

The Nordic Advantage – Leveraging Opportunities for Increased Sustainability and Value Creation



A smart energy system for the whole region

*"The Nordic countries can act as a visionary trendsetter by **building a smart energy system into our region**. This will enhance welfare, as working more closely together will ensure the best and most efficient solutions.*

*"The energy transition is already underway – if the Nordic countries do not participate to the fullest, **the jobs will be created elsewhere**"*





Nordic Energy Co-operation: Strong today – stronger tomorrow

BY JORMA OLLILA

Key recommendations on energy research

- Multiply the effect of current Nordic research activities through mapping and streamlining. Involve the Baltic states.
- Use Mission Innovation to create and reinforce Nordic positions of strength
- Set up a Nordic PhD Programme in energy and transform testbeds into new position of strength
- Promote Nordic positions of strength by creating a EUR 67 Million Nordic Research and demonstration programme



Nordic Energy Co-operation: Strong today – stronger tomorrow

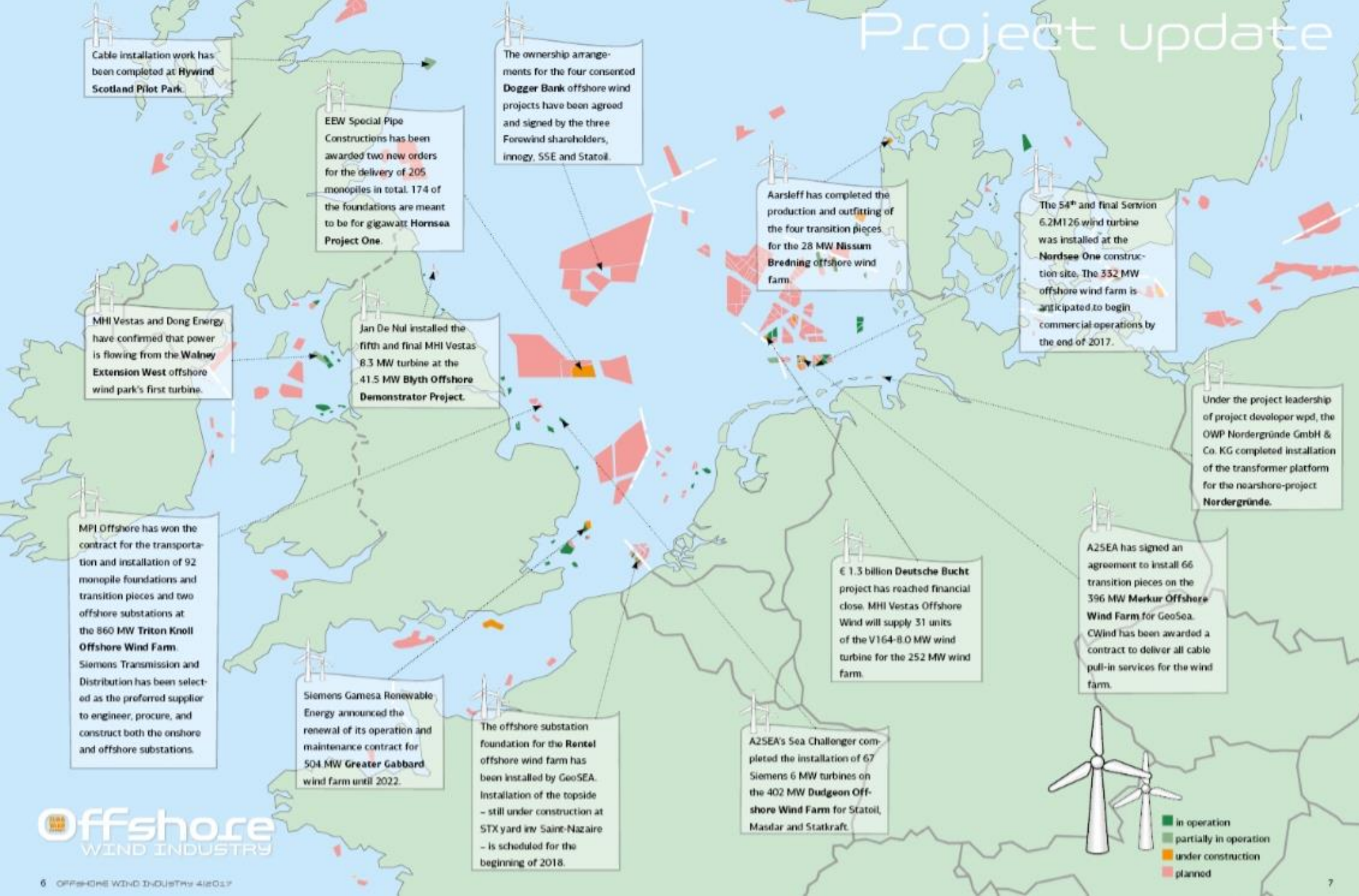
BY JORMA OLLILA

The Nordic potential to play a global role

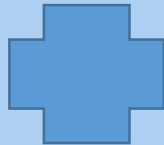
*"There is enormous potential here. The Nordic Region is one of the **12 largest economy in the world.**"*

*"Current research activities, at both the Nordic and national level, should be mapped, discussed and aligned within the planned new strategy for Nordic Energy Research. **According to the IEA, the Nordic countries spent approximately 1 EUR billion on energy research in 2014.**"*

Project update



Sharing markets and competencies



Hans Jørgen Koch, Nordic Energy Research
The Future of Energy – Bridging the Gap, Arendalsuka 2018



Synergies:

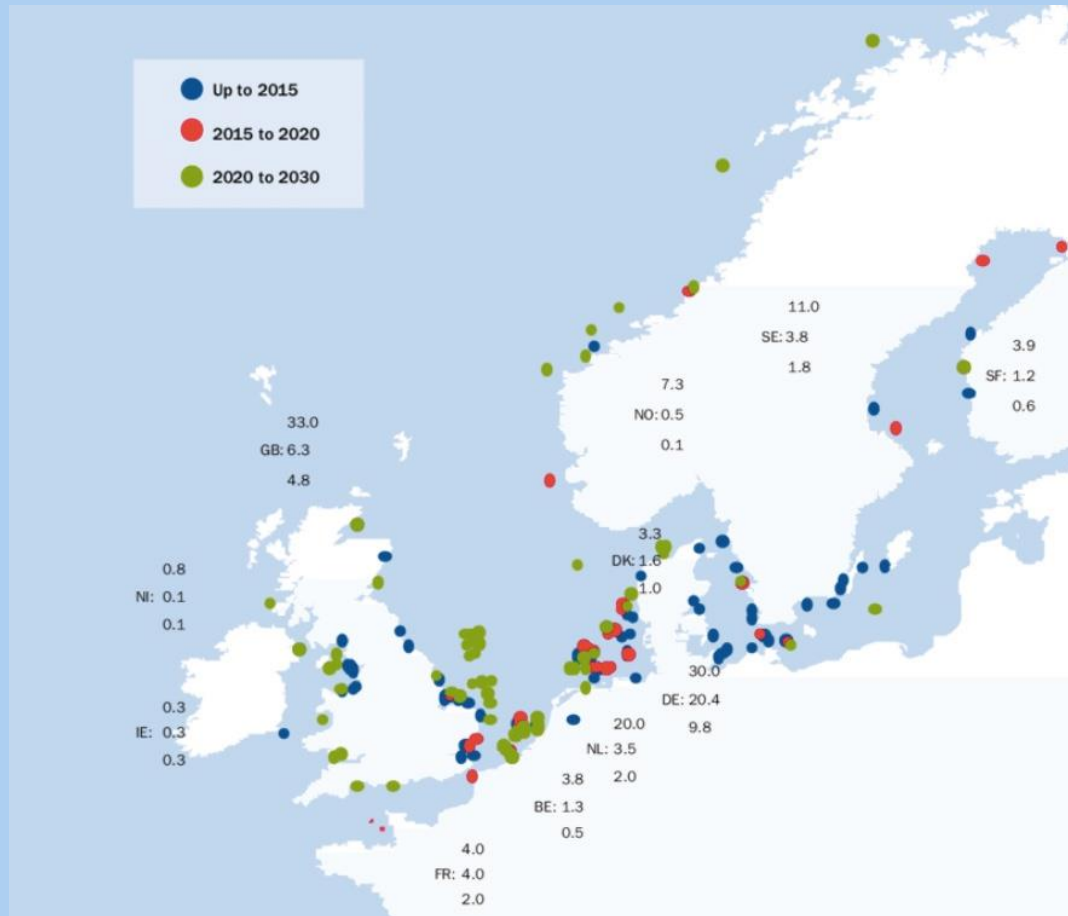
- Transferable offshore expertise
 - Offshore robustness
 - Construction and maintenance
 - Floating structures (Hywind)
 - Horizontal drilling > geothermal energy
- Re-use decommissioned structures
- Learning by doing > Bigger and cheaper windmills

= Meeting/surpassing EU Renewable Energy Targets



Expectations in 2009

- Reality in 2018

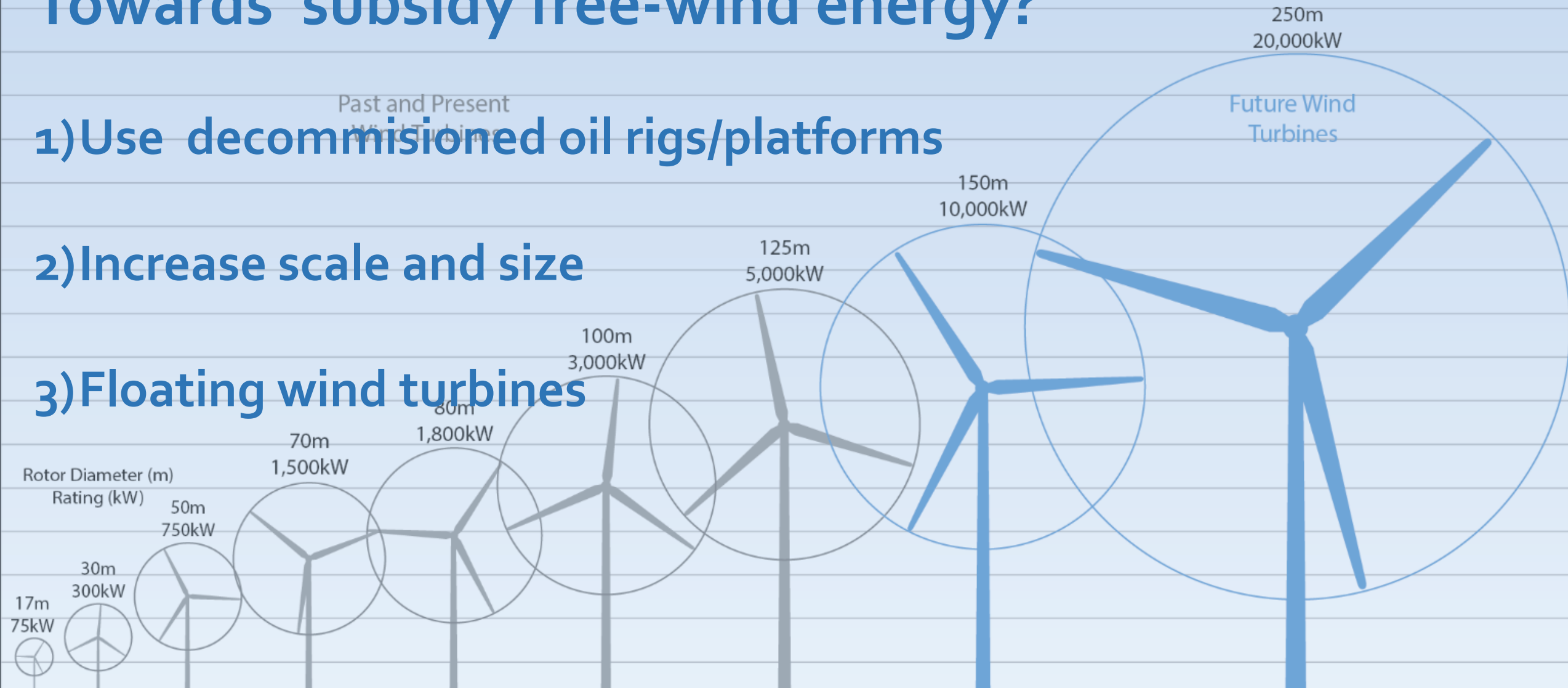


Source: Hulle, Uhlen et. Al 2009



Towards subsidy free-wind energy?

- 1) Use decommissioned oil rigs/platforms
- 2) Increase scale and size
- 3) Floating wind turbines



Source: My Florida Home Energy



Challenges ahead:

- Increase research efforts in low-carbon energy > Mission Innovation and Ollila-report
- Create a Nordic/Baltic home market – industrial base and jobs
- Avoid “subsidy-hunting”
- Accomodate new renewables in the Grid
- Governments role in interconnectors
- Ensure that policies and incentives promote the best wind resources

