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Strategic context of the UKCS – an integrated approach

Westminster Energy Forum

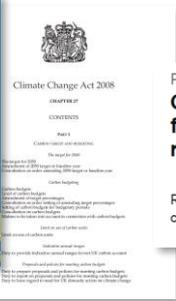
9 December 2020

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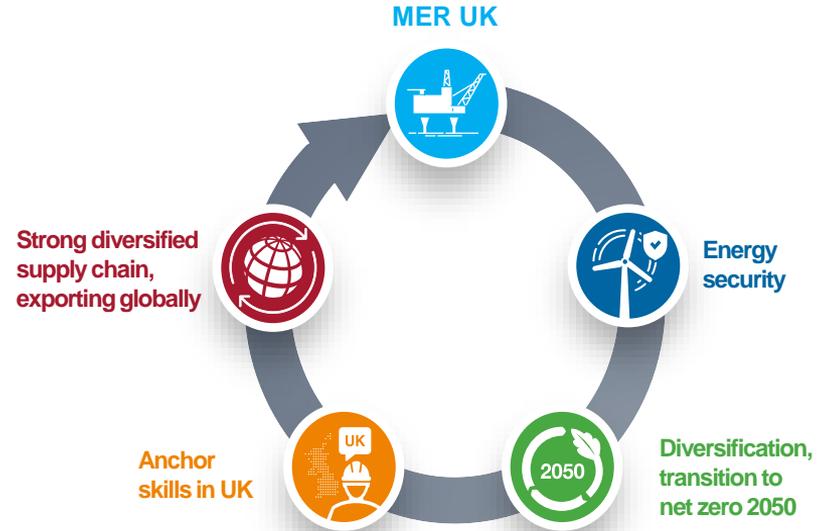
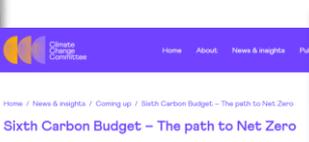
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The world is changing



Press release
Government launches review into future offshore oil and gas licensing regime

Review will form part of aim to lead the way on tackling climate change and achieving net zero emissions by 2050



Reinforcing our focus on net zero



Industry commitment to reducing upstream GHG emissions



OGA tracking and monitoring progress



Senior level engagement: net zero 'deep dives'

Carbon Capture and Storage



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OGA role

Licensing and permitting authority for offshore carbon storage – OGA issued first licence Dec 18

Maintain carbon storage licence public register

Encourage re-use as part of the OGA Cessation of Production process

Consultee to OPRED on operators' decommissioning plans

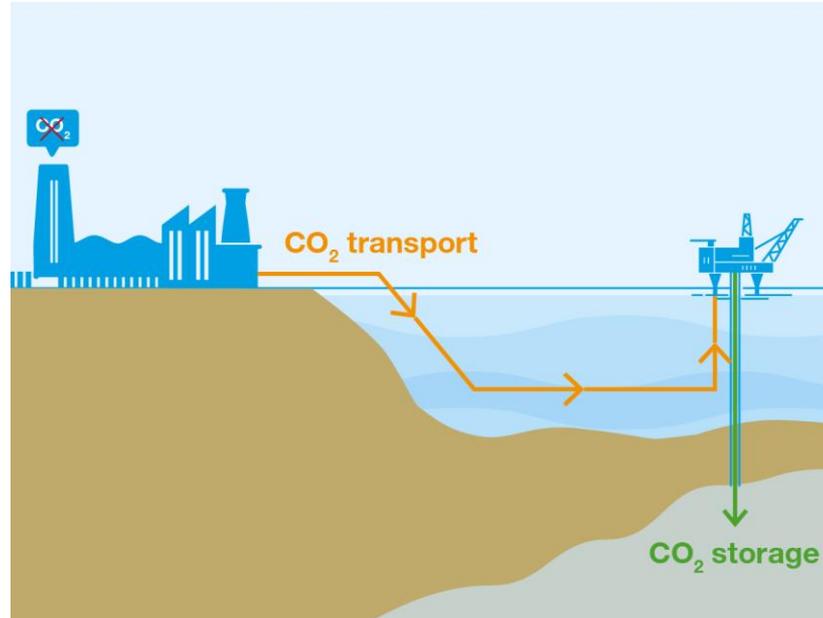
Exploring the role of CO₂ EOR

Working with government and industry

Supporting government and others to identify existing infrastructure with reuse potential for carbon capture and storage or hydrogen projects

Engaging with CCUS project developers

Guiding and stewarding developers and applicants through OGA processes



78
GtCO₂

total UKCS CO₂ storage resource estimate

75-175
MtCO₂

CCC estimate of annual requirement in 2050

10
MtCO₂

UK govt 2030 annual target (Ten Point Plan)



2020
progress

- Carbon storage licence to Eni project, Liverpool Bay
- Transfer of carbon storage licence to NG/BP/Equinor, Northern Endurance Partnership
- Received licence application Humber project

Energy integration: UKCS contribution to net zero

The UKCS is a critical energy resource which could play a significant role in achieving the net zero target



Led by



Oil & Gas Authority

In collaboration with



Department for Business, Energy & Industrial Strategy

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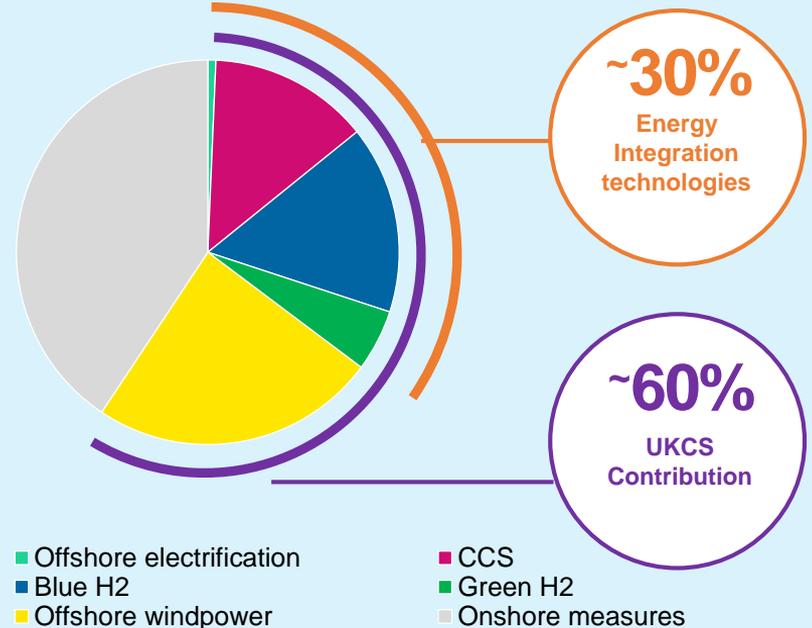
ofgem

Regulatory enhancements

Technical/economic feasibility

Continue into Phase 3

2050 net zero emission abatement from 2018 baseline
(Total = 450MtCO₂e pa.)



Energy integration: Summary



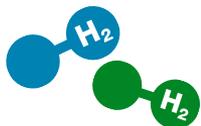
Offshore O&G installations emit ~10MtCO₂e p.a. to generate power (~10% of total UK's energy supply emissions). **Platform electrification** will be key to cutting upstream O&G emissions, and to the industry's social licence to operate.



Offshore electrification may unlock the **faster growth of renewables**, expansion of offshore transmission infrastructure, and establishment of **floating windpower** technologies in the UK, contributing to offshore renewables' **75GW capacity ambition** by 2050.



CCS is critical to achieving net zero **removing over 130MtCO₂** from UK's emissions. The UKCS has enough CO₂ storage capacity to fully support UK's needs and **oil and gas infrastructure** which can be reused.



Blue hydrogen can convert the UK natural gas supply to low-carbon fuel and accelerate the growth of CCS. **Green hydrogen** (electrolysis using renewable electricity) will be critical to support the expansion of offshore windpower in the 2030s and beyond.



Oil and gas **infrastructure, capabilities and supply chain** can support energy integration on the UKCS, contributing significantly to offshore renewables expansion and UK net zero.



Combining these technologies into **energy hubs, linked to existing and future onshore net zero clusters**, can accelerate deployment and improve project economics.

Energy integration: Actions and next steps

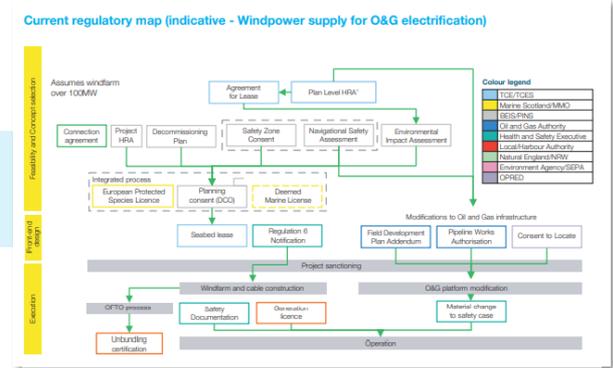


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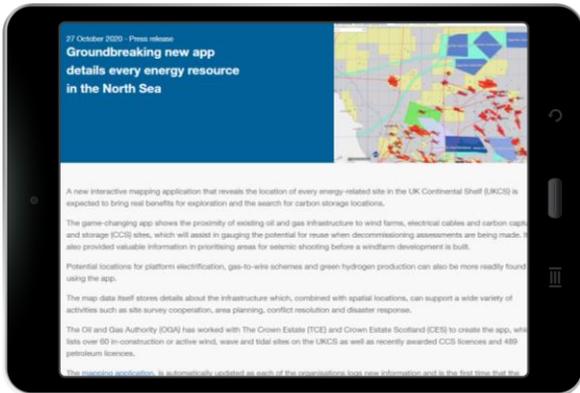


Action 1 support energy integration pioneering projects

Action 2 enhance regulatory coordination



Action 3 promote greater data availability and ease of access



Ramping up UKCS net zero projects

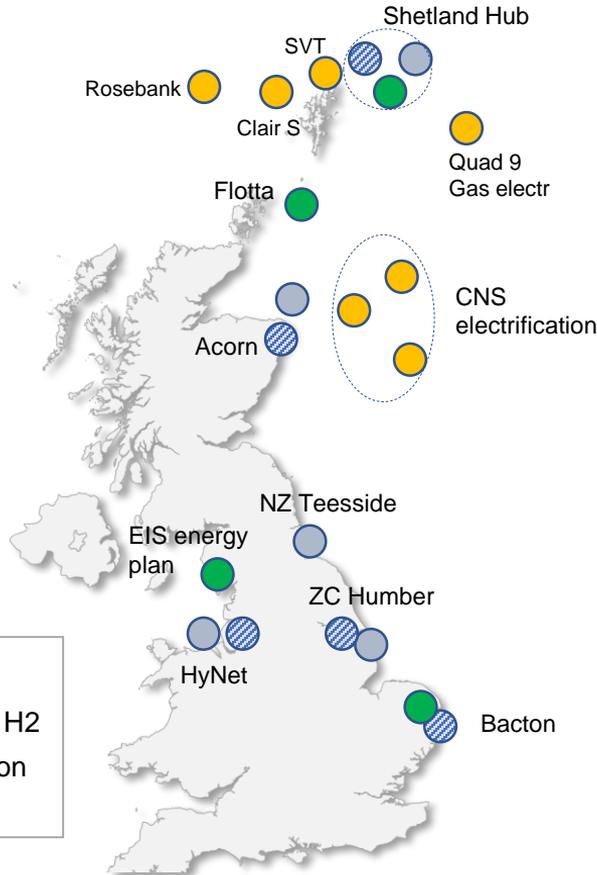


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Vision & potential pathways

Net zero indicative projects



- CCS
- CCS / Blue H₂
- Electrification
- Green H₂

2025	2030
Offshore Electrification	
<ul style="list-style-type: none"> • >1 electrification scheme from windfarms operational in CNS • >2 greenfield electrifications (shore/wind) sanctioned in WoS 	<ul style="list-style-type: none"> • 3MtCO₂ pa emission reductions • £5bn Capex invested • 2GW of wind power growth stimulated
Carbon Capture & Storage	
<ul style="list-style-type: none"> • CCS first injection at >2 pilots • >2MtCO₂ pa injected • Commercial roll-out sanctioned at >4 industrial clusters 	<ul style="list-style-type: none"> • >4 commercial scale CCS projects operating • 17 MtCO₂ pa injected • £8bn Capex invested
Energy Hubs	
<ul style="list-style-type: none"> • >2 Blue Hydrogen pilots operational • 2 more net zero Hubs identified with Blue / Green H₂ plans 	<ul style="list-style-type: none"> • Blue H₂ commercial scale, 4GW methane reforming installed • 1GW green H₂ capacity installed • £7bn Capex investment
20MtCO₂ abatement and £20bn Capex by 2030	
Supports delivery of UKCS net zero potential by 2050	



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Thank you
