



A Danish energy island?

Common understanding among parties supporting the Danish government

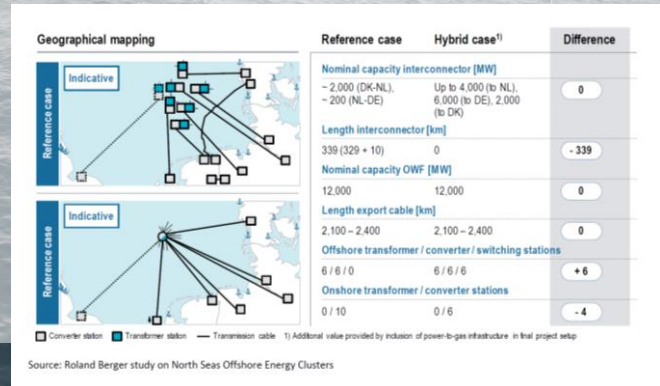
”test the option for Denmark to build the first energy island with minimum 10 GW by 2030”

Building on previous work

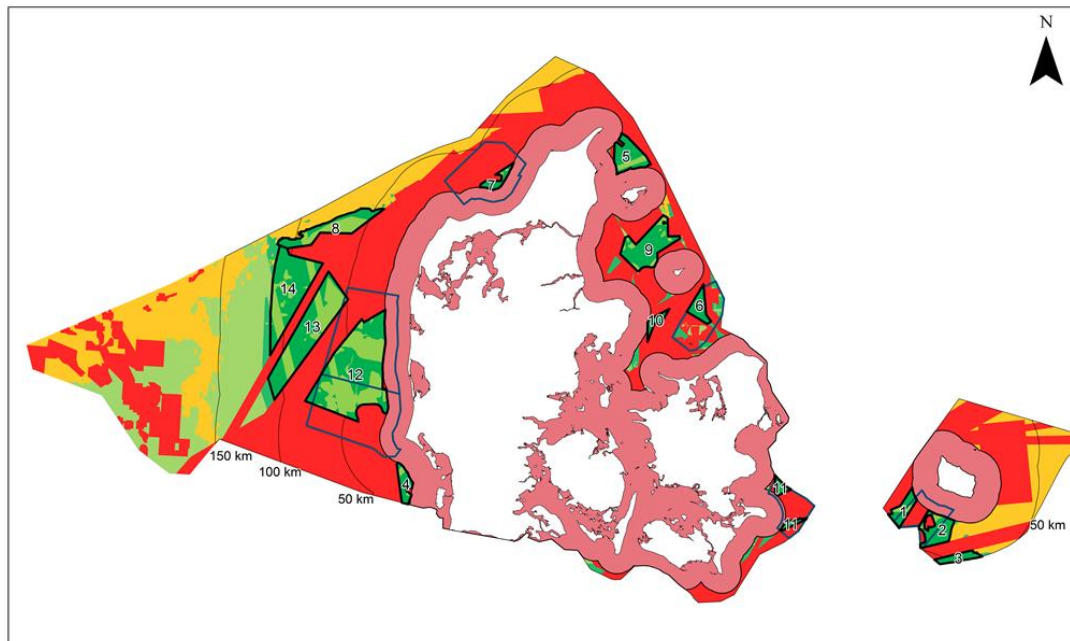
North Sea Wind Power Hub



Roland Berger - 2019







Total potential: 40 GW



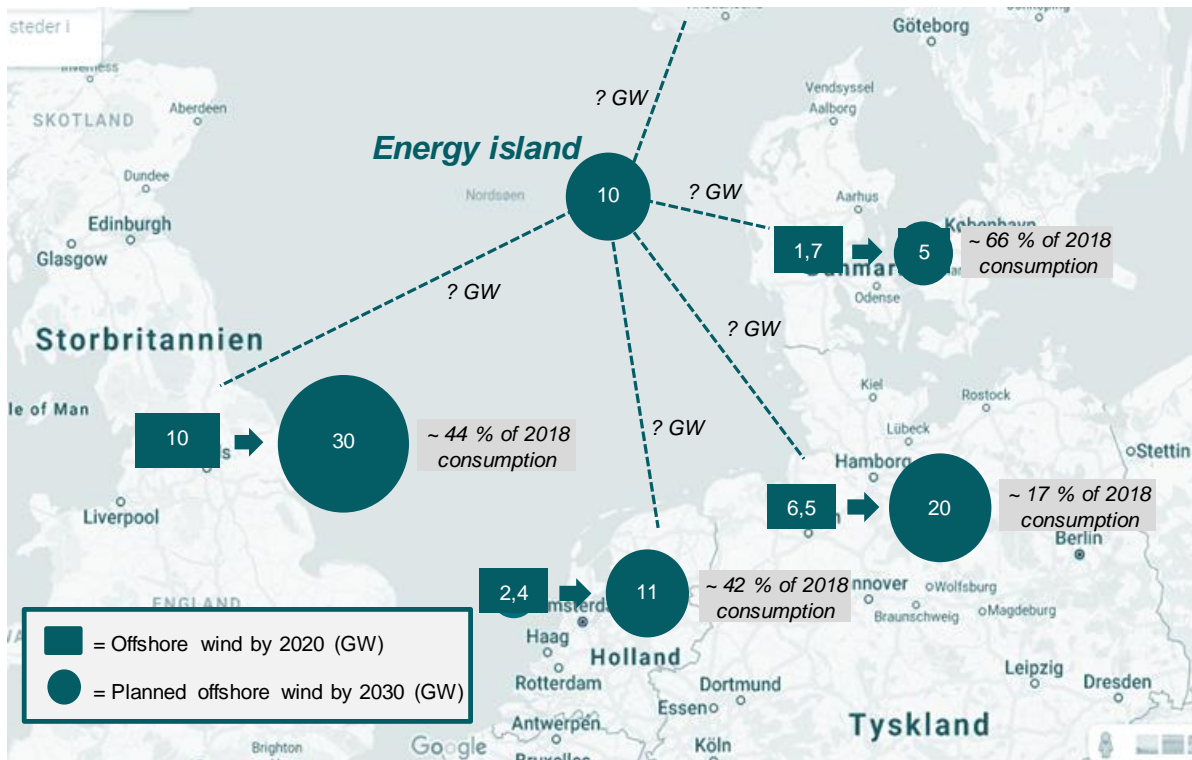
Signaturforklaring

- Ingen kendte arealinteresser, havdybde < 50 m
- Kendte arealinteresser (afvejningsområder), havdybde < 50 m
- Reservation til statslige udbud, 2011
- Udenfor bindingsområder med dybde > 50 m
- Bindingssområde
- Kystzone

How do we build an "island"?

	Caisson Island	Sand Island	Platform	Gravity Based Structure
				
Water depth limitations	< 25m	<40m	<45m	larger 100m
Construction time	3-4	6-8	3-4	3-4
Size limitations	6 GW	>36 GW	2GW	Units up to 6 GW (tbc)
Phasing & modularity	No	Not for hub	Yes	Yes
Maturity	Middle	Middle	High	Units - High Linking - Middle
Footprint on seabed	High	High	Low	Middle
Accessibility	Limited Sheltered	Sheltered	Unsheltered	Unsheltered

Who needs the power?



Regulatory questions to academia

- Which special circumstances should be handled in an auction design for wind farms connected to a hub?
- How would a price zone with only production and export work?
- How could costs and benefits be estimated for each participating country?
- How can the electrical infrastructure be designed for modular/phased build out?
- How should wind farm sites be located in view of a modular/phased build out?