



Upscaling and cross- border CCS integration

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DTU Offshore CCS Conference,
6th of June, 2023

GOING BIG

- Why CO₂-storage in Denmark?
- Upscaling of CO₂ storage in Denmark
- CCS infrastructure
- From national CCS focus to European CO₂ storage hub





THE DANISH CCS STRATEGY (2021)



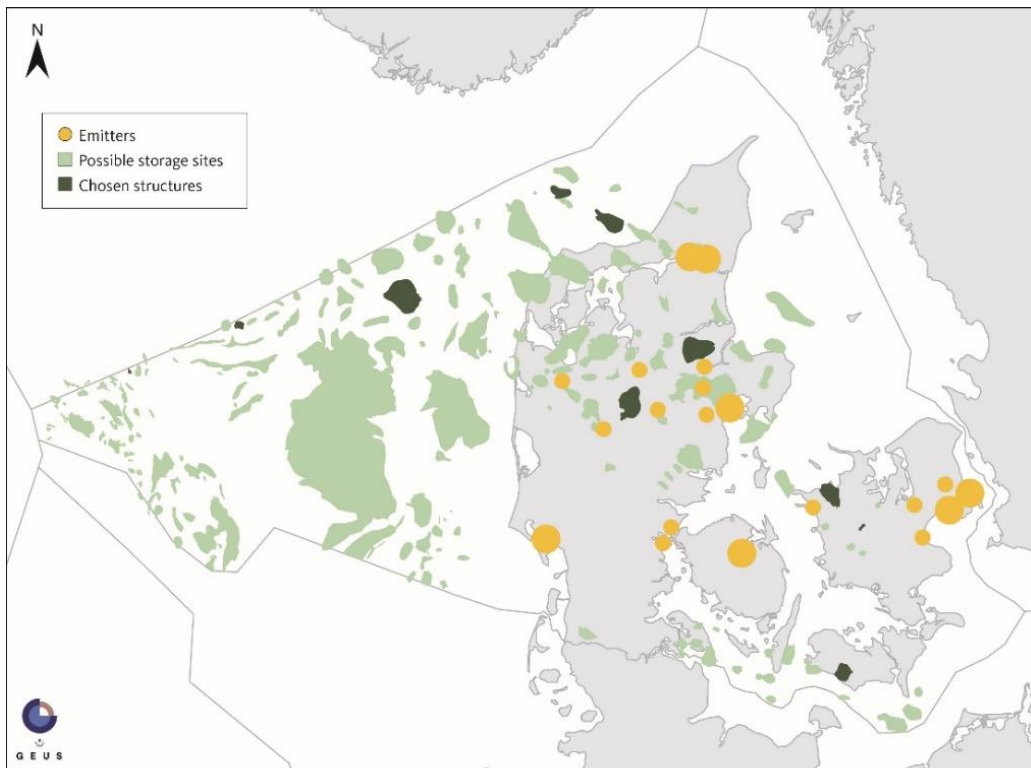
SUPPORTED BY A BROAD MAJORITY IN THE DANISH PARLIAMENT

- CCS will be used to reduce emissions from hard-to-abate sectors and contribute with negative emissions
- Support development of full scale CCS-value chain in Denmark
- Storage of CO₂ in Denmark should be environmentally sound and safe – and not be used for Enhanced Oil Recovery (EOR)
- Enable full scale CO₂-storage in Denmark and import/export of CO₂ with the aim of developing Denmark into a European hub for CO₂ storage



CO₂ STORAGE IN DENMARK

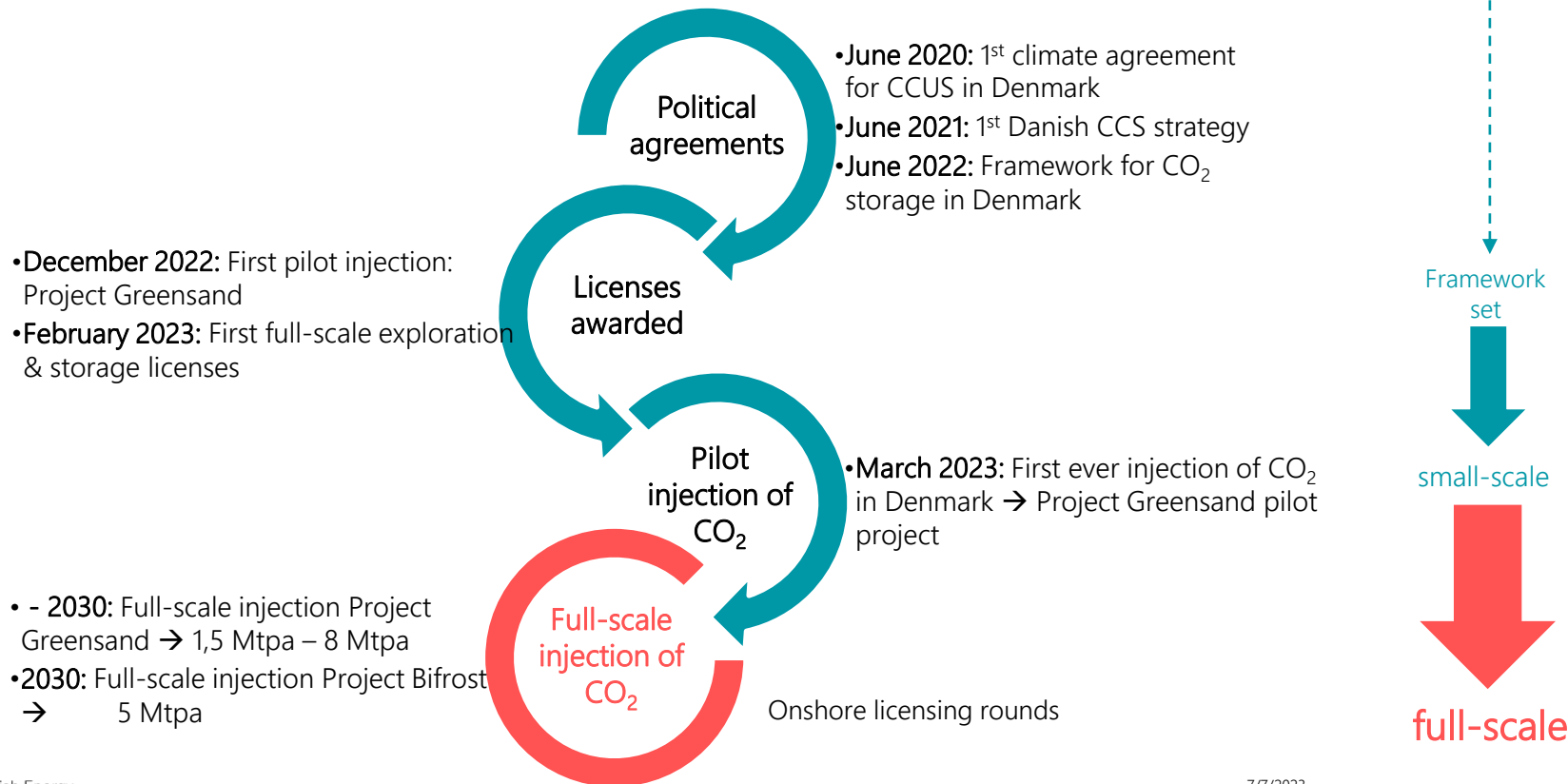
GREAT POTENTIAL FOR GEOLOGICAL STORAGE OF CO₂





UPSCALING OF CO₂-STORAGE IN DENMARK

FROM DEVELOPMENT OF FRAMEWORK TO ACTUAL INJECTION





EXAMPLE OF UPSCALING: 1. TENDER OFFSHORE

AVAILABLE AREA AND AWARDED LICENSES FEBRUARY 2023

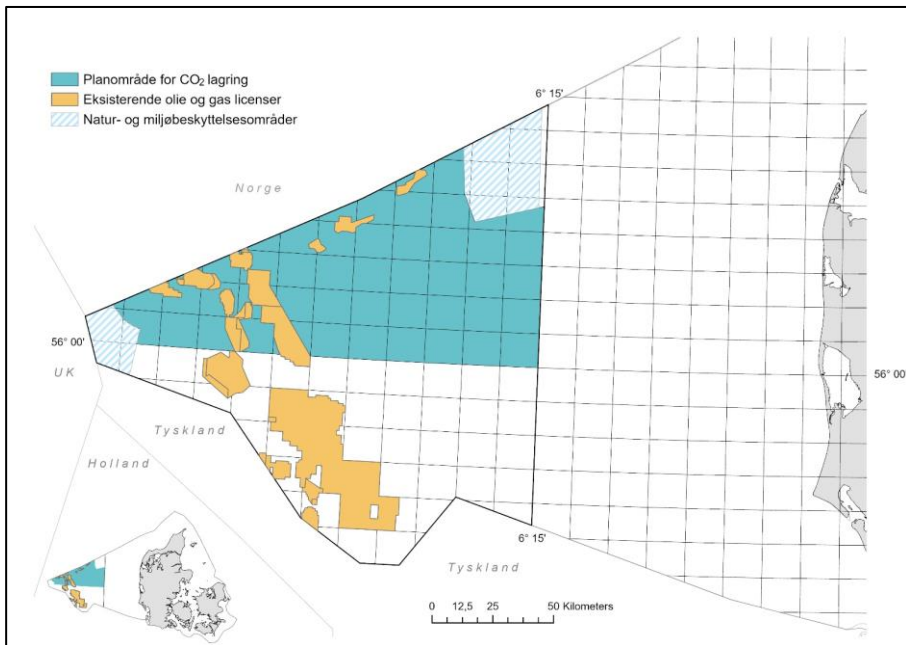


Figure: The boundary of the available area in the Danish North Sea on the Danish continental shelf west of 6 degrees 15' E and north of 56 degrees 00' N

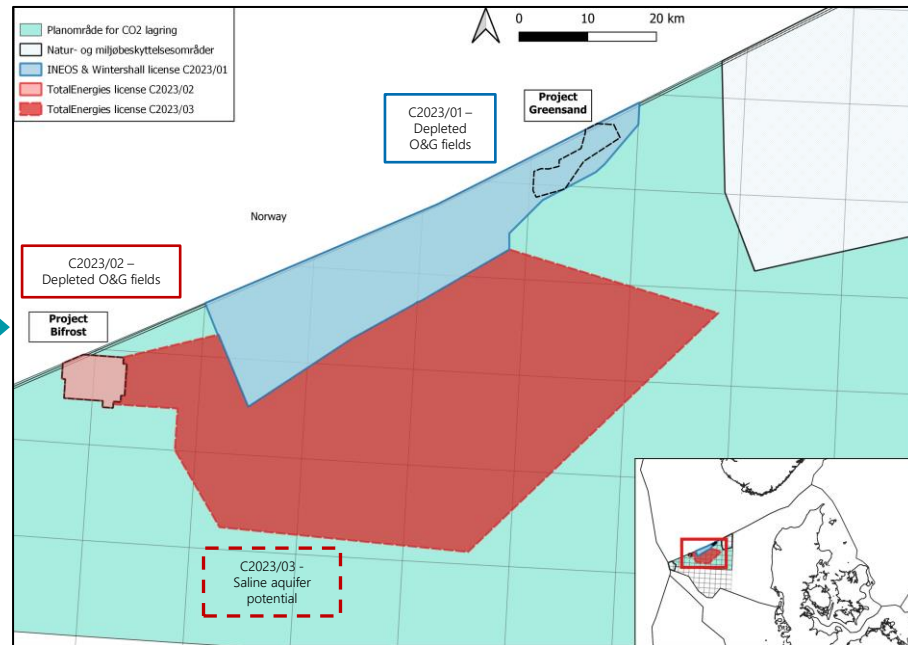


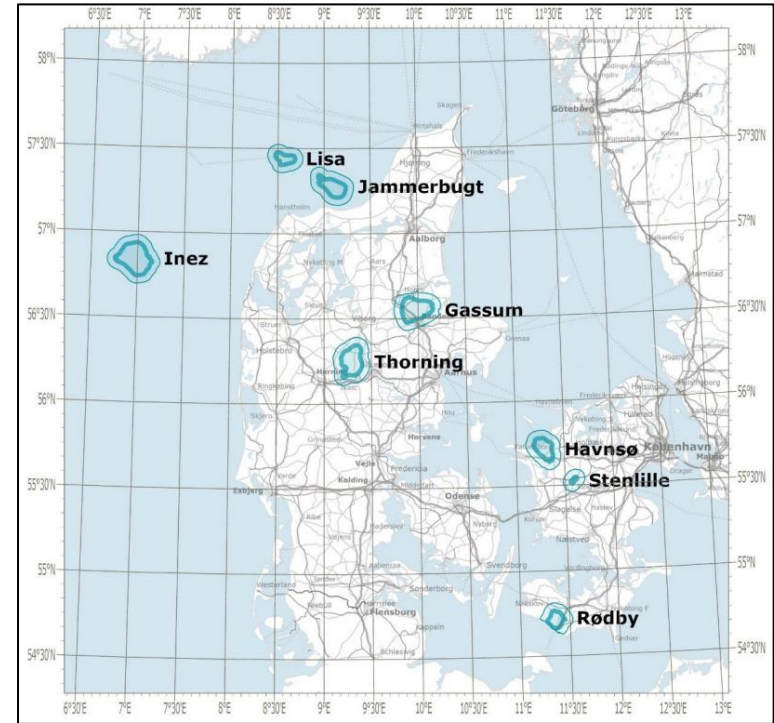
Figure: The awarded licenses (C2023/01, C2023/02 and C2023/03) to INEOS & Wintershall and TotalEnergies.

EXAMPLE OF UPSCALING: ONSHORE TENDERS



DEVELOPMENT OF ON- & NEARSHORE STORAGE OF CO₂

- The DEA are conducting a strategic environmental impact assessment for potential on- and nearshore storage sites.
- The Geological Survey of Denmark and Greenland (GEUS) are conducting seismic studies of possible storage structures on land and nearshore.
- First tender for onshore CO₂ investigation and storage licenses can open after the conclusion of the EIA.





THE ROLE OF CO₂ INFRASTRUCTURE



- Getting the Danish CO₂-infrastructure established is important for upscaling
- Considerations on new legislation on CO₂ transportation and infrastructure. The legislation will address regulatory issues and potential market barriers for CO₂ transport providers.
- The 6 cluster partnerships have contributed with valuable inputs
- EU Commission is underway with a CCS strategy and analyses of the regulatory framework for CO₂ transportation
- Danish projects (Project Bifrost and Project Norne) have recently applied for PCI status.



COLLABORATION



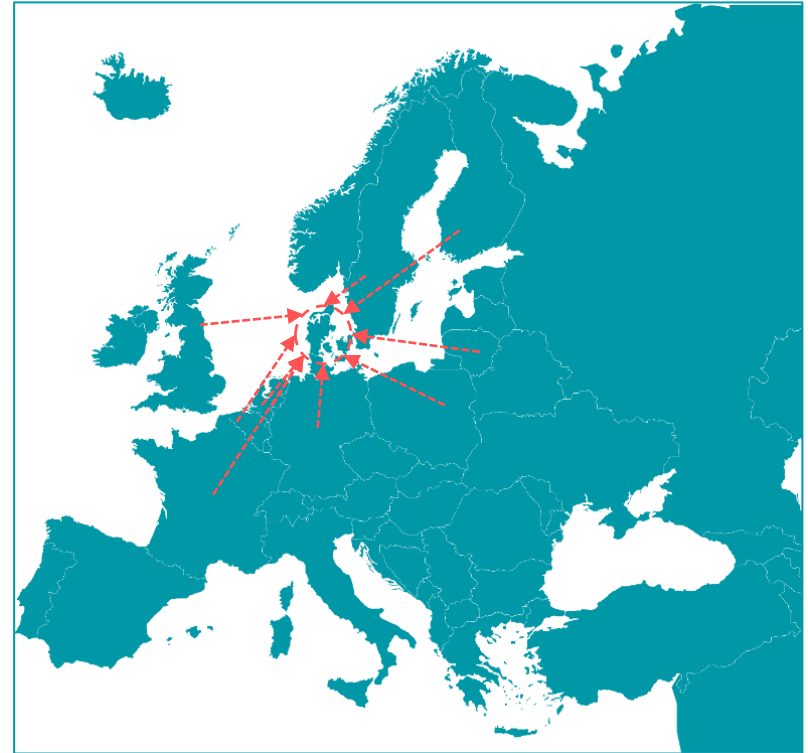
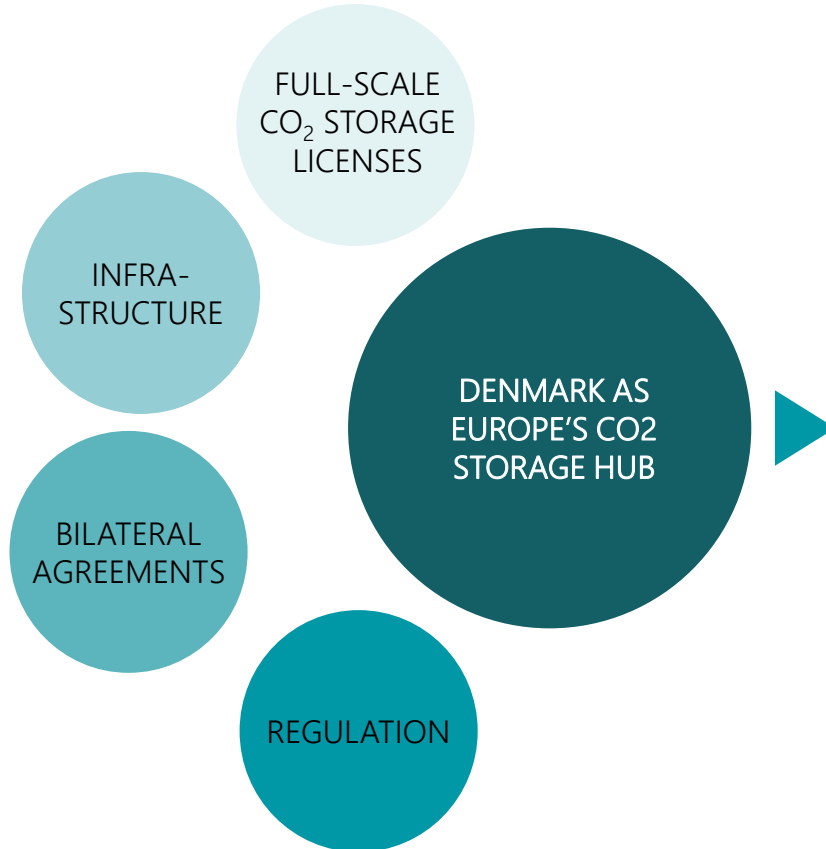
Bilateral agreements

- **29th of September 2022:** MoU signed with Belgium and Flanders (First of its kind)
- **24th April 2023:** CCUS MoU signed with Germany
- More agreements are in the pipeline

European collaboration is required – activate the CCS directive

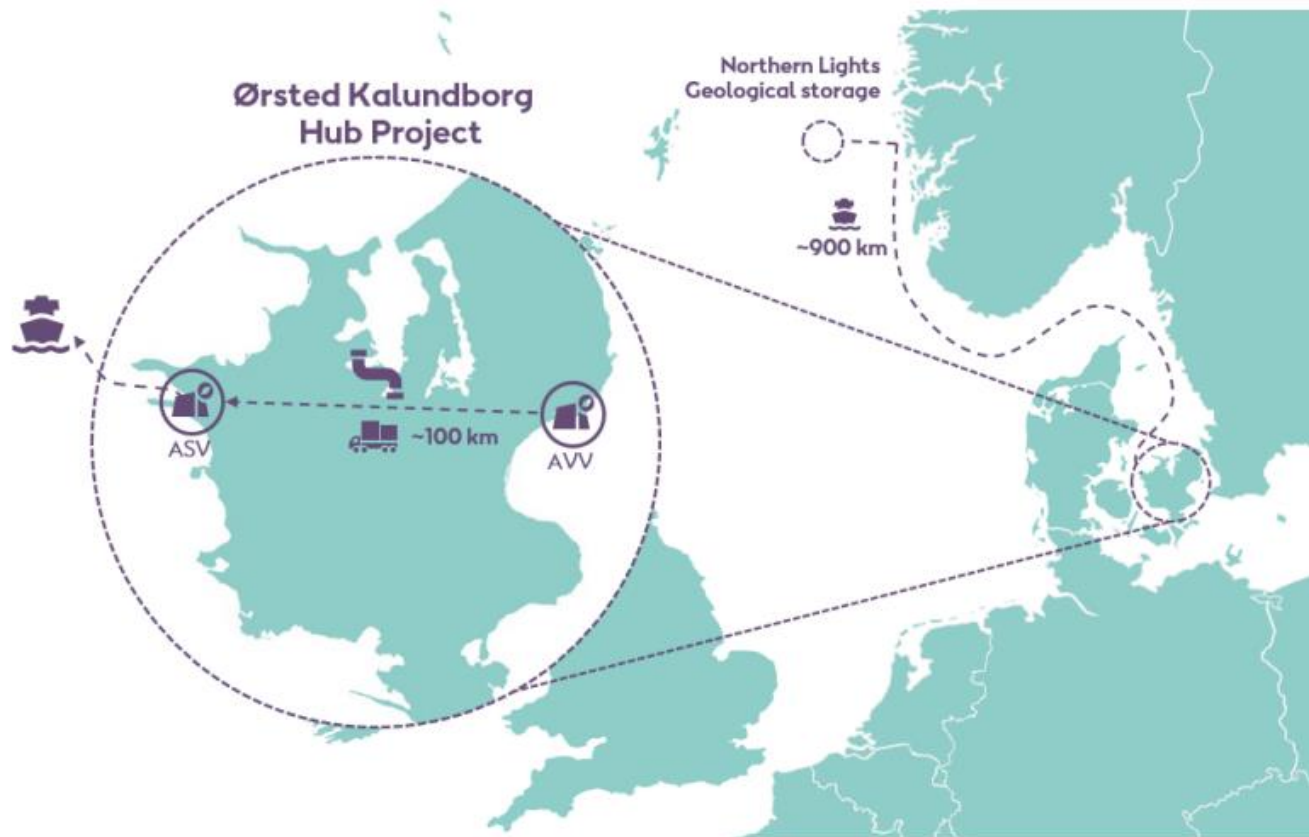


FROM NATIONAL CCS FOCUS TO EUROPEAN CO₂ HUB





UPSCALING IS HAPPENING





Thank you