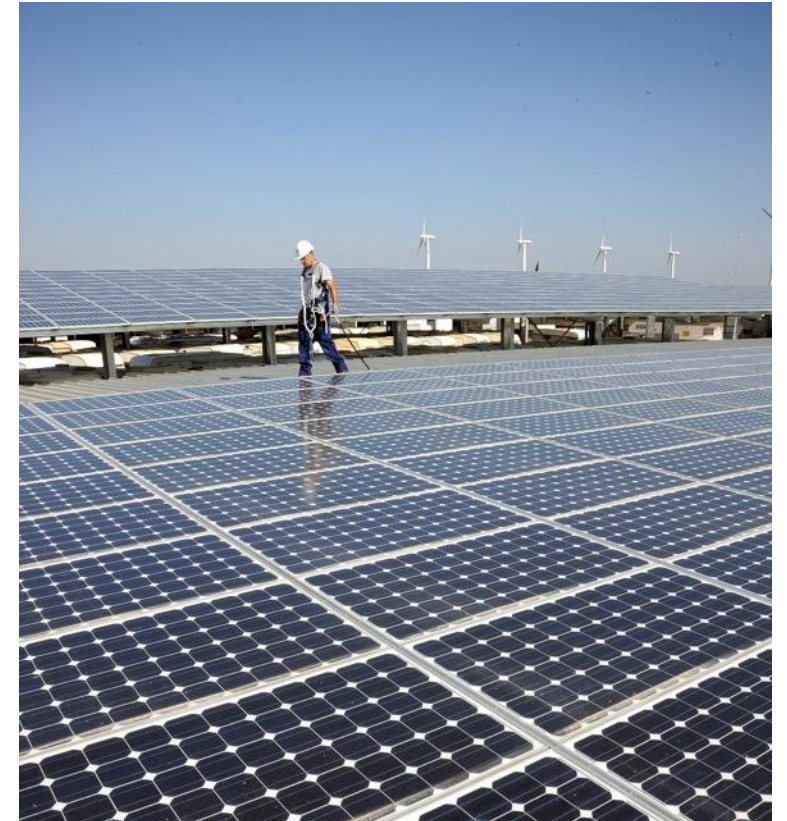


TotalEnergies: Decarbonization journey



TotalEnergies



TotalEnergies: global reach and Brazilian presence

Global



More than **100,000 employees** in **120 countries**



2.53 Mboe/d of hydrocarbons produced in 2025, 46% of which was gas



3rd largest LNG supplier



31.6 GW of gross installed power capacity, including 26 GW of renewable power



More than **13,000 service stations** and around 78,000 charging points around the world

Brazil



More than 50 years in Brazil



\$12 billion invested in Brazil over the last decade



~ 4,000 employees



\$1 billion invested in renewables since 2023



Leading cash-flow contributor in the company's portfolio in 2025



9 licenses across oil and gas fields; 4 are operated by TotalEnergies



34% stake in Casa dos Ventos, a leading renewable energy company in Brazil



4.3 GW of Production through the JV with Casa dos Ventos and developing a renewable energy portfolio of **12 GW**



~200.000 barrels of oil equivalent per day produced in Brazil

Two pillars to support our energy transition strategy

Oil & Gas



- Low cost, low emission
- Deep and resilient projects portfolio

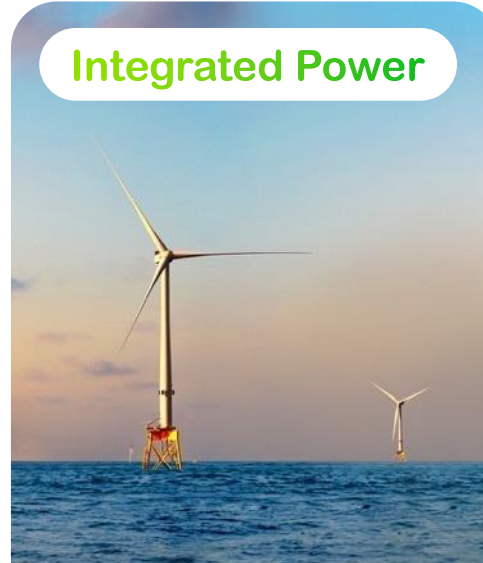
- Top 3 global LNG integrated portfolio
- Strong LNG project pipeline

Decarbonation levers

Energy savings & efficiency
Greening scope 2 & H₂

Slashing
methane emissions

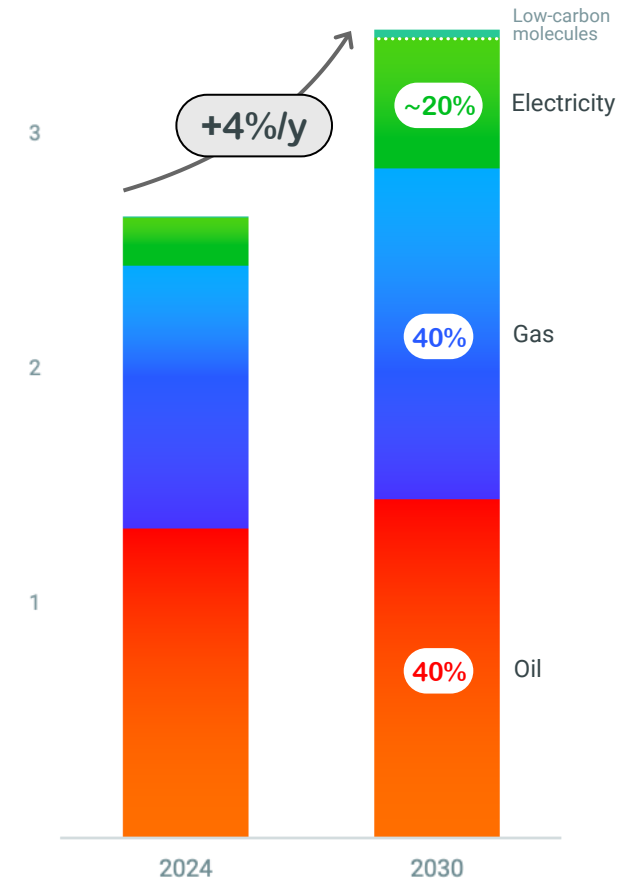
Integrated Power



- Driving value from integration
- Positive net cash flow by 2028

Meeting growing low-carbon electricity demand

Energy production Mboe/d

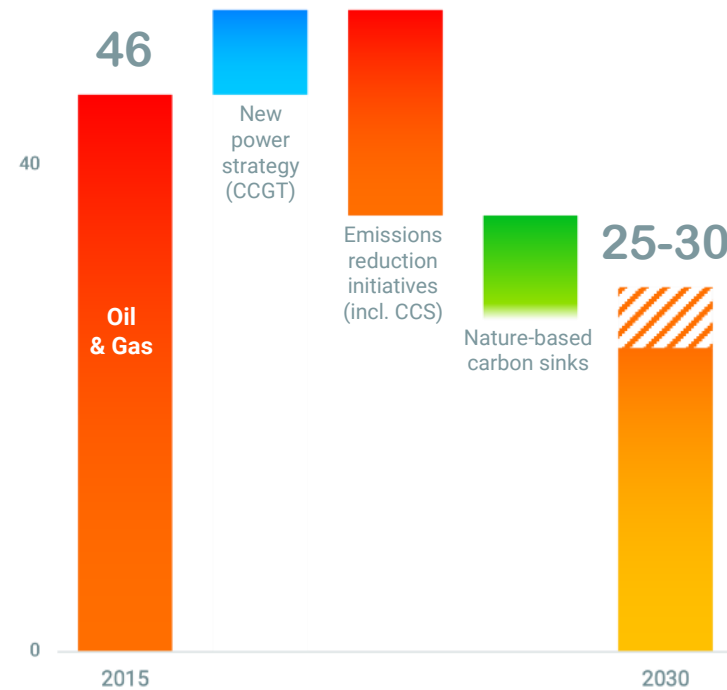


Scope 1+2: mobilization on CO₂ reduction using best available technologies

Levers

Scope 1+2 from operated facilities

MtCO₂e



On track to deliver on our - 40% target*

2025 vs 2015

- 38% O&G operated

Operated upstream average intensity reduced from 21 to 16 kg CO₂e/boe



Stop routine flaring

→ Zero routine flaring by 2030

All new projects with closed flare

Reduce non-routine flaring



Improve energy efficiency

→ 1 B\$ over 2023-24

Reduce fuel gas consumption

Optimize power consumption

Deploy digital solutions



Green power

Cover all industrial sites' power needs with green electricity in Europe and the US

→ -2 MtCO₂/y Scope 2 emissions by 2025



Capture and store carbon

Decarbonize all grey H₂ used in our European refineries

→ -3 MtCO₂/y by 2030

Develop carbon transport and storage projects

→ ~10 MtCO₂/y capacity by 2030

- Scope 1: **Direct emissions** from sources that are owned or controlled by the organization. This includes emissions from company vehicles and on-site fuel combustion.
- Scope 2: **Indirect emissions** from the generation of purchased electricity, steam, heating, and cooling consumed by the organization. These emissions occur at the facility where the electricity is generated. Excludes purchased industrial gases (ex: H₂).

Successfully delivering our energy savings plans



2023–25

Successfully deployed, with tangible energy and CO₂ savings

1 B\$
Invested

200 M\$/y
energy and CO₂ savings⁽¹⁾⁽²⁾

2.3 MtCO₂e/y

In line with targets



E&P

- Optimization of reservoir pressure Aguada Pichana, Argentina, -65 kt CO₂/y
- Compressor rationalization K5CC, Netherlands, -10 kt CO₂/y



R&C

- Optimization of heat exchangers, furnaces and vapor network (operating conditions, modernization, heat recovery for district heating...) during major shutdowns
Antwerp -50 kt CO₂/y
Normandy -35 kt CO₂/y



M&S

- Recovery of fatal heat in bitumen production
Brunsbüttel, Germany
-16 kt CO₂/y

2026–28

Deploying
second energy
savings plans

Additional ~ **1B\$**
dedicated capex
program

~**120 M\$/y**
energy and CO₂
savings⁽¹⁾⁽²⁾

~**1.5 Mt CO₂e/y**
emissions reduction

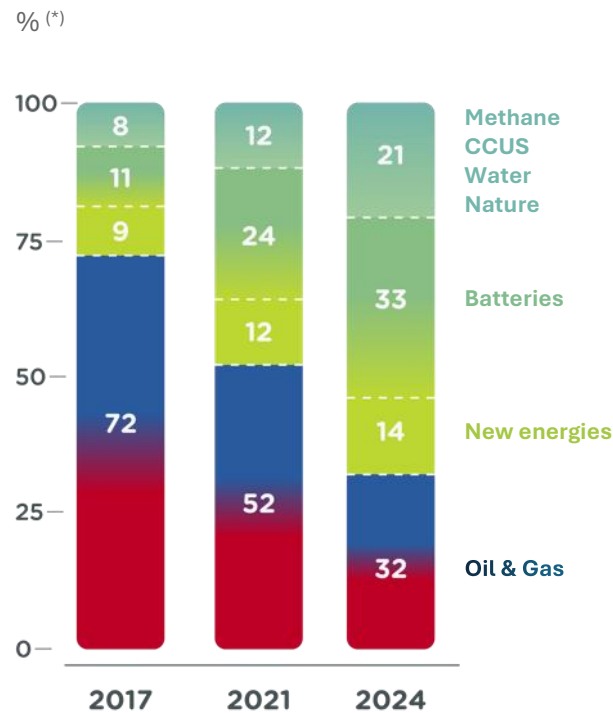
(1) At 10 \$ TTF and 3 \$ HH

(2) CO₂ price at 78\$/t for Europe 27, UK, Norway and Australia

R&D: our innovation efforts for beyond 2030

OneTech providing the technical and R&D expertise to implement our strategy

~1 B\$ overall R&D
and digitalization budget



* Excluding Hutchinson

Focus – 4 programs to move towards Near Zero Emissions plants

Developing innovative solutions for decarbonization levers such as electrification, energy efficiency, decarbonization of processes, heat recovery, recycling, CO₂ capture & reinjection

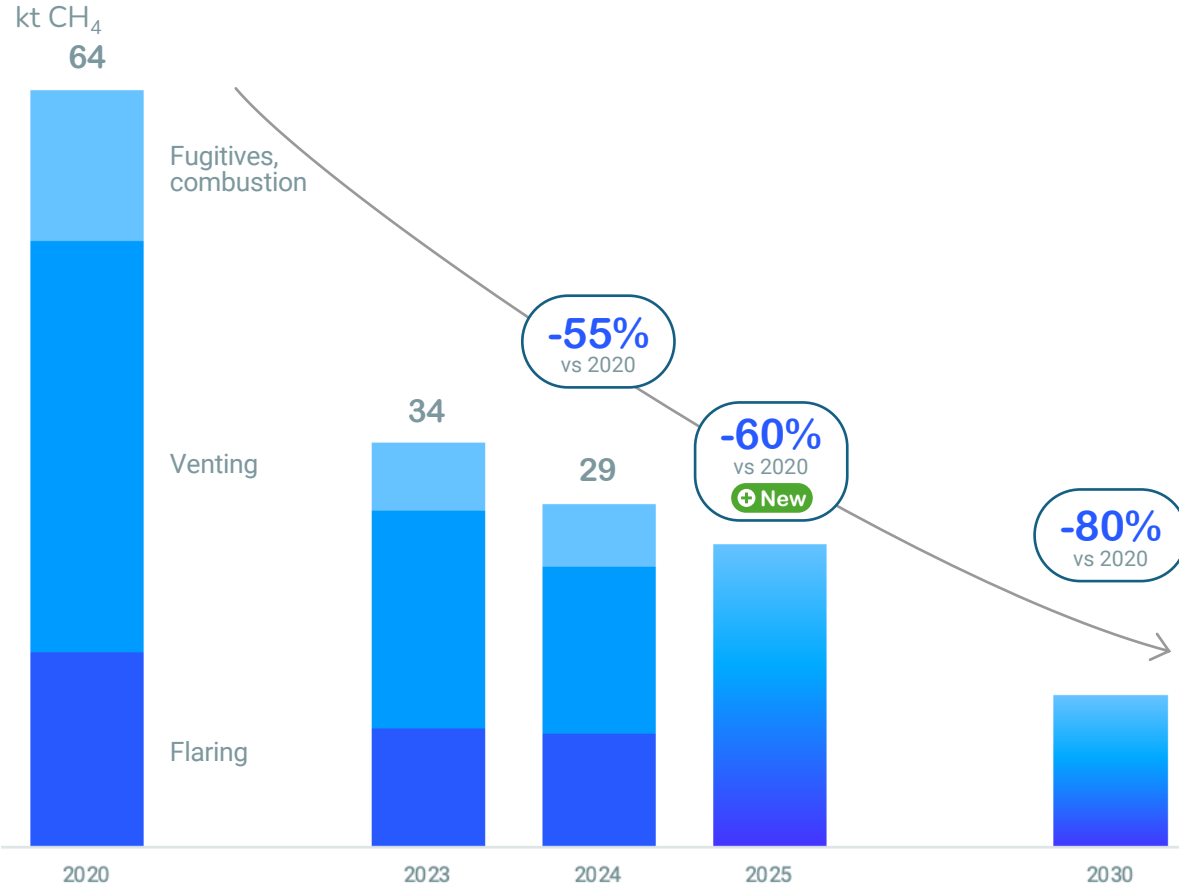


Project examples

- **MyCFR live detection and monitoring** system for EP: 305 kt CO₂ abnormal emissions identified and being treated
- **Smart Flare Tracker** solution: deployed to all operated refineries and biorefineries
- **Power generation hybridization** of an offshore O&G platform (Culzean, UK) through a floating wind farm pilot project. A 3 MW turbine will cover ~20% of electricity needs
- **8,000+ models developed** by the Digital Factory team of 300 experts, developers and data scientists, supported by AI and TotalEnergies' Pangea supercomputer

Leading the industry in slashing methane emissions

Methane emissions on operated facilities



Continued excellence in our operations

- OGMP 2.0 Gold Standard for 5 consecutive years
- **55%** CH₄ reduction 2024 vs 2020, on track to reach -60% in 2025
- **Extending <0.1% CH₄ intensity target** by 2030 to Oil & Gas upstream operations

Strong leadership in “Aiming for zero methane”

- ~13,000 equipment for continuous CH₄ detection deployed by end-2025
- Offered access to proprietary **AUSEA** drones, 6 NOCs already onboarded
- COP28: Signed the **Oil and Gas Decarbonization Charter** (OGDC)
- **25 M\$ donation** to the World Bank’s GFMR trust fund

Our actions to move toward near-zero methane



Methane
Permanent
Monitoring



Annual
leak detection &
repair campaign



Reducing
flaring & venting



Gold Standard



Three partnerships accelerate accountable methane action



EXTERNAL PARTNERSHIPS • THREE COMPLEMENTARY LEVERS

GFMR

WORLD BANK • CAPACITY & FUNDING

- Supports countries with grants, technical assistance and policy and regulatory reform.
- Anchors the Zero Routine Flaring by 2030 initiative, endorsed by 58 oil companies and 36 governments.
- TotalEnergies committed \$25M to the trust fund for 2024–2030.



OGMP 2.0

UNEP • MEASUREMENT & REPORTING

- The oil and gas sector's comprehensive, measurement-based reporting and mitigation framework.
- Improves methane-data accuracy and transparency while supporting compliance and mitigation.
- Strengthens environmental accountability and corporate credibility.



OGDC

INDUSTRY CHARTER • COLLECTIVE ACTION

- Aligns the sector around climate action consistent with the Paris Agreement.
- Targets net-zero operations by or before 2050, near-zero upstream methane and zero routine flaring by 2030.
- Brings together 56 signatories: 34 national and 22 international oil companies.



Funding enables action; measurement makes progress credible; collective commitments scale execution.



Decarbonization at E&P

Carbon Footprint Reduction Program



- 1 Anchor & Spread a Low Carbon Culture & Performance
- 2 Collect & Share High Quality CFR Data
- 3 Improve Support of Assets through Innovation, Technology Methods & Tools
- 4 Engage & Leverage External Stakeholders



Methane & Venting

Act towards near zero CH₄ emissions

-70%
vs 2020
by 2026



Flaring

Target near Zero Flaring

< 0.1 MSm3/d
Routine Flaring
by 2025 (excl. Iraq)

**Zero
routine flaring**
by 2030

-80%
vs 2020
by 2030

<0.1%
Maintain Methane
intensity below 0.1%
(0,07 in 2025)



Fuel Gas

Drive down Fuel Gas emissions



Liquid Fuel

Reduce Liquid Fuel

-40%

vs 2015

Net emissions
Scopes 1&2
from operated
assets at **2030**

Transverse Enablers

Roadmaps by main sources of emissions

Act for lower emissions on existing assets

By acting on all sources of flaring, venting and fuel consumption

Flaring



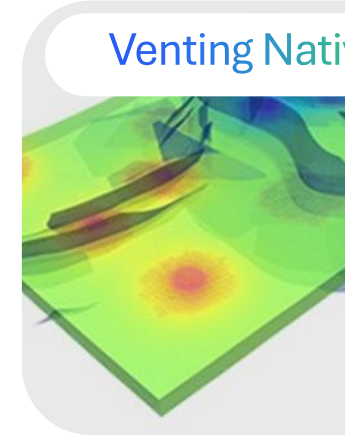
- Eliminate routine flaring
- Minimize non-routine flaring
- Reduce safety flaring
- Close flare retrofit

Liquid fuel



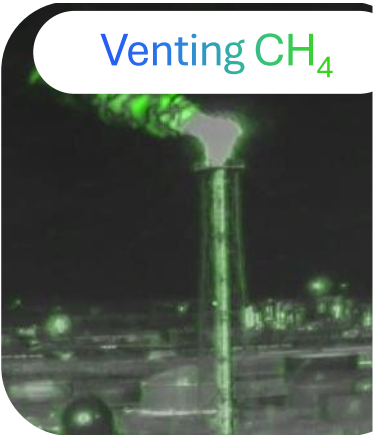
- Battery Energy Storage (BESS)
- Drilling – Electric rig
- Logistic – Opsealog

Venting Native CO₂



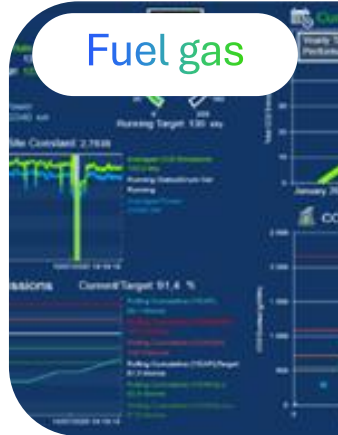
- Carbon Capture and Storage

Venting CH₄



- OGMP 2.0
- Retrofit gas driven instrumentation
- Frequent QLDAR campaigns
- Collect & valorize process venting
- Reroute vents to flare

Fuel gas



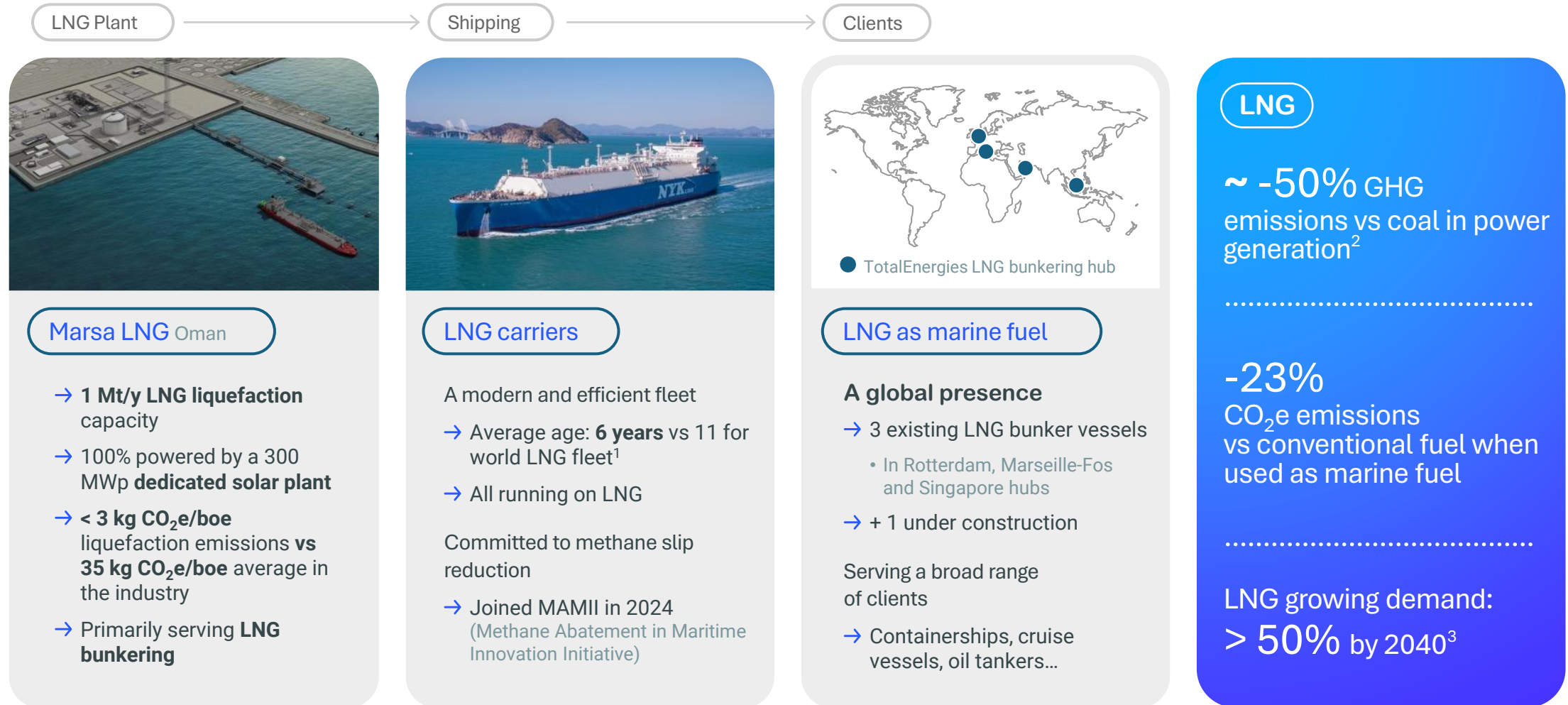
- Process efficiency assessments
- Digital & GHG Monitoring
- Rotating equipment upgrade
- Electrification / Hybridization
- Optimize power reserve
- WHRU / CCGT / CCS / H2

Scope 2



- Solar farm
- Wind farm
- Power Purchase Agreement (PPA)

Current cases: Decarbonizing the LNG chain



(1) Source S&P (2) Source IEA Life cycle Upstream Emission Factors 2024 (3) Calculated by identifying 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, for each country and generation mean. (3) Source: Wood Mackenzie, IHS, Rystad

Current cases: AUSEA 2024 Campaign – achievements



FPSO



>100 kg_{CH₄}/hr abated

Fuel gas vent line leaking.

Abnormal emission discovered in 2022.

AUSEA allowed to pin-point leak location on Gas turbine Generator B, further investigation with VPAC-II identified a passing valve.

Onshore asset

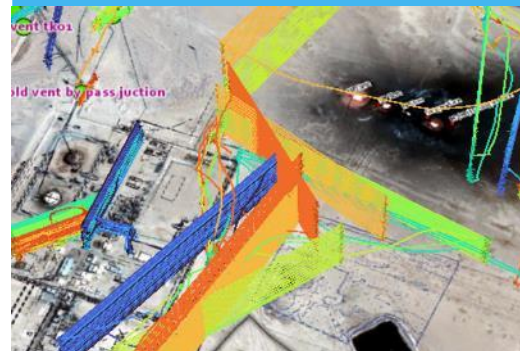


>300 kg_{CH₄}/hr abated

AUSEA highlighted significantly more venting than what was estimated from tanks, blanketed with fuel gas.

This finding allowed the acceleration of the N₂ blanketing project.

Onshore asset



CH₄ inventory confirmed

AUSEA allowed to raise confidence in CH₄ inventory on an asset with limited flare and vent measurement.

Action plan put in place to further understand higher CO₂ emissions measured at the flare.

Onshore asset



~300 kg_{CH₄}/hr abated

First AUSEA surveys in 2023 highlighted pads with abnormal emissions.

A comprehensive action plan was put in place to address the emissions from different sources and two surveys later, the average emissions per pad have significantly decreased.

Current cases: CCS in the focus of TotalEnergies' strategy

Investment in own assets and services to third parties



CCS for our assets

CCS complements main emission reduction levers: electrification, energy efficiency & flaring reduction

Reduce emissions from existing assets

- Snøhvit (NO): in operation
- Antwerp refinery & Ichthys: under study

Avoid emissions for new projects:

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

Storage as a service

Offering CCS solutions to hard to abate industries

North Sea core area

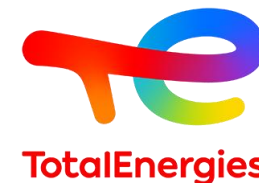
- Northern Lights Ph1 (NO): in operation
- NEP Ph1(UK) & Northern Lights Ph2 (NO): under development
- Aramis (NL, op.) & Bifrost (DK, op.): under study

Worldwide growth

- Bayou Bend (US), Southern Cluster (MY): under study

- **Priority** to reducing emissions of its activities: Scope 1+2 from upstream Oil & Gas activities, refining and LNG plants
- Investing in CO2 storage projects for large industrial emitters ("Storage as a Service") to reduce their Scope 1.

Current cases: CCS Projects Portfolio Investing in CO₂ storage services for our customers in Europe



Norway

Northern Lights

Partners: TotalEnergies 33%, Equinor 33%, Shell 33%

Pioneering merchant CCS project

Phase 1

- Ready for start up
- 1.5 Mtpa, capacity fully booked
- Start up in 2025

Phase 2

- Extension to over 5 Mtpa
- FEED completed
- FID taken March 2025



Netherlands

Aramis

Partners: TotalEnergies 60% op.*, EBN 40%

Storage

- Ph1: 2,5 Mtpa, start-up 2029
- Extension to 5 Mtpa (Ph.2)

Transport & gathering

- 22 Mtpa transport capacity
- CO₂ terminal for gas & cryo
- Sourcing: gas pipe (local) + shipping (international)

** Storage part, equities differ on transportation and terminal*



United Kingdom

NEP**

Partners: TotalEnergies 10%, BP 45%, Equinor 45%

Onshore + offshore infrastructure for storage in Endurance reservoir, a large-scale saline aquifer

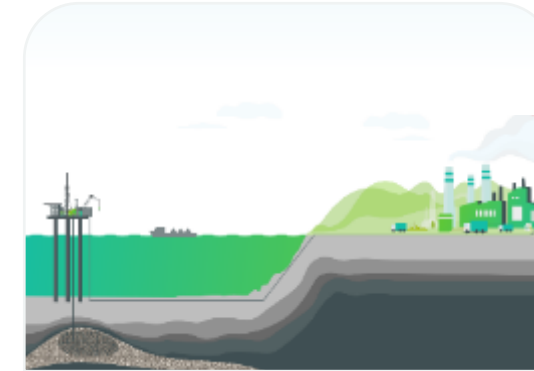
Phase 1

- 4 Mtpa, start-up 2028
- Selected clients: NZT Power, H2Teesside, Teesside Hydrogen CO₂ Capture

Phase 2

- Extension to over 20 Mtpa

***Northern Endurance Partnership*



Denmark

Bifrost

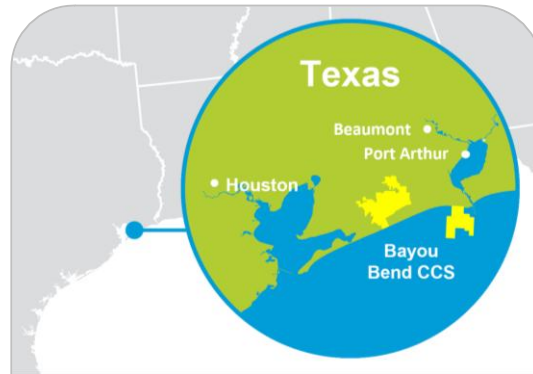
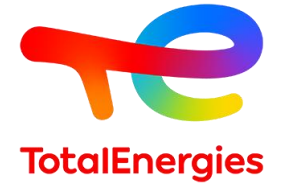
Partners: TotalEnergies 80% op., Nordsøfonden 20%

Infrastructure to link EU industrial hubs with offshore storage in depleted gas field and saline aquifer

→ Storage capacity of > 5 Mtpa by 2030

→ 2 licenses, appraisal phase

Current cases: CCS Projects Portfolio Investing in CO₂ storage services for our customers in the US and in Asia



United States

Bayou Bend

Partners: TotalEnergies 25%, Chevron op., Equinor 25%

One of largest CCS projects in the US for industrial emitters

Storage

- > 10 Mtpa by 2029
- Onshore & offshore capacity (circa 600km²) for **several hundreds Mt**

Transport & gathering

- Sourcing by pipe: 2 large industrial corridors with 100Mtpa emissions (Houston Ship Channel, Beaumont/Port Arthur region)



Malaysia

Southern Cluster

Partners: TotalEnergies, Petronas, Mitsui

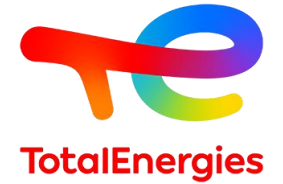
CCS Development agreement signed on 26th June 2023

Storage

- Approx. 5 Mtpa by 2029

Full chain project that anticipates delivery of CO₂ **sourced from international trading partners** (Japan, South Korea and Taiwan)

Technical Mission to the Methane Tracking Center and Northern Lights CCS Project with the Brazilian Government authorities



Methane Tracking Center “MethaneLive”



TADI (TotalEnergies Anomalies Detection Initiative)



TotalEnergies HQ



Northern Lights