



Illustration: Danish Energy Agency

The Ministry of Climate, Energy and Utilities grants Denmark's first full-scale CO2 storage permits in the Danish North Sea

The Danish Energy Agency (DEA) has now evaluated the applications and has recommended the Minister of Climate, Energy and Utilities to award the first three (3) exclusive licenses for exploration of full-scale CO2 storage in the Danish North Sea to TotalEnergies and a consortium consisting of INEOS E&P

and Wintershall DEA. The licenses are an important step towards realizing Denmark's CCS (Carbon Capture and Storage) strategy and will kick start the plan for the development of full-scale CO₂ storage in Denmark.

The Danish Energy Agency received two applications in the first round of licenses for CO₂ storage in the Danish North Sea. The two applications came from TotalEnergies EP Danmark A/S and a consortium consisting of INEOS E&P and Wintershall Dea International. The two applications met the requirements, and two licenses were granted to TotalEnergies and one to the INEOS & Wintershall consortium

“Granting the first exclusive permits for full-scale CO₂ storage in the North Sea is an important step into the future. CO₂ capture and storage is an important element in the green transition. Today's licenses are the result of effective implementation of the first Danish political agreements on CCS,” says Kristoffer Böttzauw, DEA's director.

The Ministry of Climate, Energy and Utilities has issued the licenses

The DEA has reviewed the applications and evaluated the technical and financial capacity as well as the technical content of the work programs presented by the companies in their applications. Awarding of the new licenses takes place after the Minister of Climate, Energy and Utilities has presented a report to the Climate, Energy and Utilities Committee of the Danish Parliament explaining which licenses the minister intends to issue.

Nordsøfonden will represent the interest of the state and participate with a share of 20% in each of the coming new licenses.

The granting of exclusive licenses for exploration and full-scale CO₂ storage in the Danish North Sea is an important step towards implementation of the national agreements on the CCS strategy in order to achieve CO₂ neutrality by 2050. Similarly, the licenses pave the way forward for Denmark as an important puzzle piece in realizing the growing demand for CO₂ storage capacity in Northern Europe. The Geological Survey of Denmark and Greenland (GEUS) has previously demonstrated that the Danish subsurface is particularly suitable for CO₂ storage, both offshore and onshore, thus enabling the opportunity for Denmark to serve as a commercial hub for CO₂ storage from all of Europe.

What does the permit entail?

TotalEnergies EP Danmark A/S is awarded two licenses and the partnership between INEOS E&P and Wintershall Dea International is awarded one license. The licenses cover areas in depleted oil and gas fields and previously unexplored saline aquifers. All the licenses contain the necessary geological structures that are suited to serve as permanent CO₂ storage locations in the future. The timing and design of the final CO₂ storage facilities will depend on the upcoming exploration and research work.

The specific storage projects must be approved by the DEA before establishment. The captured CO₂ will likely be transported either via specially designed ships or through existing or new pipeline infrastructure. Finally, the CO₂ will be stored in depleted oil and gas fields or saline aquifers 1-2 km below the seabed, by pumping the CO₂ into small pockets in sandstone or limestone layers and thus buried under thick layers of impermeable claystone.

[Read the permits \(in Danish\)](#)

Facts

- Awarding of exclusive licenses for exploration of full-scale CO₂ storage in the Danish North Sea are the first of its kind in Denmark, and it is crucial for Denmark's ambitions of climate neutrality.
- Permissions can initially be granted for exploration for up to six years, during which the exploring company has exclusive rights to the area. If a suitable location for CO₂ storage is found, the permit can be extended for up to 30 years for storage operations.
- The conclusion of the tender marks the end of the first of an annual tender round for licenses for exploration of full-scale CO₂ storage on the Danish continental shelf.
- Full-scale storage of CO₂ offshore is a known technology that has been in operation in Norway since 1996. In Denmark, the technology will be tested in connection with Project Greensand, which is a pilot- and demonstration project by INEOS E&P funded by the EUDP.
- GEUS has estimated that the Danish subsurface theoretically can store up to 22 billion tons (GT) of CO₂. This is equivalent to between 500 and 1000 years of total Danish emissions at current levels.

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