

Greensand: The first CO₂ storage in the EU intended to mitigate climate change

Based on a review of the [Global Status of 2024 report](#) from the Global CCS Institute, which includes the most comprehensive list of CCS projects worldwide, along with additional research, it can be concluded that Greensand, if storage initiates by end 2025/early 2026, is expected to become the first CO₂ storage in the EU intended to mitigate climate change. Below is a description of the review and research conducted along with a table overview of comparable projects.

Since 2009, the international think tank Global CCS Institute has mapped and evaluated CCS projects worldwide.

In its latest status report, [Global Status of CCS 2024](#), the institute is tracking 628 CCS projects globally. The projects are at different maturity stages and have different purposes.

From the list of projects in the report, it can be seen that the vast majority of the projects in operation inject CO₂ into the subsoil with the main purpose of enhanced oil recovery (EOR). These are not included in the present review. Only 16 operational projects carry the purpose of dedicated geological storage purpose (i.e. excluding EOR), but none of these are within the EU.

35 non-EOR projects are listed as in construction, seven of which are in the EU: Air Liquide Rotterdam, Asnaes CHP Plant, Avedore CHP Plant, Porthos CO₂ Transport and Storage, Yara Sluiskil, Air Products Rotterdam and Shell Pernis Refinery. All projects are set to be operational in 2026. However, the projects Asnaes CHP Plant, Avedore CHP Plant and Yara Sluiskil all plan to store CO₂ outside the EU.

249 projects are categorised as in advanced development, 23 of which are in the EU. Among the most mature projects are the Prinos CO₂ Storage in Greece, which is expected to be operational in early 2026, the TotalEnergies Zeeland refinery project, which is expected to be operational in Q3 of 2026, and the Air Products Refinery Rotterdam, which is expected to be operational in 2026. The remaining projects in advanced development either plan to store CO₂ outside the EU or from 2027 onwards.

With storage operations set to get underway at the end of 2025/early 2026, Greensand is thus expected to become the first CO₂ storage in the EU intended to mitigate climate change.

Please see the table on the next page for an overview of comparable projects or refer to the [Global Status of 2024 report](#) for a complete record.

Table: Overview of comparable CCS projects within the EU

FACILITY	STATUS	COUNTRY	OPERATIONAL DATE	INDUSTRY	CAPTURE, TRANSPORT AND/OR STORAGE CAPACITY (MTPA CO2)	STORAGE WITHIN THE EU?
Air Liquide Rotterdam	In construction	Netherlands	2026	Hydrogen / Ammonia / Fertiliser	0.5	Yes
Asnaes CHP Plant	In construction	Denmark	2026	Power Generation and Heat	0.28	No
Avedore CHP Plant	In construction	Denmark	2026	Power Generation and Heat	0.15	No
Porthos CO2 Transport and Storage	In construction	Netherlands	2026	CO2 Transport / Storage	N/A (CO2 Transport and Storage)	Yes
Yara Sluiskil	In construction	Netherlands	2026	Hydrogen / Ammonia / Fertiliser	0.8	No
Air Products Rotterdam	In construction	Netherlands	2026	Hydrogen / Ammonia / Fertiliser	Under evaluation	Yes
Shell Pernis Refinery Rotterdam	In construction	Netherlands	2026	Oil Refining	1.15	Yes
Amager Bakke Waste to Energy	Advanced development	Denmark	2025	Power Generation and Heat	0.5	No
Project Greensand	Advanced development	Denmark	End 2025/ Early 2026	CO ₂ Transport / Storage	N/A (CO ₂ Transport and Storage)	Yes
Prinos CO ₂ Storage	Advanced development	Greece	Early 2026	Depleted Oil and Gas	N/A (CO ₂ Transport / Storage)	Yes
TotalEnergies Zeeland refinery (H2ero)	Advanced development	Netherlands	2026 (Q3)	Hydrogen / Ammonia / Fertiliser	0.8	Yes
Air Products Refinery Rotterdam	Advanced development	Netherlands	2026	Hydrogen / Ammonia / Fertiliser	Under Evaluation	Yes

The table has been comprised based on a review of the complete list of 634 CCS projects featured in the [Global Status of 2024 report](#), filtering out:

- Projects outside the European Union
- Projects with an Enhanced Oil Recovery industry code.
- Projects set to store CO₂ from 2027 and onwards.