



Oil & Gas
Authority

The UK Continental Shelf in Transition

Delivering net zero

Andy Samuel - Chief Executive

7 December 2021

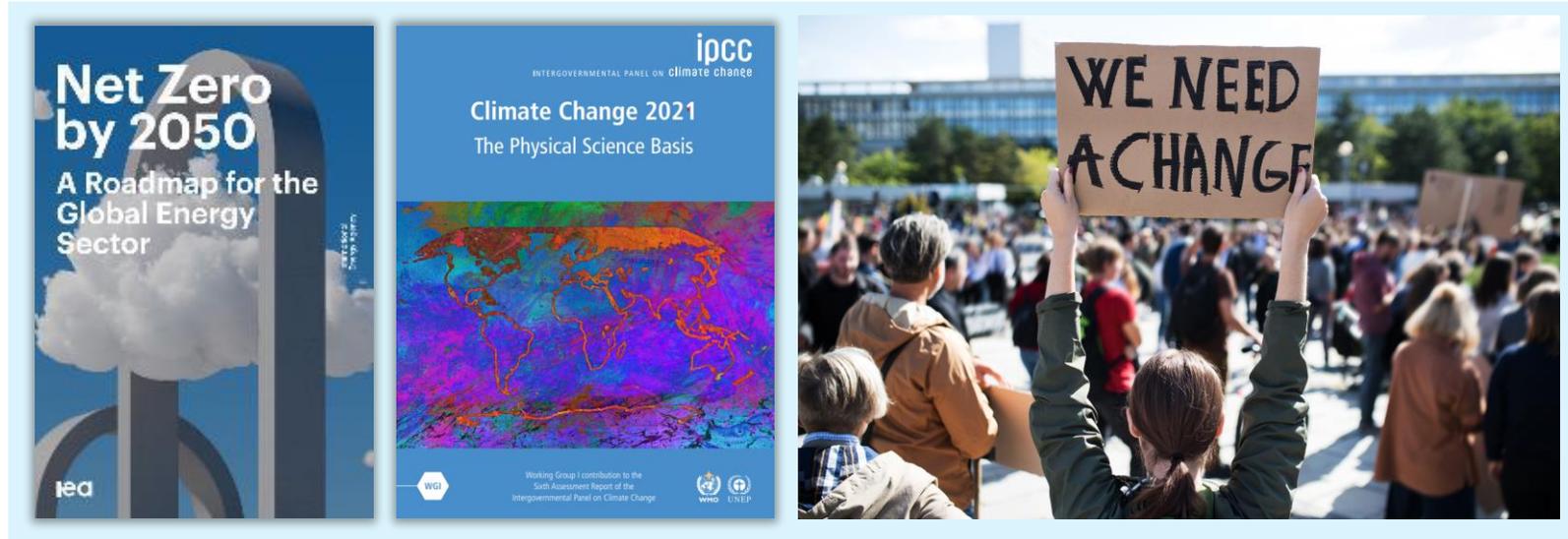
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Oil and gas under the spotlight



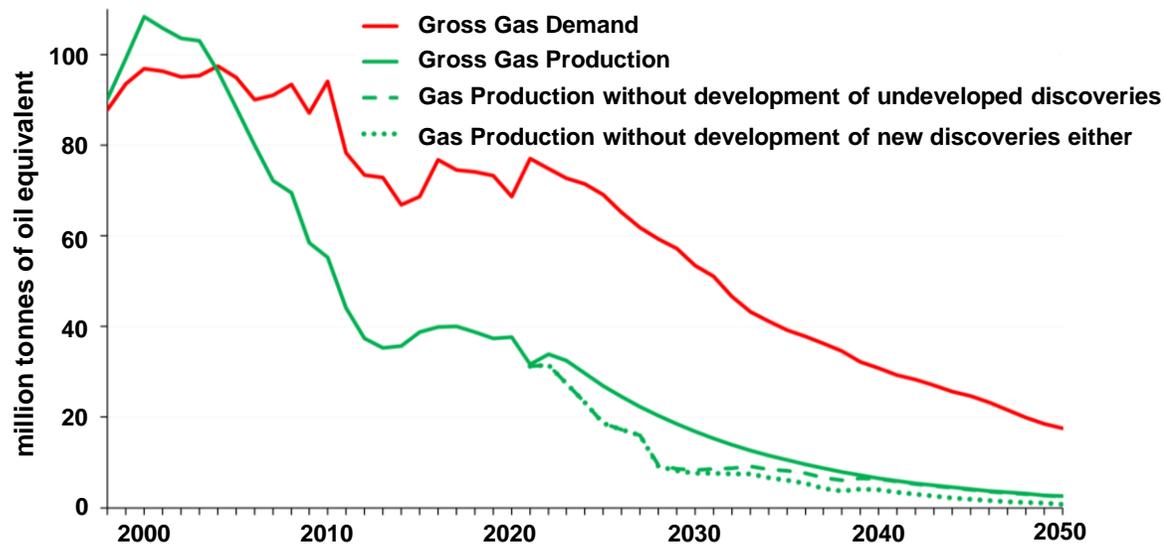
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Oil & gas meets
 c. **3/4**
 UK energy demand

-33%
 Reserves replacement

CCC Balanced Net Zero Pathway Demand and OGA Production projections



UK Gas Spot Price (UK GBP)



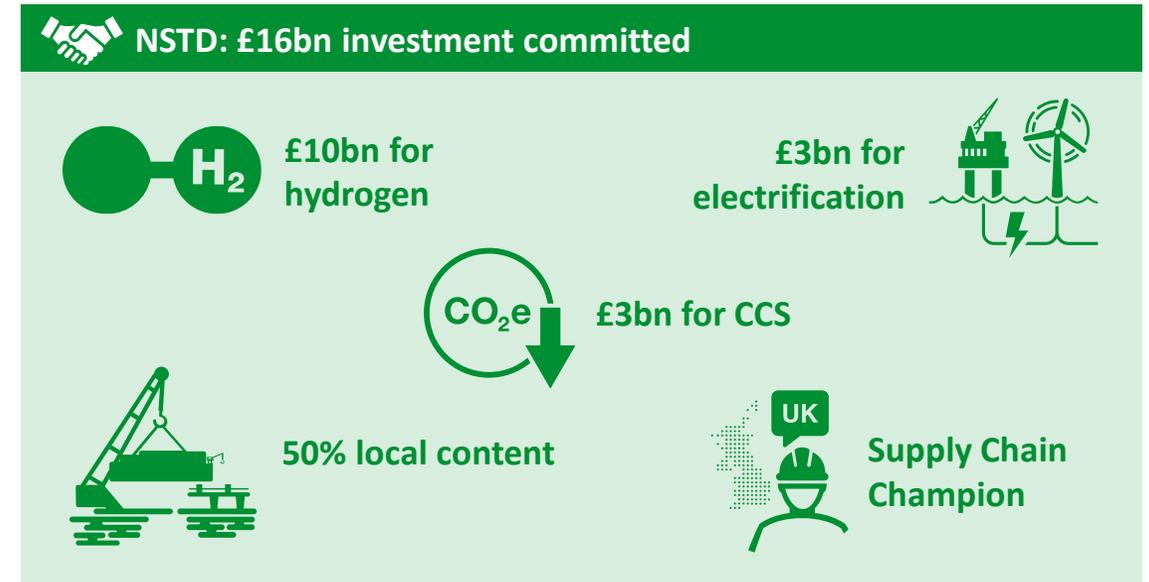
Source: ICE, US Energy Information Administration, ERCE Estimates

North Sea Transition Deal

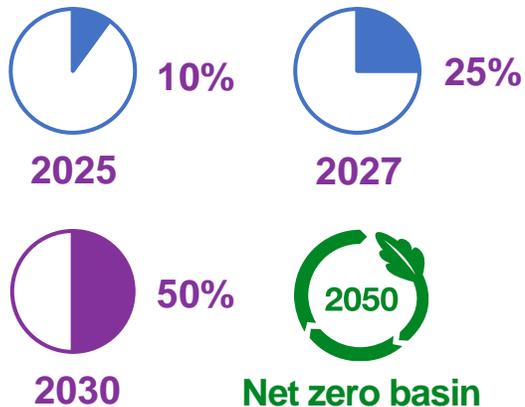


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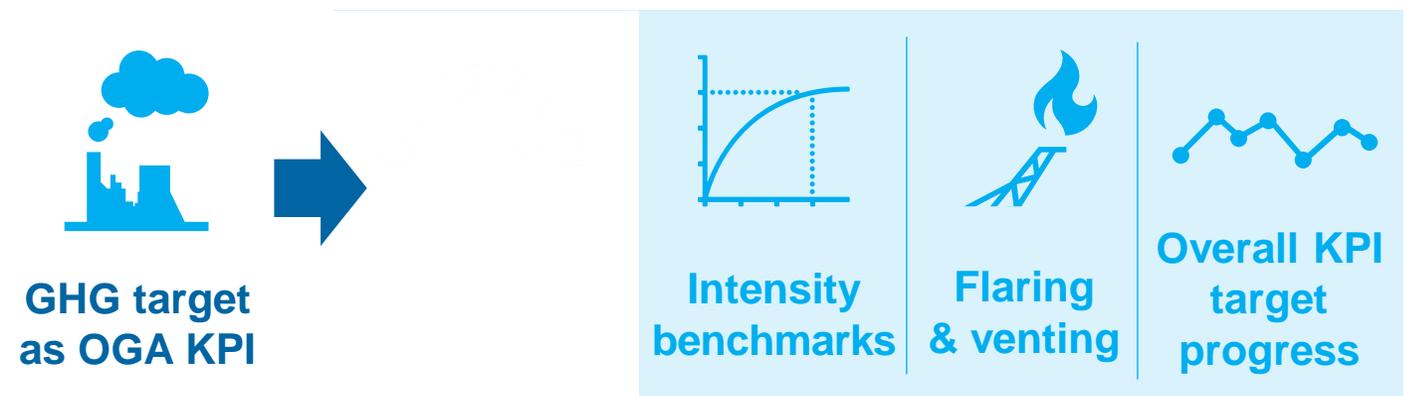
- Govt & industry commitment to transition
- First of kind for G7 country
- Future licensing climate checkpoint
- Quid pro quo



Industry commitment to reducing upstream GHG emissions



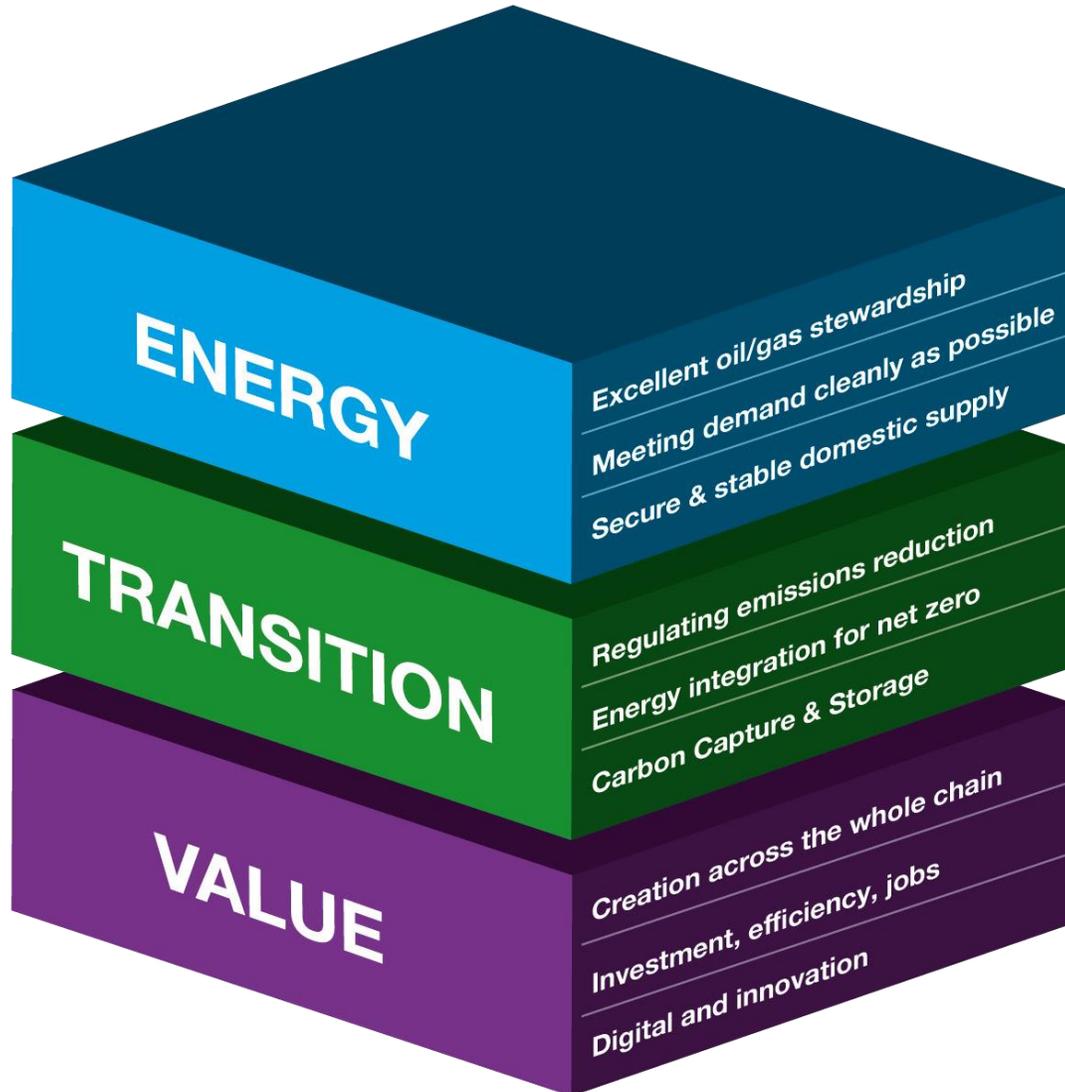
OGA tracking and monitoring progress



Our mission



Oil & Gas Authority



We regulate and influence the oil, gas and carbon storage industries. We help **drive North Sea energy transition**, realising the significant potential of the UK Continental Shelf as a critical energy and carbon abatement resource. We hold industry to account on **halving upstream emissions by 2030**.

We work with government, industry and other regulators to **accelerate the move to net zero** while meeting the UK's **energy demand and security**. We perform an effective net zero test and will not approve developments unless they pass it.

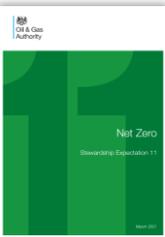
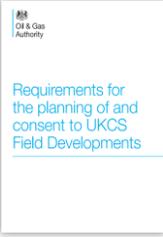
We aim to be a **value creator** in everything we do, encouraging and enabling economic benefit and **job creation** across the UK. We drive greater efficiency through **inclusive leadership**, data, analysis, stewardship and the use of our powers.

Good business – not business as usual



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Framework

 <p>The OGA Strategy</p>	 <p>OGA Strategy</p>	 <p>Corporate Governance Consultation</p>	 <p>Corporate Governance</p>
 <p>"Delivering the 'E' of ESG" reporting</p>	 <p>ESG</p>	 <p>Net Zero Stewardship Expectation 11</p>	 <p>Net zero expectation</p>
 <p>Requirements for the planning of and consent to UKCS Field Developments</p>	 <p>New fields</p>	 <p>Flaring and venting guidance</p>	 <p>Flaring & venting</p>

OGA interventions & industry effort



22%

Annual reduction in flaring volume



10%

Annual reduction in CO2 emissions



983,000

tonnes CO2 avoided YTD



80%

OGA PE target retained



11.2/boe

Unit operating cost

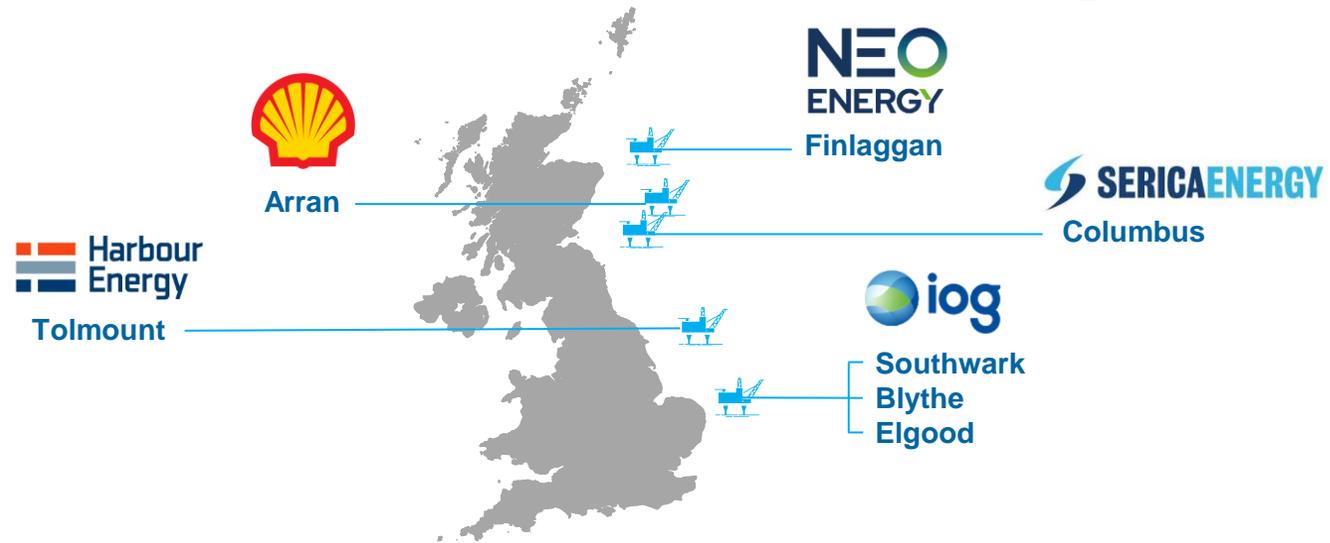


23%

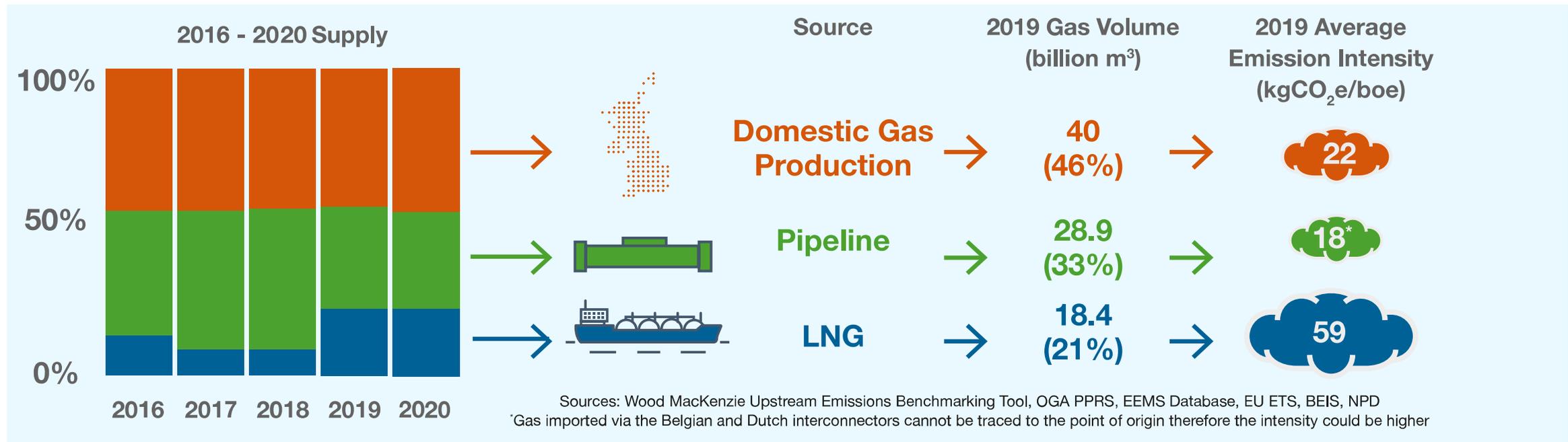
Decom cost reduction since 2017

Importance of UK domestic gas supply

7 New gas/condensate fields expected/onstream in near future

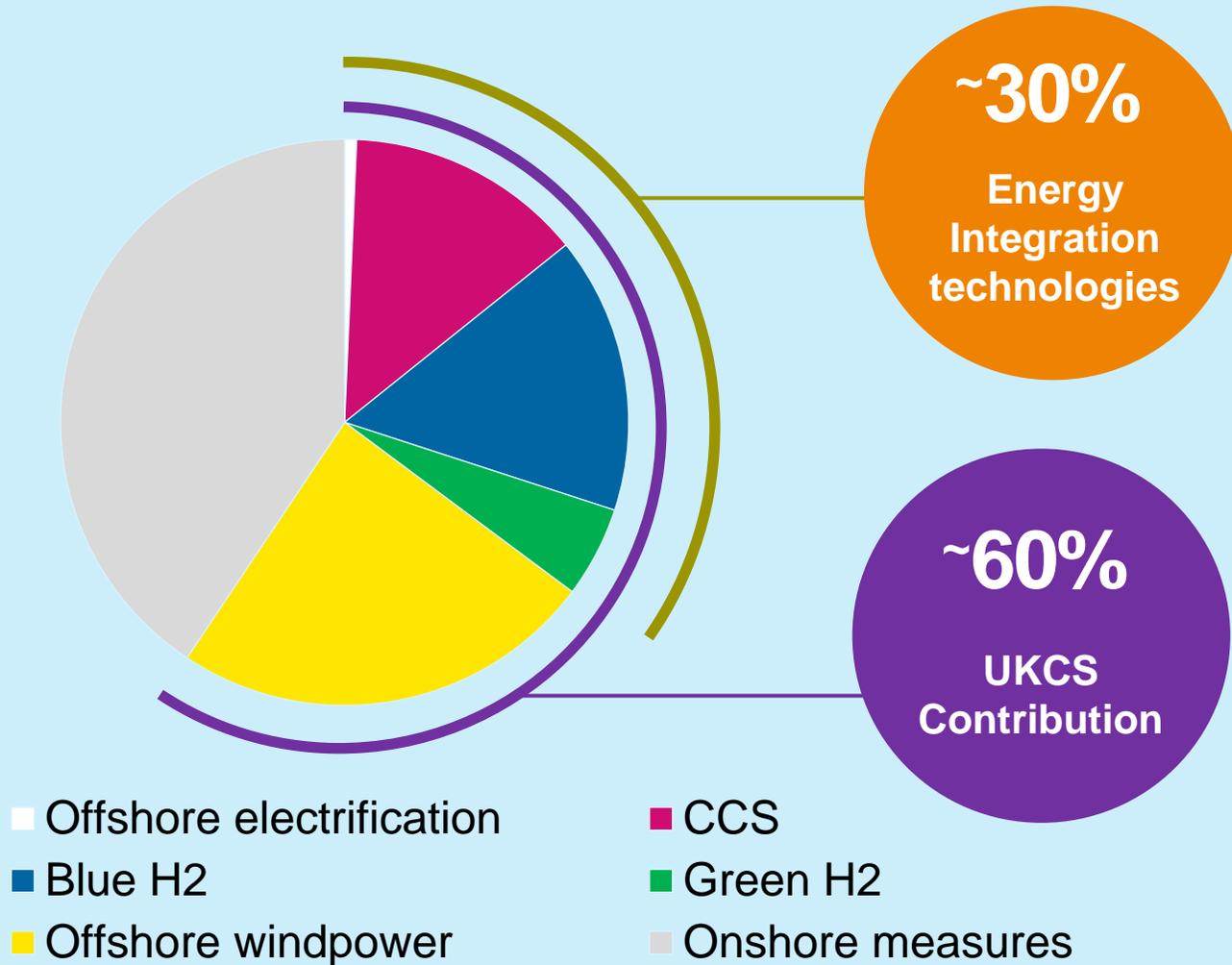


UK's gas supply by origin



Offshore contribution to UK net zero

2050 net zero emission abatement from 2018 baseline



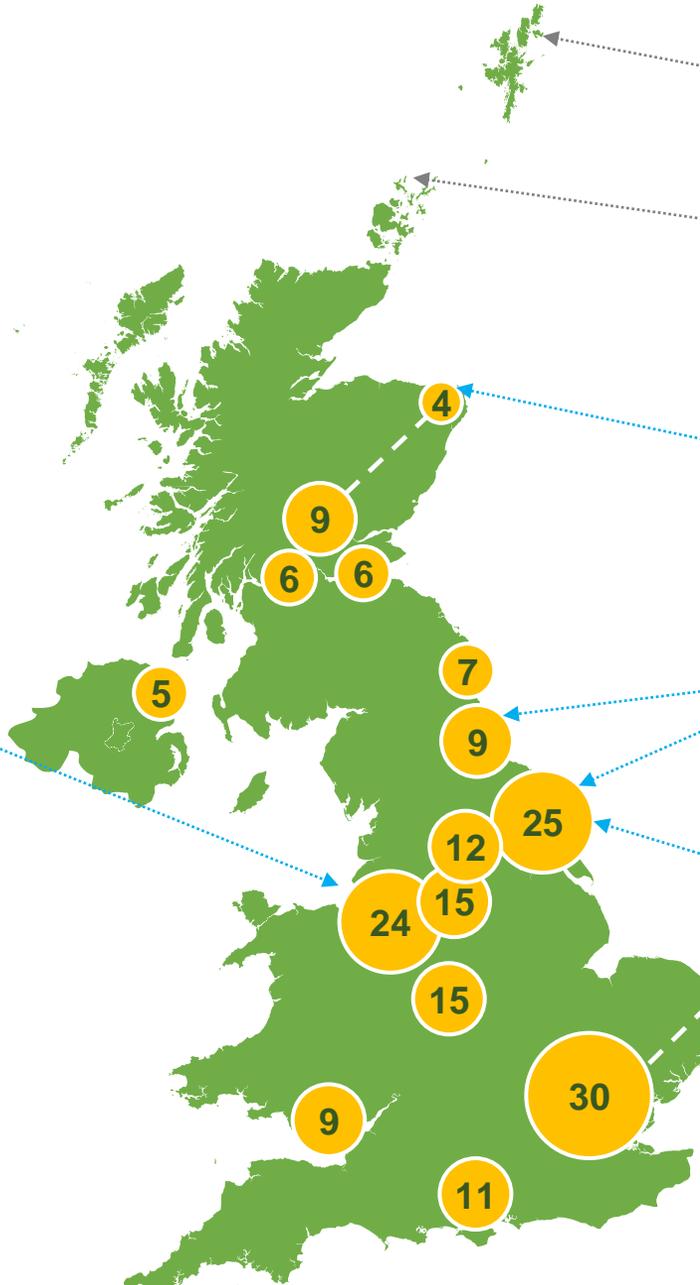
Growing number of energy integration projects

Onshore CO₂ emissions

15 largest UK emitters (areas with 30km radius)



Source: NAEI 2019 data, OGA analysis
 Note: total CO₂ emissions on the map account for ca.186 mtCO₂ (~40% of UK total)



Northern Horizons
 10GW floating wind
 Green hydrogen, synthetic fuel, ammonia

ORION
 Shetland renewable energy hub

Flotta H2 Hub
 RJDG MACQUARIE TotalEnergies REPSOL SINOPEC

Acorn
 2 Mtpa mid 2026 (with blue H₂);
 7 Mtpa by 2030
 Re-uses existing infrastructure

East Coast Cluster (Teesside, Humber and NEP)
 4 Mtpa from 2026
 10+ Mtpa by 2030
 3.3GWe hydrogen production capacity

V Net Zero (Humber)
 3.6 Mtpa from 2027
 11 Mtpa by 2030
 Re-uses existing infrastructure

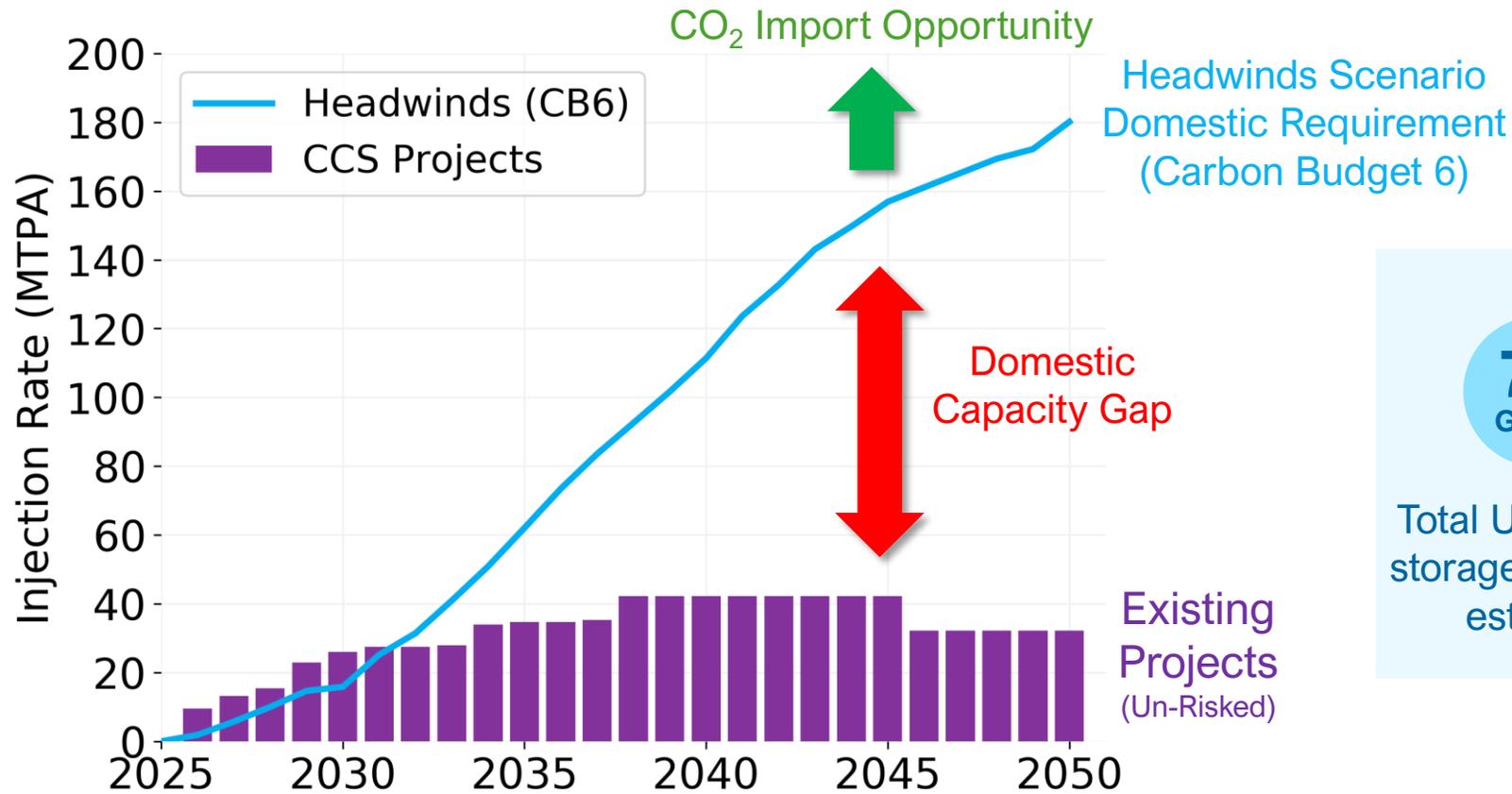
Bacton Hub
 Early stage, potential for H₂ supply into London area
 Oil & Gas Authority nationalgrid

Hynet
 1 Mtpa from mid 2025;
 3+ Mtpa by 2030 (with blue H₂)
 Re-uses existing infrastructure

Offshore net zero projects (ongoing)

- OGA awarded CCS licences
- Further projects
- CCS
- CCS / Blue H₂
- Green H₂
- Re-use/repurposing
- Electrification/wind integration

CCS – the time is now



78
GtCO₂

Total UKCS CO₂ storage resource estimate

75-175
MtCO₂

CCC estimate requirement in 2050



Spatial planning to high-grade future sites

Northern Endurance Partnership, Teesside



HyNet, North West England



Acorn, St Fergus

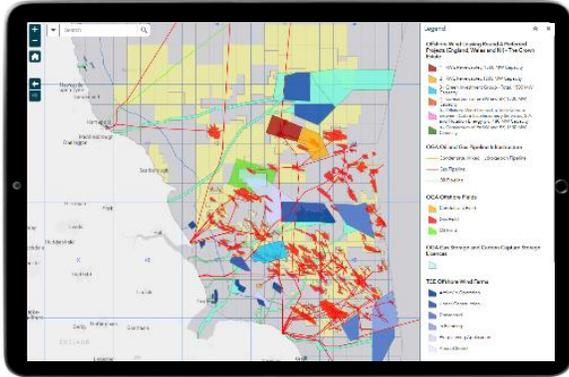


V Net 0, Immingham

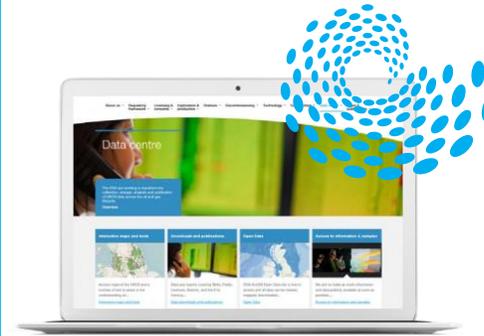


Power of data and digital

Geographic Information Systems



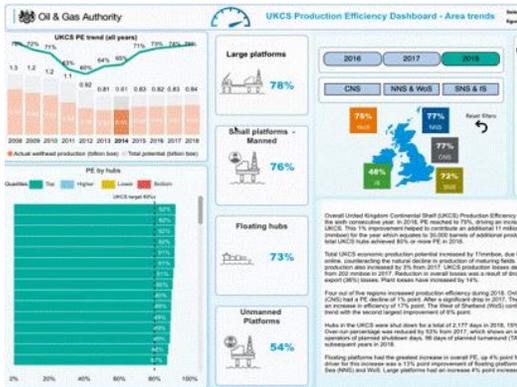
Digital Energy Platform



- Open to all
- Cloud based
- View & download data
- Integrated with other data sources
- Authoritative

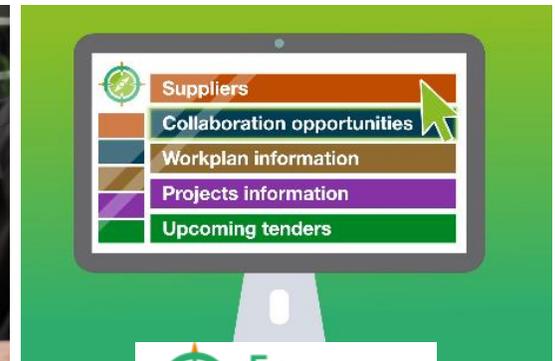
Insights

Data collected, analysed and disclosed to encourage action



Advancing the energy transition

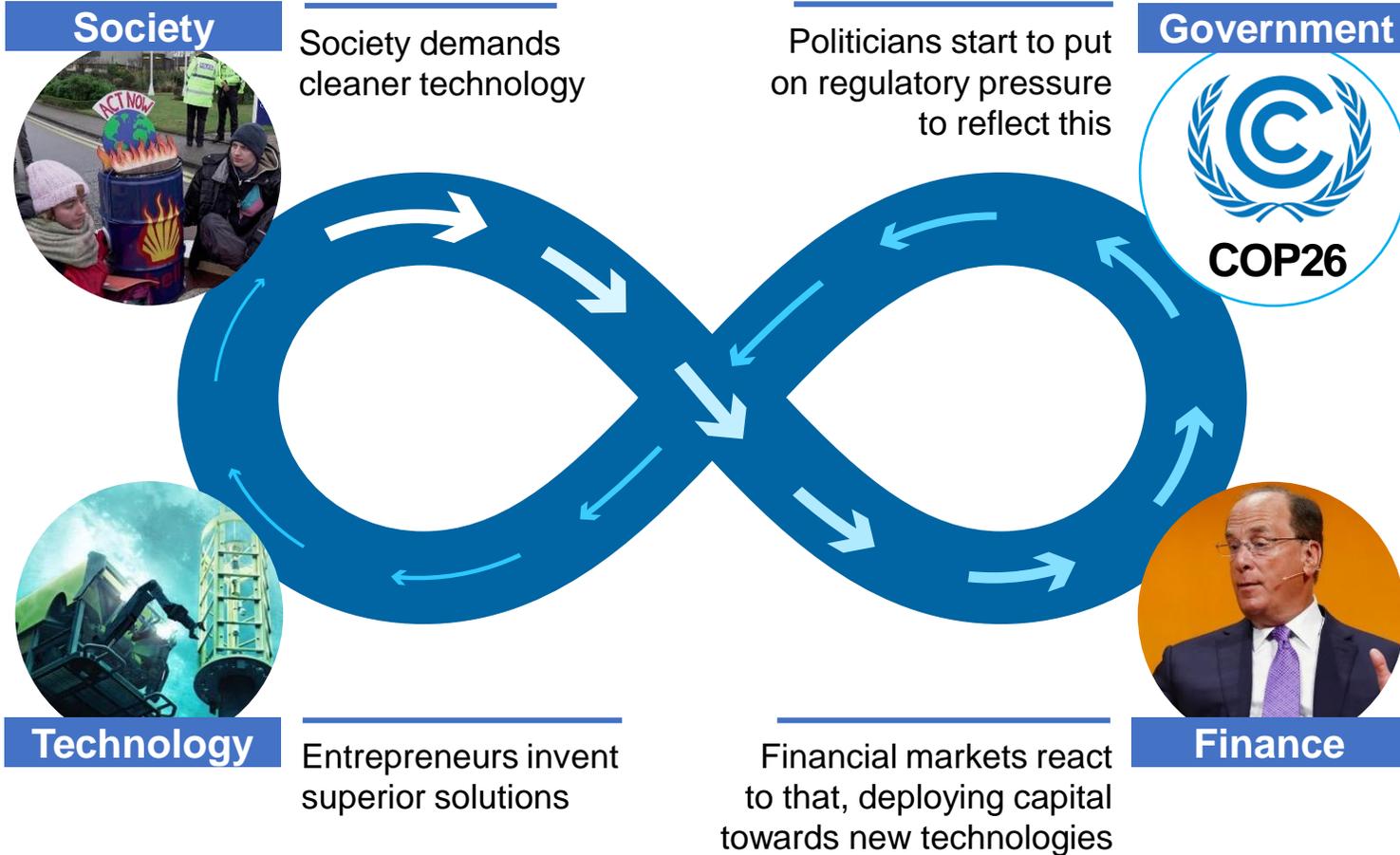
NDR and Energy Pathfinder providing transparency and visibility to unlock energy transition opportunities



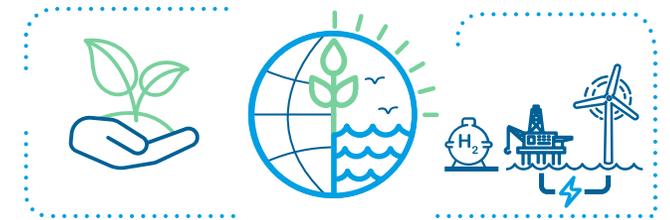
Leading with purpose



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Climate change – Loss of Biodiversity – Social inequality



Unique opportunity post pandemic green and just recovery



Requires whole systems approach and down to all of us



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Thank you
