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Onshore CO2 storage:

Greenport Scandinavia moves one step closer with historic license allocation

The establishment of Greenport Scandinavia - Northern Europe's largest CCUS hub in the Port of Hirtshals - moves one step closer after the first ever permits to investigate CO2 storage on land have been awarded by the Danish Energy Agency.

Greenport Scandinavia project partners Wintershall Dea and Ineos were awarded the right to investigate onshore CO2 storage at Gassum, which is situated between Randers and Hobro in Jutland. The results will determine whether CO2 can be stored underground.

Concurrently, planning of a CO2 pipeline between Port of Hirtshals and Gassum is underway. Port of Hirtshals is advantageously located for shipping and receiving CO2 for storage both onshore and offshore, and the port will be established as a hub with intermediate storage facilities.

"The potential for safe storage in Gassum is great, but now, we must carry out the necessary studies to demonstrate safe and efficient storage in Gassum, and naturally, we will draw on the important learnings from Greensand," says Mads Gade, Country Manager of Ineos Energy Denmark.

Already in 2026, CO2 will be shipped from Hirtshals for storage in the Greensand area in the Danish part of the North Sea. With onshore storage at Gassum, the hub at Port of Hirtshals is set to have access to two storage locations.

"The allocation of the Gassum license not only promotes Greenport Scandinavia's vision, but also underlines the relevance of the port expansion in Hirtshals. With the new license we can integrate both shipping and loading of CO2 into the project, which significantly increases the overall capacity. Access to two storage locations means that we can handle much larger amounts of CO2, which is tremendously exciting ", says Per Holm Nørgaard, CEO of Port of Hirtshals.

Port of Hirtshals is well situated to receive CO2 from countries with limited underground storage options such as Germany, Sweden, Norway and the Baltics. Dialogue is already underway with large CO2 emitters who will need storage in the coming years and see Port of Hirtshals as a very good solution for intermediate storage before safe, permanent underground storage.

Anne-Mette Cheese, Country Lead for Carbon Management and Hydrogen in Denmark hos Wintershall Dea, says:



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"We are grateful to the Danish Ministry of Climate, Energy and Supply for entrusting Wintershall Dea with the operatorship of the Greenstore onshore storage license. The partners look forward to developing the storage site in close dialogue with local and national stakeholders."

The efforts to create a hub in Hirtshals for shipping CO₂ for storage in empty oil and gas fields in the North Sea have been noticed both at home and abroad. Recently, Greenport Scandinavia has hosted a visit from Austrian Finance Minister Magnus Brunner and member of the German Bundestag Oliver Grundmann, who took the trip to Hirtshals on their own initiative.

Germany launched a new CCS strategy in May 2024 and sees Denmark and the Greenport Scandinavia project as an important factor in storing CO₂ from German industry. Germany needs to store around 80 million tons annually, and Greensand and now potentially Gassum can be brought into play.

The partnership behind Greenport Scandinavia was launched in December 2022. In December 2023, the European Commission's Just Transition Fund awarded €14,6 million for the development of Greenport Scandinavia, including the establishment of intermediate storage in Port of Hirtshals to be operational in 2026.

About the Greenport Scandinavia consortium

Greenport Scandinavia CCUS Hub was launched in Hirtshals in 2022 with the aim of developing and establishing a complete end-to-end CCS value chain from CO₂ emitter to permanent storage.

The location of Greenport Scandinavia in the Port of Hirtshals gives access to storage in Greensand in the Danish part of the North Sea as well as to future onshore and near-shore storage options.

CO₂ is expected to be shipped from Greenport Scandinavia to Greensand from 2026.

About Wintershall Dea:

Wintershall Dea is Europe's leading independent natural gas and oil company with ambitions to become one of Europe's leading gas and carbon management companies. With more than 120 years of experience as an operator and project partner along the entire E&P value chain, Wintershall Dea is well positioned for this transition and supporting the EU goal of carbon neutrality in 2050.

About Evida:

Evida is Denmark's national distributor of methane gas (natural and biogas). As the owner of the gas distribution infrastructure in Denmark, Evida is working on adapting, expanding and optimising the running of the gas system to ensure that the infrastructure will be ready for the 100% biogas energy system of the future and to ensure security of supply within the Danish energy system. At the same time, Evida is getting ready to distribute hydrogen and CO₂ to fulfil the Danish potential for Power-to-X and CCUS (carbon capture, utilization and storage). Evida's experience with gas transport will play a key role in the development and establishment of the hydrogen and CO₂ infrastructure of the future.



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About Aalborg Portland:

Aalborg Portland is Denmark's only and one of the world's leading producers of cement and cement products. Aalborg Portland has a strong focus on sustainability, innovation and customer needs, and aims with its 2030 Roadmap to elevate Danish-produced cement among the cements in the world with the lowest CO₂ footprint.

Om INEOS Energy:

Experienced energy company INEOS Energy is currently developing CO₂ storage in the Siri area in the Danish part of the North Sea. The project is named Greensand and aims, in collaboration with partners such as Wintershall Dea and the North Sea Foundation, to deliver a highly competitive solution for safe, reliable and efficient transport and storage of CO₂. As part of the project, a pilot was successfully completed in the first quarter of 2023 following detailed engineering and construction in 2022. The aim was to demonstrate the full value chain for catch and drift, transboundary transport, offloading and safe storage of CO₂ for the very first time in Denmark and Europe in the geological storage reservoir Nini West, located 1.8 km below sea level. The first commercial phase aims to deliver an offshore transport and storage capacity of up to 1.5 million tonnes per annum by 2025/26. There will subsequently be further expansion to reach a capacity of up to 8 million tonnes of CO₂ transport and storage in 2030.

About Port of Hirtshals:

Port of Hirtshals operates the port in Hirtshals and attracts and supports companies within the fields of transport and logistics, maritime services and fishery and fish processing. Port of Hirtshals is an independent public port owned by the municipality of Hjørring.

The port intends to participate in activities within the CCUS value chain, including establishing itself as a receiving and shipping port for CO₂. The Port of Hirtshals is currently planning a major expansion of the port expected to be completed in 2027.

About Biocarb Solution:

Biocarb Solution is a collaboration between a number of Denmark's largest biogas plants. The process of upgrading biogas to bio-natural gas generates approx. 40% pure biogenic CO₂. In the coming years, the biogas plants will invest in CO₂ capture and storage facilities at the plants in order to transport liquid CO₂ to the future intermediate storage at Port of Hirtshals. From here, it will be shipped for permanent storage in Greensand at the Siri field in the North Sea. In the future, biogenic CO₂ from the biogas plants can be used in green energy production, for instance in Power-to-X at Port of Hirtshals or elsewhere in North Jutland. Biocarb Solution is owned by Bioman, BB Biogas, GrønGas, Rønnovsholm Biogas, Sindal Biogas and Vrejlev Bioenergi.

About Greenport North:

Greenport North is a business development company focusing on green transition and growth for existing and new companies in the Port of Hirtshals. Within the Greenport Scandinavia partnership, Greenport North supports and contributes to the development of activities throughout the CCUS



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value chain. Greenport North P/S is owned by Port of Hirtshals, the municipality of Hjørring, Hirtshals Havnefond and Nord Energi A.m.b.a.



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