

Where next with offshore wind power

By Morten Holmager, Manager Renewables



Offshore Center Danmark

Agenda

- Offshore Center Danmark
- Political targets
- POWER cluster countries
- How are POWER cluster benefiting other regions
- Trends and challenges

Offshore Center Danmark

The National Innovation Centre for the Danish offshore industry



Oil and Gas



Offshore Wind



Offshore Maritime



Wave Energy



- Membership based business support organization – currently 220 membership companies and institutions
- Private and public funding (50%/50%)

- Network activities
- Knowledge sharing
- Development projects
- Courses
- Internationalisation



Political targets

Political targets

Renewable energy in EU to increase from 8.6% in 2005 to 20% in 2020 *

2020: 40 GW offshore wind

2030: 150 GW offshore wind

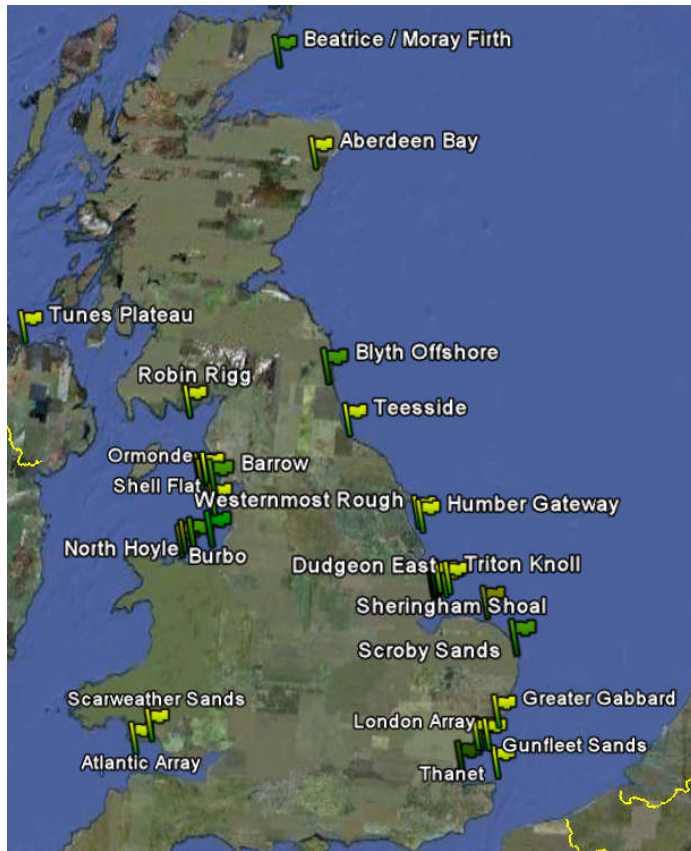


*) 2009 EU Renewable Energy Directive

www.power-cluster.net

POWER cluster countries

United Kingdom



www.offshorecenter.dk/offshorewindfarms

Stats:

- Online: 1,041 MW
- Under construction: 1,452 MW
- Planned: 40,000 MW

The Netherlands



www.offshorecenter.dk/offshorewindfarms

Stats:

- Online: 250 MW
- Planned: 4,800 MW

Germany

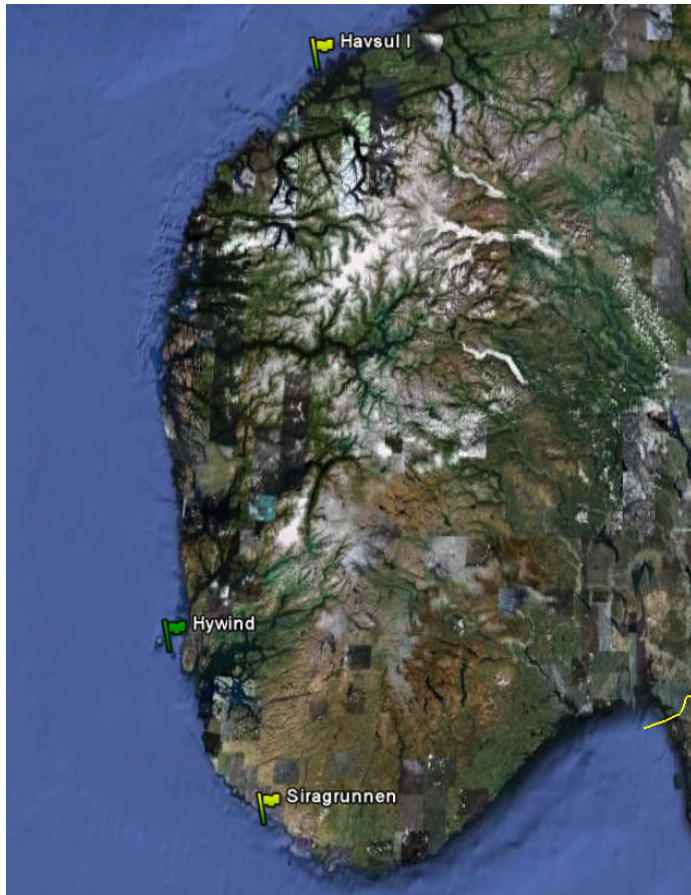


www.offshorecenter.dk/offshorewindfarms

Stats:

- Online: 72 MW
- Under construction: 930 MW
- Planned: 23,700 MW

Norway

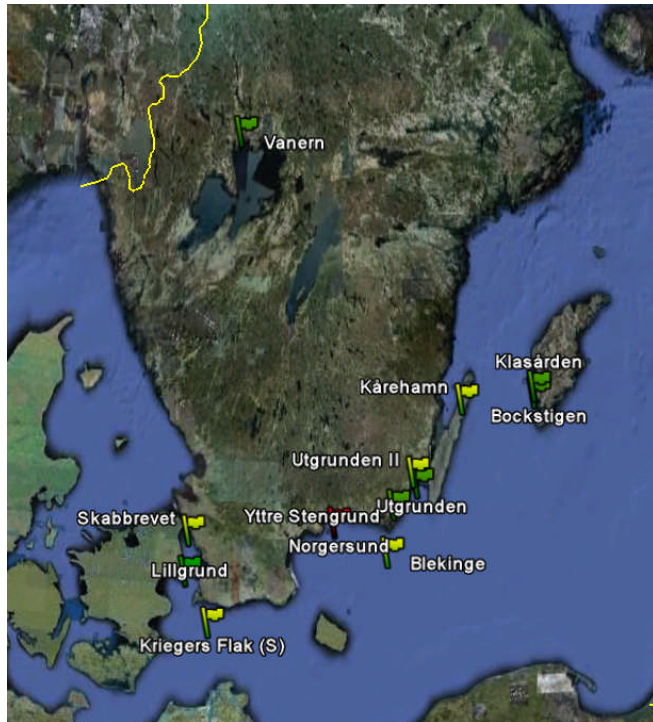


www.offshorecenter.dk/offshorewindfarms

Stats:

- Online: 2 MW
- Planned: 11,300 MW

Sweden

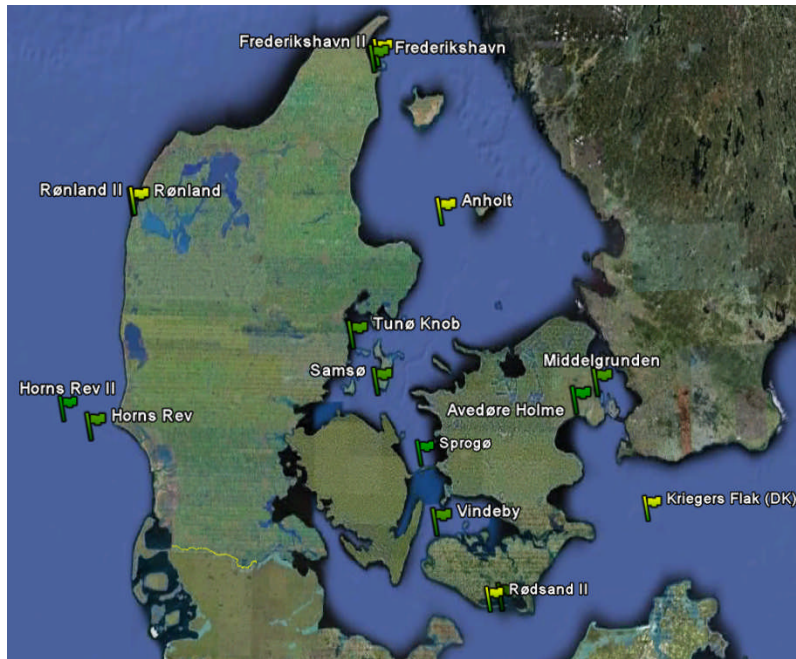


www.offshorecenter.dk/offshorewindfarms

Stats:

- Current: 164 MW
- Planned: 11,000 MW

Denmark



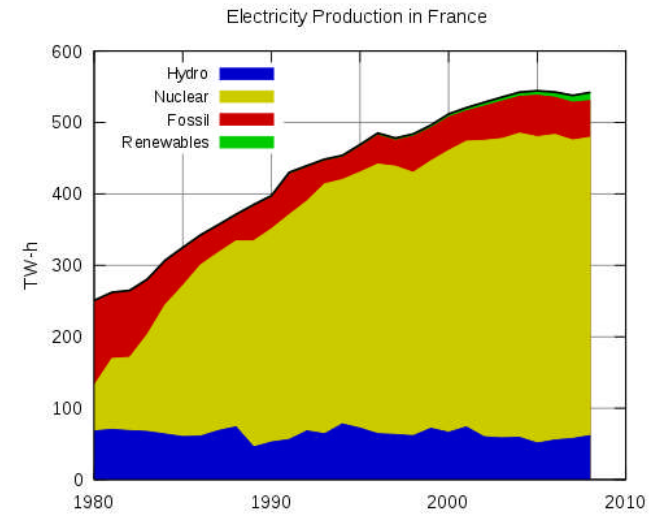
www.offshorecenter.dk/offshorewindfarms

Stats:

- Online: 665 MW
- Under construction: 607 MW

How are POWER cluster benefiting other regions

How are POWER cluster benefiting other regions



How are POWER cluster benefiting other regions



Environment minister Jean-Louis Borloo and President Nicolas Sarkozy

“6 GW offshore wind in by 2020”

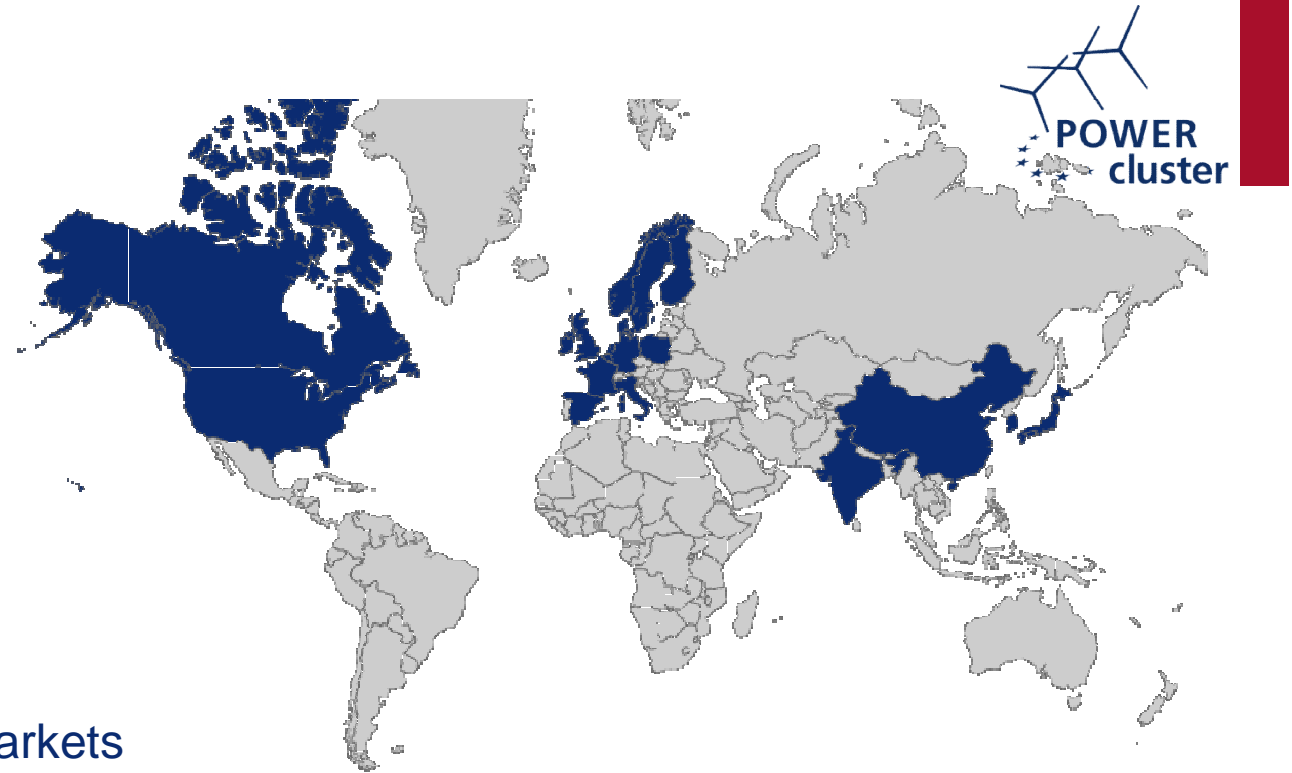
- Social acceptance
- Business
- Skills



www.offshorecenter.dk/B2B

Trends and challenges

Future development



Trends

- New markets
- Bigger, deeper, further offshore
- Development of transnational grid systems
- Cost reduction

Challenges

- Competition with other energy sectors
- Shortage of equipment
- Politics





For further information please refer to our websites

www.power-cluster.net

www.offshorecenter.dk



www.power-cluster.net

The Northern European
competence network
for offshore wind energy