

Wind power and the energy transition

Diletta Zeni

Advisor – Energy & Climate Change

Our members make wind energy work

400+ MEMBERS

Wind turbine manufacturers

e.g.



GE Renewable Energy

SIEMENS Gamesa
RENEWABLE ENERGY

Vestas

Wind farm developers

e.g.



acciona
Energy

res
powering change



VATTENFALL

Power utilities

e.g.

e-on

edf
energies nouvelles

enel
Green Power

IBERDROLA
Renovables

Component manufacturers

e.g.

ABB

LM WIND
POWER

BASF
We create chemistry



Installation / logistics

e.g.

DHL
GLOBAL FORWARDING



Port of Amsterdam

Van Oord

Marine ingenuity

Financial & legal services

e.g.

Allianz

大成 DENTONS



Rabobank

Research institutes

e.g.

CATAPULT
Offshore Renewable Energy

Fraunhofer
IWES

TU Delft

DTU

+ NATIONAL WIND ASSOCIATIONS

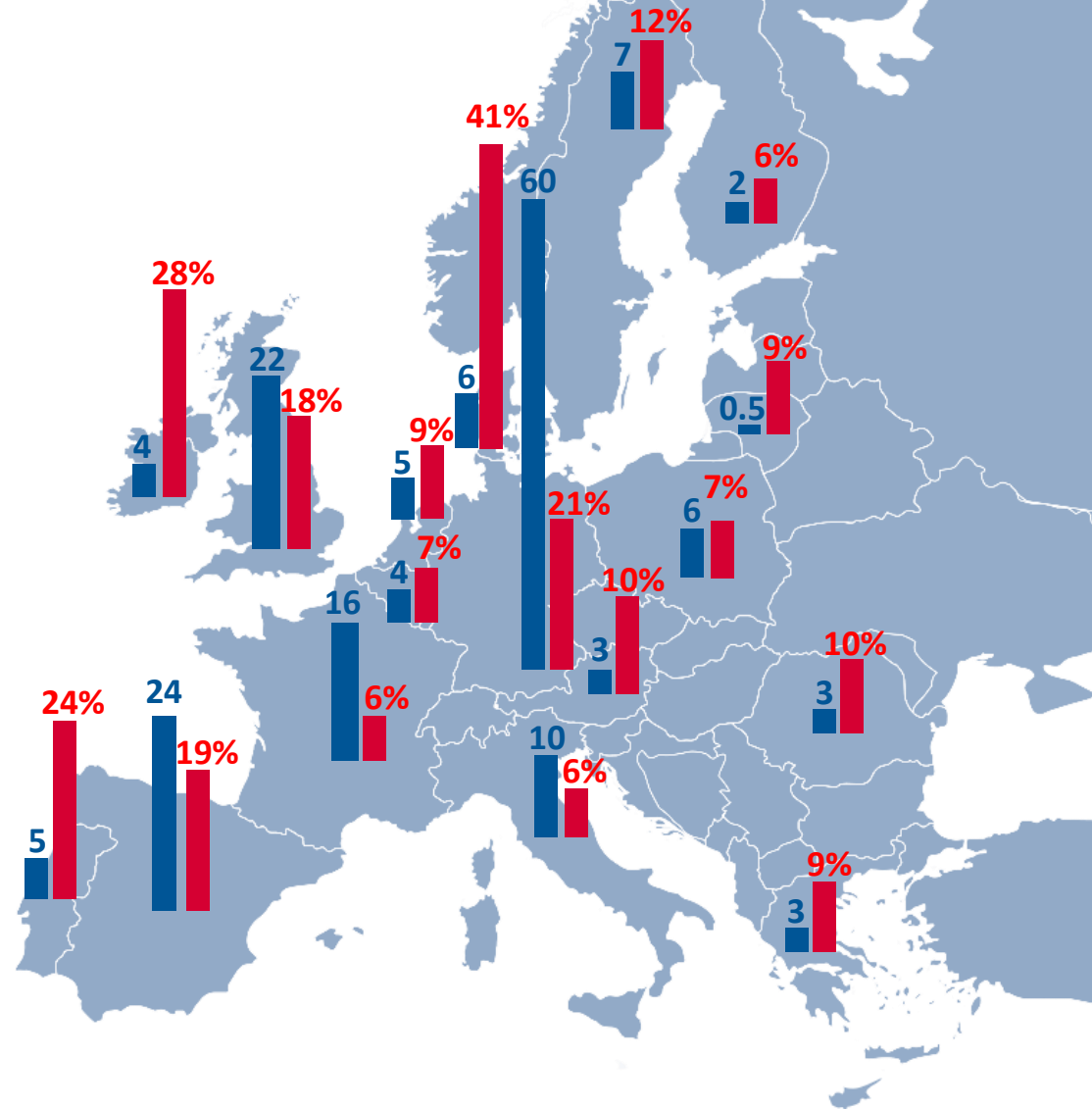
14% of EU power is provided by wind

183 GW

14%

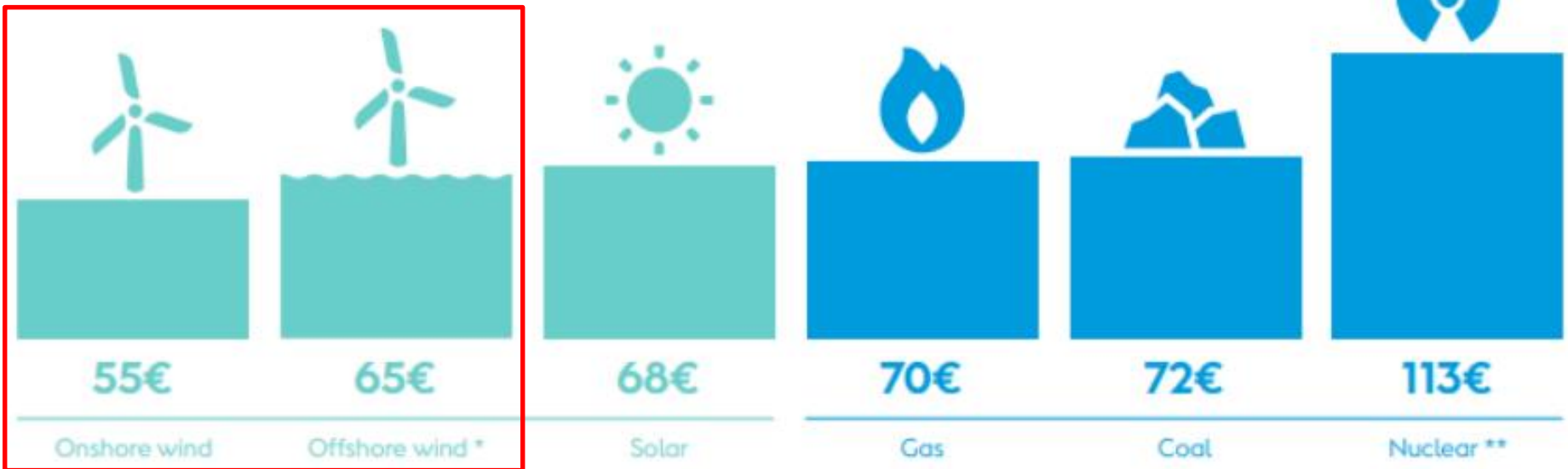
of 2018 EU power demand

- GW installed
- Penetration



Wind is cost-competitive

Levelised cost of electricity/MWh

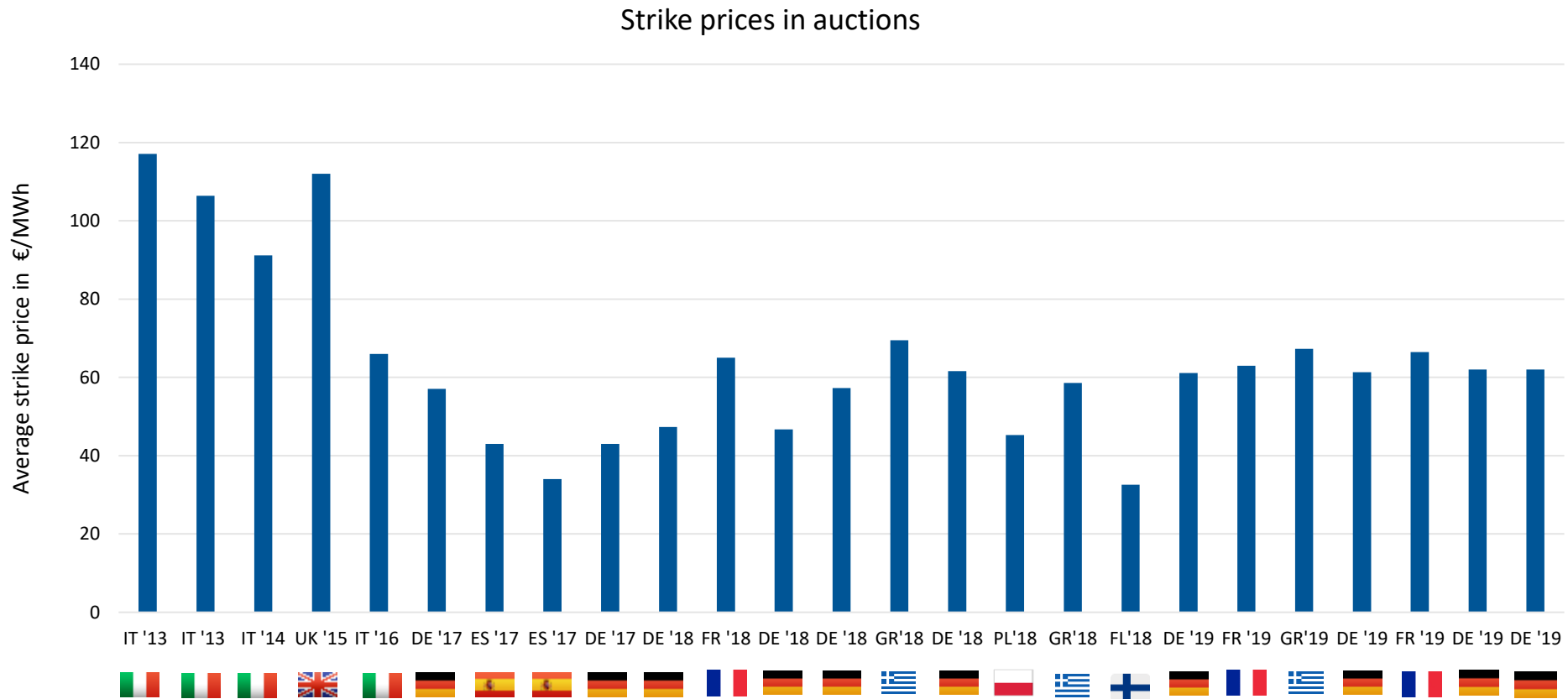


Source: Bloomberg New Finance (2016-prices), Year of FID.

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

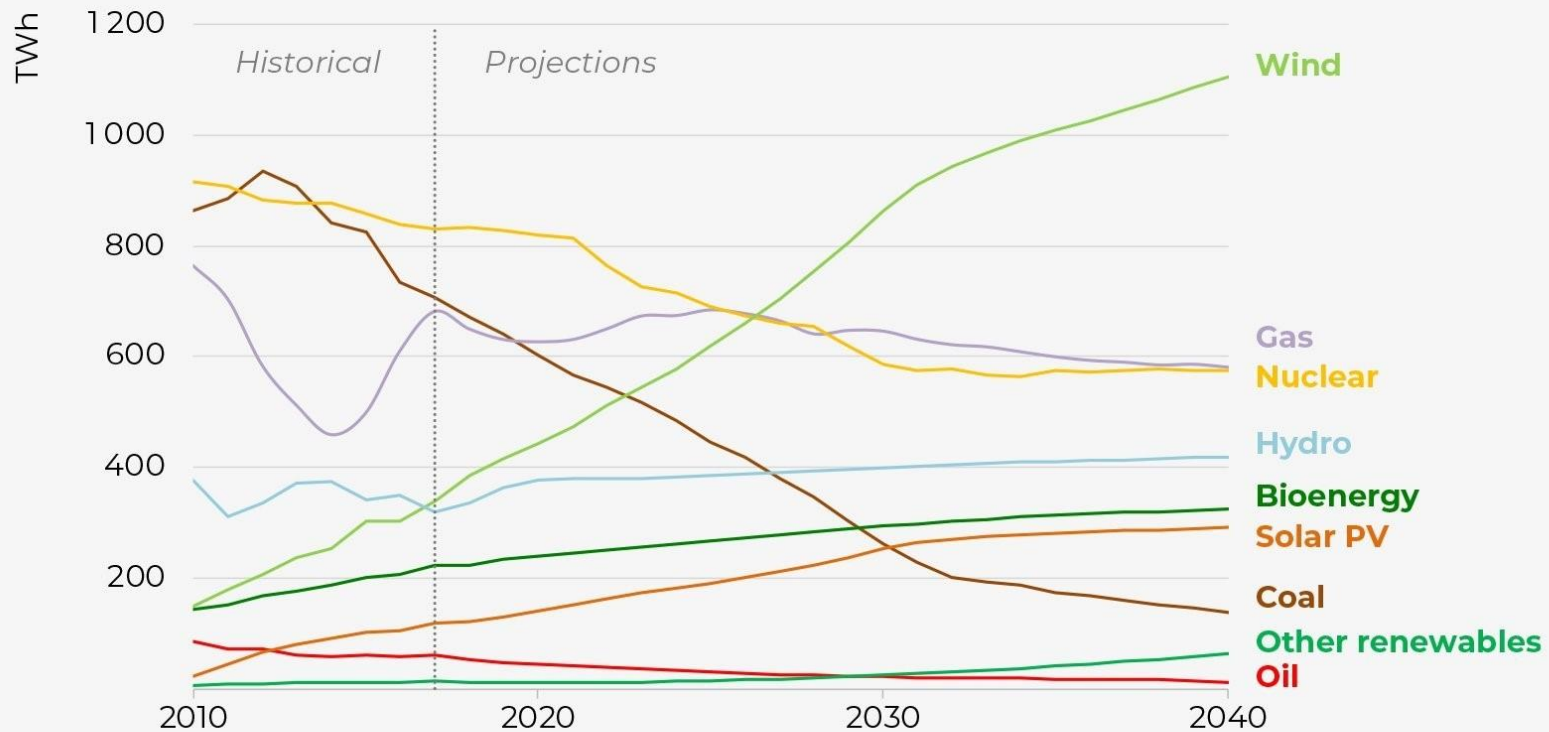
* Offshore: Hornsea 2, UK (cost including transmission) ** Nuclear: Hinkley Point, UK

Cost of onshore wind is decreasing

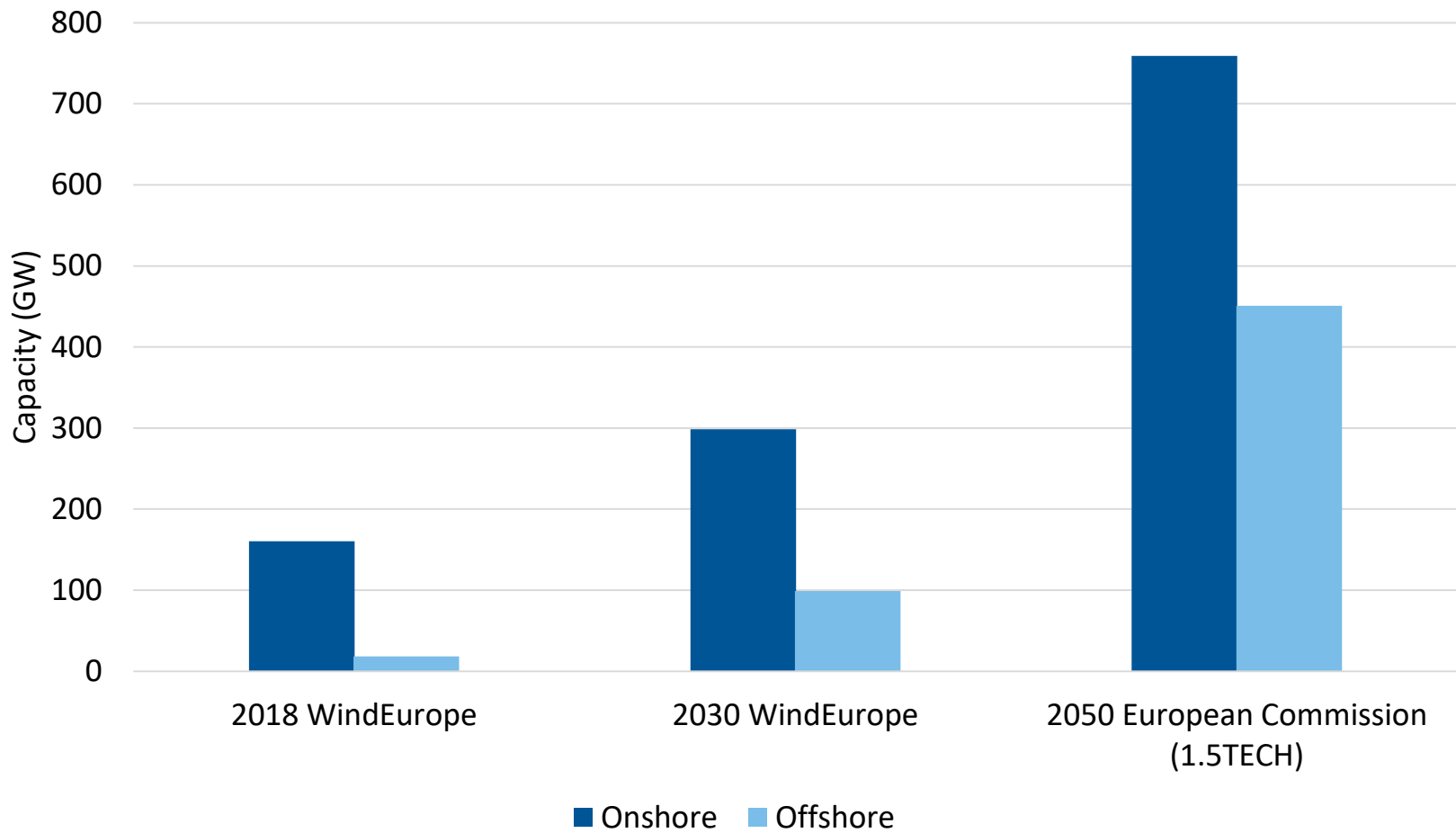


Wind the no. 1 power source in the EU by 2027

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



Onshore wind remains the bulk of Europe's wind capacity



The EU agrees on 32% renewable target by 2030 after all-night negotiations



Seán Kelly MEP ✓

@SeanKellyMEP



It's 4 in the morning & what's more the dawning & we are happy as deal done on #RED11 . Pleasure to work with such great people @EU_Commission @Europarl_EN @EUCouncil Thanks all @pepeblancoEP @JerzyBuzek @BasEickhout @ClaudeTurmes @tamburrano @MAC_europa

♥ 131 03:21 - 14 Jun 2018

💬 49 people are talking about this



National Energy & Climate Plans



National Energy & Climate Plans

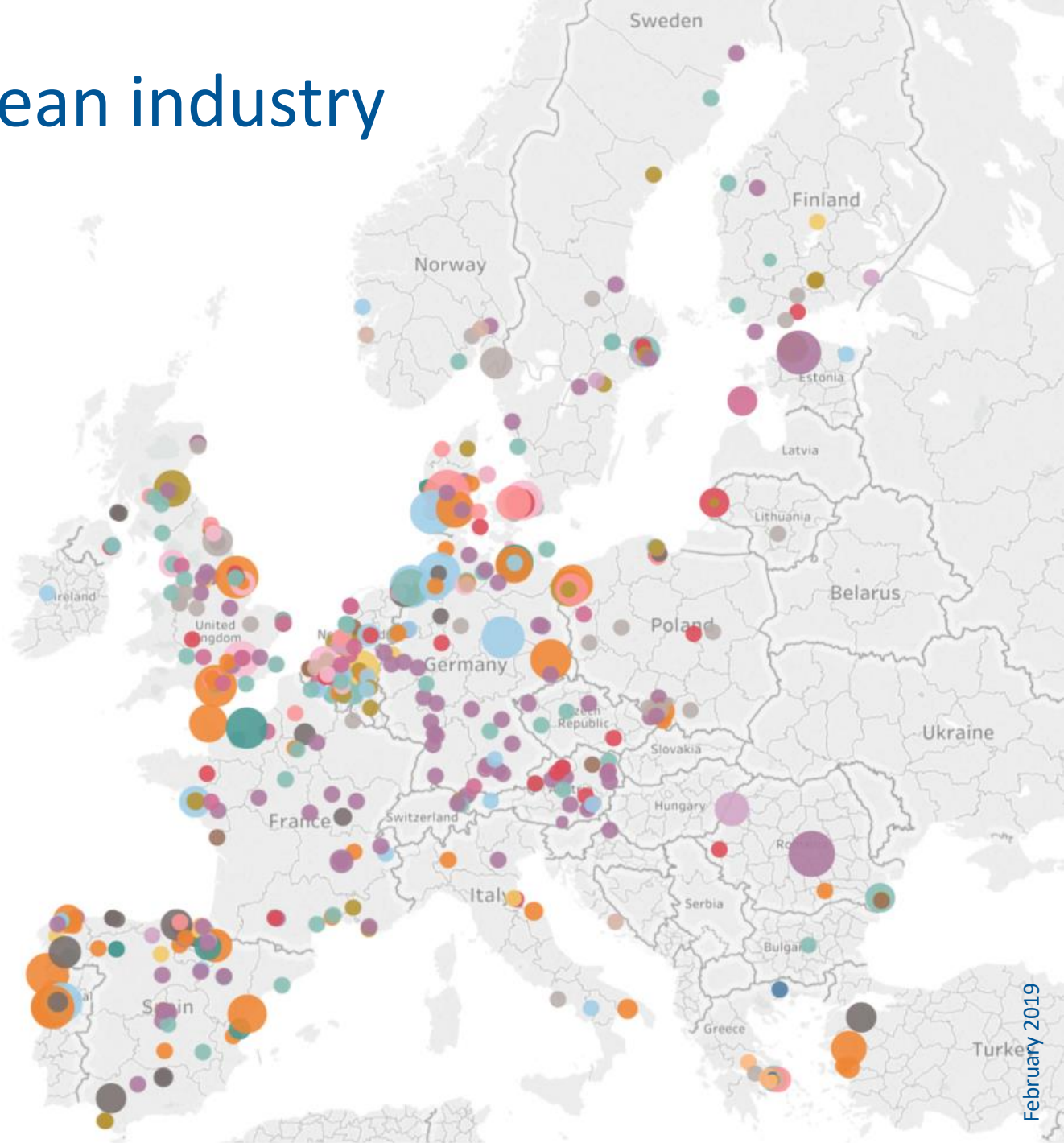
- Visibility over wind energy volumes
- Shorten & simplify permitting
- Facilitate Repowering
- Support R&I
- Facilitate uptake corporate RES PPAs
- Power grids & markets
- Enable electrification

Visibility on renewable auctions



A truly European industry

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



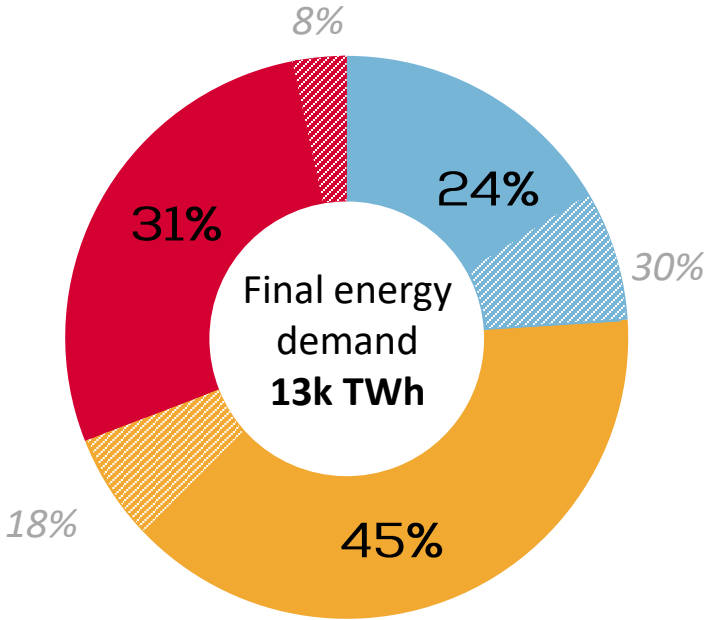
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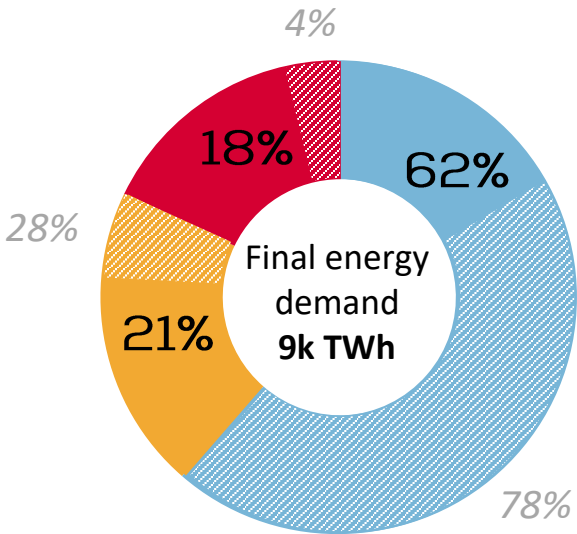
+ 300,000 jobs

Accelerate direct RES-based electrification

2018



2050



■ Power ■ Heat ■ Transport
▨ Share of renewables in the sector

Grids and System Integration



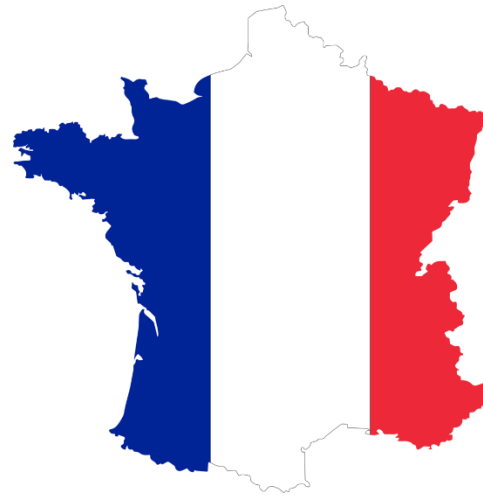
Get the permitting right



A majority of people living close to wind farms are happy with them



75%



80%

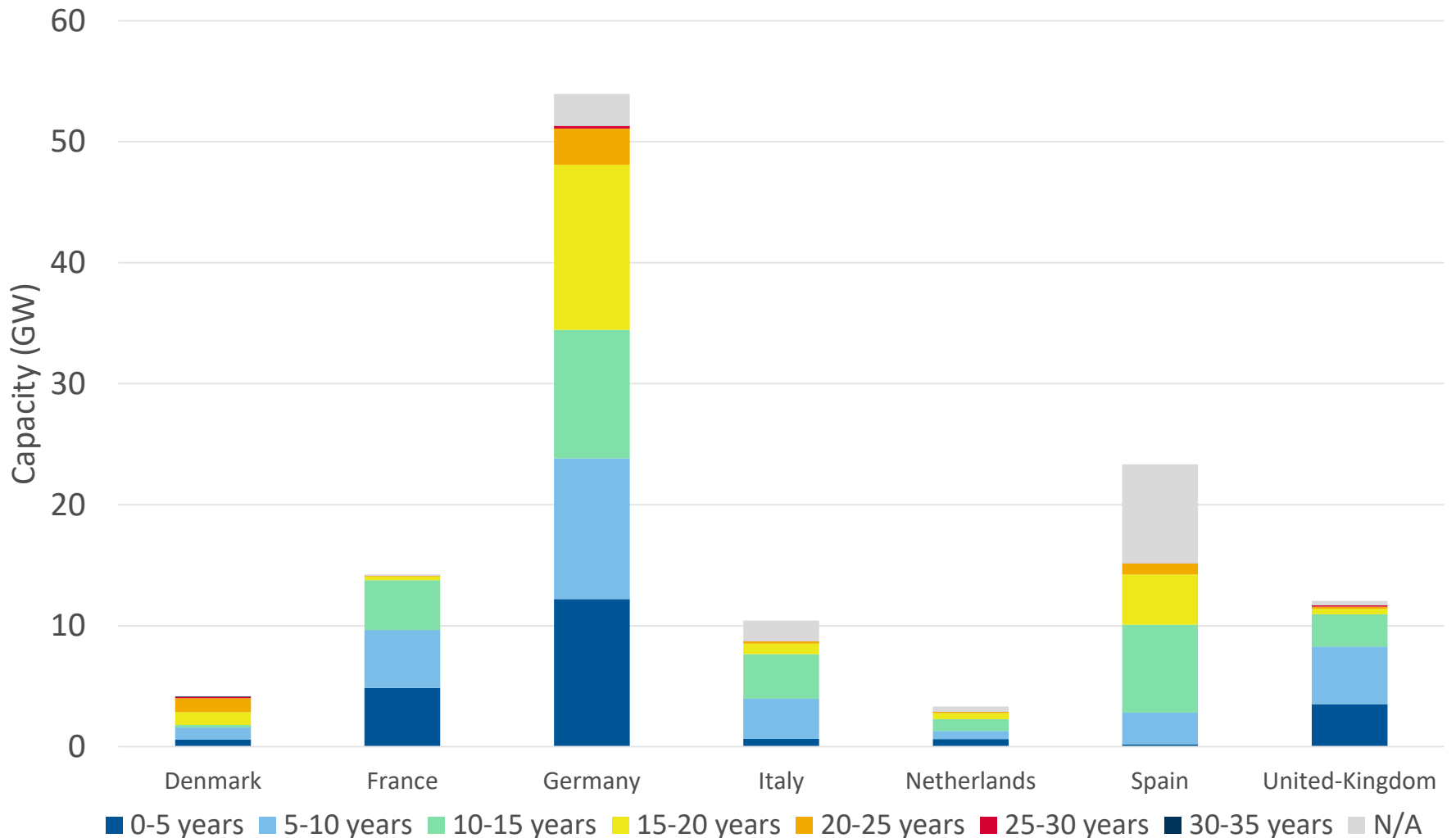


86%

The growth of onshore turbines



Europe's existing onshore wind farms are ageing



THANK YOU

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BACK-UP SLIDES

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EUROPE

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Klettwitz, Brandenburg - Germany



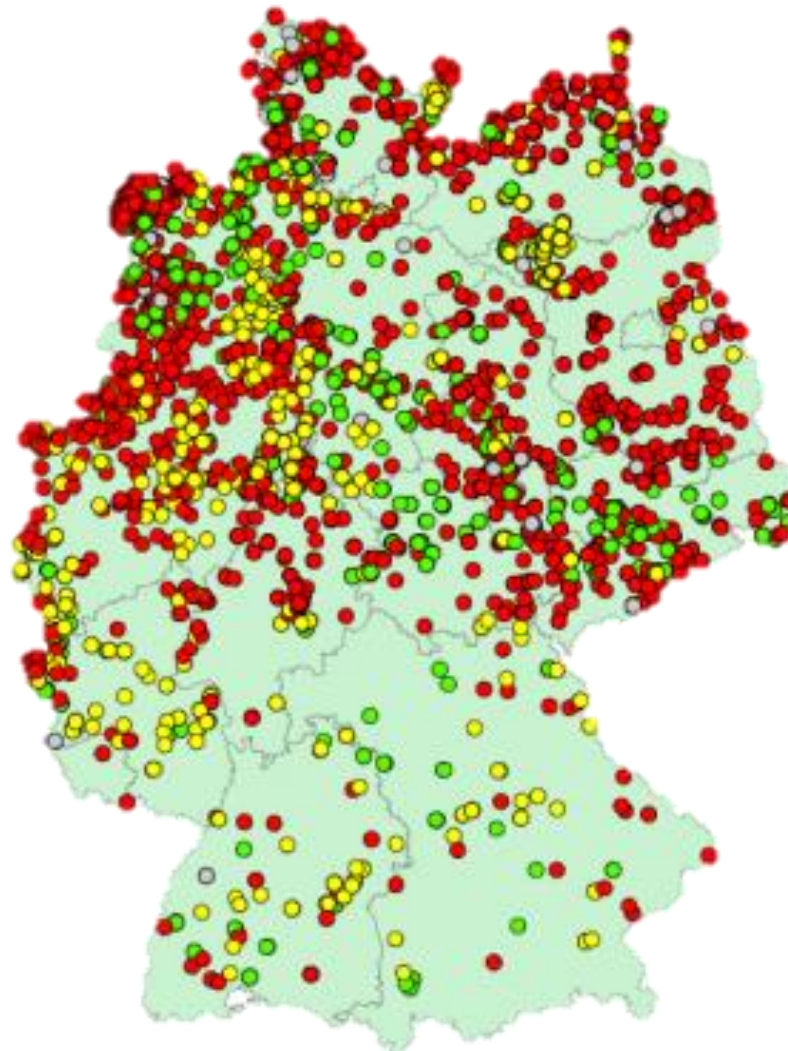
Completed in 2015

- 25% fewer turbines
- 2x more powerful turbines
- 57% increase in capacity
- 15 years when dismantled
- Original project (2000)

	Turbines (Number)	Turbine (MW)	Total power (MW)	OEM
Before	36	1.64	59.4	Vestas
After	27	3.45	93.2	Vestas

Where it's possible to repower wind farms in Germany, September 2019

- Repowering possible
- Repowering might be possible in the future
- Repowering not possible



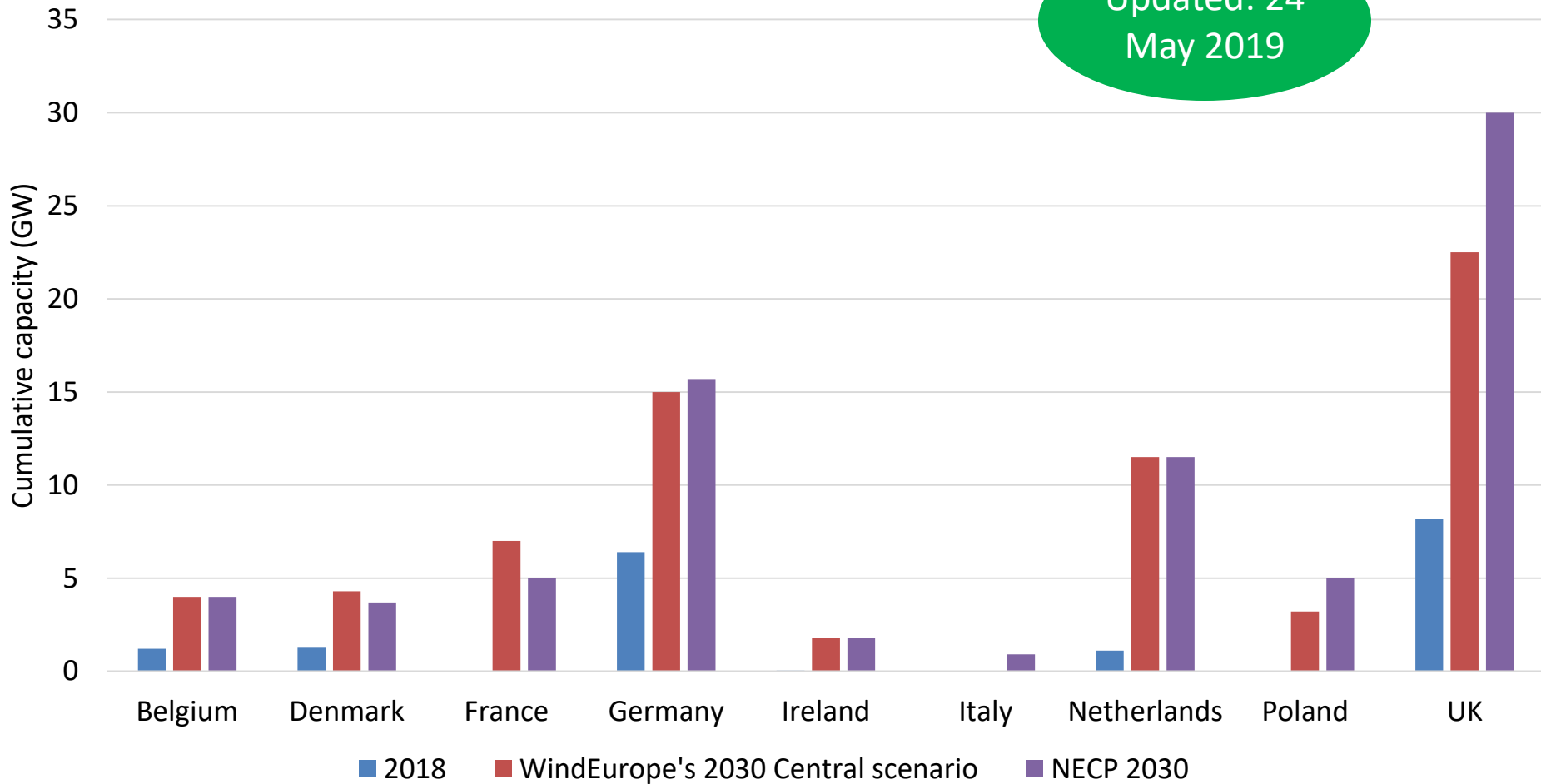
NECPs exceed WindEurope's 2030 onshore scenario

Updated: 24
May 2019

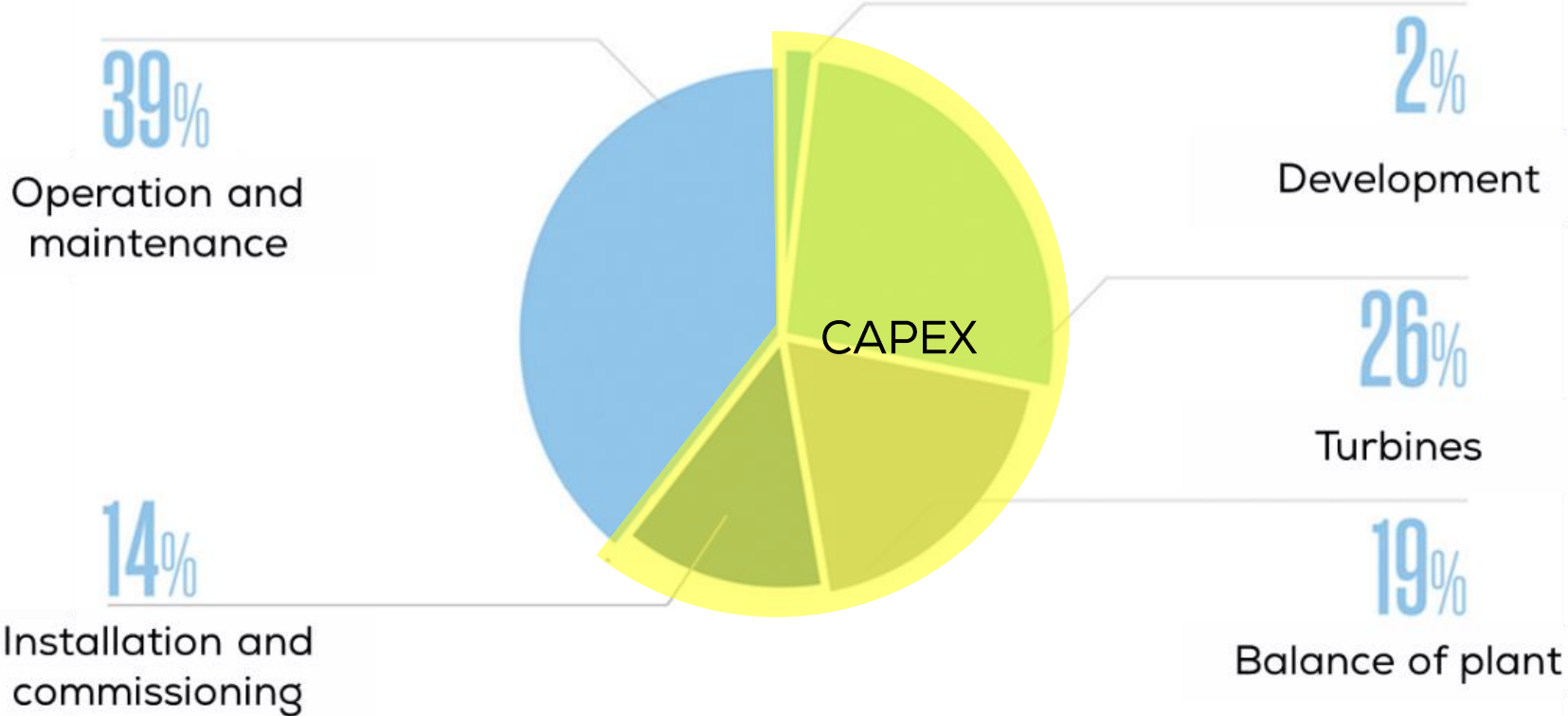


NECP offshore volumes similar to WindEurope's 2030 scenario

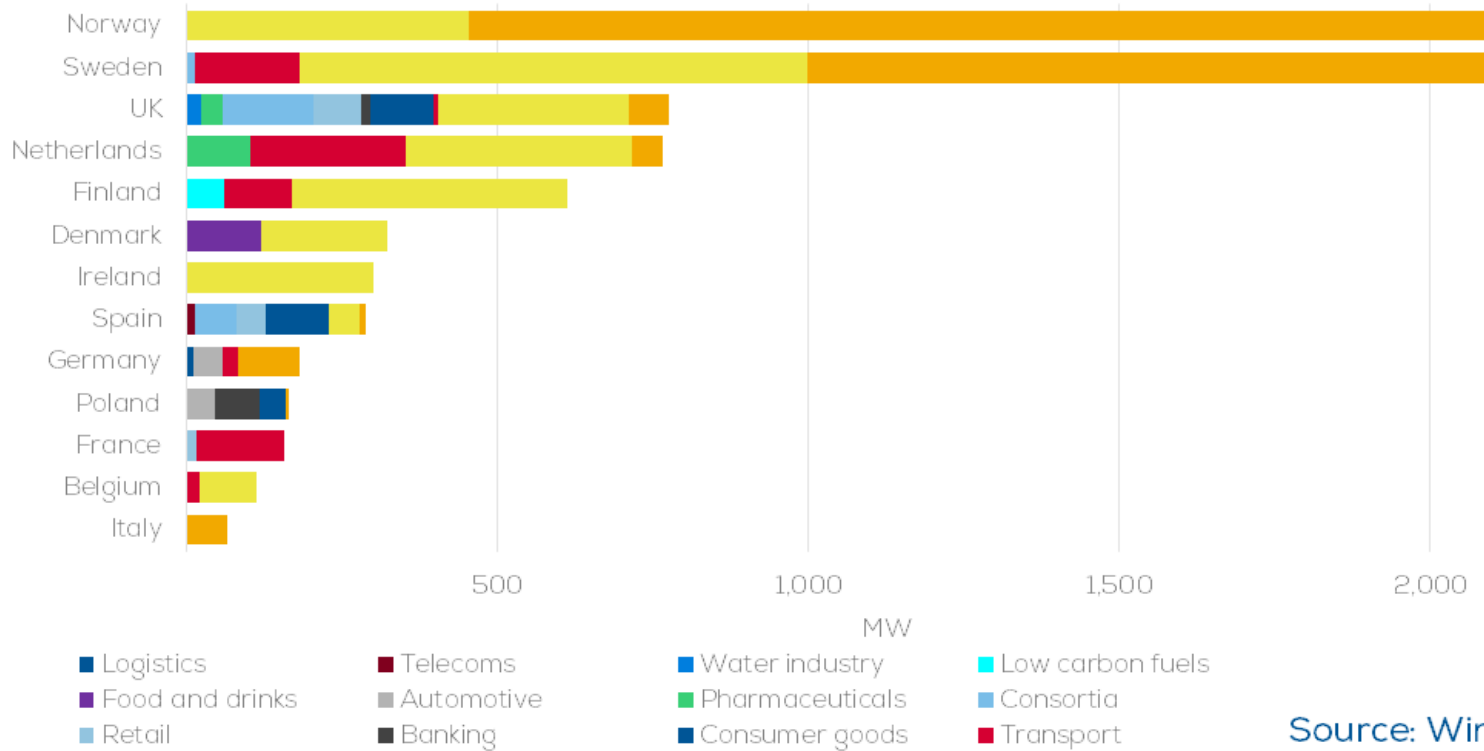
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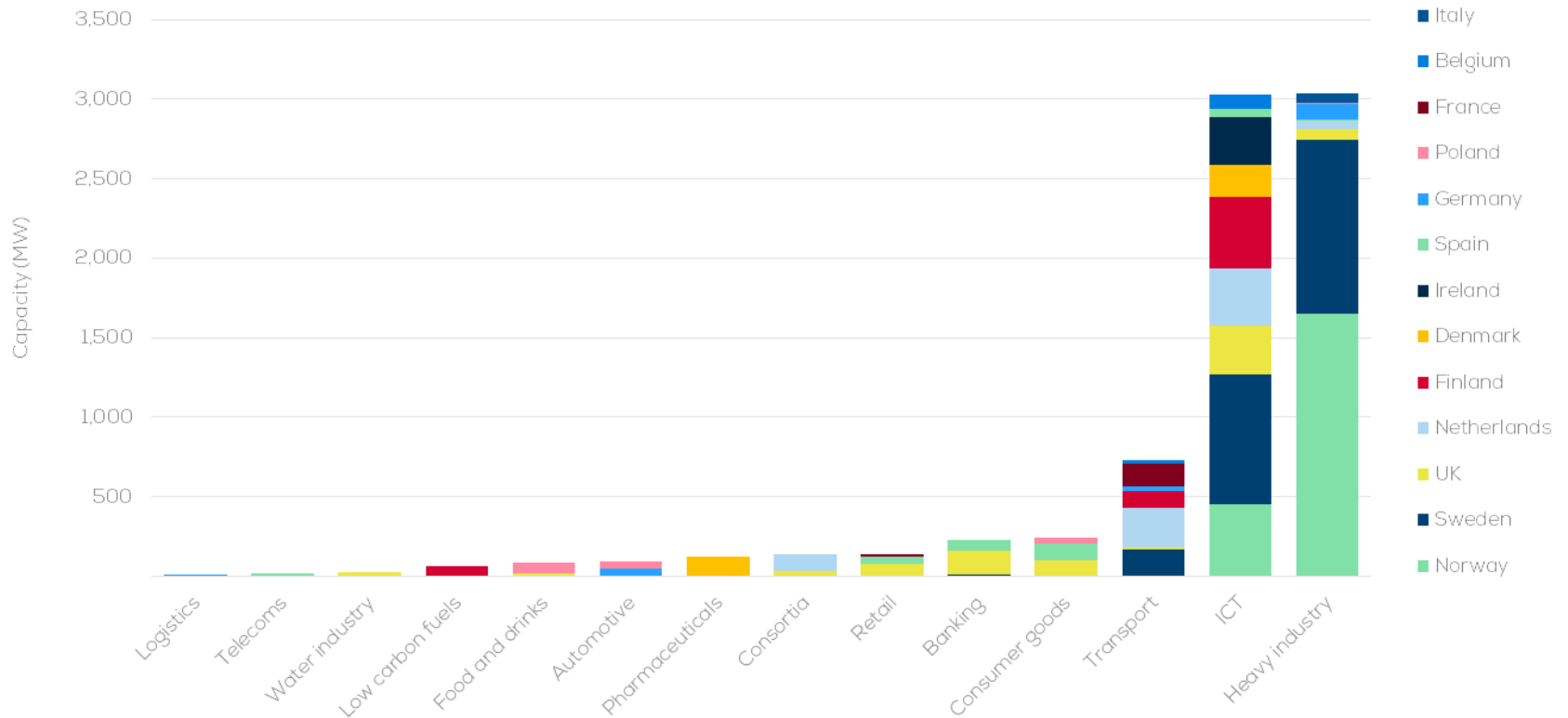
Breakdown of CAPEX & OPEX



Which countries have the most wind PPA's

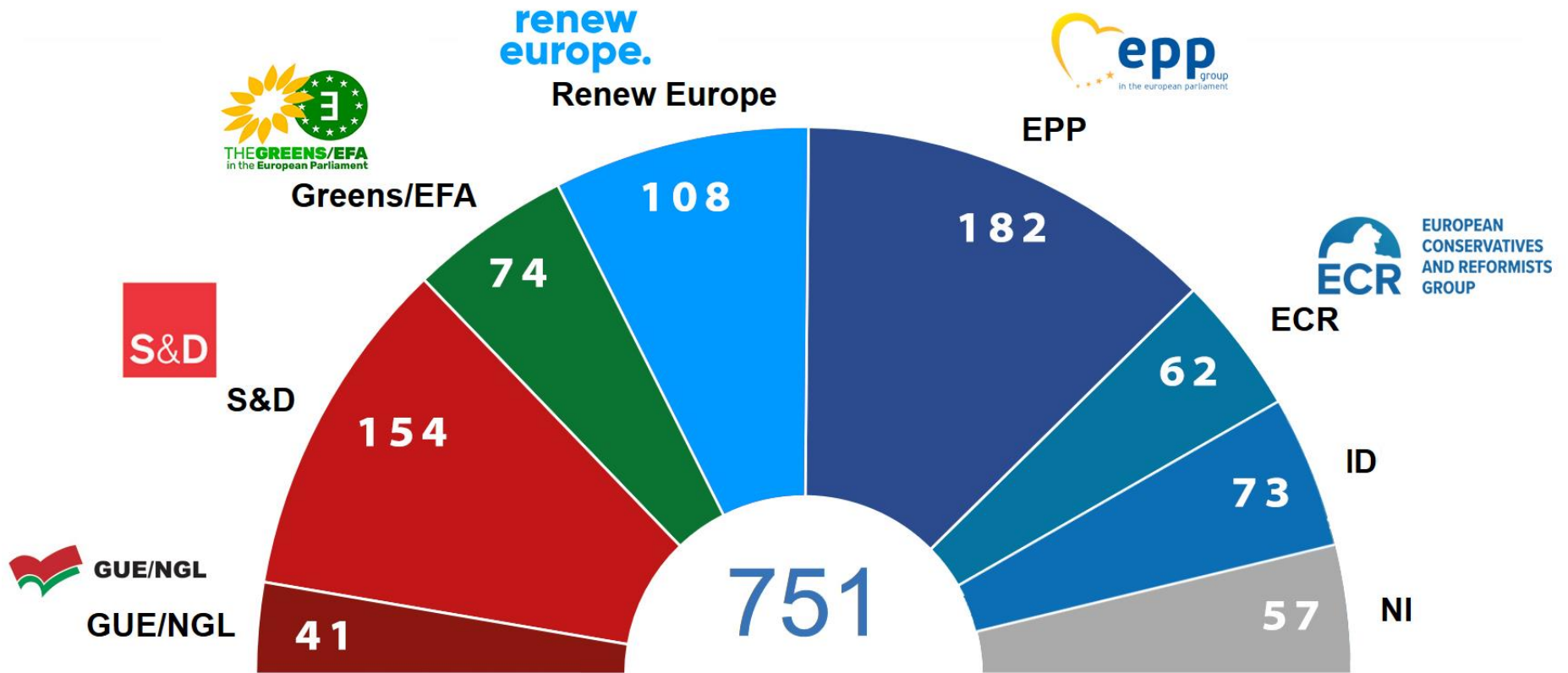


Most wind PPAs are with heavy industry and ICT



Stronger font in the keys

European Parliament 2019-2024



Climate and Energy champions



Van Brempt – S&D



Eickhout – Green



Federley – RE



Petersen – RE



Kelly – EPP



Canfin – RE

Key Committees & Chairs:

- ITRE – A. Valean (RO, EPP)



- ENVI – P. Canfin (FR, RE)



- INTA – B. Lange (DE, S&D)



- TRAN – K. Delli (FR, Greens/EFA)



Our 5 priorities for the new EU Institutions

- Ambition on decarbonisation
- Smart approach to electricity & gas
- Money for Infrastructure
- Research & Innovation
- A renewables industrial policy

Wind^o
EUROPE

5 priorities for the new European institutions

- **Ambition on decarbonisation.** Net-zero carbon by 2050 delivered through the 2030 National Energy and Climate Plans.
- **A smart approach to electricity and gas.** The electricity share in Europe's energy has to rise to at least 60%. Electricity is the cost-effective way to decarbonise heating, transport and much of industry. Hydrogen from renewable power will also play a role.
- **Money for infrastructure.** InvestEU, the Structural and other Funds must channel investments in grids, storage, EV charging and other infrastructure, e.g. ports for offshore wind.
- **Research and innovation.** Horizon Europe should prioritise renewables and continued innovation in technologies where Europe leads, like onshore wind.
- **A renewables industrial policy.** Wind employs more than 300,000 people in Europe and exports €8bn high-tech equipment outside the EU. Free trade is central to competitiveness.



New European Parliament and Commission - 2019-2024



Ursula von der Leyen lors de son discours devant le Parlement européen à Strasbourg le 16 juillet 2019 dpa Picture-Alliance/AFP

Priorities – The European Green Deal

- Enshrine 2050 climate neutrality goal in **European Climate Law**
- **2030 GHG reduction target** up to at least 50%
- Extend the **ETS**
- Set up a new **Just Transition Fund**
- **Blue economy** contributes to decarbonisation
- **EU tax policies** deliver on climate ambition
- Set up **long-term strategy for EU's industrial future**
- A new **EU Climate Pact** installs climate culture in Europe