North Sea Transition Authority

OEUK conference

The Age-Old Energy Trilemma

Dr Andy Samuel, Chief Executive

24 May 2022

The Energy Trilemma

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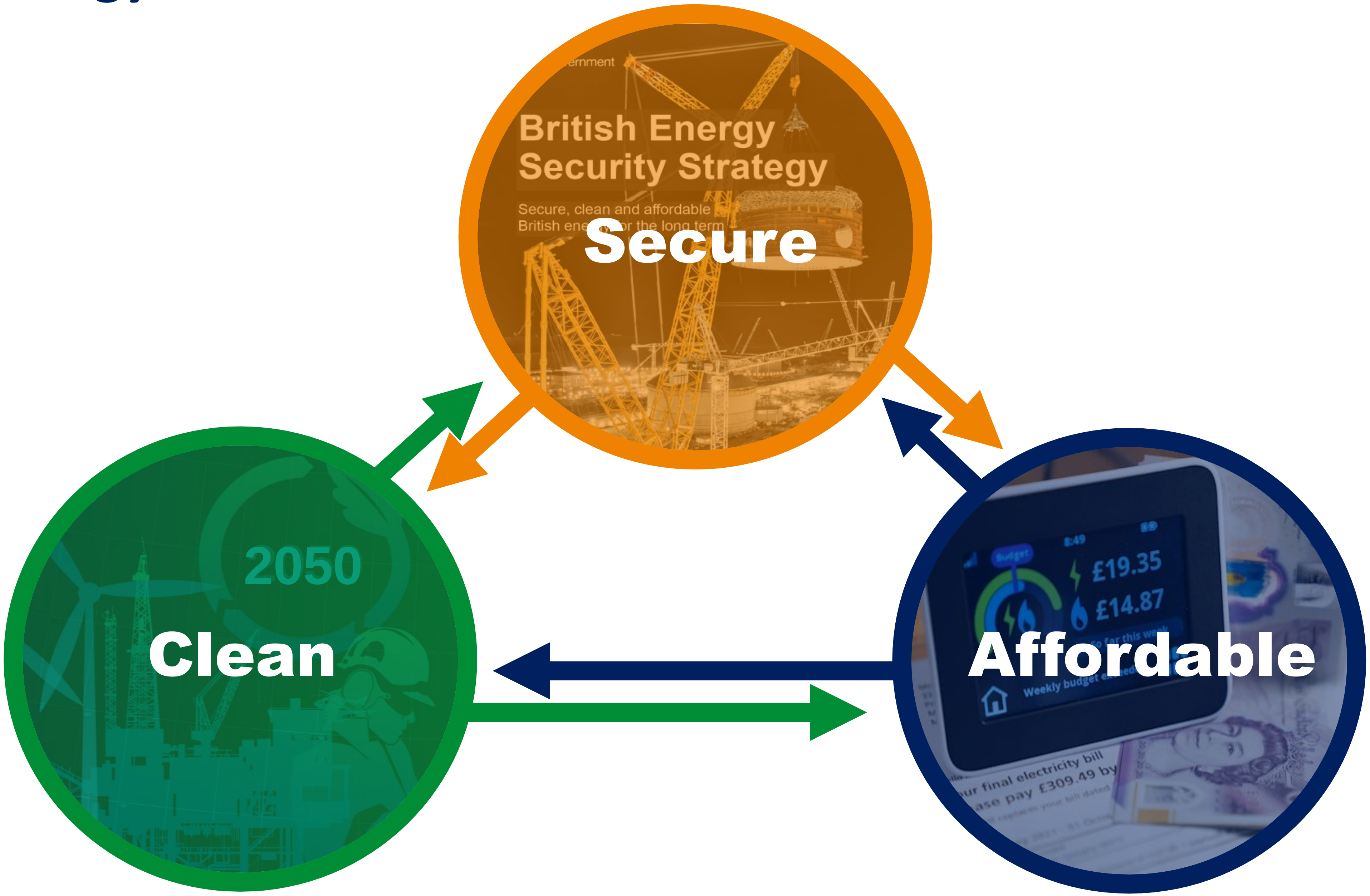

Demand outstrips domestic supply

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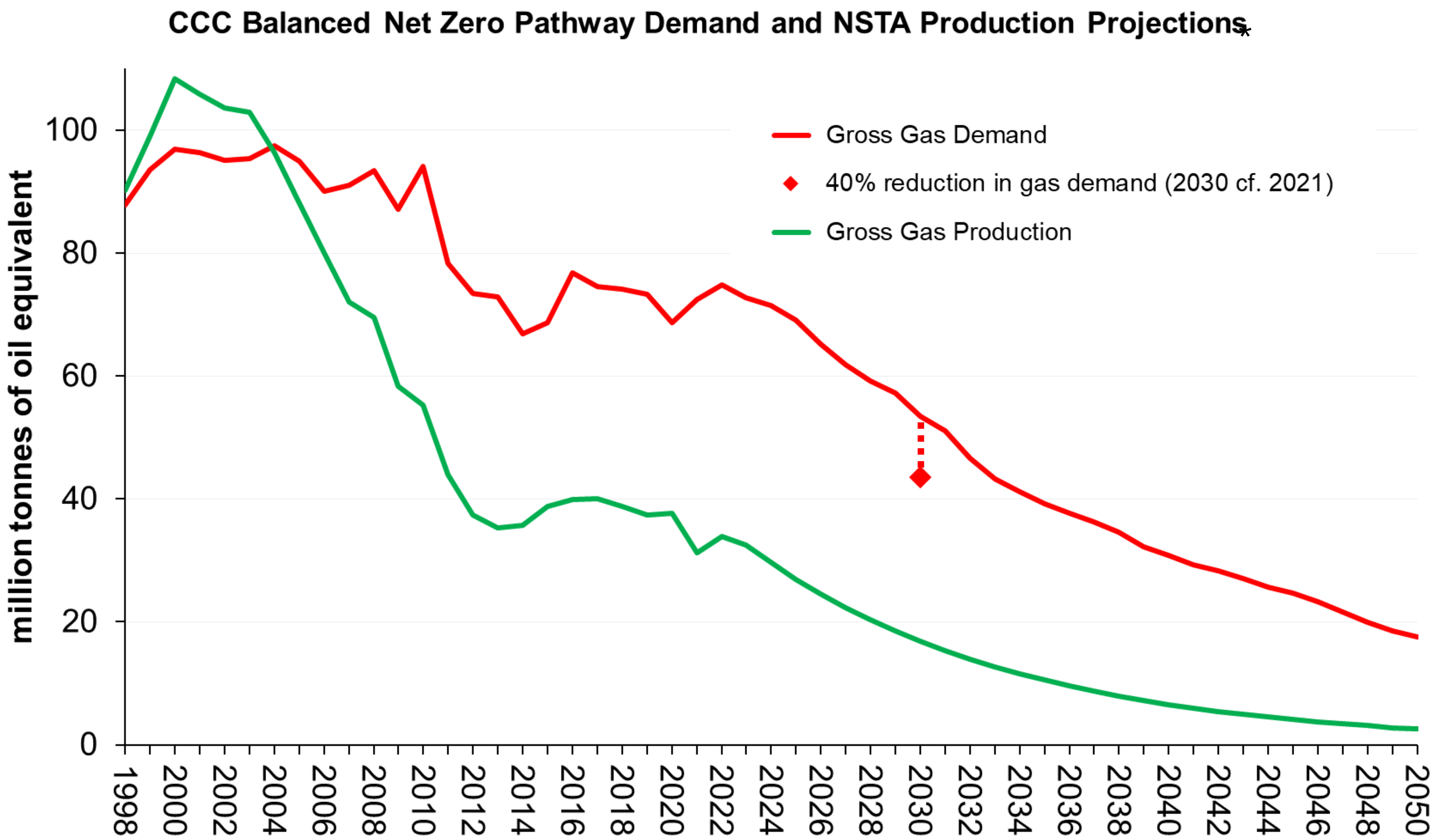

- Production from new developments already included
- Production decline sharper than IEA, IPPC and UNEP pathways

Production Efficiency and Wells

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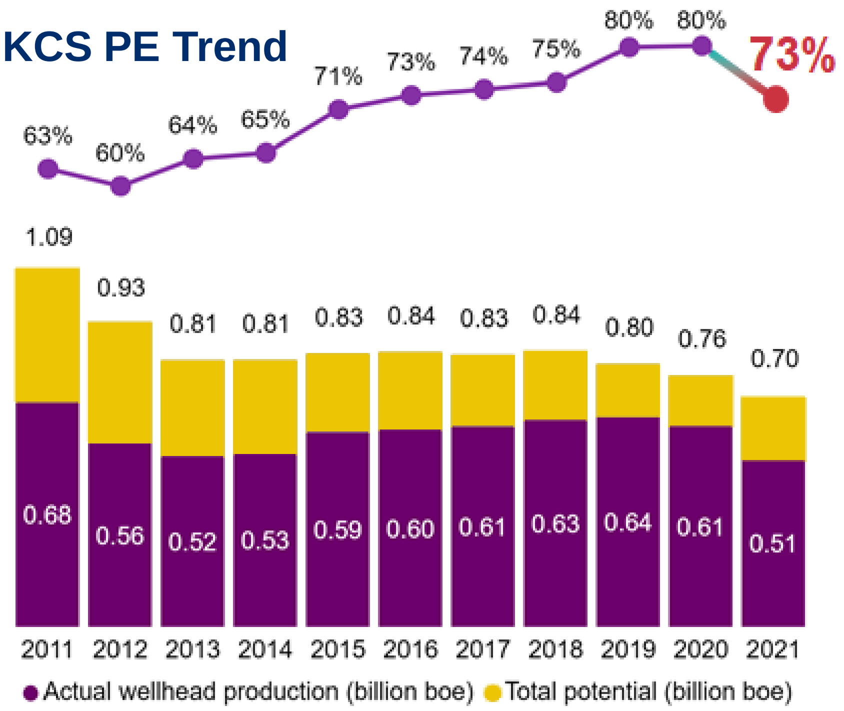
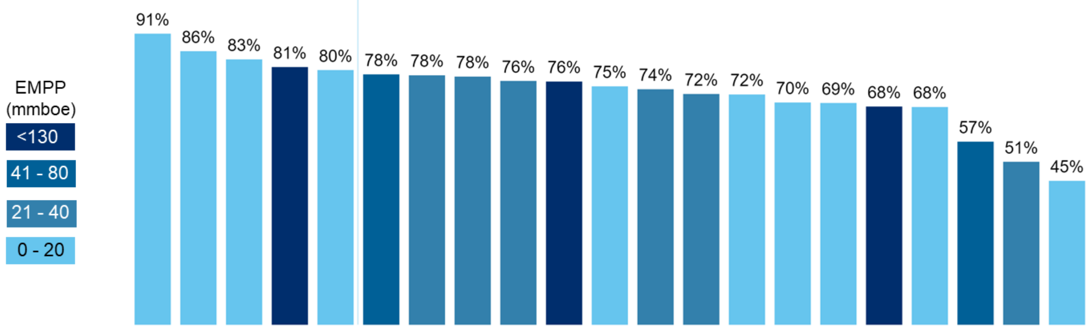
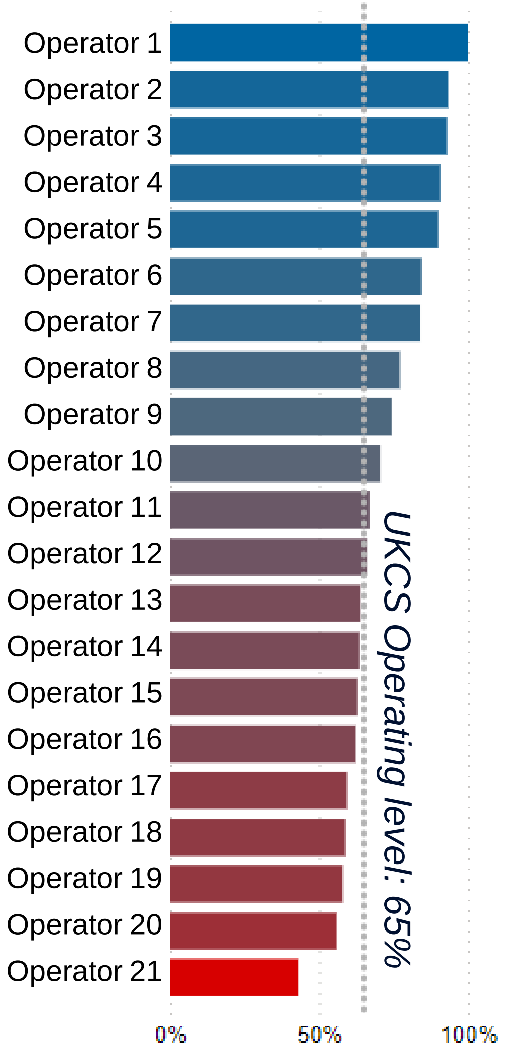
UKCS PE Trend



Production Efficiency by Operator & Production



Operator 'Completed Operating' Well Stock %



Key performance data reviewed with Top 22 operators

MD's commitment to get PE back to 80%

Other short-term opportunities such as wells being worked hard

Projects Pipeline

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33 Projects

	2022 – 2024	> 2024
Resources (mmboe)	890	440
CAPEX	£10.4bn	£1.5bn
Status	CSRs Approved	Under Assessment

Consent Date: 2022 – 2024 | > 2024

Bubble Size: Resources (mmboe) 100 200 300

33 projects totalling **1.3bn boe** in pipeline

84% resources held by largest operators

Potential for **890 mmboe** to be consented by 2024

Latest barriers/enablers to Oil & Gas Investment

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Reduced Access to Capital

- Multiple senior Govt/NSTA meetings with capital providers
- NSTA's ESG Task Force

Lack of Confidence in Govt's Support of Industry

- Highest level of support from UK govt & NSTA
- Energy Security Strategy

Concern over Fiscal Stability

- Attractive fiscal framework
- Industry advised to get on with investments

Access to acreage

- 33rd licensing round
- Right Assets Right Hands
- Appropriately robust regulation

Challenging M&A due to Partner Behaviour

- Commercial Code of Practice
- Early engagement between parties
- Consultation
- NSTA powers

Tough Carbon Reduction Targets

- Right thing & industry signed up to NSTD
- Clear NSTA guidance
- GREG
- Data bench-marking & targets

Slow and/or Disjointed Approvals

- GONPA
- Collaboration on spatial planning
- NSTA/TCE/CES Carbon storage

Delivering the Deal: Emissions reductions

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21% Reduction GHG emissions 2018-21

23% Reduction flaring 2019-20

1.1M Tonnes avoided since Jan21

Electrification crucial to meet NSTD targets

Supports floating wind, green H_2, CCS & regional schemes

NSTA expects targets to be met as absolute minimum

2021

- The OGA Strategy — **OGA Strategy**
- Net Zero, Stewardship Expectation 11 — **Net zero expectation**
- Requirements for the planning of and consent to UKCS Field Developments — **New fields**
- Flaring and venting guidance — **Flaring & venting**

On track

- **2025** — 10%
- **2027** — 25%

Need industry to strive for 68%

- **2030** — 50%
- **2050** — Net Zero basin

Carbon storage and circular economy

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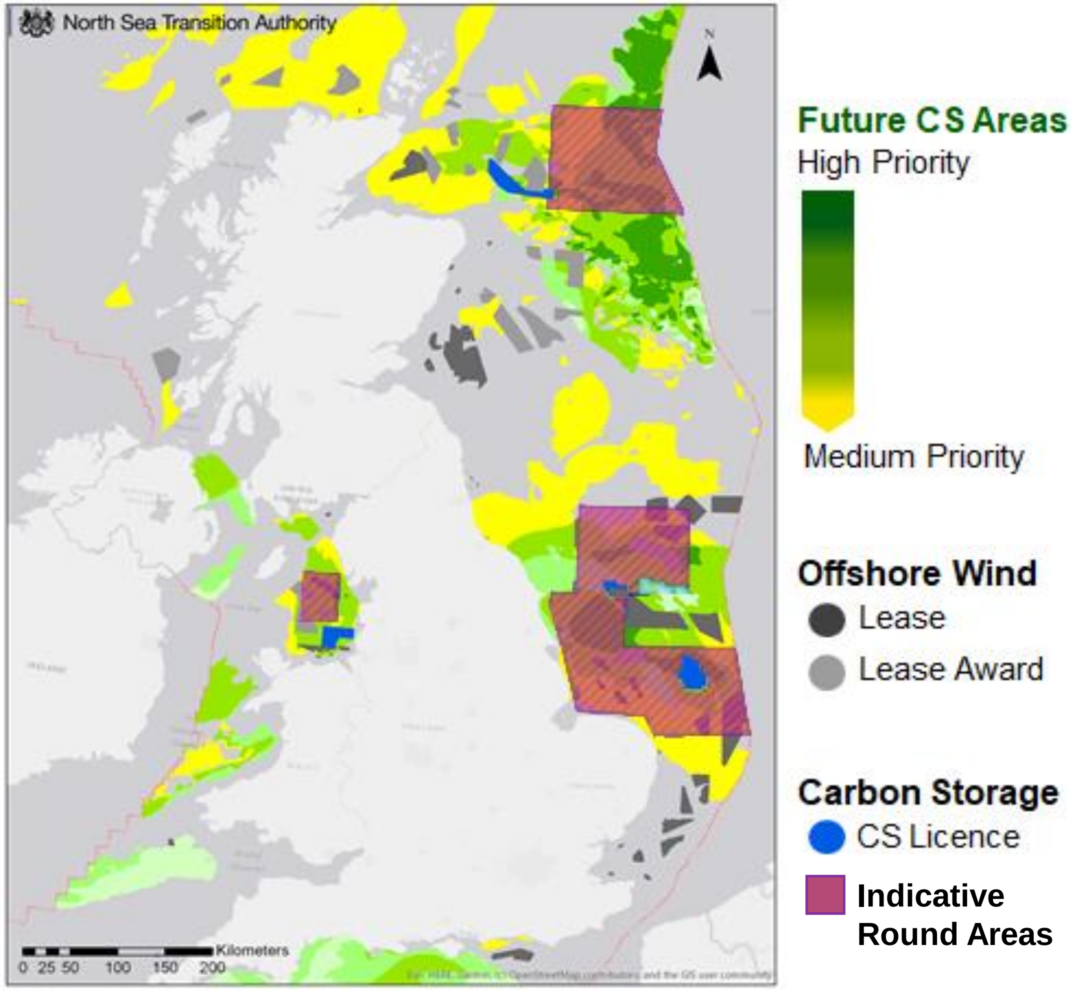
Carbon Storage Licence Rounds

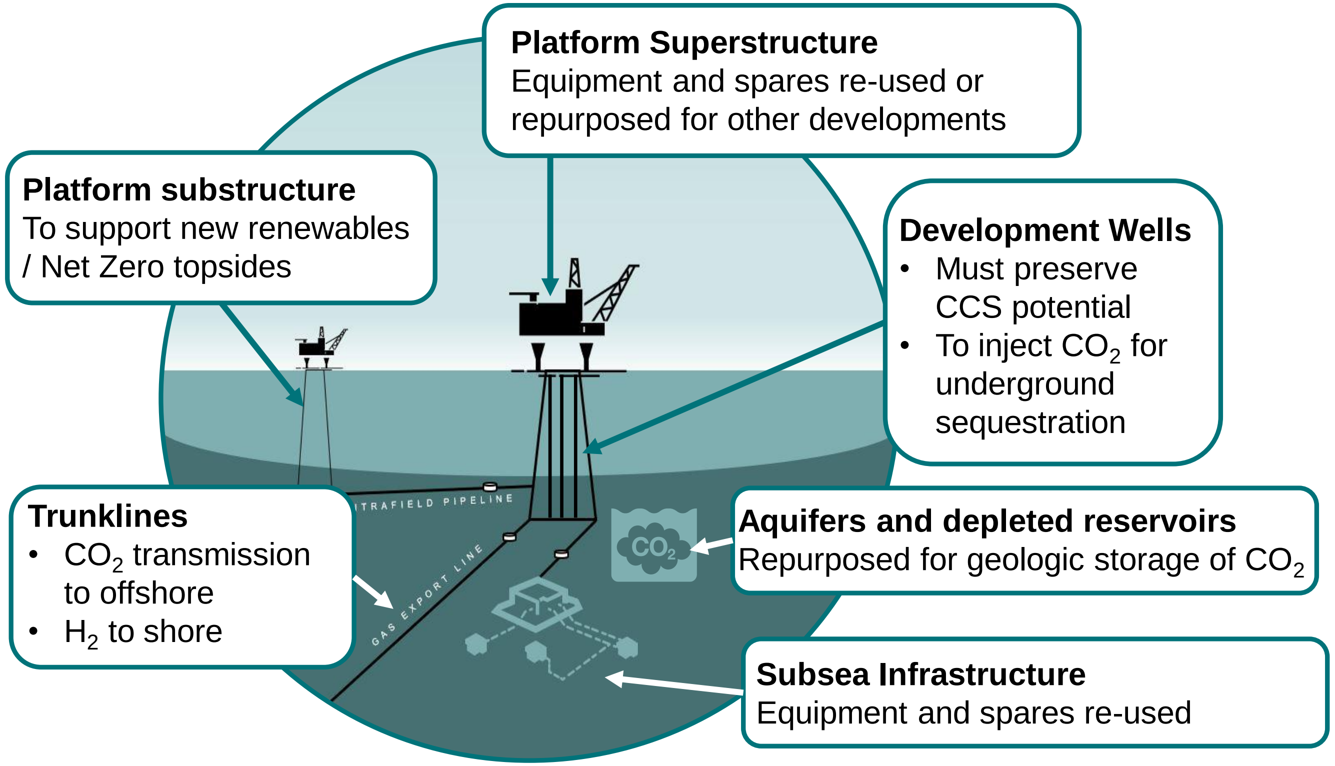


Mid 2020s

- First injection at >2 pilots
- >2MtCO_2 pa injected
- Roll-out of >4 industrial clusters

2030

- >4 commercial scale projects
- 17 MtCO_2 pa injected
- £8bn Capex invested



Hydrogen and systemic approach

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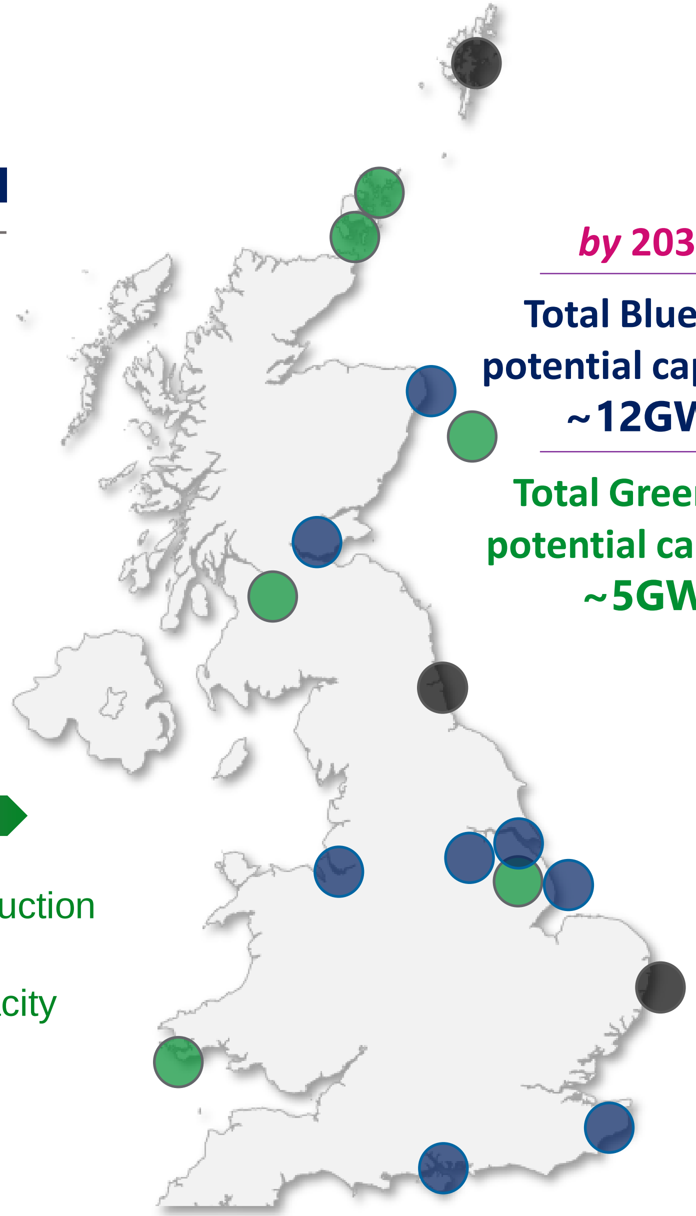
UK Hydrogen Production Potential

- Blue H_2
- Green H_2
- Both



by 2030

Total Blue H2 potential capacity ~12GW

Total Green H2 potential capacity ~5GW

Mid 2020s

- 1GW electrolytic hydrogen in construction or operational

2030+

- 10GW production capacity
- >50% Capacity from Green Hydrogen

Enablers

Develop low-carbon production

Blue H_2 : Industrial clusters & CCUS, natural gas feedstock

Green H_2 : Coastal locations, offshore renewable electricity generation capacity & water supply

Establish H_2 hubs and terminals

H_2 transmission and distribution: Pipelines & network integration (with CO_2 / CH_4)

Establish H_2 storage networks

Storage: Offshore/ onshore; underground/ surface

Supply Chain Key

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~ 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

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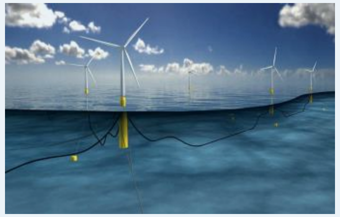
Leadership: tripartite focus on transition

Emissions reduction technology & best practice exported globally

Global Underwater Hub

Net Zero Technology Centre

Technology Driving Transition



UKCS investment 2022-2030

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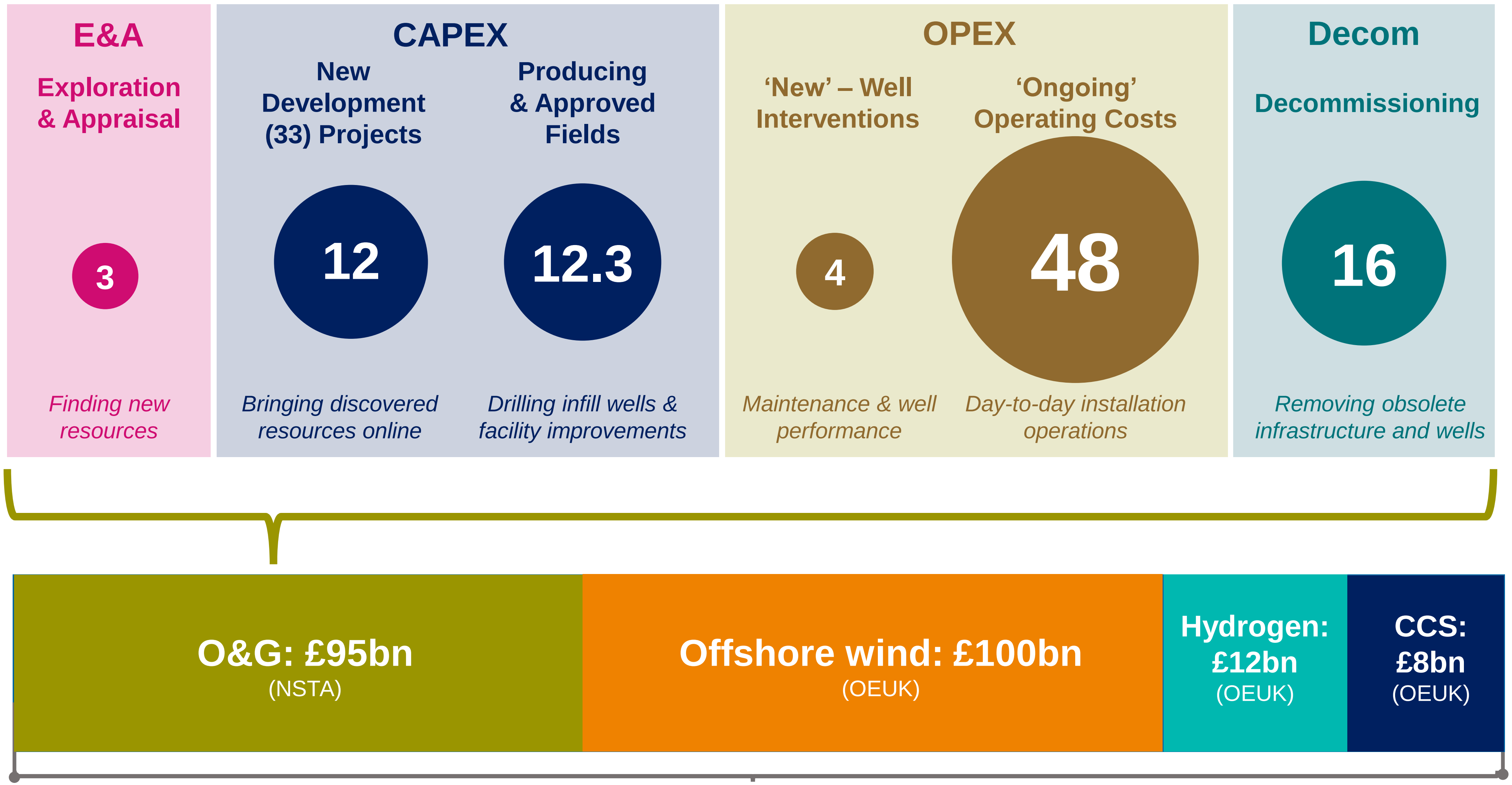

Total: £215bn

Vital year and decade of delivery

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2050
Net Zero

2030
-50% Emissions Reduction
Zero Routine Flaring

2027
-25% Emissions Reduction

2025
-10% Emissions Reduction

2022

Continued investment

- Oil and gas to meet demand profile
- CCS and renewables

Further emissions reduction

- Critical to exceed targets
- Electrification crucial

Transition plans

- Transparent and specific to each operator
- Tripartite collaboration

Value Creation

- Exchequer revenues
- Global supply chain in new technologies

Transition plans

bp
£18bn
by 2030

£20-25bn
over 10 years

NEPTUNE ENERGY
£800mm
over 5 years

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Thank you