt CO<sub>2</sub>/y and a Celso waste incinerator for 0.4 Mt CO<sub>2</sub>/y), as well as a Yara ammonia and fertilizer plant located in the Netherlands (0.7 Mt CO<sub>2</sub>/y). Studies are under way for a capacity expansion of up to 5 Mt CO<sub>2</sub>/y. The Danish company Orsted has already expressed its interest in storing 0.4 Mt/y of biogenic CO<sub>2</sub> from two of its power plants powered by wood chips, in Phase 2 capacities.

(1) Source: An Eye on Methane: International Methane Emissions Observatory 2022 Report, UNEP (United Nations Environment Program).

In 2023, TotalEnergies acquired a 40% interest in the ExL004 CO<sub>2</sub> storage exploration license located 120 kilometers off the coast of Bergen, in 200 meters water depth (the "Luna" project).

In the **Netherlands**, TotalEnergies participates in the Aramis project (60%) which aims to store CO<sub>2</sub> permanently in depleted offshore gas fields, at a depth of approximately four kilometers below the seabed, thanks to new CO<sub>2</sub> transportation infrastructure connecting Rotterdam to these offshore fields. The Front End Engineering & Design studies (FEED) for phase 1 of the project started at the end of 2023 with an objective of starting the storage of 2.5 Mt CO<sub>2</sub>/y in TotalEnergies operated fields. This storage capacity could be further expanded up to 5.5 Mt CO<sub>2</sub>/y in later phases.

In **Denmark**, TotalEnergies holds two storage exploration licenses (80%). These two blocks cover an area including the Harald gas fields, currently operated by TotalEnergies and for which the Company is already assessing the CO<sub>2</sub> storage potential as part of the Bifrost project, as well as a saline aquifer that could increase stored volumes. A 3D seismic survey was carried out in the summer of 2023. Subject to evaluation and assessment work, this project could ultimately be able to provide the storage for more than 5 Mt CO<sub>2</sub>/y.

### 2.2.2.3 Natural carbon sinks

While TotalEnergies' priority is first to avoid and then to reduce its GHG emissions, the net emissions targets for Scope 1+2 take into account the contribution of nature-based carbon sink projects, that is to say sequestration projects, such as reforestation or regenerative agriculture or conservation projects that protect environments where significant amounts of carbon are already stored.

TotalEnergies intends to invest up to \$100 million per year on average between 2020 and 2030 with the objective of reaching a stock of 100 Mt of carbon credits by 2030 and an annual quantity of carbon credits issued of at least 5 Mt of CO<sub>2</sub>/y from 2030. These credits will be certified according to the highest standards of environmental and social management. The projects are designed to respect the resource regeneration cycles and contribute to provide social, economic and environmental benefits for local communities, on which the projects generally rely.

The stock of credits established at year-end 2023 amounts to a little less than 11 million certified credits (carbon credits certified by a third-party). The cumulative budget committed on all of the ongoing agreements amounts to close to \$725 million, on the project's cumulative reserve life, for a cumulative volume of credits expected between 44 Mt by 2030 and 71 Mt by 2050.

In 2023, the Company decided to invest \$100 million in the Nature Based Carbon fund managed by Climate Asset Management, mainly targeting

### 2.2.3 Activities by geographical zone

The information below describes the Exploration & Production segment's main oil and gas activities by geographical area, without giving details of all of the assets held by TotalEnergies. The capacities referred to herein are expressed on a 100% basis, regardless of TotalEnergies' interest in the asset. TotalEnergies' average annual and daily production of liquids and gas by country for 2023, 2022 and 2021 are presented in the tables

#### 2.2.3.1 Africa (excluding North Africa)

In **Nigeria**, the Company's production is mainly offshore. It operates eight licenses out of the 34 permits in which TotalEnergies holds interests<sup>(1)</sup>.

TotalEnergies is present offshore in particular:

- in PML 2/3/4 (formerly OML 130, 24%, operator), with the Akpo and Egina fields in production as well as the Prewei field where

In the **United Kingdom** the Company is part of the Northern Endurance Partnership (10%). This partnership was created to develop a project which includes collecting CO<sub>2</sub> in the industrial regions of Teesside and Humberside, transporting it offshore and storing it in a saline aquifer at respectively 85 km and 145 km from shore. The final investment decision for Phase 1 of the project (4 Mt CO<sub>2</sub>/y) is scheduled for 2024 and the project aims to reach 10 Mt CO<sub>2</sub>/y. In 2023 a third exploration block was obtained and assessment work launched, in addition to the two blocks obtained in 2022. These blocks will help to prepare the expansion phases for the project.

In **Australia**, TotalEnergies has a 26% interest in a joint venture that was awarded a CO<sub>2</sub> storage assessment license off the northwest coast in August 2022. This project could complement existing solutions to reduce greenhouse gas emissions from Ichthys LNG.

In **Malaysia**, TotalEnergies partnered with Petronas and Mitsui in 2023 to create a CO<sub>2</sub> storage hub in Southeast Asia. This partnership aims to develop a commercial CO<sub>2</sub> storage service to decarbonize industrial customers in Asia.

the preservation or restoration of three types of ecosystems: degraded natural forests, grasslands impacted by human activity as well as wetlands.

In 2022, TotalEnergies entered into partnerships and contracts with recognized players in Gabon, Peru, Southeast Asia and Guatemala. In particular, TotalEnergies and Compagnie des Bois du Gabon (CBG) joined forces to develop a new model of forest management combining sustainable wood production, conservation of biodiversity and lasting carbon storage. TotalEnergies became CBG's leading partner after acquiring 49% of its capital from Criterion Africa Partners. In March 2022, TotalEnergies invested \$50 million in the Tropical Asia Forest Fund 2 (TAFF2) managed by the New Forests company, whose objective is to invest in certified plantation and primary forest conservation projects in several South-East Asian countries, including Indonesia, Malaysia, Laos, Cambodia, Thailand, and Vietnam.

In 2021, TotalEnergies and Forêt Ressources Management signed a partnership agreement with the Republic of the Congo to plant a 40,000-hectare forest on the Batéké Plateau. The new forest is expected to create a carbon sink that could sequester more than 10 Mt of CO<sub>2</sub> over 20 years.

"Production by geographical area" in section 2.1.3 of this chapter. For information concerning TotalEnergies' interest in each asset (share in %) and to determine whether the Company operates the asset as at December 31, 2023, see the table entitled "Assets in production by geographical area" in point 2.1.3 of this chapter.

development studies continued in 2023. In May 2023, the production licenses were renewed for 20 years until 2043;

- in OML 99 (40%, operator), with the Amenam-Kpono fields (30.4%) in production as well as the Ikike field, where production started in July 2022 and reached its plateau at the end of 2022;

(1) Including through its stake in the SPDC joint venture.

- in OML 102 (40%, operator), with the Ofon field in production and where the Ntokon oil and gas discovery in June 2023 provides perspectives for a new tie-back development to existing facilities. A second discovery was made by the Ntokon North-East well, also drilled and tested in 2023;
- in OML 138 (20%), with the Usan field in production. The license was renewed in August 2022 for a period of 20 years. Development studies on the Owovo discovery in OML 139 (18%) located near OML 138, continued in 2023;
- in OML 118 (12.5%), with the Bonga field in production as well as the Bonga North field on which development studies continued in 2023.

TotalEnergies is also present via the SPDC joint-venture (10%) which holds 18 production licenses, including 3 offshore licenses. In 2022, TotalEnergies announced its intention of selling its interest in the SPDC oil licenses.

In **Angola**, the Company's production comes from Blocks 17, 32, and 0:

- on Block 17 (38%<sup>(1)</sup>, operator), the Company's main asset in the country, located in deep offshore, four major hubs are in production: Girassol, Dalia, Pazflor and CLOV. Various infill drilling projects are being carried out;
- on Block 17/06 (30%, operator), the development of the Begonia field was approved in July 2022. The start-up of production is planned for the end of 2024 with a tie-back to the Pazflor FPSO;
- on Block 32 (30%, operator), located in deep offshore, production comes from the Kaombo Norte and Kaombo Sul FPSOs. Drilling of development wells are expected to continue until mid-2025 and to be followed by the drilling of 3 infill wells, approved in 2023 under the name Kari Phase1. Discoveries in the central and northern areas of the block (outside Kaombo) offer additional potential currently being assessed;
- on Block 0 (10%), in May 2023 the Angolan authorities approved the extension of the license until 2045 as well as new tax terms;
- on Block 20/11<sup>(2)</sup> (40%, operator), in the Kwanza basin, TotalEnergies is continuing development studies on the Cameia and Golfinho oil discoveries, with a view to an investment decision in 2024. In September 2023, TotalEnergies sold a 40% stake in the block to Petronas.

In December 2022, the company Angola Block 14 B.V., in which TotalEnergies held a 50.01% stake, was sold to the Angolan company Somoil. TotalEnergies held interests in Blocks 14 and 14K through this participation.

TotalEnergies has held exploration licenses on Block 16/21 since August 2023 and on Block 29 since August 2021. The exploration license on Block 48 (40%, operator) expired in May 2023.

In the **Republic of the Congo** (Congo Brazzaville), the Company's production comes from the TotalEnergies EP Congo subsidiary, owned by TotalEnergies (85%) and QatarEnergy (15%). The production operated by TotalEnergies EP Congo comes mainly from the Haute Mer permit (53.5%) which includes the Moho Bilondo asset composed of two fields: Moho Bilondo and Moho North.

TotalEnergies EP Congo also operates the Nkossa field (53.5%) and the Yanga and Sendji fields (55.25%) and holds 26.75% of the Lianzi field located within the offshore unitization area between Angola (Block 14K) and the Republic of Congo (Haute Mer license).

TotalEnergies EP Congo withdrew from the Loango II and Zatchi II licenses (also known as "Madingo"), in September 2021.

The concession for the operation of the country's only oil terminal, in Djéno, expired in November 2020 and approval for the new operating concession is in the process of being validated by the Congolese authorities. In the meantime, TotalEnergies EP Congo continues to operate the oil terminal under an interim agreement.

Three exploration licenses were awarded by the Republic of Congo to TotalEnergies EP Congo in February 2020: Marine XX in the deep offshore, as well as Nanga and Mokelembembe. An exploration well is planned on the Marine XX license in 2024. TotalEnergies EP Congo renounced its participatory rights and interests in the Mokelembembe license on December 31, 2021 and transferred to SNPC its rights and interests in the Nanga license on December 11, 2023.

In **Gabon**, since the sale, completed in December 2021, of its interest in seven non-operated offshore licenses to Perenco Oil & Gas Gabon, TotalEnergies EP Gabon<sup>(3)</sup> has refocused on its operated assets governed by the Anguille-Torpille concession agreement (100%, operator) and by the Baudroie-Mérou production sharing agreement (90%, operator). In 2022, the fiscal terms of the Baudroie-Mérou production sharing contract as well as those of the Torpille/Anguille concession agreement were revised and extended respectively until 2047 and 2042. In December 2022, The Republic of Gabon acquired a 10% interest in the Baudroie-Mérou production sharing agreement. In 2023, TotalEnergies EP Gabon started a campaign on the Anguille-Torpille wells aimed at maintaining the production plateau using the first pulling unit or workover rig acquired by the Company in 2022.

In **Uganda**, TotalEnergies is a partner, with a 56.67% interest, in the project to develop the Lake Albert oil resources located in Blocks CA-1, LA-2 and CA-3A. TotalEnergies is also a 62% shareholder, in East African Crude Oil Pipeline (EACOP) Ltd, the company responsible for developing and operating of a pipeline of close to 1,450 km that will transport crude oil to a storage and offloading terminal in Tanga, Tanzania.

After taking into consideration the societal and environmental challenges, the project was approved by the Board of Directors in December 2020. The production capacity is planned to be 230 kb/d and will include the joint development of the resources in Blocks CA-1 and LA-2 (the Tilenga project operated by TotalEnergies) and Block CA-3A (the Kingfisher project, operated by CNOOC). It plans the drilling of approximately 450 onshore wells and the construction of two crude oil processing facilities. The final investment decision was announced in February 2022. Drilling started in 2023, and production could start in 2025.

Firmly committed to transparency, the guiding principle for all its actions, TotalEnergies publishes on its website detailed information on the social, environmental and societal issues related to this project.

In **South Africa**, TotalEnergies operates five deep offshore exploration licenses: the South Outeniqua Block (100%), Block 11B/12B (45%), the ODB Block (48.6%, following the sale of a 29.2% interest to QatarEnergy in 2021), the DWOB Block (50%, following the sale of a 30% interest to QatarEnergy in 2021), as well as Block 5/6/7 (40%). TotalEnergies sold its interest in the East Algoa license (30%) in 2020. This transaction was approved by governmental authorities in December 2021. A multi-client 3D seismic survey started in January 2024 on DWOB.

On offshore Block 11B/12B, following the discoveries of gas condensates on the Brulpadda (2019) and Luiperd (2020) fields, TotalEnergies filed, in September 2022, an operating license application and initiated discussions with the South African authorities to define the conditions for marketing gas and condensates to enable these discoveries to be developed.

(1) TotalEnergies interest shall be 36% in 2036.

(2) In 2023, Blocks 20/15 and 21/09 were merged into a single Block 20/11.

(3) TotalEnergies EP Gabon is a company incorporated under Gabonese law. Its shares are listed on Euronext Paris and as at December 31, 2023 were owned by TotalEnergies (58.28%), the Republic of Gabon (25%) and the public (16.72%).

In **Namibia**, TotalEnergies operates two deep offshore exploration licenses in the Orange basin: Blocks 2912 (38%) and 2913B (40%). Following the drilling of an exploration well on Block 2913B, TotalEnergies announced a significant discovery of light oil and associated gas on the Venus prospect (the Venus-1X well) in February 2022.

In 2023, two rigs were mobilized to evaluate the area's potential, with positive results from the Venus-1A appraisal well and production tests from the Venus-1X and Venus-1A wells and a negative result for the Nara-1X exploration well, targeting a prospect west of the Venus discovery on Block 2912. The drilling campaign continues in 2024, with in particular the drilling of an exploration well on a prospect located in the north of Venus (Mangetti) and an additional appraisal well on the Venus field. In addition, a 3D seismic acquisition campaign started at the end of 2023 to increase knowledge of the two blocks. In January 2024, TotalEnergies announced the signing of an agreement to acquire additional interests in Blocks 2912 and 2913B. Following finalization of these transactions, which are still subject to approval by the competent authorities, the Company's interest in these two licenses would be 42.48% (Block 2912) and 45.25% (Block 2913B).

### 2.2.3.2 Americas

In **Brazil**, the Company's production comes from the Libra (19.3%), Lapa (45%, operator), Iara (22.5%), Atapu (22.5%), Atapu ToR Surplus (22.5%) and Sépia ToR Surplus (28%) Blocks in the Santos Basin.

On the Libra Block, situated approximately 170 km offshore Rio de Janeiro, production began in 2017 on Mero field with the Pioneiro de Libra FPSO (capacity of 50 kb/d).

At year-end 2023, the Mero development project comprised four FPSOs, each with a liquid processing capacity of 180 kb/d:

- Mero 1, approved in 2017, started up in April 2022;
- Mero 2, approved in 2019, started up in December 2023;
- Mero 3, Mero 4 respectively approved in 2020 and 2021, planned to start by 2025.

On Iara, the P-68 FPSO is dedicated to production of the Berbigão and Sururu-Ouest fields, reached its nominal production capacity in 2022. The P-70 FPSO is dedicated to production of the Atapu field and has been producing at capacity (150 kb/d) since July 2021.

Two production sharing contracts (ToR-Surplus) on the Atapu (22.5%) and Sépia (28%) fields were awarded to TotalEnergies in December 2021. These contracts are effective since May 2022. The P-70 FPSO for the Atapu field and the FPSO Carioca for the Sépia field, are both producing at their nominal capacities of 150 kb/d and 180 kb/d respectively. Development plans for an additional FPSO on each field were finalized in October 2022 and the results of the call for tenders launched for two FPSOs of 250 kb/d each are currently being analyzed. In the Sépia area, an additional oil accumulation was discovered with the drilling of the Pedunculo well in 2022.

The Lapa field is producing through the MV-27 FPSO (capacity of 100 kb/d). The Lapa South-West project was approved in January 2023. First production is scheduled for 2025, providing additional production of 25 kb/d, bringing total production to 60 kb/d.

TotalEnergies holds an interest in the Gato do Mato field (20%), discovered in 2012. The field's resources were confirmed with the GDM#4 well, drilled in 2020. After the postponement of the development project announced at the end of 2022 by the operator, development studies continued in 2023 in order to adapt the project to reduce costs.

After having sold its 28.6% interest in the BM-C-30 Block in 2021, TotalEnergies sold its 40% interest in the Itaipu field located in the BM-C-32 Block in the Campos Basin.

In exploration, the drilling of the first exploration well on the C-M-541 Block (40%, operator), Marolo-1, ended in July 2022. The drilling of the second well, Ubaia-1, started in 2022 and was completed in October 2023.

In **Senegal**, A 3D seismic survey was carried out on the Ultra Deep Offshore block (70%, operator) in early 2021 and its interpretation is continuing. TotalEnergies also holds interests in the Rufisque Offshore Profond exploration license (90%, operator).

In **São Tomé and Príncipe**, TotalEnergies holds two exploration licenses, one on Block ST-1 and the other on Blocks JDZ-7, 8, and 11 in the joint development area between São Tomé and Príncipe and Nigeria. Two 3D seismic surveys were carried out in 2021 on these blocks and their interpretation is under way.

In **Kenya**, TotalEnergies initiated a procedure in November 2022 to exit offshore licenses L11A, L11B and L12. Likewise, in May 2023, TotalEnergies initiated an exit procedure from onshore Blocks 10BA, 10BB and 13T. These procedures are subject to approval by the authorities.

In **Mauritania**, in August 2023 TotalEnergies returned Block C-15, the last exploration block held.

In **Côte d'Ivoire**, TotalEnergies no longer holds any licenses, having exited offshore Blocks CI-605 (90%) in August 2021, CI-706 (45%) in December 2021 and CI-705 (45%) in June 2022 following the negative results of the Barracuda-1 exploration well in August 2021.

TotalEnergies also holds two operated exploration blocks (with a 50% Working Interest after the sale of 50% in early 2023) in the SM-1711 and SM-1815 Blocks in the South Santos basin. A production sharing contract for the Água Marinha (30%) exploration block, in the Campos basin was signed in May 2023. An exploration well is planned to be drilled on this block in 2024. In addition, TotalEnergies holds an interest in an exploration license currently suspended, located in the Barreirinhas basin (50%).

As part of their strategic alliance, TotalEnergies and Petrobras renewed their agreement in 2023 to promote technical cooperation between the two companies in areas of common interest, notably for the development of new technologies, particularly in deep offshore. As part of this agreement, a pilot unit using a pioneer high-pressure subsea technology to separate oil from CO<sub>2</sub>-rich gas (HISEP<sup>®</sup>) and reinject the CO<sub>2</sub>-rich gas into the Mero 3 reservoir, was approved in December 2023.

In **Argentina**, TotalEnergies operates the, Ara and Cañadón Alfa Complex, on the CMA-1 concession in Tierra del Fuego, onshore fields as well as the Hidra, Carina, Aries and Vega Pleyade offshore fields (37.5%). In September 2022, the Company approved the final investment decision for the Fenix offshore gas project (37.5%, operator) with a capacity of 10 Mm<sup>3</sup>/d of natural gas, which is expected to commence production at the end of 2024.

In the onshore Neuquén Basin, TotalEnergies holds interests in seven licenses, of which six are operated. In addition to conventional projects, TotalEnergies operates four shale gas and shale oil projects in the basin, the first located in the Aguada Pichana Este Block in the gas window of the Vaca Muerta, the second and third located in the Rincón la Ceniza Block (45%) and la Escalonada (45%) in the gas and condensate window of the Vaca Muerta, and the fourth located in the Aguada San Roque Block (24.71%) in the oil window of the Vaca Muerta.

In 2023, TotalEnergies swapped with PanAmerican Energy and YPF its 25% stake in the non-operated Aguada Pichana Oeste and Aguada de Castro blocks for an additional 14% in its operated block Aguada Pichana Este (55%), in the Vaca Muerta. TotalEnergies also sold its interest in the Rincón de Aranda Block (45%) to Pampa Energía. TotalEnergies has initiated the process of withdrawing from the non-operated Veta Escondida Block (45%).

In exploration, TotalEnergies has operated three offshore licenses since 2019: CAN 111 and CAN 113 (50%), which are in the process of restitution, as well as MLO 123 (37.5%).

In the **United States**, TotalEnergies' oil and gas production in the Gulf of Mexico comes from its interests in the Tahiti (17%) and Jack (25%) deep offshore fields.

In addition, TotalEnergies holds interests in two deep water projects, Anchor (37.14%) and Ballymore (40%). The development of Anchor, with a production capacity of 75 kboe/d, is continuing, with production scheduled to begin in 2024. The investment decision for the Ballymore project was made in May 2022 and its start-up is scheduled for 2025.

In exploration, in 2022 TotalEnergies sold its remaining interests in seven deep offshore licenses, initially owned 100%.

In **Canada**, with effect from November 2023, TotalEnergies no longer holds any interest in the oil sands. TotalEnergies held a 50% interest in the Surmont in-situ production project, and a 31.23% interest in the Fort Hills mining project (after increasing its stake by 6.65% in February 2023 through the exercise of its pre-emption right when Suncor acquired Teck's interest), both located in the province of Alberta. On October 4, 2023, TotalEnergies finalized the sale to ConocoPhillips of its stake in Surmont as well as certain associated logistics obligations. On November 20, 2023, TotalEnergies finalized the sale to Suncor of its subsidiary TotalEnergies EP Canada, including in particular its interest in the Fort Hills asset and associated logistics obligations.

In **Bolivia**, TotalEnergies has interests in five producing licenses: San Alberto (15%), San Antonio (15%), Block XX Tarija Oeste (Itau, 41%), Aquio and Ipati (50%, operator) which include the Incahuasi field.

In **Venezuela**, TotalEnergies transferred in July 2021 its non-operated minority participation of 30.32% in Petrocedeño S.A. to Corporación Venezolana del Petróleo, S.A., a subsidiary of PdVSA. In July 2022, TotalEnergies sold its 69.50% stake in the Yucal Placer field to a subsidiary of Sucre Energy Group. Together with the operator, TotalEnergies returned the license for Plataforma Deltana Block 4 (49%) in August 2022. Since this return, TotalEnergies no longer holds assets in

### 2.2.3.3 Asia-Pacific

In **Kazakhstan**, TotalEnergies' oil and gas production comes mainly from the Kashagan field, operated by the North Caspian Operating Company (NCOC) located in the North Caspian license (16.81%). The oil production capacity of the first phase of this field and the associated processing plant was increased from 400 kb/d to 430 kb/d, thanks in particular to the upgrade of the gas injection compressors completed in 2022.

On the Dunga field (60%, operator), phase 3 development continued in 2023. The subsidiary Total E&P Dunga GmbH was sold in November 2023.

In **China**, production comes from the South Sulige Block (49%), located in the Ordos basin in Inner Mongolia. Drilling of tight gas development wells continues. Production increased to 4 Gm<sup>3</sup>/y, following the approval in 2022 of a new development plan.

In **Brunei**, production comes from the Maharaja Lela Jamalulalam offshore gas and condensate field located on Block B (37.5%, operator); where the gas is delivered to the Brunei LNG liquefaction plant.

In **Indonesia**, production comes from the Ruby gas field located on the Sebuku license (15%).

In **Myanmar**, the Company no longer has any activities, having definitively withdrawn on July 20, 2022.

Venezuela (refer to point 3.2.1 of chapter 3). A process of dissolution of its subsidiaries registered in the country is being finalized.

In **Suriname**, TotalEnergies, operator of Block 58 (50%), successfully completed the appraisal of two main oil discoveries, Sapakara South and Krabdagu, with the drilling and testing of three wells (Sapakara South 2 drilled in 2022, Krabdagu-2 and Krabdagu-3 drilled in 2023) confirming significant resources of oil and associated gas. The Front End Engineering Design (FEED) studies has begun with a view to a final investment decision expected at the end of 2024 and production start-up in 2028 via an FPSO with a capacity of 200 kb/d. In May and December 2023, TotalEnergies signed respectively explorations licenses for Blocks 6 and 8 (40%, operator), in shallow waters, located South of Block 58, and on Block 64 (40%, Operator) in deep water.

In **Mexico**, TotalEnergies holds licenses in five offshore exploration blocks in the Gulf of Mexico: Block 1 (33.3%) in the Salina Basin and Blocks 15 (35%, operator), 32 (50%), 33 (35%, operator) and 34 (27.5%) located in the shallow waters of the Campeche Basin. Following studies which concluded that prospectivity was limited, the operators of Blocks 1, 32 and 34 have launched the relinquishment processes for these blocks and exits are in the final stages. Relinquishments of Block 3 in the Salina basin and Block 2 in the Perdido basin were finalized in April and May 2023 respectively. Drilling of an exploration well in Block 33 began in November 2023 and will be followed by an exploration well on Block 15.

In **Guyana**, TotalEnergies (60%) and QatarEnergy (40%) jointly hold 25% interests in the Kanuku and Orinduik Blocks. In May 2023, TotalEnergies and QatarEnergy exited the Kanuku Block on which an exploration well (Beebei) was drilled in 2022. TotalEnergies also holds a stake in the Canje Block (35%), the second three-year exploration period of which started in March 2022. On October 26, 2023, TotalEnergies was awarded the exploration rights of S4 Block (40% Operator).

In **Thailand**, the main Bongkot licenses expired in April 2022 and March 2023. The company still benefits from residual production from a block whose transfer to PTTEP is currently being approved by the competent authorities.

In **Papua New Guinea**, TotalEnergies holds interests in the PPL339 (35%), PPL589 (100%) and PPL576 (100%) exploration licenses and in the PRL-15 Block (37.5%). For more information refer to point 2.3.2.

In **Malaysia**, TotalEnergies holds interests in offshore exploration licenses, where the Tepat-2 an exploration well was drilled in the state of Sabah in 2022.

TotalEnergies has signed an agreement with OMV to acquire its 50% interest in Malaysian independent gas producer and operator SapuraOMV Upstream, in January 2024. The transaction is subject to regulatory approvals. SapuraOMV's main assets are its 40% operated interest in block SK408 and 30% operated interest in block SK310, both located offshore Sarawak in Malaysia.

In **Tajikistan**, TotalEnergies withdrew from the exploration license in which it held a 50% stake in May 2023.

#### 2.2.3.4 Europe

The specific context of **Russia** and its consequences on TotalEnergies are detailed in point 1.9.3 of chapter 1.

In **Norway**, production comes from many fields:

- Ekofisk (39.9%), Eldfisk (39.9%), Embia (39.9%), Tor (48.2%) and Flyndre (6.26%). In 2021, the redevelopment of Tor was finalized while the development of the Tommeliten Alpha field (20.14%), a satellite of the Ekofisk field, was approved. The production of Tommeliten Alpha started in October 2023;
- Johann Sverdrup (8.44%), where production of Phase 1 started in October 2019 and phase 2 came on stream in December 2022. Production facilities in this field are powered from shore resulting in very low GHG emissions, of only 0.67 kg of CO<sub>2e</sub>/boe;
- Oseberg (14.7%), whose facilities also treat, among other fields, the production from Tune (10%). Electrification of the Oseberg installations with power supply from shore was approved by the authorities in 2022;
- Islay (5.51%) located in the boundary with the UK sector in the northern North Sea and operated by TotalEnergies in the UK;
- Troll (3.69%), one of the largest oil producing fields on the Norwegian Continental Shelf and with very large quantities of gas, and Kvitebjørn (5%);
- Åsgard (7.81%), Tyrihans (23.15%) and Kristin (6%) located in the Haltenbanken region;
- Skirne (40%) and Atla (40%) fields, operated by TotalEnergies. On these mature fields, abandonment of wells and decommissioning of flowlines to the Heimdal (16.76%) platform operated by Equinor, are expected to be completed by the end of 2028.

As part of the continuous optimization of its portfolio, TotalEnergies sold its interests in Gimle (4.9%), Sindre (4.95%) and Nokken (5%) in May 2021.

In the **United Kingdom**, production comes from:

- the Alwyn North (100%) and Dunbar (100%) fields in the Northern North Sea, as well as from satellites feldis linked to them;
- the Elgin/Franklin complex (46.17%) which includes the West Franklin (46.17%) and Glenelg (58.73%) fields in the Central Graben zone. TotalEnergies also operates the Culzean gas and condensate field

#### 2.2.3.5 Middle East and North Africa

In the **United Arab Emirates**, TotalEnergies' production, mainly comes from the following stakes:

- 20% interest in the Umm Shaif/Nasr offshore concession and a 5% interest in the Lower Zakum offshore concession both, operated by ADNOC (Abu Dhabi National Oil Company) Offshore. These two concessions have been awarded for 40 years, following the expiry of previous concession of Abu Dhabi Marine Areas Ltd (ADMA);
- 10% interest in the ADNOC Onshore concession, which includes Abu Dhabi's 15 major onshore fields; the license was extended for 40 years in 2015. Development activities on the Bab and Bu Hasa fields continued in 2022;
- 15% interest in ADNOC Gas Processing, a company that produces liquefied natural gas (LNG) and condensates from the associated gas produced by ADNOC Onshore;
- 20% interest in the Satah Al Razboot (SARB), Umm Lulu, offshore concession since March 2023. This concession covers two major offshore fields and is operated by ADNOC Offshore with a license period ending in 2058;
- 10% interest in the Ruwais Diyab Unconventional Gas Concession, operated by ADNOC and awarded until 2063. TotalEnergies (40%) entered into this venture in 2018 through an agreement signed with ADNOC and became the operator in 2019. An exploration and

(49.99%), where production capacity was increased by approximately 10% in March 2022. In addition, TotalEnergies announced in March 2020 an oil and gas discovery on the Isabella prospect (30%, operator), located close to existing operated infrastructures. An appraisal well on this structure was drilled in January 2023, the results of which are currently being analyzed;

- to the West of the Shetlands, the Laggan, Tormore, Edradour and Glenlivet fields. In July 2022, TotalEnergies finalized the sale of 20% of its stake in these fields, thus reducing its stake to 40%;
- in the Quad 9 area, in the Eastern North Sea, the Gryphon (86.5%), Maclure (38.19%), South Gryphon (89.88%) and Tullich (100%) fields.

In **Denmark**, TotalEnergies operates the Danish Underground Consortium (DUC, 43.2%). Production comes from DUC's four main fields: Dan, Gorm, Halfdan, and Tyra. Dan, Gorm and Halfdan produce is mainly oil, while Tyra's production is mainly gas and condensates. Production of the Tyra field stopped in September 2019 as part of a redevelopment project and is expected to resume in 2024. An exploration well is planned to be drilled in 2024 from the Harald satellite platform.

In **Italy**, TotalEnergies operates the Tempa Rossa field (50%), located in the Gorgoglione concession in Basilicata region, main asset of TotalEnergies EP Italia. The new facilities being built in Taranto with ENI and partners, are expected to allow Tempa Rossa to increase crude oil export and production by the end of 2024.

In the **Netherlands**, production originates from the assets held in 18 offshore production licenses, of which 14 are operated.

In **Azerbaijan**, the Absheron gas and condensate field (50%), located in the Caspian Sea, and operated by JOCAP (Joint Operating Company of Absheron Petroleum, a company jointly held by TotalEnergies and SOCAR, the state oil company), started production in July 2023 and is currently producing 1.5 Gm<sup>3</sup>/y. The second phase of development is expected to make it possible to increase the field's production to 5.5 Gm<sup>3</sup>/y. TotalEnergies and SOCAR finalized, in February 2024, the transfer of a 15% stake each to ADNOC (Abu Dhabi National Oil Company), thereby reducing TotalEnergies' stake in Absheron to 35%.

In **Bulgaria**, TotalEnergies withdrew in November 2023 from the deep offshore exploration Block Han Asparuh in which it held a 57.14% stake.

appraisal campaign was conducted in 2020-2021. In 2023, TotalEnergies reduced its holding to 10% and transferred the role of operator to ADNOC.

In addition, TotalEnergies holds a stake of 24.5% interest in Dolphin Energy Ltd., which sells gas produced on Dolphin Block in Qatar to the United Arab Emirates and Oman.

The license for the Abu Al Bukoosh offshore field, which TotalEnergies has operated since 1972, expired in March 2021 and the facilities are now operated by ADNOC Offshore.

In **Qatar**, production comes mainly from TotalEnergies' stakes in the offshore fields of Al Khalij (40%, operator), Al Shaheen (30%) and Dolphin (24.5%). Developments continued in 2023 on the Al Shaheen field, operated by North Oil Company, which is owned by TotalEnergies (30%) and QatarEnergy (70%), with a duration of 25 years starting from 2017.

In **Libya**, production comes from the Waha (20.41%) and El Sharara onshore fields located in Blocks 129-130 (15%) and 130-131 (12%) and the Al Jurf offshore field located in Blocks 15, 16 and 32 (37.5%). The Mabruk field (37.5%), located in onshore Blocks 70 and 87, has been shut down since the end of 2014; following the installation of an early production facility its production could restart early 2025.

In November 2021, TotalEnergies signed various agreements for the sustainable development of the country's natural resources, in particular the construction and operation of a 500 MW photovoltaic power plant, and an increase in its interest in the Waha concession from 16.33% to 20.41%. This increase in interests was finalized in November 2022.

The production from Libyan assets has been frequently disrupted since 2022, notably due to security and social issues.

In **Algeria**, production comes from TotalEnergies' interests in the TFT II and Timimoun gas fields and the oil fields in the Berkine basin located in Blocks 404a and 208. Under the terms of the comprehensive partnership agreement signed with the authorities in 2017, two new concession agreements and corresponding gas sales agreements came into effect for TFT II (26.4%) in 2018 and for TFT SUD (49%) in 2019. In June 2021, the acquisition of Repsol's shares was finalized and TotalEnergies' interest in TFT II was consequently increased to 49%. In July 2023, TotalEnergies and Sonatrach agreed to convert the production contracts of TFT II and TFT SUD within the framework of the new Algerian oil law promulgated in December 2019, allowing the continuation of the investment program aimed at increasing the combined production of the two fields to over 100 kboe/d by 2026. The Council of Ministers validated the conversion of those contracts on October 15th, 2023.

On Timimoun (37.75%), production continues under the gas concession and marketing contracts which entered into force in 2018.

In the Berkine basin, TotalEnergies owns a 12.25% interest in Blocks 404a and 208, with the producing onshore oil fields of the Ourhoud and El Merk onshore. TotalEnergies, its partners and Sonatrach, signed a new 25-year oil contract in July 2022.

In **Oman**, TotalEnergies' oil production comes from Block 6 (4%). On the onshore Block 12 (50%, operator, following the transfer of 30% of the Company's stake to Petronas in October 2023), the drilling of two exploration wells is planned for 2024. On the onshore Block 11 (22.5%), following a 3D seismic survey in 2022, a positive appraisal well (Jaleel 3) was drilled in 2023 and an accelerated appraisal campaign is planned for 2024.

In **Iraq**, TotalEnergies' production comes from its 45% interest in the Ratawi field and its 22.5% stake in the risk service contract for the Halfaya field, located in the province of Missan.

On the Halfaya field, the plant that will treat associated gas and enable the recovery of LPGs and condensates, approved in 2019, is scheduled to start operations in 2024. In the first half of 2023, production continued to be affected by OPEC+ production quotas.

In July 2023, TotalEnergies confirmed with the Iraqi authorities, the terms of the agreements announced in September 2021 for the GGIP project (Gas Growth Integrated Project) of sustainable development of natural resources in the Basra region: This major multi-energy project combines

the redevelopment of the Ratawi field, the recovery of gas now flared on three oil fields, including Ratawi, in order to power power plants, a 1 GW solar farm and the construction of a seawater treatment plant for injection and to maintain the pressure of the region's oil fields. These agreements became effective in August 2023 and TotalEnergies has been operating the Ratawi field since November 2023.

On this field, the AGUP Phase 1 project (Associated Gas Upgrade Project), sanctioned in September 2023, will restore the integrity and operability of the existing facilities to secure current production (around 60 kb/d) and then increase it to 120 kb/d. In a second phase, the AGUP Phase 2 project will build new processing units to increase oil production to 210 kb/d and gas production to 160 Mcf/d. The gas produced on Ratawi as well as that currently flared on two other fields will be sent to the gas treatment unit.

The sale of the Company's 18% interest in the Sarsang field, located in the Kurdistan region of Iraq, was finalized in September 2022.

In **Yemen**, after the sale in November 2022 of its stake in onshore Block 5 (Marib Basin, Jannah license, 15%), TotalEnergies relinquished its stake in Block 70 to the Government in May 2023. TotalEnergies retains interests in three onshore exploration licenses, which have been in force majeure since 2015.

In **Cyprus**, TotalEnergies is present in offshore exploration Blocks 7 (50%, operator), 11 (50%, operator), 2 (20%), 3 (30%), 6 (50%), 8 (40%) and 9 (20%). Two exploration wells, Cronos-1 and Zeus-1, drilled on Block 6 in 2022, resulted in two natural gas discoveries. Drilling of the Cronos-2 appraisal well on Block 6 started in November 2023, the drilling and production test on this well were successfully completed in February 2024.

In **Lebanon**, TotalEnergies has operated since February 2018 explorations of the offshore Blocks 9 (35%) on which an exploration well was drilled in 2023 with negative results. TotalEnergies was also the operator of Block 4, on which a well was drilled in 2020 with negative results and was returned to the Government in October 2023.

In **Egypt**, TotalEnergies owns a 25% interest in the North El-Hammad offshore block, on which part of the Bashrush offshore field is located, with the other part located on the Baltim Block. A unitization agreement signed in 2022 gives the Company rights to natural gas and condensate production since June 2022. In addition, TotalEnergies is operator of the offshore exploration Block 3 (35%).

In **Iran**, TotalEnergies ceased all operational activities prior to the re-imposition of US secondary sanctions on the oil industry with effect from November 5, 2018.

In **Syria**, TotalEnergies has ceased its activities since December 2011.

## 2.3 Integrated LNG segment

Since the first quarter of 2023, TotalEnergies has separated in its published results the Integrated LNG segment covering its LNG and low-carbon gas activities and the Integrated Power segment covering the integrated electricity chain.

The Integrated LNG segment covers the integrated gas chain (including upstream and midstream LNG activities) as well as biogas, hydrogen and gas trading activities.

In its final statement, the COP28 recognized the utility of transitional fuels in setting up "Net Zero". TotalEnergies shares this conclusion, which reinforces its growth strategy in gas, and particularly LNG. Gas is key for the energy transition to support the development of intermittent renewables and rapidly reduce CO<sub>2</sub> emissions through switching from other fossil fuels such as coal that emit significantly more.

### Main indicators

<b>\$7.3 billion</b>	<b>44.3 Mt</b>	<b>1<sup>st</sup></b>	<b>19</b>	<b>20.8 Mt</b>
CFFO <sup>(1)</sup> in 2023	Volumes of LNG sold in 2023	US LNG exporter with over <b>10 Mt</b> in 2023 <sup>(2)</sup>	Long term chartered LNG carriers in 2023	Regasification capacity in Europe in 2023

### Main objectives and ambitions

<b>Tending towards Zero</b>	<b>+50%</b>	<b>&gt;15 Mt/y</b>	<b>30</b>
Methane emissions in 2030	LNG sales growth (excluding Russia excluding spot) between 2023 and 2030	US LNG exportation by 2030	Long term chartered LNG carriers by 2030

### Integrated LNG: Hydrocarbon production and LNG sales

Hydrocarbon production for LNG	2023	2022	2021
Integrated LNG (kboe/d)	449	469	529
Liquids (kb/d) <sup>(a)</sup>	58	53	63
Gas (Mcf/d)	2,128	2,267	2,541
Integrated LNG excluding Novatek (kboe/d)	449	413	483

Liquefied Natural Gas (Mt)	2023	2022	2021
Overall LNG sales	44.3	48.1	42.0
<i>Including sales from equity production<sup>(a)</sup></i>	15.2	17.0	17.4
<i>Including sales by TotalEnergies from equity production and third party purchases</i>	40.1	42.8	35.1

(a) The Company's equity production may be sold by TotalEnergies or by the joint-ventures.

Hydrocarbon production for LNG (excluding Russia) was up by 9% in 2023 compared to 2022 due to increased supply to NLNG in Nigeria and higher availability of Ichthys LNG in Australia and Snøhvit in Norway.

LNG sales were down 8% in 2023 compared to 2022, mainly due to lower spot volumes related to lower demand in Europe as a result of a milder winter weather and high inventories.

(1) Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.  
 (2) Long term FOB contracts - Source: TotalEnergies data.

## Integrated LNG results

(M\$)	2023	2022	2021
Adjusted net operating income	6,200	11,169	5,591
<i>Including adjusted income from equity affiliates</i>	2,103	5,637	2,659
Organic investments <sup>(a)</sup>	2,063	519	2,061
Net acquisitions <sup>(a)</sup>	1,096	(47)	(910)
Net investments <sup>(a)</sup>	3,159	472	1,151
Cash flow from operations excluding working capital (CFFO) <sup>(a)</sup>	7,293	9,784	5,404
Cash flow from operating activities	8,442	9,604	(2,765)

(a) Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

Integrated LNG adjusted net operating income was \$6,200 million in 2023, down 37% year-on-year (excluding Novatek), mainly due to the exceptional environment in 2022 linked to the energy crisis in Europe resulting from the Russia-Ukraine conflict.

Cash flow from operations excluding working capital (CFFO) was \$7,293 in 2023, down 25% year-on-year (excluding Novatek), mainly due to lower LNG prices that were partially offset by high margins captured in 2022 on LNG cargoes delivered in 2023.

### 2.3.1 Presentation of the segment

TotalEnergies is implementing an integrated strategy for profitable growth in the **liquefied natural gas** (LNG) segment and along the whole natural gas value chain. TotalEnergies is also involved in the trading of LNG and complementary products (liquefied petroleum gas, petcoke and sulfur) and is developing positions in low-carbon gases.

Worldwide LNG market volumes grew by more than 6% a year on average between 2015 and 2023<sup>(1)</sup>, thanks to the switch from coal to natural gas. In Europe, Russia's invasion of Ukraine has in fact highlighted the continent's structural dependence on Russian gas imports via pipeline, which has led Europe to strengthen its regasification capacity and its LNG imports. In 2023 in a context of tight market, the measures taken combined with a drop in gas demand enabled Europe to ensure its supply at an average price below 2022 average albeit at a much higher level than before the crisis. Europe (European Union and United Kingdom) imported 113 Mt of LNG in 2023 compared to 115 Mt in 2022 and 67 Mt in 2021<sup>(2)</sup>.

Worldwide LNG demand is expected to continue to grow by an average of 5% per year between 2023 and 2030, driven mainly by Asia. Supplies are expected to remain constrained until 2026-2027 and the commissioning of new liquefaction projects, mainly in Qatar and in North America.

Due to its solid, diversified positions, TotalEnergies is still the world's 3<sup>rd</sup> largest player in LNG (the second largest private player<sup>(3)</sup>), with a global portfolio of 44.3 Mt and a global market share of about 11%<sup>(4)</sup> in 2023. The Company is the leading importer in Europe. TotalEnergies' LNG sales in EU + UK reached 22.8 Mt in 2023 compared to 26.5 Mt in 2022

and to 16.1 Mt in 2021 thanks to a 21 Mt/y of regasification capacity. The Company is also the leading United States exporter<sup>(5)</sup> (with 10.7 Mt in 2023<sup>(6)</sup>).

In accordance with its balanced multi-energy strategy, the Company intends to consolidate its integrated position throughout the LNG value chain and its position as third largest global LNG player by developing a portfolio of leading projects (such as North Field East and North Field South in Qatar, Rio Grande LNG in the United States, Mozambique LNG in Mozambique and Papua LNG in Papua New Guinea). TotalEnergies has strengthened its presence across the entire chain, from upstream activities, thanks mainly to its interests in liquefaction plants located in the major production areas, through midstream activities, such as transport, regasification and trading, and up to distribution to end customers. TotalEnergies' managed volumes (excluding Russian and spot volumes) are expected to grow by 50% between 2023 and 2030. TotalEnergies also intends to continue increasing its LNG exports from the United States (with more than 15 Mt in 2030) and to focus on improving the flexibility and resilience of its LNG portfolio. It plans to increase its fleet of long-term chartered LNG carriers to 30 vessels by 2030 and to remain amongst the first regasification capacity holders in Europe, above 20 Mt/y.

The LNG sold by TotalEnergies on worldwide markets comes in part from equity production in natural gas and condensate fields or liquefaction plants of which the subsidiaries are shareholders (refer to point 2.3.2 of this chapter). It also comes from purchase contracts concluded with third parties (refer to point 2.3.3 of this chapter).

(1) IHS Historical Bilateral LNG Trade Data; January 2024.

(2) IHS Historical Bilateral LNG Trade Data; January 2024.

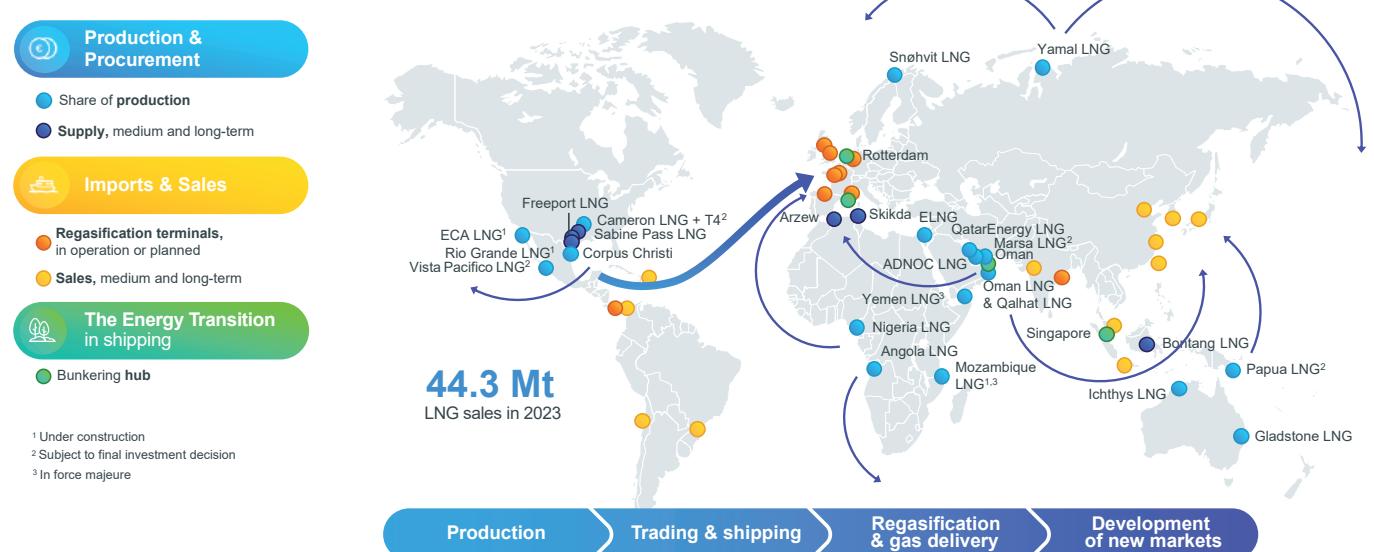
(3) Source: TotalEnergies data.

(4) Source: TotalEnergies data.

(5) Source: TotalEnergies data.

(6) Long term FOB contracts.

### No. 3 worldwide in LNG, thanks to a diversified portfolio



In the **low-carbon gas** segment, the Company intends to develop the production and marketing of **biogas**, mainly in Europe, in order to meet incorporation obligations and support its clients who wish to decarbonize their own activities. In Europe, in the context of the REPowerEU plan to end dependence on Russian gas and taking into account the support mechanisms for the development of biogas, TotalEnergies intends to develop its activities by capitalizing on a gross installed production capacity of 1.1 TWh/y at the end of 2023 and relying on the teams and the portfolio of biogas projects acquired in France and Poland. Likewise,

as regards **low-carbon hydrogen**, TotalEnergies intends to develop its business in Europe as a priority to meet part of the needs of its refineries.

In response to the issue of methane emissions, TotalEnergies has already reduced the methane intensity below 0.1% of the commercial gas produced on its operated gas facilities. The Company set ambitious targets to step up its efforts and reduce methane emissions by 50% by 2025 and by 80% in 2030, compared to 2020<sup>(1)</sup>.

### 2.3.2 LNG production and liquefaction

TotalEnergies' share of LNG production stood at 15.2 Mt in 2023 compared to 17.0 Mt in 2022 and 17.4 Mt in 2021.

Hydrocarbon production for LNG (excluding Novatek) was up 9% compared to 2022 due to the increased supply to NLNG in Nigeria and higher availability of Ichthys LNG in Australia and Snøhvit in Norway.

LNG production growth is expected to resume in coming years thanks to liquefaction projects under construction (Rio Grande LNG in the USA,

NFE and NFS in Qatar, ECA in Mexico and NLNG T7 in Nigeria) or under study.

The information below describes the main development, production and liquefaction activities of the Integrated LNG segment, presented by geographical area. The capacities are expressed on a 100% basis, regardless of TotalEnergies' interest in the asset.

#### AFRICA (EXCLUDING NORTH AFRICA)

In **Nigeria**, TotalEnergies holds a 15% interest in Nigeria LNG (NLNG), whose main asset is a liquefaction plant with a total capacity of 22 Mt/y. The project to install an additional 7.6 Mt/y of capacity is in process. TotalEnergies is also present in the onshore fields of the OML 58 block (40%, operator) in the context of its joint venture with Nigerian National Petroleum Corporation (NNPC), which has been supplying gas to NLNG for about twenty years. The OML 58 onshore fields also supply gas to the Nigerian domestic market.

In **Angola**, TotalEnergies holds a 13.6% interest in Angola LNG (ALNG), which owns a gas liquefaction plant of 5.2 Mt/y capacity, located near Soyo, that is supplied by associated gas to production from Blocks 0, 14, 15, 17, 18, 31 and 32. In July 2022, TotalEnergies, partner of the New Gas Consortium (NGC, 11.8%), announced the final investment decision for the Quiluma and Maboqueiro gas field development project. This project is the first non-associated natural gas project developed in Angola. The gas produced from the two offshore fields Quiluma and Maboqueiro will supply the Angola LNG plant, thereby increasing

Angola's LNG production as well as the availability of domestic gas for the country's industrial development. Production is scheduled to start in mid-2026.

In **Mozambique**, TotalEnergies EP Mozambique Area 1 (TEPMA1) holds a 26.5% interest in the Mozambique LNG project (acquisition in September 2019 from Occidental Petroleum Corporation), for which the final investment decision was taken in June 2019. The project includes the construction of two onshore liquefaction trains with a total capacity of 13.1 Mt/y to liquefy the gas produced by the Golfinho and Atum fields in Offshore Area 1.

In light of the developments of the security situation in the north of the Cabo Delgado province in Mozambique, on April 26, 2021, TotalEnergies confirmed the withdrawal of all Mozambique LNG project personnel from the Afungi site. This situation led Mozambique LNG project, to declare force majeure.

(1) Methane emissions from operated facilities were 34 kt in 2023 compared to 42kt in 2022.

In December 2022, on behalf of Mozambique LNG, the Company entrusted Mr. Jean-Christophe Ruffin<sup>(1)</sup>, to assess the humanitarian situation in the Cabo Delgado province, in northern Mozambique, where the Mozambique LNG project is located, and the socio-economic development programs undertaken by Mozambique LNG. In May 2023, TotalEnergies made public Mr. Jean-Christophe Ruffin's report, as well as the actions plan adopted by the Mozambique LNG partners based on the report's recommendations.

## AMERICAS

In the **United States**, TotalEnergies is active in liquefaction through its 16.60% stake in the Cameron LNG plant in Louisiana. The production of the three phase 1 trains with a capacity of 4.5 Mt/y each, began in 2019 (train 1) and 2020 (trains 2 and 3). The study to expand the plant beyond its initial capacity of 13.5 Mt/y is ongoing. In May 2022 TotalEnergies has signed an agreement with Sempra Infrastructure, Mitsui & Co., Ltd. and Mitsubishi Corporation for the development of the Hackberry Carbon Sequestration (HCS), a project for the capture, transportation and storage of 2 Mt CO<sub>2</sub>/y from Cameron LNG, in order to significantly reduce GHG emissions.

In June 2023, TotalEnergies acquired from the U.S. company NextDecade<sup>(2)</sup> a 16.7% stake in the first phase of the Rio Grande LNG (RGLNG) project, a natural gas liquefaction plant, in South Texas. This first phase composed of three liquefaction trains for a total capacity of 17.5 Mt/y, which is scheduled to start production in 2027. The terms of the agreement provide for TotalEnergies to offtake 5.4 Mt/y of LNG from this first phase for 20 years. TotalEnergies has held a 17.5% stake in NextDecade since September 2023 and will have the right to participate in subsequent phases of the project as well as a carbon capture and storage (CCS) project planned by NextDecade to reduce emissions generated by the LNG project.

## ASIA-PACIFIC

In **Australia**, LNG production comes from the Ichthys LNG (26%) and Gladstone LNG (GLNG, 27.5%) projects.

The Ichthys LNG project involves the development of a gas and condensate field located in the Browse Basin. This development includes subsea wells connected to a platform for gas production, processing and export, an FPSO for condensate processing and export, an 889 km gas pipeline and an onshore liquefaction plant at Darwin, comprising two trains with a total nominal capacity of 8.9 Mt/y of LNG. Ichthys LNG has reached its production plateau and various adjustments have allowed it to reach 110% of nameplate capacity. A compression project was approved in 2021, thus making it possible for the plateau to be extended. In addition to LNG, the facilities produce approximately 110 kboe/d of condensates and LPG.

In August 2023, TotalEnergies and INPEX (operator of the Ichthys LNG project) signed an agreement for the acquisition of PTTEP's 100% interest in the AC-RL7 permit. Under the terms of the agreement with PTTEP, TotalEnergies acquired a 26% stake in the permit, corresponding to its share in Ichthys LNG. INPEX acquired the remaining 74% while assuming operatorship. The permit, located approximately 250 kilometers northeast of the Ichthys offshore facilities, includes the Cash and Maple gas and condensate fields. Their development is expected to contribute to the long-term supply of the Ichthys LNG liquefaction plant.

In August 2022, the Bonaparte CCS Assessment partners namely TotalEnergies (26%), together with INPEX and Woodside were awarded a CO<sub>2</sub> storage assessment permit on the G-7-AP license off the northwest coast of Australia, to carry out evaluation and appraisal the geological sequestration of CO<sub>2</sub> in order to reduce greenhouse gas emissions from Ichthys LNG. Appraisal work began in 2023.

GLNG is an integrated project with production from the Fairview, Roma, Scotia and Arcadia fields transported to a liquefaction plant on Curtis

The sale of nearly 90% of Mozambique LNG future production has been secured through long-term contracts for delivery to customers in Asia and Europe. In addition, part of the gas from the Golfinho and the Atum fields is intended for the domestic market in order to contribute to the country's economic development.

TotalEnergies operates assets (held 95% on average) in the Barnett Shale basin, with 1,460 active wells and an interest in 333 non-operated wells. An investment program including drilling and well maintenance activities is being implemented to maintain the production. TotalEnergies is implementing the physical measurement of its greenhouse gas emissions, particularly methane, through the deployment of portable sensors, infrared cameras with quantification algorithms and continuously operating fixed detectors. The reduction of these emissions is ensured via a set of initiatives including the replacement of gas instrumentation with compressed air. At the end of 2023, 361 production sites had been converted out of a target of 400, which is expected to be reached at end of the first quarter 2024.

In 2021, the agreements between TotalEnergies and Tellurian Inc. for the development of the Driftwood LNG liquefaction project in Louisiana came to an end and TotalEnergies sold its interest in Tellurian Inc.

In **Mexico**, TotalEnergies holds a 16.6% stake in the Energia Costa Azul (ECA) gas liquefaction project (nominal capacity of 3 Mt/y) currently under construction with start-up scheduled for 2026. The Company has agreed to offtake approximately 1.7 Mt/y.

Island, Queensland with a capacity of 8.8 Mt/y and whose two trains are in production. TotalEnergies entered into a tolling agreement with GIP Australia (GIP) effective since January 1, 2021, which provides that GIP will receive a tolling revenue for 15 years based on gas volumes (TotalEnergies' share) passing through the downstream treatment facilities. In June 2023, TotalEnergies signed an agreement with Gentari for the joint development of the Pleasant Hills solar project to provide low-carbon electricity to the Roma field's gas facilities.

In **Papua New Guinea**, TotalEnergies holds a 37.5% (operator) stake in block PRL-15 of following the sale of a 2.6% stake to JX Nippon in 2023. The State of Papua New Guinea may exercise a back-in right of up to 22.5% interest (when the final investment decision is made), reducing TotalEnergies' interest to 29.1%.

Block PRL-15 includes the two fields Elk and Antelope. Front End Engineering and Design (FEED) (including downstream) was launched early March 2023. The gas produced from these fields is planned to be transported through a 320 km onshore/offshore pipeline to the Caution Bay site. The project includes 2 Mt/y of liquefaction capacity to be secured in a facility operated by a partner and the construction of three additional electrical LNG trains with a total capacity of 4 Mt/y, on the same site.

In April 2019, TotalEnergies and its partners signed an agreement with the authorities of Papua New Guinea defining the fiscal framework for the development of the Papua LNG project. This agreement has been supplemented by a Fiscal Stability Act agreement, signed with the State in February 2021, and an agreement allowing the extension of the PRL-15 license by 5 years until 2026.

(1) Mr. Jean-Christophe Ruffin is one of the co-founders of Médecins sans frontières and honorary president of the NGO Action Against Hunger.  
(2) Company listed on NASDAQ.

## EUROPE

In **Norway**, TotalEnergies holds an 18.40% interest in the Snøhvit gas liquefaction plant (nameplate capacity of 4.2 Mt/y). Following a 20-month shutdown, due to a fire, production resumed in June 2022.

In **Russia**, TotalEnergies holds a 20.02% direct interest in the Yamal LNG gas liquefaction plant (nameplate capacity of 17.4 Mt/y). In addition, TotalEnergies holds a 10% direct interest in the Arctic LNG 2 project (19.8 Mt/y, under construction).

Since July 2021, TotalEnergies has also held a direct interest of 10% via TotalEnergies EP Transshipment in Arctic Transshipment<sup>(1)</sup>, which was established on behalf of Arctic LNG 2 in order to enable the transfer of LNG cargoes from Arctic LNG carriers (icebreakers) to conventional LNG carriers at transshipment terminals in Murmansk and Kamchatka.

Given the uncertainties that technological and financial sanctions pose on the ability to complete the Arctic LNG 2 project, TotalEnergies has ceased to recognize as proved reserves the resources associated with the Arctic LNG 2 project since December 31, 2021, and has provisioned in its accounts the value of its investments as of March 31, 2022. TotalEnergies no longer recorded reserves from its interest in Novatek.

The American Office of Foreign Assets Control (OFAC) designated, on September 14, 2023 and November 2, 2023, respectively, Arctic

Transshipment and Arctic LNG 2 as Specially Designated Nationals with immediate effect subject to temporary exceptions under licenses issued by the OFAC. As a consequence of these designations, US persons are prohibited to deal with those two entities. All non-US persons are exposed to the risk of US secondary sanctions if they provide material support to these entities. Since April 18, 2023, TotalEnergies EP Transshipment has not participated in any governance body and has not paid any cash calls to Arctic Transshipment. The Company is party to an LNG purchase contract with Arctic LNG 2, for which the Company had indicated that it could not terminate it early without exposing itself financially to significant consequences in the absence of economic sanctions, and that it would exercise the force majeure clauses provided for in the contract to interrupt it if sanctions were imposed. On November 2, 2023, Arctic LNG 2 was placed under sanctions by the US authorities. As a result, in accordance with what it announced, on November 7, 2023, TotalEnergies initiated the contractual suspension procedure provided for in the Arctic LNG 2 shareholders' agreement and the force majeure procedure for the LNG purchase contract with Arctic LNG 2. Upon notification of these procedures, TotalEnergies' rights and obligations under these contracts were suspended (refer to point 3.2. of Chapter 3).

## MIDDLE EAST AND NORTH AFRICA

In **Qatar**, TotalEnergies participates in the production, processing and liquefaction of gas from the North Field through its interest in:

- QatarEnergy LNG N(2) (formerly Qatargas 2): TotalEnergies holds a 16.7% interest in train 5, which has an LNG production capacity of 8 Mt/y;
- North Field East (NFE) and North Field South (NFS): TotalEnergies announced in June and September 2022 its entry in the projects NFE (6.25%) and NFS (9.375%) projects. These projects which are under construction, include four trains with a total planned capacity of 32 Mt/y for NFE and two trains with a total planned capacity of 16 Mt/y for NFS. By 2028, these interests are expected to add, 3.5 Mt/y of production (Company share) to the Company's global LNG portfolio;
- QatarEnergy LNG N(1) (formerly Qatargas 1): TotalEnergies held a 20% interest in the North Field-Qatargas 1 Upstream field and a 10% interest in the LNG plant (three trains with a total capacity of 10 Mt/y), for which the upstream license and LNG plant partner agreement expired on December 31, 2021. The transfer of shares in the QatarEnergy LNG N(1) LNG plant is pending final approval of competent authorities.

In **Oman**, since December 2021, TotalEnergies has held a stake of 26.55% in onshore gas block 10, located in the Greater Barki area, where production started in January 2023 on the north east of the Mabrouk field, with gas sold to the government of Oman. In addition, since December 2021 TotalEnergies has been a shareholder (80%, operator) of Marsa LNG, which was formed with a view to developing a low

emissions LNG plant in the port of Sohar. This plant, with an initial capacity of 1 Mt/y, should be supplied by natural gas from block 10.

TotalEnergies also produces LNG through its investments in the Oman LNG (5.54%)/Qalhat LNG (2.04% via Oman LNG) liquefaction complex, with an overall capacity of 10.5 Mt/y, increased to 11.4 Mt/y in 2023 as a result of debottlenecking operations. In November 2023, TotalEnergies signed an agreement allowing it to extend these shareholdings beyond 2024, by 10 years for Oman LNG and by 5 years for Qalhat LNG. The agreement also provides for investments to reduce the site's GHG emissions.

In the **United Arab Emirates**, TotalEnergies holds a 5% interest in ADNOC LNG (capacity of 5.8 Mt/y), which processes the gas produced by ADNOC Offshore in order to produce LNG, LPG and condensates, as well as a 5% interest in National Gas Shipping Company (NGSCO), which is in charge of chartering the ships and supplying the logistical resources for the needs of ADNOC LNG.

In **Egypt**, TotalEnergies holds a 5% interest in the first train (capacity of 3.6 Mt/y) of Egyptian LNG Idku liquefaction plant.

In **Yemen**, the deterioration of security conditions in the vicinity of the Balhaf site caused the company Yemen LNG, in which TotalEnergies holds a 39.62% interest, to cease its commercial production and export of LNG and to declare force majeure to its various stakeholders in 2015. The plant has been placed in preservation mode.

<sup>(1)</sup> Arctic Transshipment is a Russian company jointly owned by Novatek (90%) and TotalEnergies EP Transshipment (10%) at December 31, 2023.

### 2.3.3 Intermediary activities: purchase, sale, trading and transportation of LNG and natural gas

#### PURCHASE, SALE AND TRADING OF LNG

In 2023, LNG trading activities represented a volume of 40.1 Mt, compared with 42.8 Mt in 2022 and 35.1 Mt in 2021. These volumes represent sales by TotalEnergies stemming from equity production and purchases from third parties.

TotalEnergies, with trading teams located in Geneva, Houston, Paris, and Singapore, develops its activities with the management and optimization of a portfolio of long-term contracts coupled with a strong presence on spot markets.

TotalEnergies purchases long-term volumes of LNG, in many cases from liquefaction projects in which the Company holds an interest. New sources of LNG from assets already in operation (Oman LNG – 0.8Mt/y for 10 years from 2025, ADNOC Gas in the UAE for 3 years), projects under construction (Rio Grande LNG in the United States – 5.4Mt/y for 20 years from 2027, NFE and NFS in Qatar – 3.5Mt/y for 27 years from 2026, ECA in Mexico, NLNG T7 in Nigeria, Mozambique LNG in Mozambique) or under study, are expected to ensure the growth of the LNG portfolio in the coming years (refer to point 2.3.2 of this chapter).

TotalEnergies also purchases long-term LNG volumes mainly from plants in which the Company has no equity (Sabine Pass, Corpus Christi, and Freeport in the United States and also from Algeria - 2Mt in 2024). Deliveries from Cove Point (United States) ended in 2022.

In 2023, TotalEnergies purchased 398 shipments under long term contracts from Algeria, Australia, Egypt, the United States, Nigeria,

#### LNG SHIPPING

In the frame of its LNG transportation activities, TotalEnergies Gas & Power Limited (TEGPL) operates a chartered fleet of 19 LNG carriers at year-end 2023 (compared to 18 at year-end 2022). In 2023, TEGPL sold its last co-owned LNG carrier (50%, with the Japanese shipowner NYK). This fleet is regularly renewed to benefit from best performing and lowest environment impacting vessels. It also includes 2 regasification vessels (FSRU) set up in Germany and France. In addition to the long-term fleet, each year TEGPL charters spot and short-term ships to serve trading needs and to adapt transportation capacity to seasonal demand.

#### NATURAL GAS TRADING AND TRANSPORTATION

TotalEnergies is active in the trading of natural gas in Europe and North America. It sells its output to third parties and supplies its subsidiaries.

In **Europe**, TotalEnergies sold 924 TWh of natural gas in 2023, compared to 888 TWh in 2022 and 747 TWh in 2021.

### 2.3.4 LNG regasification

TotalEnergies holds interests in regasification assets and has signed agreements that provide long-term access to LNG regasification capacity worldwide, through existing assets in Europe (France, Germany, the Netherlands, and the U.K.), in Asia (India) and the Americas (United States and Panama). Consequently, TotalEnergies has at year-end 2023 a European long-term LNG regasification capacity of 28.1 bcm/y (equivalent to 20.8 Mt/y). In 2023, TotalEnergies finalized two

Norway, Qatar, and Russia and 223 spot or medium-term shipments, compared with 385 and 289 shipments in 2022 and 306 and 242 in 2021 respectively. Deliveries from Yemen LNG have been halted since 2015.

In addition, TotalEnergies holds several long-term LNG sales contracts, mainly in Asia (China, South Korea, India, Indonesia, Japan, Singapore, and Taiwan), but also in Brazil, Chile, Panama and the Dominican Republic.

In May 2022, TotalEnergies announced the signing of an agreement with the Korean company Hanwha Energy Corporation to supply 0.7 Mt/y of LNG for 15 years from 2024-2025. The LNG is expected to come from TotalEnergies' global portfolio and be delivered to the Tongyeong regasification terminal in South Korea to power the new 1 GW Hanwha and HDC power plant, currently under construction next to the terminal.

In July 2023, TotalEnergies announced a sales contract to IOCL in India for 10 years.

In February 2024, TotalEnergies concluded a deal with Sembcorp for the supply of 0.8 Mt/y LNG during 16 years from 2027. This new agreement comes on top of the existing contract which lasts until 2029.

Additionally, TotalEnergies is developing LNG retail sales (by barge and tanker trucks) for industrial use or mobility (LNG for shipping or road mobility) in Europe, in the Caribbean in partnership with AES and in China via the joint venture created in March 2021 with Shenergy Group.

The subsidiary TotalEnergies EP Norge charters two LNG carriers directly from the ship owners, in addition to the 19 long term chartered LNG carriers by TEGPL.

Finally, LNG carriers are chartered through the Company's interests in LNG production and export projects that control their own fleet, such as Nigeria LNG, Angola LNG and QatarEnergy.

TotalEnergies uses LNG ships selected in accordance with a process detailed in point 2.5.2.2.

In **North America**, TotalEnergies sold 282 TWh of natural gas in 2023 from its own production or from external resources, compared to 305 TWh in 2022 and 258 TWh in 2021.

TotalEnergies holds interests in gas pipelines located in Brazil and Argentina.

regasification projects in Germany and France to contribute to Europe's security of supply in the context of the invasion of Ukraine by Russia. These projects involved the redeployment of two FSRUs previously operating in Asia and the Middle East. In France, the FSRU is based in Le Havre, while in Germany, it is located in Lubmin in partnership with Deutsche ReGas.

## LNG regasification capacity<sup>(1)</sup> in Europe at year-end 2023

Country	Region/State	Terminal	Reserved TotalEnergies capacity (Bcm/y)	Due date
France	Provence-Alpes-Côte d'Azur	Fosmax LNG	7.7	≥2030
	Pays de la Loire	Montoir de Bretagne	7.0	2035
	Hauts-de-France	Dunkirk LNG	2.1	2036
	Normandy	Le Havre (FSRU)	2.2	2028
Germany	Mecklembourg-Western Pomeranian	Deutsche Ostsee (FSRU)	2.6	2029
United Kingdom	Wales	South Hook LNG	2.0	2034
	Kent, England	Isle of Grain	3.3	2029
Netherlands	Rotterdam, South Holland	Gate	1.2	2029
<b>Total</b>			<b>28.1</b>	

In **France**, TotalEnergies has a regasification capacity of 7.7 bcm/y in the Fosmax LNG terminal, 7 bcm/y in the Montoir de Bretagne terminal, 2.1 bcm/y in the Dunkirk LNG terminal. Since October 2023, the Company holds a 2.2 bcm/y regasification capacity in the Le Havre floating terminal. The authorization to operate was granted by the French authorities for a period of five years, in response to the emergency caused by the interruption of gas supplies by pipeline from Russia.

In **Germany**, TotalEnergies chartered a FSRU to Deutsche ReGas, which commissioned the Deutsche Ostsee terminal at the beginning of 2023, with a regasification capacity of 5 bcm/y in the port of Lubmin. TotalEnergies has a regasification capacity of 2.6 bcm/y in this terminal.

In the **United Kingdom**, as part of its stake in the Qatargas 2 project, TotalEnergies holds an 8.35% interest in the South Hook LNG regasification terminal which has a total capacity of 21 bcm/y and has access to 2.0 bcm/y of regasification capacity. TotalEnergies has also booked regasification capacity of 3.3 bcm/y at the Isle of Grain terminal.

In **Belgium**, TotalEnergies held a regasification capacity of 2.0 bcm/y in the Zeebrugge terminal, the contract for which expired at the end of September 2023.

In the **Netherlands**, TotalEnergies holds a regasification capacity of 1.2 bcm/y at the Gate terminal that is booked until 2029.

In the **United States**, TotalEnergies has a regasification capacity of 5.0 bcm/y at the Sabine Pass terminal in Louisiana until 2029.

In **Panama**, the Colón LNG Marketing joint venture with AES (TotalEnergies, 50%) holds a capacity of 0.3 bcm/y until 2028.

In **India**, the partnerships between TotalEnergies and the Adani Group include several assets in the gas value chain, from LNG import facilities to gas distribution to domestic households. The Dhamra terminal, with a capacity of 6.8 bcm/y, started in May 2023.

The projects planned by TotalEnergies for the development of regasification terminals in **Benin** and **Ivory Coast** were abandoned in 2021.

## 2.3.5 LPG, petcoke and sulfur trading

### LPG, PETCOKE AND SULFUR TRADING

TotalEnergies is also present in the LPG, petcoke and sulfur markets.

In 2023, TotalEnergies traded and sold 7.1 Mt of LPG (propane and butane) worldwide, compared to 7 Mt in 2022 and 6.4 Mt in 2021. Almost 26% of these quantities came from fields or refineries operated by the Company. This trading activity was conducted using 13 long-term chartered vessels. In 2023, 240 voyages were necessary for transporting the quantities traded, of which 180 by TotalEnergies' long-term chartered vessels and 60 by spot-chartered vessels.

TotalEnergies sells petcoke produced by the Port Arthur refinery in the United States and the Jubail refinery in Saudi Arabia. Petcoke is sold to

cement producers and electricity producers, mainly in China, India, as well as in Mexico, Brazil, other Latin American countries, and Turkey. In 2023, 2.9 Mt of petcoke were sold on the international market, compared to 2.8 Mt in 2022 and 2.5 Mt in 2021.

TotalEnergies also sells sulfur, mainly from the production of its refineries. In 2023 1.7 Mt of sulfur were sold, compared to 2.5 Mt in 2022 and 2 Mt in 2021.

In 2015, TotalEnergies ceased its coal production activities, and it stopped selling and trading coal in 2016.

## 2.3.6 Biogas

TotalEnergies is engaged in the development and operation of biogas production units, mainly from organic agricultural and agro-industrial waste (feedstocks), in the production of electricity and heat (co-generation) and biomethane<sup>(2)</sup> and in the marketing of biomethane.

Consisting of the same methane molecule as natural gas, biomethane is renewable due to the way it is produced, and it emits very low-carbon over its entire life cycle. When it is injected into the natural gas

transmission or distribution network, it allows the same uses such as heating fuel for industry and fuel for land and sea transportation. At the same time, the anaerobic digestion process generates a co-product, digestate, a natural fertilizer with high agronomic value. This digestate is used by farmers to replace synthetic fertilizers, according to a virtuous circular economy plan.

(1) Excluding short term capacity.

(2) Biogas is used to produce electricity and heat, in co-generation. Biogas, once purified, in particular of carbon dioxide, becomes biomethane, which has the same characteristics as natural gas.

At year-end 2023, TotalEnergies' total annual gross production capacity amounts to 1.1 TWh biomethane equivalent (compared to 500 GWh in 2022). This represents the treatment of approximately 1.25 Mt/y of organic waste in order to provide renewable gas to the equivalent of 220,000 inhabitants, making it possible to avoid the emission of around 220 kt of CO<sub>2</sub><sup>(1)</sup>. With the digestate, close to 30 kt/y of chemical fertilizers are replaced by a natural fertilizer. The Company aims to be a major player in the sector, in France, in Europe and in other key markets.

#### • France

TotalEnergies has seven biomethane production units in France at the end of 2023, six of which have obtained ISCC EU sustainability certification, and also 11 biogas units.

The Company's combined biomethane and biogas gross production capacity in France stands at nearly 700 GWh/y. Since the acquisition of Fonroche Biogaz in 2021, this subsidiary, renamed TotalEnergies Biogaz France, commissioned in January 2023 BioBéarn (Pyrénées-Atlantiques) which holds the largest<sup>(2)</sup> anaerobic digestion capacity in France, i.e. 160 GWh/y. It is the first TotalEnergies Biogaz France facility and one of the first in France to have obtained ISCC EU certification in March 2023. In 2023, TotalEnergies made the decision to invest in two new biomethane production units, BioNorrois (160 GWh/y), in Seine-Maritime, and MéthAdour (32 GWh/y), in the Landes department.

Downstream in the chain, TotalEnergies signed its first "Biomethane Purchase Agreement – BPA" with the Saint-Gobain group in June 2023. This biomethane sales agreement represents 100 GWh over a period of three years starting in 2024. The biomethane will be produced by TotalEnergies on its BioBéarn site. By acquiring the Guarantees of Origin linked to this production, and due to its ISCC EU certification, Saint-Gobain will thus be able to certify, within the framework of the European Union's Emissions Trading System, the decarbonization of associated energy consumption. This contract also constitutes an example of the sale of biomethane on a purely commercial basis, not supported by subsidies.

#### • Europe

TotalEnergies confirmed its growth dynamic in the sector by acquiring Polska Grupa Biogazowa (PGB), Poland's main producer of biogas<sup>(3)</sup> in March 2023, whose main field of activity is the production of renewable

electricity and heat from biogas from organic waste. With the commissioning of Goloszyce in July 2023, PGB owns and operates 18 units in production at the end of 2023, representing installed electrical capacity of 19 MW, i.e. an electricity production capacity of 166 GWh/y (approximately 400 GWh/y in biomethane equivalent). Two biogas plants of 1 MW installed capacity each are currently under construction in Poland.

The acquisition of PGB gives the Company a leading position on the promising Polish market, which has the fourth greatest potential in Europe for biogas and biomethane production, estimated at nearly 100 TWh/y<sup>(4)</sup>.

#### • United States

TotalEnergies is developing biomethane production as part of the joint venture with Clean Energy Fuels Corp., a United States company listed on NASDAQ, that stands amongst one of the leaders in the United States market for the distribution of renewable gas for vehicles, its share of which was 19.10% on December 31, 2023. The Del Rio anaerobic digestion unit in Texas, with a capacity of 40 GWh/y, was commissioned in March 2023.

In addition, in May 2023, TotalEnergies took a 20% stake in the capital of Ductor, a Finnish start-up that has developed an innovative technology for treating organic waste with a high nitrogen content, such as poultry manure, which is usually difficult to use as a feedstock for anaerobic digestion. By enabling the processing of new types of feedstock, this technology directly contributes to accelerating the development of the biogas value chain.

TotalEnergies has entered into a partnership with Ductor to develop and invest in several biomethane production projects, mainly in the United States and Europe. The partners notably aim to develop a first unit in Ohio, in the United States. Under the terms of this joint venture, TotalEnergies will market the production of biomethane, and Ductor the production of sustainable biofertilizers.

#### • India

The Adani Total Gas Limited joint venture (TotalEnergies, 37.4%) is implementing a first biomethane plant project in Barsana in the state of Uttar Pradesh, the first tranche of which provides for a capacity of 55 GWh/y.

### 2.3.7 Hydrogen

TotalEnergies is working primarily on decarbonizing the hydrogen consumed in its European refineries by 2030. TotalEnergies has already launched projects to decarbonize its refineries by supplying them with hydrogen produced with renewable electricity (refer to point 2.5.1 of this chapter). TotalEnergies and Air Liquide signed an agreement in November 2022 to build an innovative and circular system at the Grandpuits biorefinery in order to produce and take advantage of renewable and low-carbon hydrogen, and signed an agreement in September 2023 for the long-term supply of green and low-carbon hydrogen to the Normandy refining-petrochemical platform. On the La Mède site, the Masshylia project, which ambition is to produce green hydrogen in partnership with Engie, is underway. TotalEnergies signed an agreement with VNG in June 2023 for the future supply of green hydrogen to the Leuna refinery in Germany.

The hydrogen production capacity from renewable electricity currently under development or under study are expected to contribute to achieving TotalEnergies' ambition to increase low-carbon molecules - biofuels, biogas, hydrogen, and e-fuels - to 25% of its energy production by 2050.

In May 2023, TotalEnergies joined forces with Tree Energy Solutions to study and develop a project in the United States to produce synthetic natural gas from renewable hydrogen and CO<sub>2</sub> of biogenic origin. This project, with a capacity of 100 to 200 kt/y, plans to produce synthetic natural gas that can be transported and/or liquefied and then marketed using existing natural gas infrastructure, and used by end customers without modifying their facilities.

Following the acquisition of the entire capital of Total Eren concluded in July 2023, development activities for renewable hydrogen projects are continuing as part of a new partnership through the TEH2 joint venture (80% owned by TotalEnergies and 20% by the EREN group). TEH2 is developing pioneering renewable hydrogen production projects in different regions, such as North Africa, South America, and Australia.

In the hydrogen mobility segment, TotalEnergies and Air Liquide have associated in the TEAL mobility joint-venture (refer to 2.6.5.1).

(1) Source: ADEME method.  
(2) Source: ODRE (Opendata Réseau).  
(3) Source: TotalEnergies' data.  
(4) Source: Gas for Climate (July 2022).

## 2.4 Integrated Power Segment

Since the first quarter of 2023, TotalEnergies has separated in its published results the Integrated LNG segment covering its LNG and low-carbon gas activities and the Integrated Power segment covering the integrated electricity chain.

The Integrated Power segment covers electricity production, storage, trading and gas-electricity marketing activities to BtB and BtC customers.

### Main indicators

<b>33 TWh</b>	<b>28 GW</b>	<b>\$2.2 B</b>	<b>\$5 B</b>
Net production of electricity in 2023, of which <b>19 TWh</b> from renewable sources	Gross installed power generation capacity at year-end 2023, of which <b>22.4 GW</b> from renewable sources	cash flow (CFFO)* in 2023	Net investments* in 2023

### Main objectives and ambitions

<b>&gt;100 TWh</b>	<b>~12%</b>	<b>&gt;\$4 B/year</b>	<b>Positive</b> net cash flow* by 2028
Net power production in 2030	ROACE* by 2028	cash flow (CFFO)* between now and 2028	

\* Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

### Integrated Power

	2023	2022	2021
<b>Net power production (TWh)<sup>(a)</sup></b>	<b>33.4</b>	<b>33.2</b>	<b>21.2</b>
of which production from renewables	18.9	10.4	6.8
of which production from gas flexible capacities	14.5	22.8	14.4
<b>Portfolio of power generation net installed capacity (GW)<sup>(b)</sup></b>	<b>17.3</b>	<b>12.0</b>	<b>9.2</b>
of which renewables	13.0	7.7	5.1
of which gas flexible capacities	4.3	4.3	4.1
<b>Portfolio of renewable power generation gross capacity (GW)<sup>(b)(c)</sup></b>	<b>80.1</b>	<b>69</b>	<b>43</b>
of which installed capacity	22.4	16.8	10.3
<b>Clients power- BtB and BtC (millions)<sup>(b)</sup></b>	<b>5.9</b>	<b>6.1</b>	<b>6.1</b>
<b>Clients gas – BtB and BtC (millions)<sup>(b)</sup></b>	<b>2.8</b>	<b>2.7</b>	<b>2.7</b>
<b>Sales Power – BtB and BtC (TWh)</b>	<b>52.1</b>	<b>55.3</b>	<b>56.6</b>
<b>Sales Gas – BtB BtC (TWh)</b>	<b>100.9</b>	<b>96.3</b>	<b>101.2</b>

(a) Solar, wind, hydroelectric and gas flexible capacities.

(b) End of period data.

(c) Includes 20% of Adani Green Energy Ltd's gross capacity effective first quarter 2021, 50% of Clearway Energy Group's gross capacity effective third quarter 2022, and 49% of Casa dos Ventos' gross capacity effective first quarter 2023.

## Net power production (TWh)

	As of December 31, 2023					
	Solar	Onshore Wind	Offshore Wind	Gas	Storage and hydroelectricity	Total
France	0.5	0.7	0.0	9.3	0.0	<b>10.6</b>
Rest of Europe	0.2	1.2	1.1	3.9	0.1	<b>6.4</b>
Africa	0.1	0.0	0.0	0.0	0.0	<b>0.1</b>
Middle East	0.7	0.0	0.0	1.3	0.0	<b>2.1</b>
North America	1.7	2.0	0.0	0.0	0.0	<b>3.7</b>
South America	0.3	2.5	0.0	0.0	0.0	<b>2.9</b>
India	5.5	1.0	0.0	0.0	0.0	<b>6.5</b>
Asia-Pacific	1.0	0.0	0.1	0.0	0.0	<b>1.2</b>
<b>Total</b>	<b>10.0</b>	<b>7.6</b>	<b>1.2</b>	<b>14.5</b>	<b>0.1</b>	<b>33.4</b>

## Installed power production net capacity (GW)

	As of December 31, 2023					
	Solar	Onshore Wind	Offshore Wind	Gas	Storage and hydroelectricity	Total
France	0.5	0.3	0.0	2.6	0.1	<b>3.6</b>
Rest of Europe	0.2	0.9	0.6	1.4	0.1	<b>3.2</b>
Africa	0.1	0.0	0.0	0.0	0.0	<b>0.1</b>
Middle East	0.4	0.0	0.0	0.3	0.0	<b>0.7</b>
North America	2.0	0.8	0.0	0.0	0.2	<b>3.0</b>
South America	0.4	0.8	0.0	0.0	0.0	<b>1.2</b>
India	3.8	0.5	0.0	0.0	0.0	<b>4.3</b>
Asia-Pacific	1.0	0.0	0.1	0.0	0.0	<b>1.1</b>
<b>Total</b>	<b>8.5</b>	<b>3.4</b>	<b>0.7</b>	<b>4.3</b>	<b>0.5</b>	<b>17.3</b>

Net power production in 2023 stood at 33.4 TWh, up 1% year-on-year. Lower generation from flexible capacities, whose utilization rate was exceptional in 2022 due to the energy crisis in Europe, was more than

compensated by growing electricity generation from renewables, that is related to the integrated of 100% of TotalEren and contribution from Clearway in the US and Casa dos Vento in Brazil.

## Results

(in millions of dollars)	2023	2022	2021
Adjusted net operating income	1,853	975	652
<i>including adjusted income from equity affiliates</i>	137	201	37
Organic investments <sup>(a)</sup>	2,582	1,385	1,280
Net acquisitions <sup>(a)</sup>	2,363	2,136	2,075
Net investments <sup>(a)</sup>	4,945	3,521	3,355
Cash flow from operations excluding working capital (CFFO) <sup>(a)</sup>	2,152	970	720
Cash flow from operating activities	3,573	66	3,592

(a) Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

Integrated Power adjusted net operating income was \$1,853 million in 2023, up 90% year-on-year, demonstrating the performance of its integrated business model along the power value chain: renewables, CCGT, trading, an BtB & BtC marketing.

Cash flow from operations excluding working capital (CFFO) was \$2,152 million in 2023, more than twice 2022 CFFO, with all the segments of the value chain contributing to growth.

## 2.4.1 Presentation of the segment

Transition to carbon neutrality (net zero emissions) by 2050, together with society, involves a massive electrification of energy uses combined with a strong growth in renewable energies to meet this demand for electricity. Electricity is a strong growth market in which TotalEnergies is developing a profitable and differentiated integrated business model, which it aims to make one of the drivers of the Company's cash flow (CFFO<sup>(1)</sup>), alongside oil and gas. In particular the Company aims to generate a positive net cash flow (CFFO) by 2028. TotalEnergies plans to increase its net power production to more than 100 TWh, mainly from renewable sources by 2030. It was 33.4 TWh in 2023, compared to 33.2 TWh in 2022 and 21.2 TWh in 2021.

TotalEnergies intends to replicate its integrated oil & gas model in the Integrated Power segment in order to achieve profitability (ROACE<sup>(2)</sup>) of around 12% by 2028, equivalent to that of its oil & gas activities in a Brent price environment of \$60/b.

The Company's strategy is to build a competitive portfolio of renewable (mainly solar, onshore and offshore wind) and flexible (CCGT, storage) assets in order to provide its customers with low-carbon electricity available 24 hours a day. In particular, TotalEnergies leverages on its scale for its equipment purchases to optimize investment costs and industrializes the operations of its renewable assets using digital technology to reduce operating costs. TotalEnergies also uses the strength of its balance sheet to maintain some market exposure, allowing the Company to capture additional margins in a volatile market.

By 2030, TotalEnergies plans to increase its production of renewable electricity (which was 18.9 TWh in 2023) four- or five-fold and to double

the power production of its flexible generation assets (which was 14.5 TWh in 2023).

TotalEnergies' power production in 2023, was around 70%, in countries where markets are deregulated (mainly Europe, the United States and Brazil). The Company intends to maintain this share and anticipates in these markets sustained and volatile electricity prices, in a context of strong demand growth and tensions on supply. In these deregulated markets, the Company implements its integration strategy throughout the power value chain and keeps approximately 30% of its power production exposed to market fluctuations, relying on its storage capacities and its flexible generation to cover the intermittence of renewable generation and developing power trading and sales activities to end customers. With this in mind, the Company is developing specific expertise in short-term trading on power markets, in activities linked to flexibility management, as well as on the Corporate PPA market.

In regulated markets, TotalEnergies implements a targeted growth strategy:

- in oil and gas producing countries, to support their energy transition by relying on the Company's local presence and its historical activities to develop multi-energy projects, particularly renewable ones;
- in the rest of the world, by selectively developing projects, particularly via strategic partnerships with local players (such as the partnership with AGEL in India).

## 2.4.2 Power generation from renewable sources

To develop its renewable power generation capacities, TotalEnergies is pursuing organic growth and targeted acquisitions. In July 2023 TotalEnergies finalized the increase from 30% to 100% of its shareholding in Total Eren. At this date, Total Eren had a net installed capacity of 3.5 GW worldwide, and a diversified portfolio of solar, wind, hydroelectric and storage projects of more than 10 GW in 30 countries. These assets are now fully integrated into TotalEnergies' portfolio of renewable power production assets. In 2022, TotalEnergies had finalized the acquisition of a 50% stake in Clearway Energy Group in the United States and a 34% interest in Casa dos Ventos in Brazil and, in 2021, a 20% stake in Adani Green Energy Ltd. in India.

### Power generation gross capacity from renewables

Installed power generation gross capacity from Renewables (GW) <sup>(a)</sup>	As of December 31, 2023				
	Solar	Onshore Wind	Offshore Wind	Storage and hydroelectricity	Total
France	0.9	0.6	0.0	0.1	1.6
Rest of Europe	0.2	1.1	1.1	0.2	2.6
Africa	0.1	0.0	0.0	0.0	0.2
Middle East	1.2	0.0	0.0	0.0	1.2
North America	4.9	2.1	0.0	0.5	7.5
South America	0.4	1.2	0.0	0.0	1.6
India	5.4	0.5	0.0	0.0	5.9
Asia-Pacific	1.5	0.0	0.3	0.0	1.8
<b>Total</b>	<b>14.6</b>	<b>5.5</b>	<b>1.4</b>	<b>0.8</b>	<b>22.4</b>

(a) Including 20% of Adani Green Energy Ltd's gross capacities, 50% of Clearway Energy Group's gross capacities and 49% of Casa dos Ventos' gross capacities.

(1) Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.  
 (2) Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

### Power generation gross capacity from renewables in construction

Power generation gross capacity from renewables in construction (GW) <sup>(a)</sup>	As of December 31, 2023				
	Solar	Onshore Wind	Offshore Wind	Storage and hydroelectricity	Total
France	0.2	0.0	0.0	0.0	0.2
Rest of Europe	0.4	0.0	0.0	0.1	0.5
Africa	0.0	0.0	0.0	0.0	0.0
Middle East	0.1	0.0	0.0	0.0	0.1
North America	1.4	0.1	0.0	0.2	1.7
South America	0.0	0.4	0.0	0.0	0.4
India	0.6	0.0	0.0	0.0	0.6
Asia-Pacific	0.0	0.0	0.4	0.0	0.4
<b>Total</b>	<b>2.8</b>	<b>0.6</b>	<b>0.4</b>	<b>0.3</b>	<b>4.1</b>

(a) Including 20% of Adani Green Energy Ltd's gross capacities, 50% of Clearway Energy Group's gross capacities and 49% of Casa dos Ventos' gross capacities.

### Power generation gross capacity from renewables in development

Power generation gross capacity from renewables in development (GW) <sup>(a)</sup>	As of December 31, 2023				
	Solar	Onshore Wind	Offshore Wind	Storage and hydroelectricity	Total
France	0.7	0.4	0.0	0.0	1.2
Rest of Europe	4.6	0.3	7.4	0.1	12.4
Africa	1.1	0.3	0.0	0.3	1.7
Middle East	1.5	0.7	0.0	0.0	2.2
North America	8.2	3.4	4.1	5.4	21.1
South America	1.4	0.8	0.0	0.4	2.6
India	4.7	0.2	0.0	0.0	4.9
Asia-Pacific	2.9	0.4	2.9	1.3	7.5
<b>Total</b>	<b>25.3</b>	<b>6.5</b>	<b>14.4</b>	<b>7.5</b>	<b>53.7</b>

(a) Including 20% of Adani Green Energy Ltd's gross capacities, 50% of Clearway Energy Group's gross capacities and 49% of Casa dos Ventos' gross capacities.

## SOLAR AND ONSHORE WIND

### France

The subsidiary, TotalEnergies Renouvelables France, develops, builds and operates **renewable electricity generation** projects in mainland and overseas France.

In mainland France, it operated more than 620 onshore wind, solar, battery and hydroelectric assets for an installed gross capacity of 1.6 GW at year-end 2023 compared to 1.5 GW at year-end 2022 and 1.2 GW at year-end 2021.

In 2023, among others, TotalEnergies inaugurated a solar power plant in the Greater Paris region (Grandpuits site, Île-de-France) together with a battery-powered energy storage facility, two wind farms with a combined gross capacity of more than 20 MW in Loir-et-Cher, an 8.7 MW solar power plant in Tarn, and the Torrent de Gavet hydroelectric power plant producing approximately 9.5 GWh per year.

In addition, the Company develops agrivoltaic projects that respond to the challenges of the agricultural world, as illustrated by the conclusion in March 2022 of an innovative partnership agreement with the National Federation of Farmers' Unions (FNSEA) with the aim of promoting the emergence of circular economic networks, the acceptability of projects and the sharing of value with farmers. In 2023, the Company acquired Ombréa, a leader in agrivoltaics in France. This acquisition will notably enable TotalEnergies to accelerate the development of its 1.5 GW portfolio of agrivoltaic projects.

Also, in line with its portfolio optimization strategy, at year-end 2022 TotalEnergies sold to Crédit Agricole Assurances 50% of a 234 MW portfolio of renewable projects in France, including 23 solar plants with a capacity of 168 MW and six wind plants with a capacity of 67 MW. In 2021, TotalEnergies had already sold to Crédit Agricole Assurances and Banque des Territoires two 50% interests in solar and wind asset portfolios in France with a total capacity of 279 MW.

### Rest of Europe and CIS

In **Spain**, TotalEnergies is developing a portfolio of solar projects of more than 4 GW, of which 3 GW received environmental authorizations from local public authorities in 2023. La Asomada (5 MW) started its production in 2022. Construction of the Los Valientes (14 MW, 65%) and La Isla (5 MW, 65%) solar power plants began in 2022. In 2023, construction of the Guillena solar project (263 MW) also began.

In the **United Kingdom**, the portfolio of solar projects acquired by TotalEnergies from Bluestone (330 MW at year-end 2022) reached 512 MW in 2023.

In **Romania**, TotalEnergies acquired in July 2023 a portfolio of five solar farms in the northwest of the country from its partner PNE, a German developer. With a total capacity of 210 MW, these projects are expected to enable TotalEnergies to provide its BtB customers with locally produced renewable power through power purchase agreements (PPAs) from 2025.

In **the rest of Europe**, TotalEnergies continue to expand its portfolio. For example:

- in **Bulgaria**, with two operational solar projects: Dabovo (10 MW, 100%) and the Vinogradets project (4 MW, 100%);
- in **Greece**, 154 MW of solar, and 265 MW of wind installed capacity. The Xirokambi solar project (70 MW, 100%) is expected to start operation in 2024;
- in **Italy**, 44 MW of solar, and 41 MW of wind installed capacity;

- in **Poland**, with 20 MW Gluchow I wind farm and its extension with 20 MW Gluchow II project (98%) scheduled for 2024. In addition, in this country, TotalEnergies announced in March 2023 the acquisition of a portfolio of 6 solar projects under development with an overall production capacity of 175 MW, the first of which are expected to come on stream by 2025;
- in **Portugal**, 46 MW of installed solar capacity, 526 MW of wind capacity and 33 MW of hydroelectric capacity spread among nine assets.

In **Turkey**, TotalEnergies finalized in October 2023 the acquisition of 50% interest in Rönesans Enerji. Following the signature of the agreement with Rönesans Holding in July 2023 to develop renewable projects in the country through this joint-venture, Rönesans Enerji aims to produce 2 GW of renewable energy by 2028. The power generated by these sites will be marketed in particular through direct sales on the electricity market or by concluding PPAs with end buyers.

In **Kazakhstan**, by signing a PPA for the totality of the electricity produced with a public purchaser in June 2023, the Company also formalized the launch of the Mirny project, providing for the construction of a 1 GW onshore wind farm associated with a 600 MWh battery energy storage system.

The Company is also pursuing the development of its renewable activities in the region, notably in **Uzbekistan**, with the signature in November 2023 of a memorandum of understanding (MoU) formalizing the development of two solar power plants with a total gross capacity of around 1.3 GW.

Furthermore, opportunities in other European countries are currently being studied by TotalEnergies and European Energy, who agreed, in September 2023, to develop, build and operate, in a joint-venture (TotalEnergies, 65%), at least 4 GW of onshore renewable energy projects in several geographic zones.

In addition, TotalEnergies, Baker Hughes, Technip Energies, Azimut and other investors signed a preliminary agreement in August 2023 to invest in Zhero Europe to develop large-scale renewable energy projects in Europe and Africa, covering the production of renewable energy, electrical interconnectors and low-carbon molecules.

## North America

In the **United States**, following the agreements signed in May 2022 with Global Infrastructure Partners (GIP), TotalEnergies acquired in September 2022 50% of Clearway Energy Group (CEG), one of the largest U.S. renewable energy players. CEG, through its NYSE-listed subsidiary Clearway Energy Inc. owned nearly 10 GW of operating wind and solar renewable assets at year-end 2023 and had a portfolio of 24 GW of renewable and storage projects, 7.5 GW of which are in an advanced stage of development. In this transaction, in addition to \$1.6 billion in cash, GIP received 50% minus one share of TotalEnergies' interest in SunPower Corporation. Through this acquisition, TotalEnergies has established a strong position in the U.S. renewables and storage market.

In April 2022, TotalEnergies acquired Core Solar and its identified 4 GW pipeline of projects. Of this portfolio, the Hill solar project (525 MW) was launched in late 2022 with a view to commission it in late 2024. In 2023, the Clinton (65 MW) and Brazoria (325 MW) solar projects were launched with commissioning scheduled in 2025.

In 2021, TotalEnergies acquired 2.2 GW of solar projects from SunChase Power. The Myrtle (380 MW) and Danish (720 MW) photovoltaic sites were reinforced with storage projects in 2022 (Myrtle (150 MW/225 MWh) and Danish (150 MW/225 MWh)). The Cottonwood solar project (455 MW) located in Brazoria County, Texas, construction of which

began in 2022, is expected to be commissioned in 2024. The Myrtle photovoltaic site was commissioned in the second half of 2023 and the Danish site is expected to start up during 2024. These two projects, as well as the Hill 1 project, are expected to contribute to the reduction of Scope 2 GHG emissions of the industrial sites operated by TotalEnergies in the U.S., by providing part of their electric consumption, including the Port Arthur refining-petrochemicals platform and the La Porte and Carville petrochemicals sites. These Texan solar projects should also enable to supply renewable electricity to customers via Corporate PPAs signed in 2021, 2022 and 2023 (refer to point 2.4.5).

The joint-venture (50/50) created in 2020 by TotalEnergies and 174 Power Global, a subsidiary of the Hanwha group, is developing eight industrial-scale solar and energy storage projects, with a cumulative capacity of 1.2 GW, from the 174 Power Global development portfolio. These projects, located in six U.S. states, are expected to be developed in 2024. The portfolio also includes the Oberon solar plant in Texas (194 MW, 50%), commissioned in 2021 and Rayos del Sol (242 MW, 50%), commissioned in 2022. The Ellis and Skysol projects started during 2023.

## SunPower Corporation and Maxeon Solar Technologies, Ltd.

TotalEnergies has been a shareholder (25.07% at December 31, 2023) in SunPower Corporation, a U.S. company listed on NASDAQ and based in California, since 2011. Since the spin-off of the company in August 2020 and the creation of Singapore-based Maxeon Solar Technologies, Ltd. (15.2%), which is also listed on the NASDAQ, SunPower has focused on developing and marketing energy services combining photovoltaic systems, energy storage and services in the residential segments of the U.S. market. In October 2021, SunPower acquired Blue Raven Solar, one of the fast-growing solar providers in the U.S. for the residential market. At December 31, 2023, SunPower had signed over 99,000 contracts with individual clients, for a total installed capacity of 755 MW.

Maxeon Solar Technologies, Ltd. now includes activities ranging from the design through manufacture to the international sale of cells.

## Asia Pacific

In **Cambodia**, TotalEnergies operates the Battambang solar power plant (74 MW). To develop new renewable energy projects and other decarbonization initiatives, TotalEnergies signed a memorandum of understanding with Royal Group in October 2023 to study potential partnerships for the development of solar and wind projects.

In **Indonesia**, in 2023, under the leadership of its subsidiary Total Eren, TotalEnergies, together with its partners Adaro Power and PJBi, signed a PPA with the public operator PLN for a hybrid wind project (with storage) in the country with a planned capacity of 70 MW/10 MWh.

In **the Philippines**, TotalEnergies entered into a co-development agreement in February 2023 with its local partner Nextnorth for the development of a 440 MW solar project.

In **India**, TotalEnergies is present through its partnership with Adani Green Energy Limited (AGEL) and the EDEN joint-venture (50/50) with EDF. Through these two partnerships, TotalEnergies has a solar and wind portfolio with a gross installed capacity of 5.9 GW of which 5.2 GW with AGEL. As of December 31, 2023, 56.3% of AGEL is owned by the Adani family, 19.7% by TotalEnergies and 24.0% by public and institutional investors. In January 2021, TotalEnergies had acquired 20% of the capital of AGEL. In September 2023, TotalEnergies and AGEL announced that they had entered into a binding agreement to create a new joint-venture (50/50) with a portfolio of 1.5 GW. This portfolio, both solar and wind, include assets in operation (0.5 GW), and in development (1 GW).

In **Japan**, TotalEnergies holds interests in 4 solar plants: Nanao (27 MW, 50%), Miyako (25 MW, 50%) and Osato (52 MW, 45%). The fourth solar plant, Haze (51 MW, 45%), was commissioned at the beginning of 2023.

In 2023, TotalEnergies also partnered with Gentari Renewables Sdn Bhd, the Petronas subsidiary dedicated to sustainable energy solutions, to develop renewable energy projects in the Asia-Pacific region. It is within this framework that the 100 MW Pleasant Hills solar project is expected to be developed in Queensland, Australia, with the aim of supplying low-carbon electricity to the gas production and processing facilities of the Roma field.

In **Australia**, TotalEnergies has one solar asset in operation, Kiamal (256 MW, 100%).

### **Latin America**

In **Brazil**, TotalEnergies has a portfolio of 0.9 GW of installed onshore wind capacity, 0.4 GW of onshore wind capacity under construction, as well as 0.9 GW of onshore wind and 1 GW of solar projects, development of which is at an advanced stage.

This portfolio includes the capacities of the joint-venture created in October 2022 between TotalEnergies (34%) and Casa dos Ventos (66%) (Brazil's 1<sup>st</sup> renewables developer<sup>(1)</sup>) which also has a right of first offer on all projects developed by Casa dos Ventos. It also includes 300 MW of solar and wind projects in operation.

In addition, to further strengthen its presence in Brazil, TotalEnergies announced in September 2023 the signature of a memorandum of understanding with Casa dos Ventos and Petrobras to evaluate the prospects for joint projects in the field of renewable energies and low-carbon hydrogen in the country.

In **Chile**, TotalEnergies holds interests in the Santa Isabel (190 MW, 50%) and PMGD (23 MW, 100%) solar power plants.

### **Middle East/Africa**

In the Middle East, TotalEnergies and its partners commissioned the Al Kharsaah solar power plant (800 MW, 19.6%) in **Qatar** in October 2022. The plant is 40% owned by the consortium formed by TotalEnergies (49%) and Marubeni (51%) the remaining 60% being

### **OFFSHORE WIND POWER**

As part of its long-term strategy to develop renewable energy sources, TotalEnergies has been developing a strong presence in the fixed and floating offshore wind industry since 2020, drawing on its experience and know-how in the offshore oil segment as well as its ability to manage large projects and mobilize the necessary financing. At year-end 2023, TotalEnergies had around 15 GW gross capacity of offshore wind projects under construction and in development, of which approximately 10% is floating.

In **Germany**, the Company won two maritime concessions in July 2023, one in the North Sea, the other in the Baltic Sea, to develop two wind farms with a combined capacity of 3 GW.

The production generated by these German sites will be marketed by TotalEnergies, either through direct sales on the electricity market, or by entering into PPAs with end buyers, thus allowing them to reduce their carbon footprint. These projects, with competitive costs considering the quality of the sites, illustrate the Company's strategy of becoming an integrated player in the electricity markets taking advantage of price volatility and will contribute to achieving the profitability objectives of the Integrated Power activity.

In **England**, a 50/50 joint-venture between TotalEnergies and Corio Generation, a MacQuarie affiliate, won a concession in the British part of the North Sea in February 2021 to develop the fixed 1.5 GW Outer

owned by QatarEnergy Renewables Solutions. Located 80 km west of Doha, Al Kharsaah is the first large-scale solar power plant in Qatar. It can supply 10% of the country's peak consumption and is expected to avoid the emission of 26 Mt CO<sub>2</sub><sup>(2)</sup> over its reserve life.

As part of a multi-energy agreement with **Iraq** signed in September 2021, TotalEnergies plans to develop a 1.2 GW solar power plant to supply the Basra region's grid. TotalEnergies is also developing a solar project in **Saudi Arabia** (Wadi Ad Dawasir, 120 MW, 40%) and has a stake in the Shams solar power plant in **Abu Dhabi** (110 MW, 20%).

In **Morocco**, TotalEnergies has invested £20 million to acquire a minority stake in Xlinks First Limited, with the aim of developing a giant renewable project, combining wind and solar coupled with large battery storage to supply renewable electricity to the UK.

In the **rest of the continent**, in **South Africa**, TotalEnergies won a tender in 2022 launched by Sasol and Air Liquide for an onshore wind project (140 MW, 35%) and a solar project (100 MW, 35%). These two projects are expected to enable TotalEnergies to decarbonize the energy supplying Sasol and Air Liquide's industrial sites, in accordance with the Corporate PPA signed between the parties in February 2023 covering the supply of 260 MW of renewable electricity over a period of 20 years. In December 2023, TotalEnergies also announced with its partners the launch of the construction of a hybrid renewable project comprising a 216 MW solar power plant (35%) as well as a 500 MWh battery storage system (35%) to supply renewable electricity via a sales agreement (PPA) for 20 years to the national grid. The Company won the tender for this project in 2021, as well as a second tender for the development of an 87 MW solar project (36%). TotalEnergies also owns a stake in the Prieska solar power plant (86 MW, 27%).

TotalEnergies is also developing solar projects in **Angola** (Quilemba, 35 MW, 51%) and **Mozambique** (Dondo, 40 MW, 90%), where the consortium consisting of EDF (40%), TotalEnergies (30%) and Sumitomo Corporation (30%) was selected as a strategic partner by the Government of Mozambique in December 2023 to develop the Mphanda Nkuwa hydroelectric project with a capacity of 1500 MW.

Dowsing Offshore Wind project. In March 2023, Gulf Energy Development Public Company Limited (GULF) announced that it had acquired half of Corio Generation's stake. GULF owns 24.99% of the Outer Dowsing Offshore Wind project, alongside Corio Generation (25.01%) and TotalEnergies (50%).

In **Scotland**, in 2020, TotalEnergies acquired a majority stake (51%) in the Seagreen project, an offshore wind farm with a capacity of 1.1 GW, located off the Angus coast in the North Sea, alongside SSE Renewables. Upon start-up in October 2023, the farm became the largest wind farm in Scotland and one of the deepest in the world<sup>(3)</sup> on a fixed foundation. It is operating at its maximum rated capacity and is therefore expected to generate approximately 5 TWh of renewable electricity per year. In December 2023, TotalEnergies sold a 25.5% stake in the Seagreen project to PTTEP. Following the transaction, pending the approval of the competent authorities, TotalEnergies will own 25.5% of Seagreen alongside PTTEP (25.5%) and SSE Renewables (49%).

In January 2022, following ScotWind's call for tenders, the joint-venture between TotalEnergies (38.25%), Corio Generation (46.75%) and RIDG (15%), a Scottish developer in offshore wind, obtained the N1 zone concession to develop a 2 GW offshore windfarm. This project, called the West of Orkney Windfarm, will be located 30 kilometers off the Orkney archipelago in Scotland.

(1) Source: Casa dos Ventos.

(2) Source: Enerdata.

(3) Source: The Energy Institute.

In the **United States**, after having obtained, in February 2022, 100% of the maritime concession OCS-A 0538 off the coasts of New York and New Jersey, TotalEnergies joined forces in October 2023 with Corio Generation and Rise Light & Power (Rise) to develop the "Attentive Energy" project, with a capacity of more than 3 GW. Corio Generation and Rise have taken respective stakes of 27.7% and 16.3% in this project, with TotalEnergies retaining the remaining 56%. Under the agreement, Rise will interconnect the offshore wind project at its Ravenswood production site, enabling the shutdown of its natural gas-fired power generators. This emblematic site, a pillar of the New York energy system, will thus be transformed into a green energy hub, where Attentive Energy will base its operation and maintenance activities. In December 2023, the Attentive Energy project received approval for its first federal permit (Site Assessment Plan) for the total 3 GW capacity of the site.

In parallel, in October 2023 the Attentive Energy One project, owned by TotalEnergies (40%), Rise (35%) and Corio Generation (25%), won the call for tenders for ORECs (offshore renewable energy credits) organized by the New York State Energy and Research Development Agency (NYSERDA). Attentive Energy One was thus selected for a 25-year contract for the supply of 1.4 GW of renewable electricity and received approval of its first federal Site Assessment Plan in December 2023. The consortium's goal is to commission this project in 2029.

Finally, the Attentive Energy Two project, owned by TotalEnergies (70%) and Corio Generation (30%), won the New Jersey State tender for OREC in January 2024. Attentive Energy Two has been selected for a 20-year

## DISTRIBUTED GENERATION

In the fast-expanding **decentralized power generation** segment, TotalEnergies is dedicated to developing and building photovoltaic systems, that may be combined with batteries or other means of generation installed at industrial or commercial sites for own consumption. Depending on each country's regulations, TotalEnergies can operate those systems or lease them to local players. TotalEnergies enters into private PPAs as part of its activities. In addition, it helps to roll out TotalEnergies' program for solarizing its own sites.

TotalEnergies has operational activities in more than 30 countries at year-end 2023, with clients in Asia, the Middle East, Africa, Europe and the United States. At the end of 2023, its portfolio amounts to more than 900 MW of gross installed capacity spread over more than 480 sites and 620 additional MW of secured projects.

In the **United States**, following the acquisition in 2022 of SunPower's industrial and commercial solar activities, TotalEnergies continues to develop decentralized projects, with the signing of more than 140 MW of solar and battery capacity in 2023. TotalEnergies notably concluded in 2023 with the Holcim group a solar project of more than 33 MW associated with a 19 MW BESS (battery energy storage system) on the Portland cement production site in Colorado. The project will cover more

contract for the supply of 1.34 GW of renewable electricity. The consortium's goal is to commission this project in 2031.

In November 2023 in North Carolina, TotalEnergies filed the first Site Assessment Plan for its Carolina Long Bay project (1 to 2 GW, 100%, a concession won in May 2022).

In **France**, in 2020, TotalEnergies became a 20% shareholder in the Eolmed pilot project for a 30 MW floating wind farm located in the Mediterranean off the coast of Gruissan and Port-La Nouvelle, construction of which started in May 2022, with commissioning scheduled to take place during 2024.

In **South Korea**, TotalEnergies is developing a portfolio of more than 2 GW of bottom fixed and floating wind power with the Bada project in partnership with Corio Generation. In November 2022, the SK Ecoplant group purchased a minority interest in the project.

In **Taiwan**, the Yunlin project, with a capacity of 640 MW, in which TotalEnergies acquired a 23% stake in May 2021 from wpd, is currently under construction. The project started to inject electricity into the grid in November 2021.

In February 2023, TotalEnergies and Corio Generation announced the creation of a joint-venture to develop the "Formosa 3" wind farms off the coast of Taiwan. The Formosa 3 project comprises three wind farms, Haiding 1, 2 and 3, located offshore Changhua County in western Taiwan. Formosa 3's Haiding 2 wind farm was awarded a grid capacity of 600 MW in December 2022 by the Taiwan Energy Bureau, in a third round of auctions.

than 40% of the site's consumption. Holcim will receive approximately 71 GWh of renewable energy from the project annually under a Power Purchase and Storage Services Agreement ("PPSSA") with a minimum duration of 15 years.

In **China**, at year-end 2023 the 50/50 joint-venture formed in 2019 between TotalEnergies and Envision Group, one of the world leaders<sup>(1)</sup> in smart energy systems, was operating almost 500 MW of decentralized solar capacity on behalf of its BtB customers.

In **South-East Asia**, in April 2022, TotalEnergies and ENEOS announced the creation of a joint-venture to develop decentralized solar power production for their BtB customers in several Asian countries. This joint-venture (50/50) between two major players in the segment aims to develop 2 GW of decentralized solar capacity over the next five years.

In the **Middle East**, TotalEnergies joined forces with Veolia to construct a photovoltaic project in Oman to power a seawater desalination plant and provide drinking water to more than 600,000 people<sup>(2)</sup>. This 17 MW project, commissioned in 2023, is the first of its kind in the Middle East; it produces more than 30 GWh/y of renewable electricity and should avoid nearly 300 kt of CO<sub>2</sub> emissions.

(1) Source Envision Energy.

(2) TotalEnergies data.

## 2.4.3 Power generation from natural gas

TotalEnergies is building a portfolio of CCGT as part of its strategy to create an integrated gas and electricity value chain in Europe, from production to marketing, the gas constituting an ideal complement to renewable power generation from inherently intermittent sources. Thanks to the flexible production from those power plants, TotalEnergies can optimize its customers' electricity procurement costs. In Europe, at year-

end 2023, TotalEnergies had 9 CCGT plants (unchanged from year-end 2022 and compared with eight at year-end 2021) with a gross power generation capacity of 3.9 GW and two co-generation units (0.3 GW capacity). Total net electricity production from natural gas was 14.5 TWh in 2023, as against 22.8 TWh in 2022 and 14.4 TWh in 2021.

### Portfolio of electricity generation from CCGT in Europe at end-2023

Country	Plant	TotalEnergies' share (%)	Gross capacity (MW)
France	Bayet	100	442
	Pont-sur-Sambre	100	445
	Toul	100	445
	Saint-Avold (2 CCGT)	76	892
	Landivisiau	50	446
Belgium	Marchienne	100	416
Spain	Castejon (2 CCGT)	100	856

In **France**, on December 31, 2023 (as in 2022), TotalEnergies owned six CCGT plants compared with five in 2021, including one with a capacity of 0.4 GW, which was commissioned in March 2022 in Landivisiau (50% of which was sold in 2022 to Asterion Industrial Partners, a Spanish investment fund) and one co-generation unit (Normandy refinery). Their gross gas-based power generation capacity stood at 2.7 GW at year-end 2023 for the CCGT plants and 0.2 GW for the Normandy co-generation unit.

In **Belgium**, TotalEnergies owns the Marchienne CCGT plant, with a capacity of 0.4 GW. In addition, TotalEnergies has access to Antwerp's co-generation power generation (0.1 GW).

In **Spain**, TotalEnergies acquired two CCGT plants from Energías de Portugal in 2020 with a total gross capacity of 0.9 GW at year-end 2023 (stable since 2020).

In **Abu Dhabi**, the Taweeyah A1 gas-fired power plant, owned by the Gulf Total Tractebel Power Company (TotalEnergies, 20%), combines electricity generation and seawater desalination. The plant has a gross power generation capacity of 1.6 GW and a seawater desalination

capacity of 385 km<sup>3</sup>/day. The plant's production is sold to Emirati Water and Electricity Company (EWEC) under a long-term agreement.

In the **United States**, TotalEnergies signed an agreement in November 2023 with the U.S. company TexGen for the acquisition of three gas-fired power plants representing 1.5 GW of electricity generation capacity in Texas. Connected to the ERCOT (Electric Reliability Council of Texas) grid, the plants concerned are respectively located near Dallas and Houston. They are expected to respond to the growing energy demand of these cities and to make it possible to compensate for the intermittence of renewable energy production. Their importance was recently highlighted during weather events that impacted Texas' renewable electricity production or caused a high seasonal demand peak. These 1.5 GW of additional flexible production capacity acquired by TotalEnergies complement its renewable production capacities in Texas, which at year-end 2023 amounted to 5.5 GW gross installed and under construction and more than 3 GW in development. These gas plants will strengthen TotalEnergies' trading capabilities in the electricity and gas markets.

## 2.4.4 Electricity storage

Electricity storage is a major challenge for the future of power grids and a vital add-on to renewables, which are intermittent by nature. Large-scale electricity storage is essential to promote the growth of renewables and help them capture a significant share of the electricity mix.

TotalEnergies develops stationary **electricity storage** via its subsidiary Saft Groupe, (Saft). At the end of 2023, Saft is present in 19 countries mainly in Europe, the United States and Asia and benefits from the expertise and experience of its 4,000 employees.

Saft is a century-old French company that specializes in the design, manufacture, and sale of high-tech batteries for industry. Saft develops batteries based on nickel, lithium-ion and primary lithium technologies. The company is active in transportation (aeronautics, rail and off-road electric mobility), industrial infrastructure, meters and the Internet of things, aerospace, defense and energy storage. Building on the strength of its technological know-how, and through its energy storage activities, Saft is well placed to benefit from the growth in renewables beyond its current activities, by offering massive storage capacities, combined with the generation of electricity from renewables. This is one of Saft's main sources of growth.

In 2023, Saft continued to develop its business, particularly in energy storage and mobility, with:

- the commissioning of battery energy storage equipment with a total capacity of 150 MW/225 MWh, i.e. 114 high-tech containers designed and assembled by Saft, for the TotalEnergies Myrtle Solar power plant in Houston (Texas);
- the start, on the Grandpuits site, of a battery energy storage park with a capacity of 43 MW/43 MWh;
- the commissioning of an energy storage site on TotalEnergies' Carling platform, with a storage capacity of 25 MW/25 MWh. This site is made up of 11 lithium-ion battery containers, designed and assembled by Saft;
- the launch on the TotalEnergies refinery site in Antwerp (Belgium) of a new storage site with a capacity of 25MW/75 MWh. This project constitutes the largest European battery installation for TotalEnergies. This installation, which is expected to be operational by the end of 2024, will contribute 24/7 to the needs of the European and Belgian high-voltage transport network by ensuring daily smoothing of electricity on the national grid, particularly during tense winter periods, ensuring the security of the network by actively participating in the balancing reserves of the national grid and by allowing more renewable electricity to be integrated into the network;

- the signing of a contract with Meridian Energy, to deliver the first large-scale BESS, connected to the New Zealand network. Saft lithium-ion technology will provide 100 MW of power and 200 MWh of storage capacity to support grid stability as intermittent wind and solar power expand in the country;
- the delivery of a BESS to replace diesel backup power in a sustainable Microsoft data center in Sweden;
- the first delivery to Siemens Mobility of two 100 kWh lithium-ion batteries per train for its cutting-edge hydrogen train, Mireo Plus H in Germany.

In addition, the strong growth of renewables is changing the balance of grid operators. Consequently, TotalEnergies offers them services to manage the flexibility required to balance production and consumption.

TotalEnergies won a major lot in the long-term call for tenders launched by RTE in 2019 to strengthen the security of supply of the French electricity system, and thus started up a battery-based electricity storage facility in France in 2021. The seven-year contract provides a stable revenue base for energy storage projects. TotalEnergies won 129 MW/129 MWh, which are connected to the grid at three of the Company's sites: Dunkirk (61 MW), Carling (25 MW) and Grandpuits (43 MW). 86 MW have been operational since 2022 (Dunkirk and Carling). An additional 43 MW (Grandpuits) came on stream in April 2023. These facilities are composed of 60 2.5 MWh containers designed and assembled by Saft. This roll-out is in addition to installations combining photovoltaics and storage in French overseas territories (26 MW/76 MWh).

Saft conducts research to develop ever safer and more powerful batteries, particularly for mobility applications and renewable energy storage, using artificial intelligence and big data. Today, Saft's R&D teams are based around two epicenters, one located in Bordeaux (France) and the other in Cockeysville (Maryland, United States). These two centers house the Upstream Research teams, the Incubator and the *Tout Solide* solid-state battery program. In 2023, Saft unveiled IBIS (Intelligent Battery Integrated System), a smart battery that is more efficient for stationary storage and electric vehicles.

In 2023 Saft took the lead in the ELIAS project (Solid-state Advanced Lithium Elements), structured around a consortium bringing together six major players including the Atomic Energy Commission and the National Research Center. ELIAS aims to develop and implement an industrial demonstrator for the production of high-performance fourth-generation batteries. These solutions target several market segments: energy applications (e.g. space, underwater applications, stationary battery storage) and power applications (e.g. e-VTOL, industrial backup).

In addition, TotalEnergies also develops other electrical energy storage projects through partnerships. In September 2021, Stellantis, Saft and Mercedes-Benz entered into an agreement to welcome Mercedes-Benz to ACC (Automotive Cells Company), the joint-venture created in 2020 to design and manufacture batteries for electric vehicles. With an R&D center already operational since 2020 and a state-of-the-art pilot plant in the Nouvelle Aquitaine region in France, ACC inaugurated its first Gigafactory in Hauts-de-France in 2023, with a first production line with a capacity of more than 13 GWh to reach a capacity of 40 GWh in 2030.

## 2.4.5 Natural gas and electricity marketing and electricity trading

### CORPORATE PPA

On deregulated electricity markets, it is possible to sign long-term sales contracts, called Corporate PPA, for the output from solar or wind assets with corporate customers. Unlike in the distributed generation business, these assets are not located on the customer's property, but elsewhere on the electricity grid. The electricity generated by these assets is then injected into the electricity grid.

These contracts are usually signed on a long-term basis with fixed prices or with limited price variations. They enable customers to buy low-carbon electricity directly from the producer, while at the same time benefiting from a stable electricity price over the long term with access to the cost advantages offered by large-scale plants. These contracts enable TotalEnergies to secure long-term electricity sales and to promote the launch of new production assets.

### ELECTRICITY AGGREGATION AND TRADING

TotalEnergies is active in electricity trading in Europe and North America. It sells its output to third parties and supplies its subsidiaries. To support its development in the field of renewable electricity, the Company has developed specific expertise in trading on short-term markets (intra-day, physical delivery), in the structured PPA-type products, aggregation, and flexibility management segments.

**In Europe** TotalEnergies delivered 95 TWh of electricity in 2023, compared to 122 TWh in 2022 and 111 TWh in 2021, mainly from external sources. European electricity trading is mainly carried out from offices in Geneva, Paris, Madrid and Liège.

**In Germany**, TotalEnergies signed an agreement to acquire Quadra Energy in October 2023. Founded in 2012 and with a 9 GW virtual power plant, Quadra Energy is one of the three leading aggregators of

Corporate PPAs exist in a growing number of countries. Today, the most dynamic markets are United States, Western Europe, Brazil and Australia. TotalEnergies is positioning itself locally in these different markets to offer its customers global solutions and thus support them in their decarbonization objectives. In 2023, several corporate PPA were signed, including a new 15-year 100 MW electricity sales contract with Saint-Gobain in the United States and a renewable energy supply contract with Air Liquide/SASOL for a total capacity of 260 MW in South Africa.

At the end of 2023, TotalEnergies has a portfolio of Corporate PPA in these markets of close to 4.2 TWh, equivalent to more than 1.7 GW of installed capacity. In addition to the companies mentioned above, these Corporate PPA involve clients such as Amazon Web Services, Kilroy, LyondellBasel, Microsoft and Merck.

renewable electricity generation in Germany. Specializing in the aggregation of renewable electricity, Quadra Energy purchased the production of approximately 5,000 wind and solar farms in 2022 and resold 14 TWh on wholesale markets and to German resellers and customers.

This acquisition, which is subject to authorization from the competent authorities, is expected to allow TotalEnergies to strengthen its Integrated Power activities in Germany. The Company intends to leverage the recognized expertise of the 40 Quadra Energy employees who join it, as well as its innovative weather forecasting platform. These assets are also expected to allow the Company to strengthen its trading capabilities on intra-day markets, and to expand its marketing activities in order to offer its German customers competitive contracts for the sale of low-carbon electricity available 24 hours a day.

In **Switzerland**, TotalEnergies announced the acquisition of Predictive Layer in December 2023. The latter's activity is to improve the performance of electricity trading operations, thanks to the internalization of machine learning and artificial intelligence solutions. In particular, they make it possible to make projections on energy prices, whether on physical markets or derivatives markets.

## NATURAL GAS AND ELECTRICITY MARKETING

### Europe

With a portfolio of 5.5 million BtB and BtC customer sites (gas and electricity) in **France**, 8.7 million BtB and BtC client sites in **Europe** and 52 TWh of electricity and 101 TWh of gas supplied in 2023, TotalEnergies has become a leading player in the sale of natural gas and electricity to both the residential and professional markets (commercial and industrial segments).

In a context of rising electricity prices, since November 2022, TotalEnergies has committed to support its customers by encouraging them to save energy, through the development of new offers and the broadcasting of voltage alerts on the electricity grid.

For individual customers in France, TotalEnergies has implemented:

- a new "Heures Eco" offer incentivizing consumers to reduce their electricity bills through cheaper tariffs during off-peak hours;
- a "BonusConso" program during the 2022-2023 winter, and renewed for the 2023-2024 winter, aimed at rewarding customers who reduce their electricity consumption over the winter period, in the form of bonuses applied directly to customers' invoices;
- in the winter of 2023-2024, the reactivation of the *#TousAuCourant* program, which gives suggestions for good practices to save electricity and issues alerts on days of pressure on the grid.

In **North America**, TotalEnergies delivered 29.7 TWh of electricity in 2023 compared to 38.8 TWh in 2022 and 41.4 TWh in 2021. TotalEnergies plans to develop its trading activities on the US PJM and CAISO markets.

For professional clients and local authorities, TotalEnergies has implemented:

- options to reward flexible electricity consumption during peak times,
- the roll-out of an awareness-raising campaign for all BtB customers.

TotalEnergies contributed to supporting very small enterprise (VSE) and small and medium enterprise (SME) by reducing, over the year of 2023, the prices of their electricity contracts signed in the second half of 2022 to €280/MWh excluding taxes. TotalEnergies has also committed to updating the twelve-month Horizon electricity tariff schedule at an average annual price of €280/MWh excluding taxes for new VSE and SME customers.

TotalEnergies markets natural gas and electricity in the residential and professional segments in **France** through its subsidiary TotalEnergies Électricité et Gaz France (a merger of the TotalEnergies Énergie Gaz, TotalEnergies Spring France and Direct Énergie entities), in **Belgium**, through TotalEnergies Power & Gas Belgium subsidiary (formerly Lampiris SA), and in **Spain**, where it serves both professional and residential customers following its acquisition of EDP's operations in Spain in 2020.

TotalEnergies also markets natural gas and electricity on the professional segment in the **United Kingdom** and the **Netherlands**.

(million of sites BtB and BtC)	2023	2022	2021
<b>Europe</b>	<b>8.7</b>	<b>8.9</b>	<b>8.8</b>
France	5.5	5.6	5.4
Belgium	0.9	0.9	1.0
United Kingdom	0.3	0.3	0.3
Netherlands	—	—	0.1
Spain	2.0	2.0	2.1
 (in TWh of electricity supplied)			
<b>Europe</b>	<b>52.1</b>	<b>56</b>	<b>56.6</b>
France	29.2	32.1	33.4
Belgium	3.5	3.9	4.5
United Kingdom	13.8	13.4	12.6
Netherlands	—	—	0.8
Spain	5.7	5.9	5.2
 (in TWh of gas supplied)			
<b>Europe</b>	<b>100.9</b>	<b>99.2</b>	<b>101.2</b>
France	29.2	29.9	31.5
Belgium	7.1	7.6	10.3
United Kingdom	57.5	53.7	50.2
Netherlands	—	—	3.9
Spain	7.7	5.1	5.3

## Rest of the world

In Argentina, TotalEnergies markets the natural gas that it produces. In 2023, as since 2021, 4.4 bcm of gas were sold.

In India, since 2020 TotalEnergies owns 37.4% of Adani Total Gas Limited (ATGL), which holds 33 City Gas Distribution licenses in India (100%) and another 19 licenses through IOAGPL, a 50/50 JV with Indian Oil Corporation Limited (IOC).

## 2.4.6 Services in the field of energy efficiency and innovation in the electricity segment

GreenFlex, a wholly-owned subsidiary, offers services designed to improve the energy and environmental performance of its customers. GreenFlex had over 800 customers at year-end 2023.

As part of its transformation into an integrated energy company, in May 2022 TotalEnergies launched "TotalEnergies On", its startup acceleration program at Station F, the world's largest startup campus, located in Paris. In line with TotalEnergies' ambition to be a major player in the energy transition, TotalEnergies On intends to support the development of new companies in the electricity and renewable energy segment.

The objective of this program is to identify and support startups developing digital solutions in the field of electricity, whether it is renewable production, storage, trading, sales, decentralized network management, or electric mobility.

Since its launch, TotalEnergies On has already supported 19 start-ups during 2 sessions of 6 months each. In December 2023, the Company announced the acquisition of three start-ups that have benefited from the TotalEnergies On program:

- thanks to the acquisition of Dsflow, TotalEnergies will offer its multi-site BtB customers who consume a large amount of electricity an innovative SaaS (Software-as-a-Service) solution to manage their assets in real time and thus optimize their procurement strategy;

– TotalEnergies has also decided to integrate the software platform developed by NASH Renewables in order to optimize the design and operation parameters of its renewable projects, in a design-to-value approach, taking into account the impact of the geographical specificities of the sites on the market prices effectively captured;

– TotalEnergies will improve the performance of its trading operations through the in-house insourcing of Predictive Layer's machine learning and artificial intelligence solutions. These include projections of energy prices, whether on physical or derivatives markets, as well as other tailor-made modelling of demand, supply, production, or non-commodity trading.

TotalEnergies has also taken control of Time2plug (with a 56% stake) to facilitate and accelerate the deployment of electric vehicle charging points in France for its small BtB customers. and signed commercial contracts with 10 other start-ups that participated in the acceleration program to continue to benefit from their innovations.

## 2.5 Refining & Chemicals segment

The Refining & Chemicals segment includes the Refining & Chemicals activities described in section 2.5.1 and the Trading-Shipping activities described in section 2.5.2.

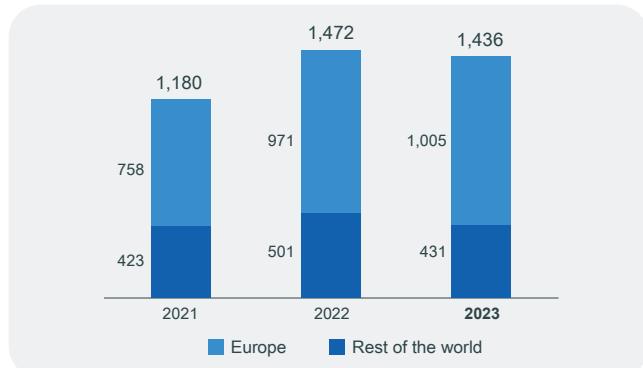
### Main indicators



### Main objectives/ambitions

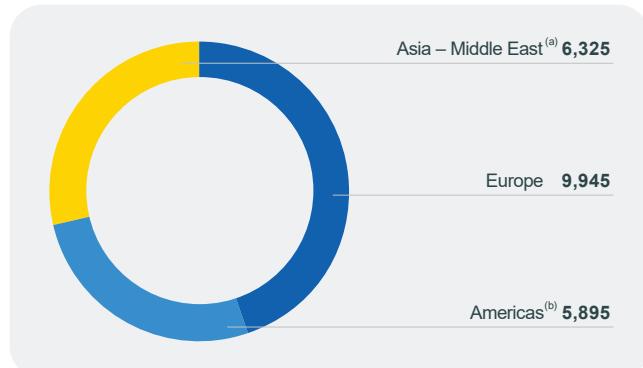


Refinery throughput<sup>(a)</sup> (in kb/d)



(a) Includes refineries in Africa that are reported in the Marketing & Services segment.

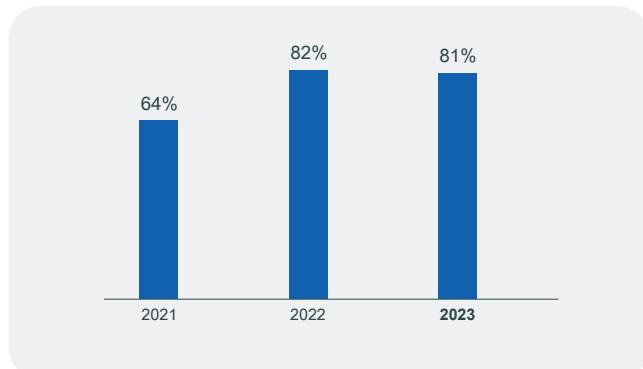
Petrochemicals production capacity by geographical area (kt)



(a) Including interests in Qatar, 50% of Hanwha TotalEnergies Petrochemical Co. Limited and 37.5% of SATORP in Saudi Arabia.

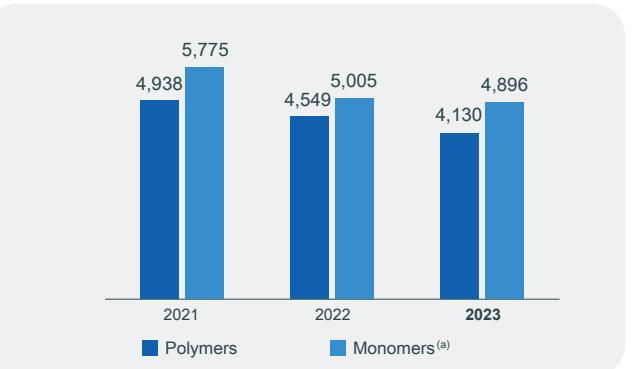
(b) Including 50% of the joint venture between TotalEnergies and Borealis.

Refining utilization rate<sup>(a)</sup> (in %)



(a) Based on distillation capacity at the beginning of the year, excluding Grandpuits (shut down first quarter 2021) from 2021 and Lindsey refinery (divested) from second quarter 2021.

Production of petrochemicals (in kt)



(a) Olefins.

(1) Based on publicly available information, refining and petrochemical production capacities at year-end 2022.

(2) Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

Refinery throughput was down by 2% year-on-year in 2023, mainly due to a slightly lower refinery utilization rate reflecting the major turnaround schedule of the year.

Petrochemicals production was down 2% year-on-year in 2023 for monomers and 9% for polymers due to weak demand for chemicals

## REFINING & CHEMICALS SEGMENT FINANCIAL DATA

Results (in M\$)	2023	2022	2021
Adjusted net operating income	4,654	7,302	1,909
Organic investments <sup>(a)</sup>	2,040	1,319	1,502
Net acquisitions <sup>(a)</sup>	(118)	(38)	(217)
Net investments <sup>(a)</sup>	1,922	1,281	1,285
Cash flow from operations excluding working capital (CFFO) <sup>(a)</sup>	5,853	7,704	2,946
Cash flow from operating activities	7,957	8,663	6,473

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

Refining & Chemicals adjusted net operating income was \$4,654 million in full-year 2023, down 36% year-on-year, due to the decrease in refining margins and refining throughput.

mainly in Europe impacting steam cracker utilization rate, with monomers partially compensated by the ramp up of ethane cracker unit in Port Arthur in the US.

Operating cash flow before working capital changes (CFFO) was \$5,853 million in full-year 2023, down 24% year-on-year for the same reasons although partially offset by dividends received from equity affiliates.

### 2.5.1 Refining & Chemicals

Refining & Chemicals' activities include refining, base petrochemicals (olefins and aromatics); polymer derivatives (polyethylene, polypropylene, polystyrene and hydrocarbon resins), including biopolymers and recycled polymers obtained from chemical or mechanical recycling, as well as the production of biofuels from the transformation of biomass and, since January 1, 2022, the production of specialty fluids, previously reported in the Marketing & Services segment. The Refining & Chemicals activities also include the processing of elastomers by Hutchinson.

Refining & Chemicals aims to constitute a safe, efficient and innovative industrial complex. The Refining & Chemicals strategy integrates the constant requirement for safety, a core value of TotalEnergies, and is embedded in the Company's climate ambition to achieve carbon neutrality (net zero emissions) by 2050 together with society. This strategy involves controlling the CO<sub>2</sub> emissions of its operations (Scope 1+2), developing low-carbon solutions, particularly in biomass, and adapting its activities in Europe in line with the net zero emission objective set by the European Union.

Its strategy is based on:

- continuously improving the competitiveness of refining and petrochemicals activities by making optimal use of production assets, concentrating investments on its large, integrated platforms and reducing CO<sub>2</sub> emissions linked to its operations;
- growing petrochemicals, mainly in the United States and the Middle East, by exploiting the proximity of cost-effective oil and gas resources in order to supply growing markets, particularly in Asia; and
- developing low-carbon activities, on the one hand in biofuels (in particular Sustainable Aviation Fuel (SAF)), synthetic fuels produced from CO<sub>2</sub> and green hydrogen (e-fuels), biopolymers and plastic recycling solutions, and on the other hand in materials that help enhance the energy efficiency of TotalEnergies' customers, particularly in the automotive market.

## Biofuels

Biofuels meeting European standards reduce CO<sub>2</sub> emissions by at least 50% compared to their equivalent fossil fuels<sup>(1)</sup> and demand for these products is supported by government policies aimed at achieving carbon neutrality (net zero emissions).

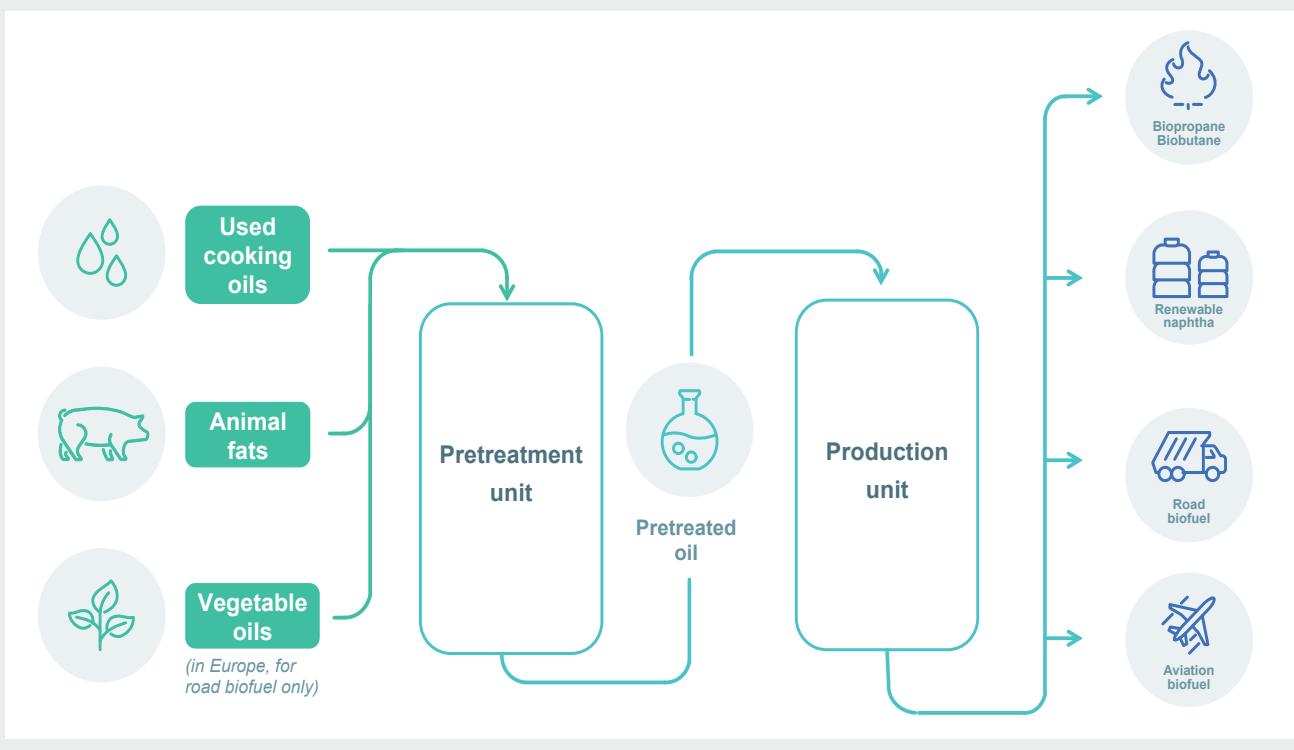
The growth of the biofuel market is driven by renewable diesel and SAF produced by hydrotreating vegetable oils or raw materials from the circular economy (animal fat, used cooking oil, etc.) This is a segment with expected growth of more than 25% per year<sup>(2)</sup> over the next few years.

The aviation sector has set itself the goal of achieving carbon neutrality by 2050<sup>(3)</sup>. Achieving this target is likely to involve the incorporation in fossil fuels of a growing proportion of SAF, which is the most effective solution for reducing CO<sub>2</sub> emissions from air transportation, in the absence of an industrial alternative to liquid fuel in the short to medium term.

The outlook for growth in demand for SAF is also supported by the various regulations. For example, in Europe, the ReFuelEU Aviation regulation, launched as part of the EU's "Fit for 55" legislative package, favors the development of SAFs in the European Union with, among other things, the implementation of obligatory progressive minimum incorporation mandate 2% in 2025, 6% (including 1.2% synthetic fuel) in 2030 and 70% (including 35% synthetic fuel) in 2050. In the U.S., the 2022 Inflation Reduction Act provides tax incentives for the domestic production of aviation fuel allowing GHG emissions to be reduced.

The hydrotreatment of raw materials from the circular economy, including animal fats and used cooking oils (as well as vegetable oils depending on local regulations), constitutes one of the main production routes for SAF.

**Diagrammatic representation of production of biofuels by hydrotreatment**



TotalEnergies intends to become a leader in the production of SAF, relying mainly on its existing refining assets (conversion, co-processing and developments on existing platforms).

In France, in order to respond to the call from its aeronautical customers, the Company is mobilizing its platforms in Grandpuits, Normandy and La Mède to be able to produce, from 2028, half a million metric tons of SAF, thus covering the gradual increase in the European SAF blending mandate, set at 6% for 2030. In December 2022, TotalEnergies and Air France signed a Memorandum of Understanding for the delivery of more than 1 Mcm or 800 kt of SAF over a ten-year period by TotalEnergies to Air France-KLM group airlines from 2023.

The Company has the ambition to produce 1.5 Mt/y of SAF in 2030 with units in Europe, the U.S., the Middle East and Asia, which is expected to correspond to a global market share of around 7% of volumes produced<sup>(4)</sup> at this horizon.

In 2023, TotalEnergies produced 331 kt (compared to 242 kt in 2022) of biofuels (renewable diesel, SAF and ETBE) and 78 kt (compared to 64 kt in 2022) of other co-produced chemical biocomponents (bionaphtha, etc.), mainly at the La Mède and Feyzin sites in France.

(1) According to the EU's RED III (Renewable Energy Directive).

(2) TotalEnergies data.

(3) Source: IATA.

(4) TotalEnergies data.

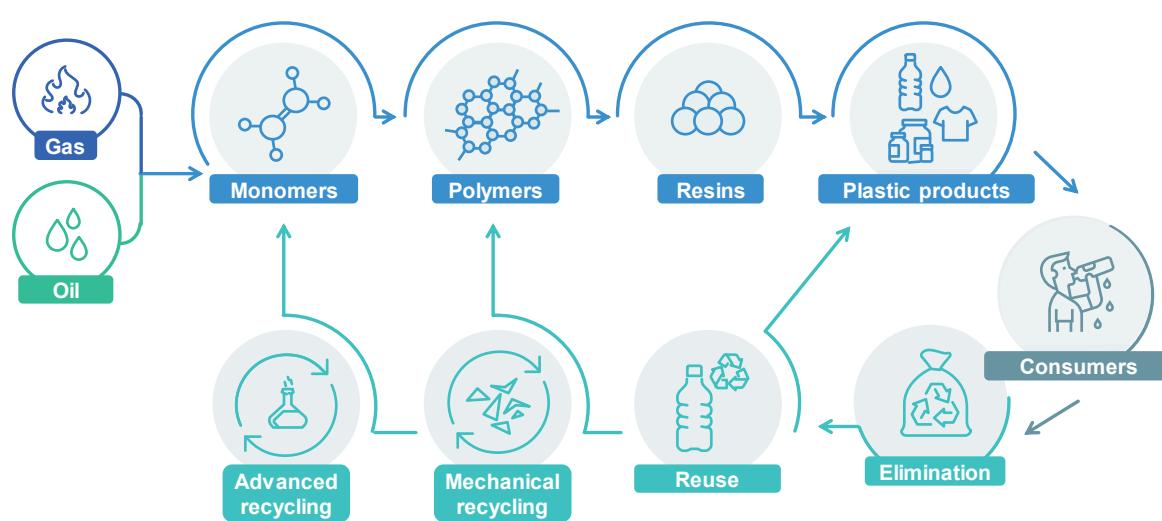
## Biopolymers and plastic recycling

Biopolymers are produced either by replacing fossil feedstock in a steam cracking unit with biomass feedstock such as vegetable oils or hydrogenated residues, or directly by making low-carbon molecules such as polylactic acid (PLA) from starch or sugar.

Mechanical recycling, the technology for which is more mature than that for chemical recycling, requires highly processed feedstock and cannot be used for every application of plastic, particularly most of those involving contact with food. This technology is suited to the needs of markets such as automotive and construction.

Advanced or chemical recycling, on the other hand, makes it possible to process waste that cannot be recycled mechanically and to address other markets, such as those of plastics for food use; it requires more capital-intensive technologies and is still at the stage of industrial development. The purpose of the chemical recycling process is to break down used polymer in order to return, in one or more stages, to a monomer, which is the raw material of any polymer.

### Plastic recycling process



In order to support its customers in reducing their greenhouse gas emissions and addressing the end-of-life problem of plastics, TotalEnergies has resolutely committed to the development of both biomass conversion into polymers and plastic recycling activities. It has set the ambition of producing 1 Mt/y of polymers from recycled or renewable materials by 2030. In 2023, TotalEnergies produced 80 kt of recycled or renewable polymers, compared to 50 kt in 2022 and 55 kt in 2021.

### 2.5.1.1 Refining and petrochemicals

At the end of 2023, TotalEnergies held stakes in 16 refineries (including the interest in Natref, in process of disposal<sup>(1)</sup>) located in Europe, the United States, the Middle East, Asia and Africa, eight of which are operated by TotalEnergies companies, including two biorefinery plants in France (La Mède, and the Grandpuits plant which is in the process of being converted). At December 31, 2023, TotalEnergies' refining capacity was 1,792 kb/d, unchanged from year-end 2022 and compared to 1,793 kb/d at year-end 2021. The refining capacity of the Refining & Chemicals segment amounted to 1,785 kb/d at year-end 2023 (or 99% of TotalEnergies' total capacity<sup>(2)</sup>).

TotalEnergies' petrochemicals operations are located in Europe, the United States, Qatar, South Korea and Saudi Arabia. Being either adjacent to or connected by pipelines to TotalEnergies refineries, the vast

In addition to the development of low-carbon polymers, TotalEnergies has been involved since 2019, as a founding member of the Alliance to End Plastic Waste, in an initiative to reduce the environmental impact of plastics. The Alliance, bringing together more than 80 members and project partners that have committed \$1 billion, develops and implements solutions on all continents to eliminate plastic waste in the environment.

majority of the petrochemical operations are integrated with its refining operations, thereby maximizing synergies.

At December 31, 2023, TotalEnergies' global petrochemicals capacity (olefins, aromatics and polymers) was 22,165 kt, compared with 21,885 kt at the end of 2022 and 21,381 kt at the end of 2021. The capacity increase in 2023 was mainly due to the commissioning of the polyethylene unit owned by the TotalEnergies and Borealis joint venture, on Bayport site (USA).

For the main sites of Refining & Chemicals at year-end 2023, please refer to point 1.7.3 of chapter 1.

(1) On December 1, 2023, TotalEnergies announced the signature of an agreement to divest the 36.36% minority stake, held by TotalEnergies Marketing South Africa, in National Petroleum Refiners of South Africa (Natref) to the Prax Group, subject to the authorizations and approvals of the competent authorities.  
 (2) The balance of the refining capacity is reported in the Marketing & Services segment.

## CRUDE OIL REFINING CAPACITY

The table below sets forth TotalEnergies' crude oil refining capacity<sup>(a)</sup>:

<b>As of December 31 (kb/d)</b>	<b>2023</b>	<b>2022</b>	<b>2021</b>
<b>Refineries operated by TotalEnergies companies</b>	<b>1,384</b>	<b>1,384</b>	<b>1,384</b>
<b>France</b>			
Normandy-Gonfreville (100%)	253	253	253
Donges (100%)	219	219	219
Feyzin (100%)	109	109	109
Grandpuits (100%)	–	–	–
<b>Rest of Europe</b>			
Antwerp (100%)	338	338	338
Leuna (100%)	227	227	227
<b>North America</b>			
Port Arthur refinery and condensate splitter (100%)	238	238	238
<b>Other refineries in which TotalEnergies has interests<sup>(b)</sup></b>	<b>408</b>	<b>408<sup>(c)</sup></b>	<b>409</b>
<b>Total</b>	<b>1,792</b>	<b>1,792</b>	<b>1,793</b>

(a) Capacity data based on crude distillation unit stream-day capacities under normal operating conditions, less the average impact of shutdowns for regular repair and maintenance activities.

(b) TotalEnergies' share as of December 31, 2022, in the eight refineries in which it has interests ranging from 0.2% to 55% (one each in the Netherlands, South Korea, Qatar and Saudi Arabia and four in Africa, including Natref in process of disposal).

(c) The decrease in refining capacity between 2021 and 2022 results from the reduction in the shareholding of TotalEnergies Marketing Sénégal SA in the Senegalese refinery SAR (Société Africaine de Raffinage) from 6.82% at December 31, 2021 to 0.18% at December 31, 2022.

## REFINERY AND BIOREFINERY PRODUCTION

The table below sets forth TotalEnergies' net share<sup>(a)</sup> of the refined quantities produced by TotalEnergies' refineries, by product category:

<b>(kb/d)</b>	<b>2023</b>	<b>2022</b>	<b>2021</b>
Gasoline (excluding ETBE)	252	259	228
Aviation fuel (excluding SAF) <sup>(b)</sup>	140	122	67
Diesel and fuels (excluding renewable diesel)	620	644	524
Heavy fuels	70	68	44
Other products <sup>(c)</sup>	314	326	265
Renewable diesel, SAF and ETBE	7	5	9
<b>Total</b>	<b>1 403</b>	<b>1 424</b>	<b>1,137</b>

(a) For refineries not 100% owned by TotalEnergies, the production shown corresponds to TotalEnergies' equity share in the site's overall production.

(b) Jet fuel, kerosene and Avgas (aviation fuel specially designed for piston engined aircraft).

(c) Mainly refining bases, petcoke, naphta, refinery propylene and other petrochemical bases.

The difference with refinery throughput and the refined volumes is due to self-consumption of crude oil and losses during the refining process.

## UTILIZATION RATE OF REFINERIES

The table below sets forth the average utilization rates of TotalEnergies' refineries:

	<b>2023</b>	<b>2022</b>	<b>2021</b>
On crude and other feedstock <sup>(a)(b)</sup>	80%	82%	66%
On crude <sup>(a)(c)</sup>	81%	82%	64%

(a) Including equity share of refineries in which TotalEnergies has an interest.

(b) Crude + crackers' feedstock/distillation capacity at the beginning of the year.

(c) Crude/distillation capacity at the beginning of the year.

## PETROCHEMICALS: BREAKDOWN OF MAIN PRODUCTION CAPACITIES

As of December 31 (in kt)	2023			2022		2021
	Europe	North America <sup>(a)</sup>	Asia and Middle East <sup>(b)</sup>	Worldwide	Worldwide	Worldwide
Olefins <sup>(c)</sup>	4,176	2,040	1,958	8,174	8,174	7,689
Aromatics <sup>(d)</sup>	2,976	1,512	2,581	7,069	7,064	7,045
Polyethylene	1,140	535	1,065	2,740	2,438	2,438
Polypropylene	1,245	1,200	605	3,050	3,070	3,070
Polystyrene	409	608		1,017	1,024	1,024
Other <sup>(e)</sup>			116	116	116	116

(a) Including 50% of the joint venture between TotalEnergies and Borealis.

(b) Including interests in Qatar, 50% of Hanwha TotalEnergies Petrochemicals Co. Ltd. in South Korea and 37.5% of SATORP in Saudi Arabia.

(c) Ethylene + propylene + butadiene.

(d) Including styrene monomer.

(e) Mainly monoethylene glycol (MEG), polylactic acid polymer (PLA) and cyclohexane.

## PETROCHEMICALS PRODUCTION AND UTILIZATION RATE

	2023	2022	2021
Monomers <sup>(a)</sup> (kt)	4,896	5,005	5,775
Polymers (kt)	4,130	4,549	4,938
Steamcracker utilization rate <sup>(b)</sup>	69%	76%	90%

(a) Olefins.

(b) Based on olefins production from steamcrackers and their treatment capacity at the start of the year.

## ACTIVITIES BY GEOGRAPHICAL AREA

### Europe

TotalEnergies is the second largest refiner and the second largest petrochemicals operator in Western Europe<sup>(1)</sup>. TotalEnergies also positions itself in the production of biofuels, mainly renewable diesel and SAF, as well as ether (ETBE) produced from ethanol and isobutene for incorporation into gasoline.

In a context of adaptation to the demand for petroleum products in Europe, TotalEnergies reduced its refining capacities in 2021 with the sale of its stake in the Lindsey refinery in the United Kingdom and the cessation of crude oil processing at the Grandpuits refinery, as part of its transformation into a zero-crude platform.

Furthermore, in line with its goal of carbon neutrality (net zero emissions) by 2050 together with society, TotalEnergies continued to pursue its projects aimed at decarbonizing all the hydrogen consumption of its European refineries by 2030. As part of this ambition, in 2023, TotalEnergies entered into agreements for the supply of green and low-carbon hydrogen on several of its sites and launched a call for tenders for the supply of 500 kt/y of green hydrogen, which is expected to allow it to avoid the emission of approximately 5 Mt/y CO<sub>2</sub> from its European refineries by 2030.

In 2023, TotalEnergies continued to improve the competitiveness of its industrial assets, notably with the sale to Ineos of its stake in the Lavéra assets (steam cracker, aromatics, polypropylene) as well as part of its stakes in the pipeline and ethylene storage network in eastern France. This operation allowed the two companies to realign their ethylene production and internal consumption. TotalEnergies is thus consolidating the integration of its Feyzin and Carling petrochemical sites.

Western Europe represents 68% of TotalEnergies' refining capacity, or 1,227 kb/d at the end of 2023, unchanged from year-end 2022 and 2021. TotalEnergies operates five refineries in Europe (one in Antwerp, Belgium, three in France, at Donges, Feyzin and Gonfreville, and one in Leuna, Germany) and one biorefinery in La Mède, France, pending the start-up of the Grandpuits zero oil platform, and holds a 55% interest in the Zeeland refinery in Vlissingen, the Netherlands.

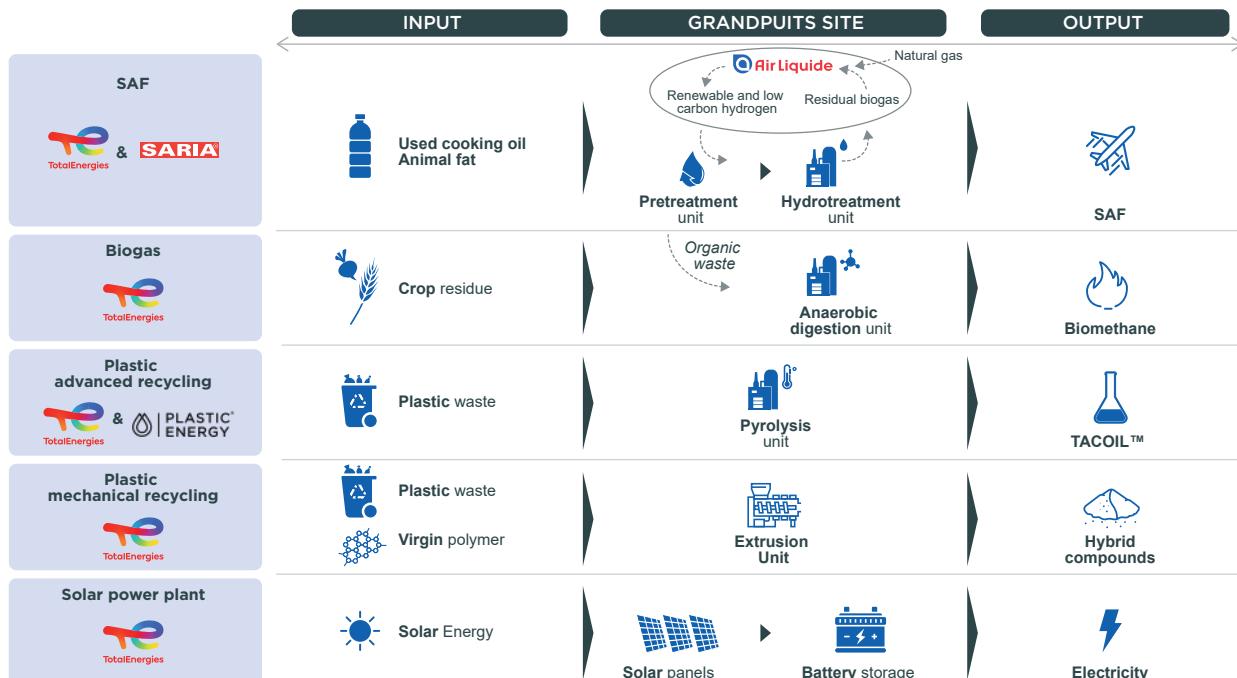
(1) Publicly available information, based on refining and petrochemicals production capacities at year-end 2022.

TotalEnergies' main petrochemical sites in Europe are located in Belgium, in Antwerp (steam crackers, aromatics, polyethylene) and Feluy (polyolefins, polystyrene), and in France, in Carling (polyethylene, polystyrene, polypropylene compounds), Feyzin (steam cracker, aromatics) and Gonfreville (steam crackers, aromatics, styrene, polyolefins, polystyrene). Europe accounts for 45% of TotalEnergies' petrochemicals capacity, or 9,946 kt at year-end 2023, compared with 9,931 kt at year-end 2022 and 2021:

- In France, TotalEnergies is continuing its development in low-carbon products while at the same time improving its operational efficiency, particularly through the conversion and modernization of assets.
  - The project to transform the **Grandpuits refinery** into a zero-crude platform focused on new energies and low-carbon activities continued in 2023.

For the development of **biofuel** production activities, a major milestone was reached in September 2022 with the signing of an agreement with SARIA, a leader in the European market for the collection and recovery of organic materials into sustainable products. Thanks to this partnership which made it possible to secure the supply of used cooking oils and animal fats (raw materials eligible for SAF production), the biorefinery is expected to have a SAF production capacity of 210 kt/y at its start planned for 2025. In June 2023, TotalEnergies announced a new investment to produce an additional 75 kt intended to increase the SAF production capacity of the biorefinery to 285 kt/y in 2027; which is expected to make it possible to respond to the gradual increase in European obligatory incorporation requirements. In November 2022, TotalEnergies partnered with Air Liquide to produce and recover renewable, low-carbon hydrogen, which will be used to produce sustainable aviation fuel. Under a long-term contract, committing TotalEnergies to purchase the hydrogen produced for the needs of its platform, Air Liquide plans to invest over €130 million in the construction and operation of a new unit producing hydrogen, which will partly use biogas from the TotalEnergies biorefinery, and will be equipped from the start with Air Liquide's Cryocap™ CO<sub>2</sub> capture technology. These innovations are expected to avoid emissions amounting to 150 kt/y of CO<sub>2</sub> compared to current processes.

#### Grandpuits site conversion project



(1) TotalEnergies data.

(2) TotalEnergies data.

For the development of **plastic recycling** activities, TotalEnergies has planned the construction, in partnership with Plastic Energy, of an advanced recycling plant in France, with the capacity to process 15 kt/y of plastic waste. This unit will be able to convert plastic waste by pyrolysis into a recycled raw material called TACOIL™. This raw material will then be transformed by TotalEnergies into polymers with properties identical to those of virgin polymers, and in particular compatible with food use. Start-up is scheduled in 2024. In March 2023, TotalEnergies and Paprec, a leader in plastic recycling in France, entered into a long-term commercial agreement to develop the first French value chain for chemical recycling of plastic film waste. This agreement allows TotalEnergies to secure supplies for the future Grandpuits chemical recycling plant.

To this initial project is added a new project announced by TotalEnergies in September 2023: the construction of a mechanical recycling unit.

This new unit, which is scheduled to be commissioned in 2026, is expected to produce 30 kt/y of high added value compounds consisting of up to 50% recycled plastic materials.

In addition, TotalEnergies announced in 2023 the construction on this same site of a **biomethane** unit with a capacity of 80 GWh/y, equivalent to the average annual consumption of 16,000 inhabitants<sup>(1)</sup>. Fed with organic waste partly coming from the biorefinery, it is expected to avoid the emission of nearly 20 kt/y CO<sub>2</sub>. TotalEnergies has also commissioned a **solar power plant** expected to generate 31 GWh/y of green electricity, the equivalent of the electricity consumption of 19,000 people<sup>(2)</sup>, as well as a battery storage park with a capacity of 43 MWh, contributing to security of supply and the balance between electricity production and consumption in France.

Finally, TotalEnergies ended the biopolymer project on the site in 2023, following the decision of its partner Corbion to withdraw due to rising costs.

- At the **La Mède** site, the first French biorefinery, with a 500 kt/y capacity, has produced renewable diesel since 2019. Since 2021, part of this diesel has been processed by the Oudalle plant near Le Havre to produce SAF.

In June 2023, TotalEnergies announced an investment of €70 million during the major shutdown planned for 2024 in order to modernize the site's installations and enable it to process up to 100% of waste from the circular economy to produce biofuels. This decision is part of the Company's objective to achieve 75% waste from the circular economy among the raw materials used to produce biofuels from 2024, as well as to accelerate the production of SAF to position the Company among the leaders in this market.

In addition, the Masshylia project which aims to design, develop, build and operate, in partnership with Engie, a green hydrogen production site located at La Mède is currently under study.

- On its integrated **Normandy** platform, after starting the production of SAF from the co-processing of used oils in March 2022, TotalEnergies plans to increase this production to 40 kt/y from 2025. In addition, following the technical work carried out with its aviation partners, TotalEnergies is expected to produce an additional 150 kt of SAF by co-processing of HVO biodiesel produced in La Mède, a production route which has been approved by ASTM<sup>(1)</sup> in September 2023.

In addition, TotalEnergies and Air Liquide have joined forces to decarbonize the site's hydrogen production and in 2022, TotalEnergies transferred the hydrogen production unit with a capacity of 255 t/d to Air Liquide, which now operates it. This cooperation between Air Liquide and TotalEnergies is part of their common ambition to contribute to decarbonizing industrial activities in the Seine axis. Thus, alongside other manufacturers, the partners signed a memorandum of understanding announced in July 2021, to develop a CO<sub>2</sub> capture and storage infrastructure in Normandy, with the objective of reducing CO<sub>2</sub> emissions by up to 3 Mt/y by 2030.

TotalEnergies and Air Liquide also signed an agreement in September 2023 for the long-term supply of the platform with 10 kt/y of green hydrogen and up to 5 kt/y of low-carbon hydrogen, which is expected make it possible to reduce the site's CO<sub>2</sub> emissions by up to 150 kt/y. The project has two components: TotalEnergies is expected to benefit from access to half of the green and low-carbon hydrogen production capacity of the Normand'Hy electrolyzer (200 MW) built and operated by Air Liquide and in return provide renewable and low-carbon electricity, intended to power the electrolyzer at a rate of 100 MW.

In February 2023, TotalEnergies and the Le Havre Seine Métropole Urban Community joined forces to supply heat to the urban network of Le Havre Sud, thus actively participating in the decarbonization and energy savings of the region. By 2025, the residual heat recovered on the platform's installations will replace the heat currently produced by gas combustion, with a view to supplying the equivalent of 12,000 homes<sup>(2)</sup> and avoiding the emission of 16 kt/y of CO<sub>2</sub>.

- The **Donges refinery**, which had been shut down since the end of 2020 (economic shutdown in a context of sharp deterioration in refining margins as a result of the COVID-19 pandemic, followed by

a major planned shutdown) restarted in May 2022, returning to its level of activity. In addition, the project to modernize the site, representing a total investment of more than €400 million, is progressing: the new section of the railway bypassing the site was commissioned in October 2022 and the construction of the diesel desulfurization unit is continuing. This unit, start-up of which is scheduled to take place during 2024, is expected to improve the refinery's competitiveness by producing fuel containing less sulfur that meets EU standards.

- **Synova** is one of the French leaders in the production of high-performance recycled polypropylene from plastics from industrial waste, the selective collection of waste from households and automotive parts such as bumpers. In October 2021, the commissioning of two new production lines at the Tillyères-sur-Avre site in France doubled TotalEnergies' recycled polypropylene production capacity to 45 kt/y enabling it to meet the growing demand for increasingly high-performing and environmentally friendly polymers, particularly from OEMs and automakers.

• In **Belgium**, TotalEnergies operates the Antwerp platform, where a major upgrade completed in 2017 has improved the site's conversion rate. The upgrade also increased the flexibility of the site's steam crackers, which can process ethane and gases recovered from the refining process. In polymers, the activities launched as part of a project to modernize the Feluy site (production of high value-added polypropylene, catalyst production workshop, polystyrene recycling) started in 2021, while one of the three existing polypropylene units, which mainly produced polypropylene as a commodity and had been in service for 40 years, was closed down in 2020. On this Antwerp platform, TotalEnergies also produces chemically recycled polymers, using the TACOIL™ produced by Plastic Energy, with which TotalEnergies joined forces in 2020 to build the advanced recycling unit at Grandpuits. In May 2023, TotalEnergies launched a battery park project intended for energy storage with a capacity of 75 MWh, the equivalent of the daily consumption of nearly 10,000 homes<sup>(3)</sup>. This project is expected to be operational by end of 2024.

• In **Germany**, TotalEnergies operates the Leuna refinery. Since the end of 2022, in accordance with the Company's announcements at the start of Russia's invasion of Ukraine, TotalEnergies has ended supplies of Russian oil to the refinery and in close consultation with the German government, deployed alternative solutions to supply the refinery, in particular by importing oil via Poland. In June 2023, TotalEnergies and VNG, a German natural gas distribution company, signed an agreement for the future supply of green hydrogen to the refinery. Green hydrogen, which will be produced by a 30 MW electrolyzer built and operated by VNG and its partner Uniper, is expected to enable a reduction in CO<sub>2</sub> emissions at the site of up to 80 kt/y by 2030.

• In **Spain**, TotalEnergies announced the acquisition of Iber Resinas (100%) in May 2023. With two plants near Valencia, Iber Resinas is a player in the mechanical recycling of plastics (polypropylene, polyethylene and polystyrene) from household and industrial waste. Thanks to this operation, TotalEnergies increases its production of circular polymers in Europe, completes its range of recycled products and strengthens access to the raw material thanks to the network of Iber Resinas suppliers.

(1) ASTM International is a standards organization that drafts and produces technical standards for materials, products, systems and services.

(2) TotalEnergies data.

(3) TotalEnergies data.

## North America

TotalEnergies' main sites in North America are located in Texas, at Port Arthur (refinery, steam cracker), Mont Belvieu (propylene splitter), Bayport (polyethylene) and La Porte (polypropylene), and in Louisiana, at Carville (styrene, polystyrene).

- At Port Arthur, TotalEnergies has, at the same site, a refinery with a capacity of 178 kb/d, a condensate splitter with a capacity of 60 kb/d as well as a 40% interest in BASF TotalEnergies Petrochemicals (BTP), which mainly owns and operates a steam cracker with the capacity to produce more than 1 Mt/y of ethylene, of which more than 85% from ethane, propane and butane, which are produced in abundance locally.
- In Mont Belvieu, TotalEnergies owns 33% of a propylene splitter, with a capacity of 410 kt/y in TotalEnergies' share, which purifies propylene from the refining process into propylene for the production of polypropylene at the La Porte site.
- At the Bayport site, the 50/50 joint-venture established in 2018 between TotalEnergies and Borealis commissioned its new Borstar® polyethylene unit in October 2023, with a production capacity of 625 kt/y and representing an investment of \$1.4 billion. This new unit, which more than doubles the site's polyethylene production capacity to over 1 Mt/y, completes the two partners' integrated petrochemical project, which includes the extended polyethylene site in Bayport as well as the ethane cracker located on the TotalEnergies platform in Port Arthur, commissioned in the third quarter of 2022.
- At La Porte, TotalEnergies operates a large polypropylene plant, with a capacity of 1.2 Mt/y, which is 100% owned.
- At Carville, TotalEnergies operates a styrene plant with a capacity of 1.2 Mt/y, through a joint venture (50% with SABIC), and a polystyrene unit with a capacity of 600 kt/y, which is 100% owned.

TotalEnergies concluded in July 2023 the sale of three lines of activity of its subsidiary Cray Valley (in charge of the production and marketing of resins). The transaction covers four production sites in the United States and the Cray Valley Italian subsidiary as well as the associated customer portfolio.

## Asia, Middle East and Africa

TotalEnergies holds interests in first-rate platforms that are ideally positioned, with easier access to feedstock under competitive conditions, enabling it to pursue its development in order to supply growth regions.

- In **Saudi Arabia**, TotalEnergies has a 37.5% shareholding in SATORP (Saudi Aramco Total Refining and Petrochemical Company), which operates the Jubail refinery. This 460 kb/d refinery, located close to Saudi Arabia's heavy crude fields, can process heavy crude oil and produce fuels and other light products that meet the European and American strictest specifications and are largely earmarked for export. The refinery is also integrated with petrochemical units: an 800 kt/y paraxylene unit, a 200 kt/y propylene unit, and a 140 kt/y benzene unit.

In addition, TotalEnergies and Saudi Aramco took the final investment decision in December 2022 on the Amiral project for the construction of a world-scale petrochemicals complex adjacent to the refinery. As part of this project, which provides for the construction of a mixed-load steam cracker (70% ethane and refinery off-gas) with a capacity of 1.65 Mt/y and polyethylene units with a capacity of 1 Mt/y, Saudi Aramco and TotalEnergies awarded engineering and construction

(EPC) contracts worth \$11 billion in June 2023. This project is expected to attract more than \$4 billion in additional investments in various areas of industrial activity (carbon fibers, lubricants, special fluids, detergents, additives, automobile parts and tires) and create approximately 7,000 jobs, direct and indirect, in the country.

Finally, TotalEnergies announced in 2023 two firsts in the Middle East concerning low-carbon activities:

- in July, oil from plastic waste, called pyrolysis oil, was treated at the SATORP refinery, then used as feedstock for Petrokema (a subsidiary of SABIC) to produce circular polymers certified ISCC+ (International Sustainability and Carbon Certification). This first paves the way for the creation of a local value chain for the chemical recycling of plastics and the production of circular polymers in the Saudi Arabia;
- in August, the SATORP refinery succeeded in treating, by co-processing, used cooking oil to produce a fuel meeting all the quality criteria of the ISCC+ certified SAF specifications. This certification should enable SATORP to meet the expected increase in demand for SAF in the Saudi Arabia.
- In **South Korea**, TotalEnergies owns 50% of Hanwha TotalEnergies Petrochemical Co. (HTC), which operates an integrated platform at the Daesan site, comprising a condensate splitter, a steam cracker and styrene, paraxylene and polyolefin production units. HTC is positioned on high value-added sustainable applications and specialty markets, such as underfloor heating pipes or automotive, contributing in particular to making vehicles lighter. Investments of \$1.3 billion between 2017 and 2021 increased the production capacity of ethylene to 1.5 Mt/y, polyethylene to 1.1 Mt/y and polypropylene to 1.1 Mt/y.
- In **Qatar**, TotalEnergies holds interests<sup>(1)</sup> in two ethane-based steam crackers: Qapco and Ras Laffan Olefin Cracker (RLOC) as well as four polyethylene lines operated by Qapco in Mesaied, including a linear low-density polyethylene plant with a capacity of 550 kt/y (Qatofin) and a 300 kt/y low-density polyethylene line (Qapco). TotalEnergies also holds a 10% interest in the Ras Laffan condensate refinery, with a total capacity of 300 kb/d.
- In **Algeria**, TotalEnergies withdrew in 2023 from the STEP (Sonatrach Total Entreprise de Polymères) joint-venture formed in 2019 with Sonatrach (51%) to study a petrochemical project in Arzew, in the north-west of the country.
- In **Japan**, TotalEnergies partnered with ENEOS Corporation in April 2022 to launch a feasibility study for a SAF production unit at ENEOS' Wakayama refinery. The proposed unit, with a production capacity of 300 kt/y of SAF, is expected to process waste or residues from the circular economy (mainly cooking oils and animal fats). The two partners envisage creating a joint-venture dedicated to SAFs.
- In the **United Arab Emirates**, TotalEnergies, Masdar and Siemens Energy signed a collaboration agreement in January 2022 to co-develop a pilot unit to produce sustainable aviation fuel from green hydrogen and CO<sub>2</sub>. The partners evaluated different technology providers, and carried out feasibility studies, working closely with regulators on compliance issues. The consortium ultimately selected the "methanol to jet" technology. In December 2023, the first successful test flight took place in Dubai on the sidelines of COP28 in the United Arab Emirates, demonstrating the feasibility of producing SAF from methanol.

(1) TotalEnergies holdings: Qapco (20%); Qatofin (49%); RLOC (22.5%).

- In Africa, TotalEnergies has interests in four refineries (South Africa, Cameroon, Ivory Coast and Senegal). Refining & Chemicals provides technical assistance for two of these refineries: the SIR refinery with a capacity of 80 kb/d in Ivory Coast and the Natref refinery with a capacity of 109 kb/d in South Africa. Concerning the latter and in line

## R&D AND PARTNERSHIPS

As part of the consolidation of its R&D activities within OneTech (refer to section 1.6 of Chapter 1), TotalEnergies has intensified its research efforts in the field of biofuels through the creation of a dedicated program. This strategic program, aimed at the development of lasting sustainable solutions based on waste, calls on a wide range of skills (modeling, agronomics, life cycle analysis, biotechnology, catalysis, thermochemicals, chemicals, industrial processes) to identify the most promising technologies contributing to achieving the goal of carbon neutrality (zero emissions) by 2050, together with society.

In this dynamic, the microalgae cultivation platform created on the La Mède site in November 2022 and the result of the collaboration between TotalEnergies and Veolia, has already made it possible to test seven innovative alga cultivation technologies developed by third parties (universities, start-ups), with the aim of identifying and promoting those compatible with the production of new generation low-carbon biofuels.

TotalEnergies develops other R&D partnerships and actions in the field of low-carbon products (fuels and polymers).

In February 2024, Airbus and TotalEnergies have signed a strategic partnership to meet the challenges of aviation decarbonization with sustainable aviation fuel. The partnership will cover two main areas: TotalEnergies will supply Airbus with sustainable aviation fuel for more than half of its needs in Europe; a research and innovation programme aimed at developing 100% sustainable fuels.

The strategic partnership with Safran, initiated in 2021, intensified in 2022, notably with the formulation of a SAF that is fully compatible with the fleets of aircraft currently in operation, and February 2023 saw the flight of an army helicopter with this SAF, produced by TotalEnergies from used cooking oil.

In March 2022, TotalEnergies and FNSEA, a French umbrella organization charged with the national representation of 20,000 local agricultural unions and 22 regional federations, formed a partnership to support and accelerate the energy, environmental and economic

with its strategy to divest non-core assets, TotalEnergies announced in December 2023 the signature of an agreement to divest its interest in the Natref refinery, subject to consents and authorizations of the competent authorities.

transition of the agricultural sector in France. This partnership aims in particular to promote solutions to produce biofuels by developing new agricultural sectors through the recovery of agricultural residues, low greenhouse gas crops or intermediate crops.

In February 2022, TotalEnergies and Honeywell announced a strategic agreement to promote the development of advanced plastic recycling. Under this agreement, Honeywell is expected to supply TotalEnergies with Recycled Polymer Feedstock (RPF) produced by its future plant jointly owned with Sacyr in Spain. This plant is expected to have a processing capacity of 30 kt/y of plastic waste, much of which is currently sent to landfills or incinerated. TotalEnergies is expected to purchase and convert this raw material into recycled polymers with exactly the same properties as virgin polymers, which notably could be used for food.

In December 2021, Plastic Energy and TotalEnergies signed a comprehensive agreement allowing TotalEnergies to acquire part of the production of the new pyrolysis unit, to be built by Plastic Energy in Seville, Spain. The plant, scheduled for commissioning in 2025, is expected to have a waste treatment capacity of 33 kt/y.

In December 2021, TotalEnergies and Plastic Omnium signed a strategic partnership agreement to jointly develop recycled polypropylene plastics that meet the demanding standards of automotive body parts, particularly in terms of aesthetics and safety. Under the terms of this agreement, the partners pool their innovation and engineering skills to design new types of recycled polypropylenes that are more efficient and environmentally friendly, while providing concrete answers to the challenges of the end-of-life of plastics.

In October 2021, TotalEnergies, Freepoint Eco-Systems and Plastic Energy announced a strategic partnership for a project to build an advanced recycling plant in Texas. This joint-venture with Plastic Energy and Freepoint Eco-Systems should process 33 kt/y of plastic waste to produce TACOIL™, a raw material from which TotalEnergies will manufacture recycled polymers.

### 2.5.1.2 Elastomer processing (Hutchinson)

The elastomer transformation specialist Hutchinson is one of the world leaders<sup>(1)</sup> in anti-vibration systems, fluid management, precision sealing and body sealing. These solutions are used worldwide, especially in the automotive, aeronautical and industrial manufacturing sectors (energy, railroads, naval, defense).

Hutchinson draws on wide-ranging expertise and leverage its know-how from the custom design of materials to the integration of connected solutions: structural sealing solutions, precision sealing, management of fluids, materials and structures, anti-vibration systems and transmission systems.

After being heavily impacted by the fall in demand linked to the health crisis, due to its exposure to the automotive and air transportation sectors, its activity grew again in 2023 and returned to the pre-crisis level. The continuation of actions aimed at lowering the break-even of its activities, particularly in a context of inflation in the cost of raw materials and labor, has enabled Hutchinson to maintain its competitiveness in its markets. Hutchinson continues to support its customers' transition to sustainable development and electric mobility.

At December 31, 2023, Hutchinson had 84 production sites worldwide (of which 51 in Europe and 18 in North America) and approximately 40,000 employees.

(1) TotalEnergies data.

## 2.5.2 Trading & Shipping

The activities of Trading & Shipping are focused primarily on serving the needs of TotalEnergies, and mainly include:

- selling and marketing the TotalEnergies' crude oil production,
- providing a supply of crude oil for TotalEnergies' refineries,
- importing and exporting the appropriate petroleum products for TotalEnergies' refineries to be able to adjust their production to the needs of local markets,
- chartering appropriate ships for these activities, and
- trading in various derivatives markets.

### 2.5.2.1 Trading

TotalEnergies is one of the world's largest traders of crude oil and petroleum products on the basis of volumes traded<sup>(1)</sup>. The table below presents Trading's worldwide crude oil sales and supply sources and

**TRADING'S CRUDE OIL SALES AND SUPPLY, AND PETROLEUM PRODUCT SALES<sup>(a)</sup>**

(kb/d)	2023	2022	2021
TotalEnergies' liquids production	1,550	1,519	1,500
Purchases from Exploration & Production	1,372	1,282	1,241
Purchases from external suppliers	2,601	2,535	2,803
<b>Total of trading's crude supply</b>	<b>3,973</b>	<b>3,817</b>	<b>4,044</b>
Sales to Refining & Chemicals and Marketing & Services segments	1,218	1,257	953
Sales to external customers <sup>(b)</sup>	2,755	2,560	3,091
<b>Total of trading's crude sales</b>	<b>3,973</b>	<b>3,817</b>	<b>4,044</b>
<b>Petroleum products sales by trading</b>	<b>2,373</b>	<b>2,269<sup>(c)</sup></b>	<b>2,262</b>

(a) Including condensates.

(b) Including inventory variations.

(c) Restated data (excluding LPG volumes).

Trading operates extensively in physical and derivatives markets, both organized and over the counter. In connection with its Trading activities, TotalEnergies uses derivative energy instruments (futures, forwards, swaps *and options*) in order to adjust its exposure to fluctuations in the price of crude oil and petroleum products. These transactions are entered into with a wide variety of counterparties.

### 2.5.2.2 Shipping

Since April 2022, the transport activities of crude oil and petroleum products as well as the transport of petrochemical products, LNG, petcoke and sulfur have been grouped under a common organization, One Shipping, whose objective is to respond in a coordinated manner to security challenges and decarbonization of TotalEnergies maritime transport activities. The transportation of these products that is necessary for the activities of TotalEnergies is coordinated by One Shipping. One Shipping maintains a rigorous safety policy rooted primarily in the strict selection of chartered vessels that meet the highest international standards.

Within the scope of crude oil, petroleum products and petrochemical products transport activities, the need for maritime transport is fulfilled through the balanced use of spot and time-charter markets. Excess transport capacity can be sub-chartered to third parties. The number of charters reached approximately 3,200 voyages in 2023 (compared to 2,800 in 2022 and 2,700 in 2021) to transport 148 Mt of crude oil, petroleum products and petrochemical products, compared to 134 Mt in

In addition, with its acquired expertise, Trading & Shipping is able to expand its scope of operations beyond its primary scope of activities.

Trading & Shipping conducts its activities worldwide through various subsidiaries that are wholly owned by TotalEnergies and are established in strategically important oil markets in Europe, Asia and North America.

The LNG and gas trading activities are reported by the Integrated LNG segment and the power trading activities by the Integrated Power segment (refer to points 2.3 and 2.4).

petroleum products sales for each of the past three years. Trading of physical volumes of crude oil and petroleum products<sup>(2)</sup> amounted to 6.4 Mb/d in 2023, compared to 6.1 Mb/d in 2022 and 6.3 Mb/d in 2021.

For additional information concerning derivatives transactions by Trading & Shipping, refer to Note 16 (Financial instruments related to commodity contracts) to the Consolidated Financial Statements (refer to point 8.7 of chapter 8).

All of TotalEnergies' Trading activities are subject to a strict risk management policy and trading limits.

2022 and 120 Mt in 2021. As of December 31, 2023, the mid-term and long-term chartered fleet numbered 67 vessels (including 13 LPG vessels), compared to 59 in 2022 and 47 in 2021. The average age of the fleet of this perimeter is approximately seven years (also approximately seven years including LNG carriers).

The integration into the time charter fleet of new vessels that are capable of using LNG and are equipped with the latest technologies that achieve better performance and produce the lowest emissions of greenhouse gases in their category continues. TotalEnergies' time-chartered fleet includes 11 vessels of this type (without counting LNG carriers).

TotalEnergies also took a significant step forward in 2023 by confirming the charter of 11 vessels capable of running on bio/e-methanol. These 6 MR type tankers (50 kt of capacity) and these 5 bitumen tankers (3 of 8 kt and 2 of 17 kt of capacity) are currently under construction and should gradually join the TotalEnergies time-chartered fleet in 2025 and 2026.

(1) TotalEnergies data.

(2) Excluding LPG volumes, which are reported in point 2.3.5.

Moreover, TotalEnergies pursues various initiatives, in particular in favor of the energy sobriety of its time-chartered fleet:

- TotalEnergies approved with its partners a pilot project to install two rotating masts on board a petroleum product transport vessel, the sails of which are expected to allow a reduction up to 8%<sup>(1)</sup> of the ship's emissions, and were installed at the beginning of 2024;
- TotalEnergies encourages its partner shipowners to use the latest weather routing technologies in order to optimize journeys. These digital tools generally allow a reduction of 3% to 5%<sup>(2)</sup> in ship fuel consumption.

The use of alternative fuels that emit less greenhouse gases and the implementation of innovative technologies to improve the energy efficiency of ships are concrete actions which aim to immediately support the Company's efforts to reduce the environmental footprint of its maritime transport activities.

The Company also participates to various initiatives in the maritime transport industry aiming to contribute to the energy transition:

- TotalEnergies is a signatory of the Sea Cargo Charter, an association launched in 2020 by the main shipping players to create a consistent, transparent method for measuring emissions in support of efforts to decarbonize the shipping industry. The association establishes a common baseline for determining, on the basis of defined standards, whether shipping activities are aligned with the International Maritime

Organization's climate ambitions. In 2023, the association increased the decarbonization ambition for the maritime transport sector, in line with the IMO's new ambition to achieve carbon neutrality in 2050. The 2023 global score of TotalEnergies' charter activities was better than the reference value of the Sea Cargo Charter (as in 2022);

- since 2020, TotalEnergies is a member of Getting to Zero coalition and supports the maritime industry's decarbonization by collaborating with companies across the maritime, energy, infrastructure and finance sectors. Joining the Coalition marked a further step in TotalEnergies' commitment alongside its customers in the maritime sector and illustrates the Company's strategy to support them in their own emissions reductions;
- TotalEnergies has been a strategic partner of the Maersk Mc-Kinney Møller Center for Zero Carbon Shipping since February 2021. Through this collaboration, TotalEnergies is accelerating its R&D program in carbon-neutral shipping solutions, in line with its commitment to work with its major customers to achieve carbon neutrality (net zero emissions). This partnership allows TotalEnergies to join forces with leading players across the shipping sector to develop new low-carbon alternative fuels as well as carbon neutrality solutions.

As part of its Shipping activity, TotalEnergies uses freight derivative products to manage the economic performance of its fleet in the face of fluctuations in the maritime transport market.

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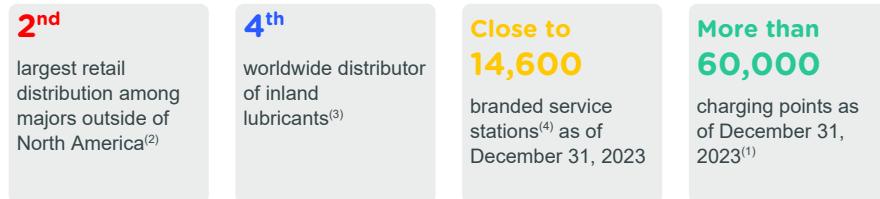
(1) TotalEnergies data.  
 (2) TotalEnergies data.

## 2.6 Marketing & Services segment

Marketing & Services includes the worldwide supply and marketing of petroleum products and services, low-carbon fuels and new energies for mobility. It contributes to the transition strategy of TotalEnergies and proactively supports its customers in their own transition towards more sustainable energy and mobility.

Marketing & Services (M&S), with a direct presence in 100 countries, caters to customers with various needs for energy, mobility and associated services. M&S also caters to a wide range of professional customers in terms of size and industry (transportation, manufacturing, agriculture, etc.), and individual customers, through its retail network of close to 14,600 service stations and over 60,000 charging points for electric vehicles<sup>(1)</sup>.

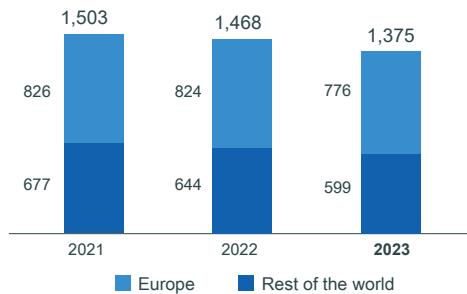
### Main indicators



### Our objectives



### Petroleum products sales<sup>(a)</sup> (in kb/d)



Sales of petroleum products were down by 6% in full-year 2023, due to the lower professional and industrial demand mainly in Europe and the disposal of 50% of the fuel distribution business in Egypt, which were partially offset by the recovery in aviation business.

(a) Excludes international (trading) and bulk refining sales.

### Marketing & Services segment financial data

Results (in M\$)	2023	2022	2021
Adjusted net operating income	1,458	1,550	1,618
Organic investments <sup>(a)</sup>	1,065	1,035	1,074
Net acquisitions <sup>(a)</sup>	(1,924)	(121)	(151)
Net investments <sup>(a)</sup>	(859)	914	923
Cash flow from operations excluding working capital (CFFO) <sup>(a)</sup>	2,318	2,365	2,556
Cash flow from operating activities	1,957	3,124	2,333

(a) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

Marketing & Services adjusted net operating income was to 1,458 million dollars for the full-year 2023, decreasing 6% year-on-year due to lower

sales. Cash flow from operations excluding working capital changes (CFFO) decreased by 2% year-on-year to \$2,318 in full-year 2023.

(1) Operated and supervised charging points.

(2) Global Retail Company Data Manager (2023), S&P Global, based on the number of service stations TotalEnergies, BP, Chevron, ExxonMobil, and Shell in 2022.

(3) Global Lubricants - Company Positioning Overview (2023), S&P Global, based on 2021 market shares.

(4) TotalEnergies (including TotalEnergies Contact), Access, Elf, Elan and AS24. Including service stations owned by third parties under the Company's brands. Third-party service stations with only terminals accepting the AS24 card are not counted.

(5) Directly or through shareholdings.

## 2.6.1 Presentation of the segment

M&S formulates and markets different ranges of petroleum fuels, lubricants, and associated services, both through the service station network (shops, catering, washing, etc.) and to industrial customers. It also offers its clients new forms of energy and mobility services such as biofuels (including sustainable aviation fuel), electric charging, LNG for ships, natural gas, biogas or also hydrogen for heavy goods transport.

M&S has a strong presence in Western Europe (Benelux, France, Germany) and in Africa, where M&S counts among the leaders in petroleum products distribution (based on the number of branded service-stations)<sup>(1)</sup>.

The M&S strategy is part of the Company's climate ambition: to provide as many people as possible with energy that is more reliable, more affordable and more sustainable, as part of the Company's carbon neutrality ambition (zero net emissions), together with society.

To this end, M&S aims to diversify its sales by developing its revenues from new low-carbon energies, whose low environmental impact is part of the Company's climate ambition, while, at the same time reducing sales of low-margin petroleum products. Thus, the Company intends to reduce Scope 3<sup>(2)</sup> emissions of petroleum products sold to its customers by 40% between 2015 and 2030.

### Market environment and trends

The development of regulatory frameworks or tax incentives aimed at reducing greenhouse gas emissions promotes the development and the adoption of low-carbon energies, and contributes to a market change, with contrasting geographic dynamics.

By 2050, global demand for energy for transportation is expected to have changed significantly, with different energy mixes depending on the type of use. The Company made public in September 2023, the TotalEnergies Energy Outlook 2023 which updates the evolution scenarios of the global energy system by 2050 developed by TotalEnergies which anticipates that:

- for light vehicles, electrification will tend to become more widespread and will reduce absolute energy demand due to the better efficiency of electric motors (compared to thermal engines);
- for heavy goods vehicles, electrification will become significant in gradual substitution of fuels (including biofuels) and hydrogen will be able to serve the applications that are most difficult to electrify;
- in the aviation and marine segments, sustainable fuels will come from bio-industry, the circular economy and hydrogen derivatives (synthetic fuels), despite the uncertainties surrounding the technologies and the transition to an industrial scale.

However, these trends will be implemented at different paces from one geographical region to another.

- In Europe, the oil demand (liquid fuels, including biofuels) should decline as vehicles fleets' electrification progresses, supported by the European Green Deal (set of European Union measures aiming to achieve carbon neutrality by 2050 in particular).
- In Africa, the pace of growth in oil demand is expected to remain strong until 2030 and then gradually slow down, while remaining positive until 2050.
- In China, the peak consumption of liquid demand could occur around 2030 despite an increasing motorization rate (more than 60% of new light vehicles are expected to be battery electric or plug-in hybrid by then).

### M&S strategy

In this rapidly changing environment, M&S seeks to proactively anticipate the decarbonization of its sales, particularly in Europe, and to support growth in demand in Africa.

#### ● Network

M&S intends to continue the selective development of its network of service stations with the objectives to:

- increase revenues from services in stations (stores branded Bonjour, washing carried by the Wash brand, and catering where M&S develops partnerships with leading brands, etc.), as well as mobility services;
- transform the service station network in Europe, aiming for more than 1,000 sites dedicated to electric high power charging or multi-energy by 2028;
- grow in Africa and in certain key markets.

The agreements signed on March 16, 2023 between the Company and Alimentation Couche-Tard ("Couche-Tard") illustrate this strategy. The transaction, finalized on December 28, 2023 for Germany and on January 3, 2024 for Belgium, Luxembourg, and the Netherlands, thus confirms:

- the creation of a joint venture (TotalEnergies 40%, Couche-Tard 60%) that will own and operate its retail outlets in Belgium and in Luxembourg, and accelerate the transition of these assets by maximizing their non-fuel sales;
- the sale to Couche-Tard of 100% of its networks in Germany and the Netherlands, in order to focus on developing new mobilities (electric and hydrogen) in these countries.

The agreements provide that these four networks will remain branded TotalEnergies as long as the fuel is supplied by the Company, for at least five years. In these countries, TotalEnergies will keep operating and developing activities related to off-station electric vehicle charging (charging hubs), hydrogen distribution, wholesale fuel business, as well as the AS 24 service station network for trucks.

Finally, in France, TotalEnergies is committed to supporting drivers' purchasing power by capping the price of fuel at €1.99/l in all its French service stations, as long as prices remain high.

#### ● Lubricants

The production and marketing of **Lubricants** represents a significant share of M&S's results. These products, which in the vast majority of cases do not generate GHGs when used, continue to have strong potential for value creation. M&S aims to:

- maintain a continuous upmarketing effort (with premium and specialty products);
- incorporate technologies and services in the field of industrial lubricants;
- expand the network of TotalEnergies Lubricants centers and develop new digital offers on "Online to Offline" platforms;
- develop a circular and sustainable approach with the incorporation of recycled base oils into its products and the eco-design of new products and packaging.

#### ● B2B activity

TotalEnergies aims to develop low-carbon solutions for its customers, relying on its portfolio of one million **B2B** customers. This dynamic was illustrated in October 2022 with the signing of a memorandum of understanding between TotalEnergies and Holcim to work together on the total decarbonization of one of their cement works currently being modernized in Obourg, Belgium, in order to capture, sequester and effectively recover nearly 1.3 Mt of CO<sub>2</sub> emitted each year by this site.

(1) TotalEnergies data.

(2) GHG Protocol – Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

- **New energies for mobility**

With regards to **new energies for mobility**, M&S is building the foundations of strong positions in the various segments of the transportation market in order to anticipate changes in demand:

- for **light vehicles**: M&S intends to prioritize the development of charging points over 150 kW for on-the-go charging (in service stations located on highways and in urban hubs, mainly in Europe) and, in the B2B segment, to support its customers in electrifying their fleets by drawing on the European portfolio of Fleet customers (approximately 365,000 customers). M&S also plans to develop selectively in the B2G<sup>(1)</sup> segment (on-street charging), through partnerships. The Company aims to cover the entire electric charging activities value chain (from the electricity supply, installation, management and supervision of chargers, to the development of its roaming network) and targets to operate and supervise 150,000 charging points worldwide by 2026;
- for **heavy trucks**: TotalEnergies launched a dedicated in-depot electric charging offer in Europe in November 2023, including the installation and supervision of chargers, and capable of covering all carriers' needs. In order to meet the carriers' charging needs outside their depots, M&S plans to build a network of electric charging points

in Europe, primarily satisfying the needs of urban and regional transportation, supplemented by a network of hydrogen stations mainly intended for long distance transportation;

- in **maritime transportation**, TotalEnergies offers its customers a diversified range of marine fuels which it intends to develop in Europe and Asia, including LNG, biogas and biofuels. At the same time, the Company aims to develop strong positions in logistics. It also offers lubricants and associated services;
- in **aviation**, M&S develops the sales of aviation fuels including SAF, in line with its clients' demand.

M&S's transformation projects are supported in the medium term by a significant multi-year organic investment plan (more than \$1 billion in 2023), which provides for a reallocation of investments to support growing activities: new energies (mainly electric), services (catering, washing, shops, etc.), and low-carbon solutions (lubricants, bitumens, LPG, etc.).

As part of its activities, M&S holds stakes, through its subsidiaries, in four refineries in Africa, including Natref in the process of disposal<sup>(2)</sup>. The activities of Refining & Chemicals activities are presented in point 2.5 of this chapter.

## 2.6.2 Sales of petroleum products

The following table shows M&S's sales of petroleum products<sup>(a)</sup> by geographical area as of December 31:

(kb/d)	2023	2022	2021
Europe	776	824	826
France	410	439	440
Europe, excluding France	366	385	386
Africa	357	388	405
Middle East <sup>(b)</sup>	46	45	42
Asia Pacific <sup>(c)</sup>	111	123	131
Americas	85	88	99
<b>Total</b>	<b>1,375</b>	<b>1,468</b>	<b>1,503</b>

(a) In addition to M&S's petroleum product sales, TotalEnergies' sales include international trading (2,173 kb/d in 2023, 2,012 kb/d in 2022 and 1,696 kb/d in 2021) and bulk refining sales (405 kb/d in 2023, 411 kb/d in 2022 and 383 kb/d in 2021).

(b) Including Turkey.

(c) Including the Indian Ocean islands.

## 2.6.3 Service stations breakdown

The table below shows the geographical breakdown of the Company-branded<sup>(a)</sup> service stations:

As of December 31	2023	2022	2021
Europe <sup>(b)</sup>	5,568	5,617	5,741
of which France	3,319	3,360	3,479
Africa	4,501	4,607	4,586
Middle East	1,125	1,058	1,061
Asia Pacific <sup>(c)</sup>	2,217	2,173	2,135
Americas	782	784 <sup>(d)</sup>	964
AS 24 network (for heavy-duty vehicles) <sup>(e)</sup>	378	408	405
<b>Total</b>	<b>14,571</b>	<b>14,647</b>	<b>14,892</b>

(a) TotalEnergies (including TotalEnergies Contact), Access, Elf, Elan and AS 24, including service stations owned by third parties and those currently being converted. Turkey is included under the Middle East region.

(b) Excluding the AS 24 network.

(c) Including the Indian Ocean islands.

(d) Cessation of the retail network activities in Mexico effective December 31, 2022.

(e) 2021 data restated to exclude third-parties accepting the AS 24 card, previously reported under this figures.

(1) *Business to Government*: public sector(aiming to develop mainly on-street charging infrastructures).

(2) On December 1, 2023, TotalEnergies announced the signing, with the Prax Group, of an agreement to divest the 36.36% minority stake held by TotalEnergies Marketing South Africa, in the Natref refinery (National Petroleum Refiners of South Africa), subject to the authorizations and approvals of the competent authorities.

## 2.6.4 Distribution of charging points for electric vehicles

As of December 31	2023	2022	2021
France	21,361	17,285	9,918
Benelux	25,575	16,089	10,271
Germany	5,210	3,902	3,164
United Kingdom	2,478	2,112	1,797
Rest of Europe	576	219	584
Asia-Pacific	4,745	2,912	108
Rest of world	123	0	0
<b>Total<sup>(a)</sup></b>	<b>60,068</b>	<b>42,519</b>	<b>25,842</b>

(a) 2021 data restated to include the number of charging stations of the Asia-Pacific region not previously reported.

## 2.6.5 Activities by geographical area

The information below describes M&S's main activities by region and business area.

### 2.6.5.1 Europe

#### RETAIL

In the framework of the agreements signed on March 16, 2023 between the Company and Alimentation Couche-Tard ("Couche-Tard"), the Company completed on December 28, 2023, the 100% sale to Couche-Tard of the service stations network in Germany (1,200 service stations). The Company also completed on January 3, 2024, the sale of 100% of the service stations network in the Netherlands (close to 380 service stations) and the creation of a joint-venture (TotalEnergies 40% and Couche-Tard 60%) in order to operate the service stations networks in Belgium and in Luxemburg (more than 600 service stations) and to accelerate their transition by maximizing their sales excluding petroleum fuels. The agreements provide that these four networks will remain branded TotalEnergies as long as the fuel is supplied by the Company, for at least five years. In these countries, TotalEnergies will continue to operate and develop in businesses of electric charging, of hydrogen distribution, of fuel wholesale as well as of the AS 24 stations network for heavy goods vehicles.

At year-end 2023, the network accounted for close to 5,950 branded service stations.

In France, at year-end 2023, the dense network of service stations consisted of more than 3,300 sites, of which close to 2,200 branded TotalEnergies (including TotalEnergies Contact), more than 700 branded Access (service stations combining low prices with fuel quality) and more than 400 branded Elan (mainly located in rural areas)<sup>(1)</sup>. At the end of 2023, TotalEnergies is the leading distributor of superethanol E85 in the country, in number of stations<sup>(2)</sup>, with approximately 900 sites offering this fuel, mostly renewable. In order to offer ever greater proximity to its French customers, the Company announced in August 2023 planning to

#### NEW ENERGIES FOR MOBILITY

##### Electricity

In the field of electro-mobility, M&S provides solutions to meet on-the-go charging needs by installing and operating charging points in its multi-energy service stations and on charging hubs.

In France, since the opening of its first 100% electric station in May 2021, the Company has equipped, at the end of 2023, more than 180 stations with charging infrastructures representing more than 1,000 charging points over 150 kW, in town and on motorways, which makes it the number one player of high power charging on the country's motorways and expressways<sup>(4)</sup>.

reopen 20 service stations in rural areas and recruiting pump attendants for 300 service stations by year-end 2024. At the end of 2023, the Company accounted for approximately 1,160 service-stations in rural areas, mainly branded TotalEnergies Contact or Elan, and approximately 130 pump attendants have been recruited.

In logistics, TotalEnergies holds interests in 27 deposits in France, including 7 operated by Group companies.

In heavy-goods transportation, with its AS 24 brand, TotalEnergies rolls out an offer specific to this growing segment. The Company offers a fuel card accepted in a network of nearly 1,550 dedicated stations in Europe. AS 24 is constantly expanding its geographical presence on the major European transportation roads, mainly in Eastern Europe. AS 24 supports the energy transition of the road carriers by offering NGV in several European countries, and in particular bioNGV in France, and developing a multi-energy offering in its network.

AS 24 also offers services aiming to simplify mobility, such as a satellite geolocation and payment system for the main European road tolls.

Benefiting from a close proximity with its customers, service-stations carrying one of the Company's brands meet their daily needs with a multi-service and multi-product offering (allowing, among else, to optimize their energy consumption such as the Excellium® fuels). Non-fuel activities (catering, Bonjour-branded stores, Wash-branded washing centers - France's leading washing network<sup>(3)</sup>- local partnerships and cards) are growing steadily, contributing significantly to the network's operating cash flow.

By 2026, the Company aims to equip 200 stations in the national road network (motorways and ring roads) and 300 stations in cities, outskirts and transitional areas (airports, train stations, tourist areas), a third of them 100% electric.

Moreover, the Company launched the Charge+ offer in October 2023, offering residents, in France, to charge their vehicles on-the-go and illustrates its commitment to supporting French people in their transition to electric mobility.

(1) In 2023, close to 300 Elan-branded service-stations were rebranded TotalEnergies.

(2) Metropolitan France (excluding Corsica). Source: "Superethanol-E85 data – December 2023", National Union of Agricultural Alcohol Producers (SNPA).

(3) TotalEnergies data.

(4) TotalEnergies data, in number of service stations at the end of September 2023.

In Spain, TotalEnergies announced in January 2024 that it has acquired Nordian CPO, a subsidiary of the Wenea Group, which owns 200 charging sites. These sites, supplied entirely with renewable electricity, are located along major highways and in urban and peri-urban areas in all 17 regions of Spain.

In Benelux and in Germany, the Company has equipped more than 130 service stations with charging points at the end of 2023, most of which are part of the finalized transaction between TotalEnergies and Couche-Tard. In Germany, TotalEnergies was awarded three regional lots in September 2023 under the *Deutschlandnetz* ("Germany network") call for tenders to install and operate approximately 1,100 charging points in the country. These high-power charging points (up to 200 kW) will be installed at 134 urban and rural sites across the east, center and west of the country, and will be powered entirely by renewable electricity.

TotalEnergies continues to selectively develop its on-street charging offering in the main European cities, with:

- in June 2023, the award of tenders in Berlin (approximately 500 public charging points), in Lille (close to 900 charging points), in Utrecht and Amsterdam (approximately 3,700 charging points), and in Madrid (approximately 50 charging points);

### Natural gas and biofuel

TotalEnergies operates in Europe more than 220 NGV stations at year-end 2023 under the TotalEnergies and AS 24 brands, essentially geared to road carriers.

In the field of shipping, TotalEnergies develops a commercial offering incorporating biomethane into LNG as a marine fuel to reduce local air pollutants (NO<sub>x</sub>, SO<sub>x</sub> and fine particles) as well as reducing the sector's carbon footprint.

### Hydrogen

In February 2023, TotalEnergies and Air Liquide announced their decision to create a 50-50 joint venture to develop a pan-European hydrogen stations network, dedicated to heavy goods vehicles. This joint venture, called TEAL Mobility, targets the development of more than 100 hydrogen stations - in Benelux, France, and Germany - in the coming years, including approximately 20 as soon as 2024. The stations, under the TotalEnergies brand, will be located on main roads, including strategic corridors.

In Germany, TotalEnergies holds a stake close to 12,1% in the H2 Mobility joint venture along with the historical shareholders and Hy24,

## LUBRICANTS AND SPECIALTIES

### Lubricants

TotalEnergies offers a wide range of lubricants, intended for motorists, automotive and industrial equipment manufacturers, and covering a broad spectrum of applications.

TotalEnergies is the third distributor<sup>(1)</sup> of inland lubricants in Europe, TotalEnergies continues to expand, relying on a direct commercial presence and 12 production sites for lubricants and greases (including in Belgium, France, Germany, Romania, Spain, Turkey and the United Kingdom). In Russia, TotalEnergies stopped producing lubricants at the end of May 2022 in accordance with its principles of action published on March 22, 2022.

### Aviation fuel, including SAF

TotalEnergies produces and distributes aviation fuels containing SAF. In December 2022, the Company signed an agreement with Air France-KLM to supply more than 1 Mcm of SAF over the 2023 to 2032 period. It will be produced in the Company's biorefineries (refer to point 2.5.1) and made available to the Air France-KLM group's airlines. TotalEnergies has

– in 2022, the award of contracts in the Flanders region (Belgium, 4,400 charging points) and in Rotterdam (Netherlands, 90 high power chargers);

– in 2021, the award of contracts in Amsterdam (Netherlands, 2,200 charging points), Antwerp (Belgium, including high power charging points) and Ghent (Belgium, 800 charging points) and the signing of a partnership agreement with Uber to accelerate the transition from private chauffeur-driven cars to electric mobility, initially in France.

To facilitate and accelerate the deployment of EV charging points in France for its B2B customers, TotalEnergies took control of the start-up Time2plug (with a 56% stake) in December 2023. Time2plug offers a marketplace where customers can obtain instant quotes and tap into a certified in-house installer network.

To promote the electromobility of heavy goods vehicles, TotalEnergies has also joined forces with Enedis, VINCI Autoroutes and six European manufacturers – Volvo Trucks, Renault Trucks, Mercedes-Benz Trucks, MAN Truck & Bus France, Scania and Iveco – to assess requirements for electric charging in France by 2030 and 2035.

TotalEnergies charters two bunkering vessels: the *Gas Vitality*, positioned in the Marseille-Fos region in France, and the *Gas Agility* based in the Rotterdam region. At year-end 2023, *Gas Agility* and *Gas Vitality* have completed close to 195 LNG bunkering operations overall (including over 100 in 2023).

with the aim of operating over 200 stations geared to heavy trucks by 2030 and thus reaffirming its commitment to developing hydrogen filling stations. At year-end 2023, this network accounts for more than 80 stations, close to 20 of which are located on TotalEnergies sites.

In France, TotalEnergies holds a stake of approximately 18,6% in HysetCo, which is dedicated to hydrogen-based urban mobility for business light vehicles fleets, notably through four distribution stations in the Ile-de-France region.

already supplied aviation fuel containing SAF for several Air France-KLM group commercial flights:

- in May 2022, an Air France flight organized as part of the SkyTeam Sustainable Flight Challenge, between Paris and Montreal, was fueled with 16% SAF;
- in June 2022, several flights organized as part of the *Connecting Europe Days*, were fueled with 30% SAF.

Since June 2021, the Company has also been seeking to increase the number of locations offering, on a permanent basis, aviation fuel including SAF to its airline customers, consistently with the demand. At year-end 2023, this offering is available at Bordeaux, Clermont-Ferrand, Paris-Le Bourget, and Saint-Nazaire airports. This aviation fuel includes SAF made from used cooking oils or animal fats from the circular economy, beyond the 2025 minimum incorporation rate of 2% provided for by the RefuelEU aviation regulation. Thus, TotalEnergies participates in the shared ambition of public and private players to address a two-fold challenge: to continue decarbonizing air transportation while at the same time supporting the dynamism of regional economies and tourist industries.

(1) Global Lubricants - Company Positioning Overview (2023), S&P Global, based on 2021 market shares.

In February 2024, Airbus and TotalEnergies have signed a strategic partnership to meet the challenges of aviation decarbonization with sustainable aviation fuel. The partnership will cover two main areas: TotalEnergies will supply Airbus with sustainable aviation fuel for more than half of its needs in Europe; a research and innovation programme aimed at developing 100% sustainable fuels.

### PROFESSIONAL MARKETS AND MOBILITY SOLUTIONS

At year-end 2023, TotalEnergies is a major player in the B2B mobility segment in Europe, with approximately 4.2 million mobility cards offering targeted commercial offerings. They allow companies of all sizes to better manage their fleets' energy expenditure and access increasingly numerous partner and network services, such as Carglass and Norauto in France.

TotalEnergies offers companies solutions to optimize their corporate vehicle fleets expenditure, irrespective of the type of engines (conventional fuels, electricity, gas, etc.), and more generally their employees mobility expenditure, while supporting them in the reduction of their carbon footprint. TotalEnergies' offering includes a multi-energy and multiservice card, a fleet management tool and an on-board telematics solution. In addition, TotalEnergies proposes an electric mobility offering tailored to users' needs, including services ranging from the installation

### Other Products

In Europe, TotalEnergies also produces and markets to professionals bulk fuels, special fluids bitumens, and specialty bitumens (low-temperature bitumens, recycling and low-carbon solutions, etc.). The Company offers its professional customers incorporated in France, Bitumen Online, an online purchasing platform to buy bitumen at a fixed price (in the process of being rolled out in other European countries).

to the supervision of electric charging points at the companies sites, at employees' homes, on roads and in establishments open to the public. At year-end 2023, the Fleet card provides access to electric charging in numerous networks comprising more than 530,000 charging points in Europe.

In addition, TotalEnergies sells the Mobility Corporate card in France, international Mastercard payment card designed to support professionals' mobility at all times. Like the Fleet card, this card can be used to pay for fuel, electric recharging, parking fees, tolls, automotive maintenance, car wash, and purchases in stores within the TotalEnergies and partners' networks. The Mobility Corporate card also makes it possible to pay for all professional mobility-related expenses: hotels, restaurants, transport, vehicle rentals and taxis, as well as energy, parking fees, and maintenance costs on an expanded network.

### 2.6.5.2 Africa

#### RETAIL

TotalEnergies is the leading petroleum products retailer in Africa in 2023 with a 16%<sup>(1)</sup> market share.

In 2023, the African network comprised more than 4,500 branded service stations in over 30 countries. TotalEnergies has significant networks, particularly in Egypt, Morocco, Nigeria, and South Africa, and continues to proactively manage its assets portfolio, as illustrated by the sale, in July 2022, to ADNOC of 50% of TotalEnergies Marketing Egypt as part of a strategic partnership.

#### LUBRICANTS

TotalEnergies is the leading distributor<sup>(2)</sup> of lubricants on the African continent and is pursuing its growth strategy in the B2B and B2C markets. M&S relies on nine operated lubricant production sites, in Algeria, Egypt, Kenya, Morocco, Nigeria (two sites), Senegal, South

### PROFESSIONAL MARKETS AND MOBILITY SOLUTIONS

TotalEnergies is an established partner for industrial customers in Africa irrespective of their sector of activity: agri-food, construction, electricity generation, mining, or transportation. TotalEnergies provides for innovative fuel management solutions and adds hybrid offers incorporating solar energy to its existing portfolio of products and services.

In December 2021, TotalEnergies strengthened its presence in Mozambique with the acquisition of a network of 26 service stations, a wholesale petroleum products business and logistics assets.

M&S diversifies its service stations offering and provides a range of products and services in restaurants, convenience stores and car wash sites.

Africa and Tanzania. Through its TotalEnergies Workshop Concept, TotalEnergies continues to deploy the automotive maintenance services offered in the Quartz Auto Services, Rubia Truck Services and Hi-Perf Moto Services centers.

Additionally, TotalEnergies progressively develops new digital payment solutions allowing for an improved customer experience at the service-stations across the continent (such as the Africa Pass card which enables drivers to pay at the retail outlets, across several countries, with a single card).

(1) Market share estimated based on volumes sold (TotalEnergies data).

(2) TotalEnergies data.

### 2.6.5.3 Asia-Pacific/Middle East

M&S directly markets its products and services in more than 20 countries in this area.

#### RETAIL

At year-end 2023, TotalEnergies accounts for more than 3,350 service stations in the Asia-Pacific/Middle East region, with service station networks in Cambodia, China, Jordan, Lebanon, the Pacific Islands, Pakistan, the Philippines, Saudi Arabia and Turkey. TotalEnergies continues to grow in major markets, including Saudi Arabia and China, in traditional activities, as well as in electric mobility. Since the signing of an

#### NEW ENERGIES FOR MOBILITY

##### Electricity

TotalEnergies continues to develop in the field of electric mobility in Asia:

- in China, the joint venture set up in 2021 by TotalEnergies with China Three Gorges Corporation is developing a fast charging network for electric vehicles in the city of Wuhan and in Hubei province. At year-end 2023, this network numbers more than 2,800 charging points, with a target of 11,000 public charging points by 2025;
- in India, TotalEnergies entered the electric vehicle charging infrastructure market in March 2022 through its joint venture with the

##### Natural gas, biofuel and ammonia

In the NGV (Natural Gas Vehicle) segment, TotalEnergies operates a network of CNG (Compressed Natural Gas) and LNG stations in India with its partner Adani (close to 490 stations at year-end 2023).

TotalEnergies Marine Fuels, long standing partner of the shipping industry, caters to approximately 200 clients and intends to develop the LNG and low-carbon fuels bunkering activity in Singapore:

- the Company continues to operate an LNG shipping logistics chain, together with its partner Pavilion Energy Singapore. In March 2021, the Maritime and Port Authority of Singapore (MPA) granted a third LNG supply license to TotalEnergies Marine Fuels for a period of five years starting January 1, 2022. In 2023, TotalEnergies inaugurated the *Brassavola*, LNG barge with a capacity of 12 Mcm which was delivered in 2024 at the port of Singapore;

#### LUBRICANTS

The lubricants business is contributing to the growth of TotalEnergies in Asia-Pacific and the Middle East. The production capacity of lubricants in this area is spread among 9 operated production sites<sup>(2)</sup>, including in China, Dubai, and Singapore. With two Technology Research Centers in China and India, TotalEnergies develops and provides premium technologies and services to its global and regional clients, including automobile manufacturers. It is developing in other industries as well, including cement, energy, mining, and textiles.

In June 2021, Great Wall Motor (GWM), one of China's leading automakers, and TotalEnergies signed two agreements to strengthen their partnership through future international commercial collaboration and R&D. With these agreements, both companies have confirmed their commitment to sustainable growth on the global market and their

#### COMMERCIAL SALES, MOBILITY AND OTHER SPECIALTIES

TotalEnergies has signed several partnership agreements with industrial customers, allowing it to extend its presence in several markets, such as construction and mining in several countries in the area.

TotalEnergies supplies lubricants and services to approximately 70 mining sites, including in Australia and in India.

agreement in October 2021, TotalEnergies and Saudi Aramco have kept developing service-stations, branded TotalEnergies or Sahel.

In 2022, TotalEnergies launched its own range of automotive maintenance products, including fuel additives and high-end cooling liquids, across the region.

Adani Group, and plans to establish an extensive network of fast charging stations throughout the country;

- in Singapore, TotalEnergies finalized the acquisition of Bluecharge in February 2022. The Company took over the management and operation of the urban charging network, which it continues to develop. At year-end 2023, it accounts for close to 1,550 public charging points.

- in July 2022, TotalEnergies successfully supplied and fueled with sustainable marine biofuel<sup>(1)</sup> the CMA CGM's *Montoir* container ship in Singapore. This biofuel consisted of very low sulfur fuel oil mixed with 24% of second-generation methyl ester made from used cooking oil. This transaction marks a new milestone in TotalEnergies' ambition to become a key supplier of marine biofuels by 2030;

- in 2021, the Marine Fuels business unit co-signed a Memorandum of Understanding along with 34 international shipping players to study the technical and economic feasibility of using ammonia as a marine fuel, more specifically for bulk carriers and deep-sea tankers, in a group led by Itochu.

partnership in the development of products and services to best meet the expectations of their mutual customers.

In September 2021, TotalEnergies and the Badminton World Federation (BWF) announced the renewal of their partnership for five years, until 2025. The agreement makes TotalEnergies the official energy and lubricants partner of these events and reinforces the Company's emphasis on customer focus.

TotalEnergies continues to develop partnerships with Online to Offline digital platforms (such as Tuhu in China, Speedworks in Indonesia, Automovil and VehicleCare in India and Open Bonnet in the United Arab Emirates) and major e-commerce players (such as GoCar in Malaysia) to benefit from new distribution channels.

In specialty products, TotalEnergies is present on the LPG market in Bangladesh, India, New Caledonia, and Vietnam, as well as in the bitumen specialties segment through a 50-50 joint venture with Indian Oil Corporation Ltd.

(1) ISCC-certified biofuel (*International Sustainability & Carbon Certification*).

(2) One of the ten sites reported in 2022 was re-treated as operated by others.

#### 2.6.5.4 Americas

**In the network**, at year-end 2023, TotalEnergies operates nearly 800 branded service stations, including nearly 240 in Brazil (Latin America's largest market for petroleum products distribution<sup>(1)</sup>) and nearly 550 in the Caribbean region.

Retail network activities in Mexico were discontinued effective December 31, 2022.

**In lubricants** and other specialty products, TotalEnergies is pursuing its growth strategy across the area, mainly in lubricants and aviation fuels.

#### 2.6.5.5 Access to Energy

In line with the Company's determination to expand its low-carbon offering, TotalEnergies Off-grid Solar Solutions teams develop and market solar solutions in close to 30 countries.

The solutions include solar lamps, as well as solar kits (consisting of lamps and which can include accessories such as a radio or a television), to meet household needs. The teams have also developed an offer of solar streetlights for the community needs. These solutions make it possible to provide energy access to populations living in remote areas without a connection or reliable access to the electricity grid, particularly

TotalEnergies has four operated lubricants blending sites in North America (Canada, Mexico, and the US) and three more in South America (Argentina, Brazil and Chile).

**In new energies for mobility**, TotalEnergies is a shareholder (19.10% as of December 31, 2023) of US-based, NASDAQ-listed Clean Energy Fuels Corp., which specializes in the distribution of natural gas for vehicles. In Canada and the United States, Clean Energy Fuels Corp. has a network of approximately 600 NGV service stations at year-end 2023.

#### 2.6.6 Products and services development

By fostering technical partnerships with car and equipment manufacturers, industries and universities, TotalEnergies develops products with a high technological content, designed to specifications that are increasingly geared to sustainable development and reduction of CO<sub>2</sub> emissions, in addition to performance. These partnerships give rise to product ranges such as *EV Fluids* for new forms of mobility or *Fuel Economy* for historical engine and industrial applications.

In the Automotive field, certain products are first formulated for competition before being widely marketed. In 2021, TotalEnergies signed a five-year extension to the partnership agreement with Stellantis in the areas of lubricants, R&D, motor racing and mobility. In motor sport, TotalEnergies has been supplying lubricants specifically developed for its partner team DS Penske. TotalEnergies has also been an official fuel supplier since 2018 to the main endurance competitions<sup>(2)</sup>, including the 24 Hours of Le Mans. In March 2022, TotalEnergies introduced a new fuel, certified 100% renewable<sup>(3)</sup>, for these FIA championships (Fédération Internationale de l'Automobile). This partnership rounds out that dedicated to supplying hydrogen, in order to support the development of a hydrogen-powered endurance car for a dedicated

in Africa and Asia. At the same time, the solar solutions TotalEnergies offers, which respect the environment, meet the growing demand for sustainable consumption in the outdoor market.

In 2023, TotalEnergies sold approximately 360,000 solar lamps and solar kits through distributors and its network of service stations. In addition, TotalEnergies Off-grid Solar Solutions works with partners in Africa to minimize the environmental impact of products through repair and recyclability projects and installs collection and recycling points for batteries.

category in the 24 Hours of Le Mans in 2027. These partnerships reflect TotalEnergies' engineering know-how in formulating fuels and lubricants for tomorrow's engines, operating under extreme conditions and stringent fuel consumption reduction requirements.

In 2023, facing an uncertain regulatory framework, TotalEnergies has withdrawn its carbon offset program from Europe, which was associated with the sale of its fuels.

TotalEnergies is accelerating its digital innovation strategy so as to develop new offerings tailored to its customers in an array of markets and to improve its operational efficiency.

M&S also continues to research and roll out IoT applications<sup>(4)</sup> in fields such as logistics, maintenance, and safety to geolocate trailers and industrial equipment, as well as to track deliveries for TotalEnergies' carrier customers. Also, data collected<sup>(5)</sup> through a Customer Relationship Management tool can be used to develop more targeted sales offerings and improve the management of customer complaints. As a consequence, nearly 15 million customers in 24 countries can benefit from personalized offers.

(1) *Global Fuel Demand Data Manager* (2023), S&P Global.

(2) The FIA World Endurance Championship, the 24 Hours of Le Mans, the European Le Mans Series and the Asian Le Mans Series.

(3) Fuel certified 100% sustainable by the ISCC (international Sustainability & Carbon Certification).

(4) The Internet of Things: connected objects.

(5) Data is used with the clients' consent, in accordance with the regulations in force.



# 3

# Risks and control

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## 3.1 Risk factors

TotalEnergies conducts its business in a constantly changing environment and is exposed to risks that, if they were to occur, could have a material adverse effect on its business, financial condition, reputation, outlook, or the price of financial instruments issued by TotalEnergies SE.

This section presents the significant risk factors specific to TotalEnergies, to which the Company believes it is exposed at the filing date of the Universal Registration Document. However, TotalEnergies may be exposed to other non-specific risks, or risks of which it may not be aware, or the potential consequences of which may be underestimated, or the materialization of which is not considered, at that date, to be likely to have a material adverse impact on TotalEnergies, its business, financial condition, reputation or outlook.

In particular, TotalEnergies could be exposed to systemic risks, such as unexpected major disruptions (health, such as the COVID-19 pandemic, security, monetary or cyber), leading to large-scale disturbances with global human and economic repercussions.

In such a context, the management of the COVID-19 health crisis or Russia's military aggression against Ukraine proved the effectiveness of

TotalEnergies' resilience mechanisms, its responsiveness, its ability to mobilize its crisis units, to implement its business continuity plans and to be agile in its organization.

The risk factors identified in this section are the results of an ongoing risk analysis and identification process, which TotalEnergies uses to determine risks that could prevent it from achieving its objectives, and a major element of which is the mapping of TotalEnergies' risks.

Risk factors are grouped by category according to their nature. Their materiality was assessed according to their probability of occurrence, their level of impact and taking into account the management systems in place. The impact level assessment was performed according to different criteria: financial, strategic, environmental, safety, image/reputation, legal and human resources.

In each category, the risks presented are those considered to be the most material according to the assessment based on the above-mentioned criteria. The assessment by TotalEnergies of this level of materiality may be changed at any time, in particular should new facts, whether external or specific to TotalEnergies, come to light.

	Materiality assessment
<b>Climate challenges</b>	
Pace of deployment of the energy transition, evolution of demand	4
Risk of legal actions	3
Financing of oil and gas reserves	3
Operational risks relating to the effects of climate change and of extreme events	3
Reputational risk	3
Risk of skill management and evolution of the professions	3
<b>Market environment parameters</b>	
Sensitivity of results to oil and gas prices, refining margins, exchange rates and interest rates	4
<b>Risks relating to external threats</b>	
Cybersecurity risks	3
Security risks	3
<b>Geopolitics and developments in the world</b>	
Protectionist measures affecting free trade and economic sanctions regimes	3
Deterioration of operating conditions	3
Regulatory developments	2
<b>Risks relating to operations</b>	
HSE: risk of major accident or damage to third parties and the environment	3
Development of major projects	3
Business ethics	3
Integration of strategic acquisitions	3
Supply chain management	3
Exposure to partnerships	2
<b>Innovation</b>	
Technological development and digital transformation	3

Materiality assessment scale: **1** = less material, **4** = more material

The main internal control and risk management procedures implemented by TotalEnergies are described in point 3.3 of this chapter.

### 3.1.1 Climate challenges

#### PACE OF DEPLOYMENT OF THE ENERGY TRANSITION, EVOLUTION OF DEMAND

**TotalEnergies is exposed to the implementation of the energy transition, particularly by States, and to the evolution of demand**

Civil society, numerous stakeholders and States are encouraging reductions in the consumption of carbon-based energy products and the establishment of an energy mix more geared towards low-carbon energies, so as to meet the requirements of the fight against the climate change, particularly in view of the objectives set by each State in the context of the Paris Agreement.

The COP28, that took place in Dubai in December 2023, concluded with an agreement which enshrines the willingness of the states to "transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner" and that mentions the usefulness of transitional fuels, such as gas. The agreement sets the objectives of tripling the renewable energy capacity and doubling energy efficiency by 2030, as well as eliminating most methane emissions by that time

The pace of change in the energy mix of countries must, however, take into consideration the needs and ability to adapt of the various energy consumers, who expect energy players to supply them with energy that is both cost-effective and environmentally friendly.

In this context, companies in the energy sector are led to deploy actions aiming at reducing their greenhouse gas emissions. They will also be able to help create solutions that contribute to reducing the CO<sub>2</sub> emissions associated with the customers' use of their energy products, as well as technologies and processes to capture, store and reuse CO<sub>2</sub>. Consequently, they may be led to change the energy mix of the products they offer while at the same time having to manage the cost and the execution of projects supporting the energy transition.

An insufficient ability to adapt to the pace of deployment of the energy transition, as well as an inadequate anticipation of the climate or sustainability regulations, of the evolution of the demand or, of the energy cost which could be considered excessive by the populations, could affect TotalEnergies' outlook as well as its financial position (lower profitability, loss of operating rights, loss of revenues, increased funding difficulties), reputation or shareholder value.

#### RISK OF LEGAL ACTIONS

##### TotalEnergies is exposed to legal actions

Increased pressure from stakeholders linked to climate issues relating to oil & gas activities of the Company could lead to future climate-related legal actions against it. These actions could aim to suspend or prohibit oil & gas projects being considered or under development and equally target the challenges linked to greenhouse gas emissions from projects as well as other societal aspects. In a similar way to legal actions launched in France under the vigilance duty (*devoir de vigilance*) against the Company or, other litigations engaged in Europe or in the United States, including against other companies, these legal

actions could target the global emissions of the Company and its stakeholders as well as the objectives set by the Company for reducing its emissions, thereby obliging it to go beyond these objectives or even reduce its production of fossil fuels at a faster pace than envisaged in the current strategy. In all cases, these legal actions could have the effect of impeding the Company from achieving its medium- and long-term objectives, as well as its ability to finance the energy transition and achieve carbon neutrality by 2050.

#### FINANCING OF OIL AND GAS RESERVES

##### TotalEnergies' profitability and its capacity to finance the energy transition depend on its ability to finance the development of its reserves profitably and in sufficient quantities

A large portion of TotalEnergies' revenues and operating results comes from the sale of oil and gas extracted from reserves developed as part of its exploration and production activities. The development of oil and gas fields, the construction of facilities and the drilling of production or injection wells are capital intensive and require advanced technologies.

In order to preserve its profitability and finance its growth levers, TotalEnergies must renew its reserves with reserves that can be developed and produced in an economically viable manner and that are compatible with the Company's climate ambition (low technical cost, low-emission reserves). Various factors may undermine TotalEnergies' ability to discover, acquire and develop its reserves, which are inherently uncertain, including:

- the geological nature of oil and gas fields, notably unexpected drilling conditions, including pressure or unexpected heterogeneities in geological formations; the risk of dry wells or failure to find sufficient quantities of hydrocarbons for commercial use,
- failure to anticipate market changes in a timely manner,
- applicable governmental or regulatory requirements, whether anticipated or not, that may prevent the development of reserves or give a competitive advantage to companies not subject to such regulations,

##### TotalEnergies' profitability and its capacity to finance the energy transition depend on its ability to finance the development of its reserves profitably and in sufficient quantities

- competition from oil and gas companies for the acquisition and development of assets and licenses,
- disputes relating to property titles as well as increases in taxes and royalties, including retroactive claims and changes in regulations and tax reassessments,
- economic or political risks, including threats specific to a certain country or region,
- pressure from investors and non-governmental organizations (NGOs).

These factors may impair TotalEnergies' ability to complete development projects and to make production profitable. They may also affect TotalEnergies' projects and facilities further down the oil and gas chain.

If TotalEnergies failed to develop reserves cost-effectively, in sufficient quantities and in accordance with its climate ambition, its financial condition, operating income and cash flows could be materially affected. TotalEnergies could also be required to recognize impairments of assets, which could have a negative impact on its results for the period in which they are recognized. For additional information on impairments recognized on TotalEnergies' assets, please refer to Note 3D to the consolidated financial statements (point 8.7 of chapter 8).

For the calculation of the impairments of its Upstream oil & gas assets, the Company assumes an oil price trajectory stabilizing until 2030, decreasing then linearly to reach \$<sub>2023</sub>50/b in 2040 and decreasing after 2040 towards the price retained in 2050 by the NZE scenario published by the IEA in 2022, *i.e.*, \$<sub>2023</sub>25/b. Gas prices used in Europe and Asia decrease and stabilize as from 2027 until 2040 at levels lower than current price levels, with the Henry Hub price staying at \$<sub>2023</sub>3/MBtu during this timeframe. They all converge thereafter towards the IEA's NZE scenario prices in 2050.

TotalEnergies assessed the impact of using the NZE price scenario published by the IEA in 2023 on the discounted present value of its assets (upstream and downstream). Such a scenario would reduce the discounted present value of the Company's upstream and downstream assets by around 10% compared to its reference scenario used to value its investments (Brent at \$50/b).

In addition, the Company's proved and probable oil and gas reserves life is 18 years and the discounted value of the Upstream oil & gas assets of the Company of more than 20 years represents less than 15% of their total value.

#### **TotalEnergies is exposed to a risk of more difficult access to the financial resources that the Company needs in particular to develop its activities in the oil and gas sectors**

The growth and profitability of TotalEnergies depend on its ability to successfully execute development projects that are capital-intensive.

A number of non-governmental organizations tend to increase the number of campaigns targeting investors and financial institutions, to encourage them to reduce their investments in projects or companies related to fossil fuels.

Some of these institutions have adopted policies aimed at restricting the funding of activities related to the exploration, production and marketing of hydrocarbons, particularly non-conventional hydrocarbons, for example from shale or those produced in the Arctic region.

Different actors, including in particular institutional investors and financial institutions, are also adopting investment and lending policies that take account of extra-financial criteria particularly in Europe.

#### **OPERATIONAL RISKS RELATING TO THE EFFECTS OF CLIMATE CHANGE AND OF EXTREME EVENTS**

##### **The effects of climate change and of extreme events may expose TotalEnergies to a cost increase and a disturbance of the continuity of its activities**

Climate change and extreme events (natural disasters, pandemics, etc) potentially have multiple effects that could harm TotalEnergies' operations. The increasing scarcity of water could be detrimental to operations, rising sea levels could harm certain coastal activities, and the proliferation of extreme natural or weather events (such as floods, landslides, etc.) could damage onshore and offshore facilities and/or the associated logistical infrastructures.

All these factors could increase the difficulties to operate, as well as the costs of the facilities and adversely affect TotalEnergies' operating income.

Moreover, climate change can expose TotalEnergies to an increase in its costs. For instance, more and more countries are likely to adopt carbon pricing mechanisms to accelerate the transition to a low-carbon economy, which could have an adverse impact on some of the Company's activities and lead to a loss of competitiveness and a cost increase. In Europe, TotalEnergies' industrial facilities participate in the CO<sub>2</sub> emissions

Furthermore, TotalEnergies' proved reserves figures are estimates made in accordance with SEC rules. Proved reserves are those reserves which, by analysis of geoscientific and engineering data, can be estimated with reasonable certainty to be economically recoverable (from a given date forward, from known reservoirs and under existing economic conditions, operating methods and government regulations) prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. They involve making subjective judgments (particularly regarding the quantity of hydrocarbons initially in place, initial production rates and recovery rates) based on available geological, technical and economic data.

TotalEnergies' reserves estimates may therefore require substantial downward revisions should its subjective judgments based on available geoscientific and engineering data prove not to have been sufficiently conservative, or if TotalEnergies' assumptions regarding factors or variables that are beyond its control prove to be incorrect over time. Any downward adjustment could indicate lower future production amounts, which could adversely affect TotalEnergies' financial condition, operating income and cash flow.

Regulations aimed at guiding investment flows towards sustainable activities, as well as the growing concern of civil society and stakeholders about climate change, could therefore influence investors in their investment choices and make access to external funding more difficult or costly for TotalEnergies or some of its projects.

If TotalEnergies were unable to obtain adequate financing for its activities from investors, notably in the oil and gas sectors, the significant increase in the cost of financing likely to result from this could hinder its ability to undertake projects in satisfactory economic conditions, impair its financial position or shareholder value.

trading system (EU-ETS). The financial risk associated with the purchase of these allowances on the market could increase following the reform of the system approved in 2018. This emission allowance market entered its fourth phase in 2021. The share of emissions in the EU-ETS scope not covered by free allowances increases over time from phase to phase, as in the 2021-2030 period (phase 4). At the end of 2023, the price of these allowances was about €80/t CO<sub>2</sub>, and TotalEnergies estimates that this price could reach more than €100/t CO<sub>2</sub> in phase 4.

TotalEnergies takes into account a minimum CO<sub>2</sub> price of \$100/t (or the current price of a given country, if higher) and beyond 2029, this CO<sub>2</sub> price is inflated by 2%/year. On the assumption that this CO<sub>2</sub> price would be at \$200/t, then inflated by 2%/year beyond 2029, *i.e.*, an increase of \$100/t compared to the base scenario from this date, TotalEnergies estimates a negative impact around 15% on the discounted present value of all the Company's assets (upstream and downstream).

## REPUTATIONAL RISK

### TotalEnergies is exposed to a reputational and media scrutiny risk that can damage its reputation

The attention of many stakeholders to major industrial groups is increasing, particularly given the challenges of climate change and the support needed to be put in place in a responsible manner for a just transition. As a major energy player, TotalEnergies faces media scrutiny, mainly from NGOs. This is magnified through the use of social networks.

If TotalEnergies were not in a position to adequately address the concerns of its stakeholders, the public image of the Company and its reputation could be negatively impacted. Hence, the relationships with its counterparties could be affected, its access to markets and its growth could be limited and its financial condition or the price of TotalEnergies shares could be adversely impacted.

## RISK OF SKILL MANAGEMENT AND EVOLUTION OF THE PROFESSIONS

### TotalEnergies could face difficulties having key skills and talents required in the context of its transition strategy

Maintaining the long-term employability of employees is one of the Company's social challenges and is one of the key factors in the success of the company's project, in the context of a just transition. Deploying the transition strategy of the Company into an integrated energy company requires supporting employees in their skills development and creating bridges between the current business lines and the renewable energy or electricity business lines, in order to have the key skills available at the pace of the transition.

In addition, TotalEnergies' ability to attract, retain and motivate the talents needed for its transition strategy is also a challenge for the Company.

Employees and new generations expect companies to be committed to environmental and climate issues and to workplace wellness. These expectations could materialize both in the recruitment process and during careers. Finally, increased competition with fast-growing sectors such as information technology and new energies can make the recruitment and retention of certain key skills more complex.

If TotalEnergies were unable to appropriately address these social challenges, it could face difficulties building the teams required to achieve its transition strategy.

### 3.1.2 Market environment parameters

#### SENSITIVITY OF RESULTS TO OIL AND GAS PRICES, REFINING MARGINS, EXCHANGE RATES AND INTEREST RATES

##### The results of TotalEnergies are sensitive to various market environment parameters, the most significant being oil and gas prices, refining margins, exchange rates and interest rates

Prices for oil and natural gas may fluctuate widely due to many factors over which TotalEnergies has no control, such as:

- international and regional economic and political developments in natural resource-producing regions, particularly in the Middle East, Africa, South America and Russia; along with the security situation in certain regions, the magnitude of international terrorist threats, wars or other conflicts,
- the ability of OPEC and other producing nations to influence global oil and gas production levels and prices,
- prices of unconventional energies as well as evolving approaches for developing oil sands and shale oil, which may affect TotalEnergies' selling prices, particularly in the context of its long-term gas sales contracts, and the valuation of its assets, particularly in North America,
- global economic and financial market conditions,
- regulations and governmental actions,
- variations in global and regional supply of and demand for energy due to changes in consumer preferences or to pandemics such as the COVID-19 pandemic.

Generally, a decline in oil and gas prices has a negative effect on TotalEnergies' results due to a decrease in revenues from oil and gas production. Conversely, a rise in oil and gas prices generally has a positive effect on TotalEnergies' results.

In addition to the adverse effect on revenues, margins and profitability of TotalEnergies, a prolonged period of low oil or natural gas prices may lead TotalEnergies to review its development projects, adjust downward its reported reserves, and revise the price assumptions on which asset impairment tests are based, which could have an adverse effect on its

results for the period in which they occur. For additional information on impairments recognized on TotalEnergies' assets, refer to Note 3D to the consolidated financial statements (point 8.7 of chapter 8).

Prolonged periods of low oil and natural gas prices may reduce the economic viability of projects in production or in development and reduce TotalEnergies' liquidity, thereby limiting its ability to finance capital expenditure and/or causing it to cancel or postpone investment projects.

Conversely, in a high oil and gas price environment, TotalEnergies may experience significant increases in costs and government withholdings, and, under some production-sharing contracts, may see its production rights reduced. An increase in prices can also lead to a fall in demand for TotalEnergies' products.

The results of the Refining & Chemicals and Marketing & Services segments are primarily dependent on the supply of and demand for petroleum products and the margins on sales of these products, with a strong dependence on the transportation sector. Changes in oil and gas prices affect results in these segments, depending on the speed at which the prices of petroleum products adjust to reflect movements in oil and gas prices. In markets still impacted by the import ban on petroleum products originating in Russia, TotalEnergies' refining margins continue to be characterized by high volatility.

The activities of trading and shipping (oil, gas and power trading and maritime transportation) are particularly sensitive to market risks and more specifically to price risks resulting from the volatility of oil, gas and electricity prices, to liquidity risk (inability to buy or sell cargoes at market prices) and to counterparty risks (when a counterparty does not fulfill its contractual obligations).

In the context of demand growth driven by emerging countries, military aggression in Ukraine by Russia in February 2022 and the implementation of European sanctions on Russian oil since 5 December 2022 continued to weigh on oil prices in 2023. They have been reinforced by the sustained intervention of the OPEC+ countries through their decision to cut production quotas, keeping oil prices between \$80 and \$100/b for most of 2023.

Gas prices in Europe (NBP<sup>(1)</sup>) and Asia (JKM<sup>(2)</sup>) remained at high levels in 2023, albeit down in 2022.

Electricity demand has experienced a significant rebound since 2010, with global average annual growth around 3.2% between 2010 and 2022<sup>(3)</sup>. Wholesale electricity prices were set at high levels in 2023, albeit lower than in 2022, in the wake of gas, coal and CO<sub>2</sub> prices, particularly in Europe.

The oil and gas markets continue to be characterized by high volatility.

**For fiscal year 2024**, in the retained scenarios applied below, TotalEnergies estimates that a change of \$10 per barrel in the average annual liquids sales price would lead to a change of approximately \$2.3 billion in the same direction in adjusted net operating income<sup>(4)</sup> for the year and of approximately \$2.8 billion in the cash flow from operations excluding working capital (CFFO)<sup>(5)</sup> for the year. In addition, TotalEnergies estimates that a change in the average annual European gas sale price - NBP/TTF of \$2 per Mbtu would result in a change in the

same direction in the adjusted net operating income for the year and in the cash flow from operations excluding working capital (CFFO) of approximately \$0.4 billion.

The impact of changes in crude oil and gas prices on downstream operations depends on the speed at which the prices of finished products adjust to reflect these changes. TotalEnergies estimates that a change in the European refining margin marker (ERM)<sup>(6)</sup> of \$10 per ton would lead to a change of approximately \$0.4 billion in the same direction in adjusted net operating income for the year and of approximately \$0.5 billion in the cash flow from operations excluding working capital (CFFO) for the year.

All TotalEnergies' activities are, for various reasons and to varying degrees, sensitive to fluctuations in the dollar exchange rate. TotalEnergies estimates that a year-on-year decrease of \$0.10 per euro (strengthening of the dollar against the euro) would increase annual adjusted net operating income by approximately \$0.1 billion and would have a limited impact on the cash flow from operations excluding working capital (CFFO) for the year. Conversely, a year-on-year increase of \$0.10 per euro (weakening of the dollar against the euro) would decrease adjusted net operating income for the year by approximately \$0.1 billion and would have a limited impact on cash flow from operations excluding working capital (CFFO) for the year.

Sensitivities 2024 <sup>(a)</sup>	Change	Estimated impact on adjusted net operating income	Estimated impact on cash flow from operations excluding working capital (CFFO)
Dollar	+/- \$0.1 per €	-/+ \$0.1 B	~ \$0 B
Average liquids sales price <sup>(b)</sup>	+/- \$10/b	+/- \$2.3 B	+/- \$2.8 B
European gas price - NBP / TTE	+/- \$2/MBtu	+/- \$0.4 B	+/- \$0.4 B
European refining margin marker (ERM)	+/- \$10/t	+/- \$0.4 B	+/- \$0.5 B

(a) Sensitivities are revised once per year upon publication of the previous year's fourth quarter results. Sensitivities are estimates based on assumptions about TotalEnergies' portfolio in 2024. Actual results could vary significantly from estimates based on the application of these sensitivities. The impact of the \$-€ sensitivity on adjusted net operating income is essentially attributable to Refining & Chemicals.  
(b) Brent environment at \$80/b.

In addition, as part of its financing, TotalEnergies is exposed to fluctuations in interest rates. Based on its portfolio of bond debt, short-term debt securities ("commercial paper"), and credit lines available at the level of the Company's central financing entities (undrawn in 2023), TotalEnergies' floating rate debt (after taking into account hedging instruments) was approximately \$13.9 billion on average over the course

of 2023. Within this portfolio, a fluctuation in the various reference rates, from now mainly the SOFR, of +/- 1% would have resulted in a variation in the cost of debt, the theoretical impact of which on TotalEnergies' adjusted net income and cash flows is estimated at approximately -/+ \$0.1 billion.

(1) NBP (National Balancing Point) is a virtual natural gas trading point in the United Kingdom for transferring rights in respect of physical gas and which is widely used as a price benchmark for the natural gas markets in Europe. NBP is operated by National Grid Gas plc, the operator of the UK transmission network.  
(2) JKM (Japan-Korea Marker) measures spot LNG trading prices in Asia. It is based on the prices reported in spot market trades and/or bids and offers of LNG collected after the close of the Asian trading day at 16:30 Singapore time.  
(3) Source: IEA, February 2023.  
(4) Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.  
(5) Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.  
(6) The European Refining margin marker (ERM) is a new market indicator for European refining, introduced from the 1<sup>st</sup> quarter 2024 to replace the "Variable Cost Margin, European refining". This indicator is calculated based on public market prices (\$/t) with a formula using a basket of crudes, petroleum product yields and variable costs representative of the European refining system of TotalEnergies.

### 3.1.3 Risks relating to external threats

#### CYBERSECURITY RISKS

**TotalEnergies is exposed to cybersecurity risks that may compromise the integrity or availability of its IT systems or cause losses of sensitive data**

The very fast evolution of cyberattack threats exposes TotalEnergies' IT systems and requires a dynamic and proactive management of cybersecurity.

In the current geopolitical context of strong tensions, cyberattacks constitute significant means of destabilization. Moreover, organized crime continues to multiply cyberattacks that are more and more sophisticated and targeted at large companies, in order to maximize profits. As a major economic player, the Company is a potential target.

In 2023, several million attacks were blocked by the Company's IT defense systems and several thousands required the intervention of TotalEnergies' technical teams.

The Company is exposed to constantly evolving cybersecurity risks through diverse attack vectors, such as phishing, malware, human intervention or exploited vulnerabilities in software or hardware. Ransomwares have become one of the biggest threats. They are notably used in cyberattacks targeting the suppliers of large companies, sometimes less protected but benefitting from legitimate access to the IT systems of their clients. Moreover, numerous factors associated with the

digital transformation increase the exposure and vulnerability of TotalEnergies' IT systems. The adoption of new technologies such as the Internet of Things, migration to the Cloud, remote working or changes in technical architectures that favor system interconnectivity are factors that increase the range of attacks of the TotalEnergies IT systems. Further, service providers on which the Company relies on for a number of its IT systems may also be the target of cyberattacks that could disrupt the Company's IT systems or cause the loss of sensitive data.

If TotalEnergies and its service providers were unable to detect and remediate cyber-attacks, and more generally to preserve the integrity and availability of its IT systems and sensitive data (which may include confidential information or personal data), TotalEnergies' activities and assets could be affected: services could be interrupted, protected intellectual property rights could be usurped or confidential information or personal data stolen, and in some cases, personal injury, property damage, environmental harm and regulatory violations could occur, which could have an adverse effect on the financial condition and the reputation of the Company and expose it to legal proceedings.

#### SECURITY RISKS

**TotalEnergies is exposed to risks that may jeopardize the security of its personnel, operations and facilities, which may result from acts of malice, violence, terrorism or armed conflicts**

In addition to armed conflicts in certain regions or countries where TotalEnergies operates, political, economic and social instability may favor the emergence of acts of malice, violence or terrorism, either by isolated individuals or by more or less organized groups.

TotalEnergies and its partners may therefore be exposed to direct or collateral risks that may jeopardize the safety of their personnel,

operations and facilities (plants, industrial or operational sites, transport systems). In particular, major industrial accidents could result.

Depending on their scale, such acts of malice, violence, terrorism or armed conflicts, could cause damage to people, property and/or the environment, and be detrimental to TotalEnergies' operating income, financial situation, and reputation.

### 3.1.4 Geopolitics and developments in the world

#### PROTECTIONIST MEASURES AFFECTING FREE TRADE AND ECONOMIC SANCTIONS REGIMES

**The development of protectionist measures affecting free trade between nations may have an impact on TotalEnergies' business, its strategy or its financial condition**

Against a backdrop of increased geopolitical tensions and of risks of deglobalization and fragmentation between nations in the form of protectionist measures, trade tensions between certain countries contribute to restricting the free trade of goods and services, financial flows, along with international transfers of labor or knowledge.

These tensions, particularly when they require the modification to the contractual framework of partnerships or the operating conditions of

projects, are likely to have a negative impact on TotalEnergies' business and its operating income. If TotalEnergies were unable to manage the impacts of these commercial tensions in an appropriate manner, it would potentially incur significant increases in costs for the development of its projects, lose markets, see its production or the value of its assets fall, which could adversely affect its financial situation.

**TotalEnergies also faces an increased risk of the imposition of international economic sanctions, as well as a tightening of regulations relating to export controls**

Economic sanction regimes, combined with export controls, can target those countries in which TotalEnergies operates, and thus restrict certain types of financing or access to critical technologies, impose restrictions on the import, export or re-export of a number of goods and services, and hinder TotalEnergies' ability to continue its operations. In certain situations, the economic sanctions multiply without being necessarily coordinated at the international level.

In addition to particularly heavy financial sanctions, the breaching of economic sanction regimes adopted by the United States may lead the

authorities to impose measures that freeze companies out of the US market, such as a ban on using the US dollar, the currency in which most of TotalEnergies' financings are denominated.

The international economic sanction regimes are described in point 3.2 of this chapter, notably against Russia that were reinforced in the context of the invasion of Ukraine by Russia. The impact of the situation in Russia on the Company is detailed in point 1.9.3 of chapter 1.

## DETERIORATION OF OPERATING CONDITIONS

### TotalEnergies is exposed to risks related to adverse changes in operating conditions in some geographical areas or strategic countries

A substantial part of TotalEnergies' activities is located in strategic geographical areas or countries that may face conditions of political, geopolitical, social and/or economic instability, or the deterioration of the security conditions. Some of these countries or areas have experienced such situations in recent years, to varying degrees. Whether these conditions appear alone or in combination, they could disrupt TotalEnergies' economic and commercial activities in the countries or geographical areas concerned. In addition, the occurrence of epidemics or pandemics may significantly affect the operating conditions of certain projects or even delay their execution.

In Africa (excluding North Africa), which accounted for 19% of TotalEnergies' 2023 oil and gas production, some of these situations of political, social and/or economic instability arose in countries where TotalEnergies has production, notably in Nigeria, which is one of the main contributing countries to TotalEnergies' production (refer to point 2.3.3 of chapter 2). In the north of Mozambique, given the evolution of the security situation in the Cabo Delgado province where the Mozambique LNG project is being developed, TotalEnergies confirmed on April 26, 2021 the withdrawal of all Mozambique LNG personnel from the Afungi site. This situation led Mozambique LNG to declare force majeure.

In the Middle East and North Africa, which accounted for 31% of TotalEnergies' 2023 oil and gas production, some countries are the setting for political instability that could be associated with violent conflicts and terrorist acts, such as in Libya and Iraq. In Yemen, which is in a

state of civil war, the deterioration of security conditions in the vicinity of the Balhaf site caused Yemen LNG, in which TotalEnergies holds an interest of 39.62%, to stop its commercial production and export of LNG and to declare force majeure to its various stakeholders in 2015. The plant has been put in preservation mode.

In South America, which accounted for 10% of TotalEnergies' 2023 oil and gas production, several countries in which TotalEnergies has production have recently experienced political or economic instability, notably Argentina.

In Asia-Pacific, TotalEnergies announced on July 20, 2022 its final withdrawal from Myanmar, repeating its condemnation of the abuses and human rights violations taking place in this country and reaffirming its support to the people of Myanmar (refer to point 2.2.3.3 of chapter 2).

The occurrence and scale of incidents related to political, geopolitical, economic, health or social instability in certain strategic geographical areas or countries may be unpredictable. Such incidents are likely to adversely affect operating conditions, generate cost increases and lead to a significant decline in production, delays in and even halting of certain projects, or the loss of market shares. Such incidents may also expose employees and jeopardize their safety, as well as that of TotalEnergies' facilities. These risks may have an adverse impact on TotalEnergies' operating income and financial condition.

## REGULATORY DEVELOPMENTS

### The increasing number of regulations, and the constant developments, whether anticipated or not, in the legal and tax frameworks in countries where TotalEnergies operates, may have significant operational and financial effects, jeopardize TotalEnergies' business model and affect the conduct of its business and its financial conditions, especially given the size of TotalEnergies and its international dimension

Conducting its activities in about 120 countries throughout the world, TotalEnergies is subject to increasingly numerous, complex and restrictive laws and regulations, particularly regarding health, safety and the environment, or business ethics, which can generate significant compliance costs. In Europe and the United States, TotalEnergies' sites and products are subject to increasingly stringent laws governing the protection of the environment (water, air, soil, noise, protection of nature, waste management and impact assessments, etc.), health (occupational safety and chemical product risk, etc.), the safety of personnel and residents, product quality and consumer protection.

In some jurisdictions, the legal and fiscal framework of operations may be changed unexpectedly. The application of rights, including contractual rights, may prove uncertain and the economics of projects called into question. The legal and fiscal framework of TotalEnergies' activities, in particular regarding exploration and production, established through concessions, licenses, permits and contracts granted by or entered into with a government entity, a state-owned company or private owners, remains exposed to risks of renegotiation that, in certain cases, can reduce or call into question the protections offered by the initial legal framework and/or the economic benefit to TotalEnergies.

In recent years, in various regions of the world, TotalEnergies has thus seen governments and state-owned companies impose more stringent conditions on companies, increasing the costs and uncertainties of TotalEnergies' business operations. This trend is expected to continue.

Government intervention in such countries, which is likely to increase, may concern various areas, such as:

- the award or denial of rights necessary to explore and exploit oil & gas or renewable resources,
- the imposition of specific drilling obligations,
- price and/or production quota controls and export limits,
- nationalization or expropriation of assets,
- cancellation or unilateral modification of license or contract rights,
- increases in taxes and royalties, including those related to retroactive claims, changes in regulations, tax reassessments and implementation of new mechanisms of taxation,
- the renegotiation of contracts,
- the imposition of increased social and environmental responsibility requirements,
- the imposition of increased local content requirements,
- payment delays, and
- currency exchange restrictions or currency devaluation.

The development of TotalEnergies' new energy activities and those in the electricity sector also expose it to new, essentially local regulations which may change at an unexpected pace.

The increasing number of legal and tax regulations, which are sometimes not very compatible with one another, and the constant changes, whether anticipated or not, in legal and fiscal frameworks in the countries in which TotalEnergies operates create legal instability, which heightens the risk of legal proceedings and promotes an increase in the number of national or transnational disputes. They may have the effect of causing a material increase in tax withholdings and customs duties, as well as costs relating to operations, thus affecting the profitability of projects or the economic value of a number of TotalEnergies assets, or even oblige TotalEnergies to shorten, change and/or stop certain activities or to implement temporary or permanent site closures.

### 3.1.5 Risks relating to operations

#### HSE: RISK OF MAJOR ACCIDENT OR DAMAGE TO THIRD PARTIES AND THE ENVIRONMENT

##### **TotalEnergies' activities entail multiple operational risks such as the risk of a major industrial accident, or damage to third parties or to the environment**

TotalEnergies must face the risk of a major industrial accident both at its sites and during transport (by sea or land), or during activities related to its operations.

TotalEnergies' Upstream activities are exposed, during drilling and production operations, to risks related to the properties of oil and gas fields, which can cause blow outs, explosions, fires or other events in particular to the environment, and can lead to a disruption or interruption of TotalEnergies' operations and limit its production. The activities of the Integrated LNG, Integrated Power, Refining & Chemicals and Marketing & Services business segments are also subject to the risk of a major industrial accident such as fires, explosions, significant damage to the environment, as well as risks related to the overall life cycle of the products manufactured, and the materials used. In addition to its drilling and pipeline transport operations, TotalEnergies had identified, at year-end 2023, 177 sites and operating zones more exposed to significant industrial accidents, given the quantity and potential harmfulness of the products used, and to damages to persons, goods and the environment.

The conduct of TotalEnergies' activities, and the nature of some of the products sold, may also entail risks of direct and repeated exposure which have longer-term effects on health and the environment (soil, air, water).

#### DEVELOPMENT OF MAJOR PROJECTS

##### **TotalEnergies' energy production growth and profitability depend on the delivery of its major development projects**

TotalEnergies is engaged in large development projects in the upstream, or in the decarbonized energies, in particular in solar energy and onshore and offshore wind power.

Growth of energy production and profitability of TotalEnergies rely heavily on the successful execution of those major development projects that are increasingly complex and capital-intensive. These major projects, as any other projects, may be affected by the occurrence of a number of difficulties, including, in particular, those related to:

- the extra-financial requirements of stakeholders ,
- economic or political risks, including threats specific to a certain country or region, such as terrorism, social unrest or other conflicts,
- negotiations with partners, governments, local communities, suppliers, customers and other third parties,

If TotalEnergies were unable to anticipate changes in regulations and legal and tax frameworks or comply with them in time in one or more countries in which it operates, TotalEnergies could face increased litigation, be forced to modify and/or stop some of its activities, which could lead to a downturn in the profitability of certain projects and adversely affect its financial condition and reputation.

TotalEnergies' entities and their legal representatives may be exposed to legal proceedings, notably in the event of damage to human life, bodily injury and material damage, chronic damage to health and environmental damage. Such proceedings could also damage TotalEnergies' reputation.

The crisis management plans put in place at TotalEnergies level and at subsidiary level to cope with emergency situations may not be able to minimize the impacts on third parties, health or the environment, or exclude the risk that TotalEnergies' business and operations may be severely disrupted in a crisis situation. An inability for TotalEnergies to resume its activities in a timely manner could prolong the impact of any disruption and thus could have an adverse effect on its financial condition.

TotalEnergies is not insured against all potential risks, and if a major industrial accident were to occur, TotalEnergies' liability could exceed the maximum coverage provided by its third-party liability insurance. TotalEnergies cannot guarantee that it will not suffer any uninsured loss, and there can be no guarantee that such loss would not have an adverse effect on TotalEnergies' financial condition and its reputation (refer to point 3.4).

- obtaining project financing,
- controlling capital expenditure and operating costs,
- earning an adequate return on investment in a low price environment (oil, gas and energy prices, etc.),
- respecting project schedules,
- difficulties in supplying the necessary goods and services, and
- the timely issuance or renewal of permits and licenses by public agencies.

Failure to deliver any major project that underpins TotalEnergies' energy production or its growth could have a material adverse effect on TotalEnergies' financial condition.

## BUSINESS ETHICS

**Ethical misconduct or non-compliance of TotalEnergies, its employees or third parties acting in its name and/or on its behalf with applicable laws and regulations in particular concerning corruption or fraud may expose TotalEnergies to criminal and civil proceedings and be damaging to its reputation and shareholder value**

In the energy sector, generally considered as strategic, where the amounts invested can be very substantial, governments and public authorities are the leading counterparties. TotalEnergies is present in about 120 countries, some of which have a high perceived level of corruption according to the index established by Transparency International. TotalEnergies advocates a zero tolerance principle for fraud of any kind, particularly corruption and influence peddling.

Non-compliance with laws and regulations as well as ethical or human rights misconduct by TotalEnergies, its employees or a third party acting on its behalf could expose TotalEnergies and/or its employees to investigations, administrative or legal proceedings, criminal and civil

sanctions and to additional penalties (such as debarment from public procurement). Further measures could, depending on applicable legislation (notably the US Foreign Corrupt Practices Act, the French law No. 2016-1691 dated December 9, 2016, relating to transparency, the fight against corruption and the modernization of the economy or Regulation (EU) 2016/679 relating to the protection of personal data), be imposed by competent authorities, such as the review and reinforcement of the compliance program under the supervision of an independent third party. Any of the above may be damaging to the financial condition, shareholder value or reputation of TotalEnergies (also refer to point 3.6).

## INTEGRATION OF STRATEGIC ACQUISITIONS

**The integration of an asset or a company that presents a strategic interest for TotalEnergies may not produce the effects initially expected**

TotalEnergies has made and may make further acquisitions in various geographical markets, in various activities, and with companies of various sizes, in particular in the decarbonized energies sector.

Acquisitions made by TotalEnergies stood at a total of \$6.4 billion in 2023 (refer to point 1.5 of chapter 1).

Acquisitions present many challenges (synergies, governance, operating model, key employees, sufficient availability of TotalEnergies' teams) and require specific adaptation on a case-by-case basis.

If TotalEnergies were unable to integrate the acquired assets under the planned conditions, achieve the expected synergies, retain and integrate the key employees of the newly acquired companies, or if TotalEnergies had to bear liabilities that were not yet identified or appropriately assessed at the time of the transaction, then TotalEnergies' financial condition and reputation could be adversely affected.

## SUPPLY CHAIN MANAGEMENT

**TotalEnergies faces various risks related to its supply chain management**

TotalEnergies' supply chain is especially wide, with a network of over 100,000 suppliers of goods and services over more than 150 countries.

TotalEnergies is exposed to various risks in the management of its supply chain, in particular in a context of geopolitical tensions or pandemics (containment measures or closure of borders) impacting a geographical area or a country representing, for the Company, a significant source of supply.

Disruptions or interruption of its supply chain (e.g.: insufficient inventories, unavailability of raw materials, lack of personnel, transport difficulties, suppliers' vulnerabilities in financial and cybersecurity terms)

can lead of an increase in costs and/or delays impacting the continuation of certain activities or projects.

TotalEnergies may also be exposed if a supplier fails to comply with the Company's regulations or requirements, particularly with respect to extra-financial issues.

If the Company did not ensure that its supply chain is sufficiently diversified, or did not select suppliers in adequation with its requirements, TotalEnergies could be negatively impacted on the management of its operations or projects, its financial condition and its reputation.

## EXPOSURE TO PARTNERSHIPS

**TotalEnergies could inadequately manage or anticipate the multiplication and diversification of the partnerships that it implements for its activities**

Almost all upstream projects and an increasing number of projects undertaken by TotalEnergies' other business segments, are carried out through partnerships (including joint ventures) in all of the areas in which the Company operates. In some countries, specifically in Africa, legislation and/or the authorities make TotalEnergies' presence conditional on the establishment of a joint venture with a local company. Some partnerships include companies exposed to specific risks linked to the financial markets, such as Clearway Energy or Adani Group.

A partnership's success depends on many factors, primarily the quality of the partner (specifically technical skills and financial capacity), the quality of agreements negotiated, and the efficiency of the governance framework implemented. Inappropriate or incomplete contractual agreements, or a partner's breaching of its obligations, specifically those that are financial, legal or ethical, may harm or prevent the development of projects, give rise to disputes and damage TotalEnergies' reputation.

Projects developed in partnership may be operated by TotalEnergies, by the partners, or by joint ventures set up for this purpose in the form of a company or via contractual agreements. In cases where TotalEnergies' companies are not operators, these companies may have limited influence over, and control of, the behavior, performance (including extra-financial) and costs of the partnership, and their ability to manage risks may be limited. Even when they are not operators, TotalEnergies companies may be sued by the authorities or by plaintiffs.

If the Company did not choose high-quality partners or failed to manage its partnerships in an optimum way or to establish an appropriate governance framework, TotalEnergies could suffer profitability losses at the level of its projects, be obliged to incur costs in relation to potential litigation and face the risk of damage to its reputation.

### 3.1.6 Innovation

#### TECHNOLOGICAL DEVELOPMENTS AND DIGITAL TRANSFORMATION

**TotalEnergies could fail to anticipate appropriately the technological changes related to its main markets, the expectations of its customers and changes in its competitive environment or in certain business models, or its ambition of carbon neutrality in 2050 and its commitment for sustainable development or may not respond to them in an appropriate way and at an appropriate pace**

TotalEnergies' activities are carried out in a constantly changing environment with new products, new players, new business models, new technologies and new climate challenges. TotalEnergies must anticipate these changes, understand the market's challenges, identify and integrate technological developments in order to maintain its competitiveness, maintain a high level of performance and operational excellence, best meet the needs and demands of its customers and prepare for the future while integrating the climate and sustainable

development challenges. TotalEnergies' innovation policy requires significant investments, notably in R&D, the expected benefits of which cannot be guaranteed.

An unsuitable pace of innovation or a technological or market development that is unforeseen or uncontrolled could have a negative effect on TotalEnergies' market shares, its profitability, its reputation, and its ability to attract the necessary human resources.

**TotalEnergies could be unable to manage its digital transformation at a suitable pace, or on the right scale, which could have an impact on its business model, its organization, its competitiveness, its climate plan and the sustainable development commitments**

Across the entire value chain, digital transformation acts on the interaction between TotalEnergies and its markets. TotalEnergies seeks to benefit from digital technology to improve its industrial operations, in terms of availability, costs or performance, to offer new services to customers notably in the area of managing and optimizing energy consumption, to develop in new decentralized and decarbonized energies, and to reduce its environmental impact. TotalEnergies also seeks to integrate digital including artificial intelligence into its operations

to improve their efficiency and enable activities and investments to be managed with enhanced performance and agility.

An insufficient pace or capacity to tailor TotalEnergies' organization and skills to the digital transformation could have a negative effect on its financial condition, its reputation, and on its ability to attract and train the necessary human resources.

## 3.2 Countries under economic sanctions

Economic sanctions or other restrictive measures could target countries, such as Cuba, Iran, and Syria and/or target actors or economic sectors, such as in Russia or in Venezuela.

### 3.2.1 US and European economic sanctions

TotalEnergies closely monitors the different applicable economic sanctions regimes, including those adopted by the United States ("US") and the European Union ("EU") (collectively, the "Sanctions Regimes"), their developments and potential impacts on the Company's activities and takes the necessary steps to ensure compliance with applicable

#### A. Cuba

The United States imposes a sanctions regime against Cuba that prohibits, in general, any US person<sup>(1)</sup> from engaging, directly or indirectly, in any dealings or activities related to Cuba.

TotalEnergies held an interest in a liquefied petroleum gas (LPG) cylinder filling plant in Cuba since 1997, in accordance with the economic

#### B. Iran

Several countries and international organizations, including the United States and the EU, apply Sanctions Regimes of varying degrees targeting Iran.

On July 14, 2015, the EU, China, France, Russia, the United Kingdom, the United States and Germany entered into an agreement with Iran, known as the Joint Comprehensive Plan of Action (the "JCPOA"), regarding limits on Iran's nuclear activities and relief under certain US, EU and U.N. economic sanctions regarding Iran. Therefore, as from that date, U.N. economic sanctions, most US secondary sanctions (i.e., those covering non-US persons for activities outside US jurisdiction) and most EU economic sanctions were suspended<sup>(2)</sup>.

#### C. Russia

Since July 2014, further to the annexation by Russia of Crimea and Sevastopol, Sanctions Regimes have been adopted against Russia, including prohibitions on transacting or dealing with certain Russian individuals and entities, as well as restrictions on investments, financings, exports and the re-exportation of certain goods towards Russia.

Since the end of February 2022, Russia's invasion of Ukraine led European and American authorities to adopt several new sets of sanctions against Russia and Belarus within their Sanctions Regimes. These sanctions provide for the freezing of assets within the EU or the United States of certain number of Russian and Belarusian individuals and entities (sanctioned individuals and entities) and a prohibition to make funds or economic resources available to them, or in regard of the US sanctions, a prohibition for US persons to deal with such sanctioned individuals and entities. Sanctions target also the financial sector including a prohibition on access to the SWIFT system for certain Russian financial institutions. Other sanctions provide for restrictions in certain sectors such as the energy sector as well as restrictions to export and import for certain types of goods and services, from or to Russia.

US and European economic sanctions applicable to the activities of TotalEnergies and information concerning TotalEnergies' activities related to certain targeted countries are set forth in points 3.2.1 and 3.2.2, respectively.

**Sanctions Regimes.** However, TotalEnergies cannot guarantee that current or future regulations related to Sanctions Regimes will not have a negative impact on its business, financial condition or reputation, nor that a failure to implement the Company's compliance program by its affiliates couldn't result in criminal, civil and/or material financial penalties.

sanctions regime imposed by the United States. The sale of its interest was effective on January 6, 2022. As of such date, TotalEnergies no longer has any assets or operations in Cuba.

Following the withdrawal of the United States from the JCPOA in May 2018, US secondary sanctions concerning the oil industry were reimposed as of November 5, 2018.

In July 2017, TotalEnergies signed a contract for a period of 20 years with the National Iranian Oil Company ("NIOC") relating to the development and production of phase 11 (SP11)<sup>(3)</sup> of the giant South Pars gas field. TotalEnergies withdrew from this project and finalized its withdrawal on October 29, 2018. TotalEnergies ceased all operational activity in Iran before November 4, 2018. TotalEnergies has had no operational activity in Iran since the re-imposition of US secondary sanctions on the oil industry as of November 5, 2018.

Refer to point 3.2.2 below for information concerning Section 13(r) of the Securities Exchange Act of 1934, as amended, pertaining to activities related to Iran carried out by TotalEnergies in 2023.

Among the different sets of sanctions adopted by the EU, those adopted on March 15, 2022 prohibit in particular to grant any new loans, credits or financing to any entity operating in the energy sector in Russia without, however, prohibiting the payments made pursuant to financing arrangements entered into before these sanctions were enacted. The restrictions and sanctions imposed by the EU authorities against the Russian financial sector make it more difficult for financial flows between Russia and entities and banks established in the European Union to take place. Under the countermeasures enacted by the Russian authorities since February 2022, financial flows to foreign shareholders are subject to the approval of the Ministry of Finance/Russian Central Bank.

On June 3, 2022, the EU authorities adopted sanctions prohibiting the purchase, import or transfer of crude oil and certain petroleum products of Russian origin into the EU as from December 5, 2022 for crude oil and as from February 5, 2023 for petroleum products. To date, an exception has been granted for imports of Russian crude oil by pipeline into most of EU member states.

(1) "US person" means any US citizen, dual nationality and permanent resident alien wherever located in the world, entity organized under the laws of the United States or any jurisdiction within the United States, including foreign branches, as well as foreign subsidiaries for certain sanctions regimes or any person or entity located in the United States.

(2) Certain US and EU human rights-related and terrorism-related sanctions remain in force.

(3) TotalEnergies was an operator of the SP11 project and held 50.1% alongside with the national Chinese company China National Petroleum Corporation ("CNPC") (30%) and Petropars (19.9%), a wholly-owned subsidiary of NIOC.

The sanctions adopted by the US authorities since February 2022 have comparable consequences with those adopted by the EU authorities. The US sanctions prohibit the importation into the United States of crude oil, petroleum products and Liquefied Natural Gas (LNG) of Russian origin and prohibit US persons from making or financing new investments in Russian energy projects.

On September 2, 2022, the G7 members<sup>(1)</sup> announced their joint intention to implement a price cap on Russian-originated crude oil and petroleum products, and to prohibit companies from providing certain services in connection with the marine transportation of crude oil and petroleum products of Russian origin, unless such products are sold at or below the cap price. Therefore, the EU and the US have introduced in their respective Sanctions Regimes an exception of the prohibition on trading, brokering and transporting, and providing certain services related to such activities, of Russian crude oil, as of December 5, 2022, or Russian petroleum products, as of February 5, 2023, transported by sea to third countries (outside the EU and outside the United States), when such products are purchased at a price equal to or lower than the price cap. These restrictions do not apply under EU regulation to condensate gas from LNG production from gas fields in Russia. Compliance with the price cap does not affect the prohibition of imports of Russian oil and Russian petroleum products by sea into the EU and the US, which remain prohibited.

As of the date of this document, the sanctions adopted by the EU authorities do not restrict the ability of Novatek<sup>(2)</sup> and Yamal LNG<sup>(3)</sup>, of which TotalEnergies is a minority shareholder, to produce and sell gas (including LNG and condensate gas), nor do they restrict the ability of European buyers (or others) to purchase gas (only imports of LNG of Russian origin to the US and to the United Kingdom are prohibited).

More specifically, the EU sanctions adopted since the end of February 2022 have included the designation of one of the minority shareholders of Novatek as sanctioned person (asset freezing). This minority shareholder was already designated under the US sanctions from 2014. In accordance with Sanctions Regimes' rules, these designations however have no impact on Novatek, or on the Yamal LNG and Arctic LNG 2 projects. Novatek is not targeted by EU sanctions, but only by US financial restrictions dating back to 2014, which also apply to Yamal LNG and Arctic LNG 2.

Concerning the financing of Yamal LNG and Arctic LNG 2 projects, some Russian banks involved in those projects have been targeted by European and/or American sanctions, which have had the effect,

#### D. Syria

The EU adopted measures in 2011 regarding trade with and investment in Syria that are applicable to European persons and to entities constituted under the laws of an EU Member State, including, notably, a prohibition on the purchase, import or transportation from Syria of crude oil and petroleum products. The United States also has adopted

#### E. Venezuela

Since 2014, different Sanctions Regimes were adopted relating to Venezuela, including measures that prohibit dealings with certain Venezuelan individuals and entities, as well as restrictions on financings.

TotalEnergies, through its subsidiary TotalEnergies EP Venezuela, held a 30.32% non-operated minority interest in Petrocedeño S.A. which it transferred in July 2021 to Corporación Venezolana del Petróleo, S.A., an affiliate of Petróleos de Venezuela S.A. (PdVSA). TotalEnergies also sold its interest of 69.50% in the Yucal Placer field, operated by the company Ypergas S.A.<sup>(4)</sup>. The sale of TotalEnergies' participation and

depending on the case, of either freezing their assets or blocking the opening or maintenance of accounts or the processing of transactions involving them. TotalEnergies has put in place the necessary measures to comply with the European sanctions, obtaining the required temporary authorizations from the French competent authorities. These sanctions have also led Yamal LNG and/or Arctic LNG 2 to replace certain banks targeted by sanctions by other non-sanctioned banks.

The American Office of Foreign Assets Control (OFAC) designated, on September 14, 2023 and November 2, 2023, respectively, Arctic Transshipment and Arctic LNG 2 as Specially Designated Nationals with immediate effect subject to temporary exceptions under licenses issued by the OFAC. As a consequence of these designations, US persons are prohibited to deal with those two entities. All non-US persons are exposed to the risk of US secondary sanctions if they provide material support to these entities. Since April 18, 2023, TotalEnergies EP Transshipment has not participated in any governance body and has not paid any cash calls to Arctic Transshipment. The Company is party to an LNG purchase contract with Arctic LNG 2, for which the Company had indicated that it could not terminate it early without exposing itself financially to significant consequences in the absence of economic sanctions, and that it would exercise the force majeure clauses provided for in the contract to interrupt it if sanctions were imposed. On November 2, 2023, Arctic LNG 2 was placed under sanctions by the US authorities. As a result, in accordance with what it announced, on November 7, 2023, TotalEnergies initiated the contractual suspension procedure provided for in the Arctic LNG 2 shareholders' agreement and the force majeure procedure for the LNG purchase contract with Arctic LNG 2. Upon notification of these procedures, TotalEnergies' rights and obligations under these contracts were suspended.

TotalEnergies has put in place the appropriate measures to comply with the Sanctions Regimes. An analysis of the impacts for TotalEnergies of the applicable Sanctions Regimes, as well as the Russian countermeasures, is carried out continuously.

TotalEnergies reaffirmed, on several occasions, its firmest condemnation of Russia's military aggression against Ukraine. In order to act in a responsible manner, on March 22, 2022, TotalEnergies publicly shared its principles of conduct for managing its Russian related businesses, and it stopped by end of 2022 purchasing Russian crude oil and Russian petroleum products.

The specific context of **Russia** and its consequences on TotalEnergies are detailed in point 1.9.3 of chapter 1.

comprehensive measures that broadly prohibit trade and investment in and with Syria.

Since 2011, TotalEnergies ceased its activities that contributed to oil and gas production in Syria and has not purchased hydrocarbons from Syria since that time (refer to point 3.2.2 of this chapter).

interests in the Yucal Placer field and in the company Ypergas was effective from July 14, 2022. TotalEnergies also returned the license of Plataforma Deltana block 4 (49%) on August 12, 2022.

TotalEnergies managed the sale of its interests in Venezuela in compliance with applicable Sanctions Regimes.

Since then, TotalEnergies no longer has any assets or operations in Venezuela.

(1) The G7 is comprised of the following member states: Canada, France, Germany, Italy, Japan, the UK, and the US.

(2) Novatek is a Russian company listed on the Moscow stock exchange, and in which TotalEnergies held an interest of 19.40% as of December 31, 2023.

(3) Yamal LNG is a Russian company jointly owned by Novatek, TotalEnergies EP Yamal (20.02%), YAYM Limited, and China National Oil and Gas Exploration Development Company (CNOOC), a subsidiary of CNPC, as of December 31, 2023.

(4) Ypergas S.A. is a Venezuelan company owned by TotalEnergies Holdings Nederland B.V. (37.33%) before the sale of its interests.

### 3.2.2 Information concerning certain limited activities related to certain countries under sanctions

The information concerning TotalEnergies' activities related to Iran that took place in 2023 provided in this section is disclosed pursuant to Section 13(r) of the Securities Exchange Act of 1934, as amended.

In addition, information for 2023 is provided concerning the payments made by TotalEnergies' affiliates to, or additional cash flow that operations of TotalEnergies affiliates generate for, governments of any country identified by the United States as a state sponsor of terrorism (in 2023, Cuba, Iran, North Korea and Syria) or any entity controlled by those governments.

#### A. Cuba

##### Integrated Power

In 2023, TotalEnergies Electricité et Gaz France, a wholly owned subsidiary, supplied electricity to the Cuba Embassy in France, located in Paris and Ville d'Avray. This activity generated a gross turnover of approximately €59,298 (without taxes) and a net margin of approximately €1,566 in 2023. TotalEnergies Electricité et Gaz France expects to continue this activity in 2024.

##### Marketing & Services

As mentioned in section 3.2.1, TotalEnergies had an interest in a liquefied petroleum gas (LPG) cylinder filling plant in Cuba since 1997, in compliance with the economic sanctions regime imposed by the United States. Such interest was sold on January 6, 2022. TotalEnergies did not receive any revenues or net income in 2023 from this interest. Since then, TotalEnergies no longer has any assets or operations in Cuba.

#### B. Iran

TotalEnergies' operational activities related to Iran were stopped in 2018 following the withdrawal of the United States from the Joint Comprehensive Plan of Action (JCPOA) in May 2018 and prior to the re-imposition of US secondary sanctions on the oil industry as of November 5, 2018.

Statements in this section concerning companies controlled by TotalEnergies SE intending or expecting to continue activities described below are subject to such activities continuing to be permissible under applicable Sanctions Regimes.

##### Exploration & Production

The Tehran branch office of Total E&P South Pars S.A.S., a wholly-owned subsidiary, which opened in 2017 for the purposes of the development and production of phase 11 of the South Pars gas field, ceased all operational activities prior to November 1, 2018. In addition, since November 2018, Total Iran BV maintains a local representative office in Tehran (three employees as of December 2023) solely for non-operational functions.

Concerning payments made to Iranian entities in 2023, Total Iran BV and Elf Petroleum Iran collectively made payments of approximately IRR 4,408 billion (€96,706<sup>(1)</sup>) to the Iranian administration for taxes and social security contributions concerning the staff of this representative office. None of these payments were executed in US dollars.

Since November 30, 2018, TotalEnergies E&P UK Limited ("TEP UK"), a wholly owned subsidiary, holds a 1% interest in a joint venture relating to the Bruce field in the United Kingdom (the "Bruce Field Joint-Venture") with Serica Energy (UK) Limited ("Serica") (98%, operator) and BP Exploration Operating Company Limited ("BPEOC") (1%), following the

TotalEnergies is not present in North Korea. Other than fees related to the renewal of the registration of an international trademark with the World Intellectual Property Organization (WIPO) (which includes North Korea as a member state) paid in 2023, TotalEnergies is not aware of any of its activities having resulted in payments to, or additional cash flow for, the government of this country in 2023.

TotalEnergies believes that these activities are not subject to sanctions under an economic sanctions regimes, including those adopted by the United States and the European Union ("EU") (collectively, the "Sanctions Regimes").

In 2023, TotalEnergies Marketing France, a wholly owned subsidiary, provided fuel payment cards to be used in TotalEnergies' service stations to the Cuban Embassy located in Paris (France). This activity generated a gross turnover of approximately €14,506 (without tax) and a net profit of approximately €1,749 in 2023. TotalEnergies Marketing France expects to continue this activity in 2024.

##### Trademarks

In 2023, TotalEnergies made small payments to Cuban authorities related to the maintenance and protection of trademarks and designs in Cuba and may make similar small payments in 2024. These payments are not prohibited by applicable Sanctions Regimes.

completion of the sale of 42.25% of TEP UK's interest in the Bruce Field Joint-Venture on November 30, 2018 pursuant to a sale and purchase agreement dated August 2, 2018 entered into between TEP UK and Serica.

The Bruce Field Joint-Venture is party to an agreement governing certain transportation, processing and operation services provided to another joint venture at the Rhum field in the UK (the "Bruce Rhum Agreement"). The licensees of the Rhum field are Serica (50%, operator) and the Iranian Oil Company UK Ltd ("IOC UK"), a subsidiary of NIOC (50%), an Iranian government-owned corporation. Under the terms of the Bruce Rhum Agreement, the Rhum field owners pay a proportion of the operating costs of the Bruce field facilities calculated on a gas throughput basis.

In November 2018, the US Treasury Department's Office of Foreign Asset Control ("OFAC") granted a conditional license to BPEOC and Serica authorizing provision of services to the Rhum field following the re-imposition of US secondary sanctions. The principal condition of the license is that the ownership of shares in IOC UK by Naftiran Intertrade Company Limited (the trading branch of the NIOC) are transferred into and held in a Jersey-based trust, thereby ensuring that the Iranian government does not derive any economic benefit from the Rhum field so long as US sanctions against these entities remain in place. IOC UK's interest is managed by an independent management company established by the trust and referred to as the "Rhum Management Company" ("RMC"). If necessary, TEP UK liaises with RMC in relation to the Bruce Rhum Agreement and TEP UK expects to continue liaising with RMC on the same basis in 2024.

(1) Converted using the average exchange rate for fiscal year 2023, as published by the Central Bank of Iran.

In January 2021, OFAC renewed the conditional license to Serica authorizing the provision of services to the Rhum field, until January 31, 2023, subject to early termination if the trust arrangements described above should terminate. In addition, OFAC confirmed that, to the extent that the license remains valid and Serica represents that the conditions set out in the license are met, activities and transactions of non-US persons involving the Rhum field or the Bruce field, including in relation to the operation of the trust, IOC UK and RMC will not be exposed to US secondary sanctions with respect to Iran. Following an application filed with OFAC on November 9, 2022, Serica received in January 2023 the renewal of its license until January 31, 2025.

IOC UK's share of costs incurred under the Bruce Rhum Agreement has been paid to TEP UK in 2023 by RMC. In 2023, based upon TEP UK's 1% interest in the Bruce Field Joint Venture and income from the net cash flow sharing arrangement with Serica, gross revenue to TEP UK from IOC UK's share of the Rhum field resulting from the Bruce Rhum Agreement was approximately £380,000. This amount was used to offset operating costs on the Bruce field and as such, generated no net profit to TEP UK. TEP UK expects to continue this activity in 2024.

TEP UK is also party to an agreement with Serica whereby TEP UK uses reasonable endeavors to evacuate Rhum NGL from the St Fergus Terminal (the "Rhum NGL Agreement"). TEP UK provides this service subject to Serica having title to all of the Rhum NGL to be evacuated and Serica having a valid license from OFAC for the activity. The service is provided on a cost basis, and TEP UK charges a monthly handling fee that generates an income of approximately £106,750 per annum relating to IOC UK's 50% interest in the Rhum field. After costs, TEP UK generates little profit from this arrangement. TEP UK expects to continue this activity in 2024.

#### **Integrated Power**

In 2023, TotalEnergies Electricité et Gaz France, a wholly owned subsidiary, supplied electricity to the Iranian Embassy in Paris (France).

#### **C. Syria**

Since early December 2011, TotalEnergies ceased its activities that contributed to oil and gas production in Syria and maintained a local office solely for non-operational functions. In late 2014, TotalEnergies initiated a downsizing of its Damascus office and reduced its staff to a few employees. Following the termination of their employment contracts in May 2019, the Damascus office was closed.

#### **Marketing & Services**

In 2023, TotalEnergies Marketing Belgium, a wholly owned subsidiary, provided fuel payment cards to be used in TotalEnergies' service stations to the Syrian's delegation to the European Union located in Brussels (Belgium) until end of October 2023. This activity generated a gross turnover of approximately €2,449 (without tax) and a net profit of

This activity generated a gross turnover of approximately €12,447 (without taxes) and a net margin of approximately €270 in 2023. TotalEnergies Electricité et Gaz France does not expect to continue this activity in 2024.

#### **Marketing & Services**

In 2023, TotalEnergies Marketing France, a wholly owned subsidiary, provided fuel payment cards to be used in TotalEnergies' service stations to the Iranian Embassy and the Iranian delegation to UNESCO located in Paris (France). This activity generated a gross turnover of approximately €14,948 (without tax) and a net profit of approximately €1,784 in 2023. TotalEnergies Marketing France expects to continue this activity in 2024.

In 2023, TotalEnergies Marketing Belgium, a wholly owned subsidiary, provided fuel payment cards to be used in TotalEnergies' service stations to the Iranian Embassy located in Brussels (Belgium) until end of October 2023. This activity generated a gross turnover of approximately €9,231 (without tax) and a net profit of approximately €1,121 in 2023. Starting on November 2023, this activity was transferred to TotalEnergies Retail Belgium (a wholly owned subsidiary until January 3, 2024, date on which the Company's interest was reduced to 40%) and generated a gross turnover of approximately €1,863 (without tax) and a net profit of approximately €241 in 2023. TotalEnergies Retail Belgium expects to continue this activity in 2024.

#### **Patents & Trademarks**

In 2023, TotalEnergies paid €106 to the Iranian authorities related to abandoned patents. TotalEnergies no longer has any patents in Iran and does not expect to make any similar payments in 2024.

In 2023, TotalEnergies made small payments to Iranian authorities related to the maintenance and protection of trademarks and designs in Iran and may make similar small payments in 2024. These payments are not prohibited by applicable Sanctions Regimes.

approximately €293 in 2023. Starting on November 2023, this activity was transferred to TotalEnergies Retail Belgium (a wholly owned subsidiary until January 3, 2024, date on which the Company's interest was reduced to 40%) and generated a gross turnover of approximately €463 (without tax) and a net profit of approximately €56 in 2023. TotalEnergies Retail Belgium expects to continue this activity in 2024.

#### **Trademarks**

In 2023, TotalEnergies made small payments to Syrian authorities related to the maintenance and protection of trademarks and designs in Syria and may make similar small payments in 2024. These payments are not prohibited by applicable Sanctions Regimes.

## 3.3 Internal control and risk management procedures

The following information was prepared by the Audit & Internal Control Division with the support of several functional divisions of the Company, in particular the Finance and Strategy & Sustainability Divisions, to which the Legal and Audit & Internal Control Divisions are attached. It was reviewed by the Audit Committee and then approved by the Board of Directors.

### 3.3.1 Fundamental elements of the internal control and risk management systems

TotalEnergies is structured around its various business segments, to which the operational entities report. The business segments' management is responsible, within its area of responsibility, for ensuring that operations are carried out in accordance with the strategic objectives defined by the Board of Directors and General Management. The functional divisions at the Holding level help General Management define norms and standards, oversee their application and monitor activities. They also lend their expertise to the operational divisions.

TotalEnergies' internal control and risk management systems are structured around this organization at three levels - the Holding, business segments and operational entities - with each level being directly involved and accountable in line with the level of delegation determined by General Management.

General Management constantly strives to maintain an efficient internal control system, based on the framework of the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In this framework, internal control is a process intended to provide reasonable assurance that the objectives related to operations, reporting and compliance with applicable laws and regulations are achieved. As for any internal control system, it cannot provide an absolute guarantee that all risks are completely controlled or eliminated.

The COSO framework is considered equivalent to the reference framework of the French Financial Markets Authority (*Autorité des marchés financiers* - AMF). TotalEnergies has also chosen to rely on this framework in the context of its obligations under the Sarbanes-Oxley Act.

### 3.3.2 Control environment

#### BUSINESS INTEGRITY AND ETHICS

TotalEnergies' control environment is based primarily on its Code of Conduct, which spells out the Company's five values, including Respect for Each Other, which is reflected in the areas of integrity (fraud and corruption), respect for human rights, as well as the environment and health. The principles of the Code of Conduct are set forth in a number of guides, such as the Business Integrity Guide and the Human Rights Guide. These documents are distributed to employees and are available on the intranet. They also set out the rules of individual behavior expected of all employees in the countries where TotalEnergies is present. Similarly, a Financial Code of Ethics sets forth the obligations applicable to the Chairman and Chief Executive Officer, the Chief Financial Officer, the Vice President of the Corporate Accounting Division and the financial and accounting officers of the principal activities of TotalEnergies.

#### GOVERNANCE, AUTHORITIES AND RESPONSIBILITIES

The Board of Directors, with the support of its Committees, ensures that the internal control functions are operating properly. The Audit Committee monitors the effectiveness of the internal control and risk management systems implemented by General Management, based on the risks identified and with a view to achieving TotalEnergies' objectives.

General Management ensures that the organizational structure and reporting lines plan, execute, control and periodically assess the

TotalEnergies' internal control and risk management systems are therefore built around the five components of this framework.

TotalEnergies' risk management system draws on the main international standards (COSO Enterprise Risk Management integrated framework, ISO 31000: 2018 – Risk management) as well as on French standards (Reference framework of the French Financial Markets Authority). The internal directive on the Principles of Risk Management, Internal Control and Auditing forms the common framework on which TotalEnergies relies to implement control on its activities.

TotalEnergies' internal control and risk management systems cover the processes of the fully consolidated entities. Regarding acquisitions, TotalEnergies' control environment is implemented in the acquired entities after a critical analysis of their own systems.

The principles of control fit into the framework of the rules of corporate governance. In particular, these rules task the Board of Directors' Audit Committee with monitoring the effectiveness of the internal control and risk management systems and of the internal audit, particularly as regards the procedures for preparing and dealing with accounting, financial and extra-financial reporting.

Approximately 400 employees monitor the internal control systems within TotalEnergies. The assessment of the internal control and risk management system is mainly overseen by the Audit & Internal Control Division, which belongs to the Strategy & Sustainability Division.

As a priority of General Management, compliance programs are deployed at TotalEnergies level, in particular for the prevention of corruption, fraud and infringement of competition law, as well as for compliance with applicable economic sanctions. The programs covering anti-corruption, anti-fraud and compliance with economic sanctions include reporting and control actions (compliance reviews and audits). The Compliance network, coordinated by the Branch Compliance Officers, comprises more than 360 Compliance Officers, whose role is to ensure the deployment and coordination of the program within the subsidiaries. Ethical assessments are also conducted (refer to point 5.7 of chapter 5). In the areas of business integrity and ethics, TotalEnergies relies on the Compliance network, the Ethics Officers' network and the Ethics Committee, which plays a key role in listening and providing assistance.

Company's activities. It regularly reviews the relevance of the organizational structures so as to be able to adapt them quickly to changes in the activities and in the environment in which they are carried out.

The business segments' and operational entities' general management bodies are responsible for the internal control and risk management system within the scope of their responsibility.

TotalEnergies has also defined central responsibilities that cover the three lines of internal control: (1) operational management, which is responsible for implementing the internal control system, (2) support functions (such as Finance, Legal, Human Resources, etc.) which prescribe the internal control systems, verify their implementation and effectiveness and assist operational employees, and (3) the internal auditors who, through their risk management and internal control assessments, provide formal audit reports that include recommendations for improving the effectiveness of the system.

An accountability system is defined and formalized at all levels of the organization, through organization notes, organization charts, appointment notes, job descriptions and delegations of powers.

### **CONTROL ACTIVITIES AND ASSESSMENT**

Any activity, process or management system may be the subject of an internal audit in accordance with the international framework of the internal audit and its Code of Ethics. The Company's Audit & Internal Control Division also conducts joint audits with third party auditors and assistance missions (advice, analysis, methodological guidance). The audit plan, which is based on an analysis of the risks and risk management systems, is submitted annually to the Executive Committee and the Audit Committee. The Audit & Internal Control Division conducted around 135 internal audit assignments in 2023, with around 70 employees. The Company's internal audit practices undergo a certification process every 3 years by the IFACI (French Institute of Internal Audit and Control). TotalEnergies obtained the renewal of its certification in 2023.

The design and effectiveness of the key operational, financial and information technology controls related to internal control over financial reporting, are regularly examined and assessed in compliance with the Sarbanes-Oxley Act.

In 2023, this assessment was performed with the assistance of the Company's main entities and the Audit & Internal Control Division.

The system in place covers:

- the most significant entities, which assess the key operational controls on their main processes and complete a questionnaire which allows their internal control framework to be assessed more globally,
- other less significant entities, which respond only to the questionnaire for assessing the internal control framework.

These two categories of entities, which include the central functions of the business segments and the Holding, account for respectively

### **3.3.3 Risk assessment and management**

#### **3.3.3.1 General principles**

To implement its strategy, General Management ensures that clear and precise objectives are defined at the various levels of the organization with regard to operations, reporting and compliance.

Operational, financial and extra-financial objectives focus on the definition and efficient use of human, financial and technical resources. They are documented, notably during the budgetary process and in the long-term plan. They are regularly monitored which allows for decision-making and monitoring the performance of activities at each level of the organization.

TotalEnergies implements a comprehensive risk management system that is an essential factor in the deployment of its strategy. This system relies on an organization at Company level and in the business segments, on a continuous process of identifying and analyzing risks in order to determine those that could prevent the achievement of the objectives as well as the management systems.

TotalEnergies has a framework that is supplemented by a series of practical recommendations and via lessons learned. The structure of this framework reflects that of TotalEnergies' organization: a Company level framework, frameworks by business segment, and a specific framework for each significant operational entity.

TotalEnergies' Audit & Internal Control Division pursues a continual process aimed at strengthening the assessment of the role and involvement of all employees in terms of internal control. Training initiatives tailored to the various stakeholders involved in the internal control process are regularly launched within TotalEnergies.

approximately 80% and 10% of the financial aggregates in TotalEnergies' consolidated financial statements.

The statutory auditors also review the internal control as part of their certification of the financial statements. In accordance with the US Sarbanes-Oxley Act, during the fiscal year 2023, they reviewed the implementation of TotalEnergies' internal control framework and the design and effectiveness of the controls selected as key by TotalEnergies in its main entities for the preparation and processing of accounting and financial information. On the basis of the work they have carried out, they have not indicated any material weakness in their report on internal control as of December 31, 2023. The reports on the work performed by the Audit and Internal Control division and the statutory auditors are periodically summarized and presented to the Audit Committee and, thereby, to the Board of Directors. The Senior Vice President Audit & Internal Control attended all Audit Committee meetings held in 2023. The Audit Committee also meets with the statutory auditors at least once a year without the presence of any Company representatives.

If areas of improvement are identified, this work, whether it be internal audits or operational controls, is part of corrective action plans shared with operational management; the implementation of which is closely monitored by them and the Audit & Internal Control Division.

Based on the internal reviews, General Management has reasonable assurance of the effectiveness of TotalEnergies' internal control.

The Executive Committee, with the assistance of the TotalEnergies Risk Management Committee (TRMC), is responsible for identifying and analyzing internal and external risks that could affect the achievement of TotalEnergies' objectives. The main responsibilities of the TRMC are to ensure that the Company has mapped the risks to which it is exposed and that efficient risk management systems are in place. The TRMC's work focuses on continuously improving risk awareness and the risk management systems.

Risk mapping is a structured dynamic process. The Company's risk map feeds into the audit plan, which is based on an analysis of the risks and the risk management systems, and the work of the TRMC.

The TRMC relies in particular on the work carried out by the business segments and functional divisions. The business segments are responsible for defining and implementing a risk management policy suited to their specific activities. However, the handling of certain transverse risks is more closely coordinated by the respective functional divisions.

### 3.3.3.2 Implementation of the organizational framework

#### THE TotalEnergies RISK MANAGEMENT COMMITTEE

The main assignment of the TotalEnergies Risk Management Committee (TRMC) is to ensure that the Company has an up-to-date map of the risks to which it is exposed and that the risk management systems in place are appropriate. It is chaired by the Chief Financial Officer, member of the Executive Committee who steers its work, and includes the President of Strategy & Sustainability, who is also a member of the Executive Committee, the managers of the corporate functions, the Senior Vice President of R&D for OneTech, together with the chief administrative officers or chief financial officers of the business segments.

Under the leadership of its Chairman and based on the work of the business segments and functional departments, the TRMC is responsible for ensuring the existence and effectiveness of risk management systems tailored to the Company's challenges. As such, its objectives are as follows:

- define a common language and tools for risk identification and prioritization,
- define risk reporting standards and risk treatment mechanisms,

#### THE RISK COMMITTEE (Corisk)

Corisk is chaired by a member of the Executive Committee: the President of Strategy & Sustainability or, in his absence, the Chief Financial Officer.

It is made up of representatives from the corporate Legal, Strategy & Climate and HSE divisions, all three attached to the Strategy & Sustainability division, as well as the representatives of the Finance (including Insurance) division.

#### THE AUDIT & INTERNAL CONTROL DIVISION

The Risk team of the Audit & Internal Control Division is responsible for producing and continuously updating TotalEnergies' risk mapping. To this end, it uses all of the risk-mapping work carried out within the Company, in the business segments and in the functional divisions, the results of all kinds of audits and internal control activities, the action plans resulting

### 3.3.3.3 Risk management systems in place

Risk management systems are implemented in the operational, financial and extra-financial fields. The main risk management systems covering social challenges, health, industrial safety, environment, climate change-

#### REGARDING FINANCIAL RISKS

The management and conditions of use of financial instruments are governed by strict rules, defined by TotalEnergies General Management, which provide for centralization by the Treasury Division of liquidity, interest and exchange rate positions, management of financial instruments and access to capital markets. Depending on the overall needs of TotalEnergies, the financing policy aims to favor long-term debt, at floating or fixed rate, depending on the level of interest rates, mainly in dollars or euros.

TotalEnergies' cash balances, which mainly consist of dollars and euros, are managed to maintain liquidity based on daily interest rates in the given currency. Ceilings are set for transactions exceeding one month, with placements not to exceed 12 months. TotalEnergies SE also benefits from credit facilities granted by international banks. These credit facilities, along with the Company's net cash position, aim to allow it to continually maintain a high level of liquidity in

Regarding commitments, General Management exercises operational control through the Executive Committee's validation of proposed investment commitments and expenditures in excess of defined thresholds. The Risk Committee (Corisk) is tasked with reviewing these projects in advance, and in particular with verifying the analysis of the various associated risks.

- identify transversal or emerging risks, evaluate residual risks in light of existing systems and, if necessary, make proposals for additional systems to bring them to acceptable levels, and
- ensure that risks and their corresponding treatment mechanisms are handled by designated managers within the organization.

The work of the TRMC is led by the Audit & Internal Control Division, which assists contributors in preparing presentations and acts as the Committee's Secretary. In this capacity, the Audit & Internal Control Division submit an annual report on the work of the TRMC to the Executive Committee and to the Audit Committee in the presence of TotalEnergies' Chief Financial Officer. The latter attends all meetings of the Audit Committee and the TRMC, thus providing a link between these two committees. The TRMC met six times in 2023 and its works were examined by the Audit Committee at its meeting held on February 5, 2024.

Corisk meets at the same pace as Executive Committee meetings. Any project submitted to the Executive Committee (and therefore giving rise to a financial commitment that exceeds certain thresholds) is first examined by Corisk.

Following the review by Corisk of the risks associated with the project submitted, a memorandum from the Strategy & Sustainability division reflecting Corisk's comments is sent to the Executive Committee.

from this work and the monitoring of their implementation, formalization of structured feedback, benchmarks and other external information sources, discussions with TotalEnergies' executive officers, and all information gathered during TRMC meetings and the preparation for these meetings.

related challenges and the prevention of corruption are presented in the Statement of Extra-Financial Performance (chapter 5).

accordance with objectives set by General Management in order to meet short-term needs.

In terms of counterparty risk linked to financial transactions, TotalEnergies applies a cautious policy, and only enters into commitments with institutions featuring a high degree of financial soundness, as assessed based on a multi-criteria analysis. Credit limits are determined globally for each authorized financial counterparty and is allocated among the affiliates and TotalEnergies' central treasury entities according to its financial needs. In addition, to reduce market valuation risk on its commitments, the Treasury Division has entered into margin call agreements with its counterparties in compliance with applicable regulations. Lastly, since December 21, 2018, pursuant to Regulation (EU) No 648/2012 on OTC derivatives, central counterparties and trade repositories (EMIR), any new interest rate swap (excluding cross currency swaps) entered into by a TotalEnergies entity must be centrally cleared.

TotalEnergies seeks to minimize its currency exposure, on the one hand, by financing its long-term assets in the functional currency of the entity to which they belong and, on the other hand, by systematically hedging the currency exposure generated by commercial activity. These risks are managed centrally by the Treasury Division, which operates within a set of limits defined by General Management.

The policy for managing risks related to financing and cash management activities, as well as TotalEnergies' exchange and interest rate risks are also described in detail in Note 15 to the Consolidated Financial Statements (point 8.7 of Chapter 8).

TotalEnergies finances its activities either by using its own resources, by issuing bonds on international markets, or by obtaining financing for

### **REGARDING RISKS RELATING TO SECURITY**

With regard to security, TotalEnergies has put in place means to analyze threats and assess risks in order to take preventive measures to limit its exposure to security risks in the countries where it is present. In the face of various types of threat, TotalEnergies ensures that people and assets are protected effectively and responsibly by conducting expert appraisal, consulting and control activities. In particular, it defines Security

### **REGARDING RISKS RELATING TO THE SECURITY OF INFORMATION SYSTEMS**

Cybersecurity issues are the subject of a strong commitment by the General Management, which is reflected in structured governance to address the risks related to external threats monitored by the TRMC, the Executive Committee and the Audit Committee.

The President, Finance, who is an Executive Committee member, and reports to the Company's Chairman and Chief Executive Officer, supervises the information systems Division, including cybersecurity, which is under the authority of the Company's Global Chief Information Security Officer.

Every year, the Cybersecurity & Risk Management Division submits the cybersecurity strategy for the Company's corporate and industrial information systems to the Executive Committee for approval. In particular, it defines changes to the Company's cybersecurity reference framework. The TotalEnergies Information Systems Division develops and disseminates the governance and security rules describing the infrastructures, organizations and operating methods expected or recommended. These rules are implemented across the entities of the

### **REGARDING RISK PREVENTION RELATING TO CHANGES IN THE REGULATORY ENVIRONMENT AND BUSINESS ETHICS**

Reporting to General Management, with a point of contact on the Executive Committee in the form of the Chief Strategy & Sustainability, the Legal Division is responsible for establishing and implementing the legal policy. It coordinates legal activities in close cooperation with the business segments' legal departments and supports the various TotalEnergies entities in order to meet their legal needs. TotalEnergies' lawyers monitor developments in their specific areas of expertise. A Compliance and Legal Risk Management Division is responsible, at Company level, for formulating policies on preventing and fighting against corruption and fraud, as well as compliance with applicable regulations on economic sanctions. This division is also in charge of devising and overseeing the implementation of the corresponding training programs, as well as coordinating the network of anti-corruption and anti-fraud compliance officers, and the points of contact for economic sanctions.

TotalEnergies has put in place since 2015 a structured program to prevent and combat fraud and has established a range of procedures and control systems that help prevent and detect different types of fraud. This mechanism is supported by the business principles and values of individual behavior described in its Code of Conduct and other standards applied by TotalEnergies' business segments.

specific projects from financial institutions and banks. The medium- and long-term debt policy implemented by TotalEnergies are aimed at ensuring that cash is available, notably to cover any major new project or significant acquisition.

A tightening of the selection criteria set by certain financial institutions and banks on financing for projects related to the exploration, production and sale of oil and gas could lead TotalEnergies to increase the diversification of its financing methods and sources. TotalEnergies will nonetheless continue to rely on the long-term relationships already formed with numerous banks and financial institutions.

measures for TotalEnergies' operational divisions, various entities and projects, ensures that these measures are implemented; and provides expertise in the event of a crisis. It relies on a network of Country Chairs assisted by Country Security Officers and on a continuously updated Security framework. The production, updating and distribution of this framework are part of the risk management system.

### **REGARDING RISKS RELATING TO THE SECURITY OF INFORMATION SYSTEMS**

Company under the responsibility of the various business segments. With the aim of preventing cyber risks, awareness-raising and training actions are also regularly carried out among TotalEnergies employees.

In addition, TotalEnergies has an Operational Security Center to detect and analyze information system security events, as well as a FIRST and TF-CSIRT certified Computer Emergency Response Team (CERT). In the event of a cyber attack on information systems, a cyber crisis management process is structured within TotalEnergies.

Lastly, TotalEnergies conducts specific risk analyses permitting the definition and implementation of appropriate security controls concerning information systems. These controls are organized into three lines of defense, the third being under the responsibility of the Security Division, which conducts several simulations of attacks in real conditions (known as "red teams") each year, carried out by third parties specialized in offensive cybersecurity. In addition, cyber crisis management exercises based on specific risk scenarios are organized each year and used by the various TotalEnergies entities for training purposes.

### **REGARDING RISK PREVENTION RELATING TO CHANGES IN THE REGULATORY ENVIRONMENT AND BUSINESS ETHICS**

TotalEnergies has widely distributed to employees a directive for handling incidents of fraud, recalling in particular the whistleblowing system that any employee can use to report acts that may constitute fraud. In addition, a rule was adopted in late 2020 to formalize the procedure for collecting integrity alerts (corruption, fraud and influence peddling) and to remind the various existing alert channels.

TotalEnergies' anti-fraud compliance program includes notably: an e-learning module for all employees of TotalEnergies, a guide called Prevention and Fighting Fraud, a map of fraud risks at the Company level updated in 2023, a typological guide of fraud risks which includes descriptions of the main risks, and video campaigns to raise awareness of the major risks of fraud. This program is deployed by the network of anti-fraud coordinators in the business segments and operational entities, this role of coordinator being generally performed by the Compliance Officer. Fraud risk mapping is also performed in the subsidiaries.

For information on corruption prevention, refer to point 5.8.1 of Chapter 5.

With regard to international economic sanctions and export controls, TotalEnergies carries out its activities in compliance with applicable laws and regulations, in particular those of the European Union (EU) and United States (US). TotalEnergies has a formalized compliance program in place to prevent the risk of non-compliance with these laws and regulations. It is kept regularly updated. This program is deployed by a dedicated Economic Sanctions and Export Control department within the Legal Division and by the points of contact within the business segments to ensure that regulations are monitored on a daily basis, to analyze all TotalEnergies' transactions and projects in relation to a country under sanctions and to ensure compliance with applicable regulations. An e-learning module on this topic has been available since 2020.

A policy aimed at ensuring compliance with, and preventing infringement of, competition law is in place and is a follow-up to the various measures previously implemented by the business segments. Its deployment is based, in particular, on management and staff involvement, training courses that include an e-learning module, and an appropriate organization.

Regarding the prevention of conflicts of interest, each of the senior executives of TotalEnergies completes an annual declaration of the absence of conflicts of interest (or, if applicable, declares any conflicts of interest to which they may be subject). By completing this declaration, each senior executive also agrees to report to his or her manager any conflict of interest that he or she has had, or would have, knowledge of in the course of his or her duties. The "Conflicts of Interest" internal rule also reminds all employees of their obligation to report to their manager any situation that might give rise to a conflict of interest so that measures can be taken to deal with it when necessary.

In order to prevent market abuse linked to trading on the financial markets, TotalEnergies applies a policy based in particular on internal

### **REGARDING RISKS RELATING TO THE SUPPLY CHAIN**

The Company pays particular attention to working with responsible suppliers who respect both human rights and the environment throughout its value chain. The Company expects its suppliers to adhere to the Fundamental principles of purchasing which derive from its Code of Conduct. To that end, the Company has chosen to have the management of its supplier relations coordinated by a dedicated cross-functional entity, TotalEnergies Global Procurement, which is specifically tasked with providing Purchasing services and assisting the Company's entities and sites<sup>(1)</sup>.

### **REGARDING RISKS RELATING TO EXPOSURE TO PARTNERSHIPS**

The procedures for selecting TotalEnergies' partners and managing the different stages in the life cycle of each partnership are governed by structured internal reference frameworks, applied by all Company entities.

In order to ensure that the process of selecting future partners for the creation of a joint company and/or the completion of a joint project is robust, TotalEnergies' framework includes performing due diligence relating to the partner's HSE, technical, legal and financial activities and operating methods. A corruption risk analysis is also carried out.

ethics rules that are regularly updated and distributed. In addition, TotalEnergies' senior executives and certain categories of employees, depending on the positions they hold, are required to refrain from carrying out any transactions, including hedging, on TotalEnergies shares or ADRs and units in FCPEs (company mutual funds) invested primarily in TotalEnergies shares (as well as on any derivatives linked to these shares) on the day on which the Company announces its quarterly, half-yearly or annual results and during the preceding 30 calendar days. An annual campaign specifies the blackout periods and rules applicable to those affected.

To mitigate the risks of third parties infringing its intellectual property rights and the leak of know-how, TotalEnergies ensures that its rights are protected contractually under partnership agreements the terms and conditions of which are negotiated by its intellectual property specialists and are consistent with its industrial and commercial strategy. TotalEnergies has a policy of filing and maintaining patents, monitors technological developments in terms of freedom of use, and takes, when necessary, all appropriate measures to ensure the protection of its rights.

In addition, since some of its employees have access to confidential documents while performing their duties, TotalEnergies has adopted internal rules concerning the management of confidential information. TotalEnergies' intellectual property specialists also carry out awareness-raising activities with employees, so that they are better informed about restrictions that may apply to the use of information and data. In terms of the security of information assets, TotalEnergies also implements document retention and personal data protection policies to deal with increasingly significant legal and security risks.

Agreements signed with third party suppliers are managed under TotalEnergies' dedicated procurement system (structure, rules and tools). This system includes a supplier evaluation and prequalification process, the monitoring of contracts and their performance (refer to point 5.10 of Chapter 5) and the monitoring of the financial robustness of the main suppliers. Finally, the audits provided for in the agreements with the suppliers complete the system.

The agreements signed with these third parties are mainly drawn up by multi-disciplinary negotiation teams. Training programs, at the Company and business segment levels, ensure that the necessary knowledge and skills are transferred to ensure that contracts are correctly prepared, activities monitored, and TotalEnergies' interests properly represented in the partnership. The relevant operational entity puts in place the structure required to monitor and manage the partnership. Finally, the audits provided for in the partnership agreements complete the system.

(1) With the exception of certain entities that retain management of their supplier relationships, such as Hutchinson, Saft Groupe, Greenflex and TOTSA TotalEnergies Trading SA.

### 3.3.4 Main characteristics of the internal control and risk management procedures relating to the preparation and processing of accounting and financial information

Accounting and financial internal control covers the processes that produce accounting and financial data, and mainly the financial statements processes and the processes to produce and publish accounting and financial information. The internal control system aims to:

- conserve TotalEnergies' assets,
- comply with accounting regulations, and properly apply standards and methods to the production of financial information, and
- ensure the reliability of accounting and financial information by controlling the production of this information and its consistency with the information used to produce the dashboards at every appropriate level of the organization.

#### 3.3.4.1 Production of accounting and financial information

##### ORGANIZATION OF THE FINANCIAL FUNCTION

Dedicated teams implement the accounting and financial processes in the areas of consolidation, tax, budget and management control, financing, cash positions and information systems. The entities, business segments and General Management are respectively responsible for accounting activities.

The Accounting Division, which is part of the Finance Division, is responsible for drawing up the Consolidated Financial Statements and manages TotalEnergies' network of accounting teams.

The tax function, made up of a network of tax experts at the corporate level, in the business segments and the entities, monitors changes in local and international rules. It is responsible for implementing the tax policy approved by the Board of Directors, for all business sectors. The Head of Tax, under the authority of the Chief Financial Officer, submits a regular report on TotalEnergies' tax situation to the Audit Committee, which reports on its work to the Board of Directors.

##### CONSOLIDATED FINANCIAL STATEMENTS PROCESS

The Accounting Department which reports to the Finance Division, prepares TotalEnergies' quarterly Consolidated Financial Statements according to IFRS standards, on the basis of the consolidated reporting packages prepared by the entities concerned. The Consolidated Financial Statements are examined by the Audit Committee and then approved by the Board of Directors.

The main factors in the preparation of the Consolidated Financial Statements are as follows:

- the processes feeding the individual accounts used to prepare the reporting packages for consolidation purposes are subject to validation, authorization and booking rules,
- the consistency and reliability of the accounting and control data are validated for each consolidated entity and at each relevant level of the organization,
- a consolidation tool, supervised by the Accounting Department is used by each consolidated entity and centrally to ensure the consistency and reliability of data at each relevant level of the organization,
- a consolidation reporting package from each entity concerned and that is sent directly to the Accounting Department allows the transmission and completeness of the information to be optimized,
- a corpus of accounting rules and methods is formalized in the Financial Reporting Manual. Its application is compulsory for all the consolidated entities in order to provide uniform and reliable financial information. This framework is built according to IFRS accounting standards. The Accounting Department centrally distributes the Financial Reporting Manual through regular and formalized

At the Company level, the Finance Division, which includes the Accounting Division, the Budget & Financial Control Division and the Tax Division, is responsible for the production and processing of accounting and financial information. The scope of the internal control procedures relating to the production and processing of financial and accounting information includes the parent company (TotalEnergies SE) and all fully consolidated entities or entities whose assets are under joint control.

Refer to point 4.1.2.3 of chapter 4 for a description of the role and the missions of the Audit Committee. These missions are defined by Directive 2014/56/EU and regulation (EU) No. 537/2014 regarding statutory audits.

Management control contributes to the reinforcement of the internal control system at every level of the organization. The network of management controllers in the entities and the business segments is supervised by the Budget & Financial Control Division. This department also produces the monthly dashboard, the budget and the long-term plan.

The Treasury Division implements the financial policy, which frames in particular the processing and centralization of cash flows, the debt and liquidity investment policy and the hedging of exchange and interest rate risks.

The Information Systems Division makes decisions on the choice of software suited to the accounting and financial requirements of TotalEnergies. These information systems are subject to developments to reinforce the task separation system and to improve the control of access rights. Tools are available to make sure that access rights comply with the Company's rules in this area.

communication with the heads of the business segments. This manual, which is regularly updated, specifies in particular the procedures for identifying, valuing and recognizing off-balance sheet commitments,

- new accounting standards under preparation and changes to the existing framework are monitored in order to assess and anticipate their impacts on the Consolidated Financial Statements,
- an accounts plan used by all the consolidated entities is formally set forth in the Financial Reporting Manual, specifying the content of each account and the procedures for the preparation of the reporting packages for consolidation purposes,
- the account closing process is supervised and is based mainly on the formalization of economic assumptions, judgments and estimates, treatment of complex accounting transactions and compliance with established timetables announced through Company instructions disclosed to each entity,
- in particular, the processes applicable to the preparation of the accounts of the acquired entities are reviewed and, where appropriate, amended to integrate them into those applicable to the preparation of the Consolidated Financial Statements. Furthermore, the booking in the accounts of the purchase price allocation of each of these entities is based on assumptions, estimates and judgments in line with the TotalEnergies business model, and
- off-balance sheet commitments, which are valued according to the Financial Reporting Manual, are reported on a quarterly basis to the Audit Committee.

## PROCESSING OF ACCOUNTING AND FINANCIAL INFORMATION

Internal control of accounting and financial information is primarily organized around the following areas:

- monthly financial reporting is formalized by Company and business segment dashboards using the same reference framework and standards as those used for the consolidated financial statements; in addition, the quarterly closing schedule is the same for preparing the Consolidated Financial Statements and financial reporting,
- a detailed analysis of differences as part of the quarterly reconciliation between the Consolidated Financial Statements and financial reporting is supervised by the Accounting and Budget & Financial Control Divisions, which are part of the Finance Division,
- a detailed analysis of differences between actual amounts and the yearly budget established on a monthly basis is conducted at each level of the organization. The various monthly indicators are used to continually and uniformly monitor the performance of each of the entities, the business segments and the Company, and to make sure that they are in keeping with the objectives,
- an annual reconciliation between the statutory financial statements and the financial statements based on IFRS standards is performed by entity,
- regular controls are designed to ensure the reliability of accounting information. They relate in particular to the processes for drawing up financial aggregates,
- a regular process for the signature of representation letters is deployed at each level of the organization,

### 3.3.4.2 Publication of accounting and financial information

Significant information about TotalEnergies is published externally according to formal internal procedures. These procedures aim to guarantee the quality and fair presentation of the information intended for the financial markets, and its timely publication.

The Disclosure Committee, chaired by the Chief Financial Officer, ensures, in particular, that these procedures are respected. Accordingly, it meets before the press releases on TotalEnergies' results and annual reports are submitted to the Audit Committee and the Board of Directors.

## ASSESSMENT OF THE SYSTEM FOR THE INTERNAL CONTROL OF ACCOUNTING AND FINANCIAL INFORMATION

TotalEnergies' General Management is responsible for implementing and assessing the internal control system for financial and accounting disclosure. In this context, the implementation of TotalEnergies' internal control framework, based on the various components of the COSO, is assessed internally at regular intervals within the TotalEnergies' main entities.

Pursuant to the requirements introduced by Section 302 of the Sarbanes-Oxley Act, the Chairman and Chief Executive Officer and the Chief Financial Officer have conducted, with the assistance of members of certain divisions of TotalEnergies (in particular Legal and Audit & Internal Control), an evaluation of the effectiveness of the internal disclosure Controls and Procedures (Disclosure Controls and Procedures) over the period covered by the annual report Form 20-F. For fiscal year 2023, the Chairman and Chief Executive Officer and the Chief Financial Officer have concluded that these internal controls and procedures were effective.

- an annual control system of the accounts of equity accounted affiliates based on a questionnaire completed by each entity concerned, the system being integrated within the TotalEnergies internal control framework, and
- the Disclosure Committee ensures the respect of the procedures in place.

Other significant financial information is produced according to strict internal control procedures.

Proved oil and gas reserves are evaluated annually by the relevant entities. They are reviewed by the Reserves Committees, approved by Exploration & Production's general management and then validated by TotalEnergies' General Management. They are also presented to the Audit Committee each year.

The internal control process related to estimating reserves is formalized in a special procedure described in detail in point 2.1.1 of chapter 2. The reserves evaluation and the related internal control processes are audited periodically.

TotalEnergies' published strategic and outlook presentations are prepared, notably based on the long-term plans drawn up at the business segment and Company levels, and the works carried out at each relevant level of the organization. The Board of Directors reviews the strategic and outlook presentations each year.

A calendar of the publication of financial information is published and made available to investors on TotalEnergies' website. With the help of the Legal Division, Investor Relations Division ensures that all publications are made on time and in accordance with the principle of equal access to information between shareholders.

## ASSESSMENT OF THE SYSTEM FOR THE INTERNAL CONTROL OF ACCOUNTING AND FINANCIAL INFORMATION

In addition, a specific process is in place for reporting any information related to TotalEnergies' accounting procedures, internal control and auditing. This process is available to any shareholder, employee or third party.

Finally, the Consolidated Financial Statements undergo a limited examination during quarterly closing, and an audit during annual closing. Almost all the audit missions performed in the countries where TotalEnergies operates are fulfilled by the members of the networks of the two statutory auditors, who, after performing their audit, proceed with the annual certification of TotalEnergies' Consolidated Financial Statements. They are informed in advance of the process for the preparation of the accounts and present a summary of their work to the Company's accounting and financial managers and to the Audit Committee during the quarterly reviews and annual closing. The statutory auditors also review the internal control as part of their certification of the financial statements.

## 3.4 Insurance and risk management

### 3.4.1 Organization

TotalEnergies deploys its worldwide insurance program taking into account the specific requirements of local regulations applicable in the countries where the Company is present. TotalEnergies has its own reinsurance company, Omnium Reinsurance Company (ORC) which constitutes the operational tool for harmonizing and centralizing the coverage of the subsidiaries' insurable risks.

Some countries may, however, require the purchase of insurance from a local insurance company. If the local insurer agrees to cover the subsidiary in accordance with the Company's worldwide insurance program, then, after negotiations, nearly all the risks that the local insurer had covered are transferred to ORC.

### 3.4.2 Risk and insurance management policy

The risk and insurance management policy consists, in close cooperation with the relevant internal departments of each subsidiary to:

- define risk scenarios of major disasters (estimated maximum loss);
- assess the potential financial impact on the Company, should major disasters occur;

In parallel, ORC negotiates reinsurance programs at the Company level with commercial or mutualist reinsurance markets. Thus, ORC allows the Company to better manage price variations in the insurance market by retaining the level of risk in accordance with the defined risk retention policy.

Apart from insurance contracts covering industrial risks, other insurance contracts covering property damages and third-party liability are subscribed (car fleet, credit insurance, life and health insurance...). These risks are essentially covered by third-party insurance companies.

### 3.4.3 Policy on insurance

TotalEnergies has worldwide property insurance and third-party liability coverage for all its consolidated subsidiaries and most of its non-consolidated subsidiaries. These insurance contracts are entered into with first-class insurers (and reinsurers).

The amounts insured depend on the financial risks defined in the risk scenarios of major disasters, the coverage terms offered by the insurance market, and the risk retention policy defined by the Company.

In 2023, the Company updated its insurance policy by increasing retention levels and adjusting insured limits, in order to transfer only the most significant risks to the insurance market, in line with industry practice; other risks are retained within the Company's reinsurance captive, in compliance with prudential insurance regulations. The updated insurance policy was approved by the Board of Directors at its meeting held on December 14, 2022. Its implementation was presented to the Audit Committee at its meeting held on February 6, 2023.

More specifically:

- for third-party liability: as the maximum financial risk cannot be evaluated by a systematic approach, the amounts insured are based on market conditions and the Company's retention policy, in line with industry practice. Moreover, the Company adopts, whenever appropriate, the necessary material and human resources to manage the compensation of victims in the event of a technological accident for which it would be liable;

- participate in the implementation of measures aiming to limit the probability that major disasters occur and their financial consequences if such events were to occur, and
- arbitrate between retaining within the Company the potential financial consequences that would result from those disasters or transferring them to the insurance market.

- for property damage and business interruption: the amounts insured vary depending on the sector and on the site. They are based on the cost estimates and reconstruction scenarios of the units that would result from the materialization of the estimated maximum loss, as well as on insurance market conditions and the Company's retention policy, in line with industry practice. The business interruption risk is retained by the Company.

The policy on insurance described above reflects a particular situation as of a given date and cannot be considered as representative of a permanent situation. The Company's policy on insurance may be changed at any time depending on market conditions, specific circumstances and General Management's assessment of the risks incurred and the adequacy of their coverage.

TotalEnergies considers that its insurance coverage is in line with industry practices and sufficient to cover usual risks in its operations. However, the Company is not insured against all potential risks. In the event of a major environmental disaster, for example, TotalEnergies' liability could exceed the maximum coverage provided by its third-party liability insurance. TotalEnergies cannot guarantee that the Company will not suffer any uninsured loss, and there can be no guarantee, particularly in the event of a major environmental disaster or a major industrial accident, that such loss would not have a material adverse effect on the Company.

## 3.5 Legal and arbitration proceedings

There are no governmental, legal or arbitration proceedings, including any proceeding of which the Corporation is aware that are pending or threatened against the Corporation, that could have, or could have had during the last 12 months, a material impact on TotalEnergies' financial situation or profitability.

### FERC

The Office of Enforcement of the US Federal Energy Regulatory Commission (FERC) began in 2015 an investigation in connection with the natural gas trading activities in the United States of TotalEnergies Gas & Power North America, Inc. (TGPNA), a US subsidiary of TotalEnergies. The investigation covered transactions made by TGPNA between June 2009 and June 2012 on the natural gas market. TGPNA received a Notice of Alleged Violations from FERC on September 21, 2015. On April 28, 2016, FERC issued an order to show cause to TGPNA and two of its former employees, and to the Corporation and

### DISPUTES RELATING TO CLIMATE

In France, the Corporation was summoned in January 2020 before Nanterre's Civil Court of Justice by certain associations and local communities in order to oblige the Company to complete its Vigilance Plan, by identifying in detail risks relating to a global warming above 1.5 °C, as well as indicating the expected amount of future greenhouse gas emissions related to the Company's activities and its product utilization by third parties and in order to obtain an injunction ordering the Corporation to cease exploration and exploitation of new oil or gas fields, to reduce its oil and gas production by 2030 and 2050, and to reduce its net direct and indirect CO<sub>2</sub> emissions by 40% in 2040 compared with 2019. This action was declared inadmissible on July 6, 2023, by the Paris Civil Court of Justice to which the case was transferred following a new procedural law. All the claimants appealed this decision before the Paris Court of Appeal. TotalEnergies considers that it has fulfilled its obligations under the French law on the vigilance duty. A new action against the Company, with similar requests for injunction, has started in March 2024 before the commercial court of Tournai in Belgium.

Several associations in France brought civil and criminal actions against TotalEnergies, with the purpose of proving that since May 2021 – after the change of name of TotalEnergies – the Corporation's corporate communication and its publicity campaign contain environmental claims that are either false or misleading for the consumer. TotalEnergies considers that these accusations are unfounded.

### RUSSIA

In France, two associations filed a simple complaint against the Company in October 2022 with the National Anti-Terrorist Prosecutor's Office, due to the continuation of some of the Company's activities in Russia since the Russian invasion of Ukraine in 2022. The complaint, which the Corporation has not been given access to, would accuse the Corporation – due to its 49%<sup>(1)</sup> holding in Russian company Terneftegaz, at that time 51%-owned by Novatek and operated by said company – of complicity in war crimes committed by the Russian Air Force in Ukraine, by aiding or assisting, through the supply of kerosene to the Russian Air Force. The

### MOZAMBIQUE

In France, victims and heirs of deceased persons filed a complaint against the Company in October 2023 with the Nanterre Prosecutor, following the events perpetrated by terrorists in the city of Palma in March 2021. This complaint would allege that the Corporation is liable for

Described below are the main administrative, legal and arbitration proceedings in which the Corporation and the other entities of TotalEnergies are involved.

TotalEnergies Gas & Power Ltd., regarding the same facts. The case was remanded on July 15, 2021 to the FERC Administrative Judge for hearing and consideration on the merits. TGPNA brought a claim to the U.S. District Court for the District of Texas in December 2022 disputing the constitutionality of FERC's administrative procedure; the U.S. District Court for the District of Texas ordered a stay of the case in the course of 2023, pending decisions by the U.S. Supreme Court in another cases involving similar constitutional issues. TGPNA contests the claims brought against it.

In France, on July 4, 2023, nine shareholders (two companies and 7 individuals holding a small number of the Corporation's shares) brought an action against the Corporation before the Nanterre Commercial Court, seeking the annulment of resolution no. 3 passed by the Corporation's Annual Shareholders' Meeting on May 26, 2023, recording the results for fiscal year 2022 and setting the amount of the dividend to be distributed for fiscal year 2022. The plaintiffs essentially allege an insufficient provision for impairment of the Company's assets in the financial statements for the fiscal year 2022, due to the insufficient consideration of future risks and costs related to the consequences of greenhouse gas emissions emitted by its customers (scope 3) and carbon cost assumptions presented as too low. The Corporation considers this action to be unfounded.

In the United States, US subsidiaries of TotalEnergies (TotalEnergies EP USA, Inc., TotalSpecialties USA, Inc. and TotalEnergies Marketing USA, Inc.) were summoned, amongst many companies and professional associations, in several "climate litigation" cases, seeking to establish legal liability for past greenhouse gas emissions, and to compensate plaintiff public authorities, in particular for resulting adaptation costs. The Corporation was summoned, along with these subsidiaries, in three of these litigations. The Corporation and its subsidiaries consider that the courts lack jurisdiction, and have many arguments to put forward, and consider that the past and present behavior of the Corporation and its subsidiaries does not constitute a fault susceptible to give rise to liability.

Corporation – which has no direct or indirect activity vis-à-vis the sale of kerosene in Russia – has strongly rejected these accusations, as unfounded in both law and fact<sup>(2)</sup>.

The complaint was dismissed by the National Anti-Terrorist Prosecutor's Office in early January 2023.

The plaintiffs later lodged a new identical complaint in March 2023 with the application to join the proceedings as a civil party. In June 2023, the National Anti-Terrorist Prosecutor's Office recommended a dismissal to the Elder Magistrate in charge of criminal matters.

"unvoluntary manslaughter" and, "failure to assist people in danger". The Corporation considers these accusations as unfounded in both law and fact<sup>(3)</sup>.

(1) The sale by the Company of the 49% interest in Terneftegaz announced by the Company on July 18, 2022 was finalized on September 15, 2022.  
 (2) Refer to the press release published by the Company on August 24, 2022 contesting the accusations made by French newspaper Le Monde.  
 (3) Refer to the press release published by the Company on October 11, 2023 contesting the accusations.

## 3.6 Vigilance Plan

### 3.6.1 Introduction

#### 3.6.1.1 Regulatory framework

In accordance with Article L. 225-102-4 of the French Commercial Code, the vigilance plan (hereinafter referred to as the "Vigilance Plan") aims to set out the reasonable measures of vigilance put in place within the Company to identify risks of and prevent severe impacts on human rights, fundamental freedoms, human health and safety and the environment resulting from the activities of the Corporation and those of the companies it controls as defined in point II of Article L. 233-16 of the French Commercial Code, directly or indirectly, as well as the activities of subcontractors or suppliers with which it has an established commercial relationship, where such activities are linked to this relationship.

The Vigilance Plan covers the activities (hereinafter referred to as the "Activities" in this section) of TotalEnergies SE and its consolidated subsidiaries as defined in II of Article L. 233-16 of the French Commercial

Code (hereinafter referred to as the "Subsidiaries" in this section)<sup>(1)</sup>. It also covers the activities of suppliers of goods and services with which TotalEnergies SE and its Subsidiaries have an established commercial relationship, where such activities are associated with that relationship (hereinafter referred to as the "Suppliers")<sup>(2)</sup>.

TotalEnergies operates in about 120 countries in a variety of complex economic and socio-cultural contexts and in business areas that are likely to present risks that fall within the scope of the Vigilance Plan.

The reasonable measures of vigilance set out in this Vigilance Plan take into account the diversity and the geographic reach of the Company's Activities. As part of its reporting of the implementation of the Vigilance Plan, TotalEnergies has chosen to illustrate its actions by referring to situations upon which it was specifically questioned.

#### 3.6.1.2 Methodology and preparation of the Vigilance Plan

TotalEnergies has integrated consideration of the impact of its Activities and those of its Suppliers on people's health and safety, the environment and respect for human rights into its corporate culture.

Thus in formulating its Vigilance Plan, TotalEnergies relies on a solid foundation of procedures, management and reporting tools, including with respect to HSE and human rights. Experiences acquired have contributed to develop further the Vigilance Plan.

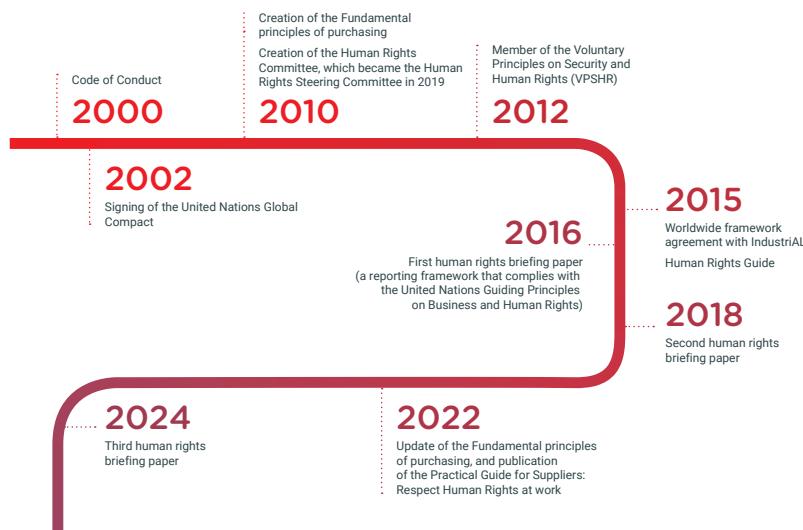
**Health, safety and the environment (HSE)** have long been the object of specific attention at Company level. Given their nature, the Activities give rise to health and safety risks for employees, the personnel of external contractors, and residents in the vicinity of industrial sites.

Since 2016, TotalEnergies has had an HSE Committee, which includes the members of the Executive Committee and is chaired by the Chairman and Chief Executive Officer. The Committee's role is to generate momentum at top management level to ensure that safety is a value shared by all. All HSE functions at headquarters and in the Company's business segments are centralized within a single HSE

division. The objective of this unified organization is to combine the strengths and expertise and to harmonize existing good practices, based on a One MAESTRO<sup>(3)</sup> reference framework common to all business segments. In practice, TotalEnergies takes a continuous improvement approach to HSE, involving every level of the organization. HSE objectives are presented to the Executive Committee every year. One MAESTRO standards, defined at Company level, are implemented by the Subsidiaries through their own HSE management systems.

**Human rights** are at the heart of the Company's operations. Since 2000, TotalEnergies has adopted a Company Code of Conduct.

In 2002, TotalEnergies joined the United Nations Global Compact. Since 2010, the Company has been supported by a Human Rights Steering Committee. The human rights road map is presented and reviewed regularly at Executive Committee meetings. In 2013, the Executive Committee examined and validated the Company's first human rights road map, and in 2016, its first human rights briefing paper, updated in 2018 and recently in January 2024.



(1) Certain companies, such as Hutchinson and Saft Groupe, have set up risk management and impact prevention measures specific to their organizations. In addition, for newly acquired companies, reasonable vigilance measures are intended to be implemented progressively during the integration phase of these companies into the Company systems.  
 (2) In accordance with the regulatory provisions, suppliers with which the Company does not have an established commercial relationship do not fall within the scope of this Plan. This Plan reflects the sustainable procurement principles applicable to relationships with Suppliers, but is not aimed at replacing the measures in place at those Suppliers.  
 (3) MAESTRO stands for "Management and Expectations Standards Toward Robust Operations".

The elaboration of the Vigilance Plan is part of a broader set of work to identify and analyse risks within TotalEnergies, including the Company's risk mapping. This process is based on an integrated approach that calls on the skills of the various functions involved (HSE, human rights, procurement, human resources, societal, security and legal).

### 3.6.1.3 Dialogue with stakeholders

TotalEnergies engages in dialogue with stakeholders at every level of the organization. In accordance with the Company's framework documents on societal matters, stakeholders are identified, mapped out and organized by level of priority according to their expectations and degree of involvement. This includes the following steps: list the main stakeholders for each Subsidiary and site (depots, refineries, etc.), categorize them and schedule consultation meetings to better understand expectations, concerns and opinions. The outcome of this process is the definition of action plans to manage the impacts of activities and consider local development needs, in order to build a long-term relationship based on trust. This process allows the Company to explain its activities to communities and other stakeholders, and to single out potentially vulnerable local populations. Its deployment continues in the Subsidiaries.

In order to facilitate this dialogue, certain Subsidiaries have established a network of dedicated contacts. For example, in some Subsidiaries within the Exploration & Production segment, a network of local community mediators is in place to maintain a constructive dialogue with local communities. These mediators act as Community Liaison Officers (CLO) and are tasked with establishing an ongoing dialogue with stakeholders on the ground (Stakeholder Engagement), including local authorities and communities and, more broadly, local players in civil society. Employed by TotalEnergies, sometimes coming from the local communities, they speak the local languages and understand local customs. They play a decisive role which is crucial in establishing good relations between TotalEnergies and its stakeholders and pay close attention to the most vulnerable populations.

A structured dialogue with stakeholders is established and maintained, primarily at local level. Subsidiaries manage local relations with civil society and are encouraged to enter into dialogue with non-governmental organizations (NGOs). The Company also cooperates with external experts specialized in preventing and managing conflict between businesses and local communities.

Additionally, relevant divisions of the Holding ensure a continuous dialogue with stakeholders of TotalEnergies. The Sustainability & Climate Division manages relations between the Company and civil society, represented notably by NGOs, as well as large institutions and multilateral agencies (e.g., Global Compact).

TotalEnergies maintains ongoing exchanges with its employees and their representatives – whose role and position allows for privileged interactions, particularly with management. Social dialogue is a key component of the Company. It includes all types of negotiations, consultations or exchanges of information among the management of the TotalEnergies entities, employees and their representatives about

In 2018, in the meetings of the Operational Committee of the European Works Council<sup>(1)</sup>, Committee members were provided with information on the law on the duty of vigilance and the methods used to prepare the Vigilance Plan, and were given an opportunity to comment.

The Board of Directors reviews the Vigilance Plan and its annual implementation report.

economic and workplace issues and concerns relating to company life. The topics addressed in this social dialogue may vary according to each Subsidiary, but some are shared concerns across the Company such as health and safety, work hours, compensation, training and equal opportunity. The Company is careful to conduct this dialogue at both the local level and at headquarters or centrally, through its participation in company bodies and its negotiation of agreements.

In countries where employee representation is not required by law, the Subsidiaries strive to establish such representation. As a result, majority elected employee representatives are present in most TotalEnergies companies.

At the European level, the TotalEnergies European Works Council serves as a forum for providing information and regular exchanging views about the Company's strategy, its workplace, economic and financial situation, as well as on matters relating to sustainable development, environmental and social responsibility and safety. It is consulted for significant proposed organizational changes concerning at least two companies in two European countries, to express its opinion, in addition to the procedures initiated before the national representative bodies. The members of the TotalEnergies European Committee also participate to visits on sites in Europe.

At the global level, TotalEnergies signed in 2015 a four-year agreement with IndustriALL Global Union<sup>(2)</sup> on the promotion of human rights at work, diversity, health and safety at work and the dialogue with employees and their representatives. TotalEnergies continues to apply the commitments of this global agreement.

Through this global agreement and the Fundamental Principles of Purchasing, TotalEnergies also asks its suppliers to respect freedom of expression, association and collective bargaining and, in countries where this right is restricted, to ensure that employees have the right to participate in a dialogue concerning their collective work situation.

In December 2017, TotalEnergies also joined the Global Deal initiative, a multi-stakeholder worldwide partnership whose goal is to encourage governments, companies, unions and other organizations to make concrete commitments to improve dialogue with employees on all levels and to propose concrete solutions to reconcile economic performance and social progress. The Global Deal promotes the idea that effective dialogue with employees can contribute to decent work and quality jobs and, as a result, to more equality and inclusive growth, from which workers, companies and civil society benefit. In 2023, TotalEnergies continued to share its good practices with Global Deal member companies.

(1) This committee was replaced by the TotalEnergies European Works Council following the transformation of the Corporation into a European company.

(2) International federation of trade unions representing more than 50 million employees in the energy, mining, manufacturing and industrial sectors in 140 countries.

## 3.6.2 Severe impact risk mapping

The mapping work presented below, which includes risks for people and the environment, was carried out using TotalEnergies' risk management tools. Each risk map identifies, analyzes, and prioritizes risks, enabling to determine the risks of severe impact. These risk of a severe impact maps are the basis for the priority risk management actions implemented by the Company.

### 3.6.2.1 Safety, health and the environment

TotalEnergies defines the risk of a severe impact on safety, health or the environment as the probability of Activities having a direct and significant impact on the health or safety of **employees of TotalEnergies companies, employees of external contractors<sup>(1)</sup> and third parties, or on the environment** following a large scale pollution or a pollution impacting a sensitive natural environment<sup>(2)</sup>.

TotalEnergies has developed regular safety, health and environment risk assessment procedures and tools applicable to operate its Activities at various levels (Company, activities and/or industrial sites):

- prior to investment decisions in industrial projects of the Company, acquisition and divestment decisions,
- during operations, and
- prior to releasing new substances on the market.

With respect to potential major industrial accidents, analyses are based notably on incident scenarios at the site level, for each of which the probability of occurrence and potential consequences (in terms of severity) are assessed. Based on these parameters, a prioritization matrix is used to determine whether further measures are needed. These mainly include preventive measures but can also include mitigation measures that may be technical and organizational in nature. Each business segment produces, on a yearly basis, an inventory of its identified major industrial accident risks, which is submitted to management/committees in each segment and to the HSE Committee (refer to 3.6.1.2), providing a global overview of identified risks and of progress on action plans launched by the Subsidiaries operating the sites.

This work allowed to identify, analyze and prioritize the risks of severe impacts. These analyses have highlighted the following risks of severe impacts:

- risks to the safety of people and to the environment resulting from a major industrial accident on an offshore or onshore site. This accident

### 3.6.2.2 Human rights and fundamental freedoms

The risks of impacts on human rights for **TotalEnergies personnel and third parties** were identified according to the criteria defined in a well-established reference document for the mapping of human rights risks, the United Nations Guiding Principles Reporting Framework:

- severity: the scale of the impact on the human right(s), and/or
- scope: the number of persons affected or who could be affected, and/or
- the remediable nature of the impact: the ease with which the corresponding rights of the impacted persons can be restored.

TotalEnergies applied the United Nations Guiding Principles Reporting Framework, which defines the following process:

- identify all human rights at risk of being negatively impacted by a company's activities or business relations, by taking into account all relevant business activities and entities in the company and the point of view of the people exposed to a negative impact,
- prioritize potential negative impacts based on their potential gravity (severity and potential extent of the impact and the required remediation efforts) and their probability (while paying particular attention to very severe but unlikely impacts),

could be an explosion, a fire or a leak resulting in fatalities or bodily harm, and/or accidental pollution on a large scale or on a sensitive natural environment, for example a well blowout,

- risks to the safety of people and to the environment related to the overall life cycle of the products manufactured, and to the substances and raw materials used, and
- risks associated with transportation, for which the likelihood of an operational accident depends on the hazardous nature of the products handled, as well as on volumes, length of the journey and sensitivity of the regions through which products are transported (quality of infrastructure, population density, environment). These risks are likely to arise from accidents or incidents in the transportation of the Company's raw materials and finished products, notably by ship, pipeline or road, as well as from accidents or incidents in the air transport of personnel

Climate change is a global risk for the planet and results from various human actions such as energy consumption. As an energy producer, TotalEnergies seeks to reduce direct greenhouse gas emissions resulting from its operated Activities. In 2023, worldwide greenhouse gas (GHG) emissions from the facilities operated by TotalEnergies amounted to 35 Mt CO<sub>2</sub>e, less than 0.1% of total worldwide emissions, which amounted to 57.4 Gt CO<sub>2</sub>e for the year of 2022<sup>(3)</sup>. In addition, TotalEnergies implements a strategy to tackle climate change challenges and reports on this in detail, notably in its statement of extra-financial performance (refer to point 5.4 of chapter 5), in accordance with Articles L. 22-10-36 and L. 225-102-1 of the French Commercial Code.

- explain the conclusions to internal and external stakeholders and check that factors have not been omitted.

This risk mapping work was carried out by TotalEnergies in 2016 in consultation with internal and external stakeholders. The process included workshops with representatives of key business activities of the Company (human resources, procurement, security, HSE, Ethics Committee, Human Rights Steering Committee) and of Subsidiaries operating in difficult environments or particularly exposed to risks to human rights and fundamental freedoms. A series of interviews was held with independent third parties (GoodCorporation, International Alert, Collaborative Learning Project). The participants were able to share return on experience on the ground (difficulties faced, proposals for improvements on issues related to human rights and HSE resulting from Subsidiary assessments). The questions raised at the Business Ethics Day were also taken into consideration. The results of the in-house survey of employees regarding their professional situation and perception of the company conducted at local or Company level, were also taken into account.

(1) Personnel of companies working on a site operated by a Subsidiary.

(2) Sensitive natural environments include, in particular, remarkable or highly vulnerable natural areas, such as sea ice in the Arctic, as well as areas covered by significant regulatory protection such as Protected Area Categories I to IV as defined by the International Union for Conservation of Nature (IUCN), Ramsar areas, or natural sites listed on the UNESCO World Heritage List at December 31, 2023.

(3) U.N. Environment Programme, "Emissions Gap Report 2023".

This work enabled TotalEnergies to identify and analyze the human rights risks that affect the Activities and to prioritize them according to their salience.

The salient risks are thus identified by comparing indicators and information provided by external stakeholders and internal return on experience. The dialogue with local stakeholders and feedback from the field, described above (refer to point 3.6.1.3 of this chapter) also contribute to this.

The mapping of salient risks, periodically updated, is supplemented by dedicated mappings such as the CSR risk mapping linked to TotalEnergies' purchasing by categories of goods and services (refer to point 3.6.2.3 of this chapter). Risk mapping by the Security division also takes into account human rights and the VPSHR (Voluntary Principles on Security and Human Rights).

In 2019, TotalEnergies updated its procedures to analyze risks of impacts on human rights (taking into account the country, types of activity and types of raw materials or purchased products and services). This work was done with a specialized consultant, and included workshops with internal and external stakeholders. It took into account international country risk indicators established by a specialized third party. This process notably offers a support to Subsidiaries located in geographic areas at higher risk of impacts on human rights.

As a result, the following six salient risks were identified, divided among three key themes for the Company:

- **human rights in the workplace** of TotalEnergies' employees and those of its Suppliers and other business partners:
  - forced labor and child labor; this risk of forced labor and child labor corresponds to any work or service exacted from any person under the threat of a penalty or punishment and for which that person has not offered himself or herself voluntarily, as well as child labor, which is forbidden for anyone under the age of 15, or 18 for any type of so-called hazardous work in accordance with the standards of the International Labor Organization;
  - discrimination; this risk of discrimination is characterized by the unfair and unfavorable treatment of people, in particular because of their origin, nationality, gender, age, disability, sexual orientation, or membership of a political, religious, trade union or minority group;
  - just and favorable conditions of work and safety; this risk of not respecting just and favorable conditions of work and safety is materialized, for example, by the absence of an employment contract, an excessive number of working hours or a non-decent remuneration.

### 3.6.2.3 Suppliers

The identification, analysis and prioritization of the risks of impacts on human rights, people's health and safety and the environment as a result of Suppliers' activities rely on a CSR mapping of the risks linked to TotalEnergies' procurement, as well as on country risk indicators.

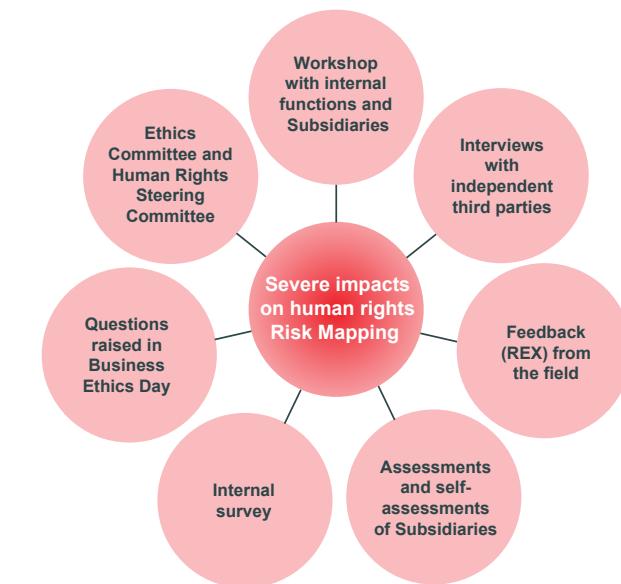
The CSR mapping of the risks linked to TotalEnergies' procurement, by category of goods and services allows the identification of the risks relating to human rights and social conditions and those relating to the environment that are associated with each procurement category. This mapping is regularly updated by TotalEnergies Global Procurement, the subsidiary dedicated to procurement, based on research conducted by AFNOR experts on the human rights and environmental risks associated with each procurement category and workshops with buyers of these categories whose practical experience and knowledge greatly enhance the results of initial research. The Company's human rights and

#### - **human rights and local communities:**

- access to land; this risk of infringement of the right of access to land is linked to the relocation of local communities and concerns certain projects requiring temporary or permanent access to land, likely to involve the economic and physical displacement and resettlement of populations and/or restricted access to their means of subsistence;
- the right to health and an adequate standard of living; this risk of infringement of the right to health and an adequate standard of living concerns, for example, activities that could have an impact on the health of local communities or on their access to fresh water.

#### - **respect for human rights in security-related activities:**

- the risk of misuse of force; this risk of misuse of force may materialize when the intervention of government security forces or private security companies may be necessary to protect the Company's personnel and facilities.



environmental experts are also involved throughout the entire process of identification, analysis and prioritization of risks. This mapping includes particular risks relating to child labor, forced labor, working conditions, discrimination, workers' health and safety, as well as risks relating to pollution and adverse impacts to biodiversity. It is available to buyers.

Country risk indicators that supplement the CSR mapping of the risks linked to TotalEnergies' procurement are related to human rights and environmental country-related risks.

Cross-referencing the results of the CRS mapping of the risks linked to TotalEnergies' procurement with human rights and environmental country-related risk indicators aims to identify Suppliers the most at risk regarding human rights, health, safety and the environment, to prioritize actions towards these Suppliers.

### 3.6.3 Action principles and organization

TotalEnergies has defined in its referential framework principles which reflect the Company's values and aim at preventing impacts on human rights and health, safety and to the environment (the "Action Principles"). When the legal provisions applicable to Activities provide less protection than the Action Principles, TotalEnergies strives under all circumstances to give precedence to the latter, within the constraints of applicable regulations.

#### 3.6.3.1 Organization

TotalEnergies has a three-tier organization: Corporate, business segments and operational entities. Each tier is involved in and accountable for identifying and implementing measures in the Vigilance Plan deemed appropriate within the scope of the entity in question.

The Action Principles are driven by the **Executive Committee**.

The **Ethics Committee** is the guarantor of the implementation of the Code of Conduct. Its chairman, who reports to the Chairman and Chief Executive Officer of TotalEnergies SE, presents an annual ethics report to the Governance and Ethics Committee of the Board of Directors.

The **Strategy & Sustainability division**, created in September 2021, illustrates the importance of the sustainable development issues that are at the heart of TotalEnergies' strategy. This general division includes in particular:

- the **HSE division**, which brings together the Company's industrial health, safety, environmental and operational societal functions. Within this division, the HSE entities dedicated to the Exploration & Production, Integrated LNG, Integrated Power, Refining & Chemicals and Marketing & Services segments are notably responsible for supporting the implementation of the Company's HSE policy. Furthermore, specific entities deal with the following areas: environmental and societal issues, major risks, safety at health, transportation, crisis management and pollution prevention, legislation and reporting, audits. TotalEnergies has set up an HSE Committee chaired by the Chairman and Chief Executive Officer and made up notably of the members of the Executive Committee and HSE managers (refer to point 3.6.2.1). Its mission is to ensure that safety is a shared value,
- the **Sustainability & Climate division**, whose mission includes to help implement TotalEnergies' climate and sustainable development (including human rights) road maps and environmental, extra-financial policies, with transparency as a guiding principle. In this division, the Human Rights department, which reports to the Vice-President of the Sustainability division, supports the Company's operational personnel with its expertise in implementing the Action Principles relating to human rights. This division also forms the link between the Company

#### 3.6.3.2 Code of Conduct

TotalEnergies' Vigilance Plan is based primarily on the Code of Conduct which defines the Company's values, including safety and respect for others, and their application to human rights, the environment, and people's health and safety.

The Code particularly sets forth TotalEnergies' compliance with the following international standards:

- the principles of the Universal Declaration of Human Rights,
- the United Nations Guiding Principles on Business & Human Rights,
- the principles set out in the International Labor Organization's fundamental conventions,

Action principles which are presented in points 3.6.3.3 "Human rights", 3.6.3.4 "Safety, health and environment" and 3.6.3.5 "Fundamental principles of purchasing" participate in actions to mitigate and prevent the risks of severe impact presented in point 3.6.2 "Severe impact risk mapping".

and civil society and is in charge of relations with non-governmental organizations (NGOs), major institutions or multi-lateral agencies at Company level. Also within this division, the Climate division is responsible for contributing to the implementation of TotalEnergies' Climate Road map, in line with its ambition to be carbon neutral (net zero emissions) by 2050, together with society.

Within the **People & Social Engagement division, the Strategy and Human Resources Policies division** is responsible in particular for defining TotalEnergies' human resources strategy and policies in line with the business challenges and the corporate project. In line with the multiple situations encountered in the field, it coordinates the diffusion and roll-out of new policies to support the various human resources departments in TotalEnergies' business segments. The Social Relations division is tasked with coordinating the Company's social relations policy, chairing the TotalEnergies European Works Council and negotiating within this scope.

The **Security division** is responsible for the protection of people, facilities and information, and pays particularly close attention to the protection of people and property, by conducting analyses and offering advice.

A dedicated cross-functional subsidiary, **TotalEnergies Global Procurement**, coordinates management of supplier relationships and provides in particular purchasing services for the Company's goods and services, whether for categories of products or services specific to one business activity or categories shared among several business activities<sup>(1)</sup>.

This corporate organization acts in support of the business segments and Subsidiaries in the operational implementation of the Action Principles.

Within the business segments services and advice are offered to Subsidiaries to assist them in the operational implementation of TotalEnergies' requirements.

Depending on their size, type of activities and the risks to which they may be exposed, the Subsidiaries may have dedicated personnel for HSE, societal, human resources, ethical, security and procurement issues.

- the principles of the United Nations Global Compact,
- the OECD Guidelines for Multinational Enterprises, and
- the Voluntary Principles on Security and Human Rights, or VPSHR.

The Code of Conduct, which can be accessed on TotalEnergies' website, is aimed at all employees and external stakeholders (host countries, local communities, customers, suppliers, industrial and commercial partners and shareholders).

(1) Present in about 120 countries, the Company currently works with a network of more than 100,000 suppliers.

### 3.6.3.3 Human rights

In addition to the Code of Conduct, matters relating to respect for human rights are included in a number of internal rules, such as those relating to ethics, human resources, societal, security and procurement. In addition to these, there are a number of practical tools dedicated specifically to societal issues.

For example, a rule concerning stakeholder and local impact management describes TotalEnergies' requirements for a unified approach to managing the societal risks and impacts of its operations. This is based on an assessment of the sensitivity of the societal context and the impacts relating to operations. Furthermore, the Charter of Principles and Guidelines regarding indigenous and tribal peoples states how TotalEnergies endeavors to know and understand the legitimate requirements of the communities living in its Subsidiaries' sphere of activities.

TotalEnergies' charters and rules are supplemented by guides and manuals at Company level or at the level of the business segment, which serve as reference documents for Subsidiaries on meeting requirements. Thus, there are guides relating to carrying out societal impact

assessments and impact assessments on human rights, managing the local societal approach, and developing local content in projects and to land acquisition and resettlement where displacement of people, their assets and livelihoods are involved.

General specifications define more technical requirements, such as the implementation of the social baseline study and analysis of the societal impact.

As regards community grievance management, a guide describes the methodology and procedures for managing individual and collective grievances resulting from Activities, based on the United Nations Guiding Principles on Business and Human Rights eight effectiveness criteria.

Additionally, requirements relating to the implementation of VPSHR in conducting security operations are detailed in an internal rule concerning risk assessment, preliminary verifications, formalization of the relationship with security providers, training and management of possible incidents.

### 3.6.3.4 Safety, health and the environment

TotalEnergies conducts its operations on the basis of its **Safety Health Environment & Quality Charter** (available on its website). It forms the common foundation for the Company's management frameworks, and sets out the basic principles applicable to safety, security, health, the environment, quality and societal commitment. The Company's directives and rules define the minimum requirements expected. General specifications, guides and manuals are available to implement these directives and rules. The Subsidiaries incorporate these requirements into their own management systems, whilst taking into account local specificities and regulatory requirements. The Company's framework is available to all employees.

The HSE reference framework common to all the business segments has been rolled out in order to give greater overall consistency to TotalEnergies' operations, while taking into account the specificities of each business segment. This reference framework, called One MAESTRO (Management and Expectations Standards Toward Robust Operations), applies to the Subsidiaries as well as their operated sites as defined in point 5.11 of chapter 5 (scope of One MAESTRO).

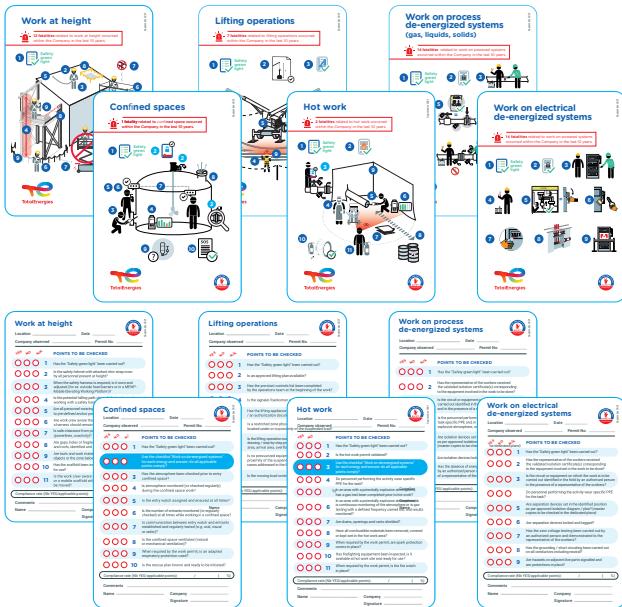
One MAESTRO is structured around ten fundamental principles: (1) leadership and management commitment, (2) compliance with laws, regulations and Company requirements, (3) risk management, (4) operational accountability, (5) contractors and suppliers, (6) expertise and training, (7) emergency preparedness, (8) learning from events, (9) monitoring, audit and inspection, and (10) performance improvement.

In addition, with regard to safety at work, the Company has **12 Golden Rules** since 2010, reviewed in 2022 for them to be more directly understandable by players on site and to facilitate their appropriation. These Golden Rules are simple, memorizable by everyone and representative of a significant number of accidents at the workplace and must be strictly obeyed by all personnel, both employees and external companies, in all the countries and in all the Company's activities. Widely circulated, the aim of the Golden Rules is to ensure day-to-day safety during the conduct of operations and on sites with a common objective: "Zero fatal accidents". These rules cover the following subjects:

#### Our 12 Golden Rules

 1   High-Risk Situations	 7   Powered Systems
 2   Traffic	 8   Confined Spaces
 3   Body Mechanics & Tools	 9   Excavation Work
 4   Personal Protective Equipment	 10   Work at Height
 5   Work Permits	 11   Hot Work
 6   Lifting Operations	 12   Line of Fire

TotalEnergies has also rolled out the ***Our lives first*** program, which introduced joint safety tours with external companies, the establishment, in the work permit process, of a ritual prior to work on all the TotalEnergies' operated sites concerned (Safety green light), and a tool (Life Saving Checks) to intensify checks in the field and measure compliance with safety rules at least for the five high-risk activities: work at height, lifting operations, work on energy-powered systems, work in confined spaces and hot work.



## PREVENTING THE OCCURRENCE OF MAJOR INDUSTRIAL ACCIDENTS

To prevent the occurrence of a major industrial accident such as an explosion, fire, leakage of hazardous products or mass leakage that might cause death, physical injury, large-scale pollution or pollution at an environmentally sensitive site, or important damage to property, TotalEnergies implements suitable risk management policies and measures that apply to the Company's operated activities. The Major Risks division of the HSE division provides support in the application of this policy.

The Company's policy for the management of major industrial accident risks applies from the facilities design stage as well as during their lifecycle in order to minimize the potential impacts associated with its activities. The policy is described in the One MAESTRO reference framework. It provides for analysis of the risks related to the Company's industrial operations at each operated site subject to these risks, based on incident scenarios for which the probability of occurrence and the severity of the consequences are assessed. Based on these parameters, a prioritization matrix is used to determine whether further measures are needed. These mainly include preventive measures against accidents, but also include measures to reduce the consequences (mitigation and prevention). They are technical and organizational. These analyses are updated periodically, at least every five years, or when facilities are modified.

With regard to the design and construction of facilities, technical standards include applicable regulatory requirements and refer to industry best practices. The construction of the Company's facilities is entrusted to qualified contractors who undergo a demanding internal

In addition, anyone, irrespective of their level in the organization, is authorized to interrupt work in progress, if they notice a high-risk situation, by using their **Stop Card**.



The Stop Card is a plastic-coated card. It grants its holder the authority to intervene and stop work in progress, if he/she notices high-risk actions or situations, or situations that may lead to an accident, with an assurance that no disciplinary action will be taken as a result, even if the intervention turns out to have been unnecessary.

If an action or situation seems hazardous for one or more people, a facility or the environment, the Stop Card provides a means of intervening. Uses of the Stop Card can range from a simple question to check that no risks are present, to interrupting the work in progress.

This interruption offers an opportunity to exchange with the colleagues involved (members of staff and their supervisor) with a view of finding a solution to the perceived problem. If necessary, changes are made to the way of working before resuming the work in progress.

If the problem cannot be solved immediately, the work is suspended, pending the implementation of suitable measures.

selection process and are monitored. In the event of a modification to a facility, the Company's rules define the management process to be adopted.

With regard to the management of operations and integrity of facilities operated by the Company, formal rules have been set out to prevent specific risks that have been identified either by means of risk analyses or from internal and industry feedback. For specific works, the preliminary risk analysis may lead to the establishment of a work permit, the process of which, from preparation through to closure, is defined. The Company's reference framework also provides a process to manage the integrity of facilities, which includes, for example, preventive maintenance, facility inspections, identification of safety critical equipment for special monitoring, management of anomalies and downgraded situations, and regular audits. These rules are part of the One MAESTRO reference framework. Operations teams receive regular training in the management of operations in the form of companionship or in-person trainings. For example, in order to control the integrity of pipelines operated by the Company, they are subject to periodic surveys such as cathodic protection checks, ground or aerial surveillance or in line inspections. These actions are planned as part of the pipeline monitoring and maintenance programs. In areas with high human or environmental risks identified by the risk analysis, these controls and their frequency are reinforced.

## PREVENTING OCCUPATIONAL ACCIDENTS

The Company has a **policy for preventing occupational accidents** that applies to all employees of Subsidiaries and employees of contractors working on a site operated by one of these Subsidiaries. The safety results are monitored with the same attention for all. This policy is described in the One MAESTRO reference framework.

As part of the policy for preventing workplace accidents, TotalEnergies has defined rules and guidelines for HSE training, personal protective equipment and high-risk operations for employees of the Company and of the contractors working on sites operated by the Company. In order to continually move its practices forward, TotalEnergies also implements a process for analyzing accidents, irrespective of their nature, with the

method used and the level of detail involved depending on the actual or potential level of severity of the event.

The HSE division includes a division of specialists in high-risk operations (work at height, lifting, electricity, confined spaces, etc.) that consolidates in-house knowledge and relations with contractors, and issues the relevant One MAESTRO rules. The HSE division also includes a division aimed at providing support for Subsidiaries in their own voluntary approach to strengthen their safety culture. This division also develops and disseminates tools to improve human performance by identifying the Organizational and Human Factors of a work situation and defining appropriate measures.

## PREVENTING OCCUPATIONAL HEALTH RISKS

With regard to the **prevention of occupational health risks**, the One MAESTRO framework provides that Subsidiaries of the Company identify and assess risks at the workplace in the short, medium and long terms. To do this, the framework provides application guides for implementation. The analysis of these health risks relates to chemical, physical, biological, ergonomic and mental risks. This results in the roll-out of an action plan. An Industrial Health correspondent in Subsidiaries is identified and tasked with implementing the policy for identifying and assessing work-related health risks. The actions are integrated into the entities' HSE action plans and can be audited as part of the One MAESTRO audits.

In general, **potential exposure to chemical or hazardous products** at a site operated by a Company entity or nearby is one of the most closely monitored risks in view of the potential consequences. New facility construction projects comply with international technical standards from the design stage in order to limit exposure. For production sites operated by a Company entity and subject to this risk, the One MAESTRO reference framework sets out the prevention process in several stages. First, hazardous products such as carcinogenic, mutagenic or toxic to reproduction (CMR) chemicals are listed and their risks identified. Second, potential exposure to levels that may present a risk to the health

of personnel, contractors or local residents at the site or nearby are identified and assessed, and prevention or mitigation measures are implemented in order to control the risk. Last, the approach is checked (atmospheric checks, specific medical monitoring, audits etc.) in order to verify its effectiveness and implement improvement measures if necessary. This is also set out formally in a risk assessment file, which is revised regularly by the Subsidiary.

In addition to the One MAESTRO reference framework, the Company has a **health reference framework**, which was comprehensively reviewed and approved by the President, People & Social Engagement in 2022.

The health policy is part of the Company's approach to sustainable development and includes occupational health requirements that apply to the Company's employees as part of their professional activity, as well as to the employees of external companies working on its sites.

The aim of occupational health protection is to protect the mental and physical health of the Company's employees by implementing an appropriate risk analysis and prevention policy. It also aims to guarantee their fitness for work and to avoid accidents at work and occupational diseases.

## LIMITING THE ENVIRONMENTAL FOOTPRINT OF TotalEnergies ACTIVITIES

TotalEnergies implements a policy of avoiding, reducing and, where necessary, offsetting the environmental footprint and effects on nature in general of its operations.

### Water and air protection

The Company's operations generate discharges such as smokes from combustion plants, emissions into the air from the various conversion processes and discharges of wastewater. In addition to complying with applicable legislation, TotalEnergies has drawn up rules and guidelines that the Subsidiaries can use to limit the quantities discharged. TotalEnergies has set itself targets for reducing sulfur dioxide ( $\text{SO}_2$ ) emissions and is committed to limiting its hydrocarbon discharges into water. After analysis, the exposed sites are equipped with reduction systems that include organizational measures (such as managing the content of sulfur dioxide ( $\text{SO}_2$ ) of fuels and the improvement of combustion process management, etc.) and specific technical measures depending on the sites (wastewater treatment plants, using low  $\text{NO}_x$  burners and electrostatic scrubbers, etc.) All refineries controlled by the Company currently have this type of system.

For new facilities developed by the Company, the internal rules require impact assessments to be carried out and, if necessary, actions must be taken to limit the impact of these emissions.

### Soil protection

The risks of soil pollution related to TotalEnergies' operations come mainly from accidental spills and waste storage. TotalEnergies has drawn up a guide that the Subsidiaries can use to prevent and contain this pollution. The recommended approach is based on four pillars:

- preventing leaks, by implementing, in the majority of sites, industry best practices in engineering, operations and transport,
- carrying out maintenance at appropriate frequency to minimize the risk of leaks,
- overall monitoring of the environment to identify any soil and groundwater pollution, and
- managing any pollution from previous activities by means of containment and reduction or elimination operations.

In addition, a Company rule defines the following minimum requirements:

- systematic identification of each site's environmental and health impacts related to possible soil and groundwater contamination,

- assessment of soil and groundwater contamination based on various factors (extent of pollution inside or outside the site's boundaries, nature and concentrations of pollutants, presence of a vector that could allow the pollution to migrate, use of the land and groundwater in and around the site), and
- management of health or environmental impacts identified based on the use of the site.

Last, decommissioned facilities operated by the Company (i.e., chemical plants, service stations, mud pits or lagoons resulting from hydrocarbon extraction operations, wasteland on the site of decommissioned refinery units, etc.) impact the landscape and may, despite all the precautions

### MANAGING IMPACTS OF PROJECTS AND OPERATIONS ON BIODIVERSITY AND NATURE

In 2016, the Company pledged to contribute to the achievement of the UN Sustainable Development Goals (SDGs), including those relating to biodiversity. In 2018, TotalEnergies signed up to the act4nature initiative promoted by the French Association of Enterprises for the Environment, now act4nature international.

This **biodiversity ambition** constitutes a contribution to the Global Biodiversity Framework (GBF) adopted at COP 15 in 2022, whose mission is “to halt and reverse biodiversity loss and put nature on the path to recovery for the benefit of people and the planet.” The Company thus intends to contribute to this ambitious framework and its national versions, such as the French National Strategy for Biodiversity (SNB) adopted in 2023, in a concrete manner through conservation and restoration measures for nature on its sites and in the regions where it is established.

This ambition is based on **four core principles**: (1) voluntary exclusion zones, (2) biodiversity management in projects, (3) biodiversity management at existing and abandoned sites and (4) promoting biodiversity. This ambition has been incorporated into the Company's One MAESTRO framework. The core principles of this ambition are described in point 5.5.4 of chapter 5, which includes the following principles of action:

- the Company has made a commitment not to conduct any exploration activities in oil fields under the Arctic sea ice;

### LIMITING RISKS FOR THE HEALTH AND SAFETY OF CONSUMERS

Unless certain precautions are taken, some of the petroleum or chemical products marketed by TotalEnergies pose potential consumer health and safety risks. Respecting regulatory requirements is the main measure to limit risk throughout the life cycle of these products. TotalEnergies has also defined the minimum requirements to be observed in order to market its petroleum or chemical products worldwide with the goal of reducing potential risks to consumer health and the environment. These include the identification and assessment of the risks inherent to these products and their use, as well as providing information to consumers. The material safety datasheets that accompany the petroleum and chemical products, including those not classified dangerous, marketed by the Company (available in at least one of the languages used in the relevant country), as well as product labels, are two key sources of information.

The implementation of these requirements is monitored by teams of regulatory experts, toxicologists and ecotoxicologists within the Refining & Chemicals and Marketing & Services segments of the Company. These teams' assignment is to ensure the preparation of safety documentation for the marketed petroleum and chemical products so that they correspond to the applications for which they are intended and to the applicable regulations. These teams therefore draw up the material safety

taken, be sources of chronic or accidental pollution. In addition to the appropriate management of the waste associated with the dismantling and securing of sites, TotalEnergies has created a soil and groundwater depollution policy based on the assessment and management of the risks that such pollution may incur. For the sites at the end of their activity, the management of pollution is determined in accordance with regulatory obligations with an objective of continuing to control the use of the sites while favoring the possibility of redeveloping Company activities (solar, reforestation, etc.) and favoring biodiversity. Specialized entities of the Company are supervising the sites' remediation operations.

### MANAGING IMPACTS OF PROJECTS AND OPERATIONS ON BIODIVERSITY AND NATURE

- the Company recognizes the universal value of UNESCO's world natural heritage areas and honors its commitment not to carry out any oil or gas exploration or extraction activities in these areas (based on UNESCO sites listed at the end of 2023);
- the Company has made a commitment to develop a biodiversity action plan (BAP) for any new site located in an area of interest for biodiversity, that is IUCN (International Union for Conservation of Nature) Protected areas I to IV or Ramsar areas. In addition, for each new project located in an IUCN Protected area I or II or a Ramsar area, the Company commits to implementing measures to produce a net positive impact (gain) in biodiversity;
- it is the Company's intention that a biodiversity action plan be defined by 2025 at the latest and deployed by 2030 at the latest on every existing environmentally significant ISO14001 certified operated site (E&P production sites, refineries, petrochemicals sites, gas-fired power stations). TotalEnergies will report on implementation to the various stakeholders;
- finally, as part of the promotion of biodiversity, TotalEnergies wishes to support awareness-raising and educational actions for young persons on biodiversity and research actions.

datasheets and compliance certificates (contact with food, toys, pharmaceutical packaging, etc.) and carry out REACH<sup>(1)</sup> registration (or equivalent in other geographical regions), if necessary. Thanks to their scientific and regulatory monitoring, they support the development of future commercial products and monitor updates of safety data sheets, certificates and registrations so that they remain compliant with regulations in force.

Governance of the process is rounded off within the Company's business units or Subsidiaries of the Refining & Chemicals and Marketing & Services segments with the designation of a Products Safety Manager who ensures compliance during the market release of his or her entity's petroleum and chemical products. The networks of product managers are coordinated by the Company's specialist teams either directly or via an intermediate regional level in the case of the Marketing & Services segment.

The safety data sheets for oil and gas produced by Subsidiaries of the Exploration & Production segment are produced by the Marketing & Services expertise center. The compliance of the go-to-market process of these products is under the Subsidiary's responsibility.

(1) Registration, Evaluation, Authorization and restriction of CHemicals (REACH) EU Regulation.

## PREVENTING TRANSPORT ACCIDENTS

In the field of **road transportation**, the Company has for many years adopted a policy intended to reduce the number of accidents by applying standards that are, in some cases, more stringent than certain local regulations. This policy, defined in the One MAESTRO reference framework, applies to all the Company's personnel and personnel of contractors working for Company entities. For example, it includes a ban on telephoning while driving, even with a hands-free set, a ban on using motorized two-wheeled vehicles for business travel, mandatory training for drivers, and the definition of strict technical specifications for Company vehicles (in particular, light vehicles must pass NCAP 5\* tests). Additional requirements are defined depending on the level of road traffic risks in the country in question and the nature of the activity.

In the field of **maritime and inland waterways transportation**, the process and criteria for selecting ships and barges are defined by the team in charge of vetting. These criteria take into account not only the ship or barge but also the crew, ensuring that the crew has the qualifications and training required under the STCW (Standards of Training, Certification and Watchkeeping for Seafarers) convention. These same teams also verify the application of the safety management system defined for ships by the ISM (International Safety Management)

### 3.6.3.5 Fundamental principles of purchasing

For procurement, requirements relating to respect by the Suppliers of human rights, health, safety and the environment are specified in an internal rule defining the procurement principles for goods and services, including the Fundamental Principles of Purchasing, which reflect the principles of the Code of Conduct with regard to Suppliers. The relationship between the Company and its Suppliers is based on adhesion to these Fundamental Principles of Purchasing.

The Fundamental Principles of Purchasing lay out the commitments that TotalEnergies expects from its suppliers in the following areas: respect for human rights at work, protection of health, safety and security, action

### 3.6.3.6 Internal control framework

TotalEnergies consistently ensures that an internal control framework, based on the referential of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) is in place.

TotalEnergies has a reference framework that is supplemented by a series of practical recommendations and return on experience. The

## 3.6.4 Assessment procedures

TotalEnergies has defined procedures to assess its Subsidiaries and Suppliers, including in collaboration with independent bodies, which help identify and prevent risks of impacts on human rights, health, safety and

### 3.6.4.1 Procedures for assessing subsidiaries

#### HSE ASSESSMENTS

Assessment of the implementation of the HSE framework involves self-assessment by the Subsidiary and HSE audits by experts from TotalEnergies' HSE division.

Subsidiaries must undertake a **self-assessment** at least every two years. The Audit and return on experience unit of the HSE division conducts an **HSE audit** at least every five years, according to an audit protocol. These audits deal with a set of activities and facilities governed by a single HSE management system. They address notably: management involvement, compliance with applicable rules, risk management, individual involvement at every level, relationships with suppliers present on the Subsidiary's site, skills, preparations for emergency situations, return on experience, self-assessment by the Subsidiary and the continual

Code of the IMO (International Maritime Organization) as well as industry recommendations such as OCIMF (Oil Companies International Marine Forum) and SIGTTO (Society of International Gas Tanker and Terminal Operators), including those which take into account the human and organizational factors especially for the prevention of accidents to people on board ships or barges. In addition, TotalEnergies' chartering contracts require that the crew belong to a recognized trade union affiliated to the ITF (International Transport Workers' Federation). The ITF represents the interests of transportation workers' unions in bodies that make decisions about jobs, conditions of employment or safety in the transportation sector, such as the ILO (International Labour Organization) or the IMO.

With regard to **air transportation**, a carrier selection process exists to limit the risks relating to travel by Company and contractors' employees, if their journey is organized by TotalEnergies. This process is based on data from recognized international organizations: ICAO (International Civil Aviation Organization), IOSA (IATA Operational Safety Audit), IOGP (International Association of Oil and Gas Producers), and civil aviation authorities' recommendations. Airlines that do not have a rating from an international body are assessed by an independent body commissioned by the Company.

in favor of climate, preservation of the environment, prevention of corruption, conflicts of interest and fraud, respect for competition law, as well as the promotion of economic and social development.

Subsidiaries ensure that the requirements of the Fundamental Principles of Purchasing are communicated to Suppliers and endeavor to include them in contracts or replace them with equivalent principles at the end of negotiation. These principles are also accessible to all suppliers in French and English on TotalEnergies' website.

structure of this reference framework reflects that of TotalEnergies' organization: a Company level framework, frameworks by business segment, and a specific framework for each significant operational entity.

the environment. **Staff training, particularly of managers**, is the **necessary** complement to assist the Subsidiaries in the implementation of the TotalEnergies Action Principles (refer to point 3.6.5 in this chapter).

improvement process. The Company's HSE audit protocol is based on the One MAESTRO framework and includes the requirements of the international standards ISO 14001:2015 (environmental management) and ISO 45001:2018 (occupational health and safety management). The audit protocol is applied in full during self-assessments and according to a risk-based approach during audits. The goal is to identify potential gaps in the implementation of the rules by the Subsidiaries and to enable them to define and implement improvement actions. The progress of improvement actions is reported to management at the appropriate level in the management chain. The status of actions taken following audit observations beyond a defined severity level is reported to the business segment and HSE divisions every semester.

Other targeted evaluation systems are applied, such as the annual Industrial Hygiene survey which is sent to the Company's Subsidiaries in order to evaluate the rate of implementation of risk analyses in the workplace, to verify that potential exposures have been identified, and that action plans are in place.

### ASSESSMENTS REGARDING HUMAN RIGHTS

The Company appoints a service provider specialized in **ethics and human rights assessments** to check the proper application in the Subsidiaries of the principles included in the Code of Conduct. These assessments include criteria relating to human rights. As part of the process, a panel of employees and external stakeholders of the Subsidiary is questioned in order to understand how its Activities are perceived locally. The content of the assessment is adapted to each Subsidiary and may address issues such as the involvement of Subsidiary management, employee awareness of the Code of Conduct, employee working conditions, supplier selection procedures, security measures taken or proactive collaboration with local stakeholders. Following the assessment, the Subsidiary defines and implements an action plan, and a monitoring procedure is put in place.

At project level, impact assessments are conducted to analyze the societal stakes and context and may be completed where appropriate by specific **human rights impact assessments** of the Company's Activities in sensitive situations (mainly based on criteria linked to the risks to human rights in each particular country) with independent organizations specialized in human rights, or in the prevention and management of conflicts between corporations and local communities. These assessments take account of the salient issues identified by the Company (refer to point 3.6.2.2 in this chapter).

#### 3.6.4.2 Procedures for assessing Suppliers

During the pre-contractual phase, the **pre-qualification procedure for Suppliers** of goods and services, concerning six criteria (administrative, anti-corruption, technical, HSE, financial, and sustainability) allows the evaluation of Suppliers as for the respect of human rights at work, safety, health and the environment. This process has been harmonized at Company level<sup>(1)</sup>. A risk analysis is carried out for each Supplier, followed where deemed necessary by a detailed assessment. The detailed assessment includes questionnaires on each of the aforementioned issues and, if needed, results in an action plan, a technical inspection of the site by employees or an audit of working conditions carried out by a consultant. An IT pre-qualification tool has been in place since 2019 and its deployment continues.

For the selection of Suppliers, TotalEnergies also integrates sustainable development criteria, including respect for human rights at work, safety, health and the environment in the **evaluation of offers**.

During the contractual relationship, TotalEnergies has put in place a **Supplier assessment** procedure, by independent third parties, to identify and prevent the risks of serious violations of human rights and fundamental freedoms and people's health and safety and the environment. Thus, Suppliers at risk are subject to documentary and/or on-site audits to verify compliance with the Fundamental Principles of Purchasing and to assess their performance in terms of sustainable development. An audit plan is established each year and targets priority Suppliers, including Suppliers selected based on the risks they present in terms of human rights and/or the environment with regards to the sector of activity and the country in which they operate.

The HSE division defines the rule and reporting guide and notably ensures the implementation of the standards for the consolidation of data, provided by the Subsidiaries, related to the Company's greenhouse gas (GHG) emissions.

**Security**, which is identified as a potential salient risk in the map of the risks of impacts on human rights, is subject to **risk assessment processes** at an entity and project level. The Security division is notably tasked with ensuring the implementation of TotalEnergies' commitments to enforce the Voluntary Principles on Security and Human Rights (VPSHR), a multi-stakeholder initiative that TotalEnergies joined in 2012, involving governments, companies and associations, that addresses relations with government security forces or private security companies. As part of this process, the Subsidiary undertakes an assessment of risks in relation to both security and human rights. In addition, a VPSHR self-diagnostic tool has been developed to enable Subsidiaries to assess their own implementation of the VPSHR and to identify areas of improvement. This tool measures the Subsidiary's commitment to VPSHR, personnel training and relations with government security forces and private security companies.

Finally, an **annual self-assessment questionnaire** enables the Subsidiaries in the One MAESTRO scope to evaluate the degree of deployment of the **societal initiative** on the ground. Actions involving dialogue, impact management and the contribution to socioeconomic and cultural development are recorded and analyzed.

At the Subsidiary level, the pre-qualification process may be complemented by **specific verifications of compliance with the VPSHR** by a Supplier. When private security companies are used to protect a Subsidiary, preliminary checks are made. They include a review of the recruitment process, technical and professional training (notably on the local context, the use of force and the respect for the rights of individuals), working conditions and the company's reputation. In addition, the proposed Supplier's employees are screened for previous conviction or implication in human rights violations.

Where deemed necessary in certain contexts such as for some raw materials or vetting, dedicated teams may be set up to conduct the pre-qualification process.

The unit put in place in the Company for the selection of **Suppliers of raw materials for biofuels** seeks to ensure that such raw materials are certified sustainable in accordance with the criteria required by the European Union (ISCC EU and ISCC PLUS certifications). These types of certifications include a review of carbon footprint, the preservation of forests, good use of land and respect for human rights. In addition to this mandatory certification, and as recalled above (refer to point 3.6.3.5 of this chapter), the entities concerned endeavor to include the Fundamental Principles of Purchasing in these contracts. In accordance with its commitment, TotalEnergies has ceased its palm oil supplies.

(1) With the exception of certain entities that retain the management of their supplier relations such as Hutchinson, Saft Groupe, Greenflex and TOTSA TotalEnergies Trading SA.

The **Vetting department of Trading & Shipping** defines and applies the selection criteria for the tankers and barges used to transport the Company's liquid petroleum or chemical and gas products. This review aims notably at ascertaining the proposed Supplier's technical qualities relative to internationally recognized industry practices, the crews' experience, and the quality of the shipowners' technical management. A green light from the Vetting department, granted strictly on the basis of technical data and independently of business considerations, is required for all ships and barges chartered by a Subsidiary, third parties transporting cargo belonging to TotalEnergies, or ships and barges that stop over at a terminal operated by a Subsidiary. Audits of shipowners also allows the Company to assess the quality of the technical management systems implemented by operators, crew selection and training, as well as the support provided to vessels.

TotalEnergies is actively involved in the Ship Inspection Report (SIRE), which was set up by the Oil Companies International Marine Forum (OCIMF) to allow the sharing of inspection reports amongst international

### 3.6.5 Actions to mitigate risks and prevent severe impacts

Specific actions are taken to mitigate risks and prevent severe impacts, drawing mainly on the Action Principles and assessments described above.

They are also based on return on experience from HSE incidents and include training of TotalEnergies employees, programs to raise the awareness of Suppliers, as well as measures to manage emergency and crisis situations.

#### 3.6.5.1 Return on experience

The Company implements a process for the analysis of accidents, irrespective of their nature, with the method used and the level of detail involved depending on the actual or potential level of severity of the event.

A return on experience may include an analysis of the incident including of its severity and result in communication to the relevant stakeholders or a wider population within the Company. The purpose of sharing return on experience is to ensure that Subsidiaries are informed and share lessons learned from the incident.

#### 3.6.5.2 Awareness-raising and training of TotalEnergies' employees

The Company has a variety of communication and information channels in place, enabling all employees of TotalEnergies SE and its Subsidiaries to have access to the Action Principles defined by the Company in relation to human rights, health, safety and the environment.

Each employee receives a copy of the **Code of Conduct** to raise awareness of the Company's values, including safety and respect for others, which includes respect for human rights. The Code of Conduct is also available to them on the TotalEnergies intranet website in more than fifteen languages. Every new employee is required to read the Code of Conduct (and must certify to having done so). The TotalEnergies induction day includes an initiation to ethics and human rights and an online training on the challenges of business ethics is also available.

**HSE training courses**, incorporating on-line educational programs as well as technical training tailored to the various Activities, are offered to all Company employees. Programs dedicated to health, safety and the environment are deployed. They may be general or specific to a type of activity or subject area. By way of illustration, the general training depends on the participant's level of responsibility and experience in the Company: *Safety Leadership for Executives, HSE training for managers, and training for new recruits*.

These training courses include since 2020 training actions related to climate challenges dedicated to all Company employees. A specific module is dedicated to Company senior executives and managers.

oil and gas companies, thus contributing to the continuous improvement of safety in oil, gas and chemical shipping.

Last, since 2012, a large-scale inspection program of transportation contractors has also been rolled out by Marketing & Services, the segment with the most transportation within the Company, with the delivery of products to service stations and consumers. This program has been extended to the product transportation activities of the Polymers division of the Refining-Chemicals segment, to the liquid sulfur transportation activities of the Integrated LNG segment, and is being progressively extended to the Exploration & Production segment. It calls on independent transportation experts who inspect the practices and processes adopted by transportation contractors with regard to the recruitment and training of drivers, vehicle inspections and maintenance, route management, and the HSE management system. After inspection, an action plan is adopted. If there is a serious shortcoming or repeated poor results, the freight company may be excluded from the list of approved transportation contractors.

With respect to climate, which is a global risk for the planet resulting from all human activities, the Company has structured its approach in order to integrate climate challenges into its strategy and has defined specific objectives within different timeframes, in order to control and reduce the GHG emissions resulting from its Activities (Scope 1+2). These are reported in point 3.6.8.4 of this chapter.

By way of example, a near-miss with a high severity potential undergoes an analysis similar to that of a severe accident. This analysis is considered an essential factor of progress. Depending on its relevance to the other TotalEnergies entities, it may trigger a safety alert and the communication of a formal return on experience. More generally, the corporate culture encourages formal and informal return on experience on all matters relevant to the Vigilance Plan.

In the Subsidiaries as well as head office, teams regularly engage in crisis management exercises, the scenarios of which are based on potential incidents identified in the risk analysis. Dedicated training (initial and refresher training) also contributes to preparing employees for potential crises including in relation to the various roles played by members of the crisis team (for example crisis team leader, liaison with operations, experts and communicators etc.).

**Training programs dedicated to human rights** have been set up for senior executives, site directors and employees most exposed to these issues. Awareness-raising sessions are organized regularly for employees, for example as part of ethical assessments of Subsidiaries.

The Human Rights department is developing a training plan for Company employees to encourage understanding of issues relating to human rights and thereby better manage the associated risks. This training plan is rolled out as a priority among employees who are most exposed to risks linked to human rights.

Specific training modules explaining TotalEnergies' ethical commitments and the Fundamental Principles of Purchasing have also been developed for the Company's procurement teams. A training on responsible procurement is also mandatory for the buyers of TotalEnergies Global Procurement.

The Security division developed an online **training including a module on the VPSHR** for security managers in the Subsidiaries and provides training materials for the Company's personnel. Local visits are also organized to deliver in-person training in the training in the Subsidiaries.

In the field of **societal**, an awareness module is available to all employees through the internal training platform. Targeted trainings are also provided.

Internal channels of communication, such as websites accessible to most employees, are also used to **raise employee awareness** of matters pertaining to human rights. Dedicated web pages on ethics and the respect for human rights present the priority areas identified by TotalEnergies. These web pages have several goals: to explain the Action Principles, present how TotalEnergies implements these principles and to help employees adopt the ethical conduct expected of them in their everyday work.

**Events** such as the annual **Business Ethics Day** are used to raise awareness among employees of TotalEnergies SE and its Subsidiaries.

A **Guide to Human Rights** is also made available to employees and stakeholders. Its goal is to raise TotalEnergies employees' awareness on issues relating to human rights in its industry (at work, with local communities and in relation to security) and it provides guidance as to the appropriate behavior to adopt in their activities and relationships with stakeholders. It includes case studies. This guide serves as a reminder of the Company's commitments in relation to human rights. It offers

proposed answers to common questions and concerns about human rights, notably child labor, forced labor, discriminatory practices and collective negotiations.

The **Practical guide to dealing with religious questions**, published in 2017, aims to provide practical solutions to issues raised by Company employees and managers worldwide. It draws on the experiences of the business segments in various countries and encourages dialogue, respect and listening as a way to find solutions suited to the local context. Many internal and external experts contributed to this document, including representatives of various religious communities. This guide has been translated into ten languages. It is available on the website dedicated to human rights and is also distributed at training courses.

The HSE Division organizes the Company's **World Safety Day** and **World Environment Day** in order to bring teams on board and raise their awareness of ways of implementing the Action Principles. Various **HSE guides** exist within the One MAESTRO reference framework to share HSE best practices with the Company's Subsidiaries. In addition, periodic HSE communications are published throughout the year (seminars, webinars, symposia). Safety culture is reinforced on a day-to-day basis by the Company's employees through "safety moments" at the beginning of meetings or before hazardous operations, consisting of a short discussion to reiterate the key safety messages and align participants with mutual commitments. A similar approach is implemented to reinforce the culture of sustainable development through various initiatives including sustainability moments (Sustainab'ALL moments).

### 3.6.5.3 Awareness-raising and training of Suppliers

The **Fundamental principles of purchasing** constitute a contractual commitment by Suppliers and are also a means to raise awareness among Suppliers, notably on HSE and human rights issues. They are communicated to Suppliers at the time of their integration in the Supplier database. A brochure explaining these principles in detail is also handed out to Suppliers at annual meetings or events such as *Suppliers Day*. The Fundamental Principles of Purchasing are also available on the TotalEnergies website. A **practical guide on respect of human rights at work**, intended for Suppliers, is shared with them and is also available on TotalEnergies' website.

Training actions are also carried out for Suppliers, for example **training on responsible security and the VPSHR** delivered to employees of

security service providers. Contracts with these service providers mention compliance with the VPSHR and the need to train their personnel about the VPSHR. Additionally, the Security division may deliver this training directly to security service providers.

Suppliers working on Subsidiary sites are made aware of the risks to health, safety and the environment of the activities of the site. They receive support in the management of risks related to their activities, those of the site and any potential interactions, such as in the work permit process or during site safety inspections.

### 3.6.5.4 Responses to emergency or crisis situations

Crisis management is organized to ensure sufficient preparedness and an efficient response to a crisis or emergency event.

In order to manage any major industrial accident efficiently, TotalEnergies has implemented a global crisis management system, based notably on a 24/7 on-call system, a set of unified procedures deployed in the

Subsidiaries and on a dedicated crisis management center that makes it possible to manage two simultaneous crises from head office. The framework requires Subsidiaries to have in place plans and procedures for interventions in the event of leaks, fires or explosions and to test them at regular intervals.

### 3.6.6 Whistle-blowing mechanisms

TotalEnergies has several whistle-blowing mechanisms that are open to **employees, Suppliers and third parties**.

To support employees on a day-to-day basis, the Company encourages a climate of dialogue and trust enabling individuals to express their opinions and concerns. Employees can turn to their line manager, an HR or other manager, their Compliance Officer or their Ethics Officer.

The **Company's employees, Suppliers, as well as any other stakeholder** can contact the **Ethics Committee** to ask questions or report any incident involving a risk of non-compliance with the Code of

Conduct by using a generic email address ([ethics@totalenergies.com](mailto:ethics@totalenergies.com)). This system for collecting and processing of ethical complaints was set up in 2008, in cooperation with TotalEnergies trade unions organizations on a European level, then detailed in a dedicated internal rule. This complaint mechanism provides that the report transmitted to the Ethics Committee may in particular concern: "a serious abuse or a risk of serious abuse of human rights and fundamental freedoms" and "a serious damage or a risk of serious damage to the health or safety of persons, or to the environment".

The procedure for collecting and processing of ethical complaints, available on TotalEnergies' website since December 2020, describes this mechanism which provides measures to protect whistleblowers including the non-disclosure of their identity, the confidentiality of the procedure for collecting, processing, and closing of the complaints, the prohibition of any retaliation measures against whistleblowers, subject to sanctions, and the respect for the laws and regulations applicable to the protection of personal data. The Ethics Committee is a central structure, in which all business segments of TotalEnergies are represented. All its members are TotalEnergies employees with a good knowledge of its Activities and have demonstrated the independence and impartiality necessary for the performance of their duties. The Ethics Committee assures compliance with the Code of Conduct and ensures its proper implementation. It is assisted in its work by the relevant departments, as well as by a network of local Ethics Officers. The Chairperson of the Ethics Committee, who reports to the Chairman and Chief Executive Officer of TotalEnergies SE, submits an annual Ethics report to the Governance and Ethics Committee of the Board of Directors. The members of the Ethics Committee are subject to a confidentiality obligation. The Committee ensures the confidentiality of the complaints, which can only be lifted with the agreement of the complainant.

The system is supplemented by specific whistle-blowing mechanisms implemented at certain Subsidiaries.

Based on the United Nations Guiding Principles on Business & Human Rights, the One MAESTRO framework requires TotalEnergies'

operational entities to deploy procedures to **manage stakeholder grievances** related to the Subsidiary's activities (excluding business claims). This provides residents and local communities with a preferential channel to voice their concerns and grievances. Handling these grievances locally makes it possible to offer a response to anyone who feels that they have been negatively affected by the Activities and to improve internal processes in order to reduce impacts that may be caused by the Activities. Managing grievances consists of: informing the stakeholders of this free process; receiving and registering grievances; acknowledging receipt of the grievances and informing the stakeholders about the follow-up actions; if necessary, proposing a means of settling the grievances in collaboration with the stakeholders and monitoring the handling of the grievance. This process is regularly analyzed to see where improvements can be made.

These grievances mechanisms can also be used to implement the **VPSHR**. In addition, **in the event of an incident, a reporting process** requires the Security division to be informed and an internal analysis to be performed to establish the facts, resulting in a final report. This allows the Subsidiary to re-assess its VPSHR process and to take measures to reduce the risk of incidents.

Suppliers can also contact the **internal supplier mediator** using a generic email address ([mediation.fournisseurs@totalenergies.com](mailto:mediation.fournisseurs@totalenergies.com)). Available to Suppliers and procurement teams, the mediator's role is to restore dialogue and help find solutions.

### 3.6.7 Monitoring procedures

Multi-disciplinary committees review the implementation of measures within their purview. Indicators are used to measure the effectiveness of the measures, progress made and to identify ways of improvement.

#### COMMITTEES

The **Ethics Committee** is particularly involved in monitoring compliance with the Code of Conduct and can be called upon for advice on its implementation.

The **Human Rights Steering Committee** is made up of representatives from different divisions (including security, procurement and societal) and business segments. It is chaired by the head of TotalEnergies' Sustainability & Climate division. It meets several times a year and coordinate the actions on human rights taken by the business segments and the Subsidiaries, as part of the implementation of the human rights road map submitted to the Executive Committee. All Country Chairs contribute to this monitoring process, notably by acting as the local point

#### REPORTING

The system of internal reporting and indicators for monitoring implementation of the actions undertaken in TotalEnergies in these areas is based on:

- for social indicators (including health in particular), a guide entitled the Corporate Social Reporting Protocol and Methodology,
- for safety indicators, a Company rule regarding HSE event and statistical reporting; a return on experience analysis process identifies, notably, events for which a formalized analysis report is required in order to draw lessons in terms of design and operation, and

of contact for the Security division with respect to compliance with the VPSHR.

Representatives of the Management Committee of TotalEnergies Global Procurement and of the Sustainability & Climate, HSE and Legal divisions as well as of the Ethics Committee meet at least once a year within the **Sustainable Procurement Committee**, which monitors the effective implementation of the Responsible Procurement program.

The **HSE division** has set up cross-functional teams of experts, including in the fields of safety, the environment and crisis management, and monitors the ongoing coordination of HSE issues.

- for environmental indicators, a Company reporting procedure, together with activity-specific instructions.

Consolidated objectives are defined for each key indicator and reviewed annually. The business segments apply these indicators as appropriate to their area of responsibility, analyze the results and set out a plan of action.

## 3.6.8 Implementation report<sup>(1)</sup>

### 3.6.8.1 Human rights

This section is primarily intended to present implementation of measures with respect to Subsidiaries, while the implementation of measures specific to Suppliers is described in point 3.6.8.5 of this chapter.

#### SUBSIDIARY ASSESSMENTS

TotalEnergies conducts assessments and impact assessments of various kinds:

- Ethics and human rights assessments of Subsidiaries, in particular regarding the working conditions of TotalEnergies employees,
- Impact assessments to analyze the challenges and the societal context of industrial projects, supplemented, if necessary, by specific impact assessments on human rights,
- Subsidiary self-assessments.

#### Ethics and human rights assessments

In addition to the audits and assistance missions carried out by the Audit and Internal Control Division, which cover certain human rights-related issues, the ethics and human rights-related practices of TotalEnergies' entities are regularly assessed by independent third parties and qualified experts.

Assessed entities are identified according to several criteria, including the level of risk of human rights violation in each country, the number of alerts received the previous year and the date of the Subsidiary's last assessment. These assessments help identify Subsidiaries' best practices, share them within the Company and identify areas for improvement. Knowledge and appropriation of the Code of Conduct are tested and reinforced by ethics and human rights awareness-raising sessions. Employees are encouraged to voice their ethical concerns in a confidential manner and report behaviors potentially contrary to the Code of Conduct.

In 2023, four ethics and human rights assessments were conducted. They concerned four Subsidiaries, totaling around 1,800 employees (in Vietnam, Morocco, South Africa and Republic of the Congo). These assessments confirmed that the Code of Conduct has been duly incorporated by the Subsidiaries.

The follow-up of the action plans put in place further to the 2022 assessments in the Mexican, Indian and Argentine Subsidiaries was also carried out in 2023. It is planned to follow up on the action plan of the Exploration & Production segment Subsidiary in Qatar and of the Saft Groupe Subsidiary in India in 2024.

#### Impact assessments of industrial projects

When the decision is taken to develop an industrial project, a detailed **baseline study** is conducted to identify in advance the stakeholders potentially affected, describe the local context and assess the main socio-economic and cultural stakes (risks and opportunities) in the affected area. A **societal impact assessment** is then conducted to assess and analyze the opportunities and the direct, indirect or cumulative risks of the project in the short, medium and long term. In 2023, 61 of these studies were initiated or carried out.

In addition to these impact assessments, **specific human rights impact assessments** may also be conducted in high-risk areas or conflict zones with the support of independent experts.

#### Example: Tilenga and EACOP projects, Uganda and Tanzania

In February 2022 the Final Investment Decision for the Lake Albert Resources Development Project was taken, including both the Tilenga upstream oil project (operated by TotalEnergies EP Uganda) and the construction of the East African Crude Oil Pipeline (EACOP) in Uganda and Tanzania (in which TotalEnergies Holdings EACOP is a major shareholder).

All partners committed to implementing these projects in an exemplary manner, taking into consideration the environmental and biodiversity stakes, as well as the rights of the concerned communities, in accordance with the stringent performance standards of the International Finance Corporation (IFC).

#### Transparency

In accordance with its guiding principle of transparency in engaging with civil society, since March 2021 TotalEnergies publishes relevant studies, independent third-party reviews and social and environmental action plans related to both the Tilenga and EACOP projects. Such independent reviews help ensure that the projects are carried out in compliance with good international industry practices. Alongside the ongoing dialogue with the local communities, these reviews also allow potential improvements to be identified.

In 2023, TotalEnergies EP Uganda and EACOP demonstrated their commitment to transparency by providing clear, accessible and up-to-date information to their stakeholders on various aspects of their projects. The Tilenga project organized 16 field visits in 2023 totaling 2000 visitors, for NGOs and other stakeholders to monitor and review its social and environmental performance. In 2023, TotalEnergies EP Uganda (TEPU) also answered to more than 22 petitions in various areas covering allegations on human rights and environmental aspects. EACOP has made available on its website in 2023, regular construction updates including disclosing its Human Rights Due Diligence Reports, Gender and Social Inclusion Policy, Free Prior and Informed Consent agreements made with indigenous communities, local content updates. Quarterly engagement with civil society organizations in both countries also provides detailed updates on construction, social performance, land acquisition, environment, and biodiversity programs.

<sup>(1)</sup> In accordance with Article L.225-102-4 of the French Commercial Code, the report on the effective implementation of the Vigilance Plan is presented below. Since the identification of risks and the prevention of severe impacts on human rights, human health and safety and the environment overlap partially with certain risks covered in the extra-financial performance statement (refer to chapter 5), TotalEnergies has chosen to report below on the implementation of its Vigilance Plan by incorporating certain aspects of its extra-financial performance statement although the latter includes risks of varying degrees.

### **Human Rights Due Diligence and policies**

For Tilenga as well as for EACOP, human rights impact assessments (HRIA) have been carried out as part of the social and environmental impact assessments. In addition, stand-alone human rights impact assessments were published in September 2018 for EACOP and in July 2022 for Tilenga. EACOP updated the HRIA in 2022 and the document is a section of the Human Rights Due Diligence report issued in December 2022, available on EACOP's website. This HRIA report was presented to NGOs in Uganda and in Tanzania in dedicated meetings in 2023.

Dedicated human rights teams in both projects have put in place action plans on the basis of these impact assessments and monitor their implementation. Human Rights Steering Committees have been set up for both projects to provide governance and monitoring. Processes are in place for investigation and fact-finding with respect to human rights allegations.

Both the Tilenga and EACOP projects published policies in 2022 setting out their commitment to human rights through all their activities. In 2023, for ease of access and comprehension, the Tilenga Human Rights policy was translated into a poster with pictograms highlighting human rights commitments and disseminated to the local communities.

In addition, EACOP published a Gender & Social Inclusion policy in November 2023. This policy, based on the UN Global Compact Women's empowerment Principles, is available on the EACOP website in English, Swahili and 3 other local languages. A Gender Action Plan has been also developed and its implementation by the relevant departments inside EACOP started in January 2024.

### **Stakeholder Engagement**

Regular stakeholder engagement occurs with the full spectrum of project stakeholders including Ugandan and Tanzanian local, national and regional governmental authorities; Project-affected Communities (PACs) and Project Affected People (PAP)<sup>(1)</sup>; traditional and religious authorities; local businesses and tourism operators; developers of associated facilities; civil society organizations (CSOs) and NGOs; academic and research organizations; and Intergovernmental organizations.

A variety of methods and tools are used: village meetings, small group meetings, focus group discussions, one to one meetings, site visits and tours, alternative medium such as community drives etc. Engagement is supported by disclosure materials adapted to the audience including a range of written and visual material, traditional media including community radio, telecommunications and websites. As an example, as part of the Tilenga Project, an innovative series of webinars known as "Let's Talk!" provides a deep dive into topics of interest for civil society. In 2023 subjects covered included Livelihood Restoration, Safety, Human Rights in the Supply Chain, National Content and Cultural Heritage.

A field-based stakeholder engagement team including community relations supervisors (CRS), and community liaison officers (CLO) in Uganda, composed of both male and female officers, are present on the sites and are in dialogue with local communities and have developed strong relations with local government, civil society and community representatives. The field-based community relations supervisors in Tanzania and CLO in Uganda observe and guide construction contractor stakeholder engagement with PACs acting as a "bridge" between the project and communities and to ensuring stakeholder engagement for the project is consistent with EACOP principles of participation, respect for human rights, non-discrimination, empowerment, transparency and accountability.

In Uganda, TotalEnergies EP Uganda has maintained for several years relations with the Civil Society Coalition on Oil and Gas (CSCO), a network of over 60 Ugandan NGOs whose objective is to work towards the sustainable governance of oil and gas resources to maximize benefits to the people of Uganda. In July 2023, a field trip to the Tilenga project facilities was organized for members of CSCO. EACOP in Uganda is also engaging with CSCO in quarterly meetings.

To further improve the engagements with CSOs and NGOs, the 2023 Tilenga NGO Coordination workplan included a focus on having direct engagements with the grassroots NGOs based in the project area. By the end 2023, 54 bilateral engagements had been held with different grassroots NGOs.

Several partnership agreements were signed in 2023 to support environmental, social and human rights objectives including on restoration and conservation of forest reserves (with National Forestry Authority), conservation and restoration of wetlands and riparian vegetation within the Tilenga project Area (with the Ministry of Water and Environment), Road Safety (with the NGO Safe Way Right Way), and biodiversity (with Chimpanzee Sanctuary and Wildlife Conservation Trust and Wildlife Conservation Society).

Road safety sensitization in the community continued in 2023 in the 5 project districts. This included four inception meetings attended by numerous stakeholders including local leaders, police officers and leaders from different associations in the districts. Additionally, in July 2023, TotalEnergies EP Uganda launched the *VIA Road Safety Programme* in Buliisa District aimed at raising road safety awareness among young people. The NGO Safe Way Right Way was contracted to enforce and promote the initiative on behalf of TEPU.

In 2023, EACOP has continued to engage and dialogue frequently with the four vulnerable ethnic groups self-identifying as "Indigenous Peoples" impacted by the project - the Akie, Taturu, Barabaig and Maasai.

(1) A PAP (Project Affected Person) corresponds to a group of individuals forming a household or an entity (institution, company) which has been identified, within the framework of the studies carried out for the program of acquisition of the land necessary for the execution of the project, as having at least one asset impacted by the implementation of the project. An asset can be a dwelling, a construction, a plot of bare or cultivated land, plants, trees, crops.

EACOP's approach with these groups included in particular:

- The implementation of the EACOP Plan for Vulnerable Ethnic Groups self-identifying as "Indigenous Peoples" signed in September 2022. This Plan sets out EACOP's commitments to reinforced engagement, impact mitigation measures adapted to the specific lifestyle of these communities, access to project benefits and capacity building of these communities.
- Signing of the Free Prior and Informed Consent (FPIC) Agreements between EACOP and the Akie Community in July 2022, with the Taturu community in March 2023 and with the Barabaig community in January 2024.
- Collaboration with 3 indigenous NGOs to reinforce engagement using more traditional methods and build the capacity of the four communities on different topics.
- The design of a specific community social investment programme working with one of the indigenous NGOs and an international specialist company.

#### **Land Acquisition**

The land acquisition processes for both projects are carried out in compliance with the IFC Performance Standards and national regulatory framework.

The land acquisition program for both projects is well advanced.

In Tilenga, the compensation process for the first tranche of land acquisition, known as "Resettlement Action Plan 1 (RAP1)" concerning 622 PAPs was completed in 2021. Only 7 PAPs did not accept the compensation offered after valuation of their assets. Pursuant to a judgment of the Court of Masindi on April 30th, 2021 which ruled that the compensation amounts offered were fair, TotalEnergies EP Uganda deposited the corresponding funds in a court account for the benefit of these seven PAPs.

The Deployment of the program for RAPs 2 to 5, concerning 4,954 PAPs is well advanced. By the end of 2023, 99,1% PAPs had signed compensation agreements for impacted assets and 98% had already received compensation. All the PAPs who had not yet signed compensation agreements were subject to a Court Application which concerned 42 PAPs owning/claiming ownership rights in 32 land parcels. Several meetings were organized to reach an agreement. Faced with the impasse resulting from the PAPs refusals, the matter was taken to court by the Ugandan government represented by the Attorney General. At a hearing held on December 8, 2023 in the Ugandan town of Hoima (where part of the land affected by the Tilenga project is located), the High Court ruled in favor of the Ugandan government. It also decided to grant the owners concerned the right to file individual claims against the Ugandan government if they contest the value of the compensation awarded by the Chief Government Valuer. TotalEnergies EP Uganda deposited the compensations in a court account as directed by the Court Order on December 22, 2023. Notices to vacate have since been issued to the individuals by the Government.

On the total number of PAPs, a minority of them require relocation to replacement houses as their primary residence is affected by land acquisition. For RAPs 2 to 5, 189 out of 205 replacement houses have been handed over by end of December 2023, as part of the progressive deployment of the program. Until the replacement houses are delivered, the affected PAPs may continue to live in their original house.

Improvements in implementation of the land acquisition process following RAP 1 were integrated into procedures for RAPs 2 to 5 including reinforced information to communities to ensure that PAPs understand that they may continue to cultivate their land until they have received their notice to vacate following compensation.

The major part of EACOP land acquisition program is close to completion. As end of December 2023, 99% of PAPs in Tanzania and 91% of PAPs in Uganda had received compensation.

To support PAPs whose farming may be disrupted by the land acquisition process, transitional food assistance – a mix of food baskets and cash transfers – has been initiated and will continue until livelihoods have been reestablished.

For concerned PAPs, livelihood restoration programs are implemented for at least 3 years after land acquisition or until livelihoods are fully restored. These programs include financial literacy, agricultural programs to improve crops and livestock, tree nurseries, beekeeping, financial management and business capacity, as well as vocational training to support jobseekers.

#### **Respect for Human Rights by suppliers**

Both the Tilenga and EACOP projects have established processes to ensure suppliers respect worker rights with regard to pre-qualification, contracting, and verifications, inspections and audits of suppliers.

In TotalEnergies EP Uganda, a presentation was given to contractor senior management at the annual HSE Contractor Forum and sensitization sessions are regularly given to key suppliers. On EACOP side, human rights training sessions were also given to the suppliers and communication materials were developed for workers.

Human Rights in the workplace matters are considered during HSE audits and inspections. In addition to including some Human Rights aspects in HSE audits, targeted Human Rights audits are carried out for TEPU contractors and suppliers. These audits are known as "Sustainability Audits", focusing on sustainable development practices put in place by suppliers and contractors. In December 2023, 8 TEPU contractors and suppliers were audited by an independent third-party auditor. The results of the audits are shared with the concerned contractors, and where necessary, corrective action plans are shared with them for areas that require improvement.

In 2023 EACOP developed and started the implementation of the Industrial Relations (IR) Management System (IRMS) to ensure the project's labor management and working conditions for the contractor workforce are well respected. The IR team in Tanzania was recruited and onboarded in mid-2023 and all construction contractors were trained on the IRMS requirements. The IR team in Uganda was recruited in late 2023 and monitoring of the IR performance started in early 2024. The site-based Industrial Relations Supervisors (IRS, Tanzania) and Industrial Relations Officers (IRO, Uganda) are responsible for developing and implementing key systems and processes, such as site workers forums and committees, monthly reporting to the project, workers grievance mechanisms, and IR training, inductions, and awareness raising at the worksite to communicate on workers' rights.

Further, in 2023 an additional tool called "Worker's Voice Tool" was rolled out on a pilot basis to selected contractors to monitor their respect for workers' rights for Tilenga and EACOP projects. This pilot initiative allows the Project to collect feedback on working conditions on site directly from contractors' workers through surveys sent to their mobile phones or via paper surveys. The surveys have been translated into six local languages used in the projects area to improve participation by diverse workers in both projects.

#### **VPSHR and Human Rights Defenders**

The Company adheres to the Voluntary Principles on Security and Human Rights (VPSHR) and ensures that no security personnel are deployed without a prior VPSHR training. A constant dialogue occurs through regular meetings and Human Rights awareness sessions. In 2023, TotalEnergies EP Uganda conducted VPHSR trainings and refresher trainings for 2,098 Government and Private Security personnel.

For EACOP, the Host Government Agreements with Tanzania and Uganda included VPSHR. Risk Assessments have been undertaken in Tanzania and Uganda, and action plans for ongoing implementation of the VPSHR have been developed. A Security Committee has been formed for the project that comprises the EACOP Security Manager and representatives of public security forces from Tanzania and Uganda. This is a key forum for EACOP to promote the VPSHR. In 2023 100% security guards (231 male and 28 female guards), employed in Uganda and in Tanzania by contractors, have been trained on VPSHR.

TotalEnergies EP Uganda and EACOP are committed to respecting the rights of Human Rights Defenders (HRDs) in relation to the projects. They regularly engage with the government, petroleum authorities, police, and civil society to discuss the importance of freedom of expression, peaceful protest, and an open civic space. They have published their positions and policies on HRDs on their websites, and they have provided various channels for stakeholders to make complaints or raise alerts, such as an office in the project area, a toll-free number, Community Liaison Officers (CLOs), an email service and contact through traditional leaders and district authorities. TEPU and EACOP strongly oppose any threats or attacks against HRDs and seek to exercise their influence with relevant persons or authorities where, in the framework of their activities, it is alerted of allegations of threats, intimidation, harassment or violence against stakeholders.

#### **Community grievance mechanisms**

Community grievance mechanisms in line with the United Nations guiding principles on business and human rights criteria have been put in place to receive and respond to community grievances including those of PAPs.

For Tilenga, there are a variety of access points to present grievances which include a local office manned daily in Uganda, a toll-free number, an email address, Community Liaison Officers and local authorities who relay such information to the project teams.

Grievances are recorded in a register and an online data management tool within 24 hours. Where possible, they are resolved within 24 hours, but for more complex cases, the process has four levels of escalation. If the proposed solution is accepted, the case is closed. A document confirming the proposed solution and its acceptance is issued (close out form). If the proposed solution is not accepted, discussions with the person who filed the complaint will continue, if necessary, with the support of external stakeholders and independent third parties. If no agreement is reached, the person remains free to take the matter to the appropriate authorities.

In 2023, considerable efforts were made to communicate broadly on the grievance mechanism. For example, for Tilenga, all contractors and CLOs were trained on the mechanism and its implementation, community village sensitizations were conducted in 60 project villages, and materials such as grievance books and brochures were printed and disseminated to the community.

During year 2023, TEPU registered a total of 69 grievances. 48 out of the 69 registered grievances (70%) were resolved and closed. By the end of 2023, 21 grievances remained opened.

EACOP's Community Grievance Management Procedure, launched in both countries in 2017, was updated in 2022 in particular to integrate local dispute resolution processes. Internal Grievance Management Committees have been established for the governance of Grievance Management in each country. Communication on Grievance Procedures has been reinforced through stakeholders' meetings, distribution of leaflets in communities as well as information and a video available on EACOP website.

During year 2023, EACOP registered a total of 175 grievances. By the end of 2023, 35 grievances (registered in 2023 or earlier) remained open.

### **Example: Mozambique LNG Project**

TotalEnergies EP Mozambique Area 1 (TEPMA1) has held since 2019 a participation of 26.5%<sup>(1)</sup> of Mozambique LNG Area 1 Project. It is the first onshore development of a liquefied natural gas (LNG) plant in the country located on the Afungi Peninsula, District of Palma, in the Cabo Delgado province.

The Project faces significant social challenges with the displacement of households and cultivating lands within the area of construction of the LNG facilities (7,000 ha), which was underway when Project activities were suspended in April 2021, as well as impact on fishers' economy due to the establishment of a Marine Exclusion Zone.

#### **Local security situation**

The Cabo Delgado province has experienced the surge of a "terrorist" movement leading to attacks against villages and large towns and causing the displacement of hundreds of thousands of people.

After taking the town of Mocimboa da Praia, in the summer of 2020, located about 80 kilometers from the Project site, the terrorist movement conducted attacks in the northeast Cabo Delgado Province by attacking populations. This situation reached a peak with the attack of the town of Palma located 6km away from the Afungi site on March 24th, 2021. The intensity and duration of the attacks prompted the evacuation of personnel from the site. This situation led Mozambique LNG to declare force majeure on April 26, 2021. Since July 2021, the Mozambican government took military assistance from external partners (Southern African Development Community and Rwandese forces) to retake security control of Cabo Delgado.

#### **Human rights due diligence and Human rights policy**

Respect for human rights is a commitment and continuous focal area for Mozambique LNG throughout the Project.

To this end, a Human Rights Impact Assessment (HRIA) had been conducted in 2015 for the Project which was then operated by Anadarko.

To update that assessment and complete it with assessments on the Voluntary Principles on Security and Human Rights (VPSHR) and social performance, a Human Rights Due Diligence (HRDD) was conducted by LKL International Consulting and published in 2020. The due diligence resulted in an action plan addressing the following salient issues: Security (Community security and Interaction with public security providers), Resettlement, Women's rights and gender equity, Workers' rights (Freedom of association), Information and consultation, Community health and safety, Project-induced in-migration (PIIM), Access to remedy.

Mozambique LNG formalized the learnings from these assessments and its approach regarding human rights by adopting its Human Rights Policy in March 2021.

The update of the HRDD launched in December 2022 was conducted in 2023.

Given the rapidly changing situation in the province, TotalEnergies on behalf of the partners of the Mozambique LNG, entrusted Jean-Christophe Rufin, a recognized expert in the field of humanitarian action and human rights, with an independent mission to assess the humanitarian situation in the province of Cabo Delgado. Published in May 2023, his report highlighted the execution quality of the actions undertaken by Mozambique LNG and their positive impact on the living conditions of local population and made recommendations for improvements to Mozambique LNG's actions on the ground.

Mozambique LNG is continuing to pursue transparency, engagement, and communications with internal and external stakeholders about the Project's salient human rights issues. To this end, multiple awareness-raising sessions on human rights were organized in 2023 to train the Project staff, with the participation of the Mozambican government, the Office of the United Nations High Commissioner for Human Rights, CSOs and NGOs in Maputo, Pemba and Palma districts.

#### **VPSHR implementation**

The Security Memorandum of Understanding (Security MoU) signed in March 2019 (amended in July 2020) between Mozambique Security Providers (Ministry of National Defense and Ministry of the Interior) and oil and gas companies (Area 1 and Area 4) remained in place until October 2023. This Security MoU is being replaced by a new framework with the Authorities of Mozambique. The new framework has a wider scope, aiming at the restoration and stabilization of public services in the Cabo Delgado province and promoting a suitable environment for proper performance of the Project. It also takes onboard the observations on the Security MoU made by Mr. Jean-Christophe Rufin in his May 2023 report and maintains the undertakings by the protection forces in terms of respect of human rights and VPSHR training.

Police and army personnel together (formerly designated as the Joint Task Force or JTF, now as Protection Forces or PF) deployed to ensure security of Project operations and workforce and the communities residing in the broader Project area of operations, received VPSHR training to ensure adherence to key human rights standards.

VPSHR training sessions have been systematically conducted for all PF officers deployed to site. In 2023, 745 PF officers were trained by qualified personnel with extensive experience on security and VPSHR. The trainers included Mozambique LNG staff and officials occupying high command positions within the PF.

In parallel, five PF officers in charge of relations with local communities in close relation with the Project, continued to deliver humanitarian and social activities together with members of their team, thereby contributing to better resolution of potential disputes.

Finally, Mozambique LNG is also involved in the promotion of VPSHR at national level. Mozambique LNG contributed to the initiative that led to the establishment of an In-Country Working Group on the VPSHR and a Cabo Delgado Technical Working Group launched in April 2022. In 2023, the Project staff attended meetings of the Working Group and made presentations highlighting its work to put the VPSHR into practice.

<sup>(1)</sup> TEPMA1, operator, holds a share of 26.5% in the Mozambique LNG Area 1 Project, and partners with ENH Rovuma Area Um. S.A. (15%), Mitsui E&P Mozambique Area1 Ltd. (20%), ONGC Videsh Ltd. (10%), Beas Rovuma Energy Mozambique Limited (10%), BPRL Ventures Mozambique B.V. (10%), and PTTEP Mozambique Area 1 Limited (8.5%).

### **Local grievance mechanism and Incident resolution**

Mozambique LNG has implemented a community grievance mechanism, managed remotely, supported notably by a 24h-toll-free telephone line to address any concerns or incidents.

When PF-related incidents are reported, they are investigated by the Project staff, and referred to the PF command for additional investigation. Mozambique LNG takes measures to preserve the anonymity of complainants.

In 2023, monthly reports on the implementation of VPSHR were provided to the representatives of the parties of the Security MoU. Ministerial authorities are regularly engaged and discuss about the implementation of the VPSHR with Mozambique LNG.

In addition, the Project monitors VPSHR incidents on a case-by-case basis by alerting and communicating directly with the authorities and taking the appropriate measures.

### **Resettlement**

The construction and operation of the Mozambique LNG Project and the Area 4 Rovuma LNG project involve the physical displacement of the Quitupo community and economic displacement of households cultivating lands, intertidal collectors and fishing activities within the Project area.

To manage involuntary displacement and ensure the re-establishment and development of livelihoods within the Project area, Mozambique LNG and Area 4 Rovuma LNG projects have developed a Resettlement Plan that was approved by the Government of Mozambique.

The Resettlement Plan implementation was affected by the suspension of activities in Afungi in March 2021. Project teams continued engaging remotely with the resettlement-affected community stakeholders. The implementation of the Resettlement Plan has resumed since June 2022.

Construction of the Quitunda village was completed in 2023, allowing the relocation of remaining families in Quitupo.

Along with the Resettlement Plan, compensation activities resumed in June 2022. At year-end 2023, 99% of land-based impacted households had signed their compensation agreements and compensation related grievances are being handled as part of the grievance management system. Compensation for fishers and intertidal collectors has resumed in 2023.

### **Livelihood & Socioeconomic Development Initiatives**

The Mozambique LNG Project employs investments into different socioeconomic development projects within its neighboring communities and society. Following the recommendations of Mr. Jean-Christophe Rufin, the Project created a Foundation in 2023 for the implementation a socio-economic development program covering the whole territory of the Cabo Delgado province, as part of a consistent and sustainable development strategy. As of end of December 2023 the Foundation has been registered with the national authorities, and consultations are ongoing with the Government, development institutions and civil society on both its governance and its scope.

In 2023, Mozambique LNG continued to engage with the communities in Cabo Delgado, and support their recovery and development after the security crisis. Various socioeconomic development initiatives related to income generation, economic diversification, agriculture, fishery, education, WASH (water, sanitation and hygiene) sectors were implemented, reaching thousands of beneficiaries, including creation of more than 7,800 local jobs.

The Project is committed to ensuring the sustainable and inclusive development and retained the Vulnerable People Program to facilitate a broader humanitarian response. The actions include distribution of food and basic goods, a vulnerable people's nutrition program in Quitunda and Maganja, actions to facilitate the return of government health care workers and the coordination of support efforts with government, local NGOs and other entities in Afungi.

### **Subsidiary self-assessment**

In addition to Subsidiary and industrial project assessments, two types of **Subsidiary self-assessment** should be noted.

With regard to the implementation of **VPSHR**, the self-assessment and risk analysis tools were revised in 2022 to make them more adaptable to the local context. In 2023, the strategy for implementing these tools mainly targeted the Subsidiaries of countries that had not participated in the 2022 campaign, or whose rate of compliance with VPSHR was low. They have thus been deployed to Subsidiaries in 98 countries with a response rate of 100%.

With regard to the implementation of the **societal approach**, the Subsidiaries must carry out an annual self-assessment in this area and internal *reporting* to identify the societal actions carried out locally. These self-assessments are analyzed by the HSE division in order to adapt the support it provides to Subsidiaries (offers of training, assistance). In 2023, 100% of the Subsidiaries in the One MAESTRO roll-out scope, with an operational activity, carried out their self-assessment.

### **ACTIONS TO MITIGATE RISKS AND PREVENT IMPACTS**

TotalEnergies has numerous tools for **raising employee awareness** of issues related to human rights. The Company held **training courses tailored to the challenges faced in the field** by employees who are particularly exposed to these issues.

In 2023, several training sessions were held as part of the implementation of the Human Rights training plan:

#### **For target groups**

More than 3,500 employees belonging to the priority categories were trained in face-to-face training sessions in 2023.

- Within the Marketing & Services segment, 1,750 employees were trained. These employees include members of the Management

Committees as well as other priority categories of employees (network directors, segment managers and service station managers) within the Subsidiaries, particularly in South Africa and Egypt but also in Côte d'Ivoire, Cameroon, the Dominican Republic, Lebanon, Jordan and Mozambique.

- Within the Exploration & Production segment, nearly 400 employees were trained in respect for human rights, including members of the Management Committees of the Subsidiaries in Mozambique, Lebanon and Brazil.
- In the Integrated Power and Integrated LNG segments, more than 800 employees were trained in respect for human rights in France (Saft Groupe and Total Eren sites) and in Brazil (Casa dos Ventos).

- In the Refining & Chemicals segment, more than 450 employees were trained in respect for human rights, including members of the segment's Management Committee and certain priority groups at Hutchinson sites in Vietnam, Brazil and India.

Finally, in France, more than 70 employees from all TotalEnergies business segments participated in two workshops organized in partnership with Shift, on crisis communication management regarding human rights. These employees include members of the Company's communications teams and human rights network.

Training on ethics and human rights was followed by around 20 newly appointed executives in 2023.

### For all employees

The online module on human rights in the workplace with a focus on respecting the ILO's core conventions, which has been accessible to all employees since 2019 in all countries and mandatory for all management employees, continued to be deployed in the countries where TotalEnergies is present. It is available in five languages and more than 69,000 employees had followed it by the end of 2023.

In addition, representatives of the Human Rights department regularly participate in external events with other companies and institutional players to share experiences and best practices in this area.

For the **societal**, several activities intended to raise awareness among the various entities on societal issues and tools were deployed in 2023:

- At the level of the Company:

- a societal module of the HSE for Managers training program, 10 sessions of which were delivered in 2023 with a total of more than 230 participants.
- a webinar on land acquisition and involuntary relocation with around 50 participants;
- 4 awareness sessions on societal indicators in the HSE Campus, with around 40 participants from all segments.
- a specific session adapted to the Nature Based Solutions division on the subject of Land Acquisition and involuntary relocation with around 20 participants.
- 6 webinars, attended by more than 160 participants, were organized in October 2023 for the launch of the societal reporting campaign.

### WHISTLE-BLOWING MECHANISMS

TotalEnergies has set up several levels of whistle-blowing mechanisms that cover the entire Company or are specific to certain projects.

In 2023, the **Ethics Committee** received about 170 reports (internal, external, anonymous) regarding compliance with the Code of Conduct, more than 70% of them concerning matters relating to Human Resources. All reports received are addressed and, when necessary, recommendations are made in order to lead to the implementation of corrective actions. Irrespective of whether the referral is well founded, mediation may be necessary. When the Ethics Committee observes a breach of the Code of Conduct, management draws the necessary conclusions and sanctions may be imposed in keeping with the applicable law and the procedures negotiated locally with staff representatives (examples include verbal reminders, written warnings, suspension or dismissal).

The *Collection and processing of ethical complaints* procedure published internally and on the TotalEnergies website since December 2020, then updated, formally sets out the existing approach for collecting and processing complaints sent to the Ethics Committee by internal or external stakeholders concerning behaviors or situations contrary to the Code of Conduct. It ensures that the identity of the person making the report is protected, rules out any reprisals against them or against those

- In Marketing & Services, a societal module was included in the MS HSE Fundamentals training for new HSE managers. Close to 70 employees were trained in 2023.
- In the Integrated Power segment, 4 awareness webinar sessions on managing societal impacts reached more than 370 participants.
- In Exploration & Production, 4 training sessions in 2023 were attended by a total of around 50 people from 9 countries (Angola, Bolivia, Brazil, Republic of the Congo, Denmark, France, Italy, Norway and Uganda).
- A new social awareness module, created in 2022, is available to all employees through the internal training platform (e-learning). It reached close to 230 participants in 2023.

In 2023, the digital platform named Societal Academy, which makes the necessary educational resources accessible to Subsidiaries, such as rules, guides, training materials, feedback and best practices, was improved by the addition of new content.

In certain situations, intervention by government security forces or private security companies is necessary to protect the Company Subsidiaries' staff and assets. TotalEnergies regularly organizes training sessions and awareness-raising activities for its employees on the risk of disproportionate use of force and, more specifically, on the VPSHR. In 2023, this awareness-raising work led the VPSHR liaisons to continue the revision the content of the training courses in order to make them more accessible and better adapted to changes and issues related to human rights and security and to offer these new modules as part of VPSHR training missions in Subsidiaries, for more than 960 participants. This improvement was made mainly by developing a new online training module for the Country Security Officers, who support Country Chairs in their role of being responsible for the Company's security at country level and who are the representatives of the Company Security division in charge, among other things, of implementing the VPSHR. In 2023, 126 Country Security Officers completed this online training.

In addition, specific awareness-raising work on compliance with the VPSHR and their deployment in the entities considered most at risk is carried out annually. The contribution of the Subsidiaries to the annual "ADRA Campaign" (*Auto-Diagnostic and Risk-Assessment*) enables the VPSHR teams of the Security division to assist them with improvement actions throughout the year.

taking part in the processing of the complaint, and respects applicable laws and regulations in terms of protecting personal data.

The Subsidiaries have also put in place **mechanisms for managing grievances made by external stakeholders**. Deployment is gradual throughout the Company.

At the end of 2023, 100% of the Subsidiaries within the One MAESTRO scope with an operational activity, had a grievance management mechanism in place.

Complaints received by the Subsidiaries in connection with the societal impact of their activities may concern: access to land and habitat, economic losses/loss of livelihood, risks to the environment and health, employment and the value chain, road safety, logistics and transportation, adverse impact on culture heritage, security and social conduct, the quality of local dialogue and the management of socio-economic development projects. The number of complaints received in 2023 is 638, with a percentage of solved complaints of 80%.

In case of **incidents related to the implementation of the VPSHR**, a reporting is quickly made to the Security division, and a report is compiled after internal analysis to assess the facts and to determine the measures to be taken to reduce the risk of future incidents.

## MONITORING PROCEDURES

The Company **human rights roadmap**, built with the different business segments and the departments concerned, is presented at regular intervals to members of the Company's management team to support the ongoing efforts to enforce the Code of Conduct and respect for human rights. The Human Rights Steering Committee monitored the implementation of this roadmap.

For each specialty or business segment, the roadmap addresses questions of governance (for example, an internal procedure to be updated), new trainings to be developed, the prioritization of salient issues in a given specialty or segment, dialogue with stakeholders (for example, by appointing and training CLOs), risk assessment (for example, in the impact assessments of new projects), preventive and remediation actions, monitoring and communication. The Human Rights Department and the Ethics Committee rely on a network of more than 100 Ethics officers across the countries in which TotalEnergies operates. They are in charge of promoting the values set out in the Code of Conduct among employees working at Subsidiaries and ensuring that the Company's commitments are correctly implemented at a local level.

### 3.6.8.2 Health and safety

This section is primarily intended to present implementation of measures with respect to Subsidiaries, while the implementation of measures specific to Suppliers is described in point 3.6.8.5 of this chapter.

#### SUBSIDIARY ASSESSMENTS

In addition to the HSE self-assessments of the Subsidiaries at least every two years, the Subsidiaries operating the sites are audited every three to five years. The periodicity of HSE audits is defined according to a risk-based approach, which takes into account, among other things, the results of previous HSE audits and the status of the corresponding action plans.

In 2023, 39 HSE audits were conducted.

Regarding the **VPSHR**, TotalEnergies takes part in **follow-up meetings** with the other members of the initiative as part of the process of continuous improvement. In March 2023, TotalEnergies published its 2022 VPSHR report, which contains information on the implementation of VPSHR in Subsidiaries worldwide, and reviews progress made. This report is available on the TotalEnergies website. The information set out in the report is based on annual reporting organized by the Security division that brings together the results of a VPSHR questionnaire, and of the risk and compliance analyses for each Subsidiary operating in a sensitive context. It contains examples of action taken to raise awareness and process incidents. The 2023 VPSHR report will be published in 2024.

#### ACTIONS TO MITIGATE RISKS AND PREVENT IMPACTS

In terms of HSE, **training intended for various target groups** (new arrivals, managers, senior executives and directors) is provided in order to establish a broad-based, consistent body of knowledge that is shared by all:

- **Safety Pass**: these safety induction courses were started on January 1, 2018 for new arrivals. Various courses exist depending on the position and cover the Company's main HSE risks, the risks linked to the site activities as well as those linked to the workplace. The theoretical content is supplemented by practical life-saving actions training sessions,
- **HSE for Managers** is aimed at current or future operational or functional managers within one of the Company's entities. This training was delivered in virtual classroom mode as well as face-to-face in 10 sessions in 2023, in which about 230 managers took part,
- **Safety Leadership for Executives** is intended for the Company's senior executives. Its objective is to give senior executives the tools allowing them to communicate and develop a safety culture within their organization. Four sessions were held in 2023 to train approximately 40 Company's senior executives.

In order to ensure and reinforce knowledge of the reference framework, a knowledge evaluation tool containing over 3,000 multiple-choice questions was developed in 2018 for use by the HSE managers of Subsidiaries, operated sites and their teams. This tool can also be used to determine a suitable training plan, if necessary. Approximately 20 evaluations were carried out in 2023.

World Safety Day is held each year by the HSE division. The theme in 2023 was "Technological risks: Everyone's involved, everyone has a role". In addition, TotalEnergies encourages and promotes its Subsidiaries' safety initiatives. Each year, the Company recognizes and awards the best HSE initiative carried out in a Subsidiary.

TotalEnergies also continued to roll out its *Incident Management System* (IMS) at Subsidiaries operating liquid hydrocarbon or natural gas exploration and production sites in the Exploration & Production, Integrated LNG and Integrated Power segments. The IMS is a harmonized system for the management of emergency situations. It is described in an IPIECA (*International Petroleum Industry Environmental Conservation Association*) good practices guide and is being progressively adopted by the majors. In 2023, 275 employees were trained in the IMS and seven Exploration & Production Subsidiaries carried out a large-scale application exercise, bringing the total number of trained employees to 1055 and the number of Subsidiaries where the IMS is deployed to 23.

**Return on experience** (feedback) on HSE incidents is regularly collected. A return on experience document describes the HSE incident or the corresponding accident, includes an analysis and recommendations applicable to similar situations. 72 documents (feedback, best practices, alerts) were disseminated within the Company in 2023.

## MONITORING PROCEDURES

**In the field of prevention of major industrial accidents**, the Company monitors the number of Tier 1 and Tier 2 losses of containment as defined by the American Petroleum Institute (API) and the International Association of Oil & Gas Producers (IOGP). After reaching its target in 2022, the Company has strengthened its demands and has set itself a new target of a number of Tier 1 and Tier 2 events below 50 in 2023. This objective was achieved in 2023. In addition to the 48 Tier 1 and Tier 2 events linked to operations indicated in the table below, the Company experienced 6 Tier 1 or Tier 2 events due to acts of sabotage or theft in 2023.

Losses of primary containment <sup>(a)</sup>	2023	2022	2021
Losses of primary containment (Tier 1)	19	11	29
Losses of primary containment (Tier 2)	29	37	48
Losses of primary containment (Tier 1 and Tier 2)	48	48	77

(a) Tier 1 and Tier 2: indicator of the number of losses of primary containment with more or less significant consequences (fires, explosions, injuries, etc.), as defined by API 754 (for downstream) and IOGP 456 (for upstream). Excluding acts of sabotage and theft.

Tier 1 and 2 events had moderate consequences in terms of safety (lost time injuries, fires or pollutions). The Company did not have any major industrial accidents in 2023.

**In the field of road transportation**, to measure the results of its policy, TotalEnergies has, for many years, been monitoring the number of severe road accidents involving its employees and those of contractors. Over the past 5 years (2018 - 2023), the 63% reduction in the number of serious accidents demonstrates the efforts made, particularly thanks to the prevention campaigns targeting the drivers of heavy goods vehicles.

Based on the use of new technologies to prevent road accidents, TotalEnergies internal rules ask for all new heavy vehicles in the Marketing & Services segment to be equipped with certain driver assistance systems<sup>(1)</sup> wherever these technologies are offered by manufacturers. The decision was also made to generalize, at Company's perimeter, the use of fatigue and distraction detection systems, after conclusive tests carried out over several months on heavy vehicles in the Africa Marketing & Services zone. Deployment is underway globally with the aim of having these devices, as well as lane departure warning and frontal collision warning systems, on all heavy vehicles by the end of 2024. The Company's Rules require all the Company's light vehicles, as well as the contractors' dedicated light vehicles, to be also equipped with the same devices during fleet renewals.

Furthermore, for 2023-2024 the third part of the SafeDriver video campaign was launched with the theme "All SafeDrivers". The topics covered are: "I control my vehicle in all circumstances", "I don't drive if I'm tired and I avoid any distraction while driving" and "I'm attentive to others while driving".

Number of severe road accidents <sup>(a)</sup>	2023	2022	2021
Light vehicles and public transportation <sup>(b)</sup>	4	3	1
Heavy goods vehicles (trucks) <sup>(b)</sup>	7	12	20

(a) Overturned vehicle or other accident resulting in the injury of a crew member or a passenger (recordable accident).  
 (b) TotalEnergies vehicles or vehicles under long-term contract (over 6 months) with TotalEnergies.

**In the field of safety, in particular in the workplace**, the indicators monitored by TotalEnergies include work-related accidents whether they occur at workplace, during transportation within the framework of long-term contracts, or during an industrial accident. In addition to its aim of zero fatalities in the exercise of its activities, TotalEnergies has set itself the target of continuously reducing the TRIR indicator and, for 2024, of reducing it below 0.62 for all personnel of the Company and its contractors. The 2023 target was 0.65.

Safety indicators	2023	2022	2021
Millions of hours worked – All Personnel	400	392	389
Company Personnel	212	217	215
Contractors' employees <sup>(a)</sup>	188	175	174
Number of occupational fatalities – All Personnel	2	3	1
Company Personnel	0	0	1
Contractors' employees <sup>(a)</sup>	2	3	0
Number of occupational fatalities per hundred million hours worked – All Personnel	0.50	0.77	0.26
TRIR <sup>(b)</sup> : number of recorded incidents per million hours worked – All Personnel	0.63	0.67	0.73
Company Personnel	0.51	0.60	0.59
Contractors' employees <sup>(a)</sup>	0.77	0.76	0.91
LTIR <sup>(c)</sup> : (lost time injury rate) number of lost time accidents per million hours worked – All Personnel	0.40	0.45	0.48
Company Personnel	0.42	0.51	0.47
Contractors' employees <sup>(a)</sup>	0.38	0.39	0.48
SR <sup>(d)</sup> : number of days lost due to accidents at work per million hours worked - All Personnel	12	15	15

(a) As defined in point 5.11.4 of chapter 5.

(b) TRIR: Total Recordable Incident Rate.

(c) Lost Time Injury Rate.

(d) SR: Severity rate.

In 2023, out of the 252 occupational accidents reported, 248 related to accidents at the workplace. 72% of these occurred, in decreasing order of the number of accidents, walking, when handling loads or objects, using portable tools or working with powered systems.

The Company's efforts on safety have allowed it to reduce the TRIR by more than 60% between 2013 and 2023. This improvement is due to constant efforts in the field of safety and, in particular:

- the prevention of the risks of serious and fatal accidents by campaigns aimed at road transport and high-risk work,
- the implementation of the HSE rules and guides, which are regularly updated and audited,
- training and general awareness raising with safety issues for all levels of management (World Safety Day, special training for managers),
- HSE communication efforts targeting all Company personnel,
- the maintaining of HSE objectives into the remuneration policy for TotalEnergies employees (refer to point 5.6.1.2 of chapter 5).

(1) Such as AEB (advanced emergency braking). LDW (lane departure warning) and EBS (electronic braking system) for motor vehicles and RSS (roll stability support) for semi-trailers.

Despite the measures implemented and detailed below, there were regrettably two accidental fatalities among the personnel of contractors in 2023. In February, in the Netherlands, a worker lost his life in a reactor during a catalyst unloading operation in an inert atmosphere. In May, during excavation work at a service station in France a worker was struck by a metal beam he was guiding while handling it with a mechanical shovel. For each of these accidents, specific prevention measures have been taken at the Company level beyond the overall programs already in place, including the ban of any entry into confined spaces under an inert atmosphere during catalyst unloading operations. For each new catalyst unloading operation, alternative solutions have been developed and implemented at all TotalEnergies sites, and communicated to the industry's safety networks. Work supervision measures at service stations were furthermore reinforced.

**In the field of occupational health,** the annual Industrial Hygiene survey sent to the Company's Subsidiaries in order to evaluate the rate of

implementation of risk analyses in the workplace, to verify that potential exposures have been identified, and that action plans are in place.

	2023	2022	2021
Entities having carried out workplace Health risk analysis	92%	91%	88%

In this field, TotalEnergies uses the following indicators:

Health indicators (WHRIS scope)	2023	2022	2021
Percentage of employees with specific occupational risks benefiting from regular medical monitoring	100%	99%	97%
Number of occupational illnesses recorded in the year (in accordance with local regulations)	107%	129	158

### 3.6.8.3 Environment

This section is primarily intended to present implementation of measures with respect to Subsidiaries, while the implementation of measures specific to Suppliers is described in point 3.6.8.5 of this chapter.

#### SUBSIDIARY ASSESSMENTS

HSE audits, which include a section on the environment, are described in point 3.6.8.2 of this chapter.

The One MAESTRO reference framework states that the environmental management systems of the sites operated by the Company that are important for the environment<sup>(1)</sup> must be ISO14001 certified within two

years of start-up of operations or acquisition: 100% of these 79 sites were compliant in 2023. In addition to this requirement, at year-end 2023, a total of 281 sites operated by the Company were ISO14001 certified, including 14 newly certified sites.

#### ACTIONS TO MITIGATE RISKS AND PREVENT IMPACTS AND MONITORING PROCEDURES

In terms of preventing the risk of accidental pollution, TotalEnergies monitors indicators that allow it to assess the preparedness of Company operated sites for oil spills.

Oil spill preparedness	2023	2022	2021
Number of sites whose risk analysis identified at least one risk of major accidental pollution to surface water	122	113	119
Proportion of those sites with an operational oil spill contingency plan	100%	100%	100%
Proportion of those sites that have performed an oil spill response exercise or whose exercise was prevented following a decision by the authorities	99%	92%	97%

In accordance with industry best practices, TotalEnergies monitors accidental liquid hydrocarbon spills of more than one barrel. Spills that exceed a predetermined severity threshold are reviewed on a monthly basis and annual statistics are sent to the Performance Management Committee of the Company. All spills are followed by corrective actions aimed at returning the environment to an acceptable state as quickly as possible.

#### Accidental liquid hydrocarbon

spills of a volume of more than one barrel that affected the environment, excluding sabotage

	2023	2022	2021
Number of spills	27	49	65
Total volume of spills (thousands of m³)	1.7	0.1	2.0
Total volume recovered (thousands of m³)	~0.0 <sup>(a)</sup>	0.1	1.7

(a) Precisely 40 m³.

The reduction in the accidental events continued in 2023. A significant offshore spill was treated by dispersion in Nigeria.

As part of TotalEnergies' policy of avoiding, reducing and where necessary offsetting the environmental footprint and effects on nature in general of its operations, discharges of substances are identified and quantified by type of environment (water, air or soil) so that appropriate measures can be taken to better control them.

In 2015, SO<sub>2</sub> emissions reached 59 kt. TotalEnergies has set itself the target of reducing its emissions by 75% in 2030 (compared to 2015), which entails not exceeding 15 kt.

Atmospheric chronic emissions	2023	2022	2021
SO <sub>2</sub> emissions (in kt)	12	13	16
NO <sub>x</sub> emissions (in kt)	60	60	59
NM VOC emissions <sup>(a)</sup> (in kt)	43	48	58

(a) Non-methane volatile organic compounds.

SO<sub>2</sub> emissions that are likely to cause acid rain are regularly checked and reduced. In 2023, SO<sub>2</sub> emissions decreased due to investment implementation in Belgium, to an operating stop at a refinery in Belgium and to the supply of low sulphur content crude oils.

NOX emissions mainly concern the hydrocarbon exploration and production activities. They are mostly located offshore, far from the coast.

In January 2022, TotalEnergies set a new target for the quality of onshore discharge water to be achieved by 2030. Compared to the previous objective, it divides by 15 the maximum hydrocarbon content expected for these discharges. At year-end 2023, 100% of onshore sites comply with the previous objective of 15 mg/l and 86% with the reinforced objective of 1 mg/l introduced in 2022. Studies have been launched to improve the discharges from sites that are still not in compliance.

(1) Production sites of the subsidiaries of the Exploration & Production segment subsidiaries, sites producing more than 250 kt/y in the Refining & Chemicals and Marketing & Services segments, and gas-fired power plants in the Integrated Power segment, operated by the Company.

Discharged water quality	2023	2022	2021
Hydrocarbon content of offshore continuous water discharges (in mg/l)	11.6	12.9	13.7
% of sites that meet the target for the quality of offshore discharges (30 mg/l)	92%	93%	92%
Hydrocarbon content of onshore continuous water discharges (in mg/l)	1.9	1.8	2.6

Discharged water quality	2023	2022	2021
% of sites that meet the target for the quality of onshore discharges of goal 2030: 1 mg/l	86%	73%	80%

As part of the implementation of its **biodiversity ambition**, an overview of measures already taken and updated for 2023 under the four core principles of this ambition is provided in point 5.5.4 of chapter 5.

### 3.6.8.4 Climate

#### SCOPE OF REPORT

This part of the implementation report relates to greenhouse gas emissions resulting from the Company's Activities (Scope 1+2), in accordance with the provisions of Article L. 225-102-4 of the French Commercial Code. TotalEnergies also reports on indirect greenhouse gas

#### GOVERNANCE

In order to contribute concrete responses to the issue of climate change, TotalEnergies relies on a structured organization and governance.

Climate issues are addressed at the highest level of the organization by the Board of Directors and the Executive Committee, which have fully committed to transforming TotalEnergies into an integrated energy company and a major player in the energy transition. The Chairman and Chief Executive Officer with the members of his Executive Committee as well as the Lead Independent Director participate all year long to a nourished dialogue with shareholders and different stakeholders on the Company's climate issues. As an illustration, on April 4 and 5, 2023, the Lead Independent Director exchanged with diverse shareholders representing close to 20% of the share capital of TotalEnergies SE. These meetings have been the opportunity of a dialogue about the transition strategy of TotalEnergies, its progress and the update of its climate ambition.

#### Oversight by the Board of Directors

TotalEnergies' Board of Directors endeavors to promote value creation by the business in the long term by taking into consideration the social and environmental challenges of its business activities. It determines the Company's strategic orientation and regularly reviews, in connection with this strategic orientation, the opportunities and risks such as financial, legal, operating, social and environmental risks, and the measures taken as a result. It thus ensures that climate-related issues are incorporated into the Company's strategy and the investment projects that are submitted to it. It examines climate change risks and opportunities during the annual strategic outlook review of the Company's business segments. It reviews performance each year.

The skills of the directors in the area of climate are presented in section 4.1.1.5 of chapter 4. A continuing training program relating to the climate for directors has been approved in 2021 and it includes different modules about the following themes: Energy, Climate Change and Environmental Risks; Energy and Climate; Climate Change and Financial Risks and Opportunities; Causes and challenges of global warming. In 2022, as part

emissions related to the use by customers of energy products (Scope 3<sup>(1)</sup>) and related actions, in accordance with Article L. 225-102-1 of the French Commercial Code, in its extra-financial performance statement (refer to point 5.4 of chapter 5).

The Board of Directors also reports annually to the shareholders on the progress made. As in 2022 and 2021, the Board of Directors submitted at the Annual Shareholders' Meeting on May 26, 2023 to the shareholders of TotalEnergies SE for their opinion the Sustainability & Climate Progress Report 2023, reporting on the progress made in the implementation of the Corporation's ambition in terms of sustainable development and energy transition towards carbon neutrality and its related targets by 2030, and complementing this ambition. This resolution was approved by close to 89% of the votes cast.

In support of the Company's governance bodies, the Sustainability and Climate division shapes the approach to climate and accompanies the strategic and operational divisions of the Company's business segments. By defining and monitoring indicators, progress can be measured and the Company's actions can be adjusted (details of the indicators used are provided in point 5.4.4 of chapter 5).

of this training program, directors participated in the Climate Fresco (a scientific, collaborative and creative workshop designed to raise awareness of climate change and in particular its causes and consequences). In 2023, several Directors attended individual climate-related trainings, either in-person or via digital courses.

Directors are invited to Company's site visits. The visits contribute in a very concrete way to the training of Directors and allow them to deepen their knowledge of the specificities of the Company, its challenges, its businesses - including new businesses - and its teams. They are often the occasion for thematic presentations.

In this context, site visits were organized in 2023, by groups of directors accompanied by a member of the Executive Committee, in Congo (Exploration & Production, Marketing & Services, Nature Based Solution), in Qatar (LNG, Renewable, Exploration & Production), in Texas (Refining, Renewables, Trading) and, in France, at Pau (Technical Center, Biogas, Methane R&D) and at La Mède (biofuels, renewables, local development).

(1) GHG Protocol – Category 11 (refer to the glossary or to point 5.11.4 of chapter 5 for further details).

To carry out its work, the Board of Directors relies on its Strategy & CSR Committee, whose Rules of procedure were amended first in September 2017, and again in July 2018 in order to broaden its missions in the realm of CSR and in questions relating to the inclusion of climate-related issues in the Company's strategy. In this regard, the Strategy & CSR Committee held on September 20 and 21, 2023 a strategy seminar to review the following topics: energy demand analysis scenarios, hydrogen activity and a presentation dedicated to the Integrated Power activity. At this occasion, Directors exchanged views with Dan Yergin, Vice President of S&P Global, on the challenges of energy transition in the United States and worldwide. The strategy seminar also provided an opportunity to examine the levers of Integrated Power's profitability, as well as the state of technology and the evaluation of the costs of hydrogen.

The Audit Committee, which is already reviewing the extra-financial performance declaration, has taken steps to take on the new tasks arising from the regulations on the reporting of sustainability information. In particular, it will monitor the process of drawing up the sustainability report that will succeed the extra-financial performance declaration, and which will be published for the first time in 2025 in relation to the 2024 financial year. It also monitors the certification of sustainability information.

The Board of Directors has also been integrating climate issues into the compensation structures for several years. The criteria for determining the variable part of the compensation of the Chairman and Chief

### **Role of management**

The Executive Committee chaired by the Chairman & Chief Executive Officer ensures that climate-related issues are taken into account and built into operational roadmaps. The Executive Committee is responsible for identifying and analyzing risks that could affect the achievement of TotalEnergies' objectives.

The TotalEnergies Risk Management Committee (TRMC) assists the Executive Committee. The TRMC's primary duties are to ensure that the Company's risk mapping is updated on a regular basis and that its existing risk management processes, procedures and systems are effective.

The Strategy & Sustainability Division coordinates the Company's activities through the entities in charge of strategy and markets analysis,

## **STRATEGY**

### **A. OUR AMBITION AND OUR PROGRESS**

#### **1. Global challenges: more energy, less emissions**

Energy is an essential resource, everywhere indispensable for living: for food, lighting, heating and cooling, transport, healthcare, construction and trade.

Historically, energy demand has grown in line with demographic growth and rising living standards.

The world's population is set to grow by almost 2 billion additional inhabitants by 2050. This prospect will have significant implications for achieving the UN's Sustainable Development Goals (SDGs) to improve prosperity and social well-being while protecting the environment and biodiversity.

In the **countries of the Global South**, where access to energy is already one of the limiting factors in human development, populations aspire to improve their quality of life.

In **OECD countries**, energy has enabled socio-economic development that no country is prepared to forego.

The IPCC reiterated in 2021<sup>(1)</sup> that global warming is the consequence of greenhouse gases (GHG) emissions linked to human activities, and warned of the environmental and socio-economic impacts of this already tangible climate change.

Executive Officer include quantitative criteria related to the evolution of greenhouse gas emissions on the operated facilities (Scope 1+2), and since 2024, related to the Integrated Power cash flow (CFFO) generation. The evaluation of the personal contribution of the Chairman and Chief Executive Officer provide qualitative criteria that also include climate issues, through criteria related to (i) steering the transformation strategy towards carbon neutrality, in line with the 2020/2030 targets announced to investors, in particular the increase of gas and power production, as well as the evolution of its sales mix, (ii) profitable growth in renewables and electricity, as well as (iii) CSR performance assessed notably through the integration of climate issues in the Company's Strategy, the Company's commitment and ratings regarding CSR, as well as the policy of diversity.

The variable compensation of the Company's senior executives (approximately 300 people at the end of 2023) includes a criterion linked to the achievement of the GHG emissions reduction target.

Since 2020, the criteria for awarding performance shares to the Chairman and Chief Executive Officer and to all the Company's employees also include performance conditions related to climate-targets (refer to point 4.3.2 in chapter 4).

sustainability and climate, and also safety, health and environment, legal affairs, relations with public authorities and internal audit. Its President also chairs the Risk Committee (CoRisk) which is in charge of the Company's investments.

The Finance Division ensures an ongoing dialogue with investors, analysts and extra-financial rating agencies on climate challenges and on extra-financial issues more broadly. In all, more than 450 meetings were held in France and worldwide in 2023.

#### **"TotalEnergies supports the Paris Agreement."**

Since the Paris Agreement in 2015, States have jointly pledged "to strengthen the global response to the threat of climate change, in the context of sustainable development and the fight to eradicate poverty, in particular by holding the increase in global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels".

The energy system must therefore be transformed, because energy is at the heart of this global climate challenge: GHG emissions linked to the production or use of energy account for over 60% of global emissions in 2021 (ref. IPCC & IEA), as the global energy system is still 80% relying on fossil fuels.

There is an urgent need to accelerate the development of a decarbonized energy system, while maintaining the current energy system at a level sufficient to meet global demand and organize a just, orderly and equitable transition of energy systems.

(1) Climate Change 2021: The Physical Science Basis and other assessment reports 6.

## 2. Global challenges: COP28 and actions to be taken

TotalEnergies welcomes the agreement reached in Dubai that calls for "transitioning away from fossil fuels" in a "just, orderly and equitable manner." Within this framework, TotalEnergies notes with interest the agreement's reference to transitional fuels such as gas.

TotalEnergies supports the objectives of tripling the amount of renewable energy and doubling energy efficiency by 2030, as well as slashing methane emissions within that time frame. These objectives are at the heart of TotalEnergies' roadmap for 2030.

This agreement reinforces TotalEnergies' transition strategy, which aims, on the one hand, to contribute to the development of a new decarbonized energy system based on electricity and renewables, in which gas plays a useful role as a flexible transitional energy; and, on the other hand, to support a just, orderly and equitable transition away from fossil fuels, notably in emerging countries that legitimately aspire to economic and social development for their populations.

Given the energy-related emissions as shown in the chart hereafter, **reducing the associated emissions implies in the short term:**

- Minimising the share of coal in the electricity mix, starting from OECD countries,
- Decarbonizing the road transport sector (currently 90% powered by petroleum products),
- Aiming for the elimination of methane emissions from fossil fuel production processes.

## 3. A two-pillar multi-energy strategy

### a. TotalEnergies stays the course of its balanced integrated multi-energy strategy...

TotalEnergies reaffirms the relevance of its balanced integrated multi-energy strategy considering the developments in the oil, gas and electricity markets. Anchored on two pillars, Oil & Gas, notably LNG, and electricity, the energy at the heart of the energy transition, the Company is in a very favorable position to take advantage of energy prices evolution. Thanks to the refocusing of the Oil & Gas portfolio on assets and projects with low breakeven and low GHG emissions, and to the diversification into electricity, notably renewable, through an integrated strategy from production to customer, the Company is implementing its transition strategy while ensuring an attractive shareholder return policy.

### b. ...responsibly producing low cost, low emission Oil & Gas

While drastically lowering the emissions from its operations, TotalEnergies plans to grow its Oil & Gas production by 2-3% per year over the next five years, predominantly from LNG, thanks to its rich low cost low emission Upstream portfolio.

The Company plans notably to develop a top-tier pipeline of LNG projects (Qatar North Field Expansion, Papua LNG, Energía Costa Azul LNG and Rio Grande in the US, Mozambique LNG) while leveraging its leading position in Europe in regasification and its leading LNG exporter position in the United States.

TotalEnergies plans to launch the production of its portfolio of high-return oil projects (Brazil, Gulf of Mexico, Iraq, Uganda) recently enriched with exploration successes in Suriname and Namibia.

To achieve this, massive investments are needed, not only in renewable energy, but also in electricity networks and systems enabling to ensure the availability of the new electricity system.

Another challenge is to **reduce fossil fuel consumption at the right pace**. In the Global South, fossil fuels remain an affordable solution for providing growing populations with access to energy, and therefore greater prosperity.

In OECD countries, an accelerated transition means retiring existing assets at country, industry and household levels, and investing in new low-carbon assets.

The transition will not take place without **social acceptability** (both between North and South and within OECD countries) and without genuine efforts in terms of **climate justice**.

Accelerating the pace of investment in low-carbon energies requires **strong cooperation between the private and public sectors**:

- In OECD countries, simplify and speed up the permitting process to accelerate the deployment of grids and renewable energies.
- Actively support the transition of the Global South through (i) the development of multilateral financial guarantees essential to project financing and (ii) the deployment of training programs to support the local implementation of new technological solutions.

The key indicator of our progress on this pillar is the reduction in Scope 1+2 emissions because our first duty as a producer of hydrocarbons is to reduce the GHG emissions linked to their production.

### c. ...and developing a profitable and differentiated Integrated Power model to create a future cash engine of the Company

TotalEnergies is replicating its integrated Oil & Gas business model into the electricity value chain to achieve a profitability (ROACE<sup>(1)</sup>) of ~12% for the Integrated Power segment, equivalent to Upstream Oil & Gas ROACE at 60 \$/b, above the returns of the traditional Utilities model.

The Company is building a world class cost-competitive portfolio combining renewable (solar, onshore wind, offshore wind) and flexible assets (CCGT, storage) to deliver low-carbon electricity available 24/7. In particular, TotalEnergies is leveraging its scale effect in equipment purchase to optimize its investment costs and industrialize its renewable assets through digital to lower operating costs. TotalEnergies also uses the strength of its balance sheet to keep market exposure, allowing it to capture additional margins in a market exposure.

The Company aims to grow its power generation to more than 100 TWh by 2030, investing around \$4 billion per year; the generated cash flow of this segment was \$2.2 billion in 2023 and will be more than \$4 billion in 2028, becoming net cash-flow positive at that time.

Additionally, TotalEnergies invests in low-carbon molecules (biofuels and biogas, as well as hydrogen and its derivatives: e-fuels and SAF).

(1) Refer to the glossary for definitions and additional information on alternative performance measures (APM, Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.

#### 4. A Net Zero Company by 2050 together with society

TotalEnergies reaffirms its ambition to be a major player in the energy transition and shares a vision of what its activities could be to achieve carbon neutrality by 2050, together with society.

##### By 2050, TotalEnergies would produce:

- about 50% of its energy in the form of electricity, including the corresponding storage capacity, totaling around 500 TWh/year, on the premise that TotalEnergies would develop about 400 GW of gross renewable capacity;
- about 25% of its energy, equivalent to 50 Mt/year of low-carbon energy molecules in the form of biogas, hydrogen, or synthetic liquid fuels from the circular reaction:  $H_2 + CO_2 \rightarrow e\text{-fuels}$ ;
- around 1 Mboe/d of Oil & Gas (about a quarter of the production in 2030, consistent with the decline envisaged by the IEA's Net Zero scenario), primarily liquefied natural gas (about 0.7 Mboe/d, or 25-30 Mt/year) with very low-cost oil accounting for the rest. Most of that oil would be used in the petrochemicals industry to produce about 10 Mt/year of polymers, of which two thirds would come from the circular economy.

**That Oil and Gas would represent** about 10 Mt CO<sub>2</sub>e/year of Scope 1 residual emissions, with methane emissions aiming towards zero (below 0.1 Mt CO<sub>2</sub>e/year); those emissions would be offset in full by projects using nature-based solutions (natural carbon sinks).

### B. OUR ORDERLY ENERGY TRANSITION

#### 1. Oil: Today's energy

##### a. Producing oil differently: focus on low cost and low-carbon intensity oil assets

In 2023, global demand for petroleum products reached 101.8 Mb/d, i.e. +2.3 Mb/d compared to 2022, and should continue to grow over the decade according to the IEA (105.7 Mb/d by 2028)<sup>(1)</sup>. These demand forecasts remain dependent in particular on population and economic growth, market penetration pace of low-carbon technology innovations such as electric vehicles and changes in behavior.

In addition, it will evolve in a differentiated way according to the specific energy transition roadmaps of the various countries.

Thus, demand for oil could start to decline around 2030, but at a slower rate than the current natural decline rate of existing fields (around 4% per year).

TotalEnergies therefore believes that new oil projects are still needed to meet this demand and to keep prices at an acceptable level in order to create the conditions for a just transition that allows people time to adapt their energy use. In 2023, TotalEnergies produced 1.4 Mb/d of oil, equivalent to its 2019 level, representing around 1.5% of world production.

The first responsibility of TotalEnergies as an oil producer is to produce differently, meaning while minimizing emissions. To that end, we approve hydrocarbon projects on the basis of performance criteria, notably technical costs and carbon intensity (Scope 1+2). We operate our fields in accordance with strict requirements concerning safety, emissions reduction and environmental impact. The cash flow generated by these Oil & Gas activities contributes to accelerating our investments in renewable energy.

In 2050, our trading portfolio would be aligned with our productions and sales portfolio.

#### 5. 2030: Our objectives for more energy and less emissions

Over the decade 2020-2030, TotalEnergies' energy transition strategy based on two pillars is reflected notably in the production targets shown below.

##### Production

We plan to increase our energy production (oil, gas and electricity) by 4% per year between 2023 and 2030, while reducing emissions (Scope 1+2 and methane) from our operated facilities.

#### 6. How TotalEnergies' 2030 objectives compare to the IEA scenarios

Reducing GHG emissions at our operated facilities (Scope 1+2) is key to our ambition to supply more energy while curbing GHG emissions. Our objective of cutting net Scope 1+2 emissions from our operated activities by 40% is consistent with the reduction targets of the European Union's "Fit-for-55" program (a 37% decrease between 2015 and 2030) and the IEA's 2023 Net Zero Emissions (NZE) scenario (a 31% decrease between 2015 and 2030).

An independent third party (Wood Mackenzie) has audited the calculations made and the trajectories presented.

##### b. Relentlessly reducing our Scope 1+2 emissions, Oil & Gas

Our primary responsibility as a producer of fossil fuels is to substantially reduce emissions on our facilities. We are resolutely continuing to reduce emissions from our operated sites. Across the 2015 scope of our Oil & Gas activities, emissions from our operated assets fell by more than 34% from 2015 levels, dropping from 46 to 30 Mt CO<sub>2</sub>e in 2023 (a decrease by 36% for Oil & Gas operated upstream and a decrease by 32% in Refining & Chemicals).

In 2023, with more than 140 GHG emissions reduction projects coming to fruition, we reduced our emissions by 1.5 Mt CO<sub>2</sub>e across our operated assets.

These ongoing reduction efforts have made it possible to reduce the Scope 1+2 equity intensity of our Upstream Oil & Gas assets, from 20 kg CO<sub>2</sub>e/boe in 2020 to 18 kg CO<sub>2</sub>e/boe in 2023<sup>(2)</sup>. These results put us among the players with the best intensities in the industry.

##### c. Scope 1+2 emissions reduction by 2030

###### Scope 1+2 emissions reduction objectives

TotalEnergies reaffirms its decarbonization objective, which aims to reduce its Scope 1+2 net emissions by -40% to 2030 compared to 2015, net of 5-10 Mt of natural carbon sinks.

Our objectives include emissions generated by the growth strategy in electricity we have pursued since 2015, which has prompted us to create a flexible power generation portfolio of plants (CCGT).

In 2023, GHG emissions from our operated assets were 24% lower than in 2015, standing at close to 35 million tons of CO<sub>2</sub>e. Between 2022 and 2023, the reduction in these emissions is 13%. It is mainly due to lower utilization rate of CCGTs, emissions reduction projects, such as for example the reduction of burning in Angola, and Nigeria, and the improvement of energy efficiency.

(1) Source IEA Oil June 2023.

(2) Equity Oil & Gas Upstream intensity is calculated excluding integrated LNG assets.

To achieve our 2030 target, we are mobilizing every tool at our disposal to avoid and reduce emissions from our operations. Compensation from natural carbon sinks will only begin from 2030 onwards, to offset residual emissions in pursuit of our objective, on the basis of a consumption of about 10% of our stock of carbon credit units per year.

#### **d. Our energy efficiency plan: \$1 Billion over 2 years**

##### **Energy efficiency plan – 2023 Progress**

Generating energy savings in our operations is beneficial in several ways: we contribute to the collective campaign for energy efficiency, we help to reduce our carbon emissions and we lower our costs.

In September 2022, TotalEnergies launched a plan to accelerate energy efficiency gains at its operated sites worldwide. We are investing \$1 billion in efforts to further reduce our energy use.

This plan, centered on four key levers, will support the measures adopted over the past several years within the Company's business segments. Each business segment has developed a plan to accelerate its energy savings, with more than 150 initiatives logged at Exploration & Production, over 200 projects at Refining & Chemicals and more than 40 initiatives at Marketing & Services and Gas, Renewables & Power.

To keep up with these efforts, a growing number of sites are ISO 50001 certified. The projects already identified which will be launched in 2024 should make it possible to achieve the reduction objective of 2 Mt CO<sub>2</sub>e.

#### **2. Gas: a transition fuel**

##### **a. Liquified Natural Gas: a key fuel for the energy transition**

In the gas markets, TotalEnergies focuses on Liquefied Natural Gas (LNG), which can be shipped everywhere in the world and thus contributes to energy security, as it has been the case in Europe since 2022 with the strong reduction of Russian pipeline gas deliveries.

The growth of renewable electricity, intermittent and seasonal by nature, will require an increase in flexible power generation resources. The flexible production of gas-fired power plants, which emit half as much GHG as coal-fired power plants for the same amount of electricity produced<sup>(1)</sup>, enables to secure electricity generation which does not depends on weather conditions contrary to renewable energy, and to face demand fluctuations. In addition, natural gas plays an essential role in reducing emissions from power generation as a replacement of coal, particularly in Asia where this one still accounts for a very large part of the electricity mix of many countries (e.g. 63% in China, 72% in India)<sup>(2)</sup>.

With diversified positions, and in particular its leading position of exporter in the United States - over 10 Mt in 2023 - TotalEnergies is the 3<sup>rd</sup> world's largest LNG player, with 44 Mt sold in 2023. The Company intends to consolidate its position as an integrated player by developing a first-class portfolio that will enable it to achieve 50% growth in volumes between 2023 and 2030.

##### **Reducing the carbon footprint of the LNG portfolio**

TotalEnergies aims to gradually reduce GHG emissions of the value chain, from the production of the gas to end use.

In addition to efforts to reduce methane emissions, initiatives are being implemented throughout the whole chain. The electrification of liquefaction plant processes is helping to reduce LNG's carbon footprint today, and tomorrow this reduction will be reinforced by CO<sub>2</sub> capture and storage projects.

We are also working to reduce shipping emissions by renewing our fleet of chartered LNG carriers with modern, high-performance vessels.

#### **b. Aiming for Zero methane emissions**

Methane is a greenhouse gas with a global warming potential 30 times higher than that of CO<sub>2</sub> and a much shorter atmospheric lifetime<sup>(3)</sup>. This makes reducing methane emissions a priority in efforts to mitigate global warming. To date, more than 150 countries have signed the Global Methane Pledge launched in Glasgow in 2021, which aims to reduce methane emissions by 30% from 2020 levels by 2030. Anthropogenic methane emissions come mostly from energy, waste and agriculture. Around 25%<sup>(4)</sup> come from the Oil & Gas industry. TotalEnergies believes that it is the industry's responsibility to aim for zero methane emissions by 2030 and wants to set an example for the industry. Our plan is based on three actions: eliminating routine flaring, eliminating vents and repairing leaks as soon as they are detected.

##### **Continuous excellence in our operations**

TotalEnergies has already reduced its operated methane emissions by more than 60% since 2015, date of the Paris Agreement, even though the Oil & Gas industry as a whole has maintained an almost constant level of emissions over this period, according to IEA estimates. In early 2022, TotalEnergies set very ambitious, specific targets for the decade ahead that call for a 50% reduction from 2020 levels by 2025 and 80% by 2030<sup>(5)</sup>. These targets cover all of the Company's operated assets and go beyond the 75% reduction in methane emissions from Oil & Gas by 2030 (vs 2020) as recommended by the IEA when creating the NZE scenario. TotalEnergies is making rapid progress towards this objective: in 2023, our operated methane emissions were 34 kt, down 47% vs 2020. TotalEnergies now aims to reach its 2025 target of -50%, one year ahead of schedule, in 2024.

TotalEnergies is a signatory of the Oil & Gas Decarbonization Charter launched at COP28, which includes the ambition "Aiming for near-zero Upstream methane emissions by 2030". In line with this collective ambition, TotalEnergies is strengthening its methane intensity<sup>(6)</sup> target of less than 0.1% by 2030 on its gas facilities, by extending it to all its operated Upstream Oil and Gas facilities.

At the same time, TotalEnergies is fully assuming its leadership role in the fight to collectively reduce methane emissions.

##### **Our drone-based methane detection and quantification technology made available to several national oil companies**

TotalEnergies works alongside its partners to implement best practices on its non-operated assets.

The Company is a pioneer in the detection and quantification of emissions in real-life conditions. After deploying its AUSEA (Airborn Ultralight Spectrometer for Environmental Application) drones at all its upstream operated sites worldwide, TotalEnergies has performed in 2023 the first AUSEA flights on non-operated assets during four campaigns in: Qatar, Brazil, Azerbaijan and the United Arab Emirates.

TotalEnergies has also announced in recent months the signing of five cooperation agreements with national oil companies to make its AUSEA methane emissions detection and quantification technology available: Petrobras in Brazil, SOCAR in Azerbaijan, Sonangol in Angola, NNPC<sup>(7)</sup> in Nigeria and ONGC<sup>(8)</sup> in India.

(1) IEA 2023, Life Cycle Upstream Emission Factors (Pilot Edition).

(2) Source: Enerdata.

(3) Around 12 years compared with centuries for CO<sub>2</sub>. Global Warming Potential of 80 over 20 years and 30 over 100 years (Source: IPCC 6<sup>th</sup> Assessment Report).

(4) IEA Global Methane Tracker 2023, License CC BY 4.0.

(5) Excluding biogenic methane.

(6) Methane emissions intensity in relation to commercial gas produced.

(7) Nigerian National Petroleum Company Limited.

(8) Oil and Natural Gas Corporation.

## Highlights

### • OGMP 2.0 Gold standard

In its "An Eye on Methane" report for 2023, the United Nations Environment Programme (UNEP)<sup>(1)</sup> confirmed TotalEnergies' Gold Standard status for the 3<sup>rd</sup> year in a row, and rated our strategy for engaging partners in our non-operated assets as "all-stars"<sup>(2)</sup>. Each year, this report reviews the deployment by Oil & Gas companies of the Oil & Gas Methane Partnership's OGMP 2.0 framework, which was created in 2020 to guide reporting on methane in the Oil & Gas industry. The framework encourages companies to continue improving their reporting of operated and non-operated emissions and focuses on performing onsite measurements to verify that estimates are exhaustive and accurate.

### • Support for the World Bank's new methane trust fund

TotalEnergies was the first company to announce a contribution of \$25 million over the period 2024-2030 to the Global Flaring and Methane Reduction (GFMR) trust fund launched by the World Bank at COP28. The GFMR will target, finance and support strategic projects to eliminate routine flaring and reduce methane emissions in countries with the greatest emissions reduction potential.

### c. Expanding geological carbon storage to reduce our emissions and those of our customers

The IEA's NZE scenario<sup>(3)</sup> includes the use of CCS<sup>(4)</sup> up to of 6 Gt CO<sub>2</sub> per year in 2050, to reduce part of the emissions from residual Oil & Gas consumption, as well as those from industrial processes (cement, lime, steel, etc.). This capacity is more than 100 times greater than the 45 Mt CO<sub>2</sub> per year currently captured worldwide.

Our CCS strategy gives priority to decarbonizing our activities in order to reduce Scope 1+2 emissions from our Upstream Oil & Gas assets, refining and LNG plants. For example, at the Snøhvit liquefaction plant, where we are a partner alongside Equinor, around 8 Mt of native CO<sub>2</sub> have been stored since 2008. Similarly, the native CO<sub>2</sub> separated in the new NFE and NFS LNG liquefaction trains currently under development will be stored by QatarEnergy. The same will be true for the native CO<sub>2</sub> separated on Cameron LNG to be stored in the Hackberry CCS storage facility in the context of a new train project by Cameron LNG. Finally, for our Ichthys LNG asset in Australia, we are studying a native CO<sub>2</sub> storage solution for start-up before 2030. The study of CCS solutions on our assets therefore complements the efforts already mentioned to reduce emissions (electrification, energy efficiency, flaring reduction, etc.).

The Company also invests in CO<sub>2</sub> storage projects for third parties ("Storage as a Service"), offering CO<sub>2</sub> storage solutions to large industrial customers who can thus reduce their Scope 1 emissions and secure the future of their activities. By 2023, we have already invested around \$100 million in this business. We will continue to invest heavily in storage projects, both for our own assets and for third parties, to achieve our objective of developing more than 10 Mt CO<sub>2</sub> of storage capacity by 2030.

Europe is at the heart of this CCS strategy. Our Company is one of the incumbent operators in the North Sea and has recognized operational and geological expertise in the area. The United Kingdom, Norway and Europe have set themselves objectives, regulations and provided significant financial support to promote the cross-border deployment of CCUS<sup>(5)</sup>. We are currently developing five projects in the North Sea that will provide decarbonization solutions for our assets and those of our

customers. Our ambition is to continue to acquire new exploration permits to increase our CO<sub>2</sub> storage capacity after 2030.

We are also investigating the use of carbon in various forms (CCU<sup>(6)</sup>).

### d. Offsetting residual emissions with natural carbon sinks

Natural areas preservation and restoration can be a lever for achieving net zero emissions worldwide by 2050.

Only in 2030 will TotalEnergies begin voluntary offsetting of its residual emissions via NBS (Nature Based Solutions) carbon credits, and will offset only Company's Scope 1+2 residual emissions.

We are working to build a high-quality portfolio and are paying close attention to the integrity and permanence of the emissions reductions and sequestration achieved by the activities financed in this way.

We are in favor of strengthening a global framework of trust to further reinforce robust and recognized voluntary crediting mechanisms.

We are investing in forestry, regenerative agriculture and wetlands protection projects. Our strategy aims to combine and balance the value of people's financial revenue from agriculture and forestry and the value of the benefits to soil, biodiversity, the water cycle and the production of carbon credits. When that approach is successful, the local standard of living improves and degradation of the land diminishes – as do emissions. This search for balance among different practices makes a just transition possible.

At 2023 year end, our stock of credits stood at just under 11 million out of which the very large majority is certified by VERRA VCS standard (> 99%; the remaining < 1% being certified by the Australian Carbon Credit Units Scheme of the Australian Government). We have allocated \$100 million annually for these projects, and the cumulative budget pledged for all of these campaigns amounts to nearly \$725 million over their cumulated lifespan, with the accumulated credits expected to total 44 million in 2030 and 71 million in 2050.

The final tally of credits obtained will be determined once the projects have been completed. If such a stock of 44 million credits is built up in 2030 and on the basis of a consumption of 10% of the stock per year from 2030, then TotalEnergies would use around 5 million credits per year from 2030 onwards.

### Highlight: Invest in a fund

In 2023, the Company has made the decision to invest \$100 million over 15 years in the projects of the Nature Based Carbon fund managed by Climate Asset Management, which focuses on preserving or restoring three types of ecosystems: degraded natural forests, grasslands impacted by human activity and wetlands.

### e. Anticipating changes in demand by adapting our sales of petroleum products

A significant part of TotalEnergies' Downstream refining and marketing activities are located in Europe. The European Union with its Green Deal and its "Fit for 55" regulatory package, has the ambition to be the first carbon-neutral continent by 2050.

These major trends are leading us to accelerate the transition of our Downstream activities in Europe to reduce our exposure to petroleum products and to develop in new mobilities.

(1) 3<sup>rd</sup> International Methane Emissions Observatory report.

(2) « All-stars of non-operated joint venture engagement: TotalEnergies has submitted one of the most comprehensive strategies for engaging its non-operated joint ventures. The company has provided detailed information on how it is supporting, progressing and collaborating with each non-operated joint venture. It has also provided detailed observations on its reconciliation attempts and a gap analysis process. In addition, TotalEnergies is providing technology access and support to its non-operated joint venture operators. » (Source IMEO report 2023).

(3) IEA 2023; Net Zero Roadmap, 2023 update, License CC BY 4.0.

(4) Carbon Capture & Storage.

(5) Carbon Capture Utilization & Storage.

(6) Carbon Capture & Utilization.

Thus, at a global level, we expect to reduce our sales of petroleum products by 40% by 2030, so that we do not sell or refine more fuel than our oil production. This means, in particular, that our service-station networks have to adapt to lower demand for fuels, notably through disposals in Europe.

Conversely, this strategy is leading us to develop actively in new mobilities: in low-carbon molecules, we have initiated the conversion of its refineries into biorefineries in Europe; in electric mobility, the Company is accelerating our growth with a plan to deploy charging points on major corridors and motorways and in large cities in Europe. In hydrogen, we are notably developing a European network of hydrogen stations for trucks, in partnership with Air Liquide.

### **3. Electricity: the energy of decarbonation**

#### **a. Our major development in electricity: an integrated approach**

Electricity demand, which is vital to the success of the energy transition, is expected to grow sharply, as decarbonization is at the heart of the roadmaps of countries committed to carbon neutrality by 2050. In response, Integrated Power, a new pillar of the Company's strategy, is developing an integrated model encompassing the entire value chain, from power generation to sales and trading activities, with a profitability target of ~12% ROACE<sup>(1)</sup>.

TotalEnergies net electricity production target is to produce more than 100 TWh by 2030, thanks to a 4 to 5-fold increase in renewable production (19 TWh in 2023) and a 2-fold increase in flexible assets production (15 TWh in 2023). As part of its ambition to achieve carbon neutrality by 2050, TotalEnergies is building a competitive portfolio of renewable (solar, onshore and offshore wind) and flexible (CCGT, storage) assets to provide its customers with less and less carbon-intensive electricity available 24/7.

The Company's levers to grow with a return on average capital employed of ~12% are selectivity in its choices of projects; integration across the entire electricity value chain; cost control using our project management and offshore development skills; mobilizing external financing at competitive rates and making partial divestments to accelerate cash flow generation and diversify our portfolio's exposure.

#### **b. Our renewable electricity capacity build-up**

We are executing our roadmap in renewable electricity.

At year-end 2023, TotalEnergies reached a gross installed production capacity of 22 GW of renewable electricity and intends to continue developing these activities to reach 35 GW by 2025 and 100 GW by 2030, a level that would bring us among the world's top five producers of renewable electricity (wind and solar) excluding China.

#### **c. Developing electric mobility**

TotalEnergies plans to invest more than \$1 billion in electric mobility between 2024 and 2028, developing a network of high-power electric charging stations along motorways, major roads and in urban hubs in Europe.

By 2028, the Company's ambition is to have 1,000 high power charging sites in Europe.

In addition to this network adapted to road roaming, TotalEnergies supports its B2B customers in their transition to electric mobility by offering services for the deployment and supervision of charging stations at the workplace, as well as at employees' homes. For heavy duty trucks in particular, the Company is developing a tailor-made offer for road haulers, with smart charging and green electricity supply solutions in addition to in-depot charging. To meet their charging needs outside their depots, TotalEnergies plans to install high power charging points suited to this type of vehicles along European corridor from 2024 onwards.

The Company is also developing its recharging network in a number of cities around the world, with a portfolio of over 30,000 charging points in operation or under deployment in Paris, London, Brussels and Singapore.

Finally, TotalEnergies supports its individual customers at home, with home charging solutions that include an energy supply contract or on the road with subscription offers allowing access to a very large network of charging stations.

From the production of renewable electricity to the operation of charging services, the Company is present across the entire electric mobility value chain.

### **4. New low-carbon energy and innovations to achieve Net Zero by 2050**

#### **a. New low-carbon energy**

The energy transition also requires the development of low-carbon energy based on the conversion of biomass and waste or the production of e-fuels combining hydrogen with CO<sub>2</sub> used as a raw material.

TotalEnergies is thus developing these new energy: biofuels, biogas, hydrogen and e-fuels.

#### **Biofuels**

Today, biofuels emit 50% less CO<sub>2</sub> than their fossil fuel equivalents<sup>(2)</sup>, making them a decarbonization pathway for liquid fuels. Because demand is strong, this is a high-margin market, but access to feedstocks (plants, residues, sugar, etc.) remains a barrier to growth. Among these biofuels, TotalEnergies favors the production of Sustainable Aviation Fuel (SAF) to decarbonize the aviation industry. To avoid land use conflicts, TotalEnergies is developing solutions based on primarily food industry waste and residues (used oils, animal fats). Our aim is to increase the share of circular feedstocks to more than 75% as from 2024 in its production of biofuels.

#### **Biogas**

Biogas, produced from the decomposition of organic waste, is a renewable gas. Injected into gas networks in the form of biomethane, it contributes to the decarbonization of natural gas uses.

TotalEnergies' gross production capacity of 1.1 TWh/year eq. biomethane has almost doubled compared with 2022. The Company now intends to pursue its development through growth, mainly in Europe and the United States, with a 2030 target of 10 TWh of net production.

(1) Refer to the glossary for the definition and further information on alternative performance measures (Non-GAAP measures) and to point 1.9 of chapter 1 for reconciliation tables.  
 (2) According to the European Directive 2018/2001 named RED II.

## Hydrogen and e-fuels

### Hydrogen

The production of green hydrogen will require the massive deployment of renewable electricity production capacities, to which TotalEnergies is contributing through its investments and the development of the Integrated Power segment. For our operations, our priority is to decarbonize the hydrogen consumed in our European refineries by 2030. TotalEnergies aims to replace carbon based or grey hydrogen by green hydrogen, produced by electrolysis of water using electricity from renewable energy sources.

### Synthetic fuels, e-fuels

$\text{CO}_2$  can be combined, in reaction with renewable hydrogen, to produce synthetic fuels or gas. In 2023, TotalEnergies is setting milestones in its synthetic fuels roadmap.

#### b. Focus Sustainable Aviation Fuel (SAF)

TotalEnergies intends to become a major player in the production of SAF (Sustainable Aviation Fuel), with a target of 1.5 Mt/year by 2030.

This production is currently being developed on our existing platforms in Europe, the Middle East and Asia, notably Grandpuits, Normandie, La Mède and SATORP.

- **Grandpuits:** The biorefinery is scheduled to come on stream in 2025. It plans to process 420 kt/year of feedstock, mainly waste and residues, to produce up to 285 kt/year of SAF by 2028. In 2022, TotalEnergies has joined forces with SARIA (European leader in the collection and valorization of organic materials into sustainable products) to guarantee the supply of lipidic feedstock.
- **Normandy:** TotalEnergies plans to increase SAF production from 130 kt/year in 2025 to 160 kt/year by 2027.
- **La Mède:** Since 2022, biodiesel produced at La Mède has already been used to produce SAF at the TotalEnergies plant in Oudalle, near Le Havre. In 2024, TotalEnergies plans to continue to invest in the site, so as to be able to process up to 100% waste from the circular economy (used oils and animal fats) and will produce locally 14 kt/year of SAF by 2025.
- **SATORP:** For the first time in the Middle East, SATORP has succeeded in co-processing used cooking oil to produce a fuel that meets all the quality criteria of the SAF ISCC+ certified specifications.
- **Partnerships**
  - In Japan, TotalEnergies has partnered with ENEOS Corporation to study the feasibility of a SAF production unit at the ENEOS refinery

in Wakayama. The planned unit, which would have a production capacity of 335 kt/year of SAF, would process waste or residues from the circular economy.

- In China, TotalEnergies is studying with its partner Sinopec the development of SAF production of around 230kt/year. This unit would mainly process local residues and waste.

Sustainable aviation fuels produced from used cooking oil make it possible to reduce  $\text{CO}_2$  emissions by 80%<sup>(1)</sup> over the entire life cycle, compared to their fossil fuel equivalent.

Beyond the SAF currently produced from used cooking oil, our mission is to prepare the next generation of aviation fuels, such as e-SAF.

Together with Masdar, the UAE Civil Aviation Authority, Airbus, Falcon Aviation Services and Axens, TotalEnergies has demonstrated the potential for converting methanol into SAF. Based on the use of renewable electricity, it could enable the production of e-SAF from  $\text{CO}_2$  converted into methanol.

#### c. Innovating to accelerate the energy transition

Each year, TotalEnergies devotes around \$1 billion<sup>(2)</sup> to R&D and innovation and mobilizes more than 3,500 employees.

##### R&D at TotalEnergies

In 2023, 65% of our R&D focused on new energies (renewable electricity, low-carbon molecules), batteries and reducing our environmental footprint (methane, CCUS, water, biodiversity, etc.). This evolution of our research and innovation towards new low-carbon energy points to the Company's future.

One of the missions of our new OneTech branch, created in 2021 to meet the Company's new challenges and mobilize the teams, is to provide solutions for reducing  $\text{CO}_2$  emissions and improving the energy efficiency of our projects from the design phase, as well as to accelerate innovation in all our assets. To that end, OneTech mobilizes integrated teams working on the design, construction and operation of our energy facilities, right including R&D, reinforced by the development, testing and deployment of innovative external solutions for our assets to cope with identified issues in our operations.

##### Leveraging digital technology to reduce our emissions

TotalEnergies' Digital Factory brings together around 300 developers, data scientists and other digital specialists with the objective to develop digital solutions to optimize our industrial assets (environmental impact, availability, costs) or to offer new services to our customers.

(1) Panorama 2020 - Biofuels incorporated into fuels in France, published by the Ministry of Ecological Transition and Territorial Cohesion.  
(2) R&D budget excluding Hutchinson.

## TARGETS AND INDICATORS RELATED TO CLIMATE CHANGE

TotalEnergies has set targets and introduced a number of indicators to steer its performance.

The Company's climate targets include among others the following:

### 2030 targets worldwide (Scope 1+2)

- Reduce GHG emissions (**Scope 1+2**) from operated facilities from 46 Mt CO<sub>2</sub>e in 2015 to less than 38 Mt CO<sub>2</sub>e by 2025. By 2030, the target is a reduction of at least 40% of net emissions<sup>(1)</sup> compared to 2015 for its operated activities, thus bringing them to between 25 Mt and 30 Mt CO<sub>2</sub>e
- Reduce **methane emissions**<sup>(2)</sup> from operated facilities by 50% between 2020 and 2025, and by 80% between 2020 and 2030
- Reduce **methane emissions intensity** below 0.1% of commercial gas produced at Upstream operated Oil & Gas facilities
- Reduce **routine flaring**<sup>(3)</sup> to less than 0.1 Mm<sup>3</sup>/d by 2025, with the goal of eliminating it by 2030

### In facts

- A reduction in GHG emissions (Scope 1+2) from operated facilities from 46 Mt CO<sub>2</sub>e in 2015 to **35 Mt CO<sub>2</sub>e** in 2023
- Methane emissions already reduced by **50%** between 2010 and 2020 and by **47%** between 2020 and 2023
- Methane intensity of **0.11%** for operated commercial gas produced at Upstream operated Oil & Gas facilities (less than 0.1% for Upstream operated Gas facilities)
- More than **96%** reduction in routine flaring between 2010 and 2023

### Indicators related to climate change<sup>(4)</sup>

		Operated domain			
		2023	2022	2021	2015
GHG emissions - Scope 1+2					
<b>Scope 1</b>					
<b>Direct GHG emissions</b>	Mt CO <sub>2</sub> e	32	37	34* (33)	42
<b>Breakdown by segment</b>					
Upstream oil & gas activities	Mt CO <sub>2</sub> e	12	14	14	19
Integrated LNG, excluding upstream gas operations	Mt CO <sub>2</sub> e	<1	<1	<1	–
Integrated Power	Mt CO <sub>2</sub> e	6	9	5	–
Refining & Chemicals	Mt CO <sub>2</sub> e	14	15	15* (14)	22
Marketing & Services	Mt CO <sub>2</sub> e	<1	<1	<1	<1
<b>Breakdown by geography</b>					
Europe: EU 27 + Norway + UK + Switzerland	Mt CO <sub>2</sub> e	19	23	20* (19)	22
Eurasia (incl. Russia)/Oceania	Mt CO <sub>2</sub> e	<1	<1	1	5
Africa	Mt CO <sub>2</sub> e	8	9	9	12
Americas	Mt CO <sub>2</sub> e	5	5	5	4
<b>Breakdown by type of gas</b>					
CO <sub>2</sub>	Mt CO <sub>2</sub> e	31	36	32	39
CH <sub>4</sub>	Mt CO <sub>2</sub> e	1	1	1	2
N <sub>2</sub> O	Mt CO <sub>2</sub> e	<1	<1	<1	<1
<b>Scope 2</b>					
<b>Indirect emissions from energy use</b>	Mt CO <sub>2</sub> e	2	2	2* (2)	4
of which Europe: EU 27 + Norway + UK + Switzerland	Mt CO <sub>2</sub> e	1	1	1* (1)	2
<b>Scope 1+2</b>	Mt CO <sub>2</sub> e	35	40	37* (36)	46
of which oil & gas facilities	Mt CO <sub>2</sub> e	30	33	33* (32)	46
of which CCGT	Mt CO <sub>2</sub> e	4	7	4	–
Direct emissions of biogenic CO <sub>2</sub> <sup>(a)</sup>	Mt CO <sub>2</sub> e	0.1	0.1		

\* Excluding the COVID-19.

(a) Biogenic CO<sub>2</sub> emissions from the Company's biogas assets. In accordance with the GHG Protocol these emissions are not included in Scope 1.

(1) The calculation of net emissions takes into account negative emissions from natural sinks like forests, regenerative agriculture and wetlands.

(2) Excluding biogenic methane.

(3) Routine flaring, as defined by the working group of the Global Gas Flaring Reduction program within the framework of the World Bank's Zero Routine Flaring initiative.

(4) Refer to point 5.11 of chapter 5 for the reporting perimeter.

		Operated domain			
		2023	2022	2021	2015
<b>GHG emissions - methane</b>					
Methane emissions <sup>(a)</sup>	kt CH <sub>4</sub>	34	42	49	94
<b>Breakdown by segment</b>					
Upstream oil & gas activities	kt CH <sub>4</sub>	33	41	48	92
Integrated LNG, excluding upstream gas operations	kt CH <sub>4</sub>	<1	0	<1	0
Integrated Power	kt CH <sub>4</sub>	<1	1	<1	0
Refining & Chemicals	kt CH <sub>4</sub>	1	1	1	1
Marketing & Services	kt CH <sub>4</sub>	0	0	0	0
<b>Breakdown by geography</b>					
Europe: EU 27 + Norway + UK + Switzerland	kt CH <sub>4</sub>	5	7	7	9
Eurasia (incl. Russia)/Oceania	kt CH <sub>4</sub>	1	1	1	33
Africa	kt CH <sub>4</sub>	18	23	23	49
Americas	kt CH <sub>4</sub>	9	12	18	3

(a) Excluding biogenic methane emissions, equal to less than 1 kt CH<sub>4</sub> in 2023. Biogenic methane is nevertheless included in the calculation of Scope 1.

Intensity indicators		2023	2022	2021	2015
Intensity of GHG emissions (Scope 1+2) of operated Upstream oil & gas activities <sup>(a)</sup>	kg CO <sub>2</sub> e/boe	17	17	17	21
Intensity of methane emissions from operated oil & gas facilities (Upstream)	%	0.11	0.11	0.13	0.23
Intensity of methane emissions from operated gas facilities (Upstream)	%	<0.1	<0.1	<0.1	<0.1
(a) This indicator doesn't include integrated LNG assets in its perimeter.					
<b>Other indicators</b>		<b>2023</b>	<b>2022</b>	<b>2021</b>	<b>2015</b>
<b>Net primary energy consumption (operated scope)</b>	TWh	157	166	148	153
Renewable energy consumption (operated scope)	TWh	2	1	–	–
Global energy efficiency indicator (GEEI)	Base 100 in 2010	86.4	85.1	87.0	90.8
Flared gas <sup>(a)</sup> (Upstream oil & gas activities operated scope)	Mm <sup>3</sup> /d	2.5	3.3	3.6	7.2
of which routine flaring	Mm <sup>3</sup> /d	0.3	0.5	0.7	2.3 <sup>(b)</sup>

(a) This indicator includes safety flaring, routine flaring and non-routine flaring.

(b) Volumes estimated upon historical data.

### 3.6.8.5 Suppliers

#### SUPPLIER ASSESSMENT

##### The Supplier pre-qualification process

The IT Supplier pre-qualification tool developed in 2019, gradually rolled out, is designed to automate and document the Supplier pre-qualification

process. At the end of 2023, more than 20,000 Suppliers were integrated into this tool.

##### The Supplier assessment process

The Company set itself the objective of assessing its 1,300 priority Suppliers by the end of 2025, on their sustainable development performance (including respect of human rights, working conditions and environment), via documentary and/or on-site audits carried out by independent third parties.

In 2023, 37% of the 1,300 priority Suppliers were assessed via documentary audits (EcoVadis) and on-site audits.

##### Supplier evaluation via documentary audits

In 2023, TotalEnergies joined forces with EcoVadis to evaluate its Suppliers in terms of sustainable development. EcoVadis carries out a documentary assessment to assess the maturity and performance of Suppliers in terms of the environment, human rights, ethics and responsible purchasing. Each company is evaluated by independent analysts on essential issues depending on its size, location and business segment. The EcoVadis rating may be shared by the Supplier with its other customers. It also gives rise to an improvement plan.

In 2023, 180 Suppliers were evaluated via EcoVadis. 98% of them obtained a score above 45/100, a score beyond which EcoVadis considers that the supplier is "committed to CSR", and the average score is 65/100.

##### Supplier assessment via on-site audits

Between 2016 and 2022, the Company conducted audits linked to working conditions. Since 2022, the Company has applied a new, expanded audit framework to cover labor and human rights issues – such as child labor, forced labor, discrimination, freedom of association and collective bargaining, working conditions, working hours, health and safety at work – but also environmental issues such as the protection of biodiversity, the responsible use of water and natural resources, the fight against pollution, as well as climate issues. These audits, carried out by an independent third party, include an on-site visit, a documentary review and interviews with workers. Tested in 2022, this audit framework was used for the 2023 audit plan.

The Company set itself the objective of evaluating 300 Suppliers via these on-site audits in 2023 and this objective was achieved. In total, since 2016, the Company has audited 740 priority Suppliers in more than 86 countries, covering more than 230,000 people.

The Company ensures that its Suppliers are committed to a process of continuous progress. Thus, in the event of a deficiency observed during the on-site audit, a Supplier must put in place an action plan, followed by the TotalEnergies teams and whose effectiveness is verified by an independent external service provider.

Among the 740 Suppliers audited since 2016, 171 resulted in verified improvements positively impacting nearly 60,000 workers concerning the right to a weekly day off, access to drinking water on site and overtime pay. The others are being monitored.

In 2023, the Company developed an internal audit management tool which centralizes data from audits carried out since 2016. This allows

## Other initiatives

### Workers's voice tool

Aware of the importance of guaranteeing respect for working conditions on the sites of major construction projects, TotalEnergies wanted to test a complementary approach to the already existing audit and complaint reporting systems. In 2023, the Company implemented a pilot "workers' voice survey" within two of its large industrial projects: Tilenga in Uganda and EACOP in Tanzania. This pilot aims to directly interview workers via their mobile phones in order to collect information on respect for human rights and working conditions on site. The percentage of workers participating via this system currently varies from 12% to 72% depending on the sites. The objective is to involve Suppliers' workers (tier 1 and beyond) who work on site. Worker participation is voluntary and anonymous. Among workers volunteering to participate in the system, the response rate to regular surveys varies from 87% to 95%. TotalEnergies shares the results of these surveys with Suppliers who are required to propose action plans.

### Minerals

The origin, extraction and refining conditions and the use of certain minerals, ores and raw materials are the subject of particular attention, given the potential risks to human rights and the environment. In 2022, TotalEnergies conducted an internal study to identify the Company's priorities in this area. This study, based on a materiality analysis and a risk analysis, identified three priorities: cobalt, polysilicon and conflict minerals (gold, tungsten, tin and tantalum).

- Cobalt: since cobalt can be used in the manufacture of certain batteries, Saft Groupe has been conducting an annual campaign since 2021 to collect information from its Suppliers. Saft Groupe relies on the Extended Minerals Reporting Template (EMRT) provided by the Responsible Minerals Initiative® (RMI®) to identify the processing units in its supply chain and the country of origin of the cobalt ores. As part of a progress-led approach, Saft Groupe is also a member of the Global Battery Alliance (GBA), within the World Economic Forum (WEF), a global platform for establishing and collaborating on a sustainable battery value chain.

## MITIGATION AND PREVENTIVE ACTIONS

In February 2022, the Company completed the update of the Fundamental Principles of Purchasing to more precisely detail its requirements with regard to its Suppliers, particularly in terms of human rights, respect for biodiversity and responsible use of natural resources.

### Training of buyers

TotalEnergies has set up a number of channels of communication to raise employees' awareness of risks and concerns relating to its supply chain. Training modules explaining the Company's ethical commitments and the Fundamental Principles of Purchasing have been developed for and made available to buyers of the Company. In addition to training buyers, numerous awareness-raising initiatives are regularly carried out in order to strengthen the responsible purchasing culture within the Company.

Buyers are the first players in the sustainable procurement process, with their internal contacts as well as with the Company's Suppliers. It is

therefore necessary for them to share a common base of knowledge in terms of sustainable development and sustainable procurement. Since July 2022, TotalEnergies has provided its buyers with a dedicated training, mandatory for any new entrant to the role.

management and operational teams to understand and address the issues specific to their ecosystems in order to better support Suppliers in the improvement of their practices. For example, the Company organized training for buyers and Suppliers in Vietnam in June 2023, targeting the topics raised during the 16 audits carried out in this country.

- Polysilicon: polysilicon is used in the manufacture of solar panels. TotalEnergies Global Procurement carries out traceability audits upstream of the Supplier's selection or commissions an independent third party to conduct them. TotalEnergies has joined a pool of US developers who jointly commission and share traceability audits.
- Conflict minerals: the pre-qualification process identifies Suppliers using minerals from conflict zones for the Company's purchases. Thus, pursuant to Rule 13p-1 of the U.S. Securities Exchange Act of 1934, as amended, which implemented certain provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, since 2014, TotalEnergies has filed with the United States Securities and Exchange Commission (SEC) an annual document relating to "minerals from conflict zones" sourced from the Democratic Republic of the Congo or neighboring countries. This document indicates whether, during the preceding calendar year, any such minerals were necessary for the operation or for the production of a product manufactured by TotalEnergies SE or one of its consolidated companies or contracted by TotalEnergies SE or one of its consolidated companies to be manufactured. The purpose of this regulation is to prevent the direct or indirect funding of armed groups in central Africa. For more information, please refer to TotalEnergies' most recent publication, available on the TotalEnergies website or sec.gov. As conflict minerals may potentially be present in the electrical and electronic components used in battery manufacturing, Saft Groupe conducts an annual campaign to collect information from its Suppliers. Saft Groupe relies on the Conflict Minerals Reporting Template (CMRT) provided by the Responsible Minerals Initiative® (RMI®) to determine the presence of conflict minerals in its supply chain and to identify the processing units for these minerals that are likely to participate in it and the country of origin of the ores. Saft Groupe became a member of the RMI in 2022.

In 2023, the Company created the Strategic Materials division within the Integrated Power segment. This division analyzes TotalEnergies' exposure in this area. A Risk and Resilience division was also created in 2023 within TotalEnergies Global Procurement in order to develop better knowledge of its supply chain.

The training of buyers and the awareness raising and mobilization of Suppliers for a responsible purchasing approach are among the priorities of TotalEnergies' Sustainable Procurement program.

At the end of 2023, 61% of TotalEnergies purchasing function employees were trained in sustainable procurement i.e., the double of the trained population compared to 2022.

In addition to training, numerous awareness-raising initiatives are regularly carried out in order to strengthen the sustainable procurement culture within the Company. In April 2023, the President TotalEnergies Global Procurement presented the sustainable procurement program via a webinar which reached nearly 400 people. In 2023, a thematic webinar

#### **Awareness-raising and training of Suppliers**

The Company regularly conducts awareness-raising actions with its Suppliers on the responsible procurement approach, particularly on respect for human rights, the protection of workers' health and safety and the preservation of the environment. In 2023, the Company organized supplier days, which were an opportunity to raise awareness among stakeholders regarding sustainability issues, notably in March in China and in July in Nigeria. The Company has also raised awareness among its Suppliers through training sessions entirely dedicated to sustainable development, such as the one organized in May 2023 in Vietnam.

#### **Progress with other companies**

In December 2018, the Company committed to pursuing its efforts with regard to decent work and respect for human rights in its supply chain by signing six commitments contained in the United Nations Global

#### **WHISTLEBLOWING MECHANISMS**

An email address ([mediation.fournisseurs@totalenergies.com](mailto:mediation.fournisseurs@totalenergies.com)) is available on the TotalEnergies website to enable the Company's suppliers to contact the dedicated internal mediator. The mediator's

#### **MONITORING PROCEDURES**

The Responsible Purchasing Department within TotalEnergies Global Procurement monitors the implementation of the Sustainable Procurement program, particularly in terms of Suppliers' respect for

on Supplier audits was followed by more than 220 employees. A mid-year webinar brought together more than 400 employees from the procurement function. The sustainable procurement department also sends a quarterly newsletter to all buyers as well as to business managers.

In order to support its Suppliers in improving their practices, the Company also published in May 2022 a Practical Guide on Human Rights at Work for Suppliers, accessible on the TotalEnergies website.

The Company also organizes a Suppliers Day every two years, the last having been organized in November 2022. This is an event bringing together nearly 200 representatives of the Company's Suppliers – the Chairman and CEO and two members of the Executive Committee are intervened and underlined the Company's ambition as well as the commitment expected from Suppliers in terms of sustainable development. This event was the opportunity to award for the first time a Sustainability Award to one of the Company's Suppliers.

Compact, and, in this context, participates in certain webinars. TotalEnergies is also a member of the IPIECA Supply Chain Working Group.

mission is to facilitate relations between the Company and its French and international suppliers. The general purchasing terms and conditions also mention the possibility of recourse to mediation.

human rights, health, safety and the environment. The implementation of this program is monitored by the Company's governing bodies and a Steering Committee meeting at least once a year.

# 4

# Report on corporate governance

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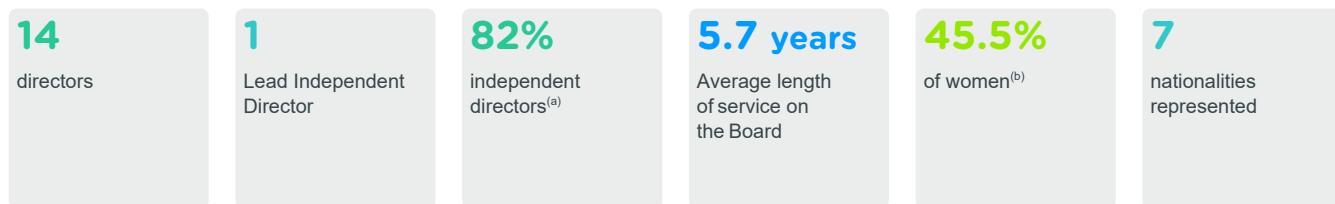
The information set out in this chapter forms the Board of Directors' report on corporate governance, produced pursuant to Article L. 225-37 of the French Commercial Code. This report was prepared on the basis of the deliberations of the Board of Directors, and with the assistance of several of the Corporation's corporate functional divisions, including in particular

the Legal, Finance and People & Social Engagement Departments. After the sections relevant to their respective duties were reviewed by the Governance and Ethics Committee and the Compensation Committee, the report was approved by the Board of Directors.

## 4.1 Administration and management bodies

### 4.1.1 Composition of the Board of Directors

As of March 13, 2024



(a) Excluding the director representing employee shareholders and the directors representing employees, in accordance with the recommendations of the AFEP-MEDEF Code (point 10.3). For more information, refer to point 4.1.1.4.

(b) Excluding the directors representing employees in accordance with Article L. 225-27-1 of the French Commercial Code and the director representing employee shareholders in accordance with Articles L. 225-23 and L. 22-10-5 of the French Commercial Code.

The Corporation is administered by a Board of Directors whose 14 members include a director representing employee shareholders elected on the proposal of the shareholders specified in Article L. 225-102 of the French Commercial Code, in accordance with the provisions of Articles L. 225-23 and L. 22-10-5 of the French Commercial Code (hereafter referred to as the "director representing employee shareholders"), and two directors representing employees appointed in accordance with the provisions of Article L. 225-27-1 of the French Commercial Code and the Corporation's Articles of Association (the first appointed by the Central Social and Economic Works Council of the Upstream Global Services UES Amont – Global Services – Holding and the second appointed by the SE Committee, known as "TotalEnergies European Works Council").

Mr. Patrick Pouyanné is the Chairman and Chief Executive Officer of TotalEnergies SE. He has served as Chairman of the Board of Directors

since December 19, 2015, the date on which the functions of Chairman of the Board of Directors and Chief Executive Officer of the Corporation were combined (refer to point 4.1.5.1).

A Lead Independent Director is in place. His duties are specified in the Rules of Procedure of the Board of Directors (refer to point 4.1.2.1).

Directors are appointed for a three-year period (Article 11 of the Corporation's Articles of Association)<sup>(1)</sup>. The terms of office of the members of the Board are staggered to space more evenly the renewal of appointments and to ensure the continuity of the work of the Board of Directors and its Committees, in accordance with the recommendations of the AFEP-MEDEF Code, which the Corporation refers to.

The profiles, experience and expertise of the directors are detailed in the biographies hereafter.

### CHANGES THAT OCCURRED WITHIN THE MEMBERSHIP OF THE BOARD OF DIRECTORS AND COMMITTEES DURING FISCAL YEAR 2023

#### Appendix 3 of the AFEP-MEDEF Code – Situation as of March 13, 2024

	Departure	Appointment/designation	Reappointment
<b>Board of Directors</b>			
05/26/2023	Patricia Barbizet	Dierk Paskert	Marie-Christine Coisne-Roquette <sup>(a)</sup>
	Jérôme Contamine	Anelise Lara	Mark Cutifani
02/28/2023			Romain Garcia-Ivaldi <sup>(b)</sup>
02/16/2023			Angel Pobo <sup>(b)</sup>
<b>Audit Committee</b>			
05/26/2023	Patricia Barbizet	Marie-Christine Coisne-Roquette <sup>(a)</sup>	
	Jérôme Contamine	Glenn Hubbard	
<b>Governance and Ethics Committee</b>			
05/26/2023	Patricia Barbizet	Mark Cutifani	
<b>Compensation Committee</b>			
05/26/2023	Marie-Christine Coisne-Roquette <sup>(a)</sup>	Anne-Marie Idrac	
<b>Strategy &amp; CSR Committee</b>			
05/26/2023	Patricia Barbizet	Jacques Aschenbroich <sup>(c)</sup>	

(a) Lead Independent Director until May 26, 2023.

(b) Director representing employees.

(c) Lead Independent Director since May 26, 2023.

(1) The Articles of Association also contain specific provisions concerning the terms of office of directors representing employees, taking into account the method of their appointment.

## OVERVIEW OF THE BOARD OF DIRECTORS AS OF MARCH 13, 2024

### Appendix 3 of the AFEP-MEDEF Code

As of March 13, 2024	Personal information			Number of shares	Number of directorships <sup>(a)</sup>	Independence <sup>(b)</sup>	Position on the Board			Participation in Board Committees
	Age	Sex	Nationality				Initial date of appointment	Term of office expires	Length of service on the Board	
Patrick Pouyanné <i>Chairman and Chief Executive Officer</i>	60	M		410,695	1		2015	2024	9	
Jacques Aschenbroich <i>Lead Independent Director</i>	69	M		1,000	2		2021	2024	3	
Marie-Christine Coisne-Roquette	67	F		5,000	1		2011	2026	13	
Lise Croteau	63	F		1,100	2		2019	2025	5	
Mark Cutifani	65	M		2,000	0		2017	2026	7	
Romain Garcia-Ivaldi <i>Director representing employees</i>	35	M		178	0	n/a	2020	2026	4	
Maria van der Hoeven	74	F		1,800	0		2016	2025	8	
Glenn Hubbard	65	M		1,000	1		2021	2024	3	
Anne-Marie Idrac	72	F		1,539	1		2012	2024	12	
Emma de Jonge <i>Director representing employee shareholders</i>	60	F		184	0	n/a	2022	2025	2	
Anelise Lara	62	F		1,000	0		2023	2026	1	
Jean Lemierre	73	M		1,042	1		2016	2025	8	
Dierk Paskert	62	M		1,200	0		2023	2026	1	
Angel Pobo <i>Director representing employees</i>	54	M		539	0	n/a	2020	2026	4	

(a) Number of directorships held by the director at listed companies outside his or her group, including foreign companies, assessed in accordance with the recommendations of the AFEP-MEDEF Code, point 20 (refer to point 4.1.1.3 of this chapter).

(b) As of December 31, 2023.

### As of March 13, 2024

Audit Committee	Governance and Ethics Committee	Compensation Committee	Strategy & CSR Committee
<b>5 members</b> <b>75% independent members<sup>(a)</sup></b> <ul style="list-style-type: none"> <li>Maria van der Hoeven*</li> <li>Marie-Christine Coisne-Roquette</li> <li>Lise Croteau**</li> <li>Romain Garcia-Ivaldi<sup>(b)</sup></li> <li>Glenn Hubbard</li> </ul>	<b>5 members</b> <b>80% independent members</b> <ul style="list-style-type: none"> <li>Jacques Aschenbroich*</li> <li>Marie-Christine Coisne-Roquette</li> <li>Mark Cutifani</li> <li>Anne-Marie Idrac</li> <li>Jean Lemierre</li> </ul>	<b>4 members</b> <b>100% independent members<sup>(a)</sup></b> <ul style="list-style-type: none"> <li>Mark Cutifani*</li> <li>Jacques Aschenbroich</li> <li>Anne-Marie Idrac</li> <li>Angel Pobo<sup>(b)</sup></li> </ul>	<b>6 members</b> <b>60% independent members<sup>(a)</sup></b> <ul style="list-style-type: none"> <li>Patrick Pouyanné*</li> <li>Jacques Aschenbroich</li> <li>Marie-Christine Coisne-Roquette</li> <li>Anne-Marie Idrac</li> <li>Emma de Jonge<sup>(c)</sup></li> <li>Jean Lemierre</li> </ul>

(a) Excluding the director representing employee shareholders and the directors representing employees, in accordance with the recommendations of the AFEP-MEDEF Code (point 10.3).

(b) Director representing employees.

(c) Director representing employee shareholders.

\* Chair of the Committee.

\*\* Financial expert.

### RENEWAL OF DIRECTORSHIPS AND APPOINTMENT PROPOSED TO THE SHAREHOLDERS' MEETING TO BE HELD ON MAY 24, 2024

The directorships of Mr. Patrick Pouyanné, Mr. Jacques Aschenbroich, Mr. Glenn Hubbard as well as of Ms. Anne-Marie Idrac expire at the end of the Annual Ordinary Shareholders' Meeting on May 24, 2024.

#### Renewal of directorships

The Board of directors, at its meeting held on September 21, 2023, after having reaffirmed its support to the quality and the relevance of the strategy implemented, considered that it was highly desirable that Mr. Patrick Pouyanné, Chairman and Chief Executive Officer, continues to drive this strategy's deployment at the helm of the Company. On the

proposal of the Governance and Ethics Committee, it therefore unanimously decided to propose the renewal of the mandate of Mr. Patrick Pouyanné to the Shareholders' Meeting to be held on May, 24 2024. In the frame of the balanced governance implemented since 2015, it also unanimously decided to propose the renewal of the mandate of Mr. Jacques Aschenbroich, who has held the position of Lead Independent Director since May 2023.

Mr. Patrick Pouyanné has been Chief Executive Officer since October 22, 2014 and Chairman and Chief Executive Officer since December 19, 2015.

While reaffirming its support to the quality and the relevance of the strategy implemented since 2020, the Board of Directors considers as appropriate to ensure the continuity of the Company's governance and leadership. Since 10 years, Patrick Pouyanné has done an extraordinary work in steering TotalEnergies in a complex environment, delivering outstanding financial results and engaging the Company in the energy transition more quickly and consistently than its peers. The Board of Directors unanimously looks forward to his continued leadership and his strategic vision to continue TotalEnergies' transition, with determination and consistency, relying on two pillars: Oil & Gas on the one hand, Electricity and Renewables on the other hand. This vision, which creates value in the medium and long term, and this strategic stability are an asset and a differentiating factor for TotalEnergies compared with its peers.

The discussions held with the Governance and Ethics Committee in the best interests of the Corporation had led to a firm proposal to continue to combine the functions of Chairman and Chief Executive Officer. Indeed, this management form of the Corporation is considered to be the most appropriate for dealing with the challenges and specificities of the energy sector, which is facing major transformations. More than ever, this context requires agility of movement, which the unity of command reinforces, by giving the Chairman and Chief Executive Officer the power to act and increased representation of the Corporation in its strategic negotiations with States and partners of the Company.

The unity of the power to manage and represent the Company is also well regulated by the Company's corporate governance.

The balance of power is established through the quality, complementarity and independence of the members of the Board of Directors and its four Committees, as well as through the Articles of Association and the Board's Rules of Procedure, which define the means and prerogatives of the Lead Independent Director, notably:

- in his relations with the Chairman and Chief Executive Officer: contribution to the agenda of Board meetings or the possibility of requesting a meeting of the Board of Directors and sharing opinions on major issues;
- in his contribution to the work of the Board of Directors: chairing meetings in the absence of the Chairman and Chief Executive Officer, or when the examination of a subject requires his abstention, evaluation and monitoring of the functioning of the Board, prevention of conflicts of interest, and dialogue with the directors and Committee Chairpersons;
- in his relations with shareholders: the possibility, with the approval of the Chairman and Chief Executive Officer, of meeting with them on corporate governance issues, a practice that has already been used on several occasions.

The balance of power within the governance bodies, in addition to the independence of its members, is further strengthened by the full involvement of the directors, whose participation in the work of the Board and its Committees is exemplary. The diversity of their skills and expertise also enables the Chairman and Chief Executive Officer to benefit from a wide range of contributions.

In addition, the Board's rules of procedure provide that any investment or divestment transactions contemplated by the Company involving amounts in excess of 3% of shareholders' equity must be approved by the Board, which is also kept informed of all significant events concerning the Corporation's operations, in particular investments and divestments in excess of 1% of shareholders' equity.

Lastly, the Corporation's Articles of Association provide the necessary guarantees of compliance with good governance practices in the context of a unified management structure. In particular, they provide that the Board may be convened by any means, including orally, or even at short notice depending on the urgency of the matter, by the Chairman or by one third of its members, including the Lead Independent Director, at any time and as often as the interests of the Corporation require.

Mr. Jacques Aschenbroich, a French national, has been a director of TotalEnergies SE (since May 28, 2021), Lead Independent Director, Chairman of the Governance and Ethics Committee, member of the Compensation Committee and member of the Strategy & CSR Committee of TotalEnergies SE. In addition to his participation in a balanced governance of your Company, as mentioned above, the renewal of his term of office will allow him to continue to provide the Board of Directors with his experience as the head of a major industrial company and his skills in mobility, digital and governance.

At its meeting on March 13, 2024, the Board of Directors, upon the proposal of the Governance and Ethics Committee, also decided to submit to the Annual Shareholders' Meeting to be held on May 24, 2024, the renewal of the directorship of Mr. Glenn Hubbard.

Mr. Glenn Hubbard, an American economist, has been a director of TotalEnergies SE since May 28, 2021 and a member of the Audit Committee since May 2023. The renewal of his term of office will enable him to continue to provide the Board with the benefit of his knowledge of American markets, which is a highly valuable asset given the scale of capital invested in this country and the growing importance of the Company's North American shareholder base.

The renewal of the terms of office as directors of Mr. Pouyanné, Mr. Aschenbroich and Mr. Hubbard will therefore be submitted to the next Annual Shareholders' Meeting for approval, for a three-year term expiring at the end of the Annual Shareholders' Meeting to be called in 2027 to approve the 2026 financial statements.

The Board of Directors thanked Mrs. Anne-Marie Idrac for her invaluable contribution to the work of the Board and its Committees over the past 12 years.

### **Proposed appointment of director**

The Board of Directors, at its meeting on March 13, 2024, decided, on the proposal of the Governance and Ethics Committee, to submit to the Annual Shareholders' Meeting on May 24, 2024 the appointment of Mrs. Marie-Ange Debon as a director for a three-year term, expiring at the end of the Annual Shareholders' Meeting to be held in 2027 to approve the 2026 financial statements.

Mrs. Marie-Ange Debon, a French national, is graduated from the French École des hautes études commerciales (HEC) and from the French École nationale de l'administration (ENA) and holds a master's degree in law. Chairwoman of the Keolis Group Executive Board, she has extensive experience acquired in administration and then in large international groups in the environmental and transport sectors and she will be able in particular to make the Board benefit from her skills in financial, regulatory and governance matters for large companies.

The Board of Directors would like to point out that the directors of TotalEnergies SE have different profiles. They are present, active and involved in the work of the Board of Directors and the Committees in which they participate. The complementarity of their professional experience and their skills are all assets for the quality of the deliberations of the Board of Directors in the context of the decisions it is called upon to make.

#### 4.1.1.1 Profiles, experience and expertise of the directors (information as of December 31, 2023)<sup>(1)</sup>



**Patrick Pouyanné**

**Chairman and Chief Executive Officer of TotalEnergies SE\***

Chairman of the Strategy & CSR Committee

Born on June 24, 1963 (French)

Director of TotalEnergies SE since the Annual Shareholders' Meeting on May 29, 2015

Last reappointment: Annual Shareholders' Meeting on May 28, 2021

End of current term: Annual Shareholders' Meeting on May 24, 2024

Number of TotalEnergies shares held: 410,695

Number of TotalEnergies Actionnariat France collective investment fund units held: 13,091.5928 (as of December 31, 2023)

Business address: TotalEnergies SE, 2 place Jean Millier, La Défense 6, 92400 Courbevoie, France

**Main function:** Chairman and Chief Executive Officer of TotalEnergies SE\*

**Biography & Professional Experience**

A graduate of École Polytechnique and a Chief Engineer of France's Corps des Mines, Mr. Pouyanné held, between 1989 and 1996, various administrative positions in the Ministry of Industry and other cabinet positions (technical advisor to the Prime Minister – Édouard Balladur – in the fields of the Environment and Industry from 1993 to 1995, Chief of staff for the Minister for Information and Aerospace Technologies – François Fillon – from 1995 to 1996). In January 1997, he joined TotalEnergies' Exploration & Production division, first as Chief Administrative Officer in Angola, before becoming Company representative in Qatar and President of the Exploration and Production subsidiary in that country in 1999. In August 2002, he was appointed President, Finance, Economy and IT for Exploration & Production. In January 2006, he became Senior Vice President, Strategy, Business Development and R&D in Exploration & Production and was appointed a member of the Company's Management Committee in May 2006. In March 2011, Mr. Pouyanné was appointed Deputy General Manager, Chemicals, and Deputy General Manager, Petrochemicals. In January 2012, he became President, Refining & Chemicals and a member of the Company's Executive Committee.

On October 22, 2014, he became Chief Executive Officer of TOTAL S.A. and Chairman of the Company's Executive Committee. On May 29, 2015, he was appointed by the Annual Shareholders' Meeting as director for a three-year term. The Board of Directors appointed him as Chairman of the Board of Directors as of December 19, 2015. Mr. Pouyanné thus became the Chairman and Chief Executive Officer. Following the renewal of Mr. Pouyanné's directorship at the Shareholders' Meeting on June 1, 2018 and then on May 28, 2021 for a three-year period, the Board of Directors renewed Mr. Pouyanné's term of office as Chairman and Chief Executive Officer for a period equal to that of his directorship.

Mr. Pouyanné is thus the Chairman and Chief Executive Officer of TotalEnergies SE.

On June 1, 2022, Mr. Pouyanné was appointed Chairman of the French association, Entreprises pour l'Environnement (EpE). Mr. Pouyanné has also been the Chairman of the Alliance pour l'Education – United Way association since June 2018, having accepted this office as Chairman and Chief Executive Officer of the Corporation. In addition, he has been a member of the Board of Directors of Capgemini (since May 2017), of the Board of Directors of École Polytechnique (since September 2018), of the Institut du Monde Arabe (since 2017) and of the foundation La France s'engage (since 2017). Mr. Pouyanné is an Officer of the Légion d'honneur.

**Directorships and functions held**

**Directorships held at any company during fiscal year 2023**

Within the Company

- Chairman and Chief Executive Officer of TotalEnergies SE\* and Chairman of the Strategy & CSR Committee

Outside the Company

- Director of Capgemini S.E.\* (since May 10, 2017), member of the Strategy & CSR Committee (until May 2022), member of the Ethics & Governance Committee and, since May 2022, Chairman of the Compensation Committee

**Directorships that have expired in the previous five years**

None

**Other positions held during fiscal year 2023**

- Chairman of the l'Association Alliance pour l'Education – United Way (since June 2018)
- Chairman of the French business coalition Entreprises pour l'Environnement (EpE) (since June 1, 2022)
- Member of the Board of Directors of École Polytechnique (a public scientific, cultural and professional establishment under French law) (since September 2018)
- Member of the Board of Directors of the Institut Polytechnique de Paris (until May 2024)
- Member of the Board of Directors of AFEP (French Association of private companies) (since 2014)
- Member of the Board of Directors of the Institut du Monde Arabe (since 2017)
- Member of the Board of Directors of the La France s'engage foundation (since September 2017)

(1) Including the information referred to in Articles L. 22-10-10 and L. 225-37-4 of the French Commercial Code, and point 12.1 of Annex I to Commission Delegated Regulation EU 2019/980 of March 14, 2019, supplementing Regulation (EU) 2017/1129 of the European Parliament and of the Council on the form, content, review and approval of the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market.

\* For information relating to the offices held by directors, companies marked with an asterisk are listed companies.



## Jacques Aschenbroich

### Independent director – Lead Independent Director

Chairman of the Governance and Ethics Committee  
Member of the Compensation Committee  
Member of the Strategy & CSR Committee

Born on June 3, 1954 (French)  
Director of TotalEnergies SE since the Annual Shareholders' Meeting on May 28, 2021  
End of current term: Annual Shareholders' Meeting on May 24, 2024

Number of TotalEnergies shares held: 1,000 (as of December 31, 2023)

Business address: 111 quai du Président Roosevelt, 92130 Issy Les Moulineaux, France

**Main function:** Chairman of the Board of Directors of Orange\*

### Biography & Professional Experience

As an engineer graduate of the Corps des Mines, Mr. Jacques Aschenbroich held several positions in the French administration and served in the Prime Minister's office in 1987 and 1988. He then pursued an industrial career in the Saint-Gobain group from 1988 to 2008. After having managed subsidiaries in Brazil and Germany, he became Managing Director of the Flat Glass division of Compagnie de Saint-Gobain and went on to become Chairman of Saint-Gobain Vitrage in 1996.

As Senior Vice-President of Compagnie de Saint-Gobain from October 2001 to December 2008, he managed the flat glass and high-performance materials sectors as from January 2007 and, as the Vice-Chairman of Saint-Gobain Corporation and General Delegate to the United States and Canada, he directed the operations of the group in the United States as from September 1, 2007. He was also a director of Esso SAF until June 2009.

Mr. Jacques Aschenbroich was appointed Director and Chief Executive Officer of Valeo in March 2009 and then Chairman and Chief Executive Officer of Valeo, positions he held from February 2016 to January 26, 2022. Following the change in the Valeo Group's governance, he remained the Chairman of the Board of Directors of Valeo from January 26, 2022 until December 31, 2022, when Mr. Jacques Aschenbroich left the Chairmanship and the Board of Directors of Valeo.

In May 2022, Jacques Aschenbroich was appointed Chairman of the Board of Directors of Orange.

### Directorships and functions held

#### Directorships held at any company during fiscal year 2023

- Chairman of the Board of Directors of Orange\* since May 2022
- Director of TotalEnergies SE\*, Lead Independent Director since May 26, 2023, chairman of the Governance and Ethics Committee, member of the Compensation Committee and, since May 26, 2023, member of the Strategy & CSR Committee
- Director of BNP Paribas\*, Chairman of the Corporate Governance, Ethics, Nominations and CSR Committee, and member of the Financial Statements Committee

#### Directorships that have expired in the previous five years

- Chairman of the Board of Directors of Valeo\* until December 31, 2022 and Chief Executive Officer of Valeo until January 26, 2022

- Director of Veolia Environnement\*, Chairman of the Comité de recherche, innovation et développement durable and member of the Comité des comptes et de l'audit until May 28, 2021
- Chairman of Valeo Finance, Valeo S.p.A. (Italy) and Valeo (UK) Limited (United Kingdom)

#### Other positions held during fiscal year 2023

- Chairman of the Board of Directors of the Ecole nationale supérieure des mines ParisTech
- Co-Chair of the Franco-Japanese Business Club
- Vice-Chairman of the Institut de la Finance Durable



## Marie-Christine Coisne-Roquette

### Director

Member of the Audit Committee  
 Member of the Governance and Ethics Committee  
 Member of the Strategy & CSR Committee

Born on November 4, 1956 (French)  
 Director of TotalEnergies SE since the Annual Shareholders' Meeting on May 13, 2011  
 Last reappointment: Annual Shareholders' Meeting on May 26, 2023  
 End of current term: 2026 Annual Shareholders' Meeting  
 Number of TotalEnergies shares held: 5,000 (as of December 31, 2023)  
 Business address: Sonepar, 25 rue d'Astorg, 75008 Paris, France

**Main function:** Chairwoman of Sonepar S.A.S. and of Colam Entreprendre SAS

### Biography & Professional Experience

Ms. Coisne-Roquette has a Bachelor's Degree in English. A lawyer by training, with a French Masters' in law and a Specialized Law Certificate from the New York bar, she started her career as an attorney in 1981 at the Paris and New York bars, as an associate of Cabinet Sonier & Associés in Paris. In 1984, she became a member of the Board of Directors of Colam Entreprendre, a family holding company that she joined full time in 1988. As Chairwoman of the Board of Colam Entreprendre and the Sonepar Supervisory Board, she consolidated family ownership, reorganized the group structures and strengthened its shareholding base to sustain the group's growth strategy. Chairwoman and Chief Executive Officer of Sonepar as of 2002, Marie-Christine Coisne-Roquette became Chairwoman of Sonepar S.A.S. in 2016. At the same time, she heads Colam Entreprendre as its Chairwoman and Chief Executive Officer. Formerly a member of the Young Presidents' Organization (YPO), she served on the Executive Committee of MEDEF (France's main employers' association) for 13 years and was Chairwoman of its Tax Commission from 2005 to 2013. She was a member of the Economic, Social and Environmental Council from 2013 and 2015 and is currently a director of TotalEnergies SE.

### Directorships and functions held

#### Directorships held at any company during fiscal year 2023

Within the Sonepar group

- Chairwoman of Colam Entreprendre S.A.S.
  - Permanent Representative of Colam Entreprendre S.A.S., Chairwoman of Sonepar S.A.S.
  - Director of Sonepack SAS since mid-2020
  - Chairwoman of Développement Mobilier et Industriel (S.A.S.)
  - Managing Partner of Ker Coro (société civile immobilière)
- Outside the Sonepar group
- Director of TotalEnergies SE\*, member of the Audit Committee since May 26, 2023, member of the Governance and Ethics Committee and of the Strategy & CSR Committee
  - Director of EssilorLuxottica\*

#### Directorships that have expired in the previous five years

- Chief Executive Office of Sonepack S.A.S. until mid-2020
- Chairwoman of CMI until June 2020
- Member of the Supervisory Board of AkzoNobel Energy S.A.S. (until June 2020)

#### Other positions held during fiscal year 2023

- Director at the association FONDACT
- Director at the Fondation Recherche Alzheimer
- Member of the Board of Directors of AFEP (French association of private companies)
- Vice Chair of the Board of Directors of the Association Nationale des Sociétés par Actions (ANSA)
- Member of the Bureau and director of MEDEF International



## Lise Croteau

### Independent director

Member of the Audit Committee

Born on May 5, 1960 (Canadian)

Director of TotalEnergies SE since the Annual Shareholders' Meeting on May 29, 2019

Last reappointment: Annual Shareholders' Meeting on May 25, 2022

End of current term: 2025 Annual Shareholders' Meeting

Number of TotalEnergies shares held: 100

Number of TotalEnergies ADS held: 1,000 (as of December 31, 2023)

Business address: 580 Chemin de la Réserve, Mont-Tremblant, Québec, J8E 3L8, Canada

**Main function:** Independent director

### Biography & Professional Experience

Ms. Croteau began her career in 1982 as an auditor within the audit firms, today Raymond Chabot Grant Thornton, then Deloitte, and she joined Hydro-Québec in 1986 where she held positions of control, of risk management and of financial management of increasing responsibility.

From 2015 to 2018, she held the position of Executive Vice President and Chief Financial Officer of Hydro-Québec prior to retiring.

A chartered professional accountant since 1984, Ms. Croteau holds a Bachelor's degree in Business Administration and in 2008 was named a Fellow of the Order of Chartered Professional Accountants of Québec in recognition of her contribution to the profession and for her collaboration in the development of Canadian accounting standards for derivatives.

Her functions within Hydro-Québec have enabled her in particular to develop significant expertise in risk management from 2008, as she has been in charge of risk management, responsible for the company's risk portfolio drawn up as part of the annual exercise of the company's long-term strategic planning. In this context, she had in particular to identify, quantify and monitor risk trends and means of mitigation.

Mrs Croteau was also in charge of market risk management activities, and "Middle Office" credit of Hydro-Québec's market activities for energy transactions on Northeast American markets, debt management and management of the company's employee pension fund.

Ms. Croteau has been an independent director of Boralex since 2018, the Chair of the Audit Committee since 2019 and a member of the Investment and Risk Management Committee since 2021. Boralex, listed in Toronto, is a Canadian leader in renewable energies with operations in wind, solar, hydroelectricity and storage. It also has operations in France, the United States and the United Kingdom.

Since June 2019, Ms. Croteau has been a director on the Boards of Québecor inc. and Québecor Média inc. as well as a member of the Human Resources and Corporate Governance Committee and of the Audit and Management Risks Committee since May 2022, when she was also appointed director of the Board of Directors of Vidéotron and member of the Audit and Management Risks Committee. Québecor is a Canadian leader in the telecommunications, entertainment, news media and culture fields.

### Directorships and functions held

#### Directorships held at any company during fiscal year 2023

- Director of TotalEnergies SE\* and member of the Audit Committee
- Director of Québecor inc.\* since June 16, 2019, member of the Human Resources and Corporate Governance Committee and member of the Audit and Management Risks Committee since May 12, 2022; director of Québecor Média inc. since June 16, 2019, member of the Human Resources and Corporate Governance Committee and member of the Audit and Management Risks Committee since May 12, 2022 and director and member of the Audit and Management Risks Committee of Vidéotron (Québecor's wholly-owned subsidiary) since May 12, 2022

- Director of Boralex\* since 2018, Chairwoman of the Audit Committee since 2019 and member of the Investment and Risk Management Committee since 2021

#### Directorships that have expired in the previous five years

- Director of TVA Group Inc.\* until June 16, 2019

#### Other positions held during fiscal year 2023

None



## Mark Cutifani CBE

### Independent director

Chairman of the Compensation Committee  
Member of the Governance and Ethics Committee

Born on May 2, 1958 (Australian)  
Director of TotalEnergies SE since the Annual Shareholders' Meeting on May 26, 2017  
Last reappointment: Annual Shareholders' Meeting on May 26, 2023  
End of current term: 2026 Annual Shareholders' Meeting  
Number of TotalEnergies shares held: 2,000 (as of December 31, 2023)  
Business address: 19 Oxshott Rise, Cobham, KT11 2RW, United Kingdom

**Main function:** Director and Executive Business Advisor

### Biography & Professional Experience

Mr. Cutifani is a Director and Executive Business Advisor after retiring from Anglo American plc. in June 2022. He has more than 47 years of experience in the mining industry in various parts of the world, covering a broad range of products. He was previously the Chief Executive Officer of AngloGold Ashanti Limited. Before joining AngloGold Ashanti, Mr. Cutifani was COO responsible for global nickel business at Vale. Prior to that, he held various management roles at Normandy Group, Sons of Gwalia, Western Mining Corporation, Kalgoorlie Consolidated Gold Mines and CRA (Rio Tinto).

Mr. Cutifani has a degree in Mining Engineering (with honors) from the University of Wollongong in Australia. He is a Fellow of the Royal Academy of Engineering, the Australasian Institute of Mining and Metallurgy and the Institute of Materials, Minerals and Mining in the United Kingdom.

Mr. Cutifani received an honorary doctorate from the University of Wollongong in Australia in 2013 and an honorary doctorate from Laurentian University in Canada in 2016. Mr. Cutifani is Commander of the Order of the British Empire (CBE).

### Directorships and functions held

#### Directorships held at any company during fiscal year 2023

- Director of TotalEnergies SE\*, Chairman of the Compensation Committee and, since May 26, 2023, member of the Governance and Ethics Committee
- Senior Independent Non-Executive Director – Laing O'Rourke (Private) since September 1, 2022
- Chair of Vale Base Metals since July 2023
- Non-Executive Director – Development Partner Institute since August 2022

#### Directorships that have expired in the previous five years

- Director and Chief Executive of Anglo American plc.\* until April 19, 2022
- Non-executive director of Anglo American Platinum Limited until May 12, 2022

- Chairman of De Beers plc. until May 12, 2022
- Chairman of De Beers Investments plc. until May 12, 2022

#### Other positions held during fiscal year 2023

- Chairman of Board of Trustees – Power of Nutrition since July 2022
- Chair – International Advisory Committee for Global Foundation since July 2022
- Member of International Advisory Committee – AUSIMM since October 2022
- Advisor to Mevco since April 2023
- Advisor to ERM since July 2023



## Romain Garcia-Ivaldi

### **Director representing employees**

Member of the Audit Committee

Born on September 14, 1988 (French)

Director representing employees of TotalEnergies SE since June 9, 2020

Last reappointment (by the Central Social and Economic Works Council of the Corporation): February 28, 2023

End of current term: 2026 Annual Shareholders' Meeting

Number of TotalEnergies shares held: 178

Number of TotalEnergies Actionnariat France collective investment fund units held: 4,582.355

Number of FCPE TotalEnergies France Capital+ collective investment fund units held: 3  
(as of December 31, 2023)

Business address: TotalEnergies SE, 2 place Jean Millier, La Défense 6, 92400 Courbevoie, France

**Main function:** Employee of TotalEnergies SE\*

### **Biography & Professional Experience**

A graduate of ENSTA Paris engineering school and IFP School, Mr. Garcia-Ivaldi began his career at TotalEnergies in 2012 as an economist on oil and gas projects in Americas region. Between 2015 and 2021, he was a reservoir engineer, serving in a variety of positions in Paris and Lagos (Nigeria). He is currently an economist of new business for TotalEnergies SE. He also obtained the "Certificat Administrateur de Sociétés" IFA-Sciences Po. He also completed the "Climate Change: Economics and Governance" training program at the London School of Economics.

Mr. Garcia-Ivaldi was chairman of the Supervisory Board of the TotalEnergies Actionnariat France and TotalEnergies France Capital+ employee shareholding funds from November 9, 2018 to June 17, 2020.

### **Directorships and functions held**

#### **Directorships held at any company during fiscal year 2023**

- Director representing employees of TotalEnergies SE\* and member of the Audit Committee

#### **Other positions held during fiscal year 2023**

None

#### **Directorships that have expired in the previous five years**

None



## Maria van der Hoeven

### Independent director

Chairwoman of the Audit Committee

Born on September 13, 1949 (Dutch)

Director of TotalEnergies SE since the Annual Shareholders' Meeting on May 24, 2016

Last reappointment: Annual Shareholders' Meeting on May 25, 2022

End of current term: 2025 Annual Shareholders' Meeting

Number of TotalEnergies shares held: 1,800 (as of December 31, 2023)

Business address: Sadatdomein 31, 6229 HC Maastricht, The Netherlands

**Main function:** Independent director

### Biography & Professional Experience

Ms. van der Hoeven trained as a teacher, becoming a professor in economic sciences and administration then a school counselor. She subsequently headed the Adult Vocational Education Center in Maastricht for seven years, before leading the Limburg Technology Center. She was a member of the Dutch Parliament, served as Minister of Education, Culture and Science from 2002 to 2007, and was Minister of Economic Affairs of the Netherlands from 2007 to 2010. Ms. van der Hoeven was Executive Director of the International Energy Agency (IEA) from September 2011 to August 2015. During this period, she helped to increase the number of members of the Agency and emphasized the close link between climate and energy policy. In September 2015, Ms. van der Hoeven joined the Board of Trustees of Rocky Mountain Institute (USA) and in the spring of 2016, she became a member of the Supervisory Board of Innogy SE (Germany). Ms. van der Hoeven was Vice Chairwoman of the High-level Panel of the European Decarbonisation Pathways Initiative within the European Commission between 2016 and 2018. Since January 2020, she has been a member of the Supervisory Board of COVRA, a privately held Dutch company that serves as the central depository for radioactive waste in the Netherlands.

### Directorships and functions held

#### Directorships held at any company during fiscal year 2023

- Director of TotalEnergies SE\* and Chairwoman of the Audit Committee
- Member of the Supervisory Board of Covra since January 2020 (Netherlands)

#### Directorships that have expired in the previous five years

- Member of the Board of Trustees of Rocky Mountain Institute (USA) until October 30, 2021
- Member of the Supervisory Board of Innogy SE\* until October 4, 2019

#### Other positions held during fiscal year 2023

- Member of the EACLN, European Audit Committee Leaders Network, since August 2021
- Member of the Supervisory Board of Erasmus Entreprise (Netherlands) since June 2021
- Special Advisor on energy literacy to the Secretary General of World Energy Council (WEC) since May 2021
- Member of the Board of Leaders pour la Paix (France) since January 2019
- Member of the International Advisory Panel on Energy in Singapore since January 2019
- Senior fellow in CIEP (Clingendael International Energy Programme) (Netherlands)



## Glenn Hubbard

### Independent director

Member of the Audit Committee

Born on September 4, 1958 (American)

Director of TotalEnergies SE since the Annual Shareholders' Meeting on May 28, 2021

End of current term: Annual Shareholders' Meeting on May 24, 2024

Number of TotalEnergies shares held: 1,000 (as of December 31, 2023)

Business address: 572 Kravis Hall, 665 West 130<sup>th</sup> Street, New York, NY 10027, United States

**Main function:** Russell L. Carson Professor of Finance and Economics, Columbia University and Chairman of the Board, MetLife, Inc.

### Biography & Professional Experience

Mr. Glenn Hubbard obtained in 1983 a PhD in Economics at Harvard University. After graduation, he joined Northwestern University as Assistant Professor of Economics, where he stayed for five years. In 1988 he joined Columbia University, where he continues to teach today. Since then, he has been a visiting professor at Harvard's Kennedy School of Government and Harvard Business School as well as The University of Chicago. In 1991, Glenn Hubbard was appointed Deputy Assistant Secretary for Tax Policy at the United States Department of the Treasury. In 1993, he joined the Federal Reserve Bank of New York's Panel of Economic Advisors, a position he vacated in 2001 when he became Chairman of the United States Council of Economic Advisers (CEA). He also served as Chair of the Economic Policy Committee of the Organization for Economic Cooperation and Development (OECD) as well as a Member of the White House National Economic Council, National Security Council, and the President's Council on Science and Technology. He stepped down as Chair of the CEA in 2003, returning to Columbia University. In 2007, he also rejoined the Panel of Economic Advisors for the Federal Reserve Bank of New York, a position he maintained for 10 years. In 2004, he joined the Boards of Dex Media, KKR Financial Corporation, and Automatic Data Processing (ADP), positions he held for many years. In 2004, he was named Dean of Columbia Business School (Columbia University's graduate school of business), keeping this position until 2019. In 2007, Glenn Hubbard joined the Board of MetLife, Inc. where he continues to serve today after being named Lead Independent Director in 2017 and Chairman in 2019.

### Directorships and functions held

#### Directorships held at any company during fiscal year 2023

- Chairman of the Board of MetLife, Inc.\*
- Director of BlackRock Fixed Income Funds
- Director of TotalEnergies SE\* and, since May 26, 2023, member of the Audit Committee

#### Other positions held during fiscal year 2023

- Russell L. Carson Professor of Finance and Economics, Columbia University
- Co-Chair, Committee on Capital markets Regulation
- Board Member of Resources for the Future

#### Directorships that have expired in the previous five years

- Director of Automatic Data Processing until November 2020