

Information meeting:

Process to apply for licences for exploration and storage of CO₂ in coastal areas in Denmark

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Disclaimer:

The information presented may be subject to change and additional information, other than what is presented in this slide deck, will be required. The published material in Danish at the DEA's web-site is the official material.



The Danish CCS strategy (2021) and later political agreements

- CCS will be used to <u>reduce emissions</u> from hard-to-abate sectors and contribute with <u>negative</u> <u>emissions</u>
- Support for CCS will not lead to a reduction in ambition to support energy saving policies, renewable energies and other sustainable low carbon technologies
- Storage of CO₂ in Denmark must be <u>environmentally sound and safe</u> and <u>not be used for Enhanced</u> <u>Hydrocarbon Recovery (EHR)</u>
- Prioritize the development of <u>full scale CCS-value chain</u> in Denmark
- Enable <u>full scale CO₂-storage</u> in Denmark and import/export of CO₂ with the aim of developing Denmark
 into a <u>European hub for CO₂ storage</u>

/rkede ramm

st, Venatre og Moderaterne), Socialistisj sikeparti, Enthedalisten, Radikale Venst

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Strategic environmental assessment (SEA)

- 8 areas have undergone a strategic environmental assessment (SEA)
- The SEA identified risks and concluded that the there is a risk of significant, negative impact on public health in regards to sense of security.
- No other risks of significant, negative impact on the environment was identified.
- Activities in the exploration phase and the specific storage projects, drilling etc. are covered by the Environmental Assessment Act and will have to undergo either an environmental and habitat screening or a full environmental assessment (EIA)



Inez licence area

- 753 km²
- Differentiated area (surface and subsoil)
 - > Natura 2000
- Overlapping shipping corridors



Jammerbugt licence area

- 490 km²
- Differentiated area (surface and subsoil)
 - > Safety area for military exercises
- Overlapping shipping corridors with IMO shipping routes



Lisa licence area

- 332 km²
- Differentiated area (surface and subsoil)
 - > Natura 2000
- Overlapping shipping corridors with IMO shipping routes



Points of Attention

- Shipping
 - Shipping corridors and IMO shipping routes
 - May be restrictions on activities or establishment of facilities to maintain freedom and safety of navigation
- UXO survey prior to any activity
- Natura 2000 areas
- Military areas
- Natural resources extraction
- See more on havplan.dk







Conditions for the CO₂-storage licence

- Licence with exclusive right of exploration and storage for CO_2 in accordance with the Danish Subsoil Act § 23
- Implements the EU CCS directive and the Danish CCS Executive Order
- The license is based on the model licence and the model guarantee
- A Joint Operating Agreement (JOA) must be agreed between participating parties in a licence after award.
- Nordsøfonden will participate on behalf of the Danish state with a 20% share

CO₂-storage licence roadmap

Overview of the three main phases for a licensee

1. Pre-licence

Application requirements:

- Financial capacity
- Technical capacity
- Suggested work program
- Documentation
 requirements

2. Exploration phase

- Work program implementation
- Status reports and meetings
- Milestones and decision points of relinquishing area(s) or not
- Exploration phase concluding report → determination of suitability for CO₂-storage
- Licence extension → Storage permit application

 CO_2 -storage licence = Exploration & storage licence (§23)

3. Storage phase

- Development phase
 - Design and execution
- Operational phase
 - Injection
 - Monitoring
- Post-closure phase



Changes since the onshore tenders

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Main changes since the Thorning tender (2024)

- JOA (Joint Operating Agreement) elaborated
 - > No significant changes to the model JOA allowed
 - > Decision-making procedures must not obstruct progress
- Elaboration of points of attention regarding activities in and around the tender areas (Letter of Invitation)
 - > Nature Conservation
 - > Danish Maritime Spatial Plan
 - > UXO Surveys

Main changes since the onshore tender (2024)

- The selection criteria have been elaborated. The intention is to achieve greater transparency regarding the assessment, including clearer selection criteria in a situation with competition
- Updated requirements regarding guarantees.
- Information forms (Appendix 8) have been added to the application. These are expected to provide better guidance to the applicant and will ensure better processing of applications.
- Sections 2, 4 and 22 of the model licence have been changed in whole or in part. These changes relate to:
 - > a change of geographic reference system (section 2)
 - > the definition of when a storage license application should be submitted (section 4)
 - > new condition for the publication of data from baseline studies carried out by GEUS (section 22)

Documentation requirements 1/2

- General information
- Budget and financial capacity
- Technical capacity
- Documentation of the area
- Work program

→ Documentation should follow industry standards such as EU Guidance Documents or e.g. ISO 27914 and DNV-RP-J203.

Documentation requirements 2/2

New information forms summarising the application must be filled out and submitted with the application

2								
3	GUIDELINE:							
4	1. Fill in the work program in the table below, as described in point u) in annex 2, chapter B1.5.							
5	The information provided on this page may be published on DEA's web-site if a license is granted.							
6								
7								
8	License no.	Applicant	0/P ⁽²⁾	Equity [%]	Milestone (No. of months after award)		Activity	
9 10 11 12 13	C2024/XX ⁽¹⁾							
14 15 16								
17	FOOTNOTES:							
18	⁽¹⁾ The DEA will give the license a number, if a license is granted.							
19	⁽²⁾ O/P = Operator/Partner							
20 21								
4	• 1. Applica	nt info 2. V	Vork progr	amme	3. Knowledge	4. Budget	5. Storage portfolio summary	6. Storage portfol

Evaluation criteria for granting a licence

- Data collection/work program
 - > Amount and type of data
 - > Greater understanding of the Danish subsoil
 - > Realisation of CO_2 storage potentials
 - > Firm/contingent
- Provability of storage potentials in the area applied for
 - > Correspondence between work programme and known risks and uncertainties
 - > Understanding of geological uncertainties and containment

Evaluation criteria ranking in case of competing applications

Data collection/work program

- > Amount and type of data
- > Greater understanding of the Danish subsoil
- > Realisation of CO₂ storage potentials
- > Firm/contingent

Time table

- > Duration of the exploration work and milestone
- > Assessment of realistic timelines

Provability of storage potentials in the area applied for

- > Correspondence between work programme and known risks and uncertainties
- > Understanding of geological uncertainties and containment
- The way in which applicant intends to store CO₂
 - > Allowing greatest possible use of subsoil

Shared second priority

Lowest priority

First priority

Further conditions of particular interest

- Pre-defined areas
- Public involvement
- Social clauses
- Differentiated subsoil and surface designation for certain areas
- The DEA may set down requirements that GEUS will carry out some of the baseline studies
- The Danish Energy Agency will require reimbursement for processing applications also in the case an applicant is not awarded a license.

More information & contact details

Read more:

• <u>Danish Energy Agency CCS homepage (English)</u>

Contact details:

DEA's CO₂-storage team <u>ccs-lagring@ens.dk</u>

The application must be sent to <u>ccs-</u> <u>lagring@ens.dk</u> by 12 pm 6th of March 2025.

For very large files, the DEA will provide a direct link to an FTP-solution ("Filkassen") upon request to <u>ccs-lagring@ens.dk</u>



Questions



Thanks for coming

