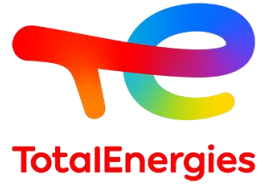




Decarbonizing the chemical industry


APIC Fukuoka – 29th may 2026

Key figures





 **> 102,000**
employees
> 120 countries

 **~\$ 3.5 B**
net investment
in low-carbon energies

 **N°3**
Global LNG player

 **> 100 TWh** of
production by 2030
- End of 2025: **34GW** of gross
capacity

 **+ 78,000**
Charging points for
electrical vehicles. End of 2025

 **8,8 millions**
Customers for electricity
& Natural Gas in Europe

 **44 Mt**
LNG sales

 **+3,500**
Researchers in
our R&D centers

 **6,000,000**
Customers in
service station

Two pillars: Oil & Gas + Integrated Power



Oil & Gas

- › Low cost, low emission
- › Rich upstream projects portfolio
- › Top 3 global LNG integrated portfolio
- › Strong LNG project pipeline

2025
key
indicators

+ 4%

Upstream
production
growth

44 Mt

LNG sales



Integrated Power

- › Accelerate gas-to-power integration in Europe through major transaction with EPH
- › ~6 TWh/y PPAs signed to supply datacenters
- › Successful farm downs: 2 B\$ of recycled capital

2025
key
indicators

**48
TWh**

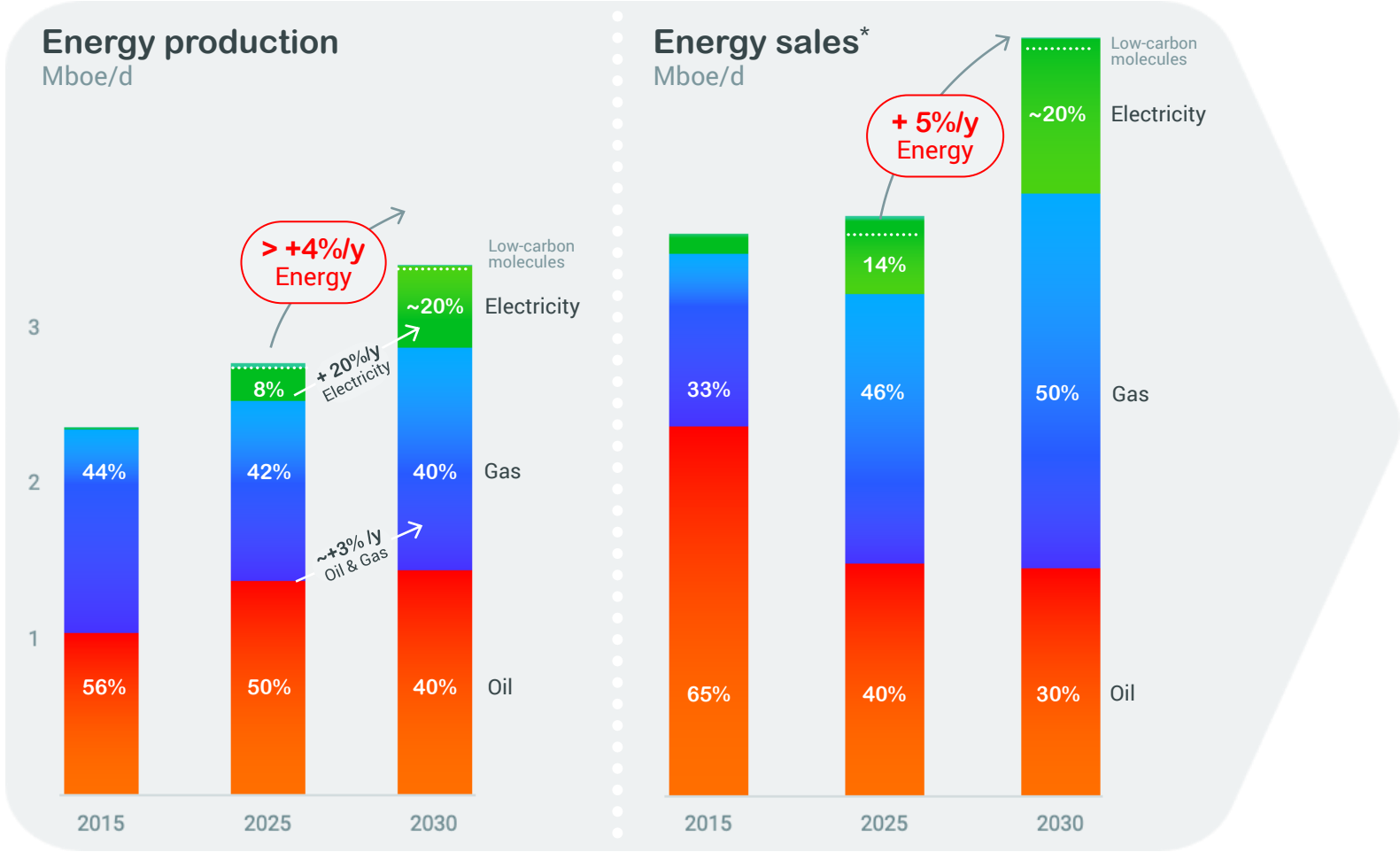
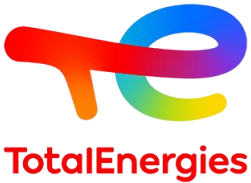
Production
Dec. 25

34 GW

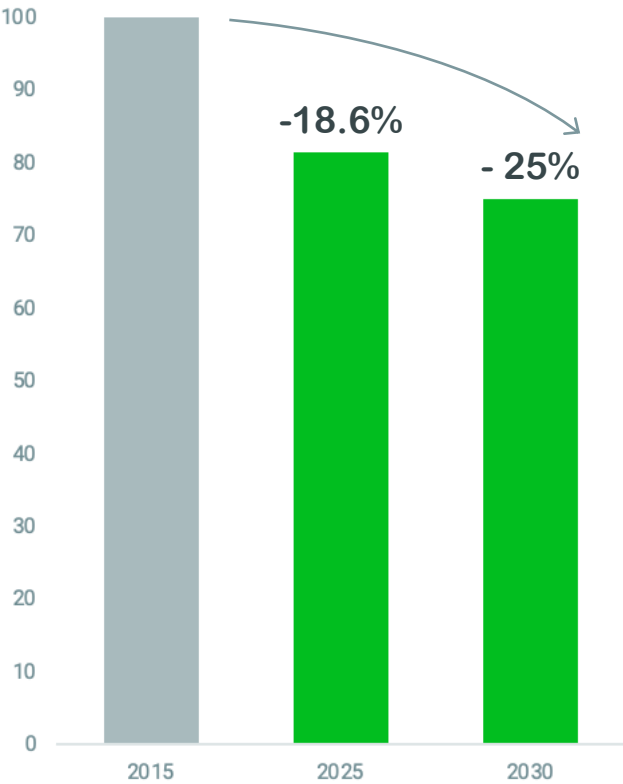
Renewables
gross installed
capacity



Growing our energy production and sales towards 2030

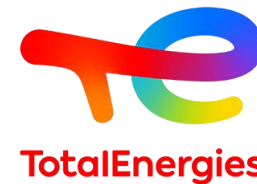


Lifecycle Carbon Intensity of Energy products sold*
Base 100 in 2015



Decarbonizing the chemical industry

A complete portfolio of solutions



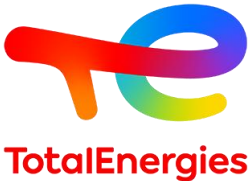
A team dedicated to your industry



A portfolio of solutions addressing your challenges



A global and integrated LNG player



Upstream

Access to low-cost supply

LNG plants

Lower the breakeven
of our LNG portfolio

Trading Shipping

Strong trading teams
Competitive LNG fleet

Regas

Access to premium
physical outlet in Europe

Customers

Secure Long-Term Brent-
indexed sales in Asia

+ 50%

Equity + offtake growth
2023–30*

26 ↗ 30

LNG carriers

> 20 Mt/y

Regas capacity
in Europe

~ 10%

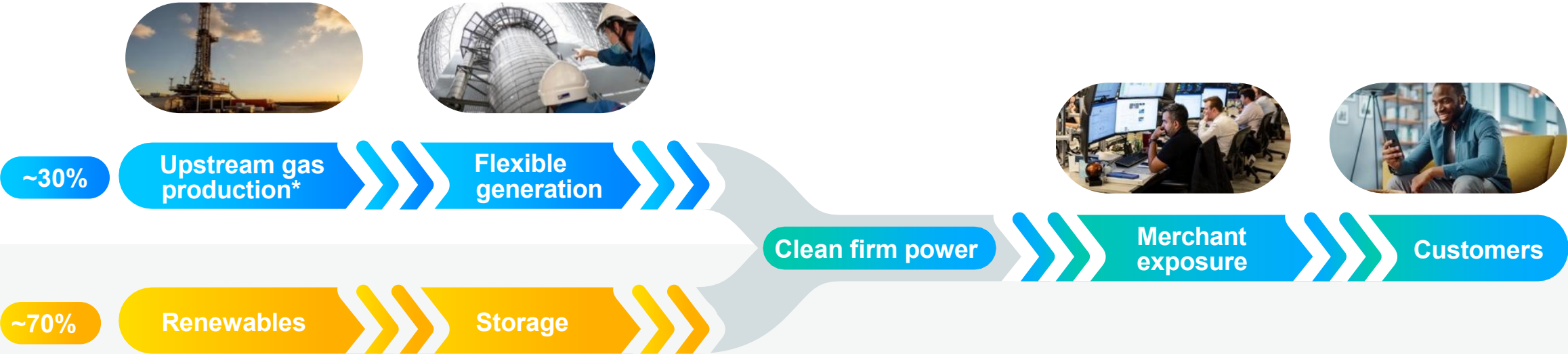
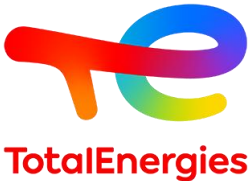
Global
market share

*Excluding Russia, excluding spot volumes



Integrated Power

Expertise across entire electricity value chain to deliver clean firm power



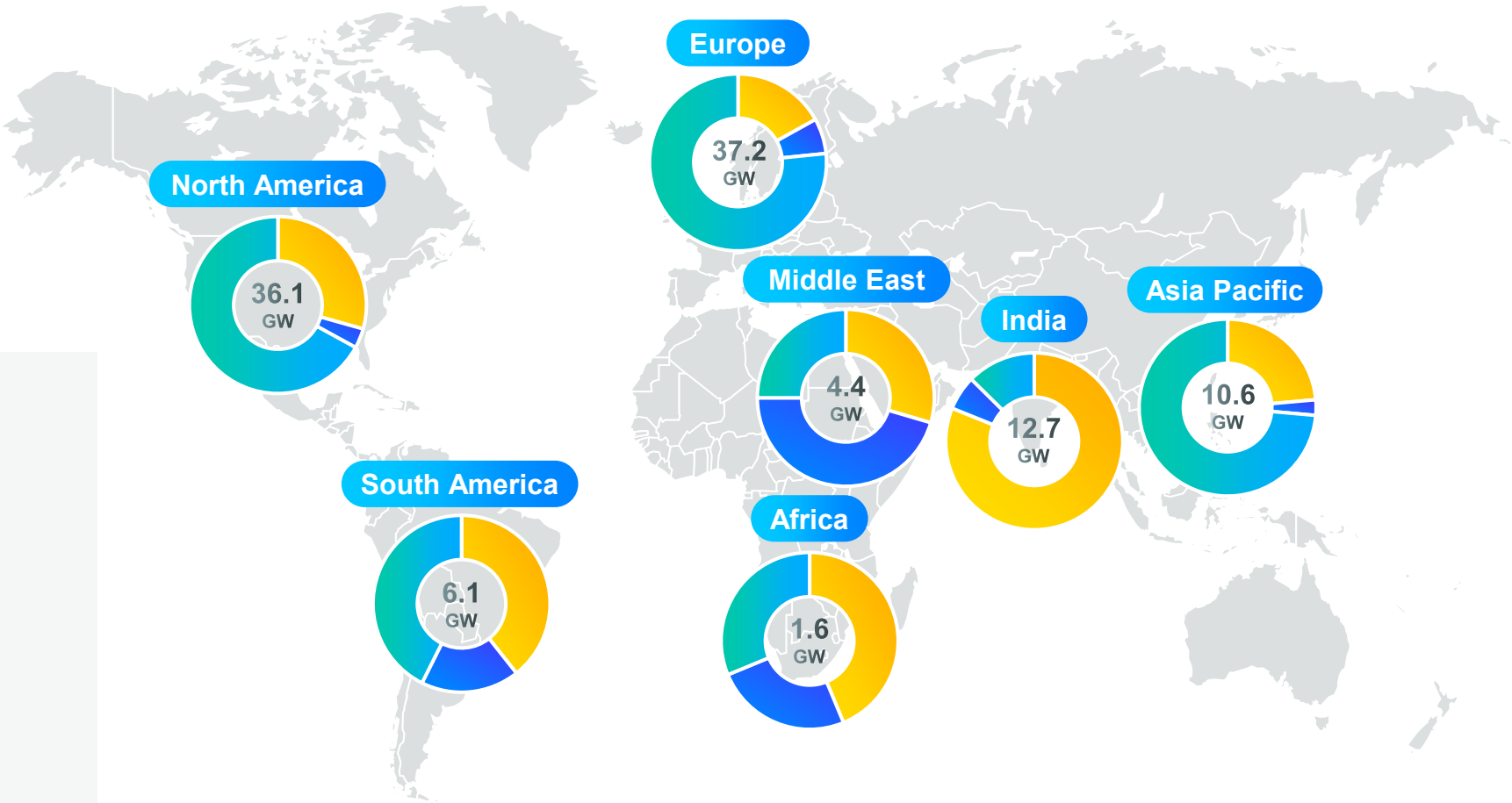
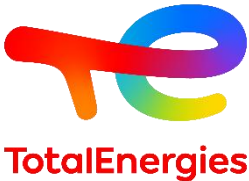
+ Our objectives by 2030 :

100-120 TWh/y
of power
generation

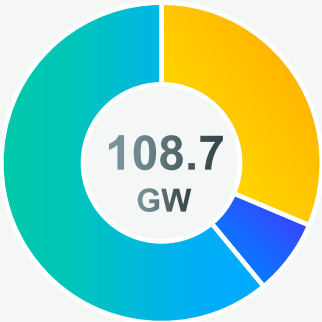
100 GW of
Gross installed
capacity



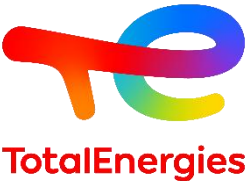
A global portfolio of renewable Electricity generation



2025 Gross portfolio
in GW



From Pay-As-Produced to Clean Firm Power



Initial situation:
Market supply +
Guarantees of Origin

Before PPAs, renewable supply would be obtained through

- Standard supply contract
- Generic Guarantees of Origin sourcing

Current situation:
15 to 20-year Pay-as-Produced

Green supply: Identified Renewable projects
→ Renewable certificates, additionality

Not matching demand profile

Cost issue: purchase missing electrons to meet baseload and resell excess electrons

Resell surplus electrons at low price

Purchase electrons in deficit at high price

— Baseload demand
— PPA PaP supply

Emerging product:
Clean Firm Power

Green supply: Identified Renewable projects
→ Renewable certificates, additionality

Matching demand profile

Cost: reduced imbalances & risks, leaner organization through PPA + aggregation bundle

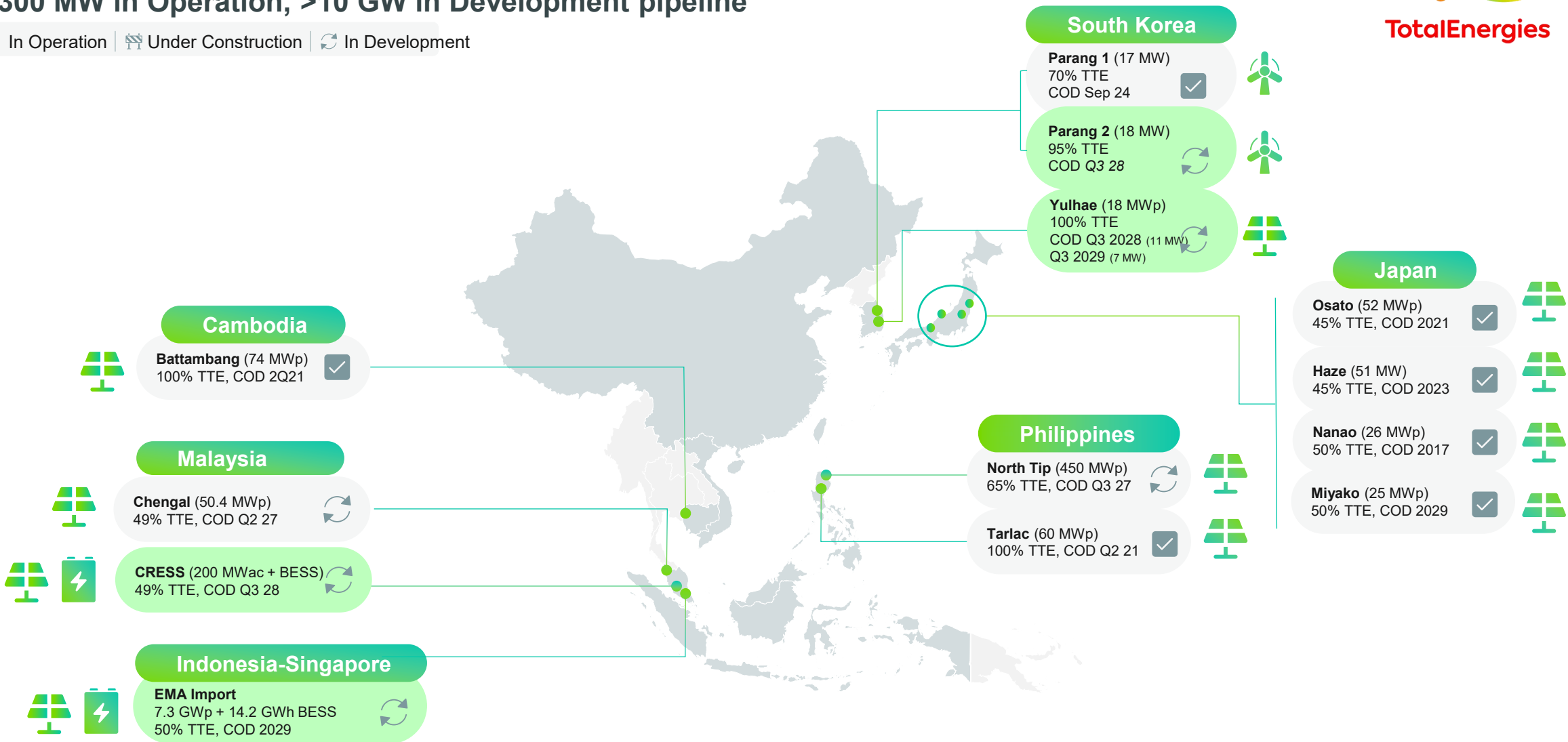
— Baseload supply
— Asset generation



Utility Scale Renewables Portfolio in Asia

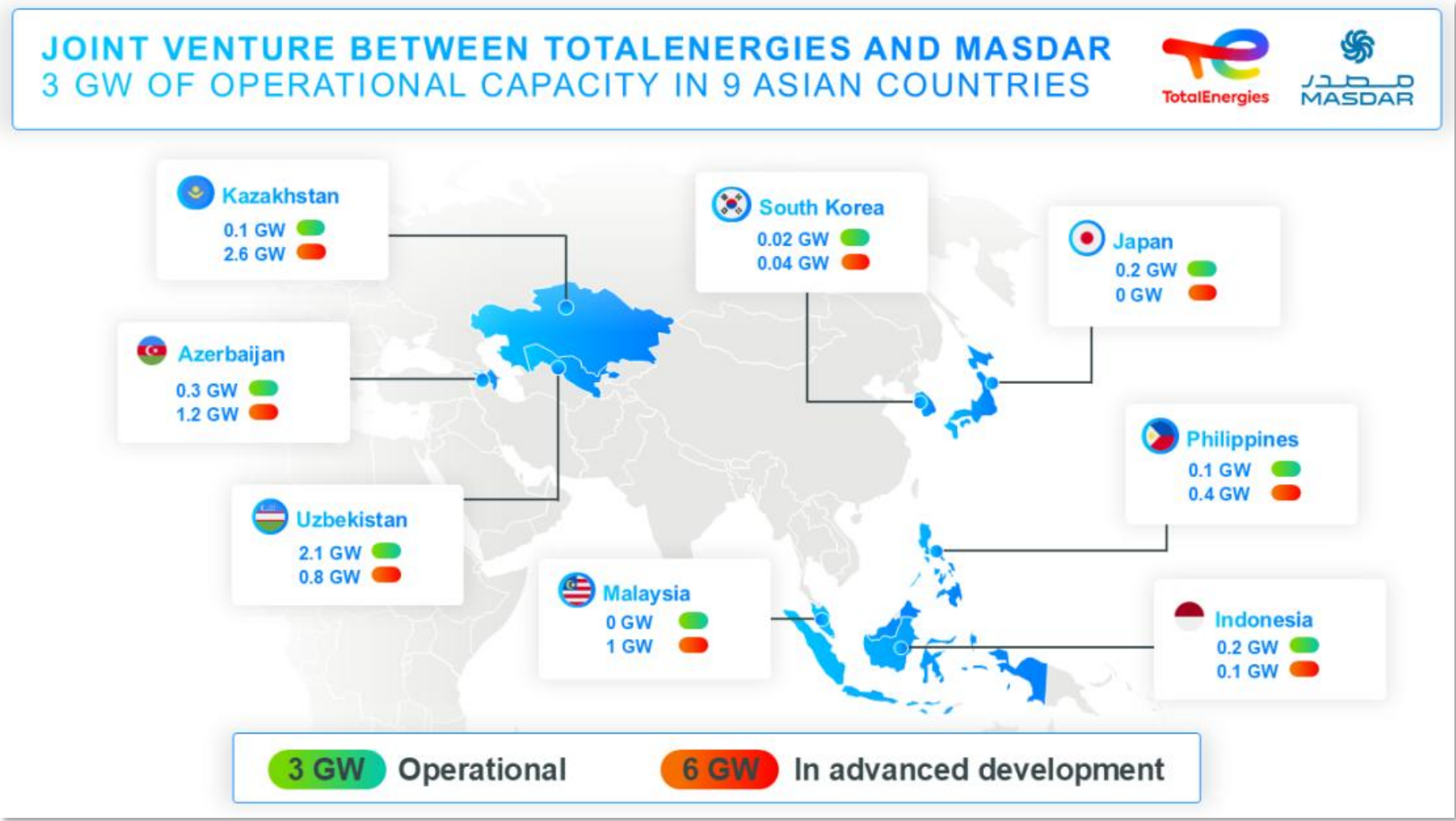
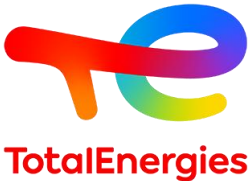
>300 MW in Operation, >10 GW in Development pipeline

☒ In Operation Under Construction In Development





Totalenergies & Masdar joining forces in a 50/50 JV to become a renewable champion



On-site solutions

Tailored, reliable and competitive renewable energy solutions

ON-SITE PPA



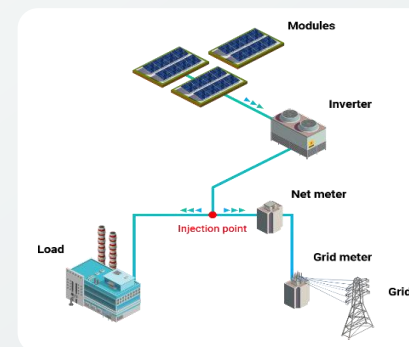
Green electricity produced directly at customer's site

- › **Rooftop, carport, ground mounted solar** installations
- › Can be combined with **EV charge & integrating battery solution**
- › **Driving down your CO₂ emissions**
- › **Visible and local RSE commitment**
- › **Reducing your energy bill & consumption** for an affordable green growth
- › **Maximise asset value**
- › **Limit exposure** to price variability

GROUND-MOUNTED



Self consumption with injection



On-site storage



A complete turnkey solution, including

- › **Energy Storage Unit** (Li-ion battery system that stores and releases energy)
- › **Power Conversion System: PCS** – conversion from DC (battery) to AC (grid)
- › **Power Management System: PMS** – AI performance controlled
- › **Grid Connection** Turnkey solution including point of connection to grid

➤ **More than 80% of the electricity produced is consumed by the customer site**



Low-carbon molecules for energy transition

Doubling circularity within the next 10 years



In 2050, 25% of our activity will come from low-carbon molecules



Biofuels

1.5 Mt/y SAF*
in 2030

Targeting ~10% market share

- › Priority to waste & residues: >75% from 2024

Converting Grandpuits refinery into a zero-crude platform: >70% feedstocks already secure



Recycled & Biopolymers

Targeting 1 Mt/y*
of high value circular polymers in 2030

- › Mechanical recycling
- › Chemical recycling
- › Biopolymers
- › Biomonomers



Biogas

8 TWh/y
of biomethane production by 2030

- › Strong demand for bio-LNG/ bio-CNG for transportation use will drive higher value
- › Fragmented markets with limited economies of scale
- › Developing local platforms (France, Poland, US...)

#2 producer in Europe

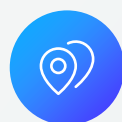


Hydrogen & e-fuels

- › Decarbonize grey H₂ and displace natural gas in our European refining

Biogas: Production & Distribution

MAJOR PLAYER IN FRANCE



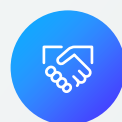
TotalEnergies Biogaz France & Méthanergy

+800 GWh/y
in injection capacity
produced (16 plants)

16
units in operation
(8 injection, 8 Combined
Heat & Power)

+1
unit under
construction

A BIOGAS LEADER IN POLAND



Acquisition

Polska Grupa Biogazowa

1st Biogas producer

0.46TWh in
biomethane equivalent

21 MW Installed
electric capacity

+15 %
Market share

+200 employees
> 40% plant operators

20 Biogas plants
with an annual capacity of
~183 GWh of electricity
production and ~184
GWhth of heat production

JOINT VENTURES IN USA & IN INDIA



TotalEnergies biogas in India

~640 TWh of biomethane potential (more than 2/3 of which comes from agriculture and livestock farming)

Cost of biogas vs. price of natural gas

700 TWh of gas demand in 2022, and 2000 TWh in 2040 according to the IEA

TotalEnergies biogas in USA



the leading distributor
of bioNGV and bioLNG
for road transport



JV to develop, build, and own
operate Farm Powered renewable
natural gas (RNG) projects in the
US



Deploying Carbon Capture Storage strategy



TotalEnergies

Offering CCS services

Build a profitable, scalable business and offset Scope 3 emissions by offering CCS solutions to our customers

- North Sea is our core area
- Worldwide growth (Malaysia and USA)

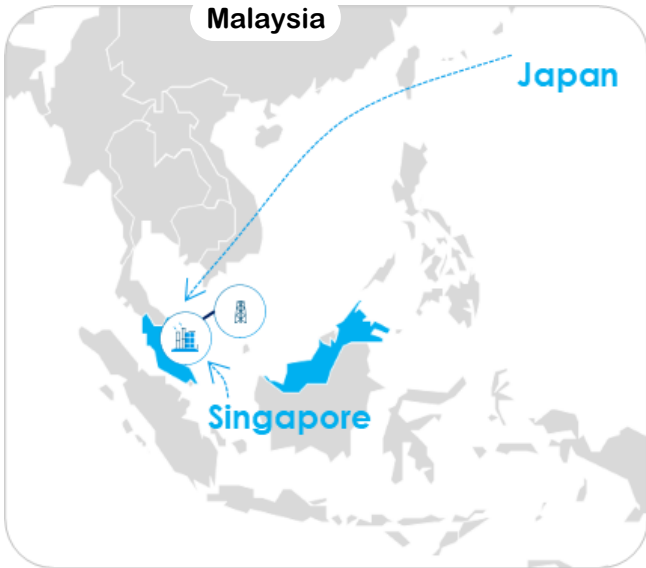
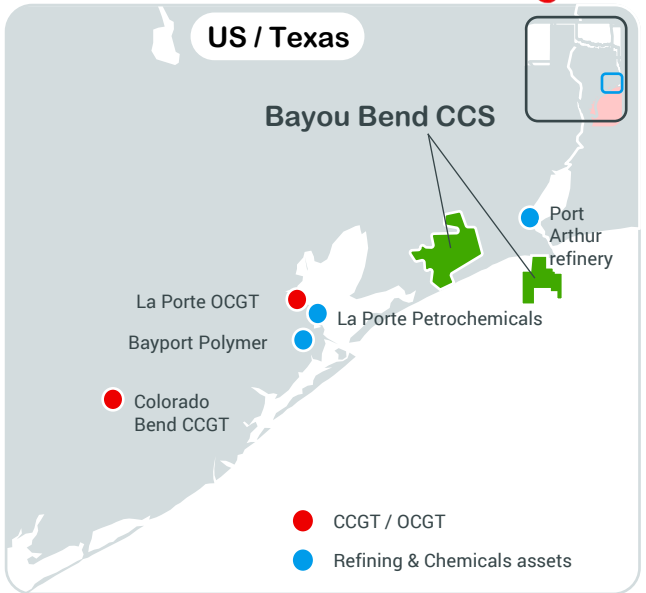
CCS for our assets

Reduce emissions from existing assets:

- Snøhvit (Norway): under operation
- Ichthys LNG (Australia): under study
- Refineries (EU, US): under study

Avoid emissions:

- Greenfield projects North Field East & South (Qatar): under development
- LNG N(2) (Qatar): under study



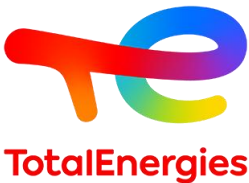
2030 target

Contributing to over 10 Mt/y capacity



Decarbonization of the Chemical Industry: summary

Clear commitment till 2030 – Less clarity, more complexity and higher costs beyond



Decarbonization
Roadmap

Decrease by ~30% CO₂ emissions by 2030 to reach Carbon Neutrality by 2050
(Reference year ranging from 2018 till 2020)



Key decarbonization
drivers

- › Energy Efficiency
- › Electrification
- › Ren. Power
- › Bio-feedstocks/ circularity
- › Use of green or blue hydrogen (process/heating)
- › Biomethane
- › CCS

Implementation timeline shifting beyond 2030

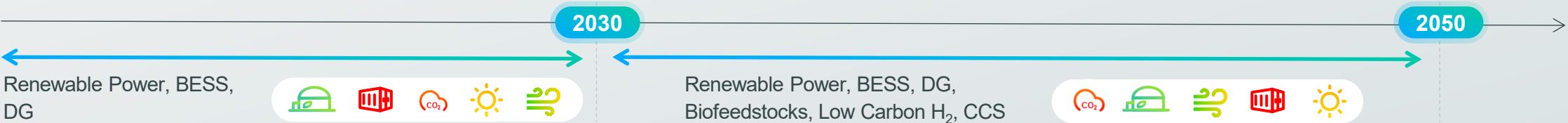
- › Focus on scope 2 (Power)
- › Where power grid is carbonated and green power affordable — ex: BASF, Lyondell Basell, Arkema, Air Liquide

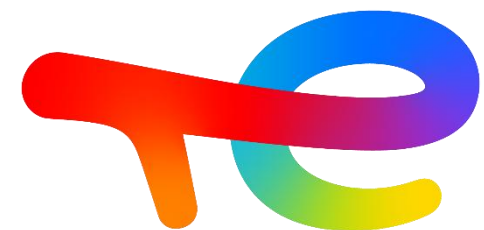
- › Some CCS project starting in 2030 — ex: BASF, Yara
- › Biofeedstock, low carbon H₂ considered — ex: Arkema, Covestro

- › Hard to abate CO₂ — ex: BASF, Dow, Lyondell Basell
- › Steam decarbonization — ex: Arkema, Covestro
- › CI of the products — ex: Arkema, Covestro, BASF, Novartis

Postponement
of more complex
& costly solutions

- › CCS — ex: Air Liquide, BASF, Yara
- › Low carbon H₂ — Covestro, BASF
- › Biomolecules — Arkema





TotalEnergies

Thank you

