THE VOICE
OF THE ENERGY
SUPPLY CHAIN

UK AND NORTH SEA OVERVIEW OF ACTIVITY

Neil Golding, Director Market Intelligence

THE VOICE
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Top 7 globally
900 members

Founded in UK in 1943
Energy-agnostic since 1981
Global membership since 2017

Energy supply chain focus
UK → Global → 5 hubs
→ 6th Europe hub in 2024

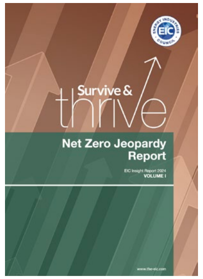
DataStream
US$13.5trn projects

AssetMap
45,000 assets

SupplyMap
6,500 suppliers

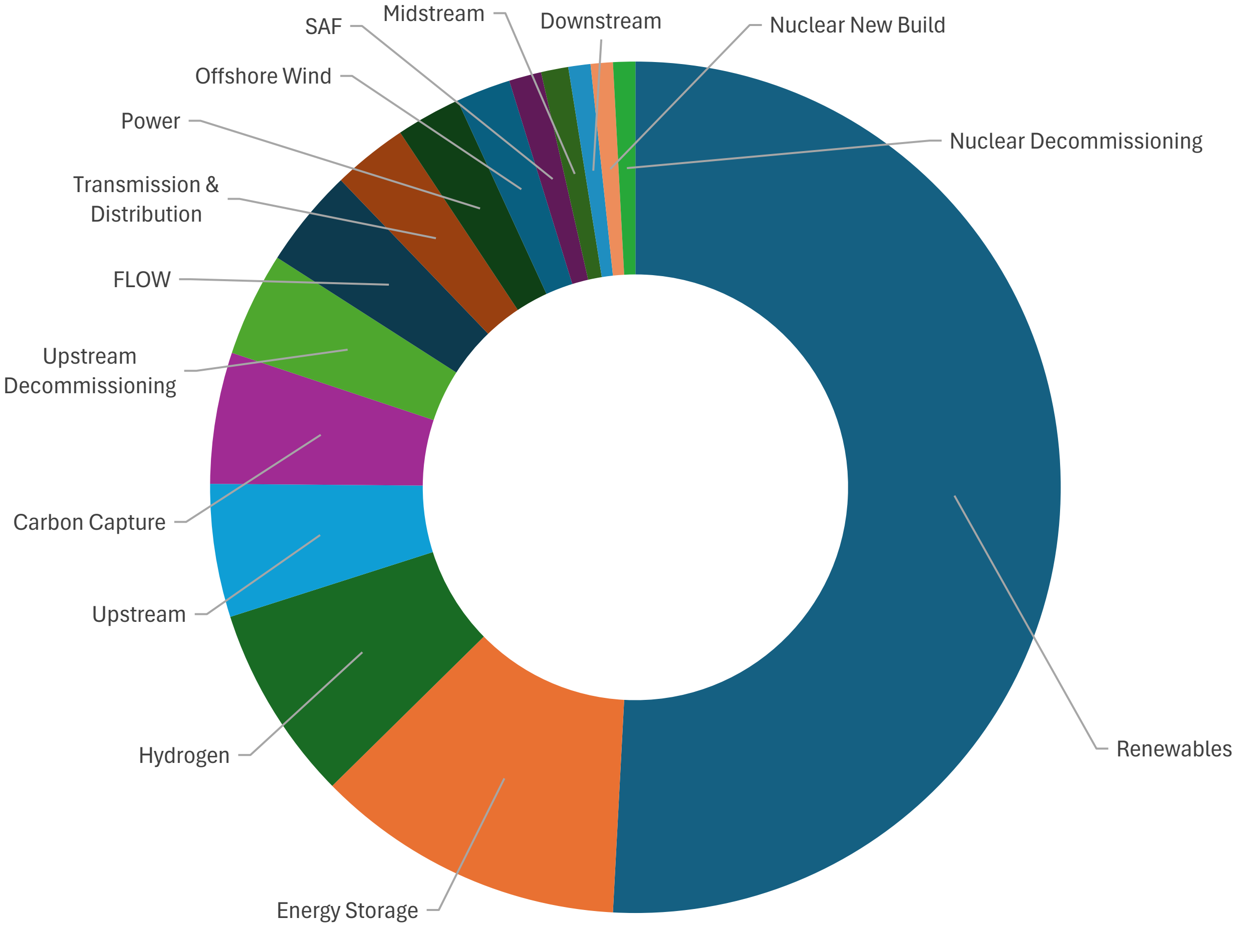
Pavilions

LIVE e-vents
130 events p.a.
Energy Exports Conference

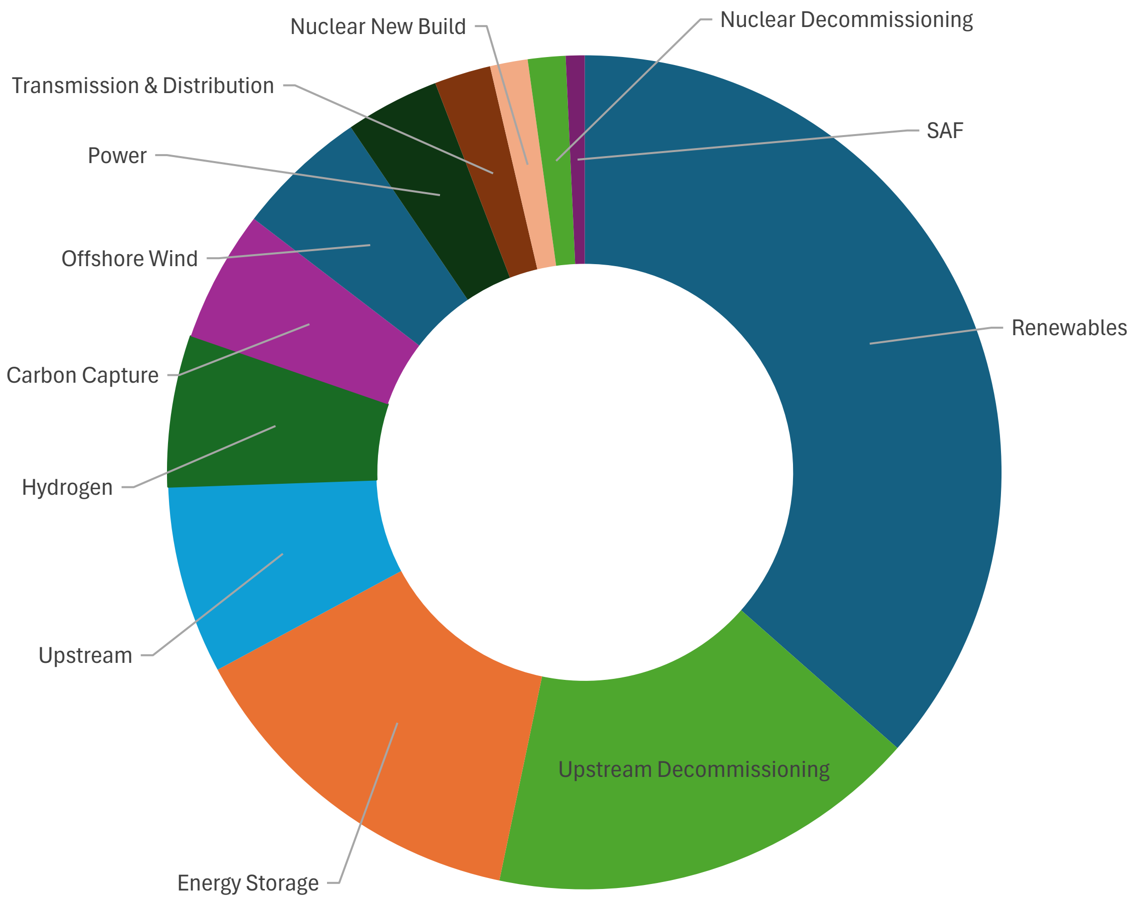


UK AND EAST ANGLIA PROJECT OVERVIEW

Number of UK projects currently under development



Number of projects in East Anglia currently under development



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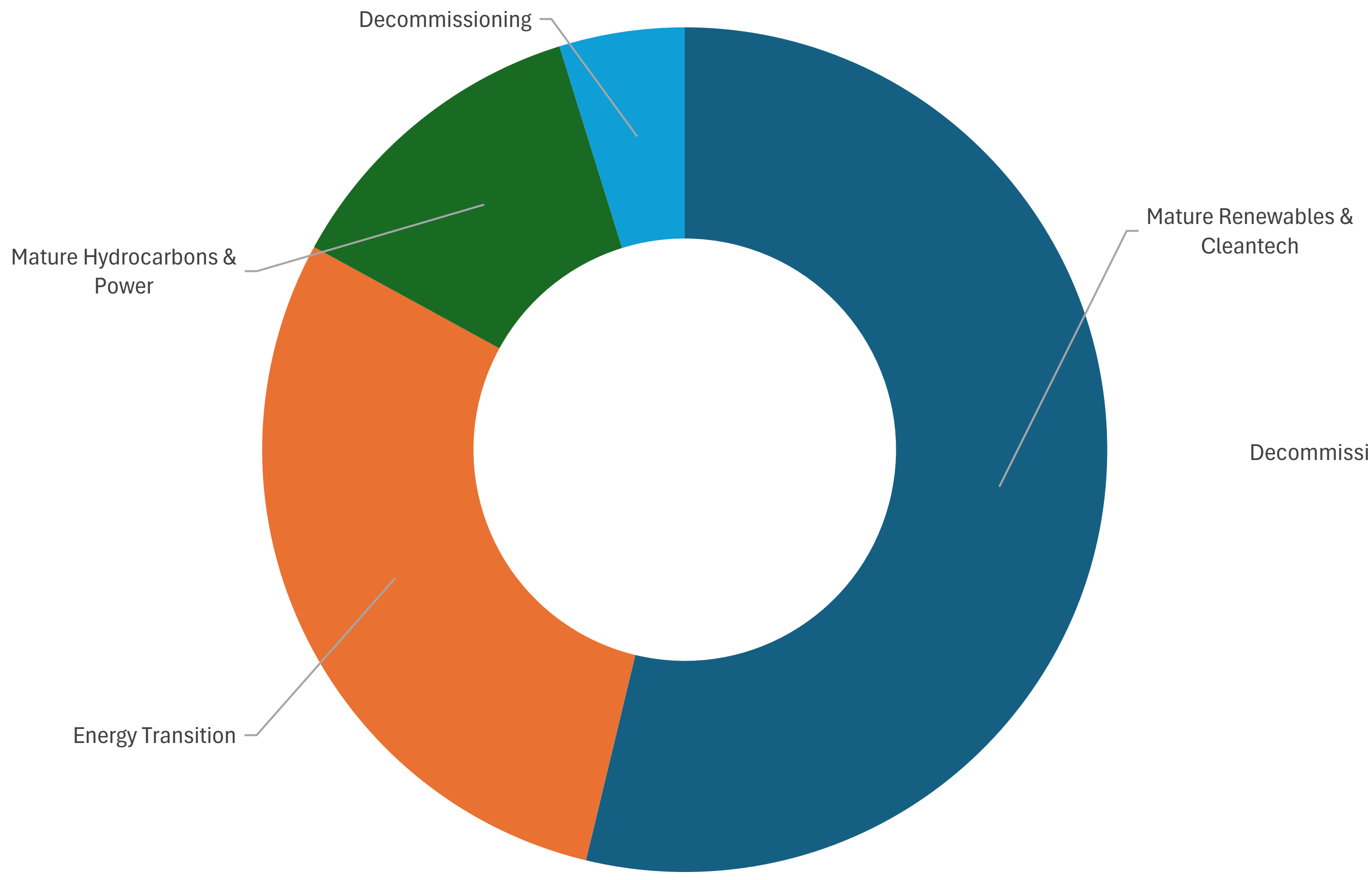

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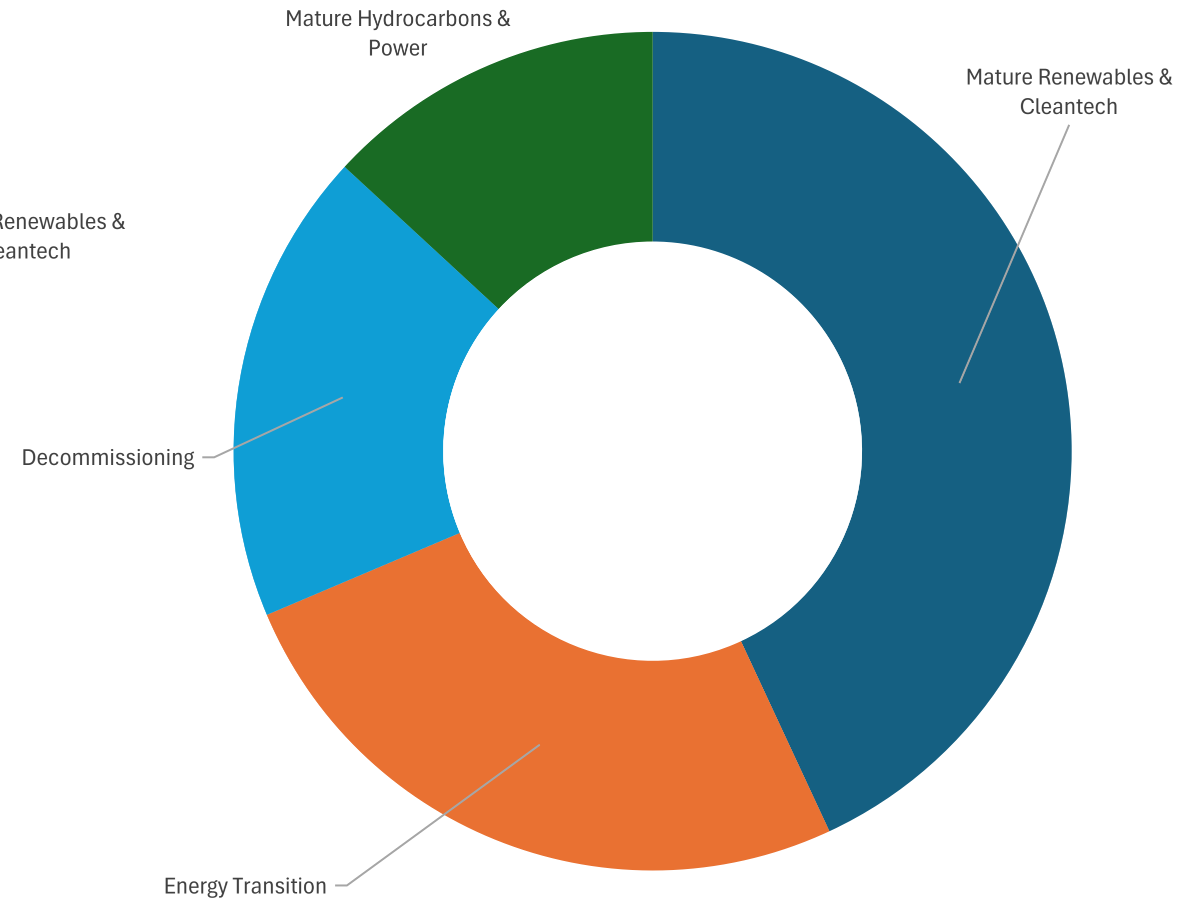

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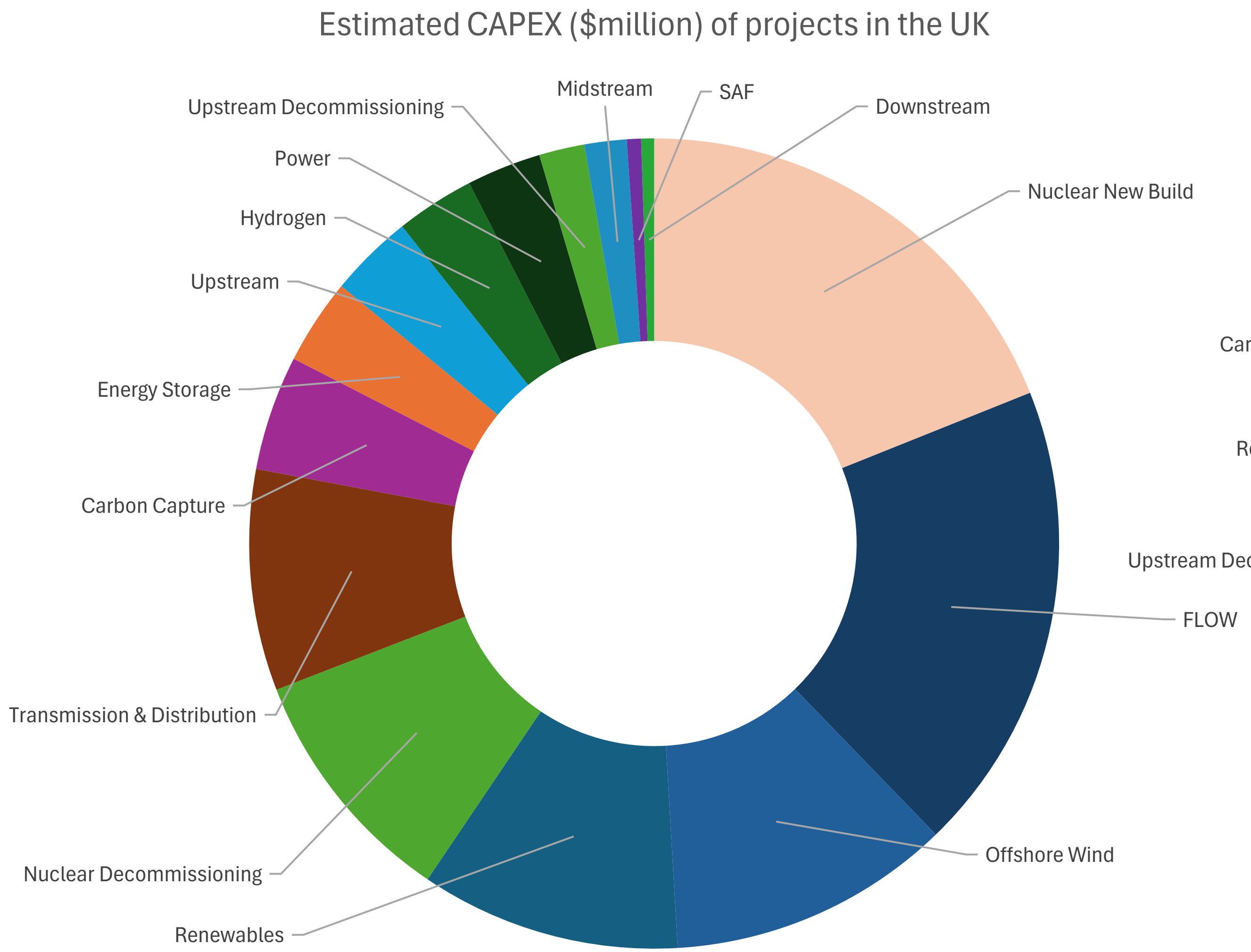
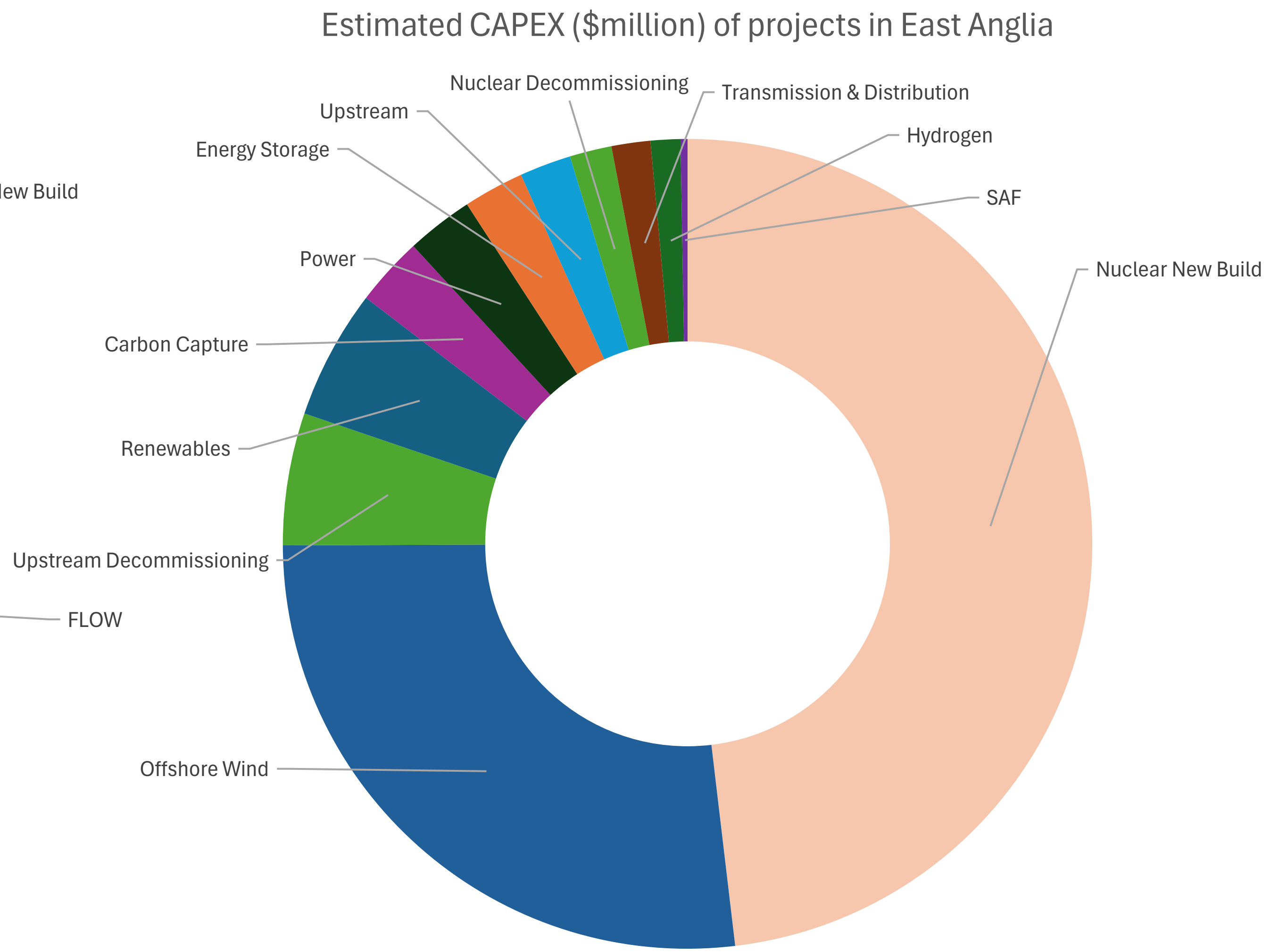
UK AND EAST ANGLIA CAPEX OVERVIEW





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UK CCS - PROJECTS

77

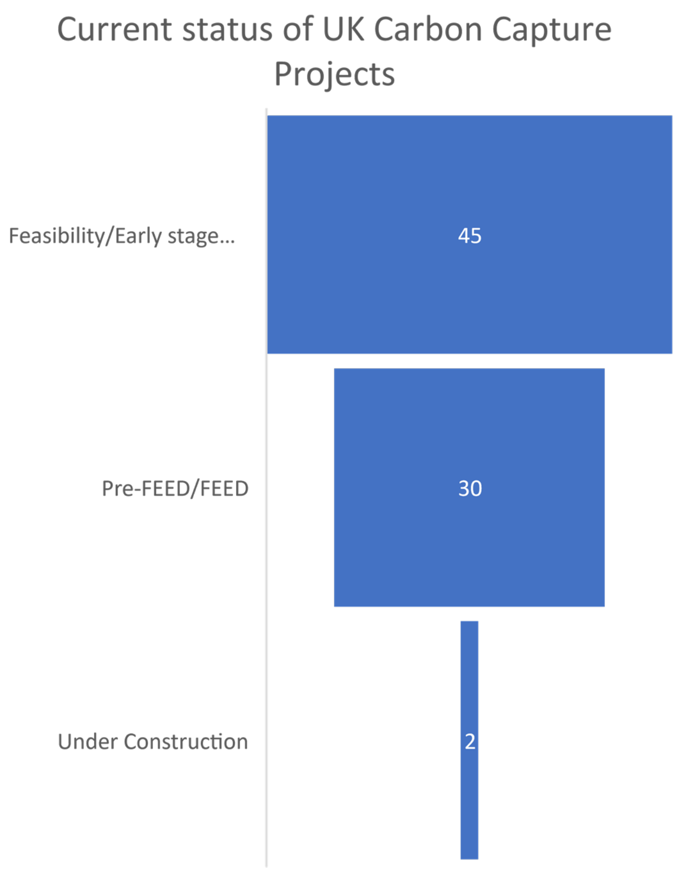
Total projects tracked

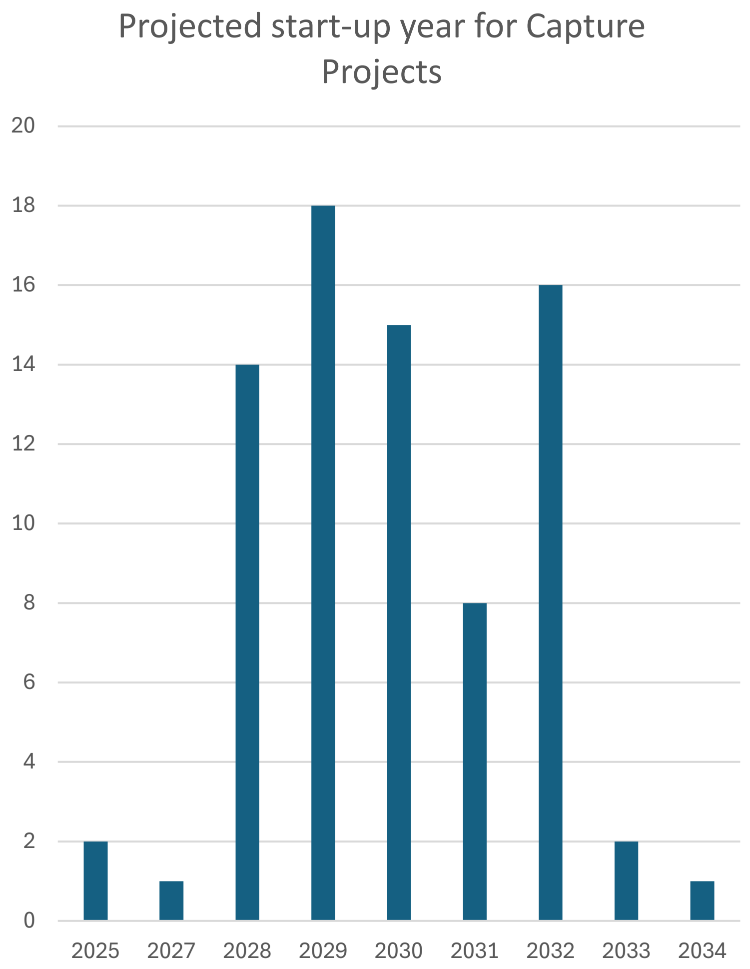
61.7mtpa

Capture capacity in pipeline

74.5mtpa

Total carbon dioxide injection rate by 2031





Source: EICDataStream

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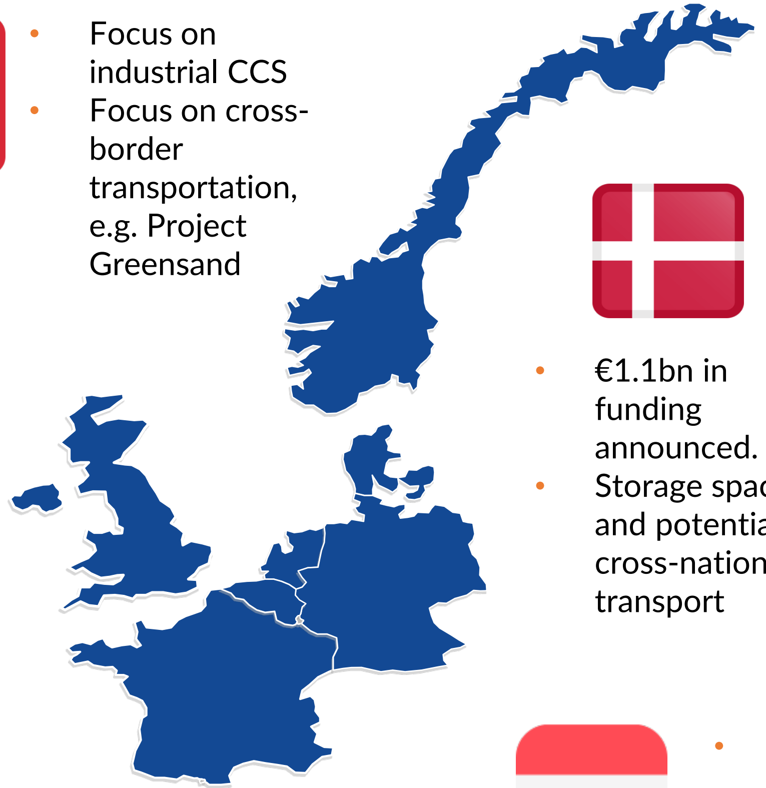
CCUS POLICY IN THE NORTH SEA REGION

EU Legislation on CCS

- **CCUS Strategic Energy Technology (SET)-Plan.** EU Innovation Fund - $10 billion of support over 10 years.
- **Net Zero Industry Act** sets 50 mtpa target by 2030, with proportional individual contribution of oil and gas companies required.

- Focus on industrial CCS
- Focus on cross-border transportation, e.g. Project Greensand



- €1.1bn in funding announced.
- Storage space and potential for cross-national transport

Aalborg Declaration

- Agreement signed in Nov 2023 between Denmark, Germany, France, Netherlands & Sweden to collaborate towards a unified CCS market in Europe, with collaboration on infrastructure and cross-border transport.

- 10mtpa target by 2030.
- Focus on Power CCUS and blue hydrogen.
- Funding for T&S being finalised under cluster sequencing process

- Several capture and storage projects at advanced stages, one of Europe's first movers – the Porthos project – has reached FID. Transitionary technology to 2035.
- Focus on industrial CCUS and blue hydrogen.

- Extensive experience in CCS, Northern Lights project first commercial scale project to come online 2024.
- Ample storage facility, with several licenses awarded.

- Draft carbon management strategy passed - support for industrial CCS but not Power CCUS. Also provides for offshore storage.

UK HYDROGEN - PROJECTS

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113

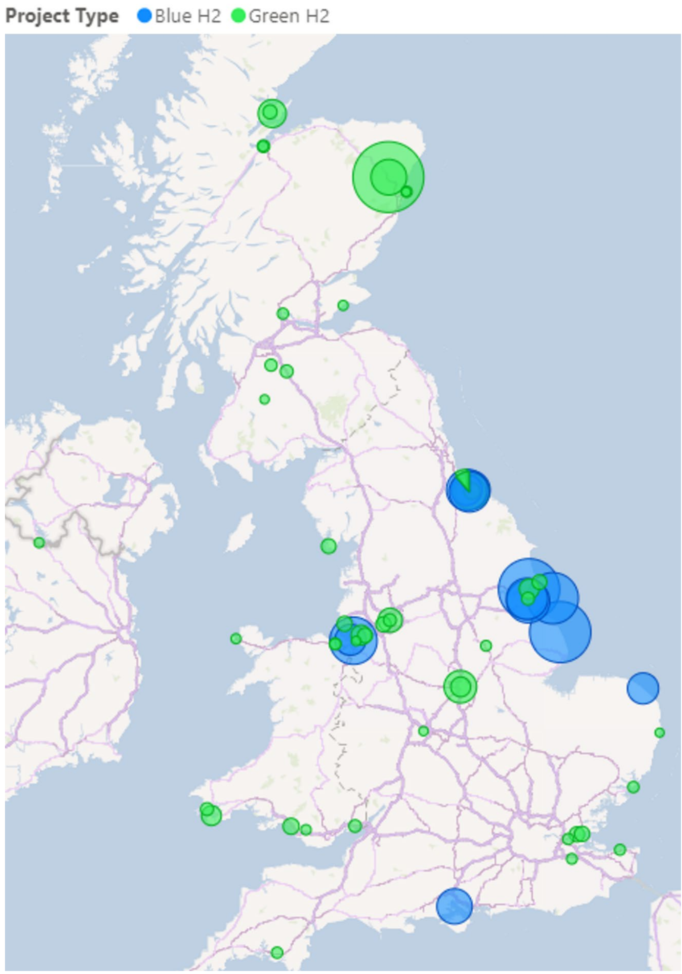
Total projects tracked

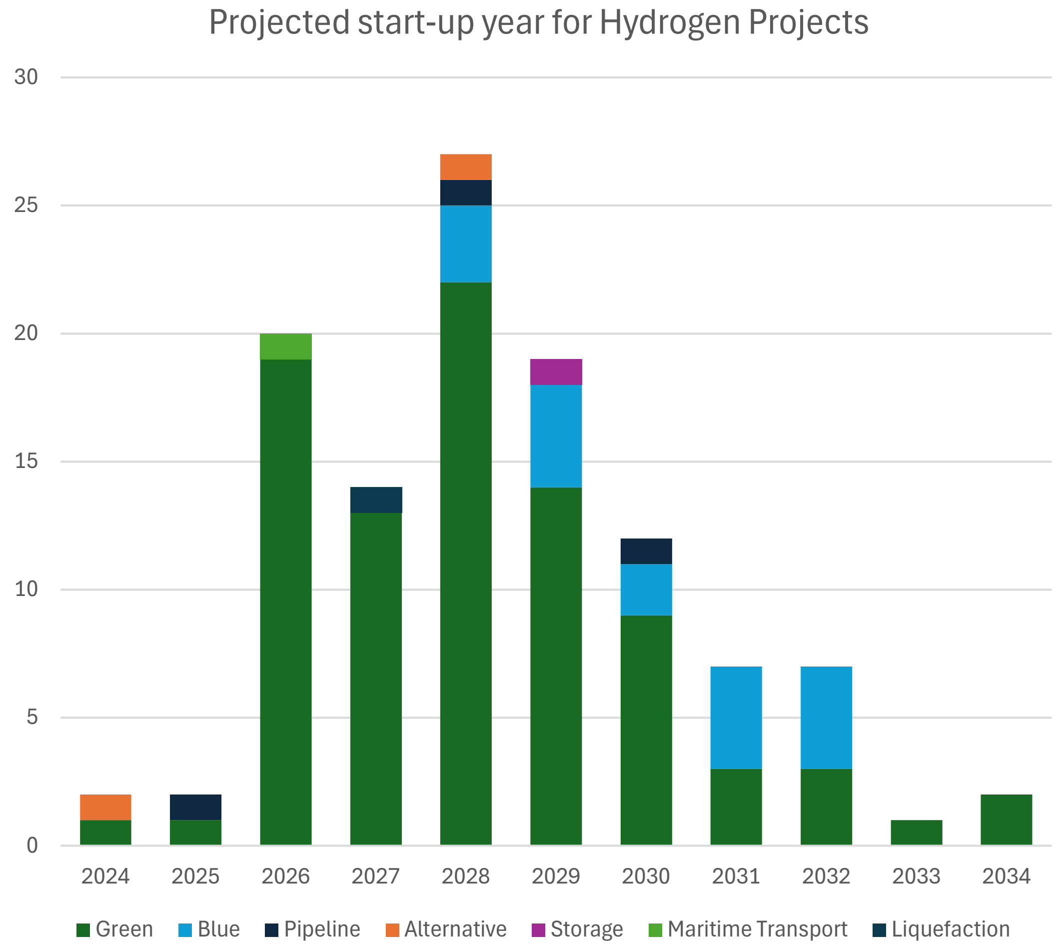
8+ GW

Total electrolyser capacity in pipeline

84%

% of hydrogen production projects that are electrolytic





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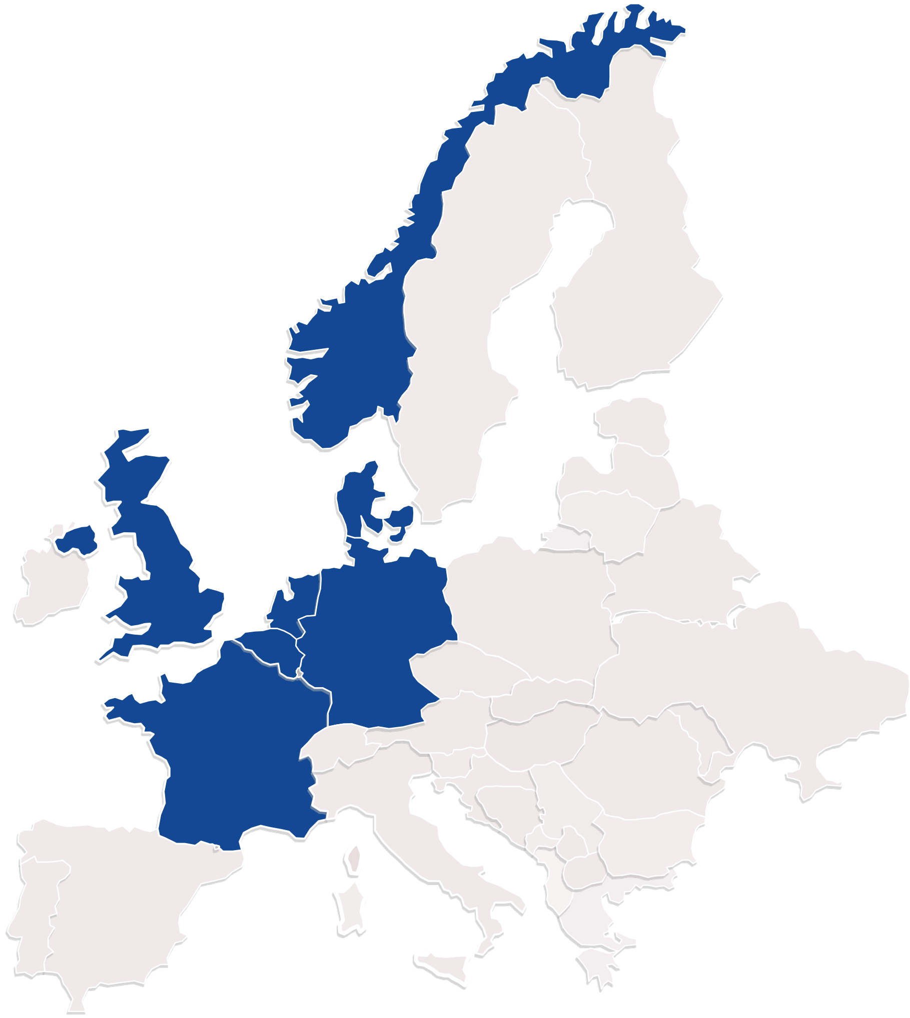
HYDROGEN POLICY IN THE NORTH SEA



- 10mtpa production and 10mtpa import by 2030, both blue and green hydrogen supported.
- Renewable Energy Directive launched
- Approval of hydrogen funding schemes across Europe.
- European Hydrogen Bank launched.

- Production target doubled to 10GW by 2030 (1mtpa)
- Received funding under the IPCEI for the Hy2Infra projects.
- High demand – 70% to be imported. H2Global scheme launched.
- Integrated hydrogen network planned.
- 10GW of hydrogen power to be tendered by 2035.
- Focus on green hydrogen.

- 4GW by 2030, 8GW by 2032
- Large, integrated plans centred around the future hydrogen hubs of Rotterdam and Amsterdam, both blue and green hydrogen.
- Plans for €1bn in subsidies, €250m program already kicking off

- 4-6GW target by 2030, focus on green hydrogen.
- Several massive scale green hydrogen projects in the offing.
- Green hydrogen tender in Oct 2023, 280MW of capacity successful.
- Focus on PtX.

- 10 GW target by 2030, consisting of both blue and green hydrogen.
- 125MW of capacity successful in HAR1 competition for green hydrogen, half of target.
- Business models and funding support being finalised, range of offtakers including power, transport, refineries and fuel switching.

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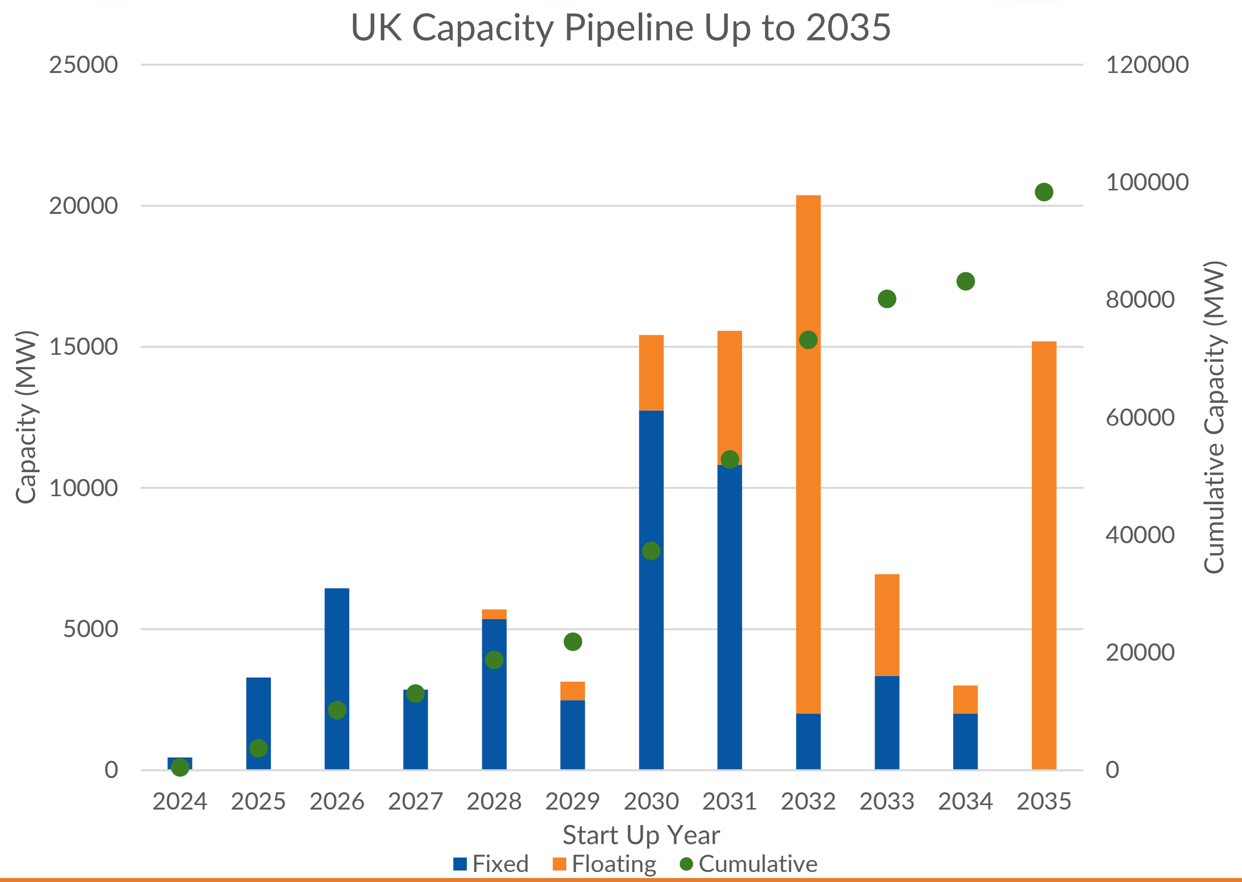
UK Offshore Wind

13.6 GW Operational Pipeline

113 GW Development Pipeline

54% % of Pipeline Floating

50 GW by 2030 (5 GW floating)



CfD Round 4 Projects: Major Contracts / FIDs
- *Inch Cape, East Anglia 3, Hornsea 3*

Extension Projects & Previous Leases: Consenting
- *Greater Gabbard (Ext.), West of Orkney (ScotWind), Green Volt (INTOG)*

Project activity for potential CfD AR6 candidates
- *e.g. Seagreen 1A, Norfolk Vanguard, Erebus…*

UPCOMING AUCTIONS

Leasing Round 5: Celtic Sea
- 4.5 GW floating by 2035
- Tender commenced Feb 2024
- Preferred bidders announced ~ Q2 2025

CfD AR6
- £800m - fixed bottom (Pot 3)
- £105m - emerging tech (Pot 2) – incl. floating
- £73 MWh (fixed) & £176 MWh (floating)

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Offshore Wind activity in the North Sea

Germany:
30 GW by 2030

- 8.8GW awarded 2023: TotalEnergies, BP, RWE, Waterkant Energy, Vattenfall
- Next tenders:
  - N-9.1, N-9.2 & N-9.3 – 5.5 GW - Centrally pre-examined; qualitative
  > Launched Feb 2024; bids by Aug 2024
  - N-11.2 & N-12.3 – 2.5 GW - Not centrally examined; lowest bidder
  > Launched Jan 2024; bids by June 2024

MAJOR CONTRACTS: Nordseecluster (RWE)

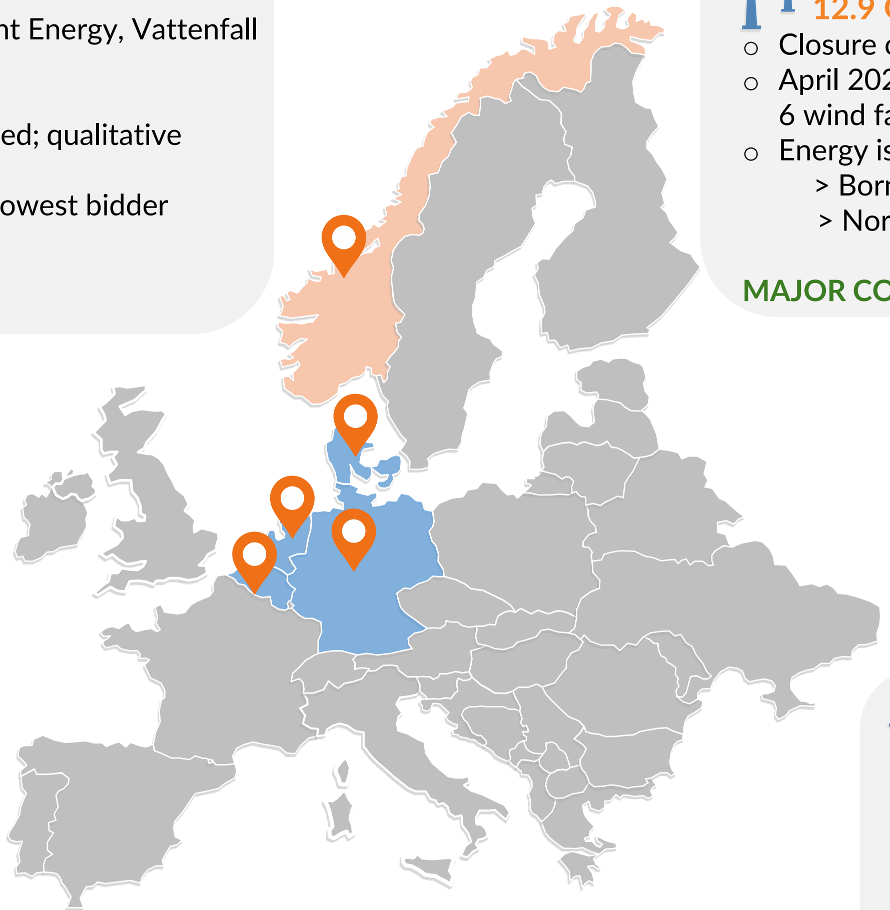
Norway:
40 GW by 2030

1st commercial sized auctions:

- Sørlige Nordsjø II (SN2):
  - 1.5 GW, fixed, quantitative
  - Awarded to Ventyr Energi (Parkwind & Ingka Group)
- Utsira Nord:
  - 1.5 GW, floating, qualitative
  - Results delayed to 2025 (finalising subsidy model)

Green Deal Industrial Plan (March 2023)

- Manufacturing capacity: annual target 36GW
- Streamlining permitting & non-price criteria auctions
- Recycling & use of permanent magnets



Fixed & Floating turbines
Fixed bottom turbines

Denmark:
12.9 GW by 2030

- Closure of Open-Door scheme
- April 2024: 6 GW tender launched (overplanting 10 GW)
  6 wind farms: North Sea I, Kattegat, Kriegers Flak II, and Hesselø areas.
- Energy islands:
  > Bornholm: new bidding zone, tendering HVDC cables
  > North Sea (VindØ): considering multiple platforms

MAJOR CONTRACTS: Thor (RWE)

Belgium:
8 GW by 2030

Princess Elisabeth Island:

- EPC contract awarded Jan De Nul-DEME
- 1st of 23 foundations to be installed by summer 2024

Princess Elisabeth Offshore Wind Zone (3.5GW):

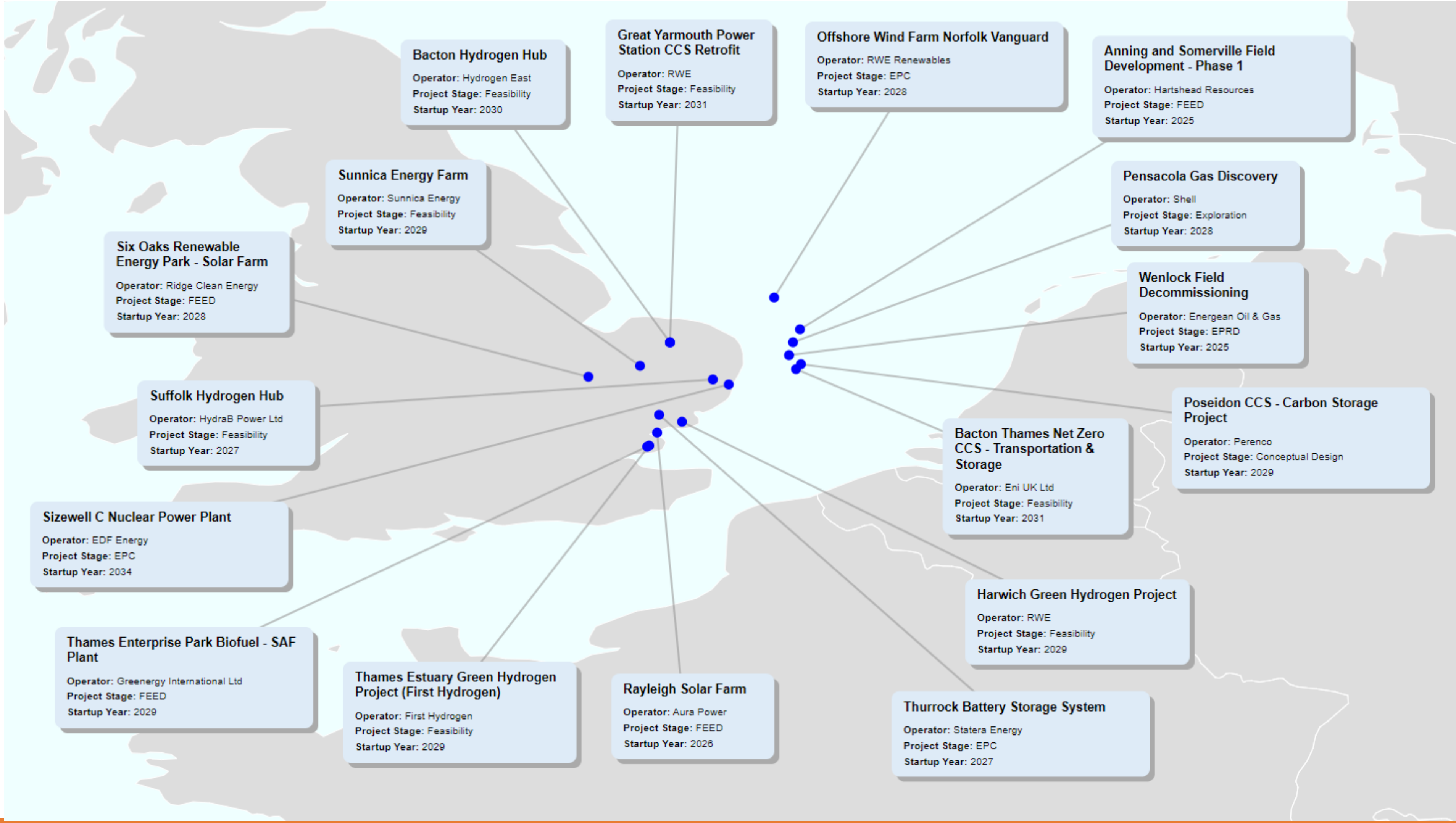
- Phase 1 (700MW) to launch Q4 2024

Netherlands:
22.2 GW by 2030

- Next tender:
  Ijmuiden Ver Alpha & Beta: 4GW
  > Bids closed, results June 2024
  > Vattenfall, ABP, APG, and SSE Renewables

MAJOR CONTRACTS: Hollandse Kust VI: Shell & Eneco

Project activity in East Anglia and SNS



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