



Developing Offshore Wind



Science Meets Industry 10.11.21

Developing Offshore Wind

1. Why explore offshore wind
2. BKK, Lyse and Shell consortium
3. Developing plans
4. Research – how and what?



About

8,7 TWh

Yearly hydropower
production

1355

employees

259 862

Grid customers

Electrification

Transport, construction,
buildings

BKK Spring

Hydrogen



Production,
innovation,
entrepreneur
and venture



Grid
Infrastructure

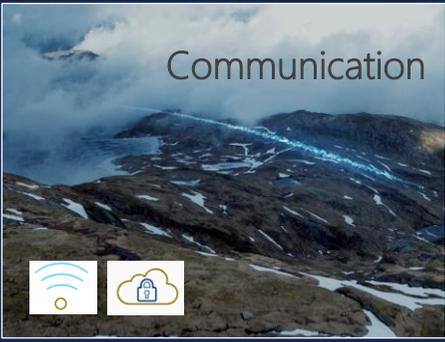
Through innovation - Green solutions for Norway and the World

DC Charging

- Nordens tredje største hurtigladeoperatør
- > 350.000 registreringer til kunder
- > 120 operative ladestasjoner
- Over 400 hurtigladere i Sør-Norge
- Installerer 200 kW ladere



Communication



Offshore Wind



Solar Panels



Solar Panel
- Roof installation BKK

Mobile Energy



Aurora Energy



Sustainable construction



Power Company



We create a sustainable future

Renewable
Electric
Digital

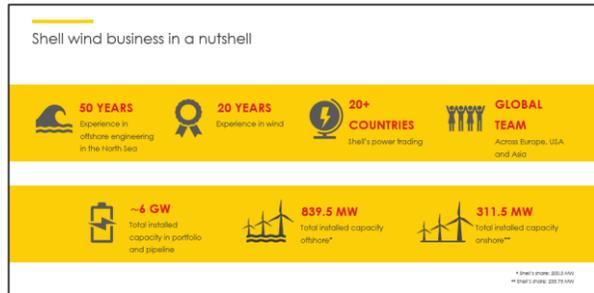
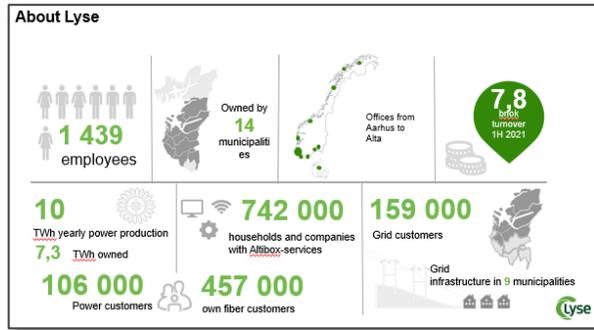


Investigating offshore wind





Long term alliance for the green transition offshore



Long term alliance for the green transition offshore

Utsira Nord and Sørlige Nordsjø 2

- **June 2020:** The Norwegian government announced the opening of two areas for offshore wind development: Utsira Nord and Sørlige Nordsjø II (SNII).
- **Aug 2021:** The Norwegian government received feedback on process for UN and SNII
- **Present:** Awaiting clarifications on the process from the new Government



Utsira Nord	Floating (250m depth)	<u>1,5 GW</u> (500 x 3)
SNS II	Bottom-fixed (60-70m depth)	<u>3 GW</u> (2-3 projects)

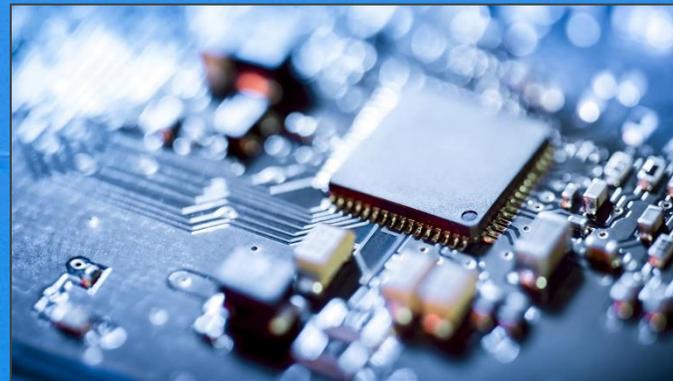
Opportunities through offshore wind development

Value Chain



- Local content
- Export potential
- Transition of O&G

Technology



- Agnostic/ neutral
- Innovation
- Standardization

Environment



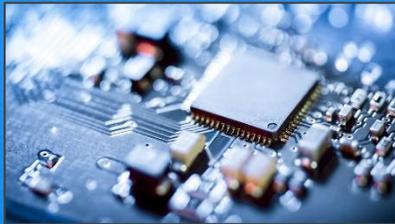
- Fact
- Sustainable
- Measures

Opportunities through offshore wind development

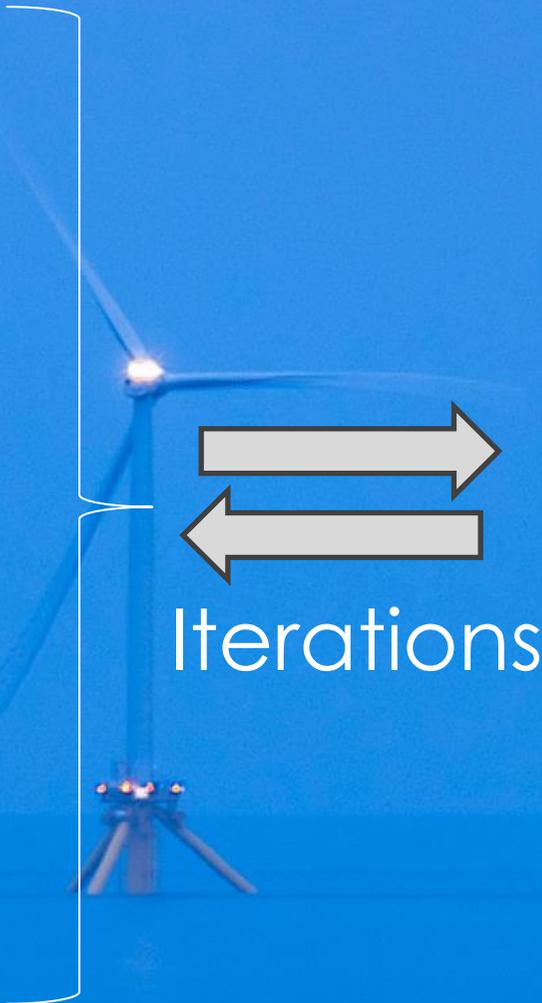
Value Chain



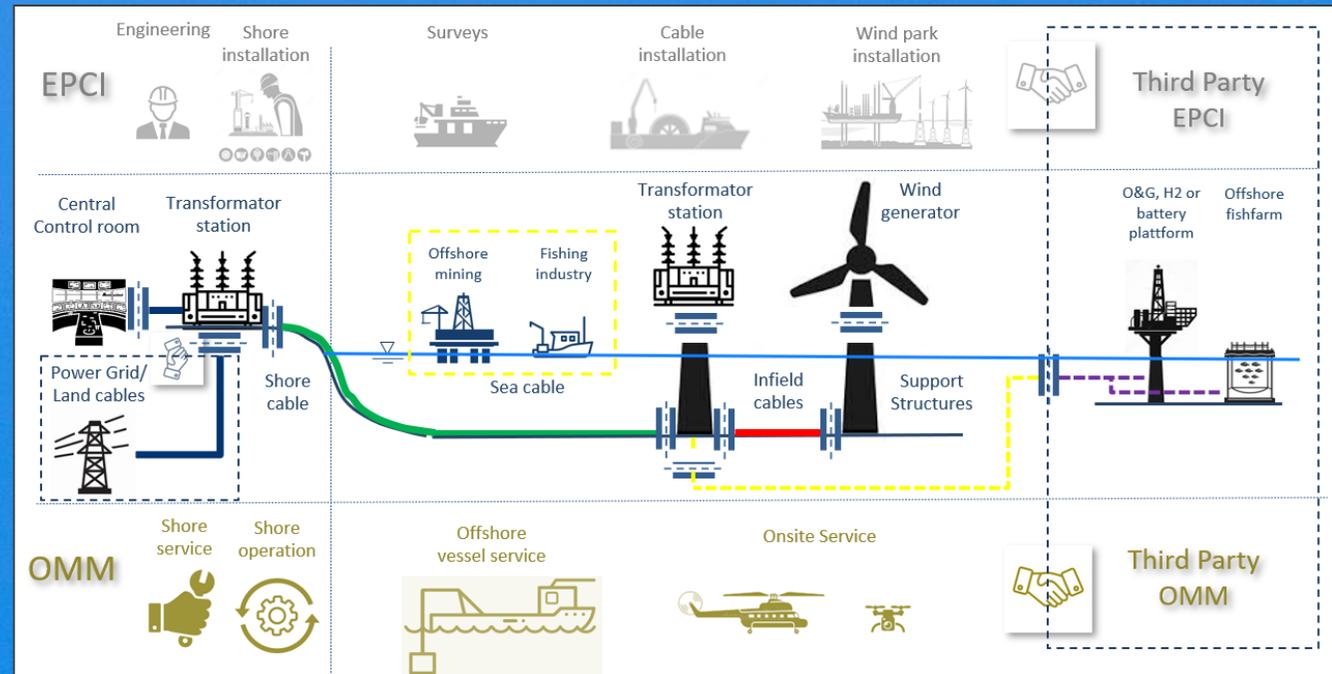
Technology



Environment



Control of interfaces



Industry meets Science

- **Research program:**
Governmental and industry partner funded joint offshore wind research program for UN and SN2 developments?



- **Challenge:** Can Science and Industry together make shorter research sprints in order to innovate research?

Research topics:

Hybrid solution/
bidding zones

**Floater
Technology**

Co-existence

Environmental research

Bottom fixed > 60m

New vessel
designs

**Grid
infrastructure**

WD

**MET centre, UiB,
UiS**

