

# 2022 Taxonomy:

## A Company in Transition

Pursuant to European Union regulations, the tables below show the proportion of eligible activities and aligned activities in the turnover and CapEx<sup>1</sup> indicators, across the scope of the entities controlled by TotalEnergies, as well as a proportional view, proposed by the delegated regulation of July 6, 2021. This proportional view includes the contribution of joint ventures and companies in which TotalEnergies has significant influence, accounted for by the equity method.

### Controlled scope – Proportional view

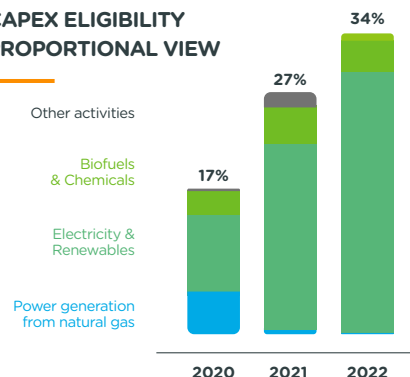
Given the size of the Company and its partnership-based development model across the integrated electricity value chain, the proportional view is more relevant than the controlled scope. Eligible or aligned capex represented more than 30% of the Company's investment in 2022 in the proportional view – confirmation of the growth dynamic underway since 2020.

### Eligible activities – Aligned activities

An **eligible activity**<sup>2</sup> is an activity that falls into one of the following categories on the list established by the European Commission: low-carbon, transitional<sup>3</sup> or enabling<sup>4</sup>.

An **aligned activity** is an eligible activity that also meets a sustainability criterion; in other

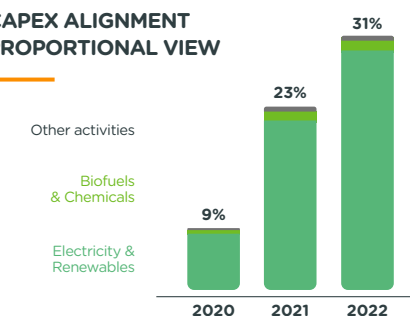
### CAPEX ELIGIBILITY PROPORTIONAL VIEW



er words, it contributes to one of the climate objectives<sup>5</sup> without adversely affecting the other environmental objectives<sup>6</sup> and meets minimum social standards.

### Our main eligible activities at TotalEnergies

### CAPEX ALIGNMENT PROPORTIONAL VIEW



### In electricity and renewables:

- Activities related to renewable energies (wind, solar, bioenergy and hydropower), as well as battery production.
- Activities related to new energy infrastructure for low carbon mobility (charge points for electric vehicles, hydrogen filling stations).
- Electricity generation from natural gas (combined-cycle gas turbine power plants).

### In biofuels and chemistry:

- Activities related to the manufacture of biofuels for use in transportation and certain petrochemical activities, including biopolymer production and mechanical or chemical recycling of plastics.
- **The Company's other main eligible activities** are the manufacture of biogas via anaerobic digestion of biowaste and activities related to carbon sinks (carbon capture and storage, natural carbon sinks). ■

Controlled perimeter (in %)	ELIGIBLE ACTIVITIES				ALIGNED ACTIVITIES			
	Turnover		CapEx		Turnover		CapEx	
	2021	2022	2021	2022	2021	2022	2021	2022
<b>Electricity and renewables</b>	2.4	3.0	8.9	13.7	1.3	1.1	8.0	13.3
<i>incl. Electricity generation from natural gas</i>	1.1	1.8	0.9	0.3	0.0	0.0	0.0	0.0
<b>Biofuels and chemicals</b>	7.4	4.4	2.7	3.1	0.1	0.1	0.3	0.6
<b>Other eligible activities</b>	0.1	0.1	1.8	0.6	0.1	0.1	1.8	0.6
<b>TOTAL</b>	<b>9.9</b>	<b>7.5</b>	<b>13.4</b>	<b>17.4</b>	<b>1.5</b>	<b>1.3</b>	<b>10.1</b>	<b>14.5</b>

Proportional view (in %)	ELIGIBLE ACTIVITIES				ALIGNED ACTIVITIES			
	Turnover		CapEx		Turnover		CapEx	
	2021	2022	2021	2022	2021	2022	2021	2022
<b>Electricity and renewables</b>	2.6	3.2	21.7	29.8	1.6	1.4	21.1	29.5
<i>incl. Electricity generation from natural gas</i>	1.0	1.6	0.6	0.2	0.0	0.0	0.0	0.0
<b>Biofuels and chemicals</b>	8.5	5.5	4.1	3.5	0.2	0.1	0.5	0.6
<b>Other eligible activities</b>	0.1	0.2	1.6	0.7	0.1	0.2	1.6	0.7
<b>TOTAL</b>	<b>11.2</b>	<b>8.9</b>	<b>27.4</b>	<b>34.0</b>	<b>1.9</b>	<b>1.7</b>	<b>23.2</b>	<b>30.8</b>

1. Capex refers to the taxonomy standard. A reconciliation table is provided in the 2022 Universal Registration Document, Section 5.4.6. 2. Described in Delegated Regulation (EU) 2021/2139 of June 4, 2021. 3. Activities for which there is currently no economically or technologically viable low-carbon alternative. 4. Activities that enable other activities to contribute to the achievement of one of six environmental objectives. 5. The Taxonomy regulation includes two climate objectives: (1) mitigation of climate change, and (2) adaptation to climate change. 6. Relating to the sustainable use and protection of water and marine resources; the transition to a circular economy; pollution prevention and control; and the protection and restoration of biodiversity and ecosystems.

# Making the Case for the Energy Transformation

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 (see sidebar below). A partial review is conducted in the intervening years. This monitoring and evaluation of industry organizations continued in 2022: a complete review began at the end of the year and will be completed in mid-2023. In 2022, most of the new organizations our entities joined were involved in the energy transition and low carbon energies.

## Support for government action and climate 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<sup>1</sup>.

**In Europe, TotalEnergies supports the “Fit for 55” package** and specifically some of its key components, such as the broader use of carbon pricing, the large-scale expansion of renewable energies, deployment of infrastructure (charge points, hydrogen) and the development of low-carbon fuels and renewables for the transportation industry. Our responses to the European Commission’s public consultations on climate in 2022 are public and may be viewed online. They address the measurement of emissions from transportation, certification of carbon sinks and renewable energy and solar energy projects. TotalEnergies has expressed its support for the European Union’s carbon border adjustment mechanism as part of the EU emissions trading system,

and has indicated its backing for a European energy union to the President of France and Germany’s Chancellor. TotalEnergies also supports the digital action plan of the European Round Table of Industrialists (ERT) in favour of the energy transition.

**In the United States,** TotalEnergies supports the implementation of the Inflation Reduction Act and plans to capitalize on that legislation to accelerate the deployment of its activities in renewable energies.

**In France,** TotalEnergies has joined the Eco-Watt initiative led by RTE, the operator of the country’s electrical grid, to encourage responsible energy consumption.

Consistent with its commitment to transparency, in 2022 TotalEnergies lent its backing to new climate reporting standards proposed by the US Securities and Exchange Commission (SEC) and the International Sustainability Standards Board (ISSB). The Company is also cooperating with the Science Based Targets initiative that aims to develop standards applicable to its industry in order to identify criteria for compatibility with the goals of the Paris Agreement. ■

1. Website link: <https://totalenergies.com/info/our-advocacy-efforts-carried-out-addressing-climate-issues>

## REVIEW OF AFFILIATIONS

### BASED ON SIX 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

and 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 to move toward the ambition of zero methane emissions.

• **Carbon offsetting:** TotalEnergies promotes a policy of reducing greenhouse gas emissions: avoid; reduce by using the best available technologies; offset the minimized residual emissions. TotalEnergies supports the carbon offset mechanisms necessary to achieve carbon neutrality, through organized and certified markets ensuring the quality and sustainability of carbon credits.

# Transforming Ourselves to Reinvent Energy

PARKING SHADES  
IN RIVESALTES  
(FRANCE).

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## Highlights

### 2022: A YEAR OF ACTION AND PROGRESS

#### FIRST QUARTER

#### SECOND QUARTER

#### THIRD QUARTER

#### FOURTH QUARTER

#### ELECTRICITY

- **Awarded a concession** to develop an offshore wind farm with a capacity of more than 3 GW in the United States
- **Awarded a concession for a 2 GW offshore wind farm** in Scotland with GIG and RIDG
- **Launched TotalEnergies On**, a start-up accelerator for France's electricity and renewables sector
- **Acquired SunPower's industrial and commercial solar power businesses** in the United States

- **Acquired a 50% stake in Clearway**, a major renewable energy firm in the United States
- **Awarded a concession** for a 1 GW offshore wind farm in the US state of North Carolina
- **Acquired Core Solar** and its portfolio of 4 GW of solar and energy storage projects in the United States

- **Announced first power at Scotland's largest offshore wind farm**, 51% owned by TotalEnergies
- **Established an Excellence Center** of Clean Energy with DTU in Denmark
- **Awarded a contract in Flanders** to install 4,400 electric vehicle charging points on Belgium's public roadways and operate them for twelve years
- **Signed an agreement with Veolia** to build the largest solar power plant for a desalination plant in Oman

- **Started production at the 800 MW Al Kharsaah solar power plant** in Qatar
- **Acquired a 34% stake in a 12 GW solar and wind power portfolio** and established a joint venture with Casa dos Ventos in Brazil
- **Reached the milestone of 500 MW of solar generation capacity** at the Company's B2B customer sites worldwide
- **New electricity rates**: created a consumption bonus to reward residential customers in France who reduce their power consumption

#### GAS

- **Strengthened our strategic alliance with Semptra** to develop the Vista Pacifico LNG project in Mexico and jointly develop several renewables projects in North America
- Conducted the **first ship-to-containership LNG bunkering operation** at the Port of Marseille in France

- **Selected by QatarEnergy** as its first partner in the North Field East LNG project in Qatar
- **Began detailed design studies** for the Cameron LNG expansion project in the United States
- **Signed a long-term LNG sale** and purchase agreement with South Korea's Hanwha Corporation
- **Launched a campaign to detect methane emissions** at more than 100 operated sites worldwide using drones

- **Launched the Upstream engineering studies (FEED)** for the Papua LNG project
- **Launched the Fenix offshore gas project** in Argentina
- **Chosen by QatarEnergy** as its first partner in the North Field South LNG project in Qatar

- **Launched the Amiral project**, a giant petrochemical complex for the production of higher-added-value chemicals in Saudi Arabia

#### OIL

- **Launched the Tilenga and EACOP projects** in Uganda and Tanzania and signed a memorandum of understanding for the development of renewables in Uganda

- **Launched the Ballymore development** in the US Gulf of Mexico
- **Started oil production from the first phase of Brazil's Mero field**, a low-cost, low-emissions project

- **Implemented multi-energy strategy in Angola** with three new projects in oil, gas and solar power

- **Increased by 4%** in our stake in Libya's Waha oil concessions and a project to reduce gas flaring in the country

## Highlights

## 2022: A YEAR OF ACTION AND PROGRESS

## FIRST QUARTER

## SECOND QUARTER

## THIRD QUARTER

## FOURTH QUARTER

- Signed an agreement with **Veolia** to produce biomethane from waste and wastewater treatment facilities in more than 15 countries
- Signed an agreement with **Honeywell** to promote advanced plastic recycling in Europe
- Signed an agreement with **Plastic Energy** to promote technology for advanced plastic recycling in Spain
- Began **SAF production by coprocessing** at the Normandy platform in France
- Signed a collaboration agreement with **Masdar and Siemens Energy** to develop a green hydrogen project and produce SAF in the United Arab Emirates

- Signed an agreement with **New Hope Energy** for a chemical advanced plastic recycling project in the United States
- Supplied **100% renewable fuel** used by all cars in competition at the 2022 Le Mans 24 Hours race in France
- Signed an agreement with **ENEOS** to develop sustainable aviation fuel production in Japan

- Signed an agreement with **Saria** to secure feedstock for the production of sustainable aviation fuel at the zero-crude Grandpuits complex in France

- Partnered with **Air Liquide** to produce renewable, low-carbon hydrogen at the zero-crude Grandpuits complex in France
- Signed an agreement to supply sustainable aviation fuel to Air France-KLM for ten years

- Invested in the fund managed by **New Forests** for certified plantations and native forest conservation projects in various countries across Southeast Asia that will generate carbon credits

- Signed an agreement with **Compagnie des Bois du Gabon** to develop a new model for forest management that combines sustainable harvesting with biodiversity preservation, generating carbon credits for Gabon
- Signed an agreement to develop a **CCS project** to decarbonize production at Cameron LNG in the United States

- Joined forces with **INPEX and Woodside** to develop a major offshore CCS project in Australia
- Signing by **Northern Lights and Yara** of an innovative commercial agreement for cross-border transport and CO<sub>2</sub> sequestration in the North Sea.

- Signed an agreement with **Holcim** to develop the first zero carbon cement production facility in Belgium

# Low-Carbon Electricity: Growth and Profitability

The low-carbon electrification of energy demand is at the heart of the roadmaps of countries committed to carbon neutrality by 2050. As a result, electricity is a fast-expanding market in which we are experiencing profitable growth. Our objective is to reach gross capacity for renewable electricity of 35 GW by 2025 and 100 GW by 2030, a level that would put us among the world's top five producers of renewable electricity (solar and wind).

Our levers for growth with a return on average capital employed of over 10% are selectivity in our choice of projects; integration across the entire electricity value chain (generation, storage and trading, B2B and B2C sales); cost

control using our project management and off-shore development skills; mobilizing external financing at competitive rates and making partial divestments to accelerate cash flow generation and diversify our portfolio's exposure.

## Executing our roadmap in renewables

Our gross installed capacity for renewables rose from 10 GW in 2021 to 17 GW in 2022. Our 2025 objective for gross installed capacity (worldwide) is secured; we are now working on projects to achieve our 2030 objective of 100 GW. The move to gain 100% control of TotalEren in 2023 and its integration within the Company will help us meet that goal.



Renewables

Flexible generation

Storage

Trading

Customers

## Creating value by integrating across the electricity value chain

### • Developing flexible generation and storage capacities

The intermittence of solar and wind projects creates a need for flexible generation and storage capacity to ensure supply meets demand at all times and to guarantee grid stability.

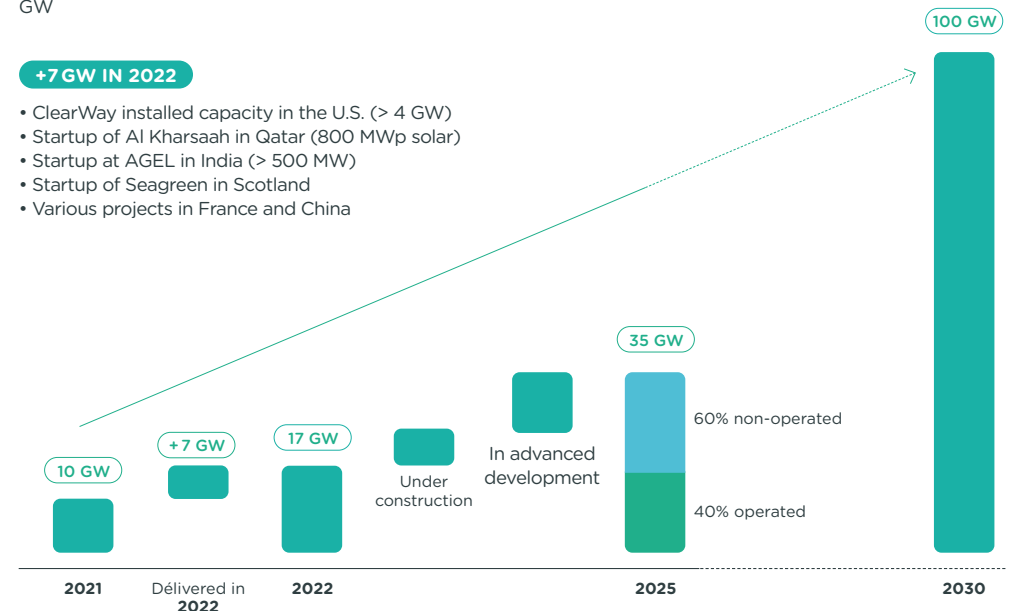
**Flexible generation:** We began building a **dispatchable power generation** portfolio in 2015 consisting of combined-cycle gas turbine (CCGT) plants. This portfolio's capacity

reached 5.6 GW<sup>1</sup> in 2022 with the March 2022 commissioning of the CCGT in Landivisiau, France. With production of around 23 TWh in 2022 versus 8.4 TWh in 2021, these units helped offset the impact of weather events and the reduced availability of France's nuclear power plants. Ultimately, the CCGT units are targeted for decarbonization, either by changing their feedstock (biomethane or hydrogen) or by sequestering their emissions through carbon capture and storage (CCS).

1. From nine CCGT plants, two co-processing units and one gas-fired power and desalination plant.

## GROSS INSTALLED CAPACITY FOR RENEWABLE ELECTRICITY

GW



**Storage:** We are leveraging the technological expertise at SAFT, which is also making the most of this fast-growing market. In 2022, TotalEnergies commissioned a 25 MWh battery energy storage system (BESS) at the Carling complex and SAFT won significant contracts in New Zealand (100 MW BESS to enhance the stability of the national grid, which takes up a growing share of renewable energies) and Côte d'Ivoire (10 MW ESS to facilitate grid integration of the country's first large-scale photovoltaic solar plant).

**New objective for 2030: 5 GW of storage capacity deployed worldwide.**

#### • Diversifying our market exposure

We aim to build a portfolio with a good balance between regulated markets (mainly emerging countries) and deregulated markets (primarily OECD countries and Brazil). In the latter, which are often more competitive, we see electricity prices trending upward over the long term. We rely on a combination of long-term contracts (PPA<sup>2</sup> and corporate PPA) and exposure to wholesale markets of up to 30% to make the most of the value created by price fluctuations. In 2022, we developed our electricity trading capacity, which is both crucial for managing this exposure and a competitive advantage for optimizing the value of our projects.

#### • Developing our customer portfolio

Our integration across the electricity value chain goes all the way to sales to end customers, with packages tailored to consumers and businesses. In 2030, our objective is to serve nearly 10 million consumers in Europe and to sell **130 TWh**. We also aim to

### GROSS INSTALLED CAPACITY FOR RENEWABLES AT END-2022

In MW

	Wind turbines	Photovoltaic	Other <sup>3</sup>	TOTAL
Europe	1,936	991	134	3,061
Oceania	20	325	8	354
Americas	2,426	3,307	62	5,796
Asia	492	6,871	0	7,363
Africa	0	239	15	254
<b>Total</b>	<b>4,875</b>	<b>11,734</b>	<b>219</b>	<b>16,829</b>

reach **150,000 electric vehicle charge points** in operations. For our industrial customers, we offer long-term corporate purchase power agreements (CPPAs) from our solar and wind farms, as well as distributed solar generation solutions.

In France, TotalEnergies is the market leader in solar power on buildings, having been awarded projects totaling more than 250 MW in the French Energy Regulatory Commission's CRE4 call for tenders since 2017 (see p. 55). ■

2. Power Purchase Agreement. 3. Batteries, hydro, etc.

### FOCUS

#### OUR ACQUISITIONS IN 2022

**United States:** TotalEnergies acquired 50% of Clearway Energy, the country's fifth largest player in solar and wind. The acquisition lifted our renewables portfolio in the United States to more than 25 GW and added to our positions in solar (8 GW of projects with SunChase and Core Solar) and offshore wind (4 GW of projects off the coast of New York and North Carolina).

**Brazil:** TotalEnergies created a joint venture with Casa dos Ventos, Brazil's leading renewable energy company, to develop a 12 GW renewable energy portfolio that includes 6 GW already in operation, under construction or in an advanced stage of development (start-up within five years).

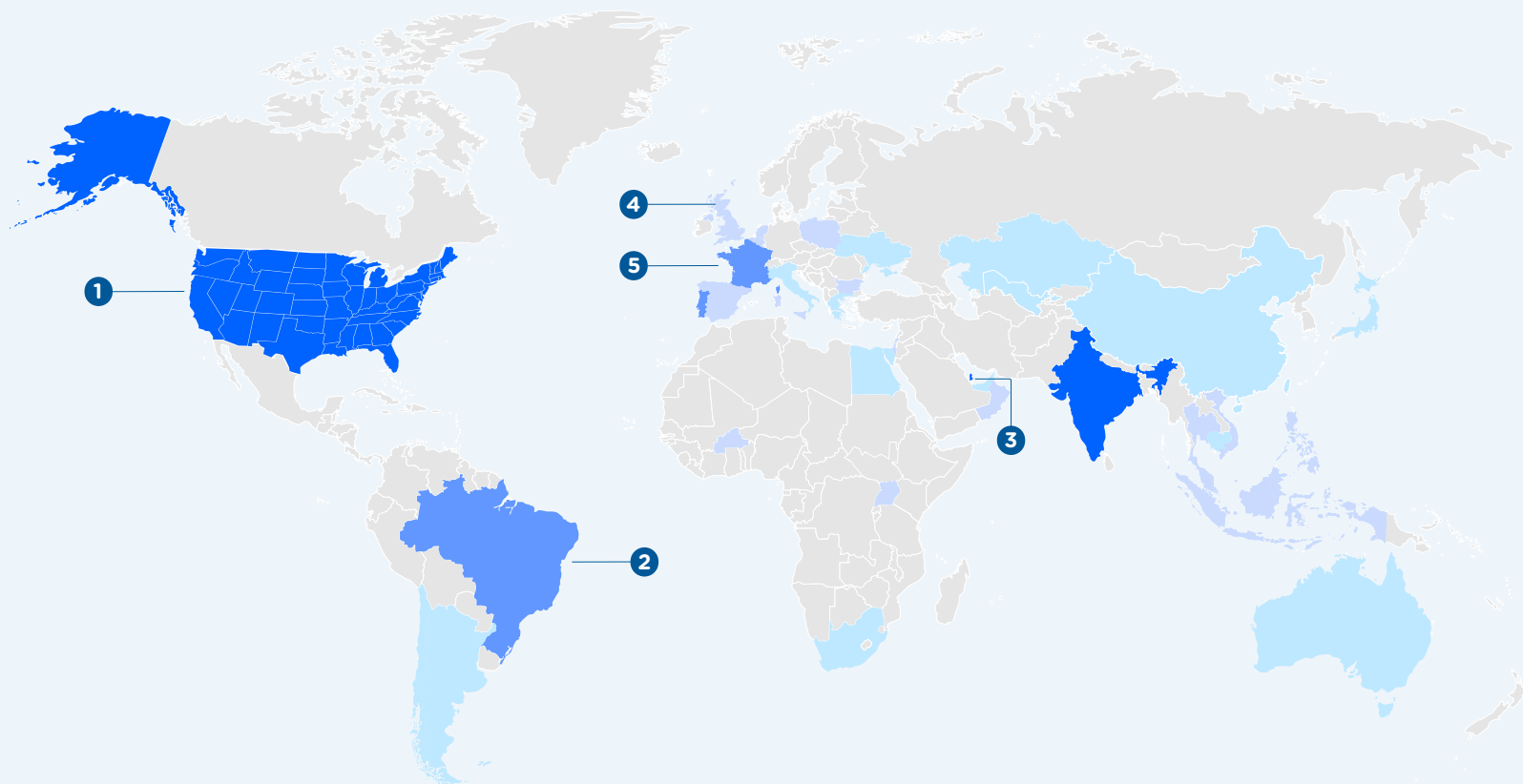


Maintenance operations on the Champagne Conlinoise wind farm (France).

## OUR MAIN ELECTRICITY PROJECTS IN 2022

Gross installed capacity of renewable power at end-2022 by country (in MW)

- Below 50 MW
- 50 - 500 MW
- 500 - 5,000 MW
- Over 5,000 MW



### Major acquisitions in 2022

#### 1. CLEARWAY ENERGY

- 5<sup>th</sup> largest renewable energies company in the U.S., 25 GW non-operated portfolio

#### 2. CASA DOS VENTOS

- Major player in renewables in Brazil, partnership for 12 GW

### Startup of large renewable projects

#### 3. AL KHARSAAH

- First large-scale solar power plant in Qatar, 800 MWp non-operated

#### 4. SEAGREEN

- United Kingdom, fixed-bottom wind farm, 1.1 GW operated

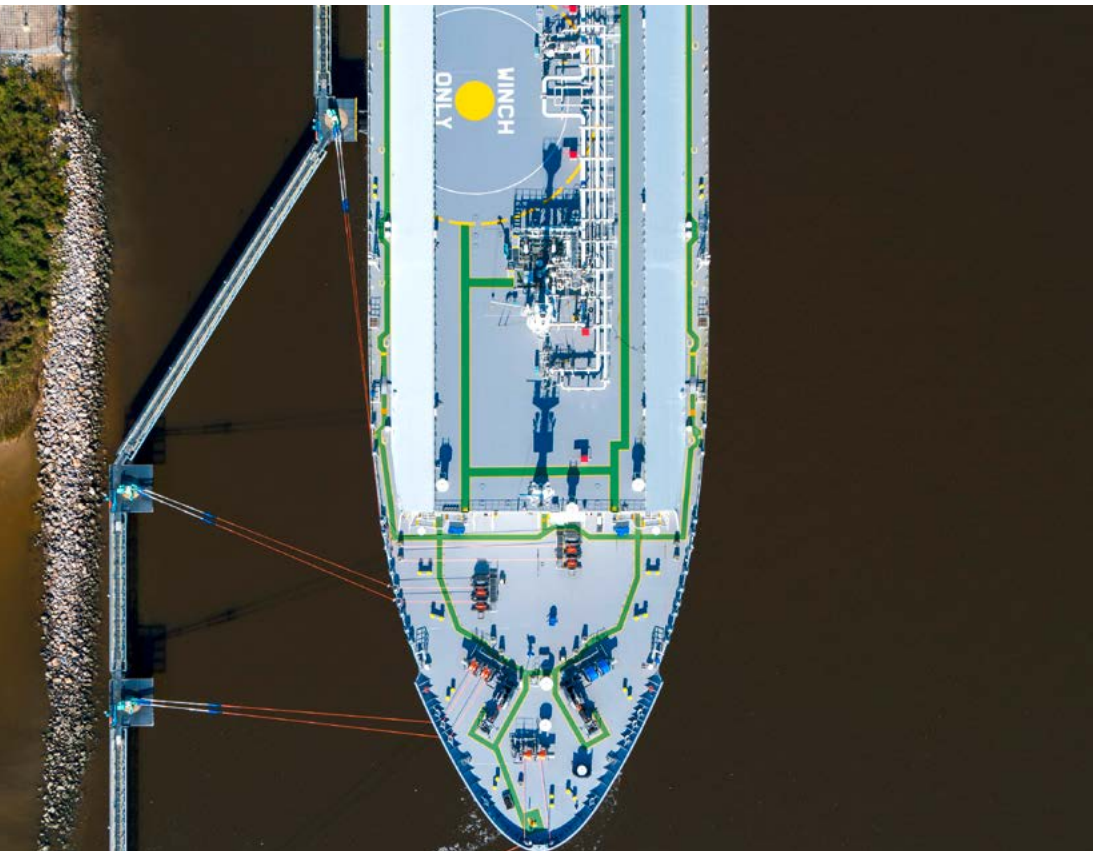
### CCGT startup

#### 5. LANDIVISIAU

- Combined cycle gas turbine plant 446 MW in France



# Natural Gas: A Key Fuel for the Energy Transition



1<sup>st</sup> loading of Enterprise LNG at the Cameron LNG liquefaction terminal in Louisiana (US).

## Pursuing our growth in LNG

In the gas markets, TotalEnergies focuses on Liquefied Natural Gas (LNG), which can be shipped everywhere in the world. LNG accounts for around 11% of the total gas market and saw strong growth in 2022 (up 6%) due to interrupted Russian pipe gas imports to Europe. The imbalance between LNG supply and demand led to a sharp price increase, from which we benefited.

On the flip side, certain consumers have reduced their demand: Pakistan, for example, announced in February 2023 that it intended to build new power plants using coal rather than gas to meet future electricity demand. For LNG to fully play its role in the energy transition, it must remain affordable and the associated greenhouse gas emissions must

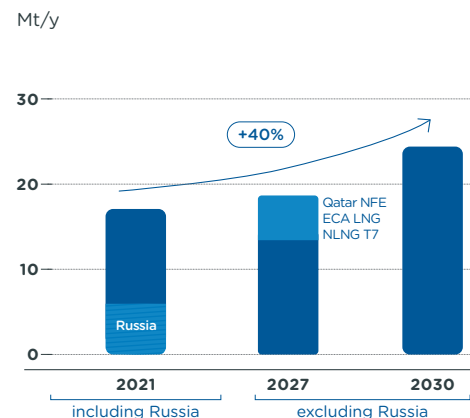
be controlled across the value chain. We are working on that.

With 48 Mt sold in 2022, TotalEnergies has strengthened its position as the world's third largest LNG company. 99% of these LNG sales went to countries committed to net zero emissions by the mid-century, giving them an alternative to coal and fuel oil (see p. 53).

## LNG: Contributing to Europe's energy security in 2022

We are the leader in regasification in Europe. We fully leveraged our capacities to offset the reduced deliveries from Russian gas pipelines by increasing the utilization rate from 50% in 2021 to 86% in 2022. The connection of our assets of two additional Floating Storage and Regasification Units (FSRUs) in Lubmin, Germany (late 2022) and Le Havre, France (planned for Q3 2023) will increase our total regasification capacity to more than 20 Mt in 2023. To supply these terminals, TotalEnergies is relying in particular on its position as the leading exporter of U.S. LNG to Europe (more than 10 Mt in 2022). ■

## LNG PRODUCTION



## FOCUS ON

**Qatar:** TotalEnergies selected as partner on NFE projects in June and NFS in September (3.5 Mt/y).

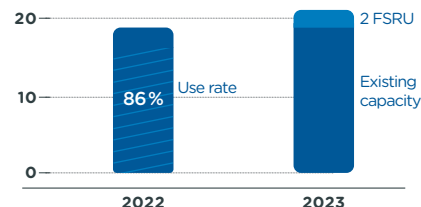
**North America:** Launch of Cameron Phase 2 FEED.

**Papua New Guinea:** Launch of integrated FEED.

## GROWING LNG REGAS CAPACITY IN EUROPE

Mt

> 20 Mt/y in 2023 (~15% market share)



- FSRU in Lubmin, Germany, since end-2022
- FSRU in Le Havre, France, planned for 3Q23

## FOCUS ON

### REDUCING OUR LNG VALUE CHAIN'S EMISSIONS INTENSITY

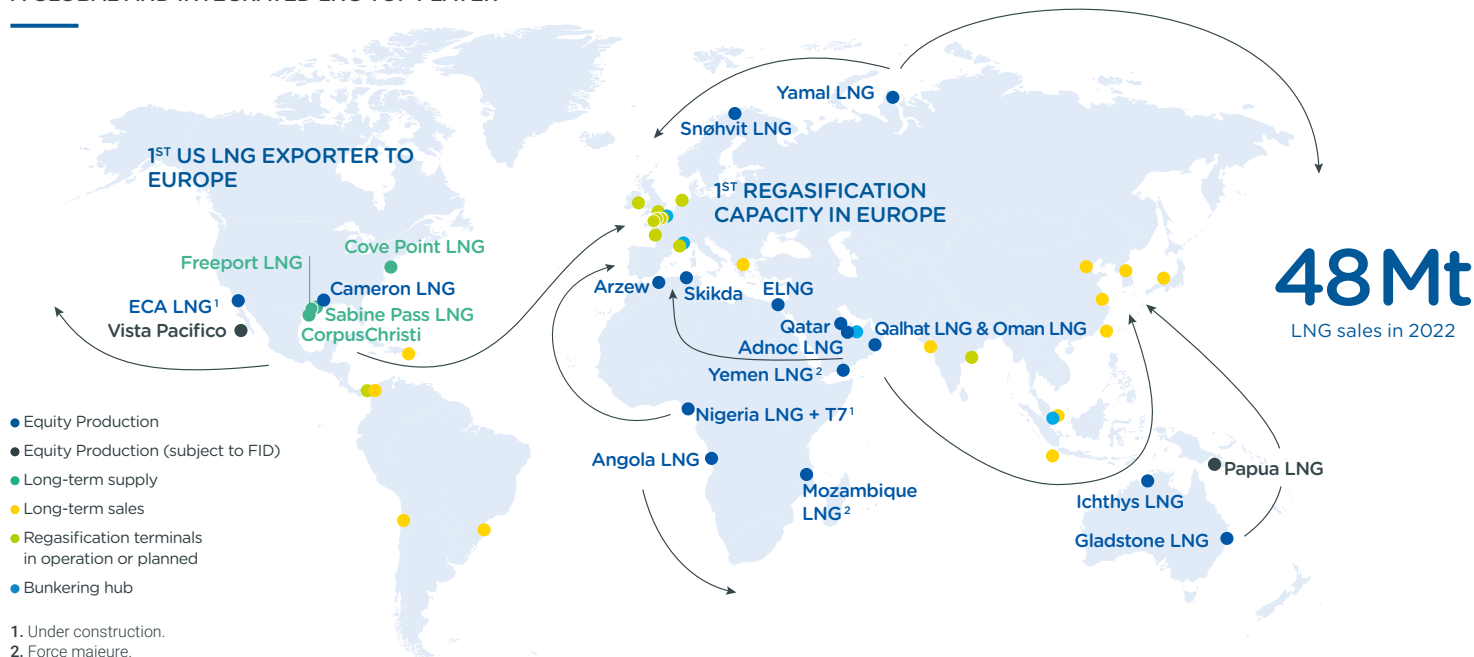
Our LNG growth strategy requires an exemplary approach to GHG emissions across the value chain. Our priority is to eliminate methane emissions (see p. 30). For example, the concept chosen for the integrated FEED launched for Papua LNG is based on four electric liquefaction trains (e-trains) and re-injection of the native CO<sub>2</sub> produced into the reservoirs.

## QATAR

### TWO MAJOR SUCCESSES IN QATAR IN 2022 FOR TOTALENERGIES

Twice in 2022, Qatar chose TotalEnergies as its first partner for LNG production projects: North Field East and North Field South. These extension projects will provide the Company with additional LNG production of 3.5 Mt/y and significantly enhance the global supply. In line with our strategy, they are among the most competitive in the world in terms of cost and will apply the highest standards to reduce GHG emissions intensity (including methane). Solutions include capturing and storing native CO<sub>2</sub> and connecting to Qatar's power grid, which is supplied with an increasing share of renewable electricity, thanks in part to the 800 MW Al Kharsaah solar power plant commissioned in 2022, in which TotalEnergies is a partner.

## A GLOBAL AND INTEGRATED LNG TOP PLAYER



Ras Laffan liquefaction terminal, Doha (Qatar).