



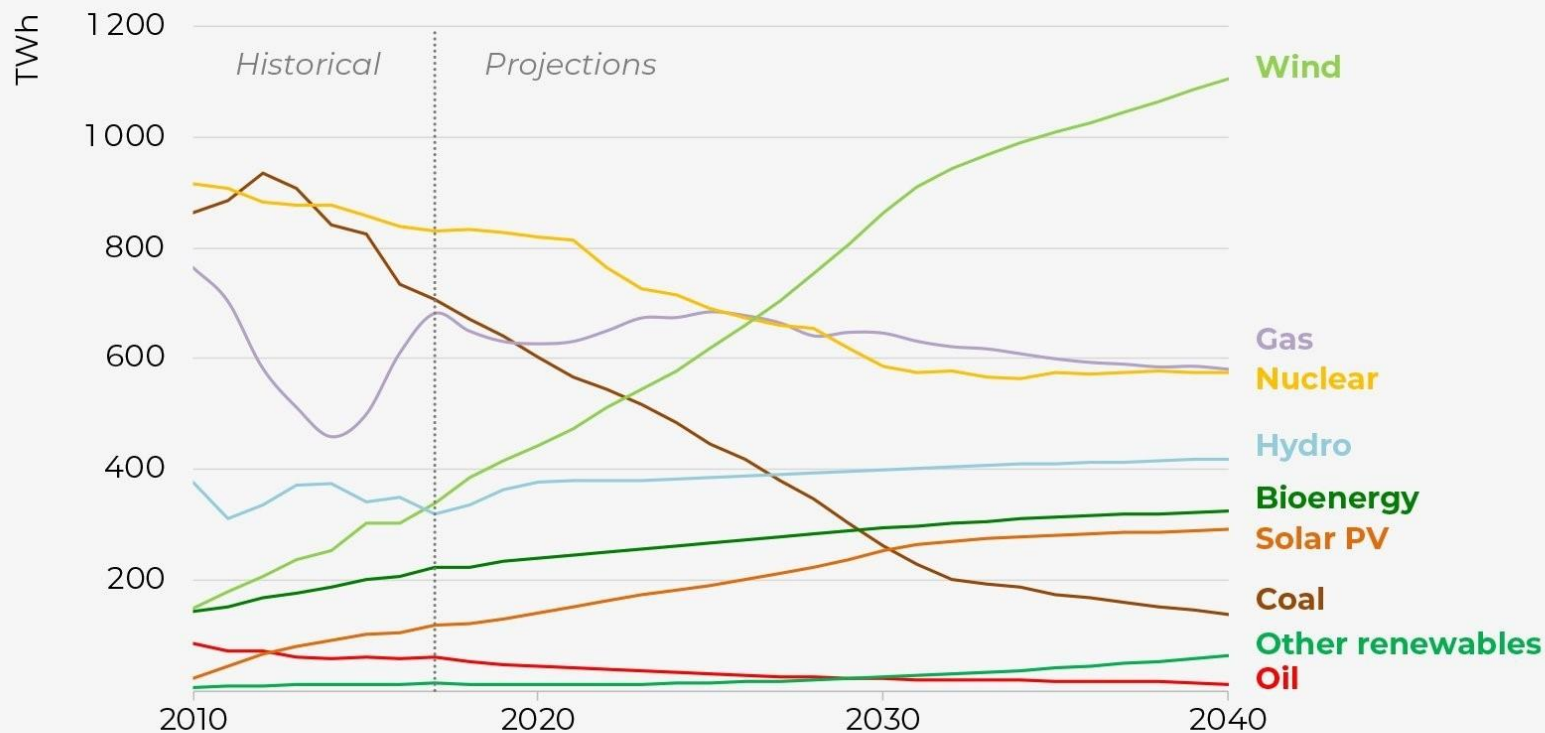
HAVVINDKONFERANSEN 2019

STRATEGIC BENEFITS OF AN EARLY MARKET ENTRY

Giles Dickson, CEO, WindEurope

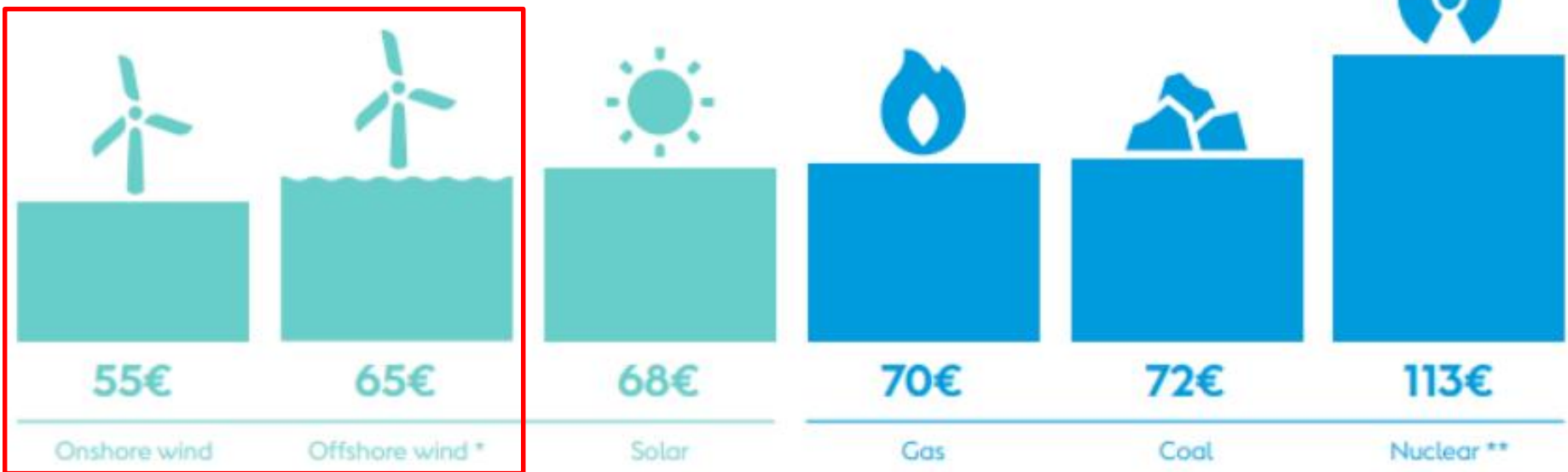
Wind the no. 1 power source in the EU by 2027

Electricity generation by source in the European Union in the NPS, 2010-2040
World Energy Outlook 2018



Wind the cheapest form of new power generation

Levelised cost of electricity/MWh



Source: Bloomberg New Finance (2016-prices), Year of FID.

Prices reflect North Western European market conditions, which express a global trend. Specific prices may vary across regions.

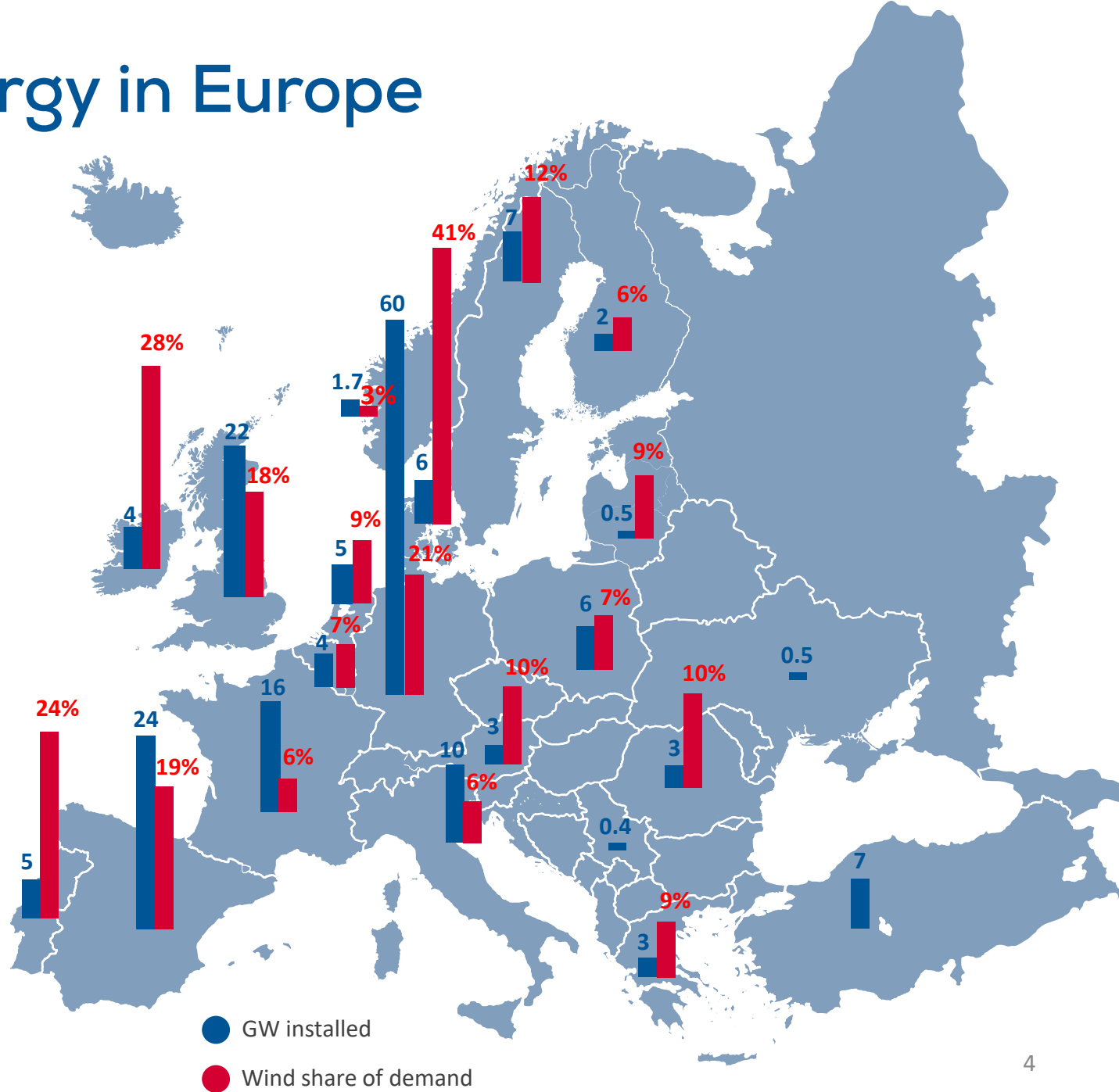
* Offshore: Hornsea 2, UK (cost including transmission) ** Nuclear: Hinkley Point, UK

Wind energy in Europe

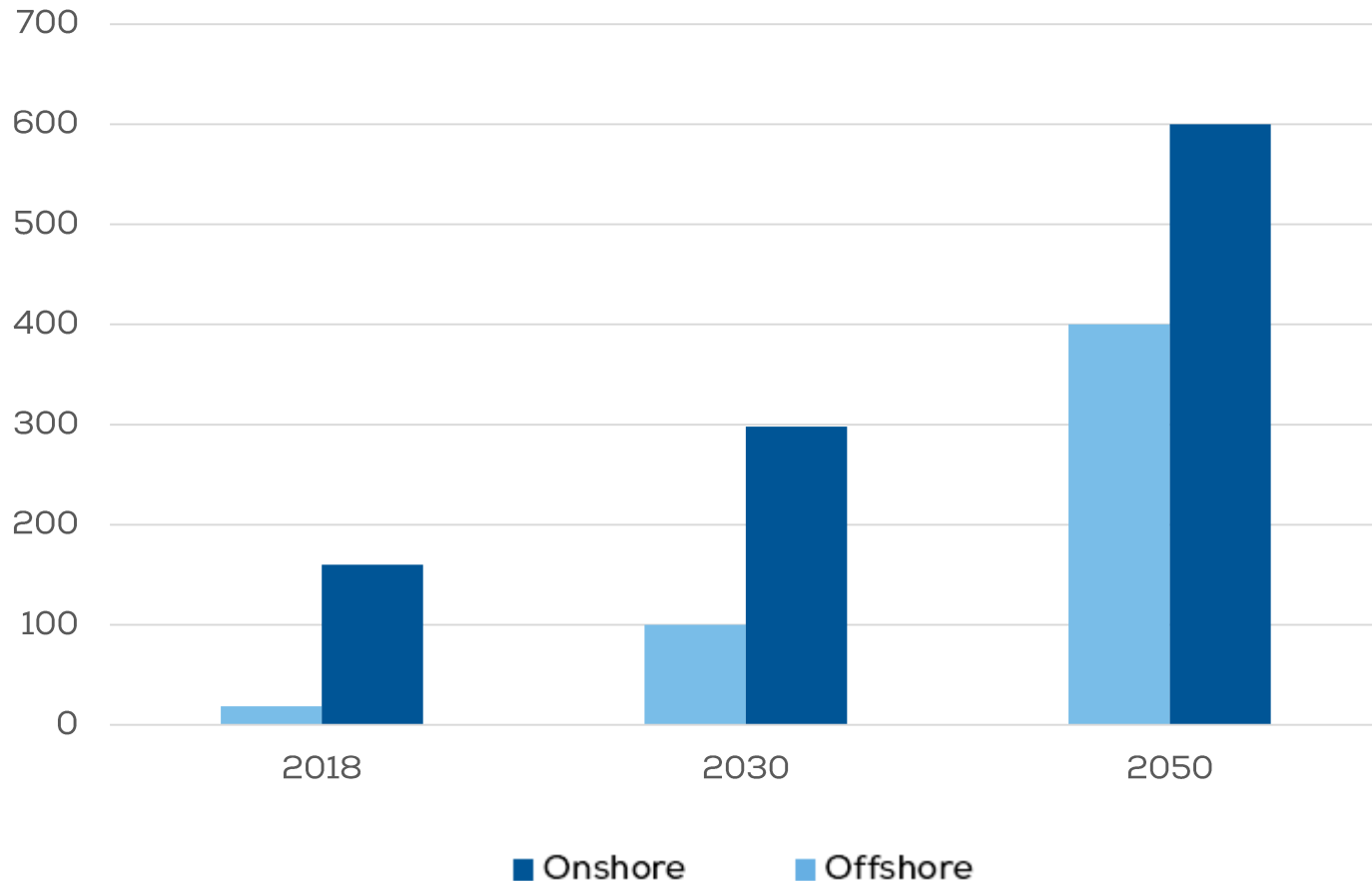
194 GW

14%

of 2018 EU
power demand



Onshore wind remains the bulk of Europe's wind capacity

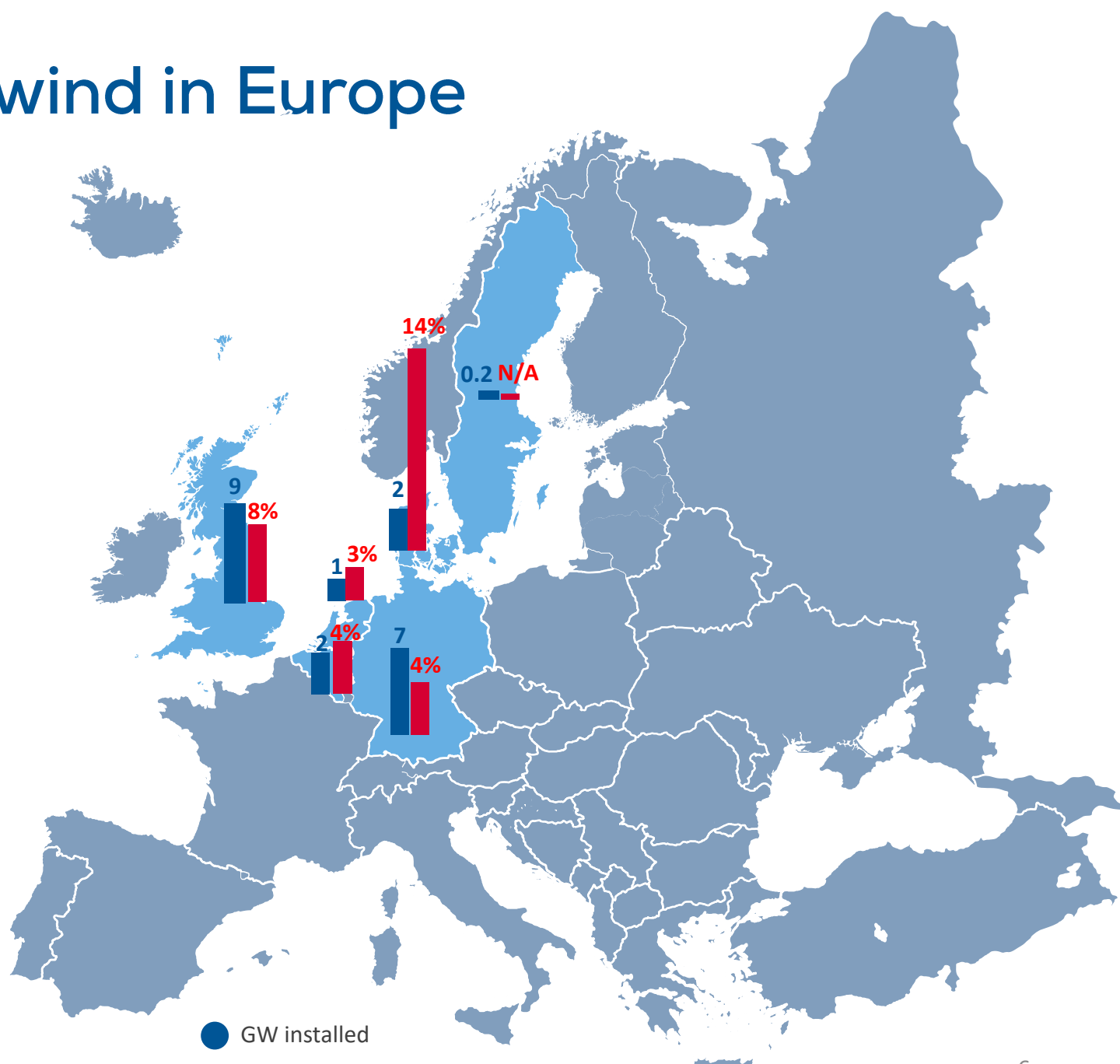


Offshore wind in Europe

20 GW

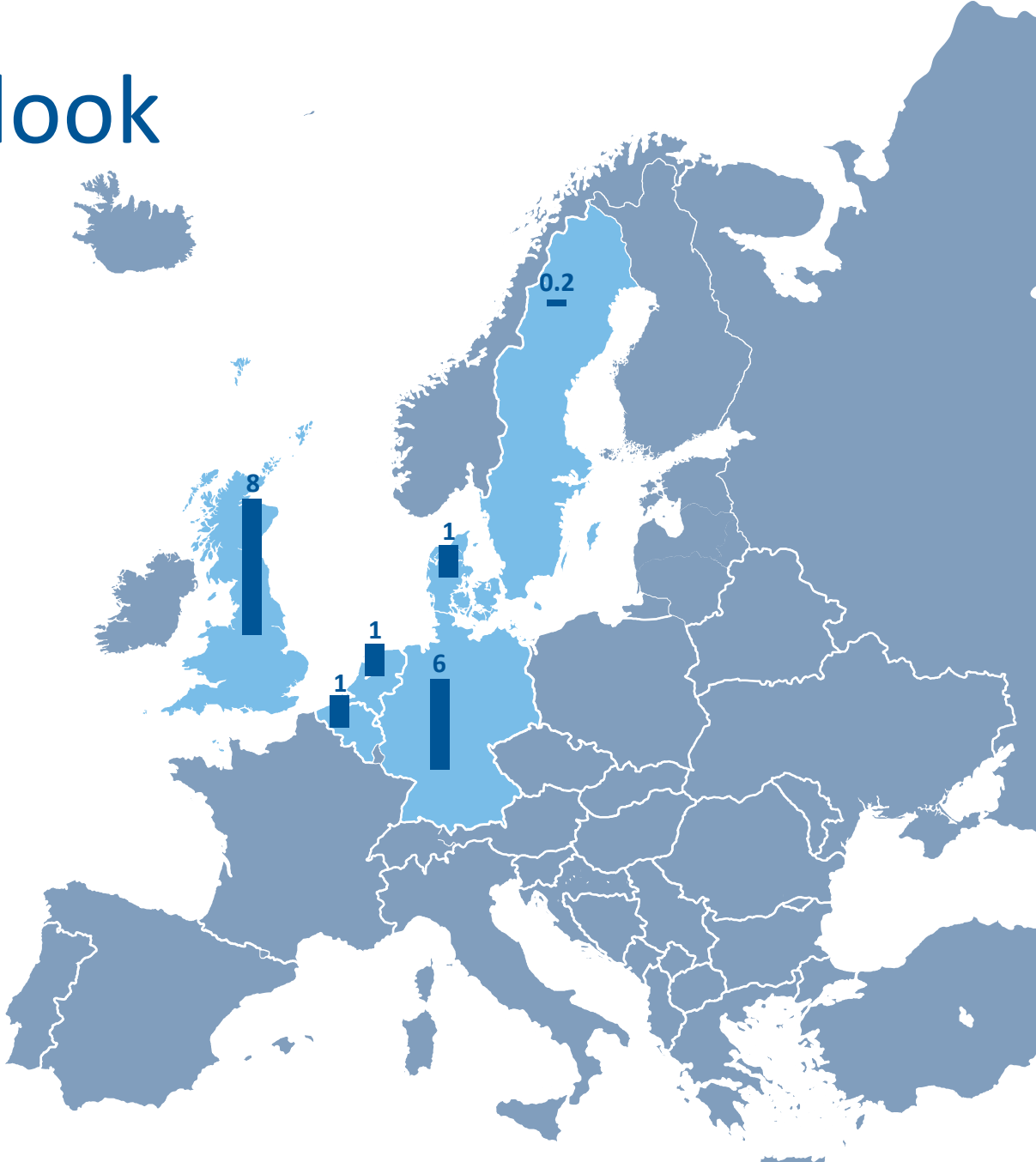
2%

of 2018 EU
power demand



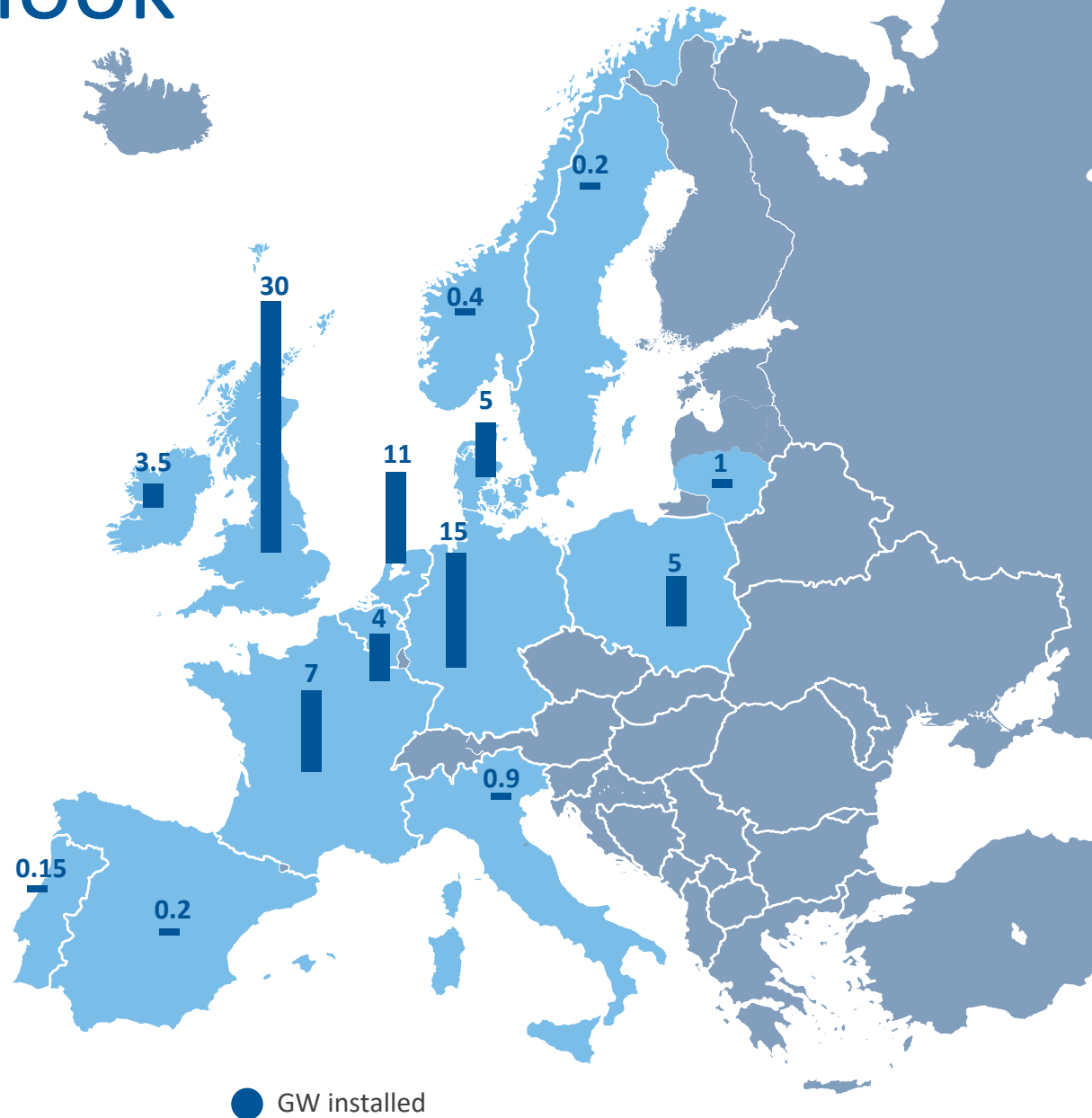
Offshore outlook

2018

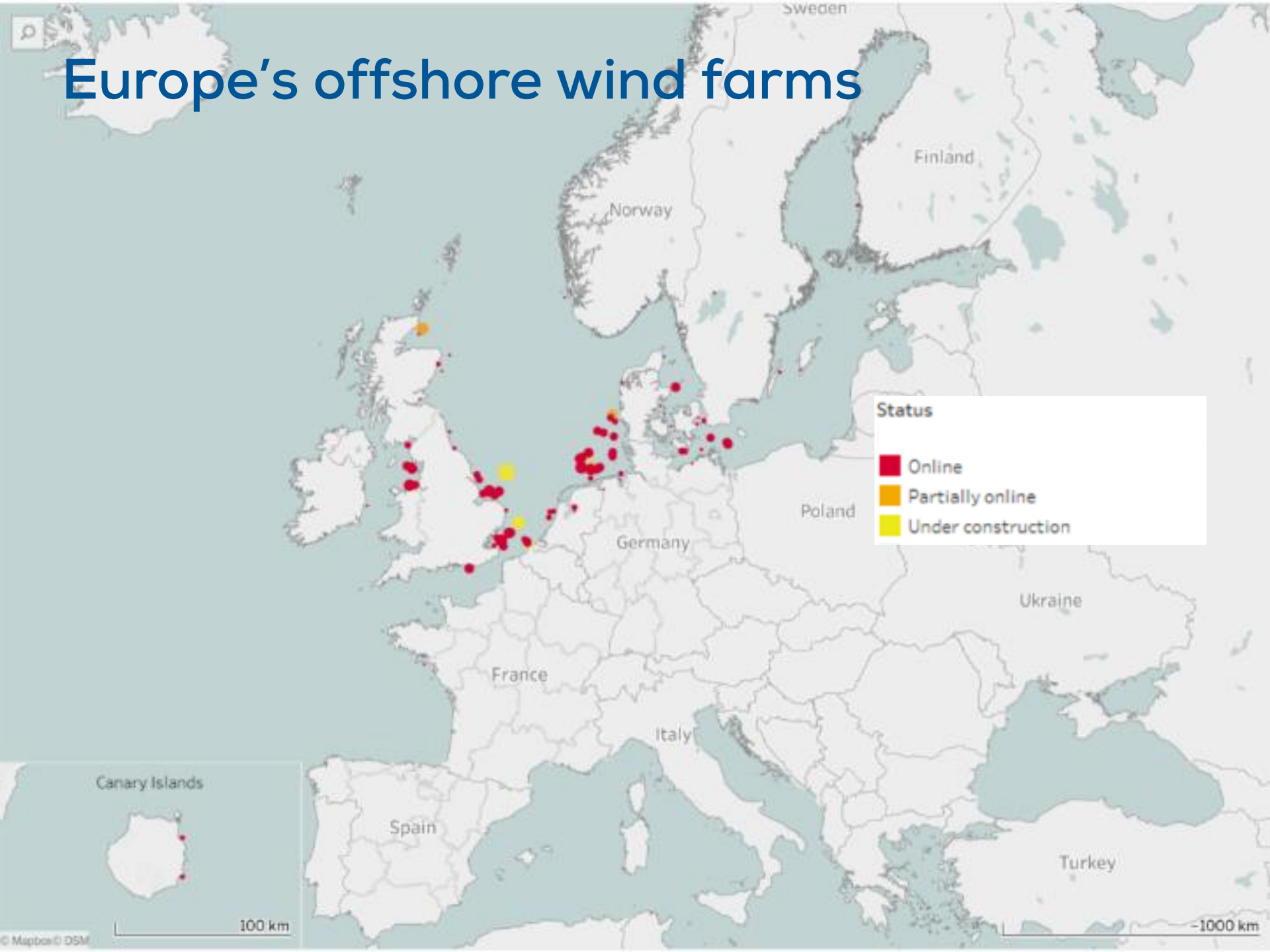


Offshore outlook

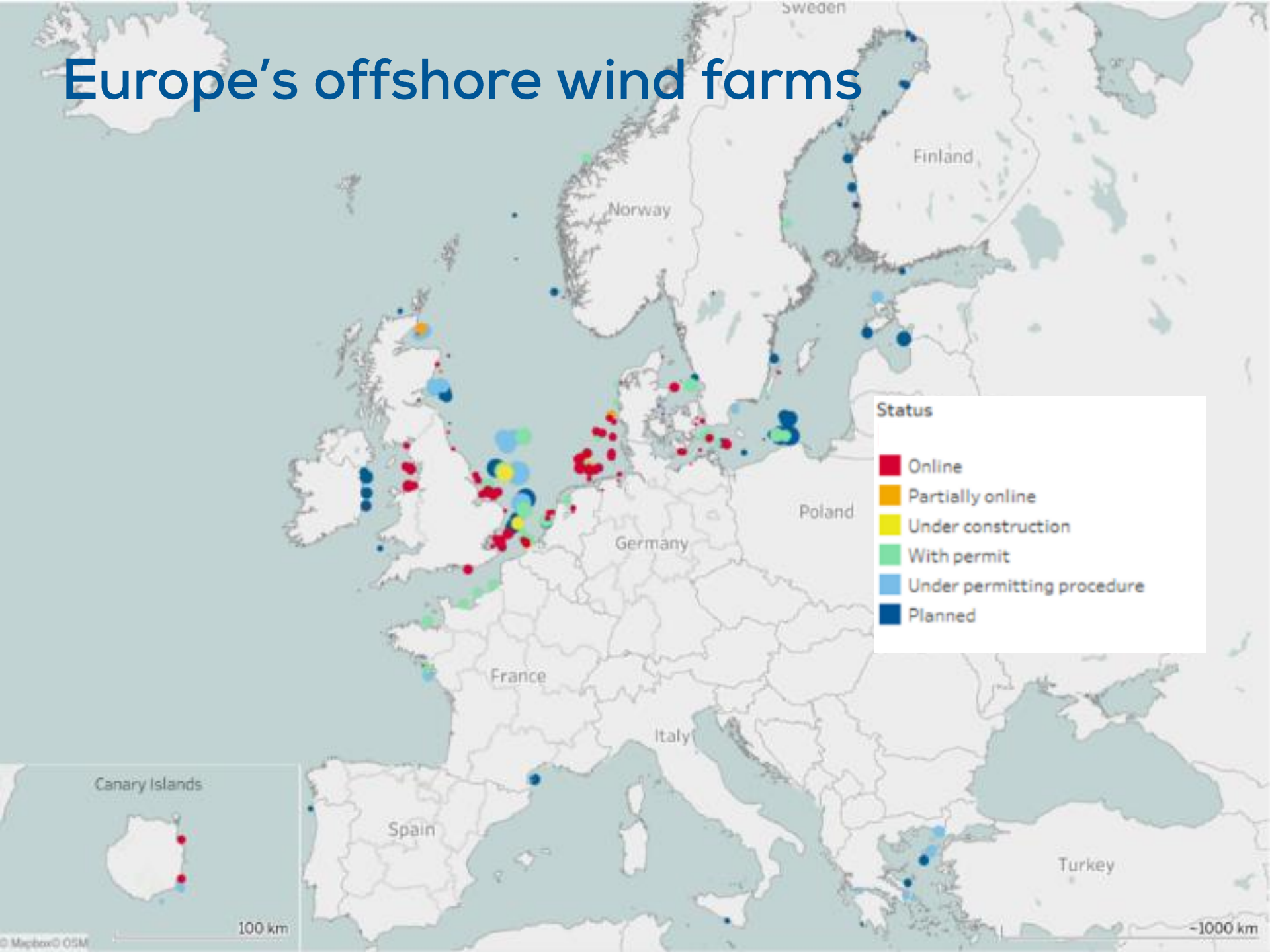
2030



Europe's offshore wind farms

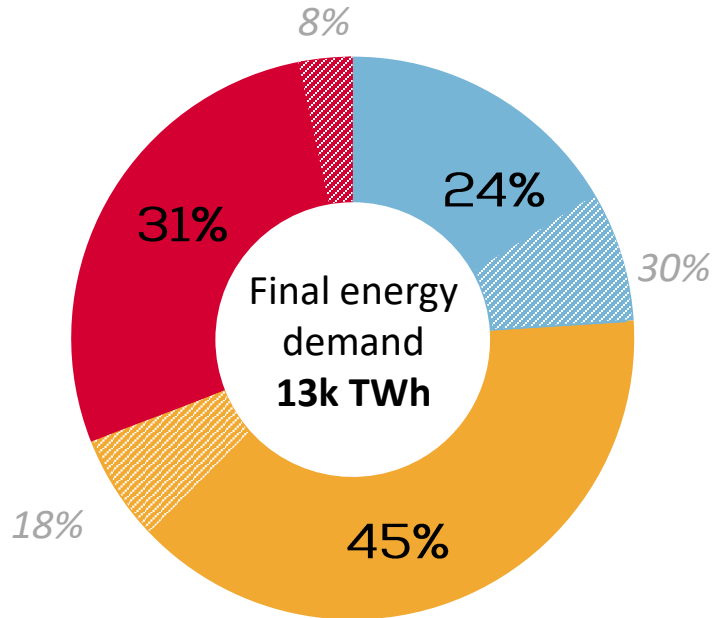


Europe's offshore wind farms

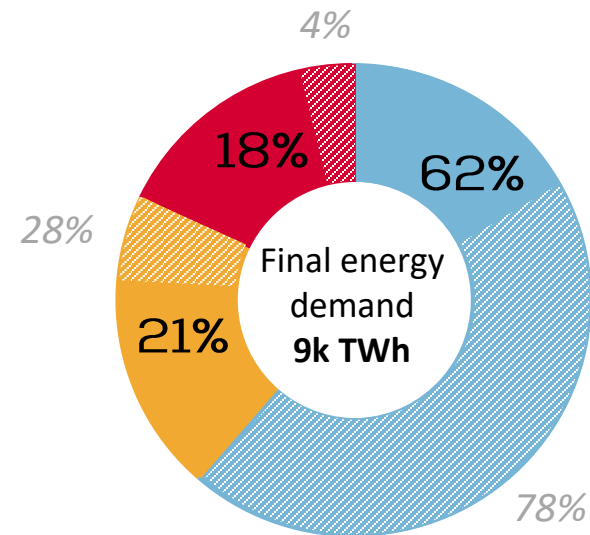


Electrification will increase demand

2018



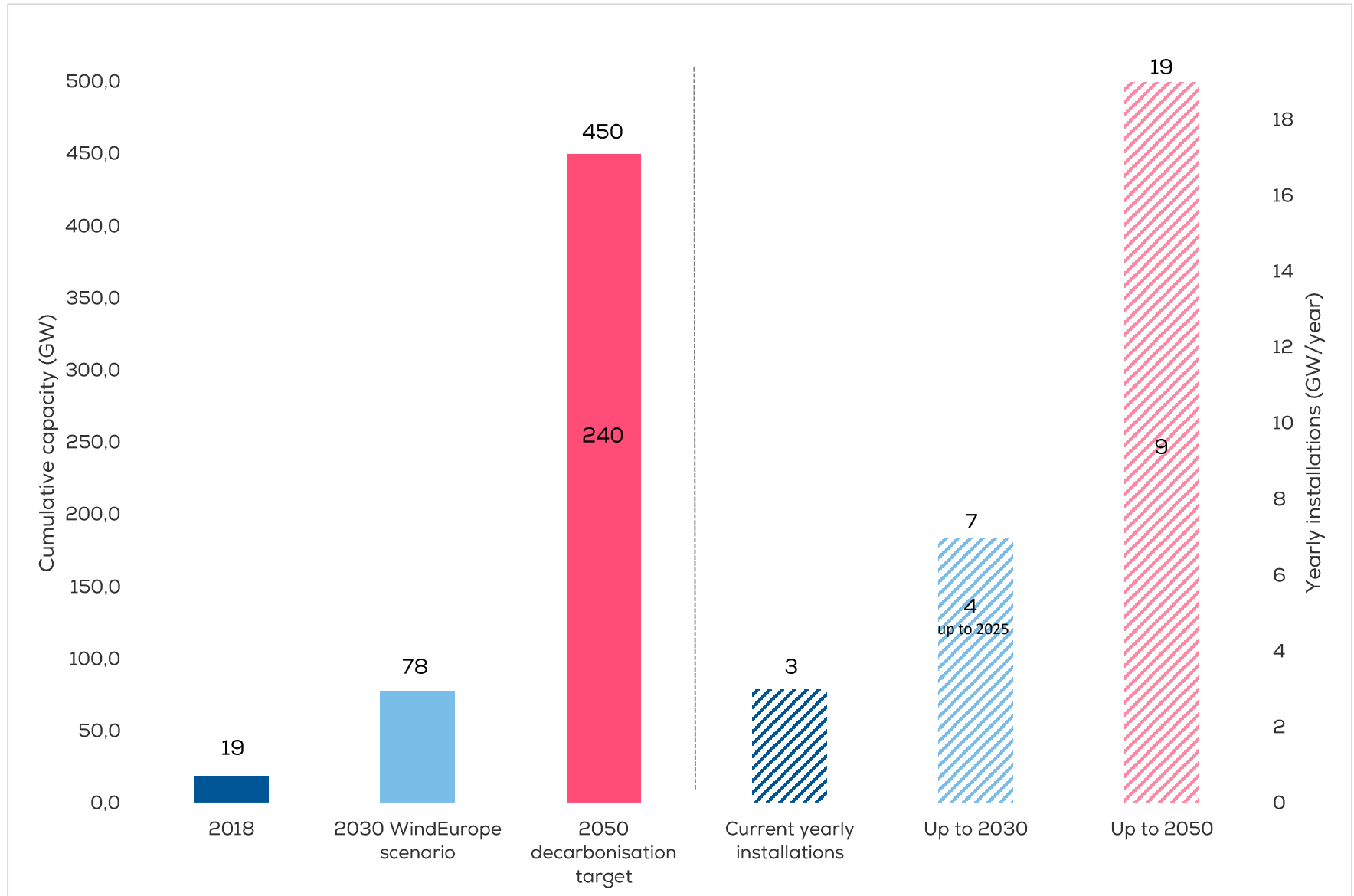
2050



Power Heat Transport

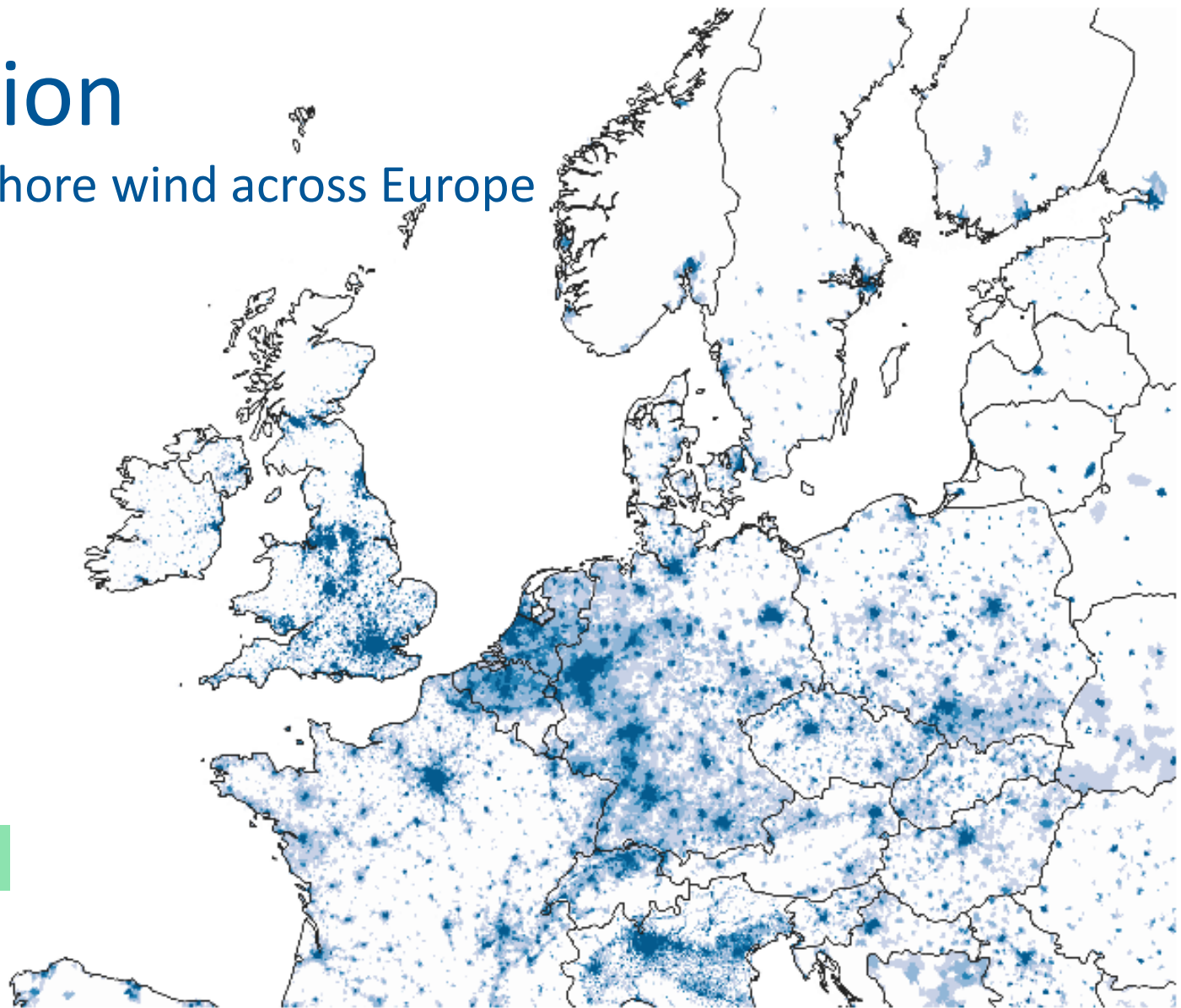
Share of renewables in the sector

The expansion of offshore wind to 2050



2050 vision

450 GW of offshore wind across Europe



It is feasible

Population density

Low Mid High

Highest capacity factors in Norway

Europe's average:

23%

Onshore

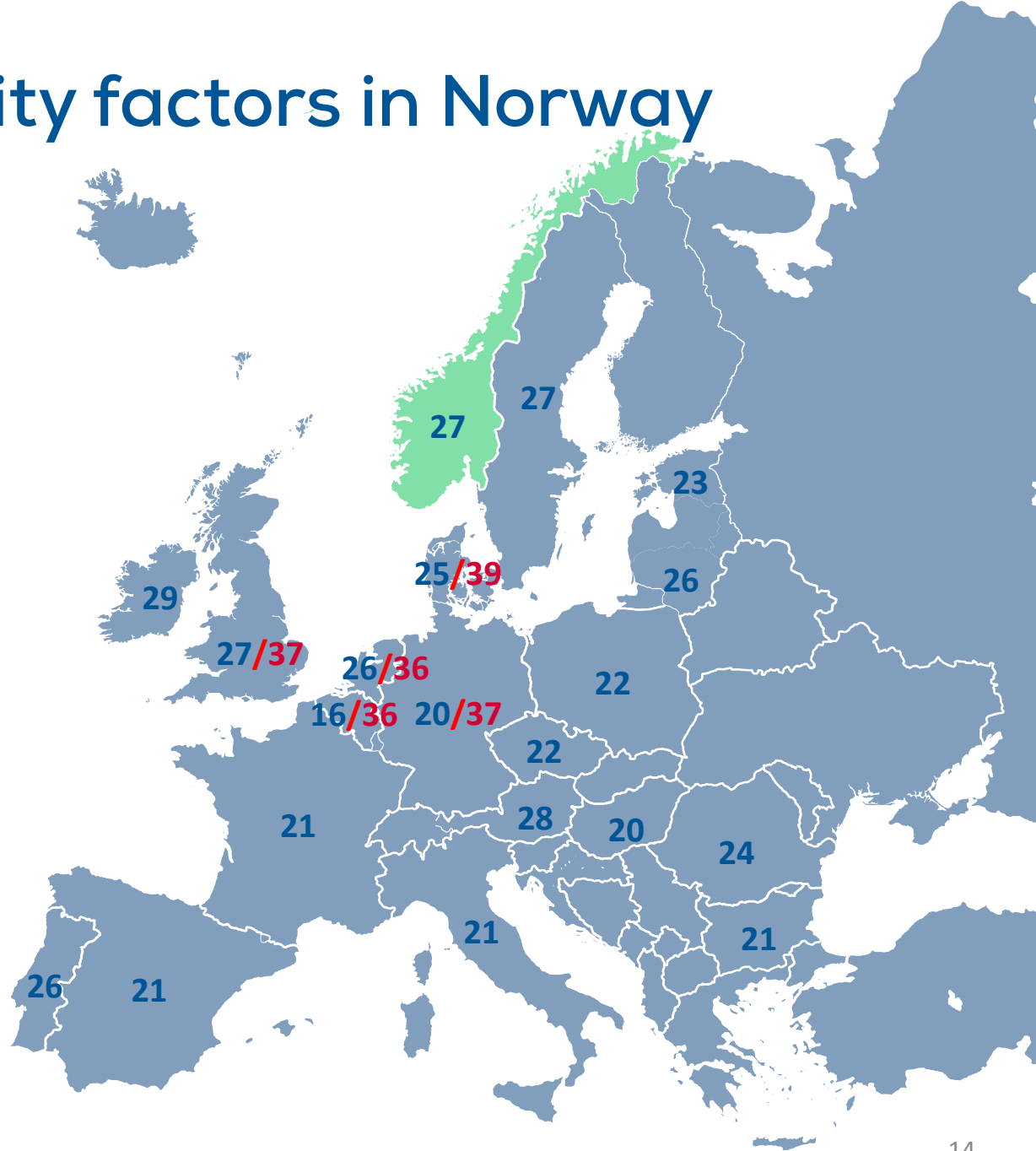


37%

Offshore



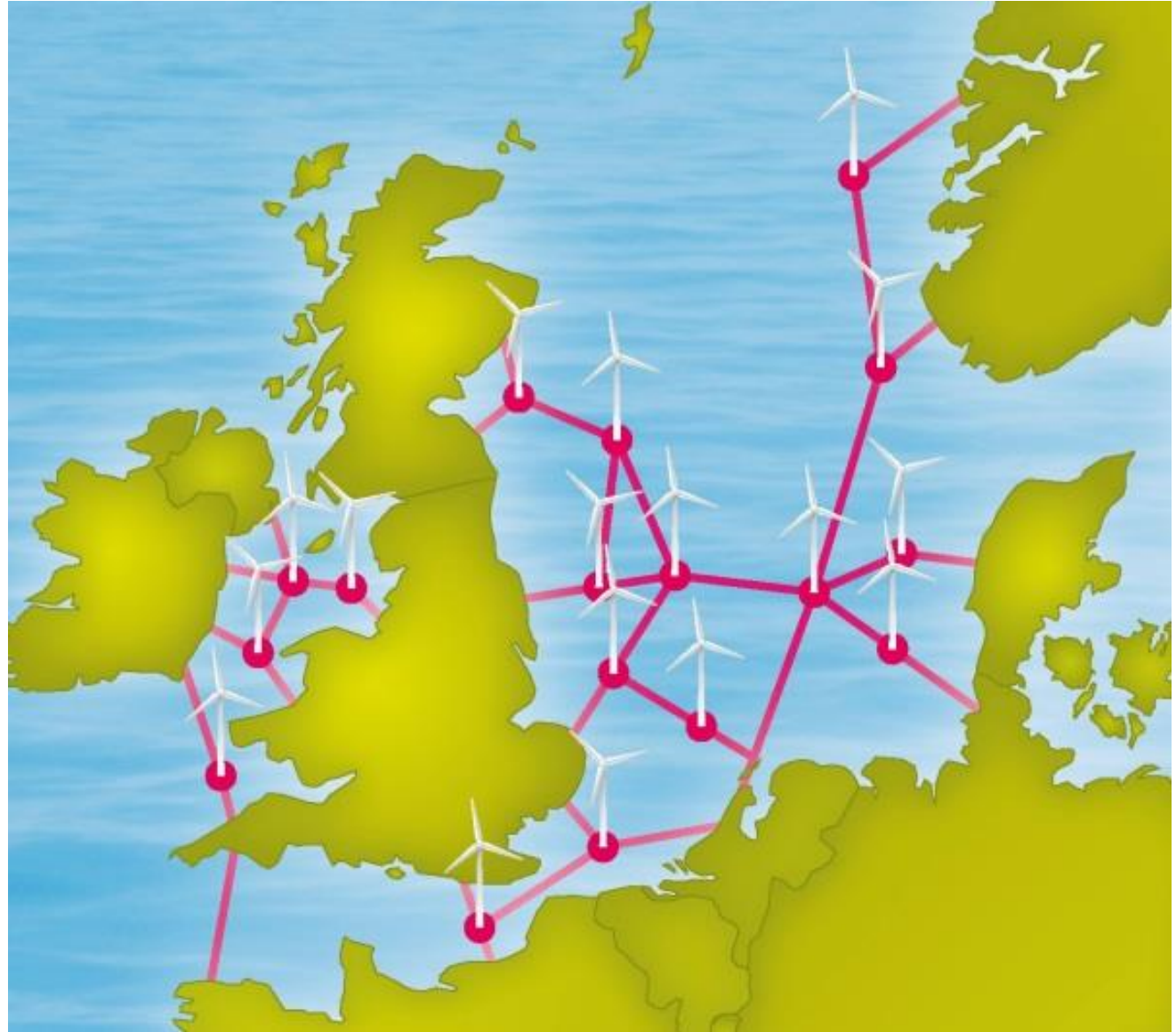
- onshore
- offshore



North Sea Super-Grid

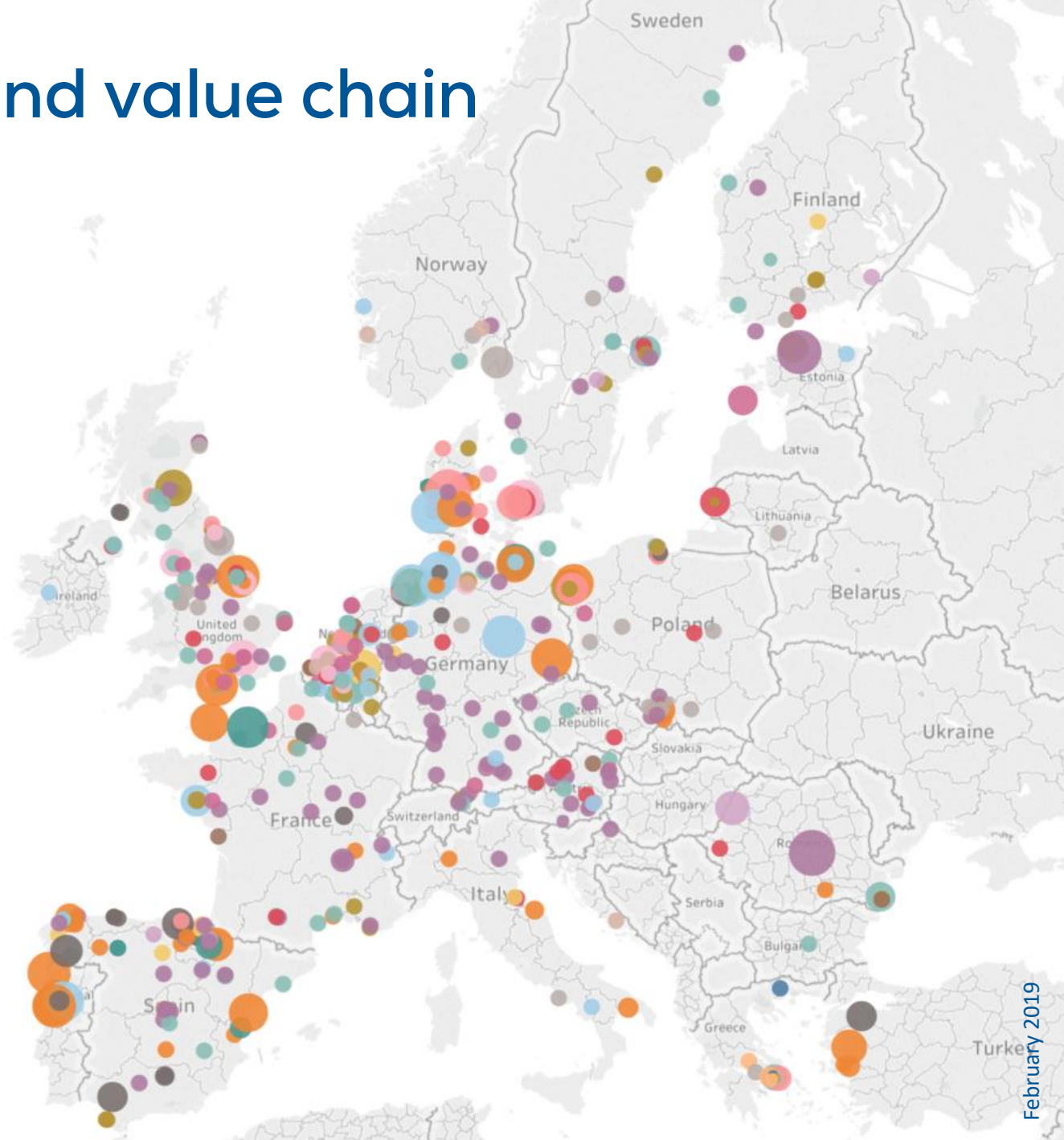


North sea grid



European wind value chain

- Components
- Assembly
- Blades
- Foundations
- Gearboxes
- Nacelles
- O&M
- Other
- R&D
- Towers
- Cables
- Generators
- Logistics
- Port



Hull UK Siemens Gamesa Factory



Green Port Hull
£310m invested, 1,000 jobs

Port of Esbjerg, Denmark



Basque Country, Spain

THE REGION WITH THE HIGHEST
CONCENTRATION OF WIND ENERGY
SUPPLIERS IN THE WORLD



wind
energy

BASQUE COUNTRY



THE BASQUE COUNTRY IS HOME TO
MANUFACTURERS FOR EVERY SINGLE
KEY COMPONENT OF A WIND TURBINE



THANK YOU

Wind[•]
EUROPE

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