

## CO2 storage projects in Europe

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IOGP Europe

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## Overview of existing and planned CO2 storage projects in Europe

## BULGARIA 1. ANRAV (IF)

## CROATIA

- 1. Petrokemija Kutina\*
- 2. Bio-Refinery Project\*
- 3. CCGeo (IF)
- 4. CO<sub>2</sub> EOR Project Croatia\*

## DENMARK

- 1. Greensand\*
- 2. Bifrost\*
- 3. Stenlille demo CO<sub>2</sub>-storage 4. Norne
- 5. Ruby
- o. reaby

## FRANCE

1. Pycasso\*

## GREECE

1. Prinos CCS

#### HUNGARY

1. MOL-Hungary CCS Project\*

#### **ICELAND**

- 1. **Orca**
- 2. Silverstone (IF)
- 3. Coda Terminal (

## ITALY

1. Ravenna CCS\*

## THE NETHERLANDS

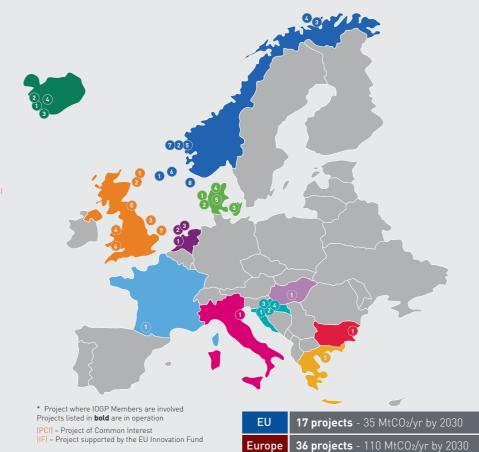
- 1. Porthos\* (PCI)
  2. Aramis\* (PCI)
- 3. L10 CCS\*

#### NORWAY

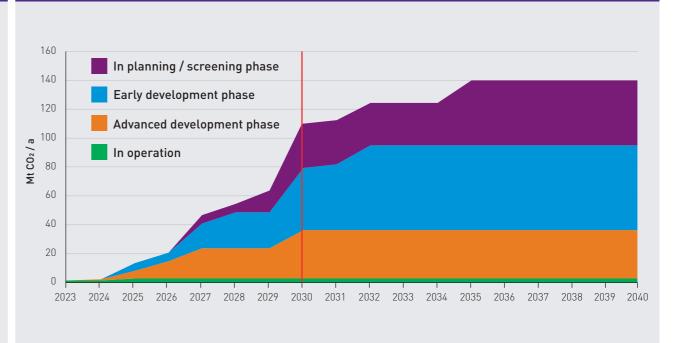
- 1. Sleipner\*
- 2. Longship (includes Northern Lights)\* (PCI)
- 3. Barents Blue
- 4. **Snøhvit\***5. Smeaheia\*
- 6. Trudvang\*
- 7. Luna\* 8. Havstjerne\*

#### UK

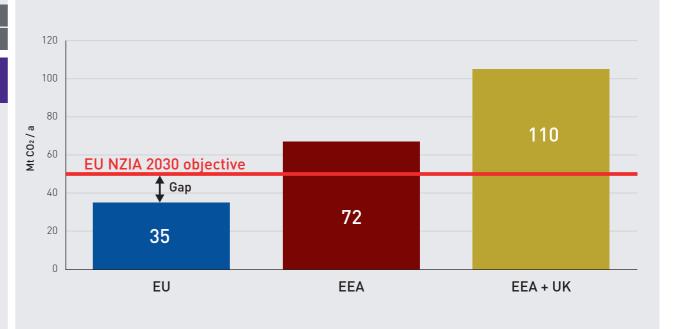
- 1. Acorn\*
- 2. Caledonia Clean Energy
- 3. Zero Carbon Humber\*
- 4. HyNet\*
- 5. Net Zero Teesside\*
- 6. South Wales Industrial Cluster
- 7. Bacton Thames Net Zero initiative\*



## Build-up of CO<sub>2</sub> storage injection capacity in Europe



## Regional breakdown of CO2 storage injection capacity by 2030



## Key numbers



CO2 STORAGE PROJECTS

COUNTRIES
WITH CO2 STORAGE
PROJECTS

35

MT CO<sub>2</sub>/YEAR CO<sub>2</sub> storage injection capacity by 2030

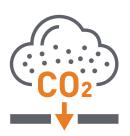
Europe

CO2 STORAG PROJECTS

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# Carbon Capture, and Storage

CCS is a set of technologies that enable the Capture, Transport and Storage of CO<sub>2</sub>.

CCS is a proven and safe technology. CO<sub>2</sub> has been captured, transported and stored in Europe successfully since 1996 (Sleipner project, Norway).

It is a key technology for Europe to meet climate neutrality.

More CCS resources at <a href="iogpeurope.org">iogpeurope.org</a>

## How it works

## The 3 segments of the CCS value chain



CCS be deployed at scale, often repurposing existing infrastructures

## Where can CCS make a difference?



## Decarbonisation of hard-to-abate industries

In the EU, steel, cement, chemical and refining sectors emit 37% of total CO2 industrial emissions. CCS is one of the only technological options to enable emission reductions in hard-to-abate industries.



## **Energy transition**

CCS can be applied to gas-fired power plants which provide flexibility to an electricity grid with a higher share of intermittent renewables.



#### Low carbon hydrogen production

Hydrogen production based on natural gas decarbonized with CCS is the most cost-effective. It can supply industrial sectors and decarbonize sectors which cannot be electrified such as aviation and maritime transport.



#### Negative emission

Large scale negative emissions can be achieved when BioEnergy production is combined with CCS (BECCS) or when Direct Air Capture is combined with CCS (DACCS).

## A European CO<sub>2</sub> storage ambition

IOGP Europe promotes an ambition on CO2 storage injection capacity availability.



Ambition level of 0.5 to 1.0 GtCO<sub>2</sub> storage availability per year by 2050



Scope covering EU, EEA and the UK



Requires a comprehensive EU policy framework

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