

# Experience and potential for floating wind farms

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Eera Deepwind 17.01.2024

## AGENDA

- Floating wind technology toolbox
- Key regions for floating wind
- Hywind Tampen
- Transfer of learnings from the Hywind journey to the industry



# Floating wind – concept & technology development



2009



Hywind Demo  
2.3MW

2017



Hywind Scotland  
6MW

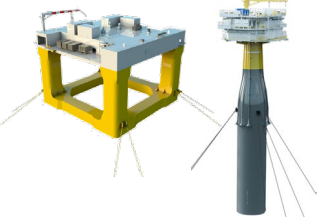
2022



Hywind Tampen  
8.6MW



Wind semi



Floating substation



Hywind XL



Wind Semi XL



Subsea Substation

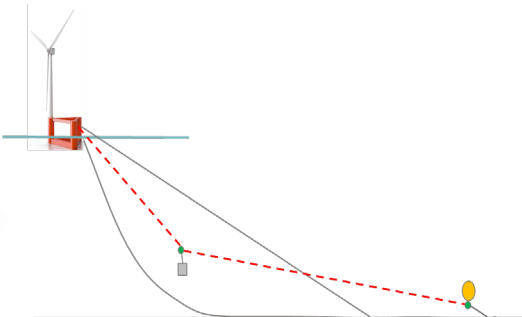
2022



Shared anchors

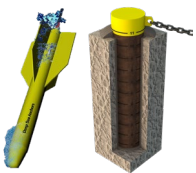


ILT

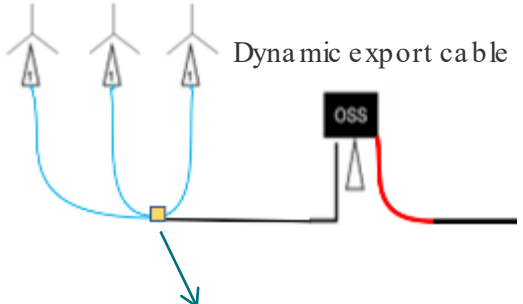


Fibre hybrid mooring

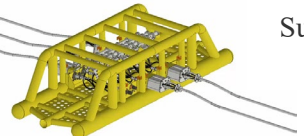
Improved fibre mooring



Rock anchors & innovative anchors



Dynamic export cable



Subsea Junction Box

# Pre Hywind Scotland

*Goal: allow installation of tower without a deep-water assembly site (fjord)*

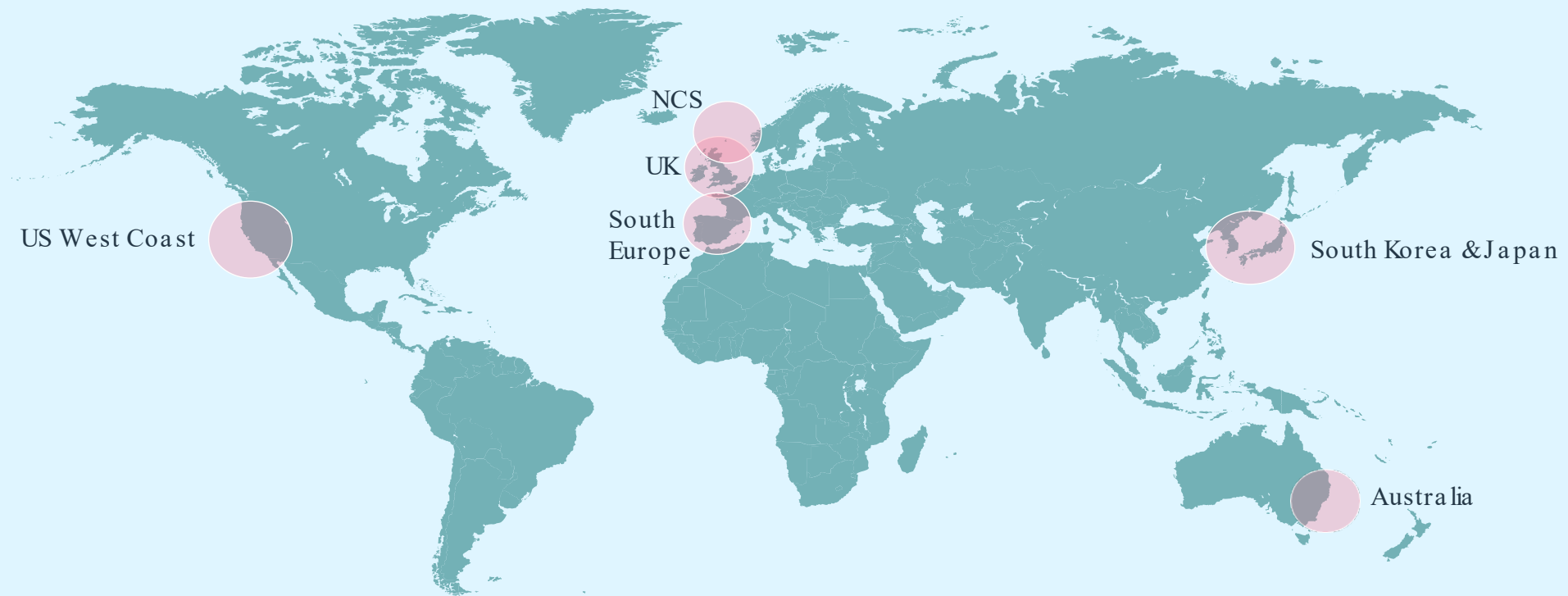




# Turbine assembly @ quayside



# Key regions for Floating Offshore Wind





## Hywind Tampen

Tow from Stord (dry-dock) to  
Dommersnes (deep water site)  
April 2021





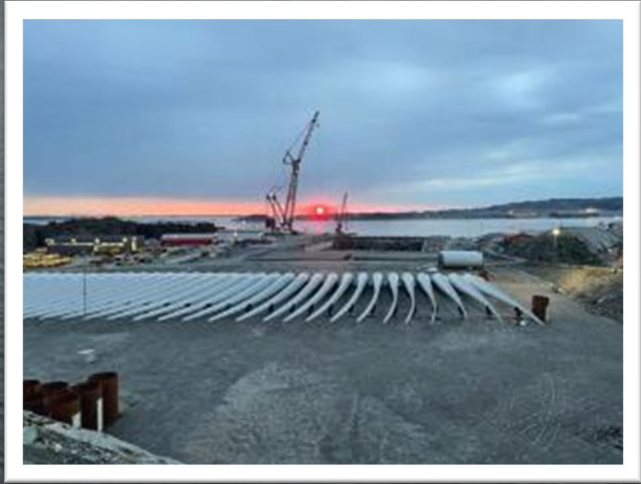
# Hywind Tampen

Deep water site – Dommersnes  
April 2022





Hywind Tampen  
Assembly site – Gulen  
May 2022





## Hywind Tampen

1st Hywind installed @ Tampen field  
June 2022





## Hywind Tampen

Cable installation, commissioning



# Learnings from Hywind Tampen

Going from demo → commercial scale, requires more efficient logistics

Fabrication



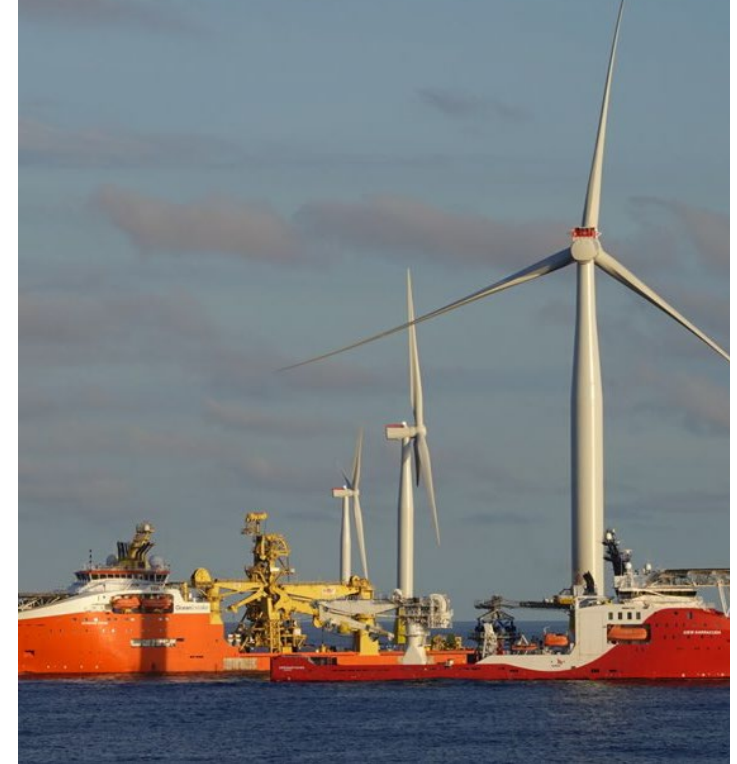
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Turbine integration



+

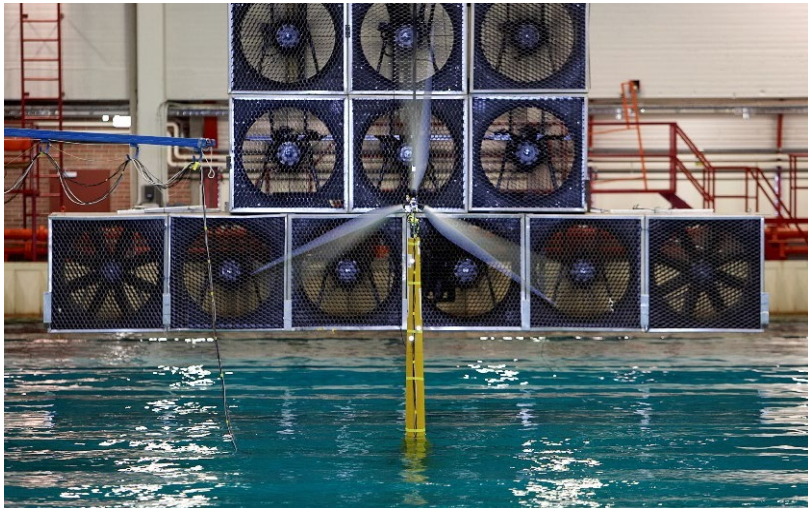
Commissioning



Floating wind factory, a one-stop shop



# Learnings from the 'Hywind journey'



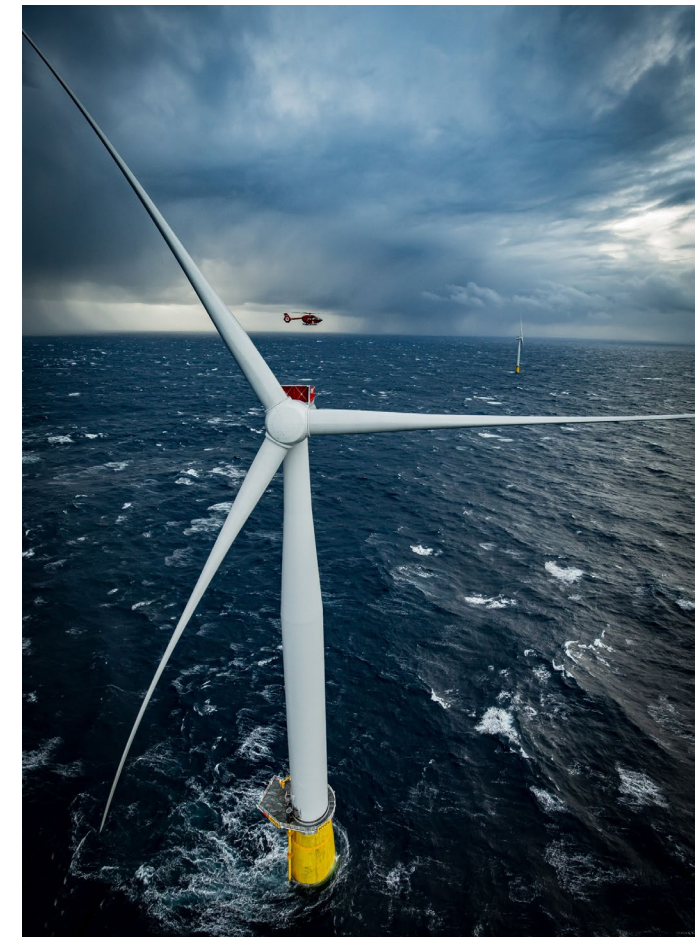
## Analysis tools, Floater controller,

- Developed aero-hydro analysis tools & controller, now state of the art
- Validations (model tests & full scale), discovered new dynamic phenomena



## Project execution

- Windfarms require factory logistics
- Minimize commissioning offshore
- Large number of contractors involved



## Operations

- Capabilities of SOV (DP, w2w)
- Helicopter access for routine visits



## Experience and potential for floating wind farms

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