Danish Offshore Technology Conference 2022

The Energy Transition in the North Sea

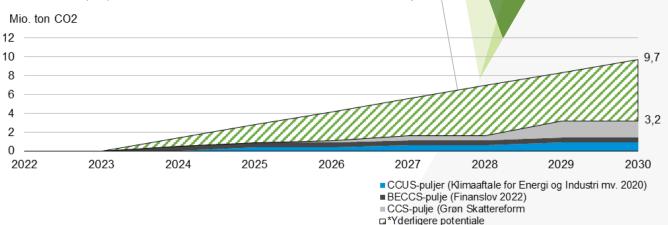
Anne Højer Simonsen, Senior Director Confederation of Danish Industry (DI)

CCS for climate targets

- The latest IPCC report underlines CCS as one of the key technologies to keep 1.5 degrees alive.
- CCS was also identified as an essential technology to reach the Danish 70% climate target.
- DK's CO2 emissions decreased from 78 mil. t in 1990 to 45 mil. t in 2021.
- To reach the 70%, we have to reduce the emissions to about 23 mil. t CO2.
- ► Almost half of the emission reductions can potentially be reached through (BE)CCS → up to 9.7 mil. t in DK in 2030.
- The three funding schemes shall deliver 3.2 mil. t reduction in 2030.

*https://concito.dk/nyheder/vigtig-klimaaftale-sikrer-mindre-co2-atmosfaeren-mere-co2-undergrunden <u>Critical Role for CCUS Highlighted in Latest IPCC Report. What's Next? (ief.org)</u> https://ens.dk/service/fremskrivninger-analyser-modeller/klimastatus-og-fremskrivning-2022v

Vedtagne (BE)CCS-reduktioner udgør under 33 pct. af potentialet i 2030 Estimerede (BE)CCS-reduktioner fra aftaler samt CCS reduktionspotentiale, 2022-2030



Anm.: *Yderlige potentiale er i 2030 aflæst fra "Klimaprogram 2022". Det høje skøn fra KEFM er anvendt Potentialet er lineært indfaset i perioden 2022-2030.

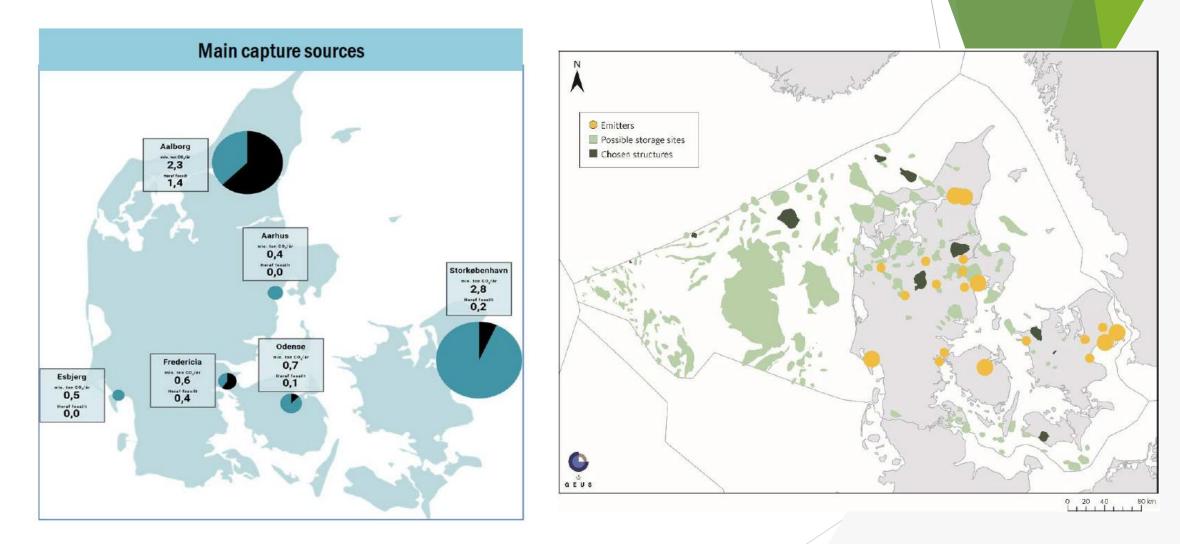
Overview of CC(U)S funding schemes

Table 1

Comparison of subsidy schemes for CCS

CCUS	NECCS	GSR
Negative emissions and reductions from technological flue gas processes	Negative emissions from technological processes.	Negative emissions and reductions from technological processes, agricultural sector excluded
Fossil and biogenic	Biogenic (including DACCS)	Fossil and biogenic (including DACCS)
Up to 20 years per contract w/ opt-out option w/ retention penalty	Up to 8 years per contract w/ opt-out option (limited retention penalty)	Up to 15 years per contract w/ opt-out option (limited retention penalty)
No	Yes	No
2025/26	2024/25	2026/27
2024-2049	2023-2032	2026-2043
16,6 mia. kr.	2,6 mia. kr.	19,5 mia. kr.
	Negative emissions and reductions from technological flue gas processes Fossil and biogenic Up to 20 years per contract w/ opt-out option w/ retention penalty No 2025/26 2024-2049	Negative emissions and reductions from technological flue gas processesNegative emissions from technological processesFossil and biogenicBiogenic (including DACCS)Up to 20 years per contract w/ opt-out option w/ retention penaltyUp to 8 years per contract w/ opt-out option (limited retention penalty)NoYes2025/262024/252024-20492023-2032

Point sources & CO2 storage facilities



*KEFM: Første forhandlingsmøde - CCS (c4cph.dk), GEUS

CCS alliance

▶ +50 members along the entire value chain

Vision:

- Positing of Denmark as a European hub for CO2 storage (international)
- Establishment of a competitive CCS industry in Denmark (nationally)

Mission:

- The alliance creates the biggest possible public and political visibility for the (BE)CCUS agenda.
- The alliance contributes to an understanding of the importance of creating a framework for a competitive Danish CCS industry.
- The alliance works for the greatest possible capture and storage capacity in 2030 – and thus also understanding and acceptance of what this requires in terms of political measures.



CARBON CAPTURE STORAGE

ALLIANCEN

DI ENERGI – DANSK FJERNVARME – DANSK OFFSHORE DANSKE REDERIER – DANSK METAL – AXCEL FUTURE

Offshore Wind - declarations, agreements and targets

Regeringen APRIL 2022 Demokra kan n mere II a klima Uafhængighed af russisk gas. Danmark skal være grønnere og sikrere.



Klimaaftale om grøn strøm og varme 2022

Et grønnere og sikrere Danmark

Danmark kan mere II

(25. juni 2022)

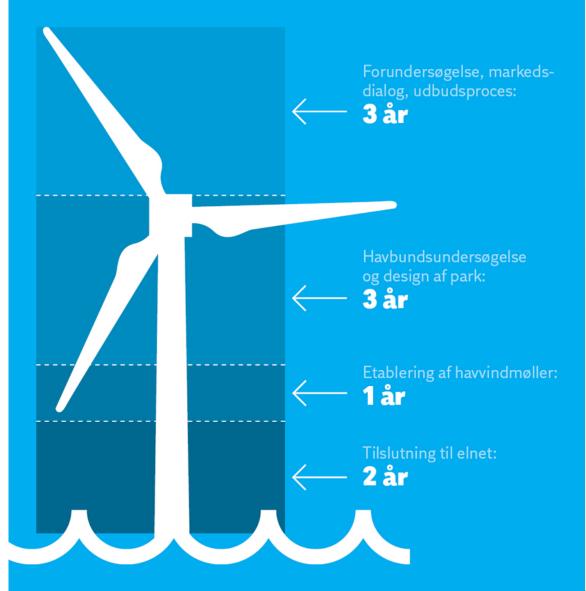
Esbjerg



Offshore Wind - challenges

- From policy to action
- Cumbersome permitting procedures
- Design of tenders
- Labour
- > A solid pipeline of projects

SÅ LANG TID TAGER DET AT OPSÆTTE EN HAVVINDMØLLE

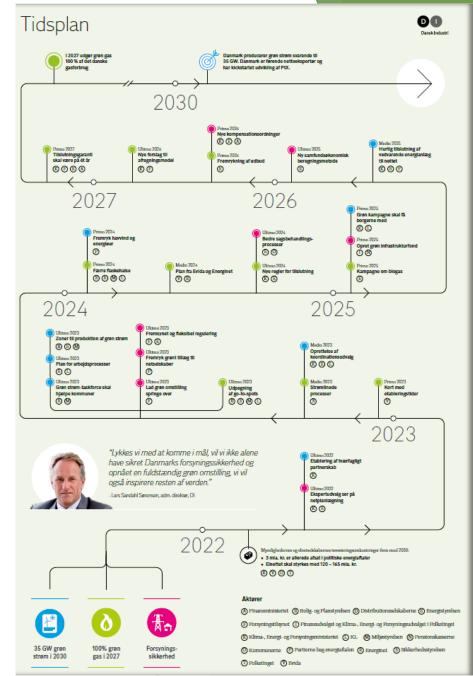


Offshore Wind - Dansk Industri



Road map 100% green energy by 2030
>35 GW green power by 2030
>100% green gas by 2027
> Security of supply

26 concrete actions



Aftale om fremtidens grønne brændstoffer

PtX/E-Fuels



Hydrogen Island





