Offshore wind, Net Zero, a global opportunity

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Vice Chair Climate Change Committee

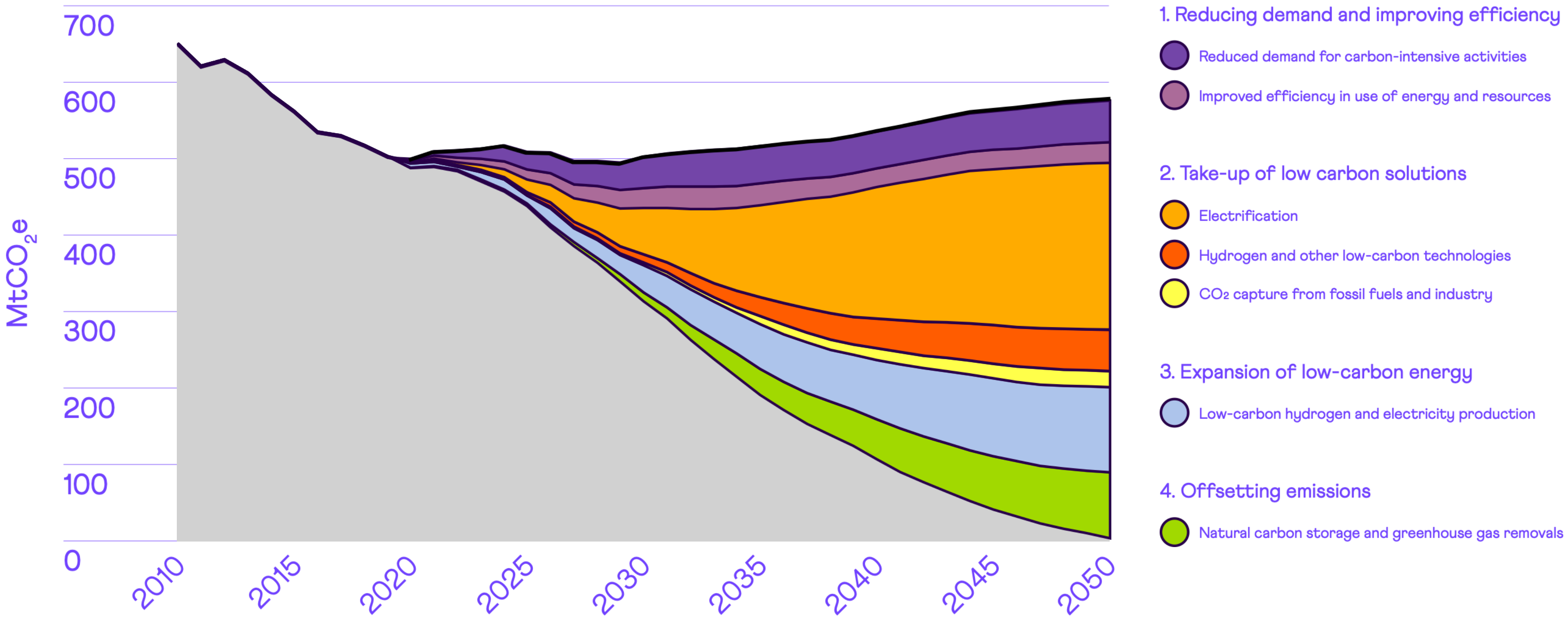
Champion for the Offshore Wind Sector Deal

Chair The Carbon Trust

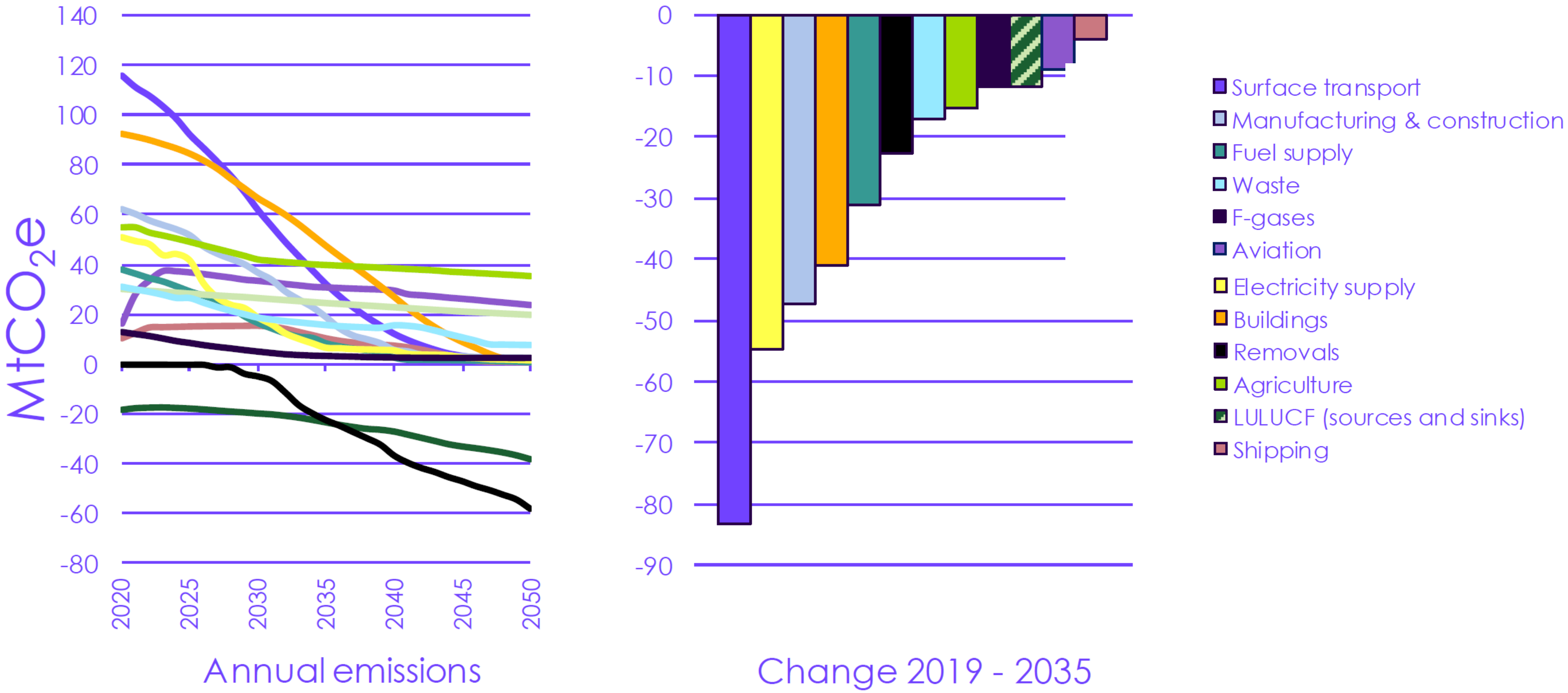
Offshore wind and Net Zero

Emissions abatement

Meeting the Sixth Carbon Budget requires actions across four key areas

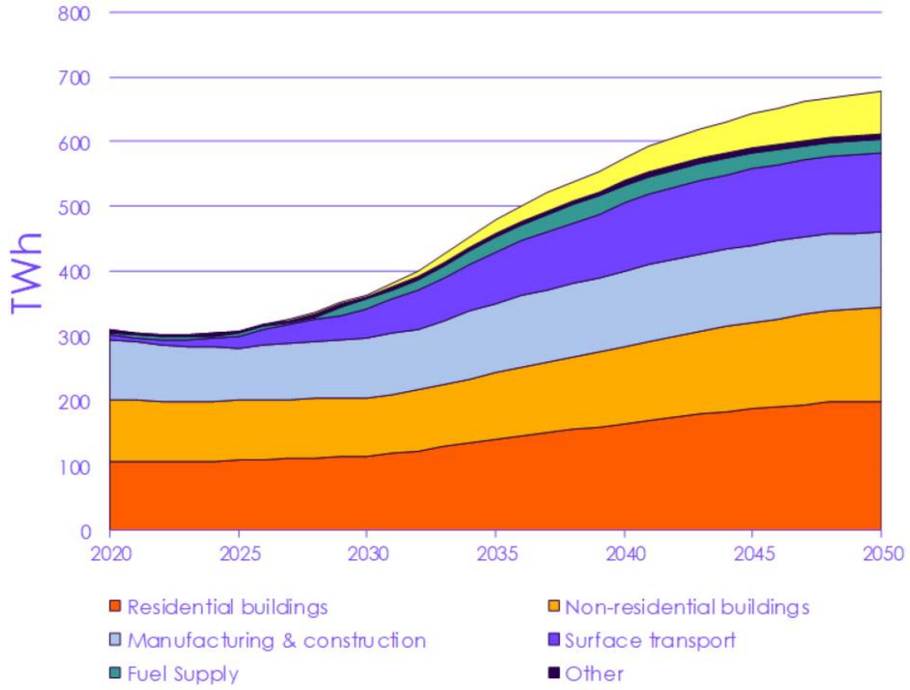


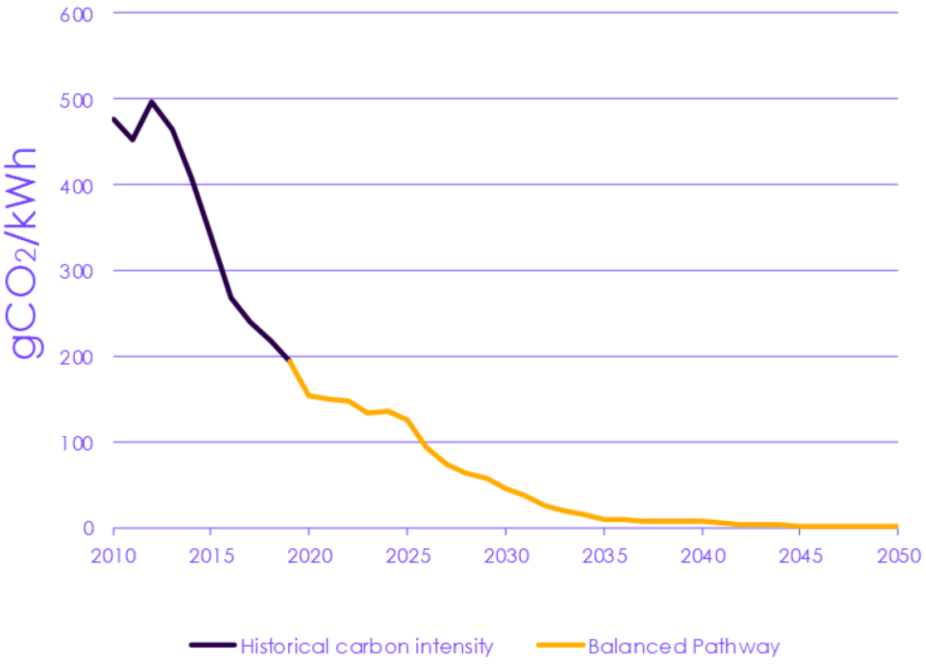
Sectoral emissions
Balanced Pathway



Sectoral emissions

Balanced Pathway: electricity demand and carbon intensity





Net Zero Balanced Pathway

Electricity generation

Doubling of electricity demand:	300TWh in 2019	610TWh in 2050
Carbon intensity of supply:	220gCO_2/kWh	2gCO_2/kWh
% variable renewables:	60% by 2035	80% by 2050

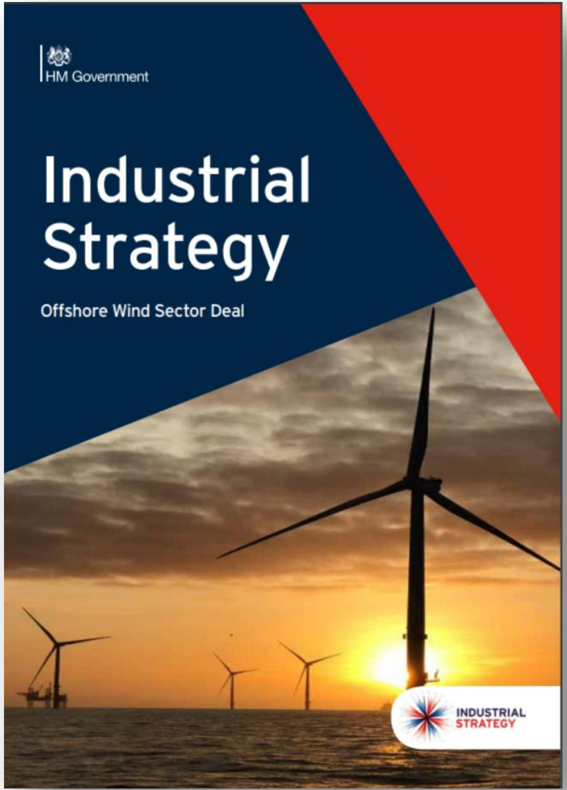
- Wind generation by 2050: 435TWh from 125GW
- Offshore wind by 2050: 95GW

- Additional 120TWh ‘surplus’ generation for hydrogen production

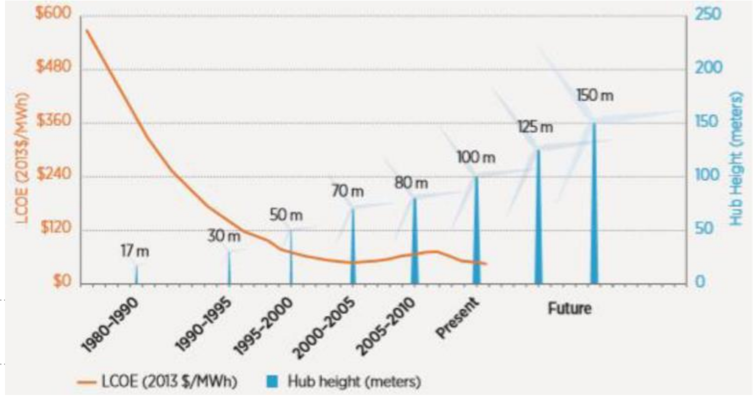
Offshore wind in the UK

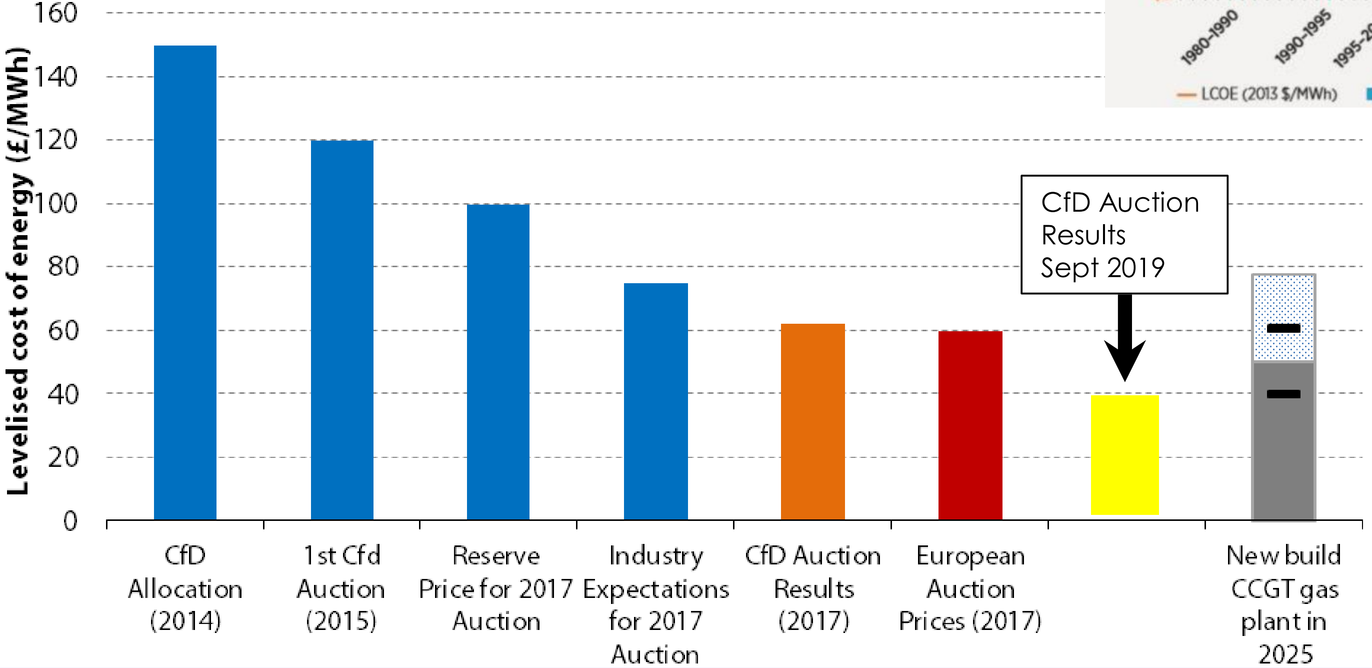
UK: a 20 year history of offshore wind

- First offshore windfarm: 2000
- 2020: 31 offshore windfarms
- Cost reduction: £150/kWh to less than £40/kWh
- OSW: one of the fastest growing industries in the UK
- UK leading global market: 10GW operating, 40GW by 2030
  - consistent Government policy
  - supply chain growth and cost reduction
- Ongoing partnership between Government and industry:
  - Industrial Strategy for OSW launched in 2013
  - Offshore Wind Industry Council established with Ministerial co-chair
  - Offshore Wind Sector Deal published 2019
  - key to the success of OSW and supply chain growth
- UK content of windfarms 48% in 2017, aiming for 60% by 2030



UK OSW auction results





Climate Change Committee

CfD Auctions
Every 2 years

£557 million available, bringing investment certainty for developers and supply chain

Which will deliver…

At least 30GW of offshore wind by 2030

£250m to support the UK Supply Chain: OSW Growth Partnership

£2.6bn/year exports

Regional clusters

Solutions to the integration puzzle

27,000 jobs, with targets for diversity

Strategic plan to address barriers to deployment

Transmission architecture for the future

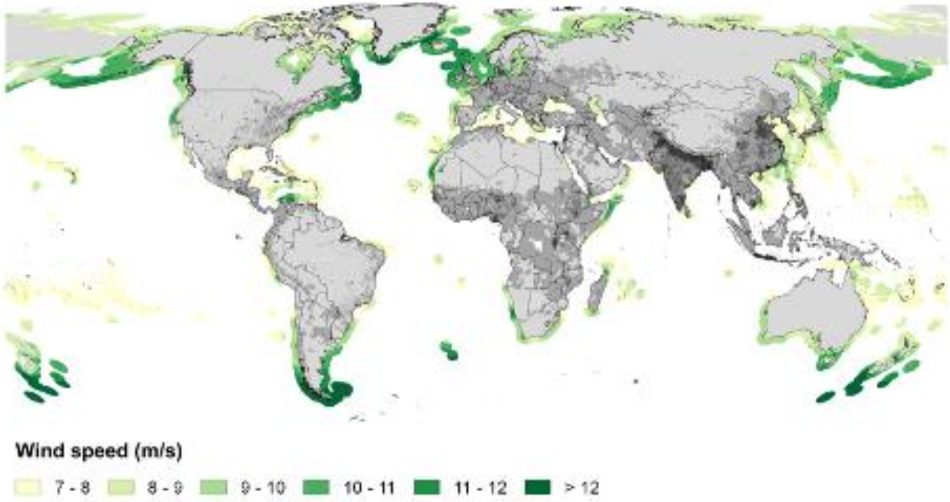
UK content up from 50% to 60%

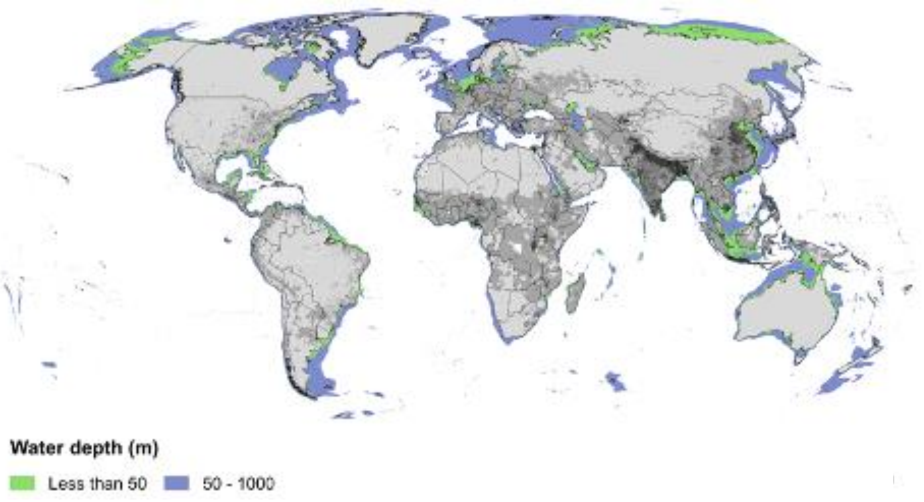
OffshoreWind IndustryCouncil

A global opportunity

Global opportunity

Global ambition: 1.4TW by 2050, 10% global electricity?





Long term potential for > 700GW in UK waters alone