



Norwegian Ministry
of Petroleum and Energy

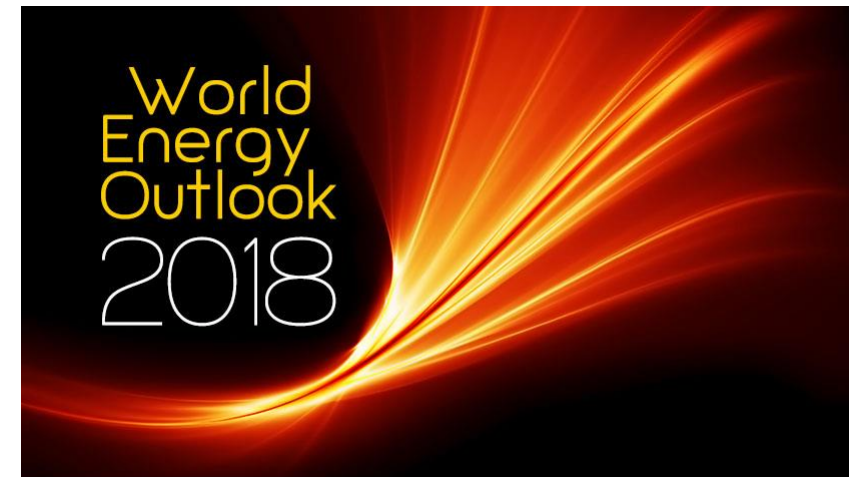
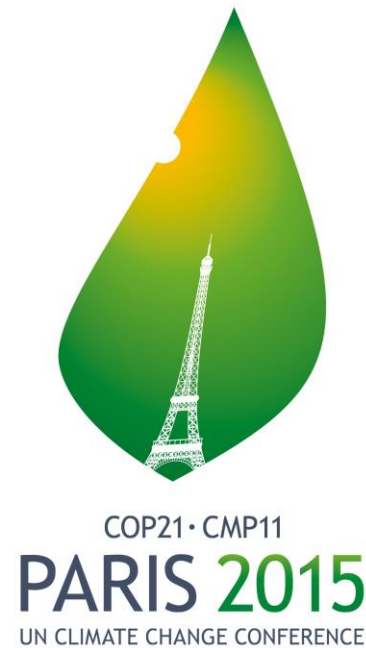
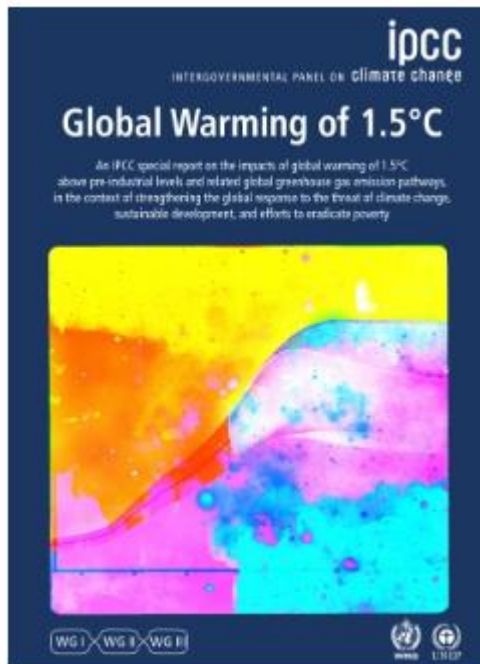
Carbon Capture and Storage in Norway

Espen Bernhard Kjærgård

Athens, 6 November 2019



CCS is a necessary part of the solution



Norwegian CCS-strategy – a broad approach

FoU

DEMO

LARGE SCALE



CLIMIT
FORSKNINGSRÅDET OG GASSNOVA

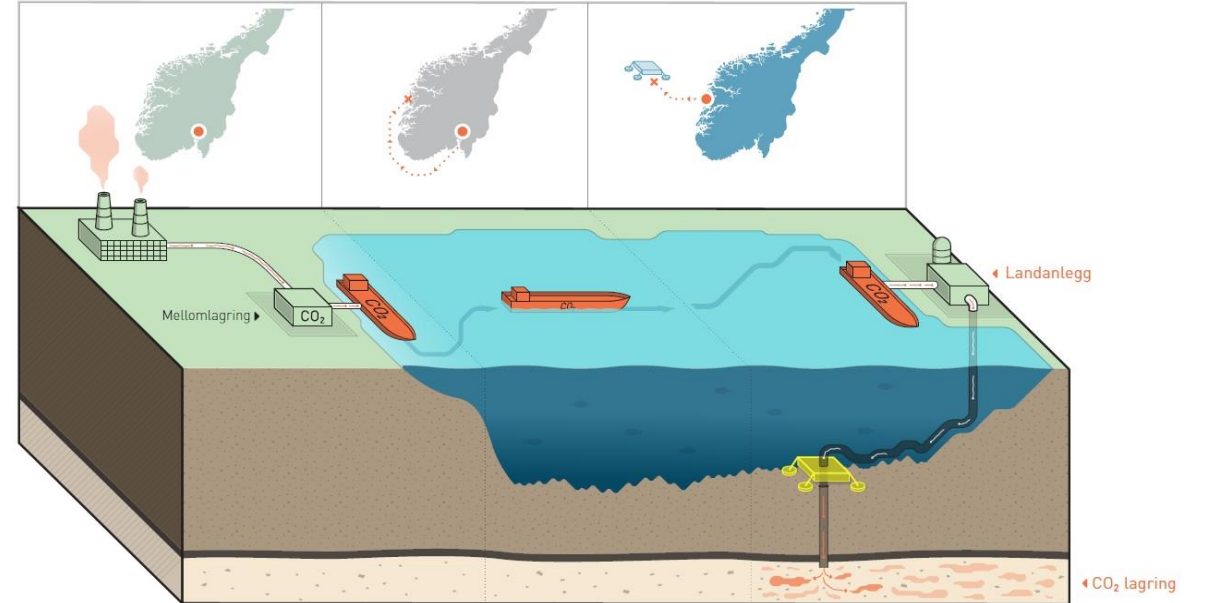


FANGST OG LAGRING AV CO₂

1. FANGST

2. TRANSPORT

3. LAGRING TIL HAVS VIA LANDANLEGG



GASSNOVA



Norwegian Ministry
of Petroleum and Energy

Large scale CCS in Norway

"...realise a **cost-effective** solution for full-scale CCS in Norway, provided that this incite **technology development in an international perspective**".

Solberg Government's Political Platform

Our aim for a CCS project in Norway:

- Demonstrate a full chain of capture, transport and storage of CO₂
- Demonstrate CO₂ capture in existing industry
- Establish a flexible storage solution with excess capacity
- Provide cost and risk reductions for subsequent CCS projects



The Norwegian CCS demonstration project



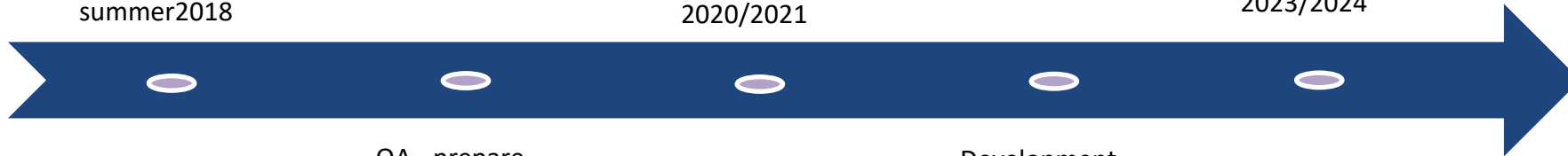
The way forward



Start FEED -
summer2018

Investment decision
2020/2021

Operation -
2023/2024



QA - prepare
investment decision –
2019/2020

Development
2020/2021 →



ccsnorway.com



More information



Approaching final investment decision: CCUS developments in Norway

Speaker: Kristin Myskja | Assistant Director-General, Ministry of Petroleum and Energy, Norway

Date: Thu, Nov. 14, 2019, 2:00 PM – 3:00 PM CET



Dear Colleagues:

We are delighted to invite you to a webinar titled “Approaching final investment decision: CCUS developments in Norway”.

For more than 20 years, Norway has been a frontrunner in the efforts to develop CCS. The Norwegian authorities want to contribute to the progress of this important technology through developing a cost-effective solution for full-scale CO₂-capture and storage in Norway, provided that it leads to technology development internationally. To be successful, this project needs to be followed by other CCS projects. From the Norwegian perspective, the state and the industry need to share both costs and risks.

The Norwegian full-scale CCS project is comprised of two capture projects: Norcem, a HeidelbergCement subsidiary, are studying capture from a cement plant and Fortum Oslo Varme are studying capture from a waste incineration plant. CO₂ will be transported by ship to an onshore terminal on the Norwegian west coast and from there transported by pipeline to an offshore storage complex under the North Sea. The transport and storage part is planned by the Northern Lights project, a partnership between Equinor, Shell and Total. The project is on track for an investment decision in 2020/2021. This webinar will provide an update on recent developments in the project and plans for the way forward.

The webinar will be held on **Thursday, November 14th at 8:00 a.m. Eastern Standard Time (UTC-5) / 14:00 Central European Time (UTC+1)**. The session will last approximately 1 hour. The event will be hosted by the US National Renewable Energy Laboratory (NREL). The webinar presentation will be followed by an interactive question and answer session with the audience.

The speaker for this event:

- **Kristin Myskja** | Assistant Director-General | Ministry of Petroleum and Energy, Norway





Norwegian Ministry
of Petroleum and Energy

Thank you

