



North Sea  
Transition  
Authority

# The Energy Transition and the Future of the North Sea

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WECA conference

Dr Andy Samuel, Chief Executive

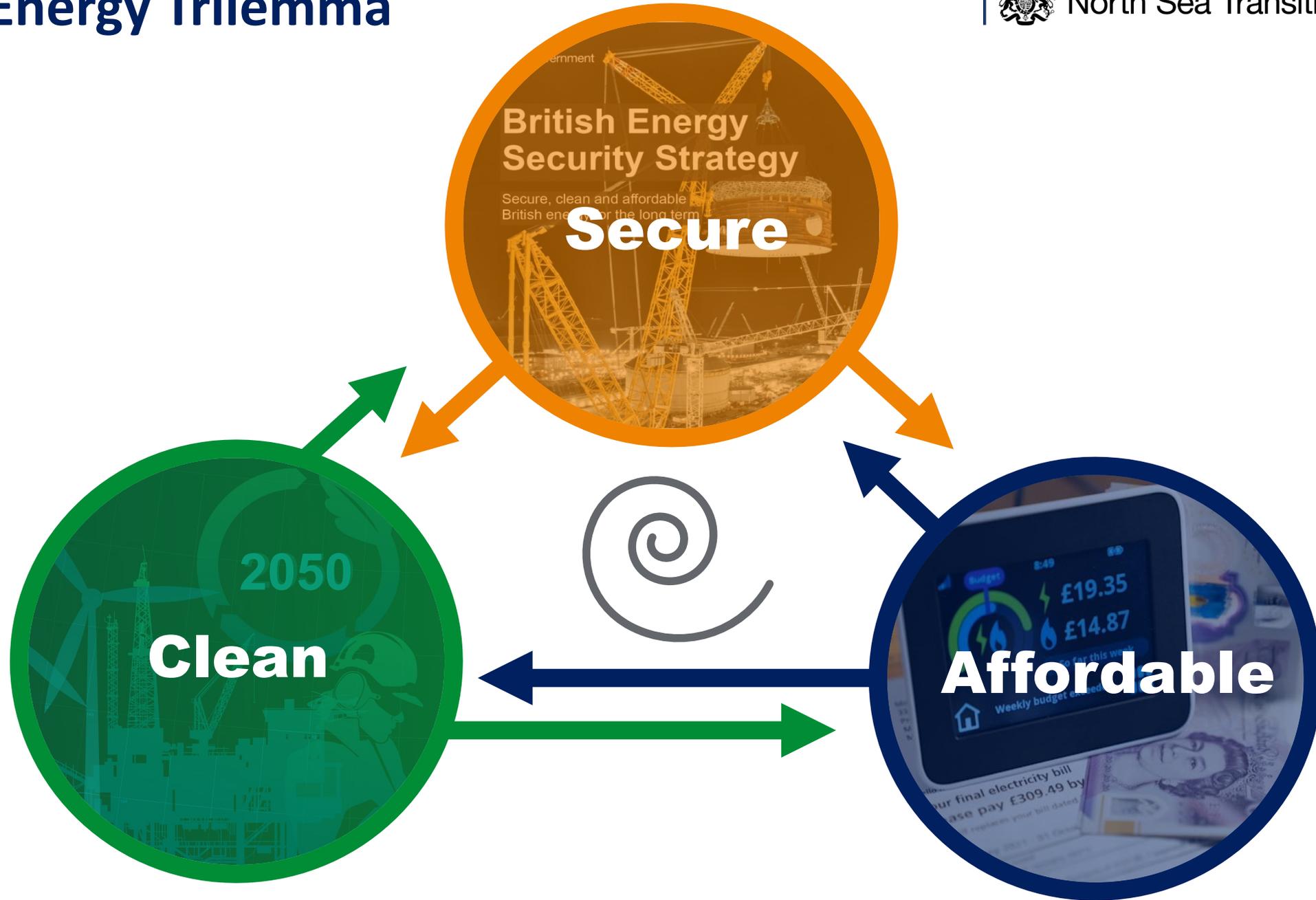
28 November 2022

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# The Energy Trilemma



# Ocean of opportunity



**£220bn**  
expenditure to 2030



**211,000** offshore  
energy jobs



**6bn** barrels  
current forecast



**50GW** fixed and  
floating offshore wind



**78gt CO<sub>2</sub>** storage  
& major repurposing



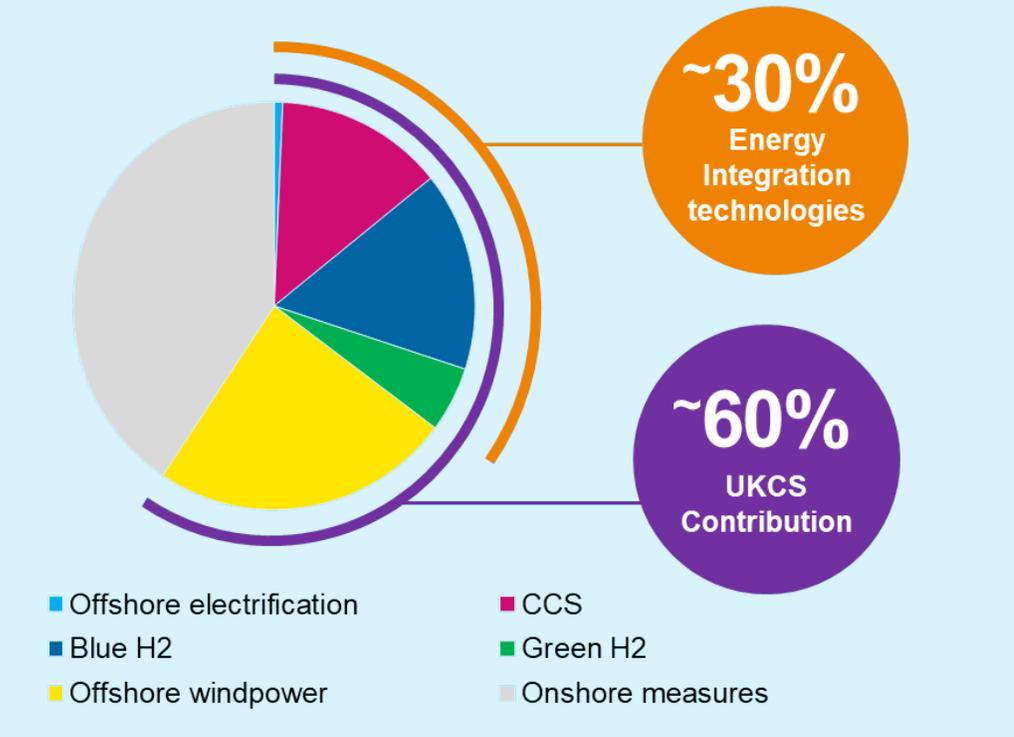
New hydrogen  
economy



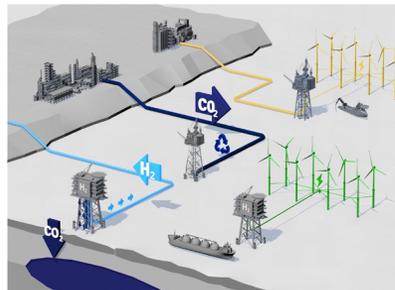
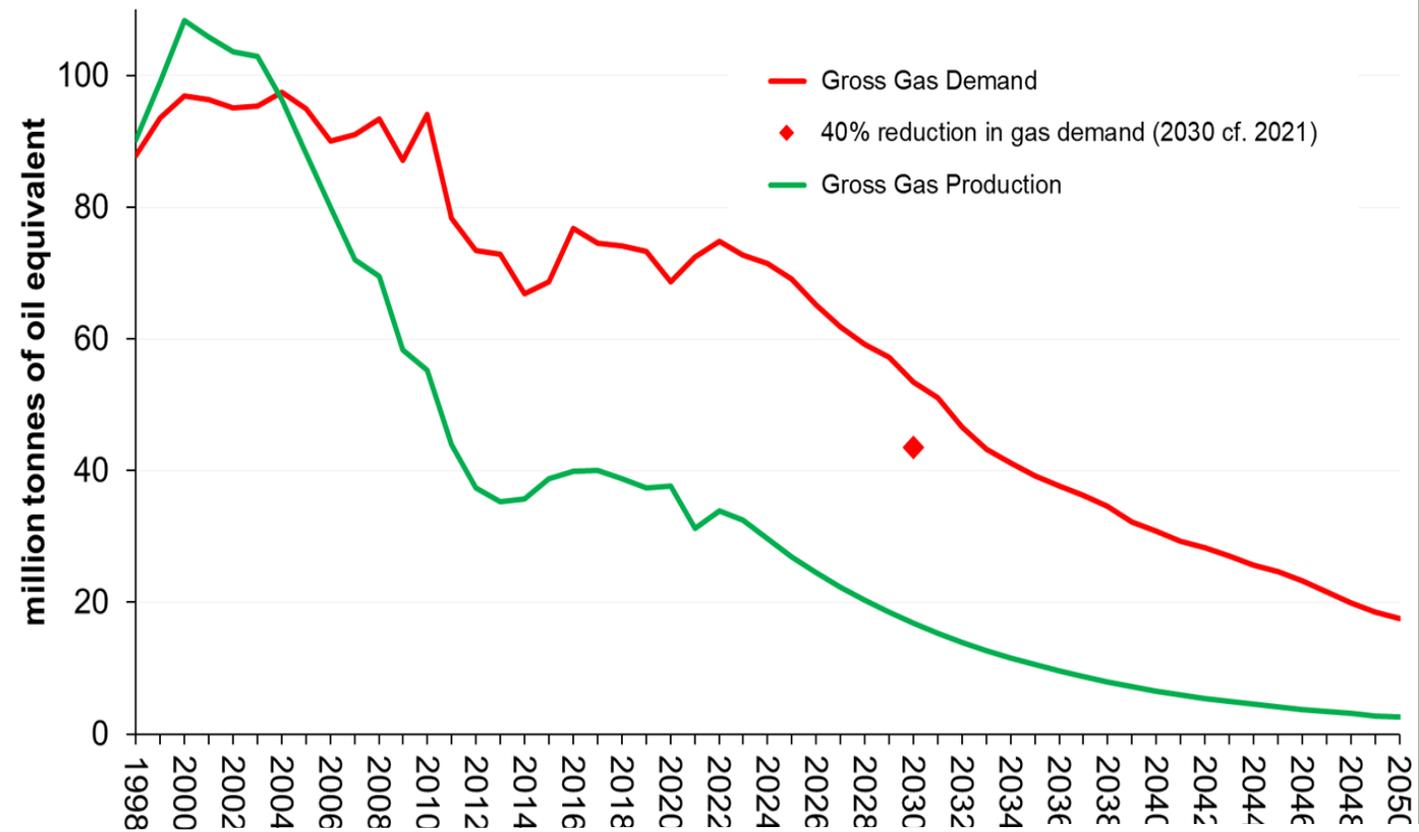
**60%**  
of UK's abatement

# Transition in action

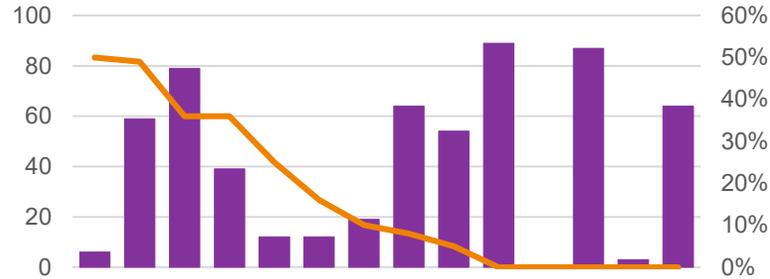
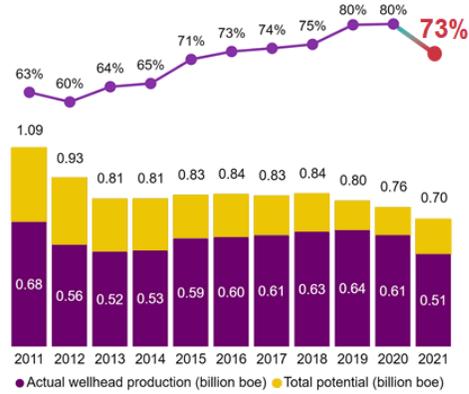
2050 net zero emission abatement from 2018 baseline



CCC Balanced Net Zero Pathway Demand and NSTA Production Projections



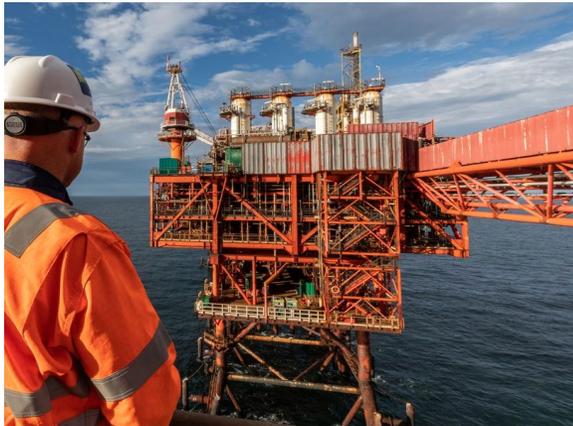
# Security of Supply – NSTA action



## Operational efficiency

## Wells

## Projects pipeline



Gas storage



Exploration



33rd Offshore Licensing Round

- First of its kind in G7 country
- Transition creating massive opportunities
- NSTA tracking progress

## Early successes



## NSTA Net Zero Guidance

2021



**OGA Strategy**

**Net zero expectation**

**New fields**

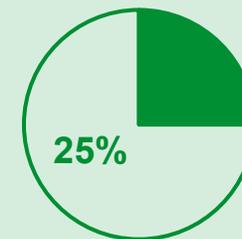
**Flaring & venting**

## On track

2025



2027



## Electrification required

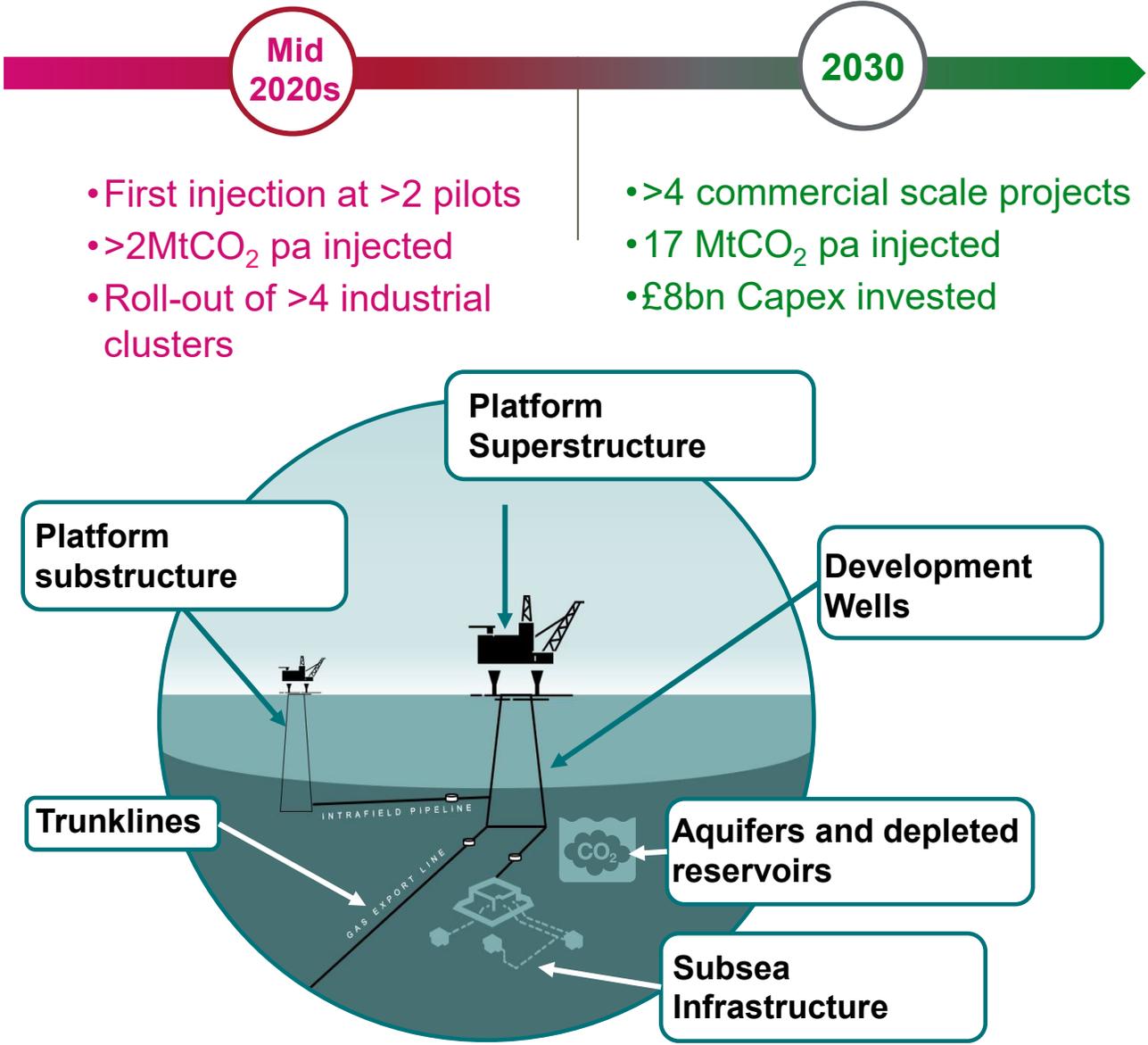
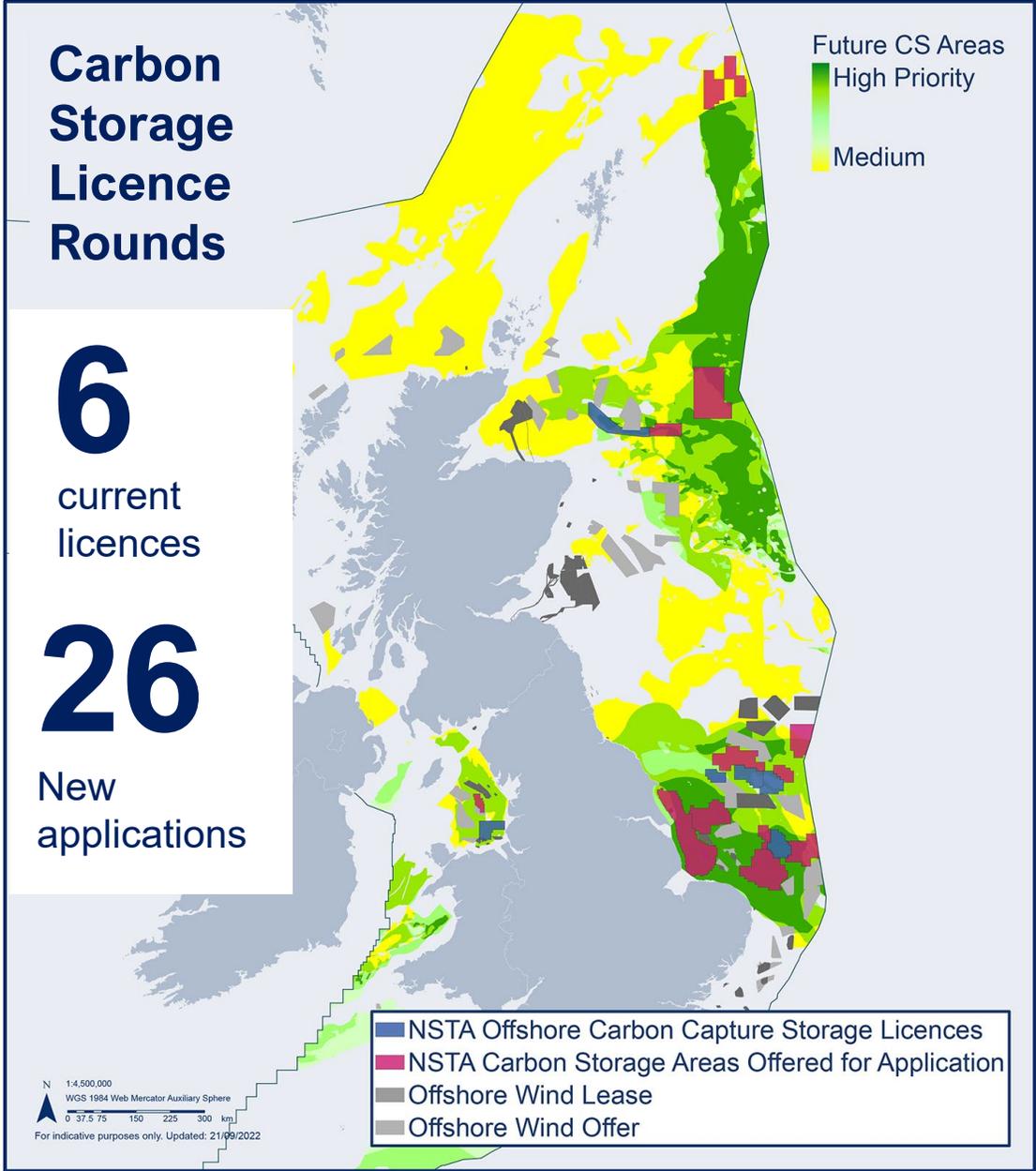
2030



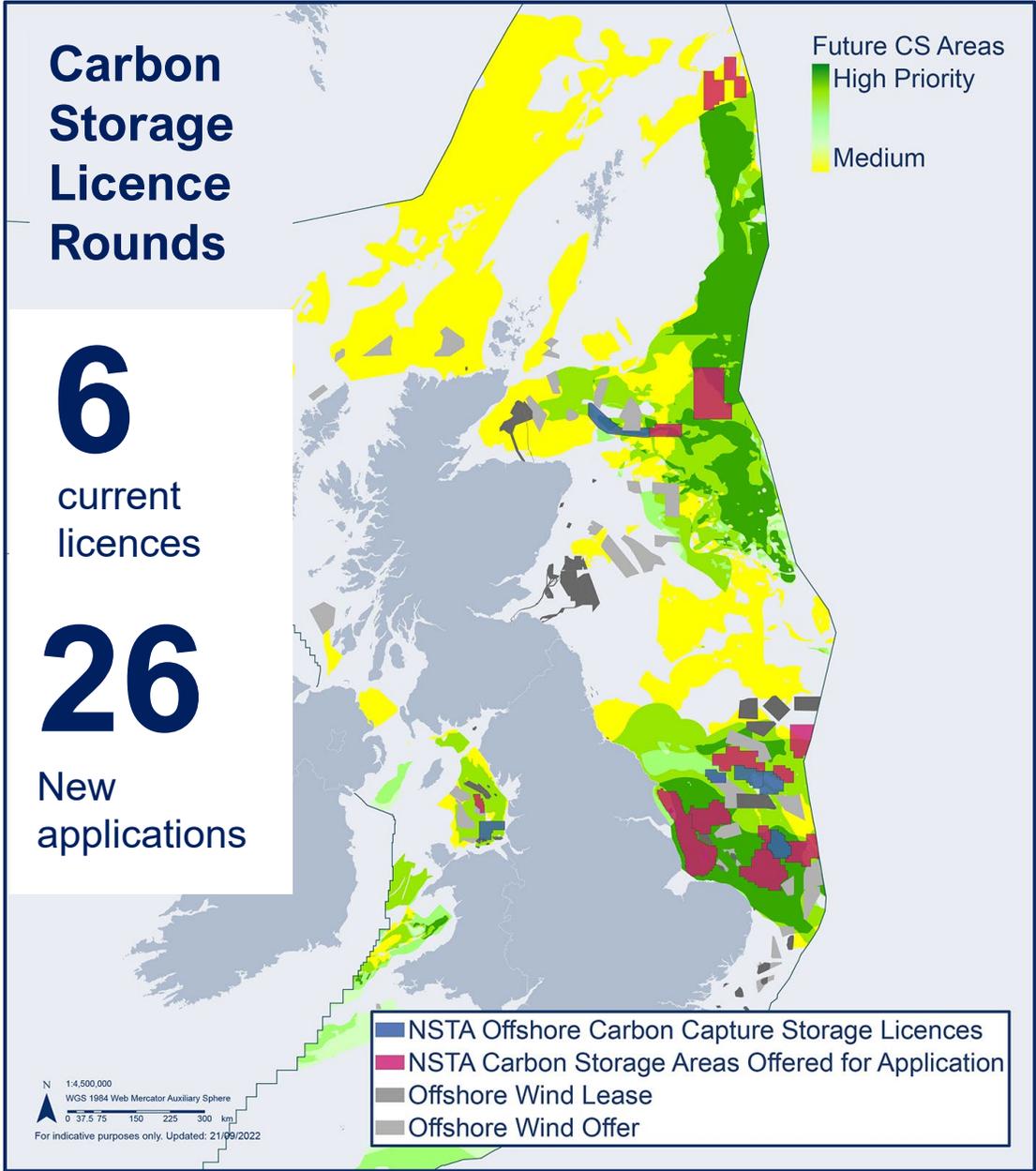
2050



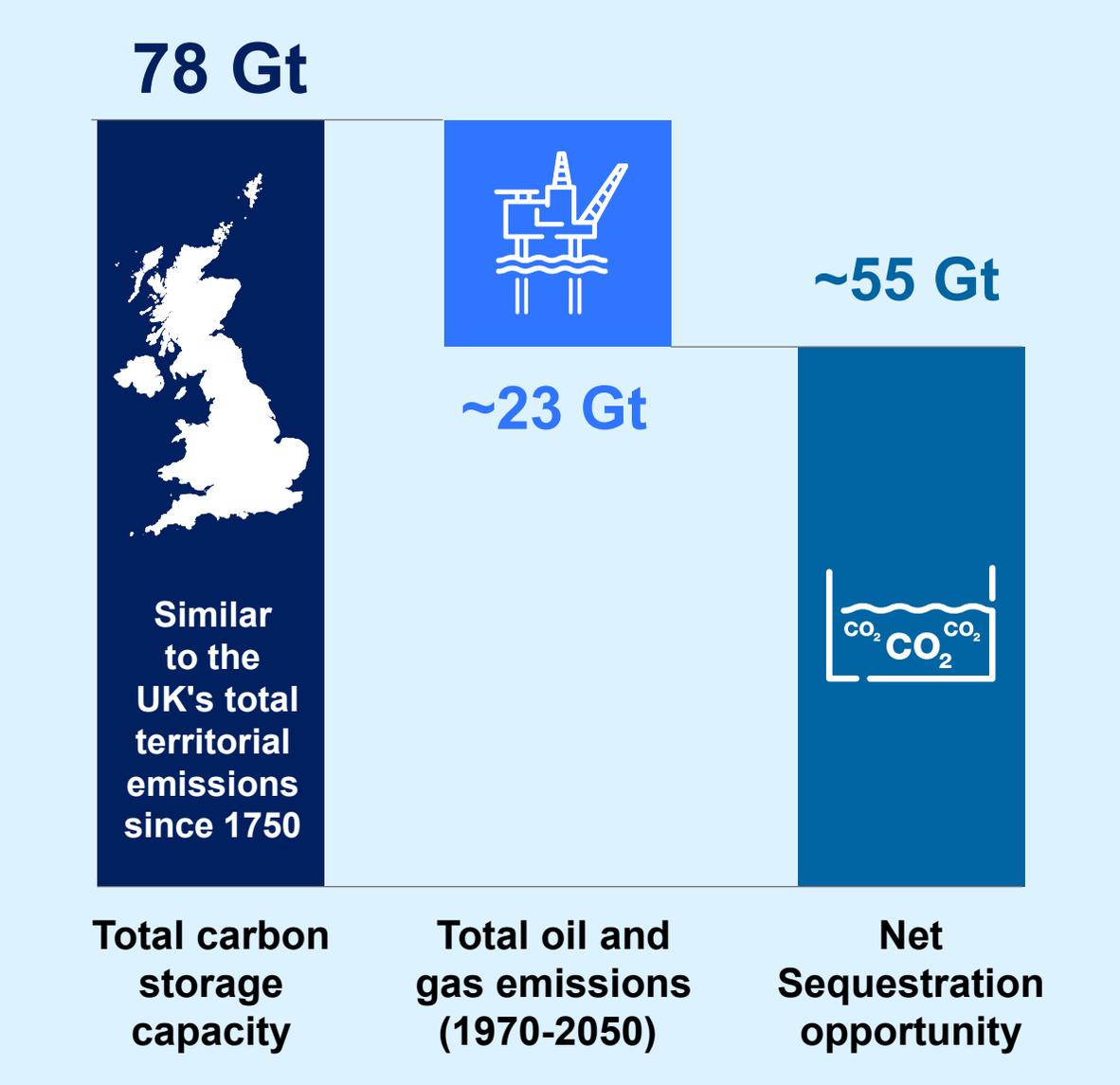
# Carbon storage and circular economy



# Carbon storage and circular economy



## Geological Net Zero



# Hydrogen and Windpower

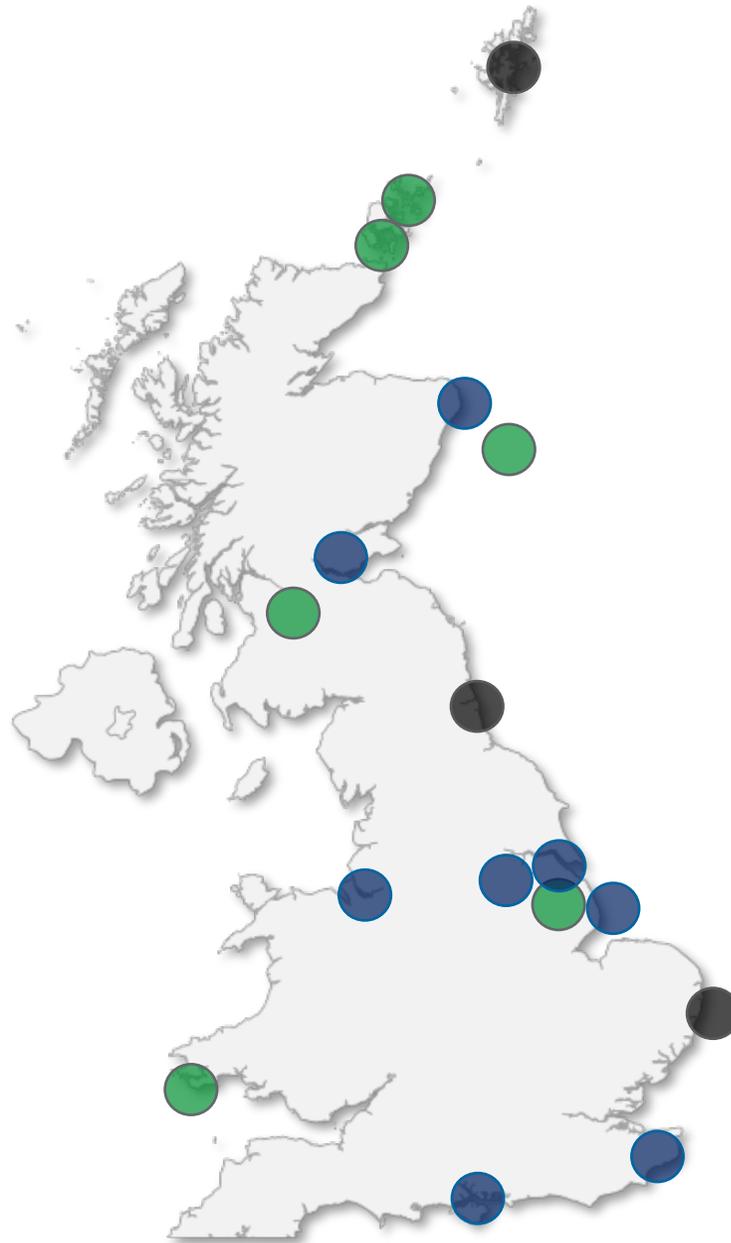
## UK Hydrogen Production Potential

-  Blue H<sub>2</sub>
-  Green H<sub>2</sub>
-  Both

**by 2030**

**Total Blue H<sub>2</sub> potential capacity ~12GW**

**Total Green H<sub>2</sub> potential capacity ~5GW**



## Windpower growth and electrification



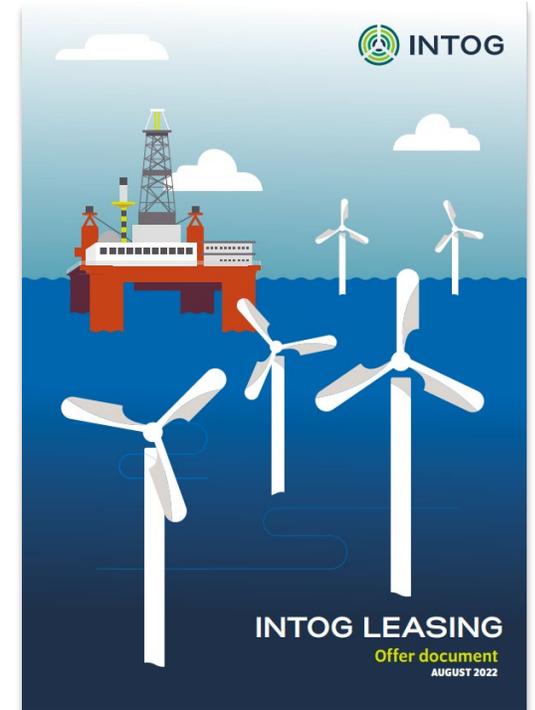
**~10MtCO<sub>2</sub>pa**  
O&G offshore **emissions**  
from power generation



**~2.5 GW**  
O&G power demand



Windpower growth **near O&G areas**, opportunity to supply clean energy

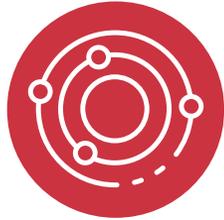


**INTOG**, first of a kind dedicated to oil and gas decarbonisation whilst supporting wind power growth (particularly floating)

# Supply Chain Key



~ 85% of UK oil and gas workforce employed by supply chain



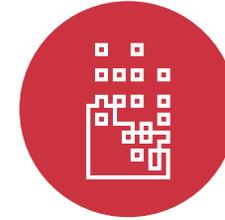
Supply Chain Action Plans, Stewardship Expectation 12 & robust reviews



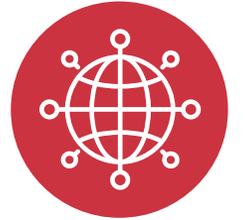
Prompt payment



Energy Pathfinder: 135 live projects



Digital & Technology



Partnerships

## World class innovation



Leadership: tripartite focus on transition



Emissions reduction technology & best practice exported globally

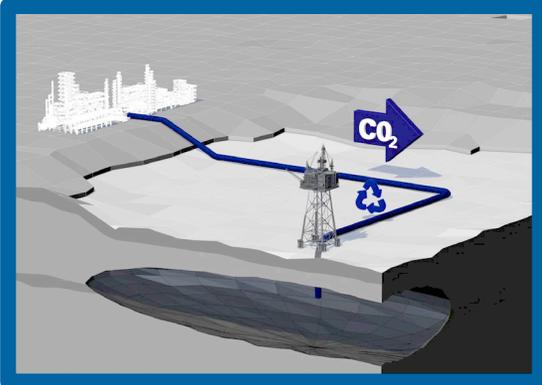


Technology Driving Transition



# The Prize: UKCS expenditure 2022-2030

# £220bn



**Oil and Gas:**  
£100bn

**CCS:**  
£8bn

**Hydrogen:**  
£12bn

**Offshore wind:**  
£100bn

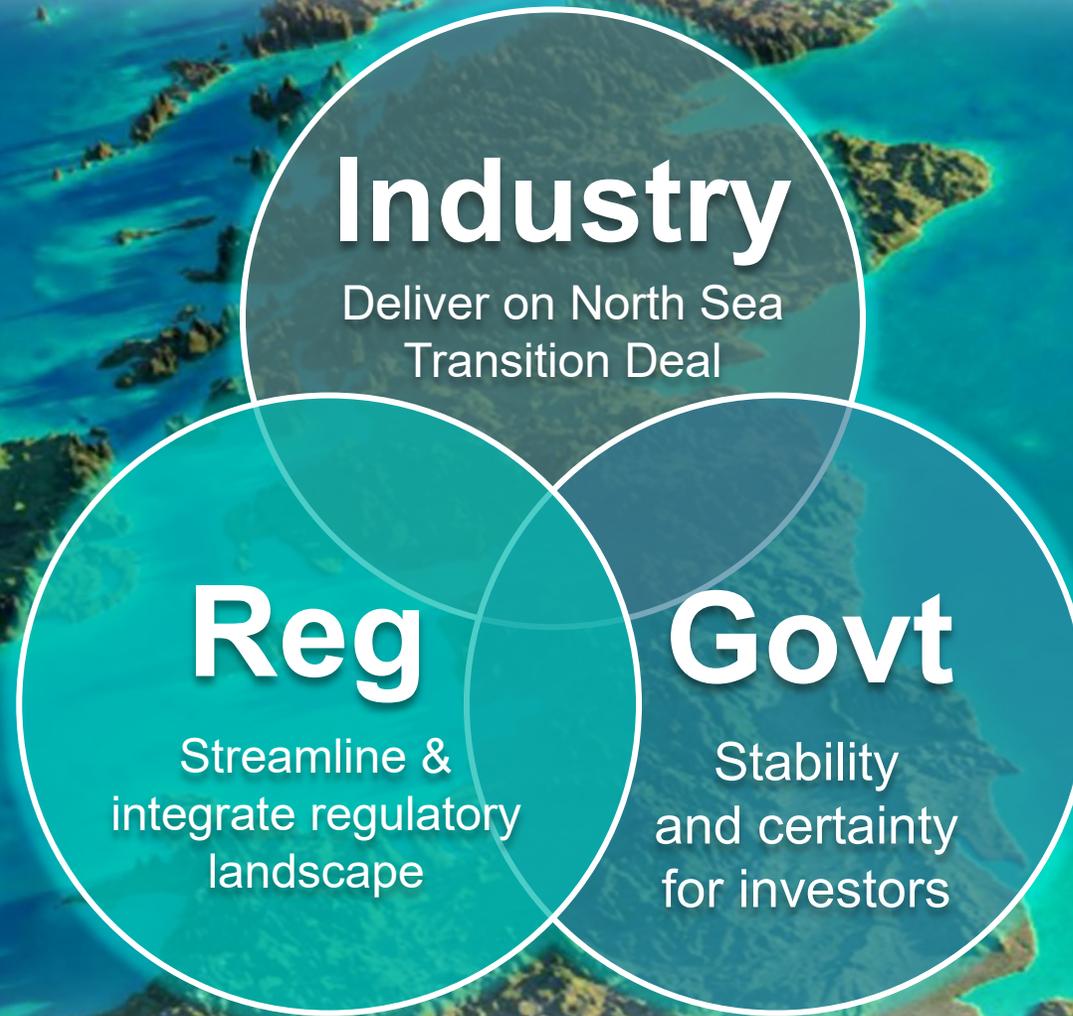


**Expenditure benefits local economies and anchors world-class supply chain in UK**



# Alternative vicious cycle scenario







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# Thank you

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