

# Making green energy affordable

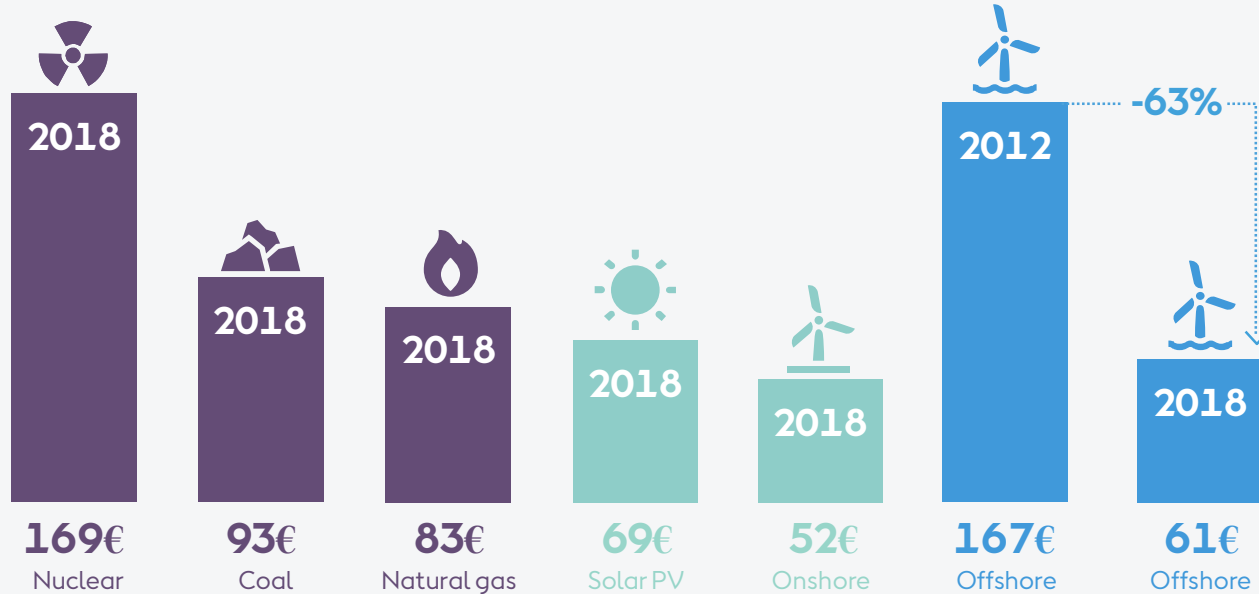
How the Offshore Wind Industry matured – and what we can learn from it

 Orsted

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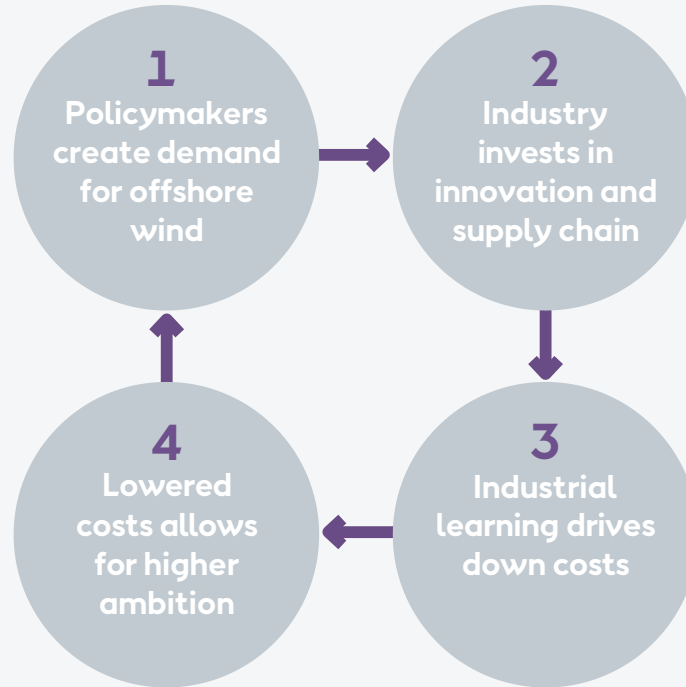
# In just six years, newly built offshore wind has become cheaper than black energy

Levelised cost of electricity for different energy (LCOE).  
EUR/MWh, 2018 prices, North Western Europe<sup>1</sup>



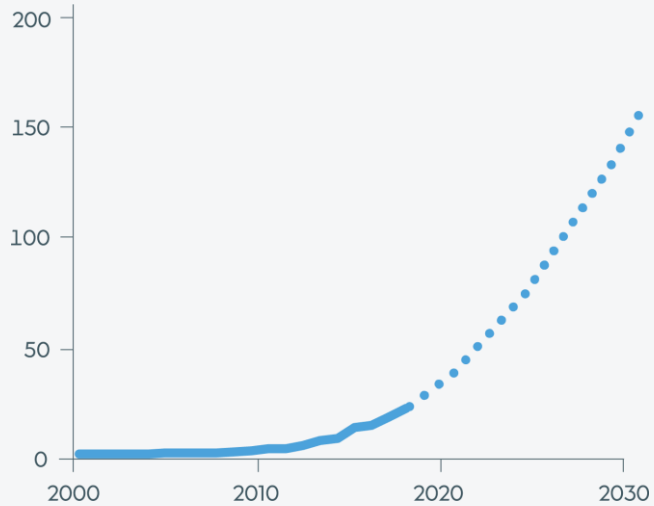
1. Source: Bloomberg New Energy Finance / Ørsted

# The Ambition Loop for offshore wind energy

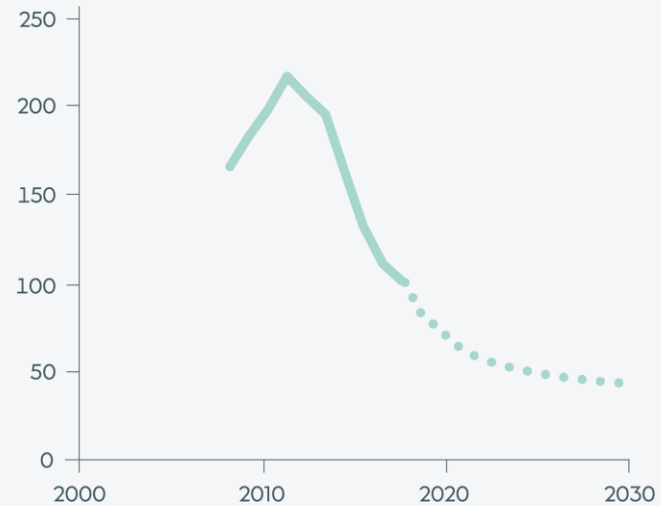


# As more offshore wind capacity is installed, costs are decreasing

**Global installed offshore wind capacity**  
GW



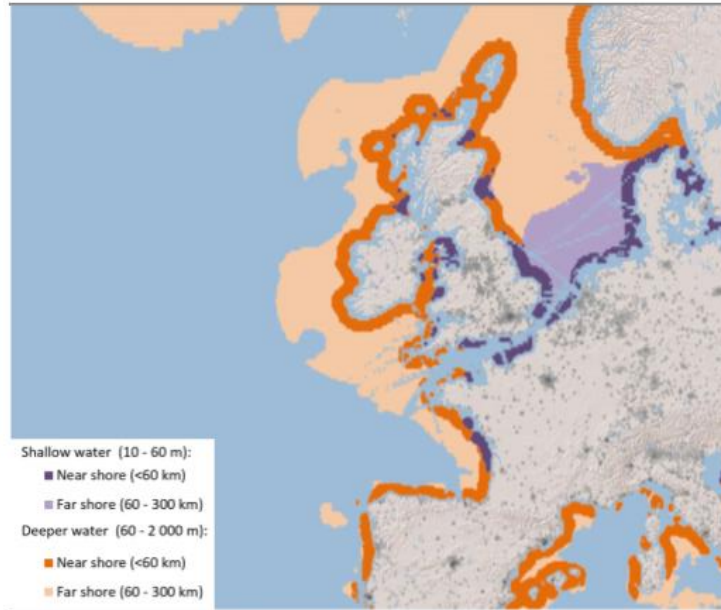
**Global LCOE benchmark**  
EUR per MWh



Source: Bloomberg New Energy Finance

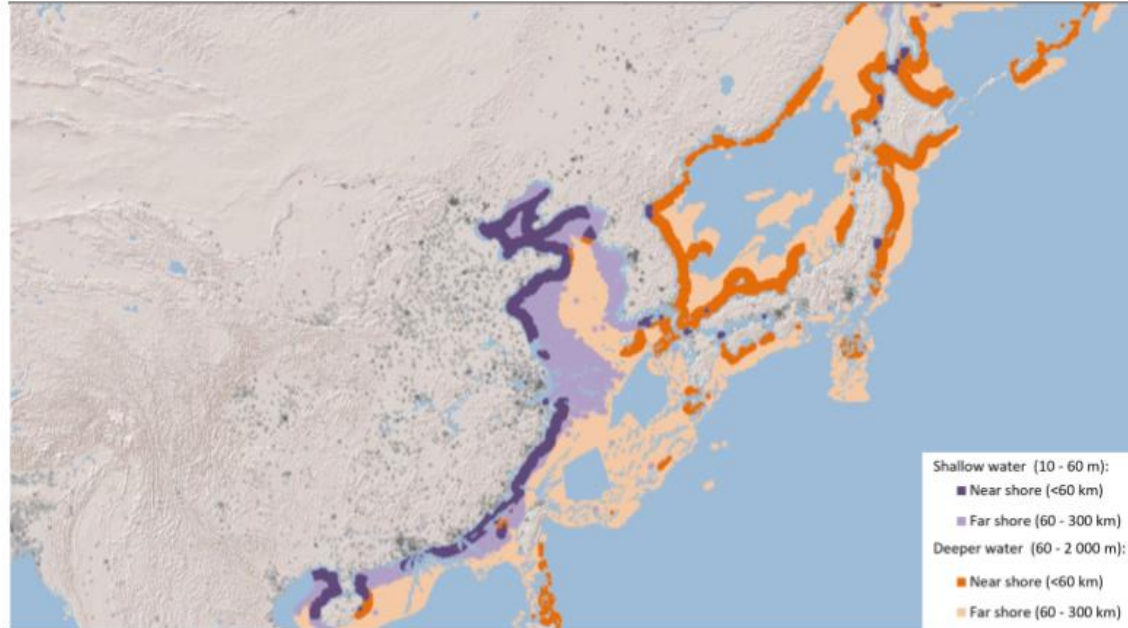
# Global Offshore Wind Energy potential areas

**Figure B.7** ▶ Offshore wind technical potential map for Europe



Note: Inland dots depict population density of more than 500, 2 000 and 8 000 people per km<sup>2</sup> with darker shades of grey.  
Source: IEA analysis developed in collaboration with Imperial College London

**Figure B.8** ▶ Offshore wind technical potential map for East Asia



Note: Inland dots depict population density of more than 500, 2 000 and 8 000 people per km<sup>2</sup> with darker shades of grey.  
Source: IEA analysis developed in collaboration with Imperial College London

# Create a home-market for floating and/or "just" tap into the current market

## Creating a home-market, where floating solutions can be developed

The maturation of offshore wind has taken place over four distinct phases. Each has contributed uniquely in maturing the industry.

### Key questions for policymakers, looking to include OWE in energy mix:

1. How to reach critical mass of the buildout
2. What role can developers and other actors play
3. How to design the right support scheme
4. How to capture a potential for regional coordination of buildout plans

### What we can learn

Bottom-fixed offshore wind energy, onshore wind energy and solar, will become the cornerstone in powering the world entirely on green energy.

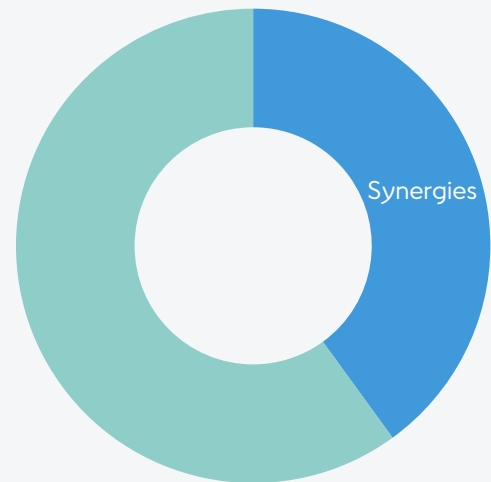
New technologies like floating will increase the potential of offshore wind energy and is likely to be needed to decarbonise according to the Paris Agreement.

This requires the right collaboration between governments and industry.

The maturation of bottom-fixed offshore wind energy is instructive.

IEA estimates in the Offshore Wind Outlook 2019:

- 40% of the full lifetime costs of a standard offshore wind energy project have significant synergies with the offshore oil and gas sector
- The market opportunities are between \$400 – \$550bn globally going forward



# Questions

