GREEN ENERGY
EXPORT DAY 2025

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CCUS Workshop Programme

13.15 Welcome by moderator
Anne Højer Simonsen, Head of Climate Policy, Danish Industry

13.20 Experiences with global exports of CC technology
Peter Thoft Knudsen, Head of region - Nordics, SLB Capturi

13.30 Perspectives from a Danish global exporter
Lia Khasanova, Commercial Director New Energy & Climate Technology, Welltec

13.40 Latest developments in Germany and overview of framework conditions within CCUS
Sima Charlotte Rasmussen, Energy & Climate Advisor, Embassy of Denmark in Berlin

13.45 Q&A with speakers and panelists

Danish Energy Agency
MINISTRY OF FOREIGN AFFAIRS OF DENMARK
STATE OF GREEN
GREEN POWER DENMARK
DBDH
SYNERGI
DANSK ERHVERV
DI Energi

Welcome by moderator:

Anne Højer Simonsen, Head of Climate Policy, Danish Industry

DI Energi

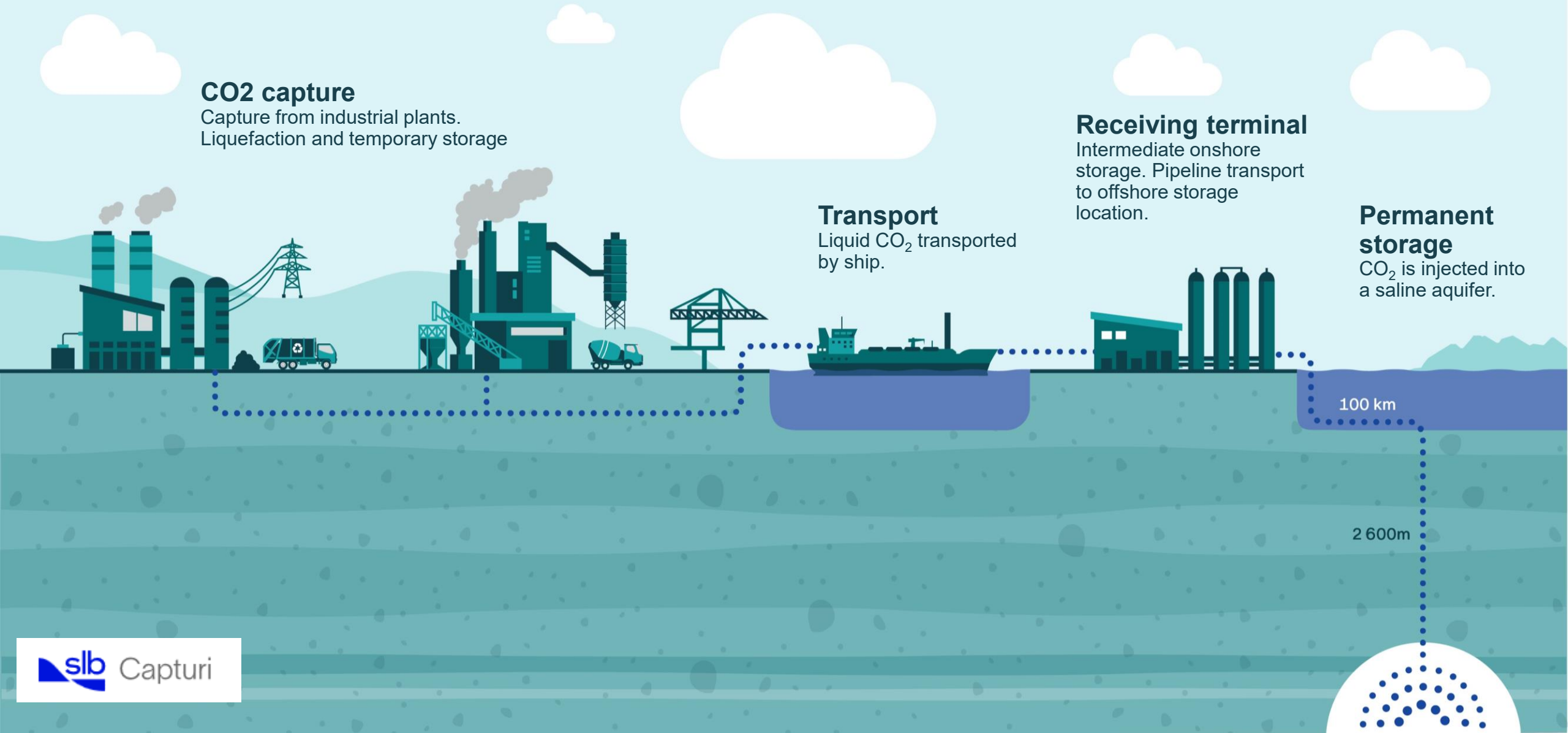
Experiences with global exports of CC technology

Peter Thoft Knudsen, Regional Head of Nordics

DI Green Export Day 27.08.25

slb Capturi

Carbon Capture and Storage Value Chain



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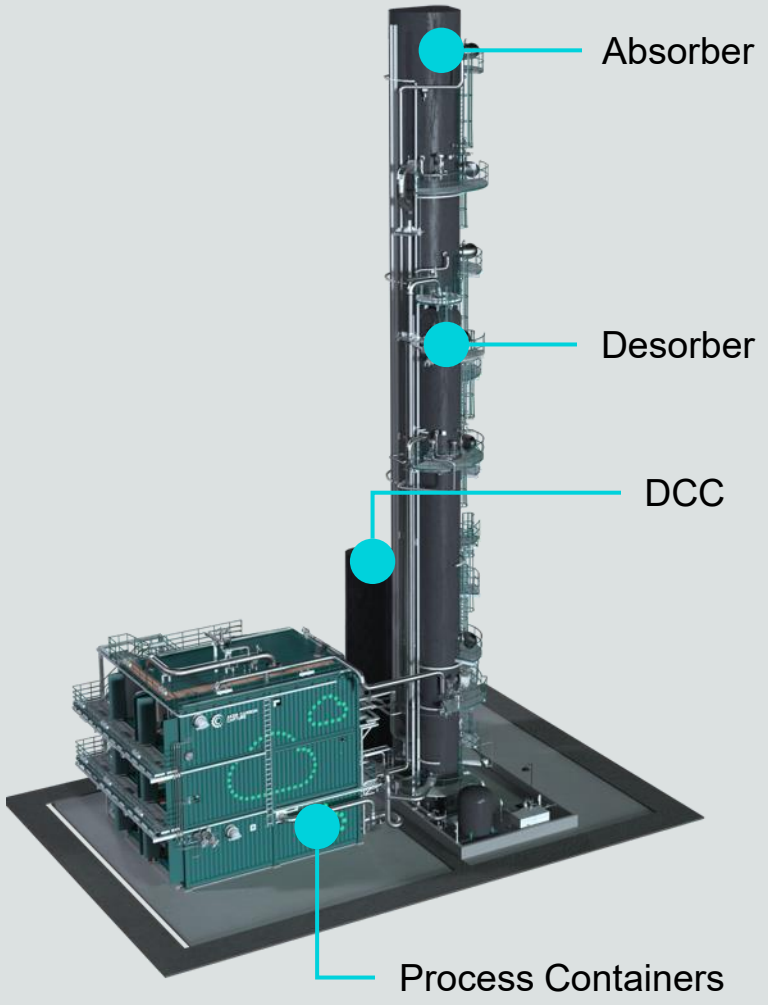
Experiences and considerations in growing carbon capture related export business

- CCUS industry is an industry in development stage
- Hard to abate industries are the most attractive industries for carbon capture
- Ability to retrofit significant process plant is often a challenge due to lack of space
- Big differences in the maturity of CC export markets
- Bankable CCS projects today require
  - T&S outlet
  - Government or other public funding is required
  - CO2 volume captured matters
- Business cases needs to be improve to boost the CCUS industry
  - T&S will come down in price (more storage capacity, going onshore etc)
  - Incentives to action like higher EU ETS price, CO2 taxes etc are expected



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Thank you!

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Impact at scale

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Welltec in Green Energy

New Energy and Climate Technology Business unit

Lia Khasanova, Commercial Director for New Energy and Climate Technology, Welltec

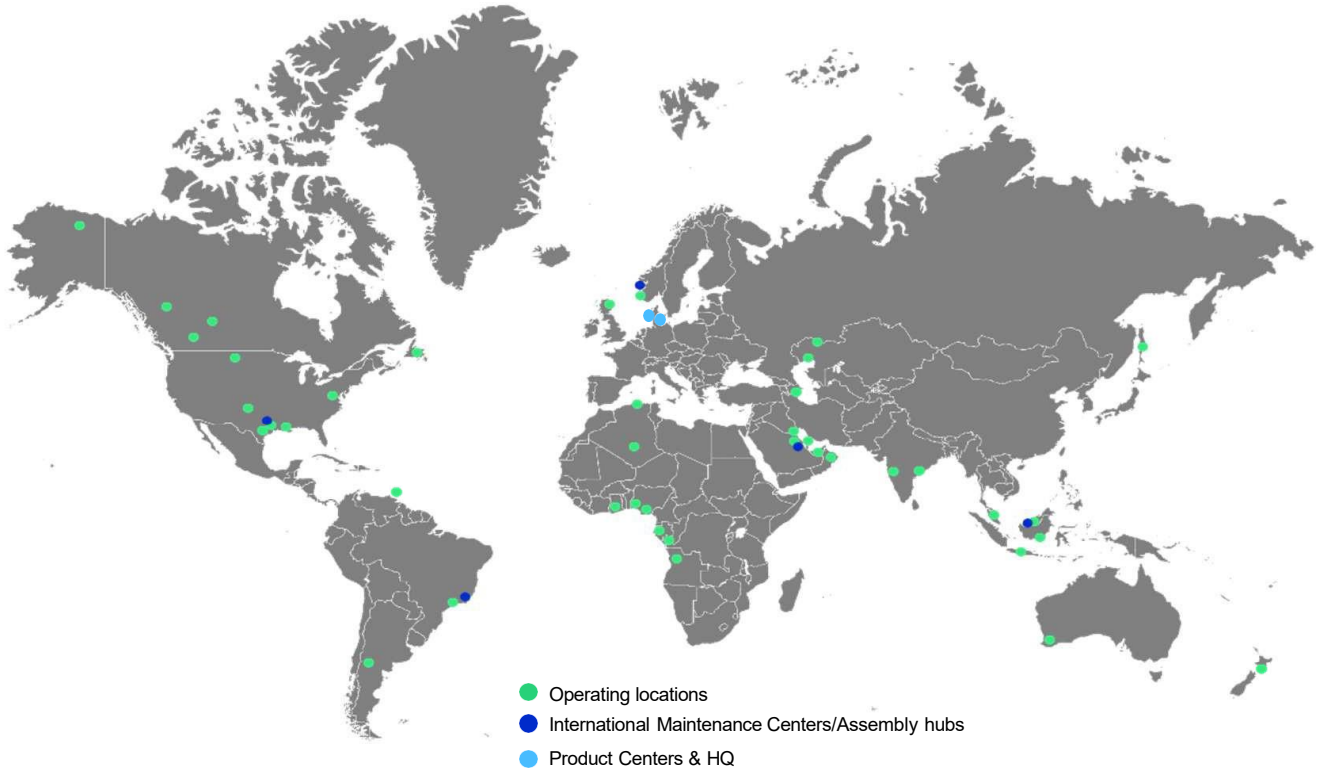
25 August 2025

Welltec

Welltec overview

A truly global company servicing the energy industry with market leading technologies.

- 31 years of innovative technology development within the energy sector (164 patent families)
- HQ, Development & Engineering and in-house manufacturing at 2 locations in Denmark (Copenhagen & Esbjerg)
- 43 global offices and service facilities located in 25 countries
- >900 employees worldwide



More than 30 years of innovation

Welltec®

1994
Well Tractor®
The beginning of
e-line conveyance

1998
Well Tractor® 218
Well Stroker®
Bergen, Norway

1999
Houston, USA

2000

2001
Well Cleaner®
Well Cleaner® Wishbone
Honer (WBH®)
Well Key®
New Global HQ and Product
Center – Allerød, Denmark

2002

2003
Well Miller®
Anchorage, USA
Midland, USA

2004
Well Cleaner®
Reverse Circulating Bit (RCB)

2005
Welltec® Annular Barrier (WAB®)
Welltec® Flow Valve (WFV™)
Welltec HQ –
Allerød, Denmark
Bonnyville, Canada
Abu Dhabi, UAE
Haugesund, Norway
Perth, Australia
Macaé, Brazil
Luanda, Angola

2007
Prudhoe Bay, USA
New Orleans, USA
Lagos, Nigeria
Labuan, Malaysia
Baku, Azerbaijan

2008
Rio de Janeiro, Brazil
Port Harcourt, Nigeria

2010
Well Cleaner® Downhole Jetting Tool (DJT)
Well Tractor® 212
Well Stroker® 100K SRO 2.0
Welltec® Release Device (WRD)
Pointe-Noire, Congo
Mumbai, India
Al-Khobar, Saudi Arabia

2012
Well Cutter® 414
New Base – Bergen, Norway

2013
Welltec® Annular
Isolation (WAI™)

2014
Welltec® Puncher 318
Well Miller® Expandable Bit 318
Well Cutter® 238
Welltec® Light Packer (WLP)
Muscat, Oman
NL, Canada
Algiers, Algeria
Doha, Qatar

2015
Welltec Manufacturing Center for Completions –
Esbjerg, Denmark

2016
Well Tractor® CVT
Continuous Variable Tractoring
Well Miller® CVF
Continuous Variable Force
Wellgrab™
Automated fishing solutions
Welltec® Puncher 218
Isealate Springblade Patch
Port of Spain,
Trinidad & Tobago

2017

2019

2022
Welltec® Expandable
Anchor (WEA)
Liner hanger system
Full-scale Test Flow Loop –
Esbjerg, Denmark

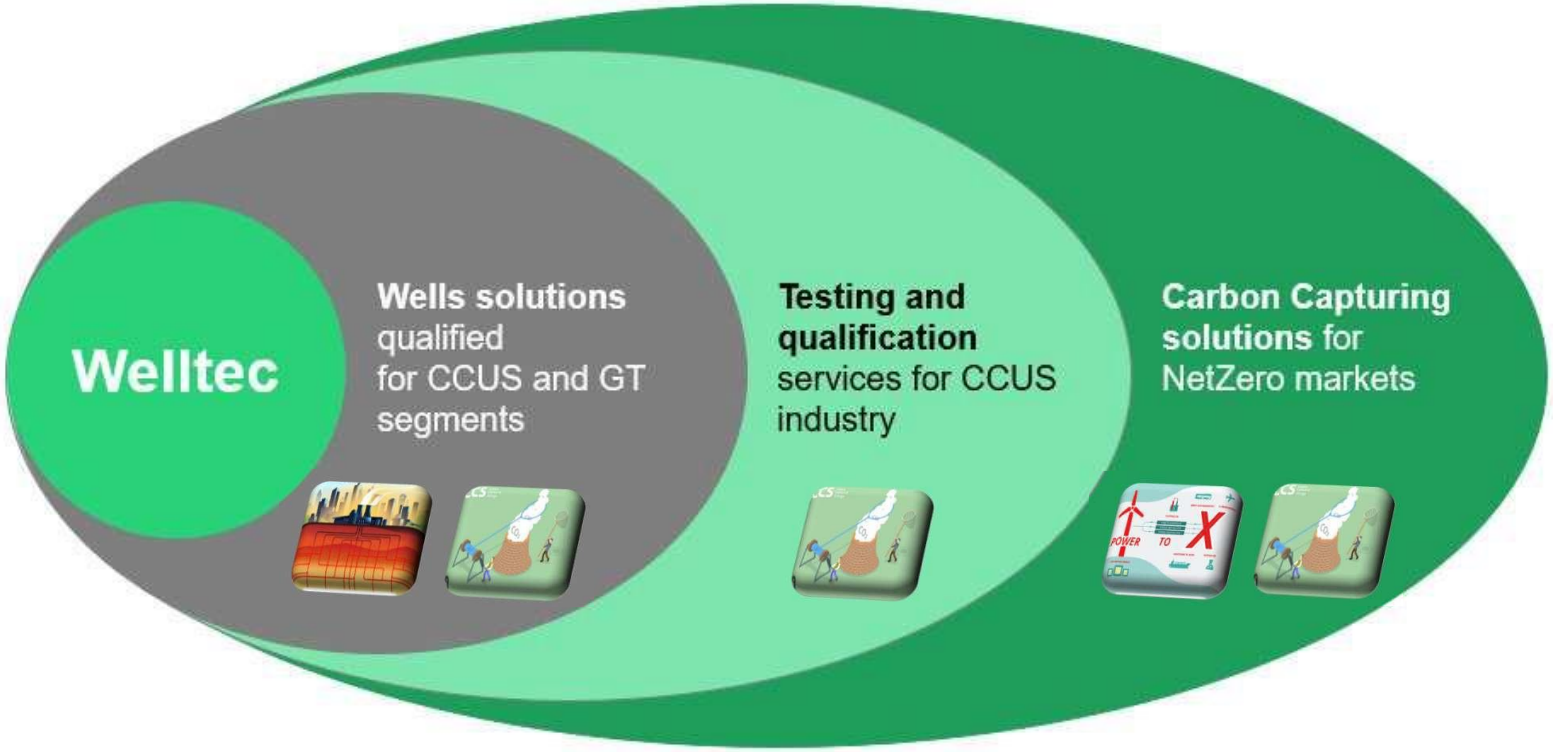
2023
Density Activated Recovery
(DAR) Technology

2024

2025
PipeSnake
Stavanger Technology Center –
Stavanger, Norway

Welltec’s green energy export focus

Welltec is applying existing oilfield experience and technology to new energy. Geothermal and CCS operators can now benefit from more than 30 years of expertise in building innovative well technology - combined with the low-impact and light-weight nature of our solutions



Welltec’s green energy export focus

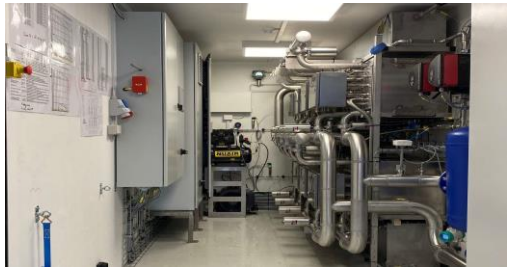
Field Engineer preparing metal expandable packer for deployment, USA land operations.

***Small-scale carbon capture** for post-combustion point-sources. Welltec’s Prototype at Greenfarm's biogas plant. Gråsten Landbrugskole, Denmark*
*(**Focus: DK, NO, PL, FR, DE**)*

CCS CCU

Welltec’s testing facility for CO2 environment – Test Flow Loop. Established to start collaboration with Project Greensand, Esbjerg, DK

EUDP
SINTEF DTU
GREENFARM
AALBORG UNIVERSITET
ESBJERG HAVN
Welltec

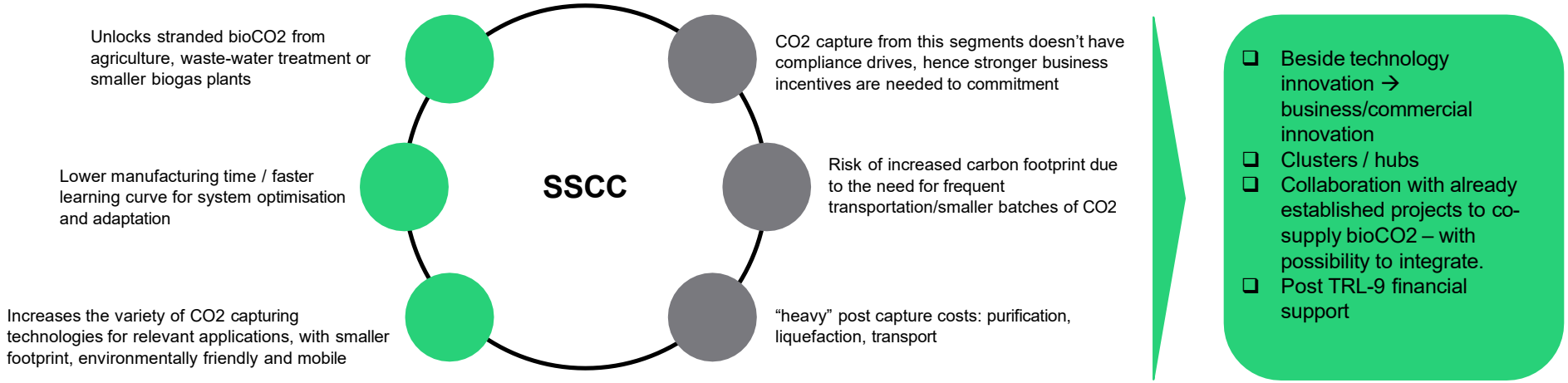


Welltec

Experiences and barriers encountered

With more than 30 years of expertise in building innovative well technology, Welltec is well positioned to be big player OFS for CCS/wells market. However, *small-scale carbon capture* for CCU/CCS project opens up a whole new chapter of challenges…

- BECCS is progressing faster than CCU segment, due to more structured public money support towards BECCS. CCU is growing on project- by-project innovation grants.
- CCS growing mainly offshore, with rigid requirements around CO2 specs/envelope for liquefaction, making it expensive for small emitters to “afford” BECCS model.
- We all know about the need for financial support for the emerging markets, and a lot of work is being done on that front. However, “Small- scale” carbon capture application/model is exposed to a whole new set of additional challenges, like:



Welltec

Questions?

Thank you for your time

25 August 2025

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UDENRIGSMINISTERIET

FRAMEWORK CONDITIONS FOR CCUS IN GERMANY

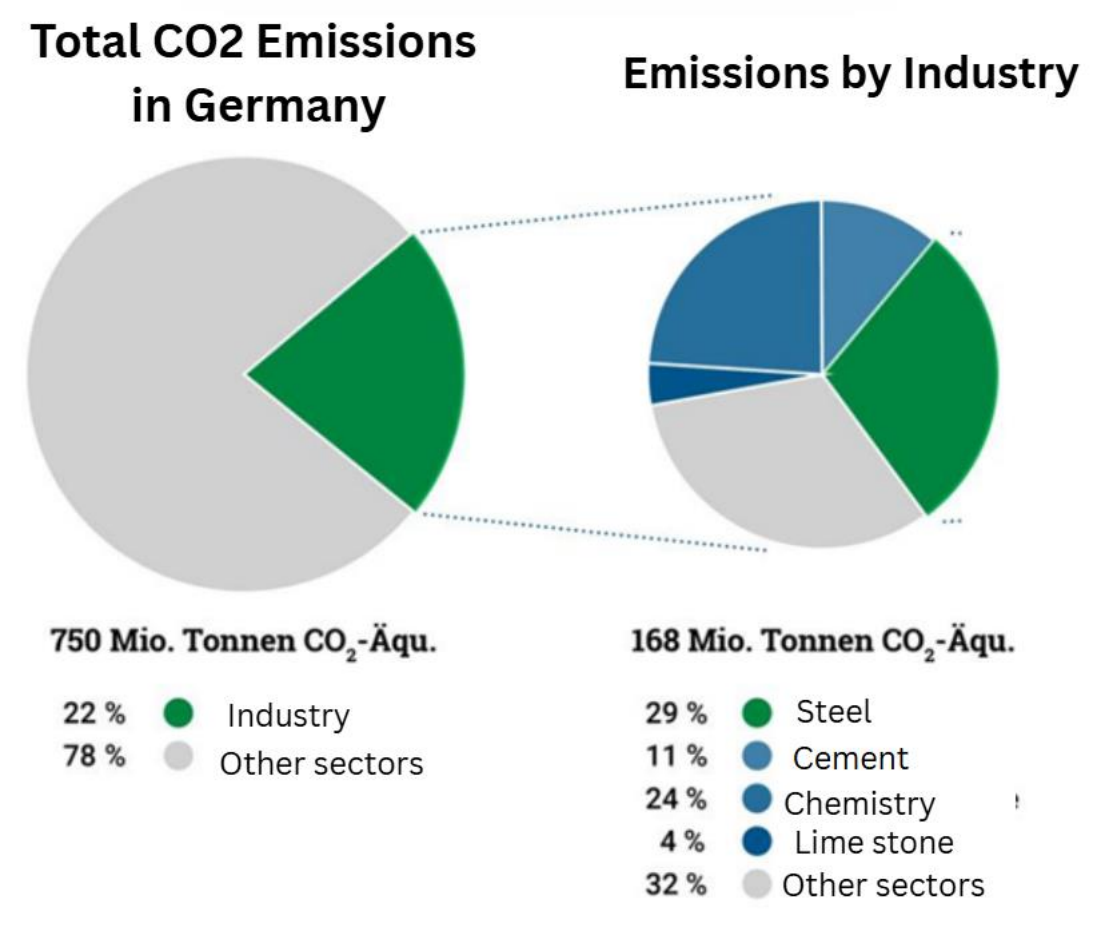
OUTLOOK UNDER A NEW GOVERNMENT

SIMA CHARLOTTE RASMUSSEN - ENERGY & CLIMATE POLICY ADVISOR - BERLIN EMBASSY - 27. AUGUST 2025

POTENTIAL FOR CCUS IN GERMANY

- According to the **Federal Climate Protection Act**, Germany must achieve greenhouse gas neutrality by 2045 and negative emissions by 2050.
- In industry, **CCS is expected to cover 20% of total emissions reduction by 2045**: Estimated 34 to 73 Mt CO_2 to be captured annually*.
  - *Cement & lime industry* (18 Mt CO_2).
  - *Waste incineration*, CCS would account for 80% of emission reductions (15 Mt CO_2).
  - CCS could also expand to: Steel, *Glass & paper industry, Blue hydrogen production, Negative emissions technologies* (BECCS & DACCS).

  Total 34 Mt CO_2 captured, with 25 Mt stored geologically (**CCS**) and 9 Mt used for product manufacturing (**CCU**). Potential net negative emissions of up to -7 Mt CO_2eq in these sectors.



Bellona

*Leak of Carbon Management Strategy Proposal September 2024

CURRENT LEGAL STATUS

- CCS is a controversial issue amongst the public and civil society
- **Carbon Dioxide Storage Act (2012):** prohibits the use of commercial CCUS
- Germany has not ratified the amendment of the **London Protocol** and amendments must be made to the High Sea dumping act
- **Amendment of the Carbon Dioxide Storage Act (KSpG)** → Cabinet decision on 06.08.2025, expected to go through parliamentary proceedings autumn 2025.

Extinction Rebellion Deutschland

CHANGES IN FRAMEWORK CONDITIONS

- August 2025: Amendments to the **CO2 Storage Act (KSpTG),** enables commercial CC(U)S in all sectors except coal and legalises export of CO2
- **Storage:** Enables offshore storage in the German Exclusive Economic Zone. It will be the competence of the federal states to decide whether they wish to store CO2 in their respective territories.
  - → Ratification of London Protocol proposed by the German Environment Ministry
  - Incorporates parts of the EU's Net-Zero Industry Act (NZIA) into German law: Oil and gas producers must provide future CO_2 storage capacity.
- **Infrastructure:** By defining CCS infrastructure as being of '*overriding public interest,*' the government will speed up the approval processes, which can ensure that the necessary infrastructure is ready as early as the beginning of the 2030s.

Photo: State o

Hearing of associations and **interdepartemental coordination.** Drafting of amendment.

Bundestag: Federal Cabinet

Current status of KSpG

September/October

Bundestag: First hearing

Committee (Economic Affairs and Energy)
- Consultation of content
- Hearing of experts and associations
- Integration of potential changes
- Voting

Bundestag: Second and Third hearing
- Debate concerning content
- Voting

November/December

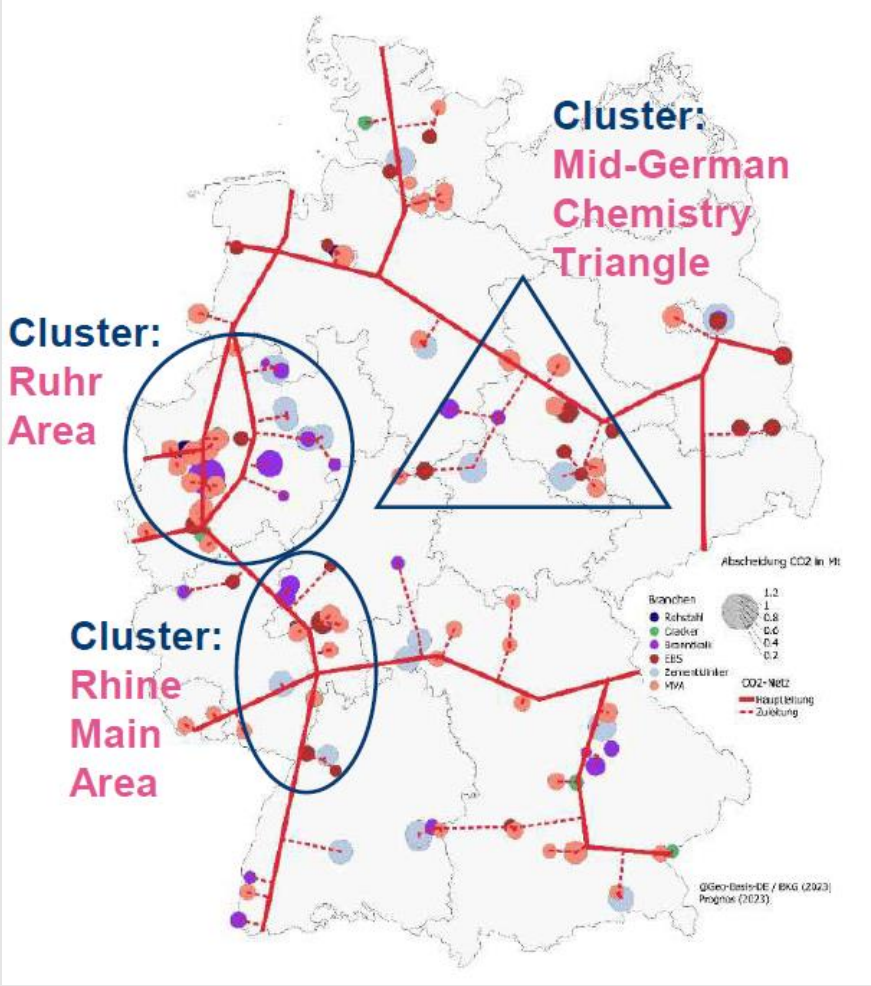
Approval in Bundesrat: Potential changes and voting

Signature by Federal President

Bundestag: Publication and entry into force

INFRASTRUCTURE

- **Identified CCS clusters based on emissions:** North Rhine-Westphalia (NRW), Rhein-Main region, Central German chemical triangle, Berlin-Brandenburg, Southern Bavaria.
- A mix of transport options is essential for the rapid deployment of CCS/CCU.
- Large-scale CO_2 transport will require a **privately operated pipeline network**, which must begin construction soon. The aim is to operate a **4,500 km pipeline network** by 2045. Short term a multi-modal transport system will include rail, shipping, trucks for decentralised facilities
- Germany will also serve as a **CO_2 transit country**, as neighboring states plan to route CO_2 through Germany for offshore storage in the North Sea.
- **Role of Ports in CCS Infrastructure:** CO_2 captured from industrial clusters will be transported to key German, Dutch and Belgian port locations



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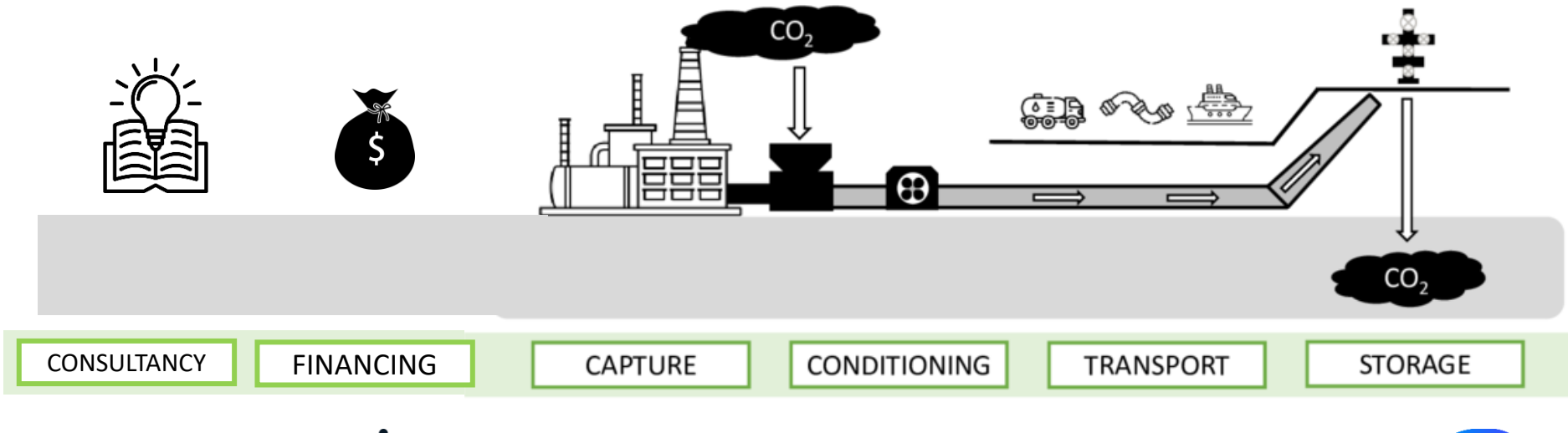
CCS ALLIANCE MEMBERS



RAMBØLL

CIP
Copenhagen Infrastructure Partners

BUILDING THE FUTURE OF CO_2 TRANSPORT
DECARBONICE
THE COOLEST WAY TO CUT CO_2

TotalEnergies

evida

INEOS

CO_2 Storage Kalundborg | A project by Equinor, Ørsted & Nordsøfonden

nordsø fonden

HOW CAN WE SUPPORT YOU?

LET’S GET IN TOUCH:

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Danish Embassy in Berlin

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DI Energi

THANK YOU