Eletricidade renovável inovação e tendências

CONFERÊNCIA APREN 2017

BEM VINDO
AO CÍRCULO DA MUDANÇA

Future trends in wind electricity

Giles Dickson
CEO, WindEurope

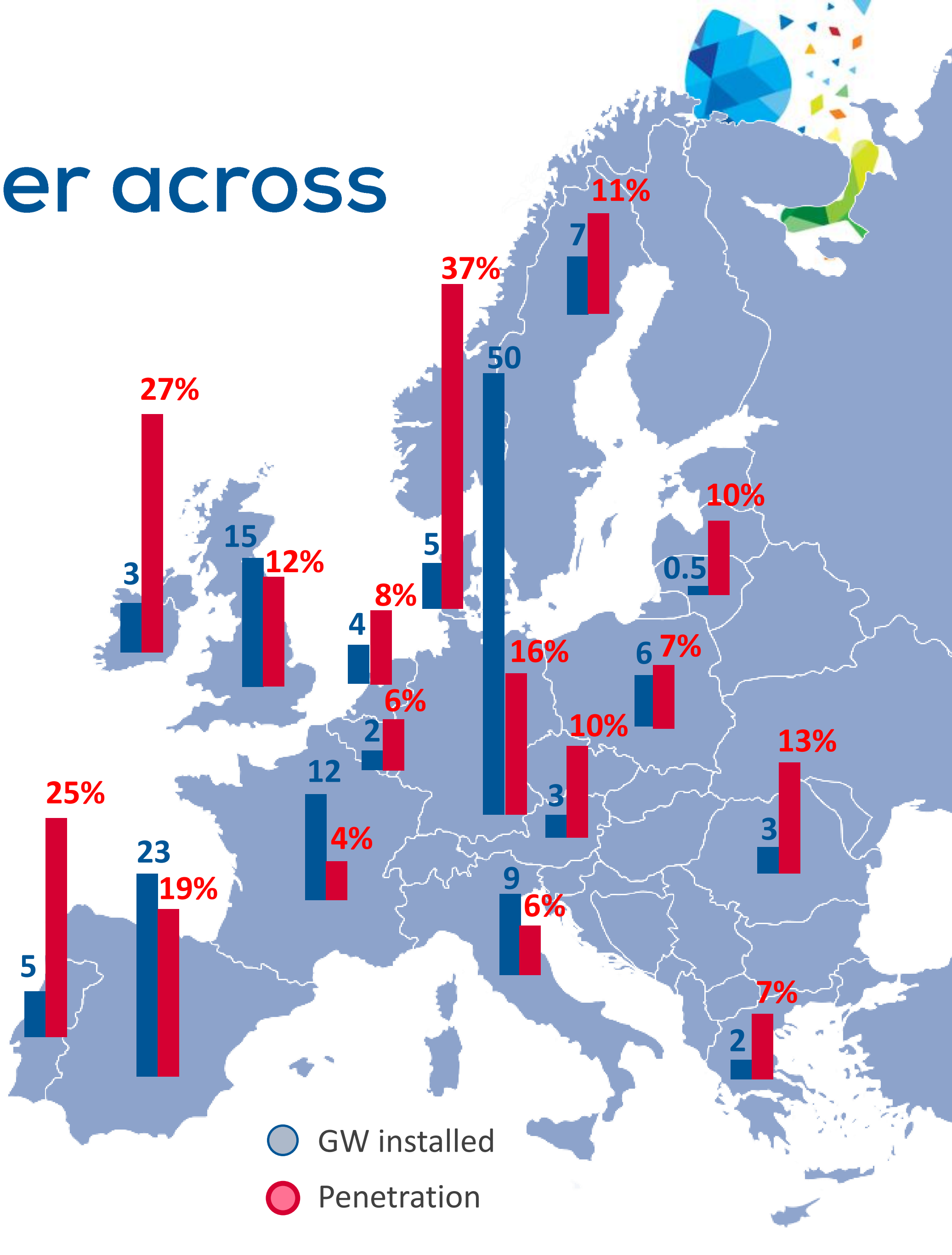
Wind power across Europe

160 GW

10.4%
of 2016 EU power demand

5 GW

25%



Daily wind power numbers

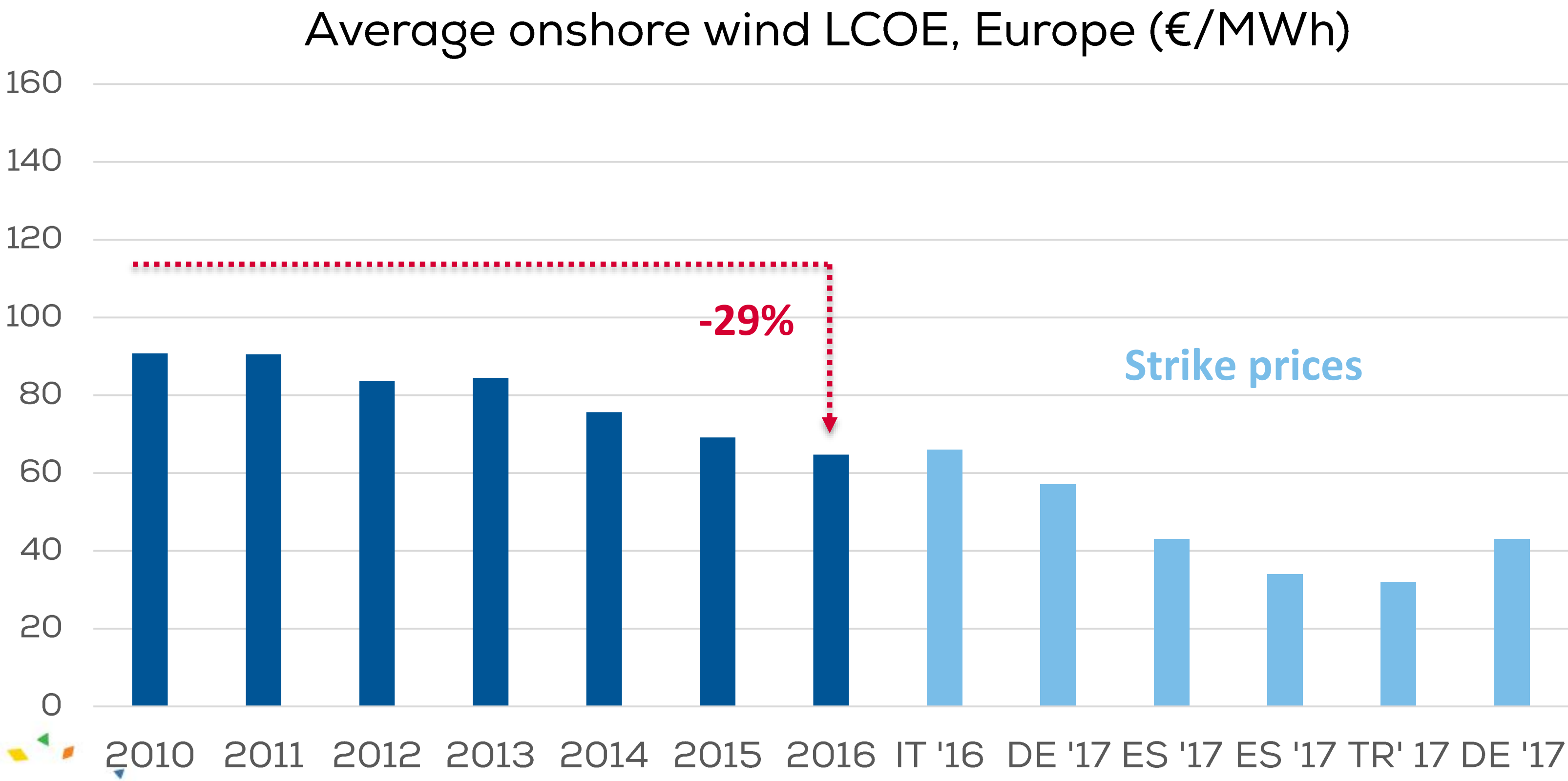
7 October 2017

19.9% of European electricity demand was met by wind energy

Wind power share and generation in each country's demand

1. Denmark: 57% = 47 GWh
2. Germany: 51% = 631 GWh
3. Romania: 33% = 54 GWh
4. Ireland: 30% = 27 GWh
5. Portugal: 29% = 35 GWh
6. United Kingdom: 27% = 193 GWh
7. Austria: 22% = 33 GWh
8. Greece: 21% = 23 GWh
9. Netherlands: 20% = 58 GWh
10. Spain: 18% = 113 GWh

Cost reduction: Onshore

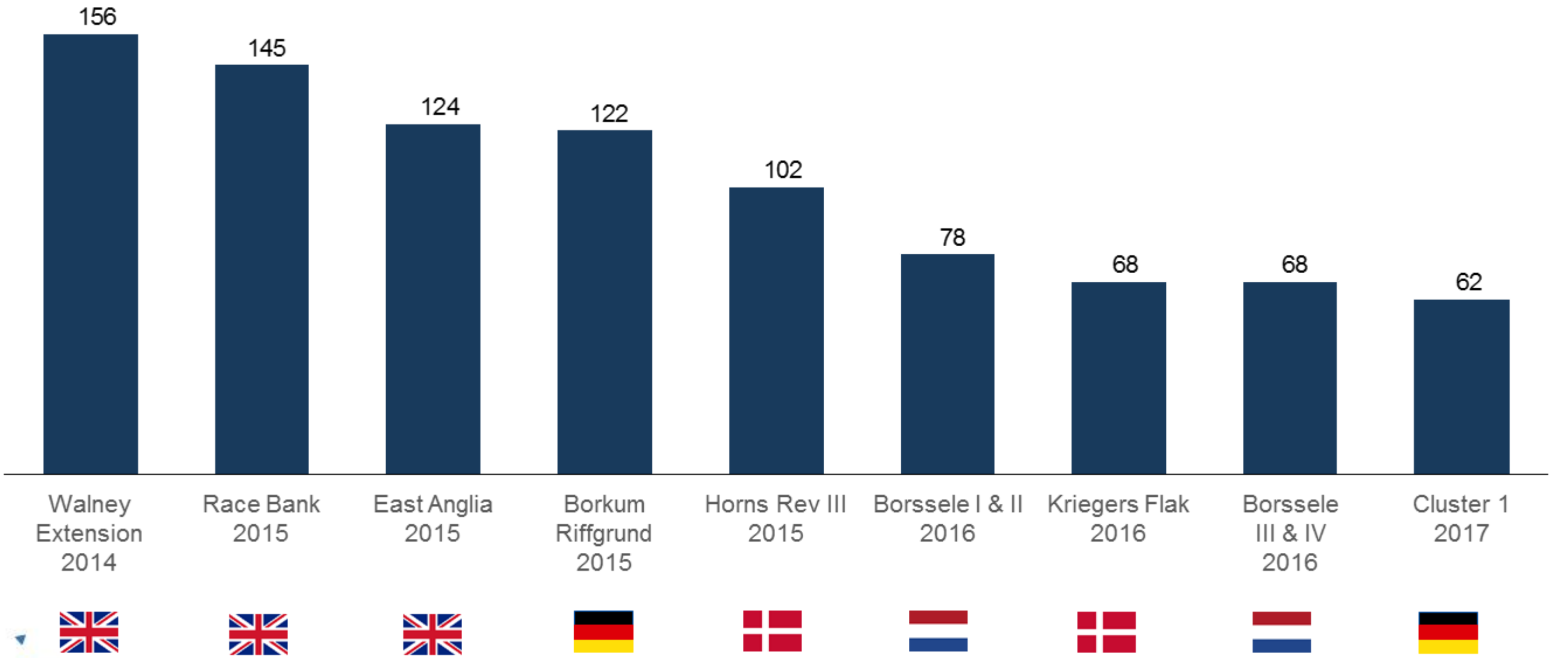


Source: IEA

Cost reduction: Offshore

Levelised revenue of electricity, incl. transmission costs

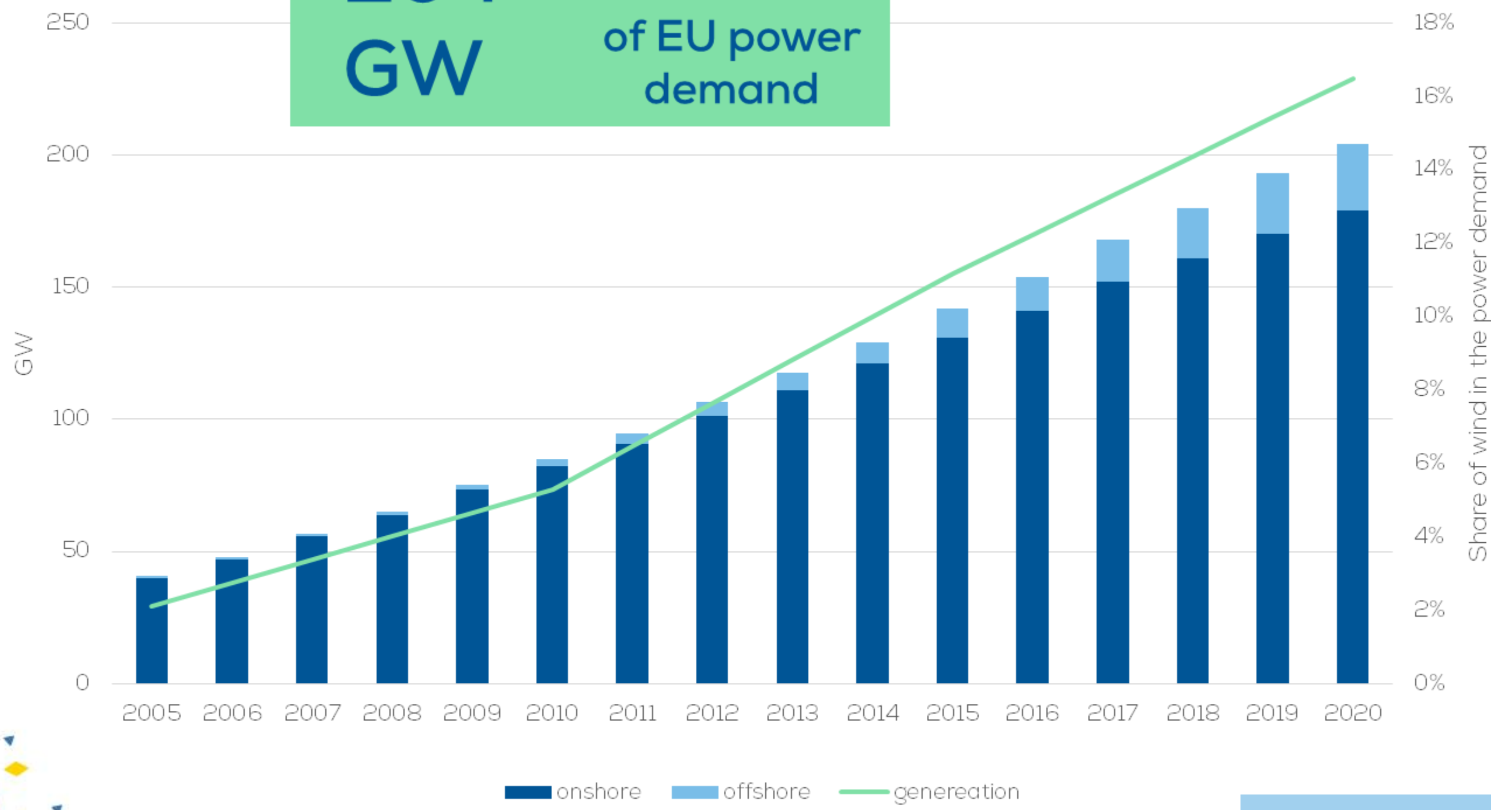
EUR/MWh[1], 2016-prices



The road to 2020

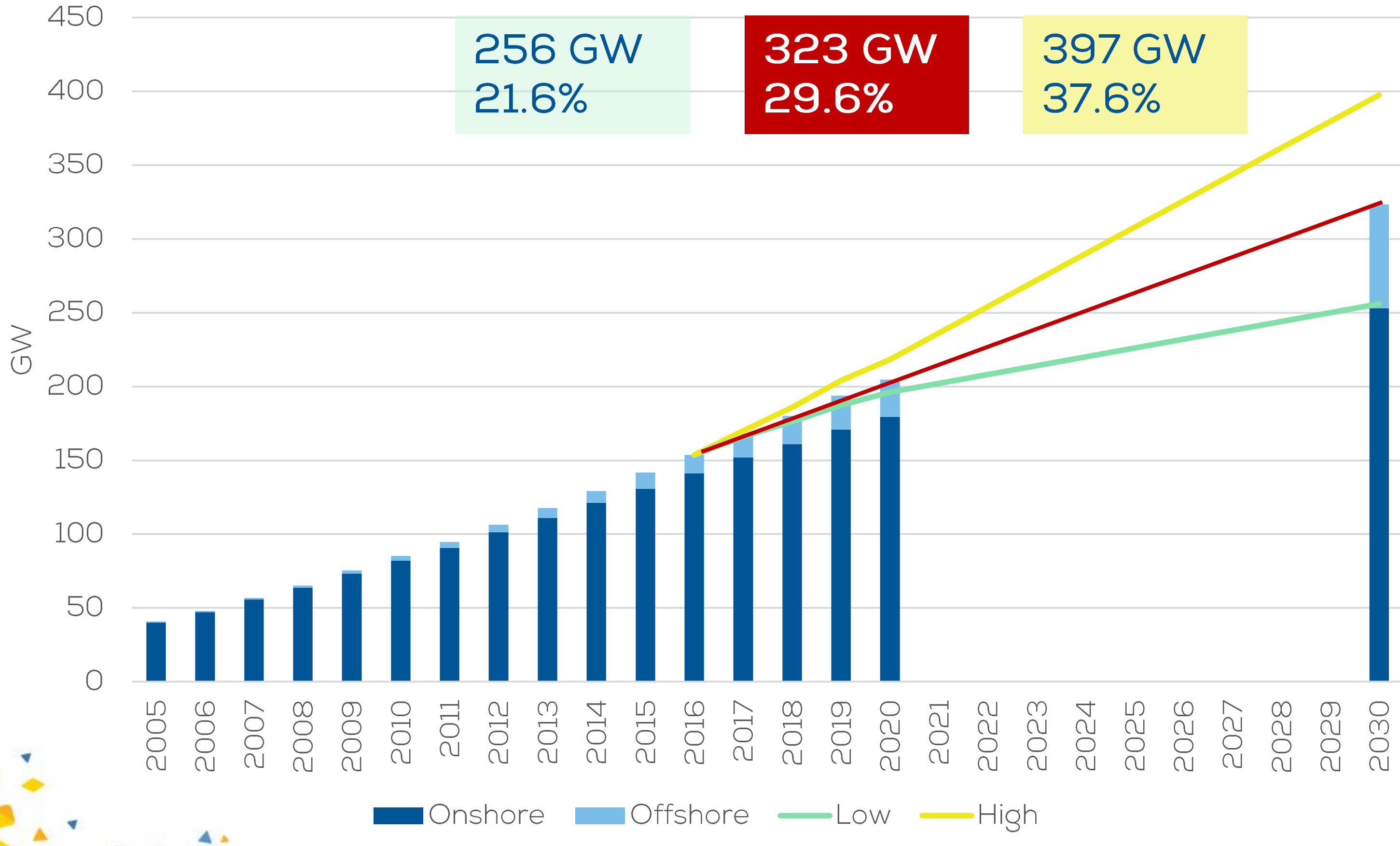
204 GW

16.5% of EU power demand

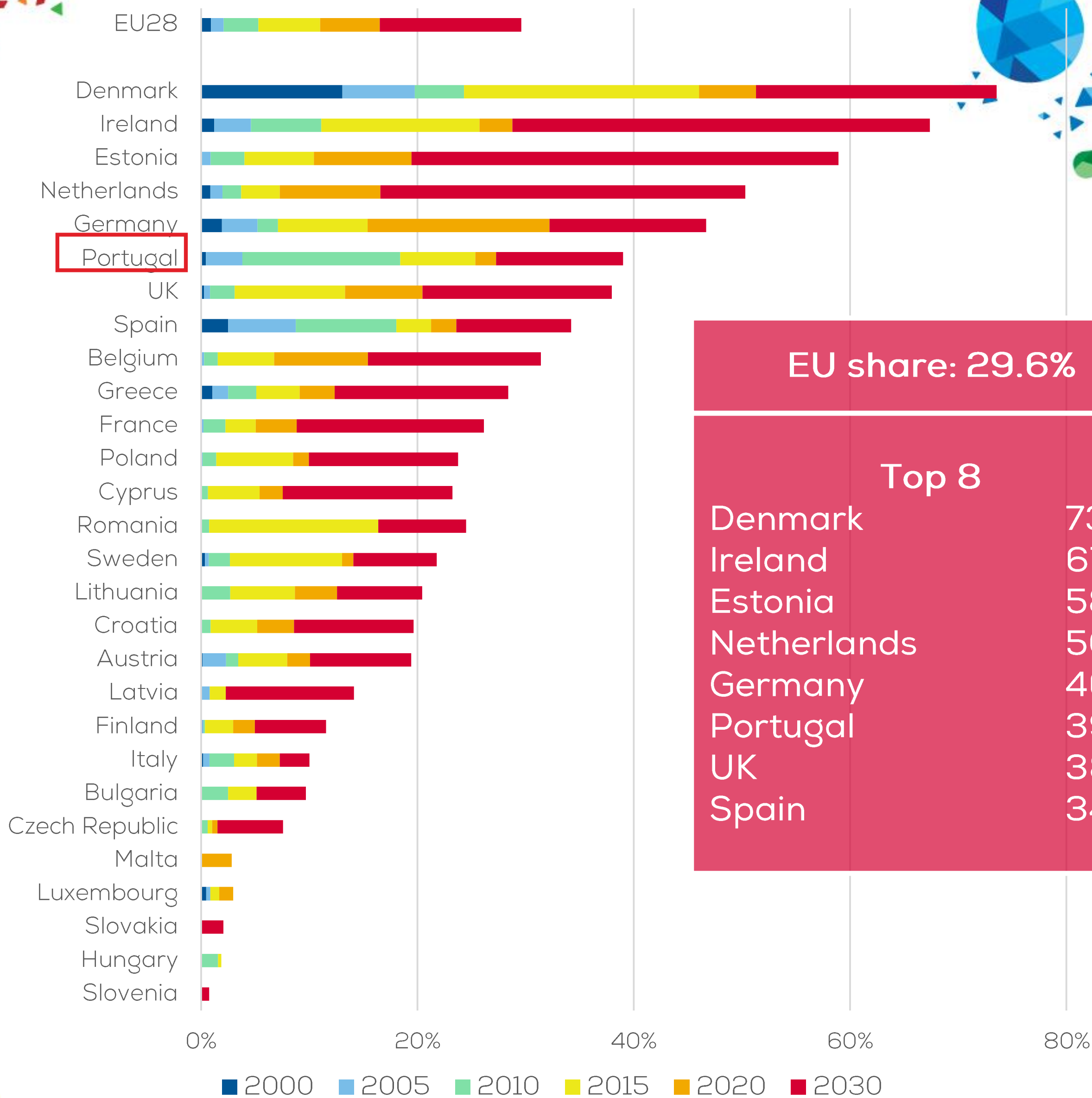


Central scenario

Cumulative installations by 2030



Share of wind in the EU's 2030 power demand



EU share: 29.6%

Top 8

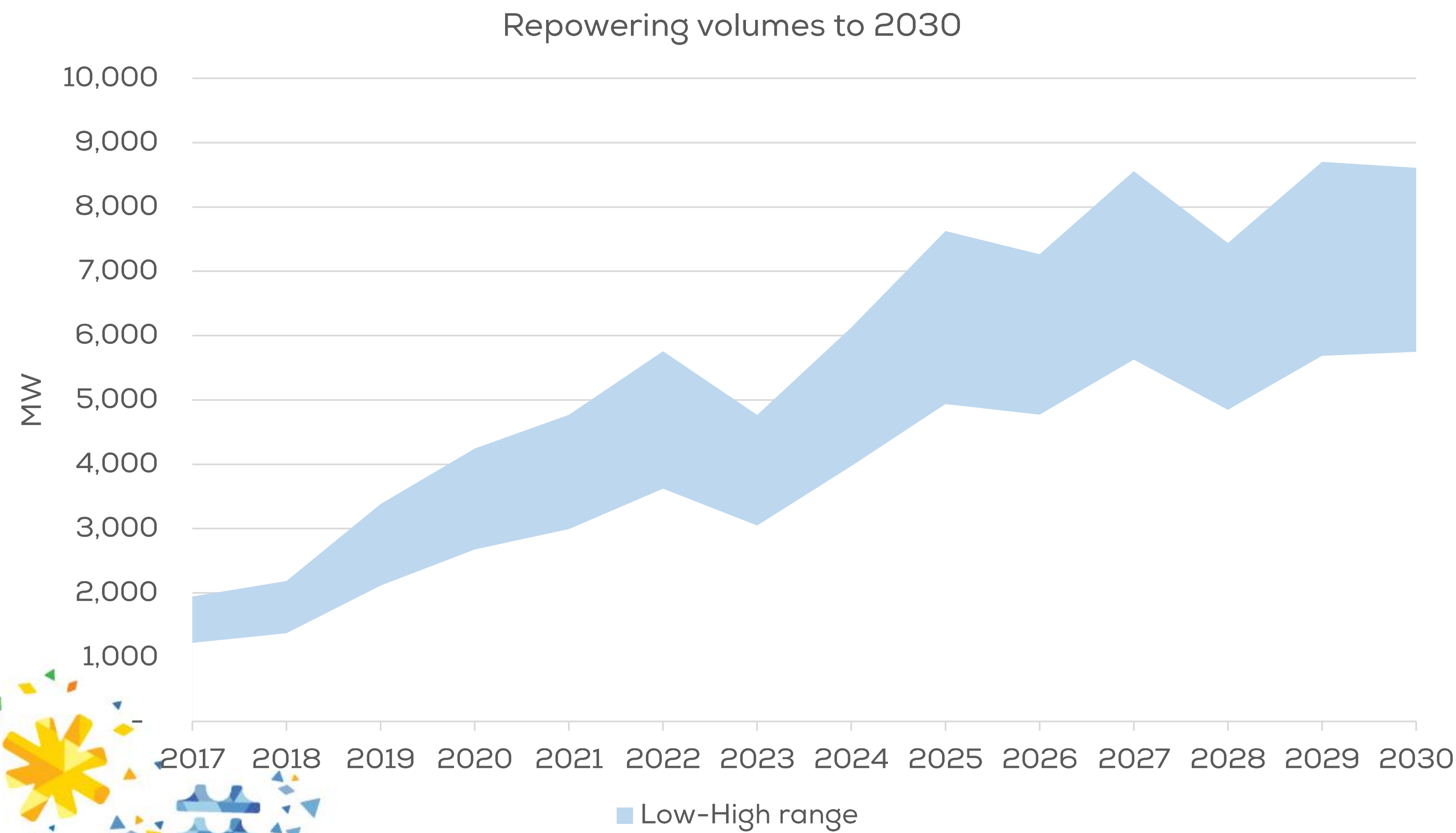
Denmark	73%
Ireland	67%
Estonia	58%
Netherlands	50%
Germany	46%
Portugal	39%
UK	38%
Spain	34%

2030 macro-economic benefits

- EU power demand: 10.4% → 29.6%
- Avoided fossil fuel imports: €5bn → €13.2bn
- Avoided CO_2 emissions: 166 MT → 382 Mt
- Jobs: 330.000 → 569.000

All this generates €239bn of investments

Opportunity: End-of life

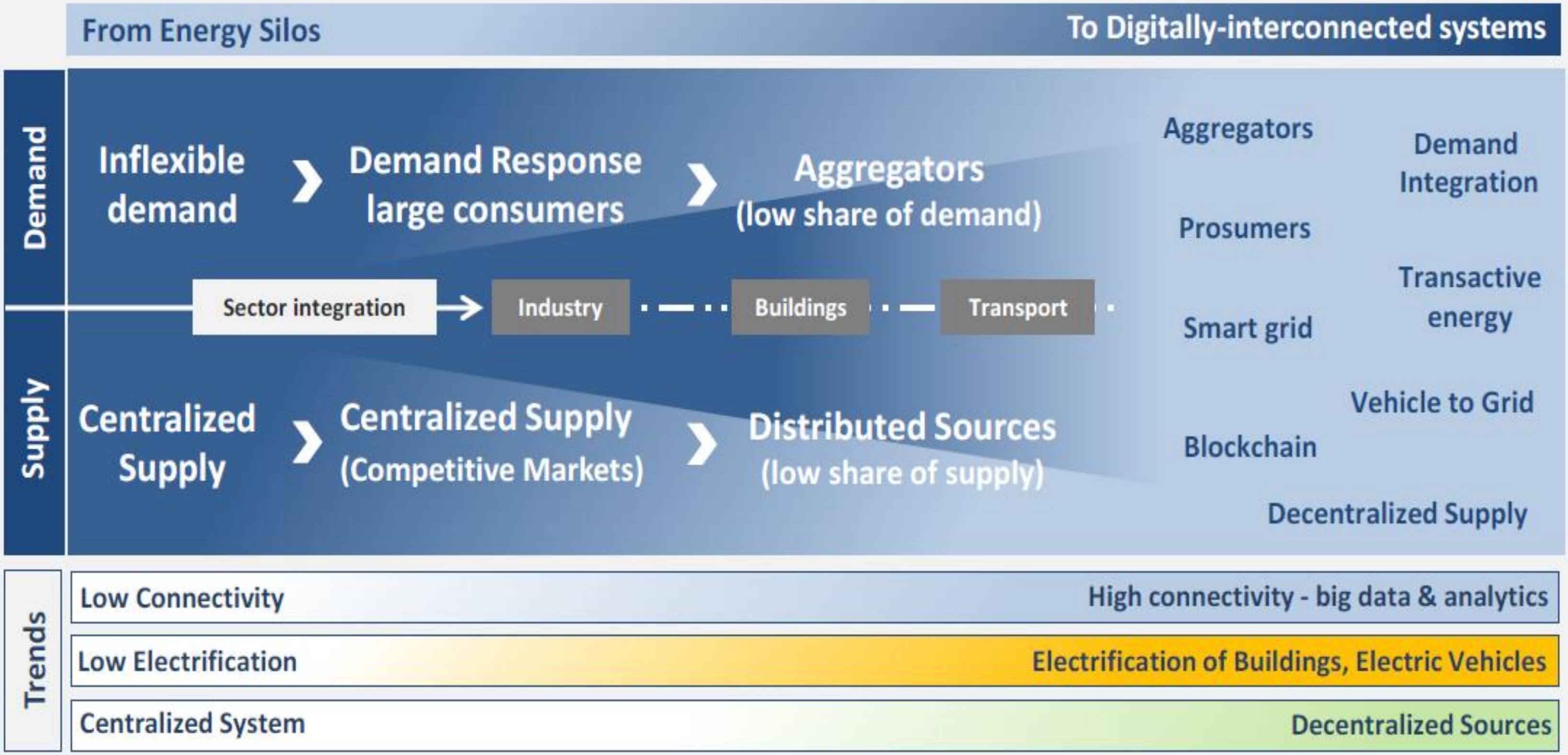


Opportunity: Floating

- **10** floating wind projects in EU
- **350 MW** of installed capacity by 2021
- **TRL 7 to 9 -** A proven technology
- **€40-60/MWh by 2030 –** Statoil figures

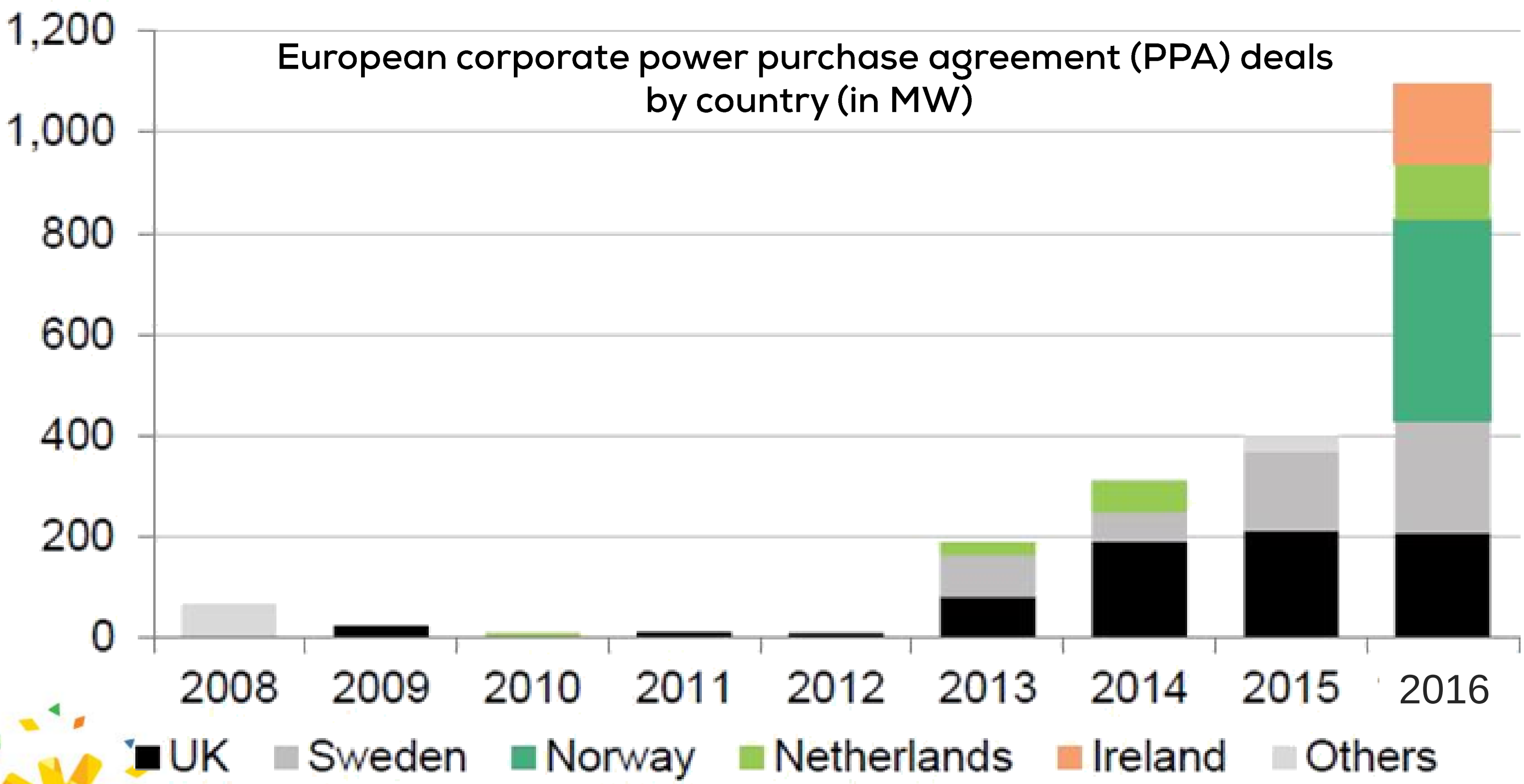
Source: WindEurope

Opportunity: Digitalisation



Source: IEA

Opportunity: PPAs



Source: BNEF, 2016

RE-Source 2017

Clean Energy Package timeline

Jul	Aug	Sep	Oct	Nov	Dec

tbc

Amendments & compromise amendments	Votes in ITRE Committee
Text negotiations in Energy Working Party	General approach MDI / REDII (tbc)

EU2017.EE

Jan	Feb	Mar	Apr	May	Jun

Vote in plenary (tbc)	Start of trilogues
General approach GOV (tbc)	Start of trilogues

Portuguese support needed

- **Priority dispatch** for *existing* RES

- **3 years visibility** for renewables support

- Clear and ambitious **National Energy and Climate Action Plans**

- Clear design rules for RES support mechanisms including **technology specific tenders**

- Clear rules for **Guarantees of Origin** to help corporate PPAs

Key MEPs

J. Ferreria

C. Zorrinho

Wind EUROPE

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2017 28-30 NOVEMBER **AMSTERDAM**

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