North Sea Transition Authority

Overview 2026

Contents

Introduction from the Chief Executive

The North Sea can power the UK's energy transition. It has got it all – oil and gas supplies, abundant offshore wind power, vast carbon storage potential and exciting opportunities for hydrogen. It also supports the expert supply chain, made up of men and women whose transferable skills are in demand across sectors, including renewable energy.

Stuart Payne, NSTA Chief Executive

The North Sea gives the UK huge advantages and, at the same time, the transition remains one of the most complex challenges of our age. We are at a pivotal moment, as oil and gas production from our mature basin continues to decline. Making the move from hydrocarbons to other energy sources in a way that works for the offshore supply chain, industry and communities requires a clear and co-ordinated approach. The right infrastructure must be in the right place at the right time. Investors must be given confidence.

The UK now has a blueprint for that transition. Announced in November 2025, the UK government's North Sea Future Plan lays out explicitly how it intends to protect existing roles and create the next generation of clean jobs, while managing existing oil and gas production for decades to come.

Once established via an energy bill, the plan will also strengthen the NSTA's regulatory framework, giving us three balanced objectives, reflecting our evolution and our ongoing work with industry, government and other regulators to accelerate the transition, secure energy production and reduce emissions.

The NSTA will steadfastly support the government and North Sea Future Board on the delivery of the plan – for the good of the North Sea and all who rely on it.

Our role

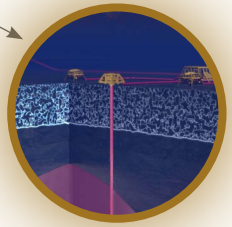
The NSTA regulates and influences the oil, gas, offshore hydrogen and carbon storage industries. We work with government, industry and other regulators to achieve our three main objectives.

Capital

Licence to operate

Capital, skills

Infrastructure reuse, integration



Energy production and security

Economic recovery of oil and gas

Storage: Natural gas and H_2

Emissions reduction

Clean power generation

Flaring and venting

Efficiencies

Technology

Integration, floating wind

Skills, supply chain

Accelerating the energy transition

Carbon storage and hydrogen

Co-location and spatial planning

Cost-effective decommissioning

Digital and data

Energy transition opportunities

The North Sea has the resources, infrastructure and industrial capability to deliver a prosperous energy transition. By harnessing these assets, the UK can benefit from a new economic success story.

Industrial potential

£125bn+ expenditure on oil and gas, offshore wind, CCS and hydrogen to 2030[1]

150,000+ jobs supported by oil and gas and renewables[2]

Existing world class energy supply chain from oil and gas sector

Infrastructure

30+ fields have infrastructure with reuse/repurposing potential

250+ subsea installations

Integration of multiple energy systems

Natural resources

up to **78GT** of CO_2 storage potential[4]

3.3bn barrels of oil equivalent projected to be produced 2026-50

50GW fixed and floating offshore wind[3]

Sources: [1] – NSTA and OEUK [2] – OEUK, RGU, OWIC [3] – UK Government target [4] – ETI, BGS, et al. UK Storage Appraisal Project (2011)

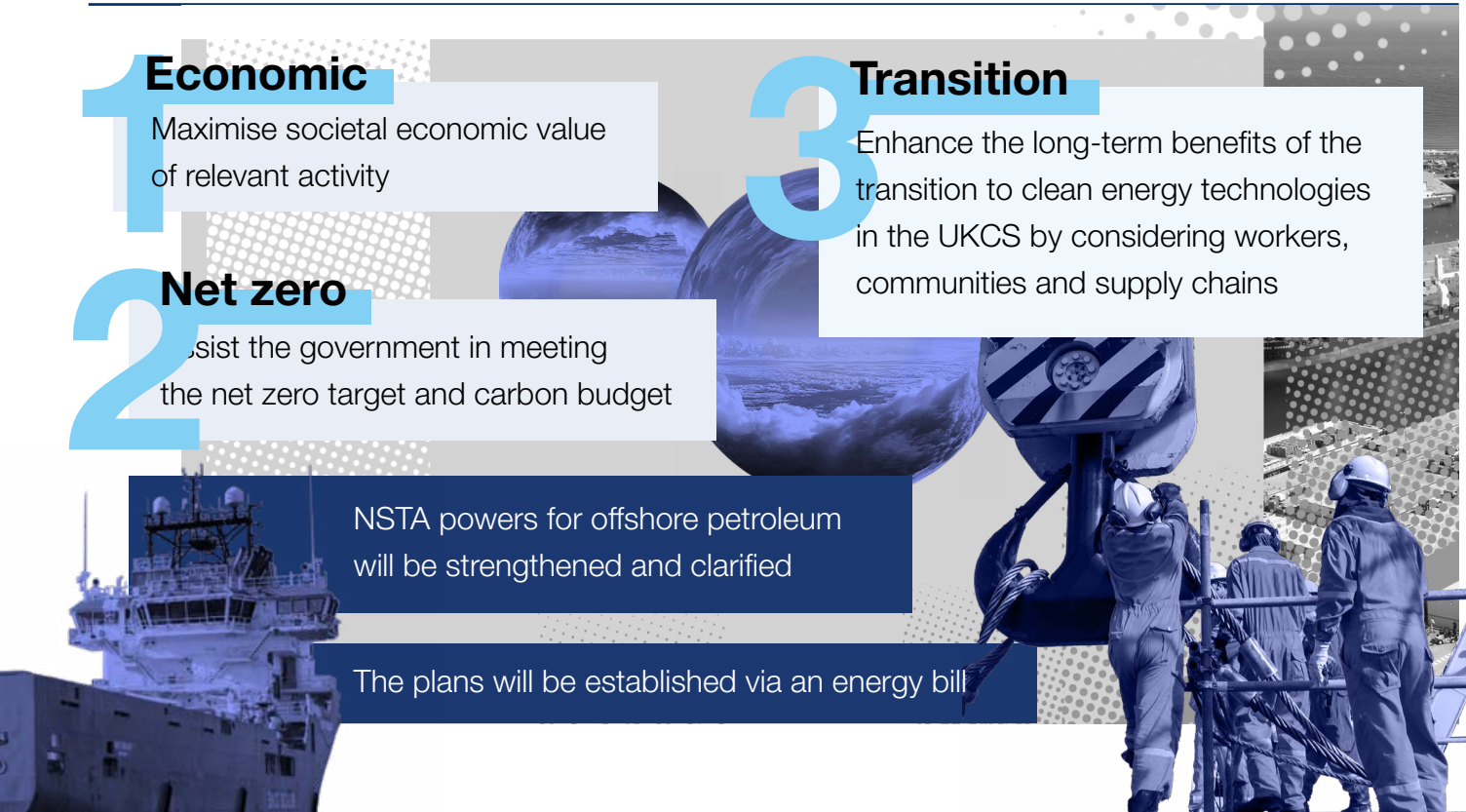
North Sea Future Plan

The UK government aims to foster an internationally leading offshore clean energy industry which ensures good, long-term jobs, growth and investment in communities across the North Sea.

Published in November 2025 in response to Building the North Sea's Energy Future consultation

North Sea Future Plan and the NSTA

The NSTA will have three primary, balanced objectives applying across our offshore remit.
The new approach reflects the reality of our evolution and increasingly diverse responsibilities.



1 Economic

Maximise societal economic value of relevant activity

2 Net zero

Assist the government in meeting the net zero target and carbon budget

3 Transition

Enhance the long-term benefits of the transition to clean energy technologies in the UKCS by considering workers, communities and supply chains

NSTA powers for offshore petroleum will be strengthened and clarified

The plans will be established via an energy bill

Energy production and security

The North Sea has been helping to provide light and warmth for UK homes and industry for more than 50 years and will continue to be an essential resource supporting UK energy security for many years to come.

Important role for oil and gas

North Sea oil and gas production – though declining – will continue to play an important role in the energy mix for decades to come, supporting communities as the UK transitions.

3.3bn

barrels of oil equivalent projected to be produced between 2026 and 2050

47.7bn

barrels of oil and gas produced from UKCS by end of 2024

14 projects

being stewarded towards consenting decisions, with **£10bn** of investment and **800m** barrels under assessment

£58bn+

to be spent on exploration and production activities, 2026-30

~50%

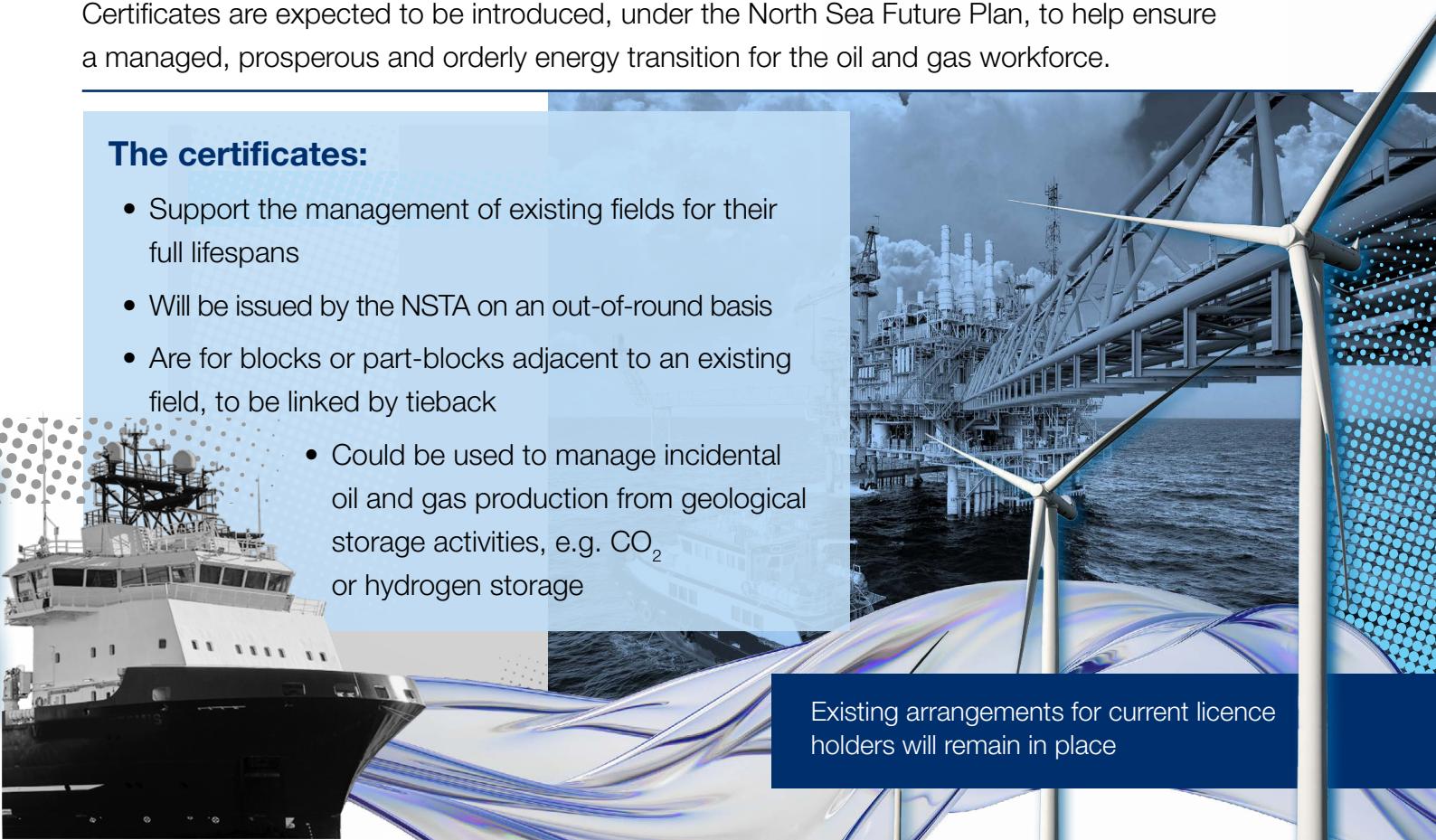
Domestic gas production equated to about half of UK demand in 2025

Transitional Energy Certificates

Certificates are expected to be introduced, under the North Sea Future Plan, to help ensure a managed, prosperous and orderly energy transition for the oil and gas workforce.

The certificates:

- Support the management of existing fields for their full lifespans
- Will be issued by the NSTA on an out-of-round basis
- Are for blocks or part-blocks adjacent to an existing field, to be linked by tieback
- Could be used to manage incidental oil and gas production from geological storage activities, e.g. CO_2 or hydrogen storage



Existing arrangements for current licence holders will remain in place

Optimising existing assets

The UKCS is home to more than 200 active oil and gas fields which produced around 1 million barrels of oil and gas per day in 2025, a significant contribution to the nation's energy supply. Operators must continue to manage these assets efficiently, ensuring economic recovery.

Tom Wheeler, Director of Operations

Asset Stewardship

- NSTA Stewardship Expectations promote best practice and set high operational standards, optimising efficiency
- Annual survey data used to benchmark operators' performance across key metrics, e.g. production efficiency
- Operators' performance is reviewed and improvements discussed

Technology

Operators safeguard existing production using innovative tools which simplify and lower the costs of inspecting, monitoring and maintaining their infrastructure – NSTA raises awareness of these offerings through its reports.

Technology Insights Report 2025

Making the most of existing wells

Extending the lifespans of existing oil and gas wells can boost the efficiency of production from North Sea fields and create opportunities for the supply chain.

Well interventions

Fine-tuning underperforming wells and reactivating shut-in wells – cheaper, quicker and cleaner than new drilling

37.5m barrels from interventions in 2024, more than a month's average supply

£9.60 per barrel intervention costs in 2024

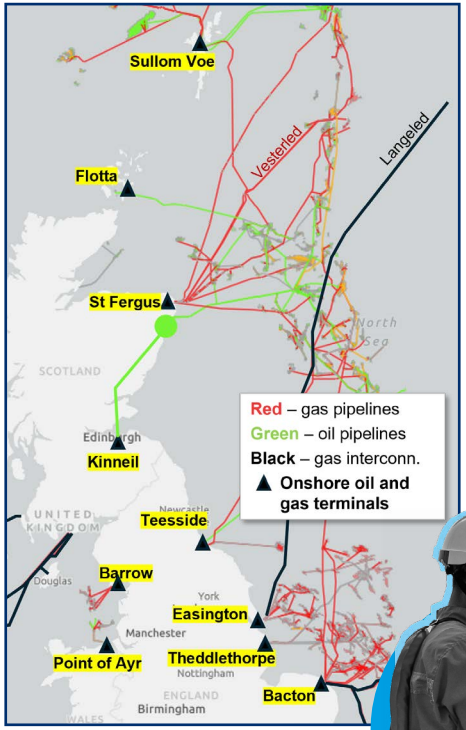
NSTA initiative

- Worked with 8 operators to identify 200 shut-in wells with potential for reactivation
- More than 50 already back online, contributing 8m barrels
- NSTA tracking progress on remaining wells and reaching out to more operators
- Development wells also in focus

The UKCS 2025 Wells Insights Report

UK oil and gas terminals

Onshore oil and gas terminals make significant contributions to the UK's energy security and are well placed to support CCS and hydrogen projects, accelerating the energy transition.



21 terminals across 10 sites

Currently treating gas volumes equating to ~60% of UK gas demand

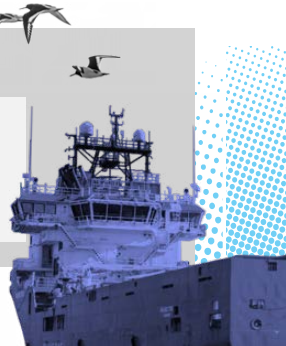
3,000+ highly skilled staff

Many fields share the same oil and gas infrastructure

The NSTA website has more information about terminals' ongoing operations and energy transition plans

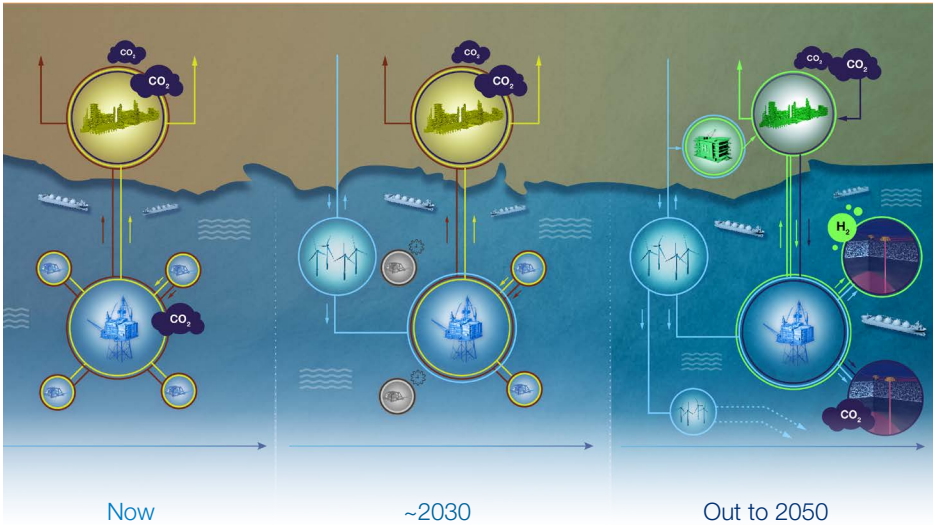
North Sea Future Plan

The NSTA is working with terminal and pipeline owners to better understand the complexity of infrastructure interconnections.



Integrated energy hubs

The North Sea has abundant wind, carbon storage and hydrogen resources. Integrating these assets, including with repurposed oil and gas infrastructure, will help them reach their full potential.



Now – Oil and gas hub

Producing oil and gas with offshore emissions from gas/diesel-powered equipment.

~2030 – Decarbonised hub

Tied into grid and offshore wind, minimising offshore emissions and enabling floating wind.

Out to 2050 – Integrated energy hub

Repurposed and shared infrastructure linking oil and gas, clean energy technologies and carbon storage.

Emissions reduction


The NSTA is fully committed to enabling the achievement of the UK government's commitment to reach net zero emissions by 2050.

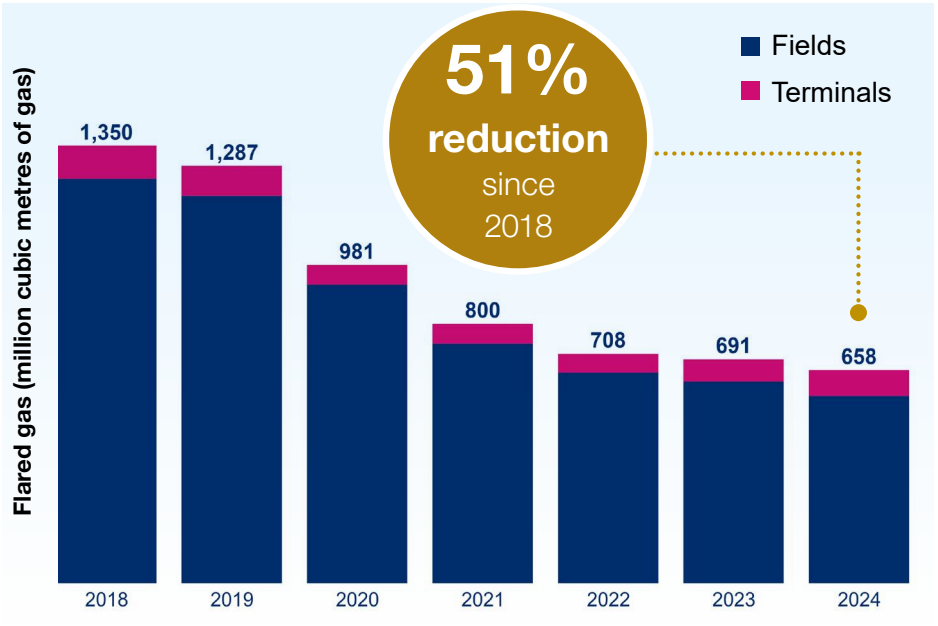
UK upstream oil and gas GHG emissions

The oil and gas industry has made progress lowering its production emissions, but more work is needed to meet key targets on the way to net zero by 2050, including a 90% reduction by 2040.

GHG emissions reduction

Source: NSTA Emissions Monitoring Report

Declining gas flaring



Source: Digest of UK Energy Statistics

UK upstream oil and gas GHG emissions

Our annual Emissions Monitoring Report shines a light on industry performance and keeps track of progress against emissions reduction targets. It's an important tool for focusing attention on the pace of progress.

Niki Obiwulu, Analysis and Insights Manager

Emissions reductions

Just over 50% of reductions achieved from 2018–24 were from online assets

Upstream GHG footprint

Oil and gas production emissions make up 3.3% of UK total

Abatement potential

27.3 $MtCO_2e$

of potential emissions reductions from abatement projects reported by operators

Offshore emissions intensity

24 $kgCO_2e$

per barrel

in 2024, unchanged from 2023

Emissions Monitoring Report 2025

OGA Plan

The OGA Plan gives operators certainty on emissions reduction requirements and helps them make long-term plans, putting them on the pathway to net zero.

The Plan calls for concerted action across four areas

Investment and efficiency

- Investment in greenhouse gas emissions reduction should be made by industry
- Includes investment in specific technology to improve efficiency and reduce emissions

Electrification and low-carbon power

- Power generation is largest contributor to oil and gas production emissions
- Electrification required for existing assets, where reasonable to do so, with other low-carbon power options also considered

Inventory

- More focus on planned decommissioning
- Scrutiny of high emissions intensity assets

Flaring and venting

- A fifth of production emissions from flaring, venting
- Operators must deliver continuous improvements in flaring and venting
- Zero routine flaring and venting for all by 2030

Emissions reduction projects

Operators have invested in flaring reduction technologies, while some low-carbon power projects are progressing. More projects are needed to keep up momentum.

Flaring and venting reduction on UKCS oil and gas platforms

Completed

- **Mariner** – flare gas recovery (FGR) unit activated

Expected completion in 2026

- **Elgin-Franklin** – FGR project
- **Clair** – vapour recovery unit refurbishment

Low-carbon power generation

Completed

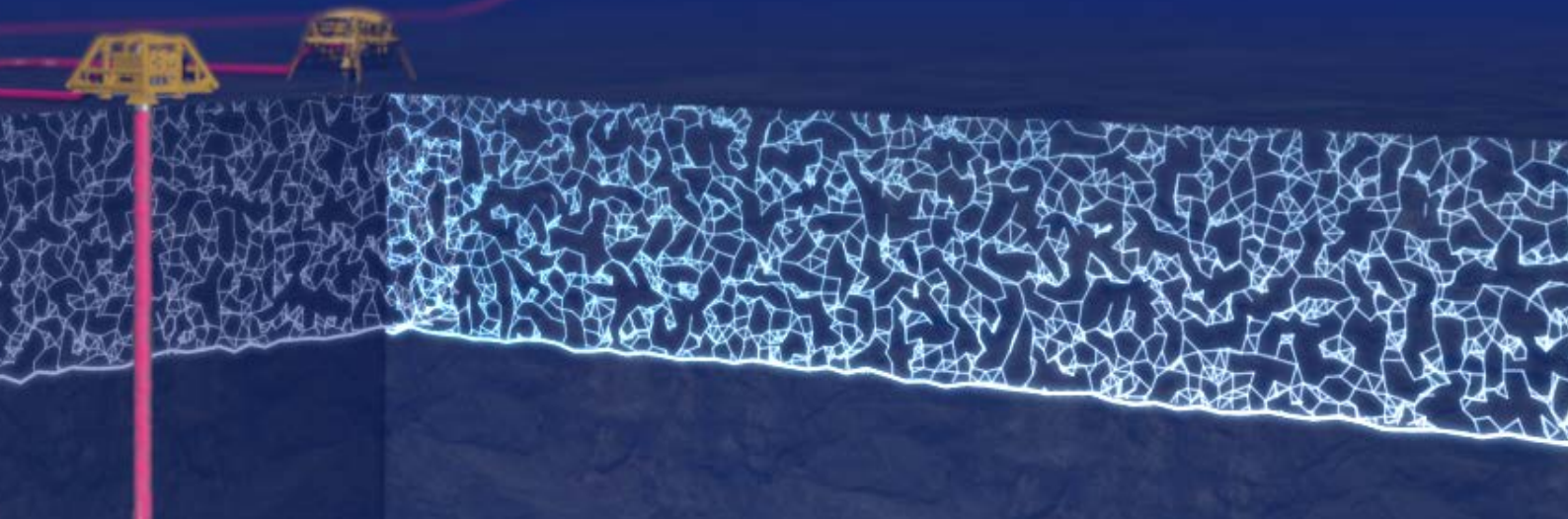
- **Breagh field** – onshore gas compression electrified
- **Multiple unmanned platforms** powered by small wind turbines, solar and batteries

Ongoing

- **Culzean** – single-floating wind turbine to cut Culzean platform emissions
- **Green Volt** – floating wind farm to provide power for oil and gas platforms

Accelerating the energy transition

NSTA analysis shows the UK Continental Shelf can make a major contribution to net zero. Co-ordination and planning are key to accommodating the full range of energy and decarbonisation systems in the basin.



Carbon storage: NSTA role

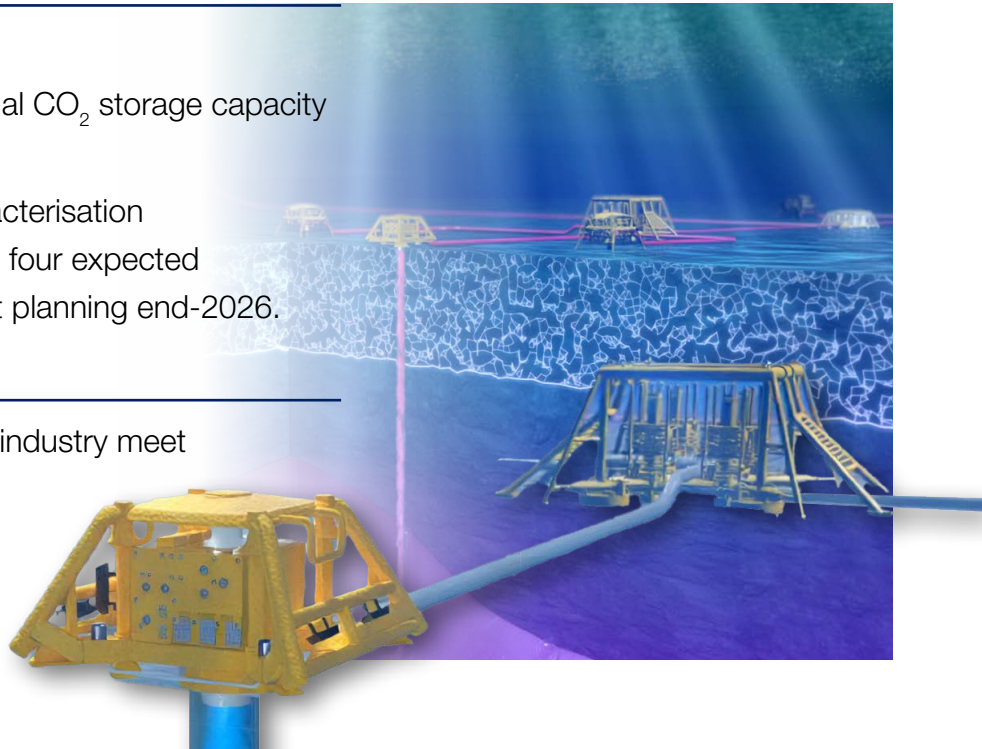
The NSTA is playing an important role in ensuring the CCS sector continues to grow quickly in the UKCS and lives up to its potential to decarbonise industries in the UK and Europe.

2nd CS licensing round

- Launched Dec 2025
- 14 locations offered – 2GT potential CO_2 storage capacity
- Builds on 1st CS round
  - 21 offers made 2023. Site characterisation progressing on 20 licences, with four expected to move onto initial development planning end-2026.

CS Stewardship Expectations

- Introduced Sept 2025 to help CS industry meet obligations and prosper
- Advice on best practice
- 5 areas covered: risk, appraisal, data, technology, stakeholders



Carbon storage projects: Endurance

The NSTA awarded a permit for the UK's first carbon storage project to the Northern Endurance Partnership in late 2024, a hugely significant step on the journey to net zero.

Up to 100m tonnes

of CO_2 from industries in Teesside and Humberside to be stored in Endurance aquifer in Southern North Sea

2028

start-up expected

25 year

lifespan

£1bn

worth of contracts awarded in first year since FID – **billions more to come**

2,000

construction jobs to be created

3d model image © Technip Energies

Carbon storage projects: HyNet

In 2025, the NSTA awarded three permits to Eni for Liverpool Bay CCS, the CO_2 transportation and storage system which will serve the HyNet industrial cluster in north-west England and Wales.

5 priority projects

selected to tie into HyNet, including gas power, cement and energy-from waste – 5 more on standby

109m tonnes

of CO_2 to be stored over lifespan – starting 2028

£2bn

of supply chain contracts unlocked

90 miles

of existing pipeline being repurposed

1,500 jobs

committed – early hiring under way

Energy Pathfinder

Subcontracts for Endurance and HyNet advertised on NSTA site

CCS – UK opportunity and progress

Several key carbon storage projects are being progressed from the appraisal and planning stages towards permit applications in the coming years.

Viking and Acorn

Both track two projects maturing technically and progressing towards storage permit applications

Morecambe Net Zero

Moving towards site characterisation review near term

Important milestones reached in 2025

Poseidon – Leman

- Perenco completed UK's first CO_2 injection test for CCS in SNS
- Results will boost understanding of impact of CO_2 injection in depleted fields

Bacton – Hewett

- Eni drilled first appraisal well on acreage licensed in inaugural CS round
- Important step towards assessing CS potential of UKCS

Hydrogen

Hydrogen is a huge growth opportunity for the UK and a key transitional sector for suppliers in industrial heartlands which host high-emitting sectors.

Our role

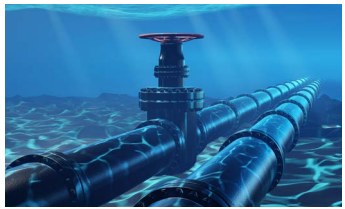
The NSTA is responsible for the licensing and consenting of offshore hydrogen pipelines and offshore hydrogen storage.

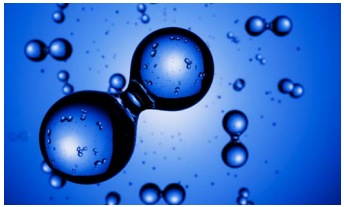
Government production ambitions

10GW hydrogen by 2030:

- At least half from Green H_2 (Electrolytic)
- Remainder from Blue H2 (CS-enabled)

UKCS potential





Production

Low carbon – hydrogen hubs, offshore carbon storage and natural gas feedstock.

Electrolytic – coastal location, offshore wind capacity.

Infrastructure

Existing pipelines, terminals and skills base can be repurposed, saving capital costs and time on permitting.

Storage

Short, medium and long-duration will be required, including in offshore reservoirs.

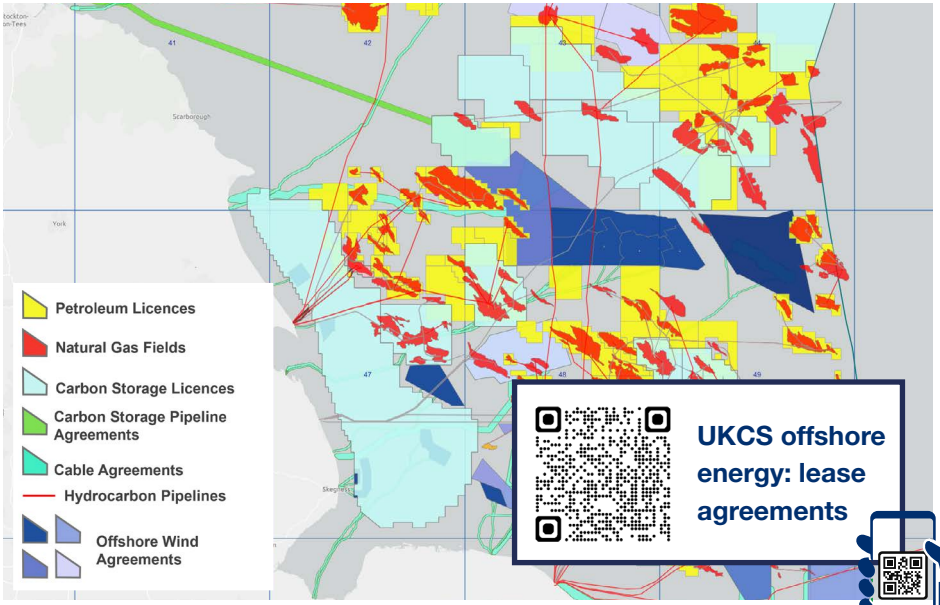
Spatial planning and co-location

Collaboration and proactive planning will be required to enable energy and decarbonisation systems to share space in an increasingly busy UKCS, alongside other marine sectors.

The NSTA works with other bodies to drive a co-ordinated approach to managing the seabed, including The Crown Estate and Crown Estate Scotland, the UK and Scottish governments and the National Energy System Operator.

The NSTA, industry and offshore bodies are using data sharing and novel technologies, including CS monitoring tools, to spatially optimise current and future projects.

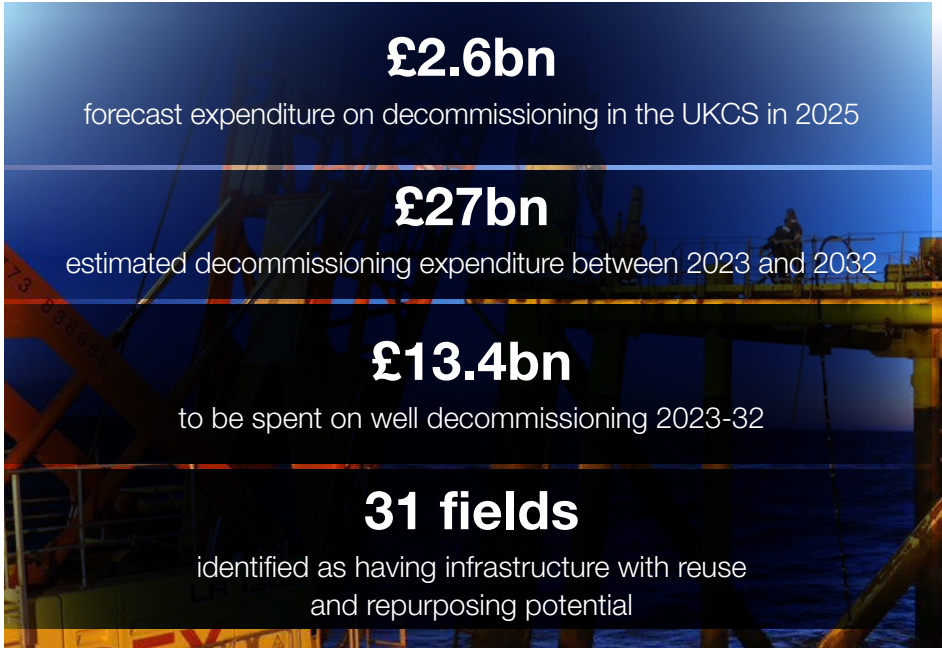
Oil and gas, carbon storage and offshore wind licences, leases and projects already co-exist in the North Sea and East Irish Sea



Decommissioning

Oil and gas infrastructure decommissioning is an obligation for licensees, can be a key enabler of the energy transition and represents a multibillion-pound opportunity for the supply chain.

Key figures



NSTA role

- Drive cost-effective decommissioning – saving money for taxpayers and industry
- Stewardship and guidance to operators
- Consultee for OPRED on decommissioning programmes
- Regulator for well decommissioning

Decommissioning

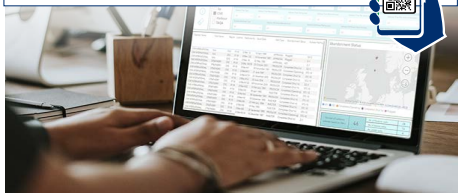
We regulate, influence and inform the industry to ensure that decommissioning is delivered in a way that minimises costs to the taxpayer, leverages data and lessons, and supports the energy transition and the UK's world-class supply chain.

Alastair Bisset, Head of Decommissioning

Insights and digital tools

NSTA digital tools, reports and benchmarking keep operators and suppliers informed and support better planning and decision-making.

Decommissioning and repurposing



Reuse and repurposing

Engaging with operators to assess alternatives to decommissioning their infrastructure, where feasible, including reuse and repurposing for energy transition projects.

Planning for well decom

Basin-wide plan for cost-efficient well decommissioning developed using quality data from industry.

North Sea Future Plan

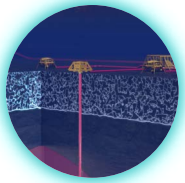
The North Sea Future Plan will give the NSTA new powers to enforce well decom milestones.

Data and digital capabilities…

The NSTA is focused on continually improving its Digital Energy Platform, which already boasts an impressive array of award-winning data visibility tools and maps used by industry and academia.

Data powered transition

1.7 petabytes of freely-available geoscience and engineering data

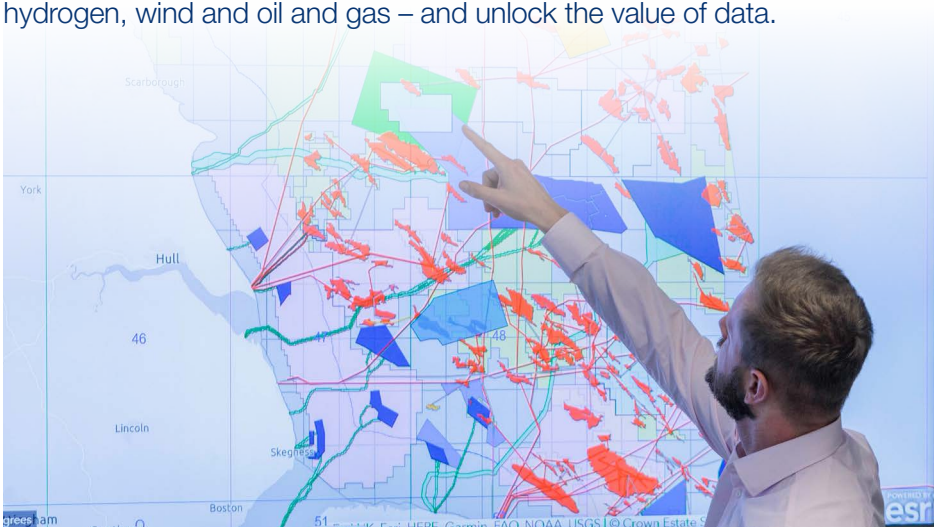


Carbon storage exploration

Offshore wind project siting

Spatial mapping tools

Our spatial and subsurface mapping tools are being used to accommodate and integrate a range of technologies offshore – such as carbon storage, hydrogen, wind and oil and gas – and unlock the value of data.



… a catalyst for the transition

Innovative use of data is playing a vital role in accelerating the North Sea's energy transition. We continuously explore new ways to share data, helping offshore energy companies plan more effectively and make better decisions.

Nic Granger, Chief Information and Financial Officer

Interactive dashboards

Emissions performance, production efficiency, pipeline consents – just three examples of a suite of 30+ online tools provided by the NSTA. The NSTA is making it easier to benchmark performance, identify opportunities and get business done.

Digital leadership

The Offshore Energy Digital Strategy Group, chaired by the NSTA, has set up a new UKCS data portals site, signposting users to eight organisations' data.

UKCS data portals

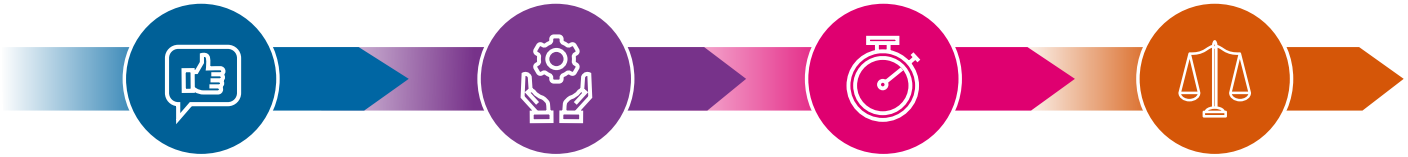
Find out more

about the NSTA's stewardship of industry and engagement with operators, the supply chain, government and other regulators to deliver shared objectives.

Exercising our powers

Regulatory compliance is essential for a level playing field and for industry to maintain its social licence to operate. The NSTA takes a tiered approach to ensure operators meet their obligations.

Our approach



Voluntary: Licensees doing the right thing

Encourage collaboration.

Educate, guide and inform.

Promote best practice.

Assisted: Licensee lacks knowledge Unintentional non-compliance

Risk-based stewardship and facilitation.

Encourage corrective action.

Directed: Licensee requires NSTA intervention

NSTA will detect non-compliance then formally direct corrective action.

Compliance will be re-prioritised to be primary driver and outcome.

Enforced: Formal sanction

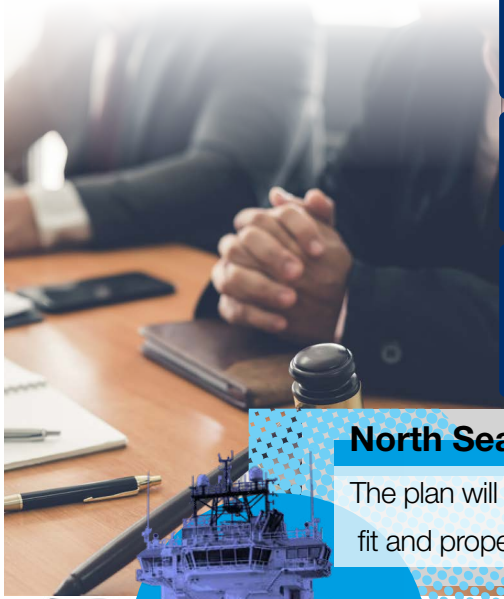
NSTA will take enforcement action to deter poor behaviour – especially if repeated non-compliance demonstrated.

Can include financial penalties, removal of licence and enforcement notices.

Exercising our powers

As the North Sea matures, the NSTA is continuing to take a firm line on non-compliance with flaring, venting and production consents and on well decommissioning obligations.

Enforcement



The NSTA opened 12 investigations and imposed three financial penalties in 2025.

Between 2021 and 2025, the NSTA issued fines totalling £1.9m, including £1.2m for flaring and venting breaches.

Supporting our focus on tackling poor behaviours and raising compliance, we are looking at increases to our financial penalty range and enforcement powers.

North Sea Future Plan

The plan will strengthen our powers for offshore petroleum, including fit and proper person test, withholding consents and decom powers.

Significance of the supply chain

The NSTA is actively supporting the oil and gas industry's supply chain, and highly-skilled workforce, as they pivot to play a leading role in the UK's energy transition.

Jobs and skills

The UK's oil and gas industry is thought to support up to 115,000 direct and indirect jobs*. Most direct jobs are in the supply chain – and the skills of this world-class workforce can transfer to renewables, in most cases.

Supply Chain Action Plans

SCAPs received by the NSTA show contracts worth ~£6bn were awarded for energy, decom and decarbonisation projects across 2024 and 2025. Job creation, local content data and tier one contractor deals are tracked.

Stewardship Expectation 12

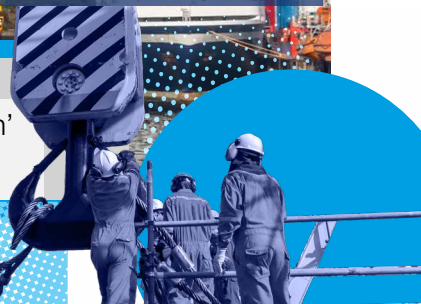
Operators are expected to treat contractors fairly, including by adhering to 30-day payment terms, using industry-standard contracts, and working collaboratively.

Outreach and engagement

The NSTA brings operators and suppliers together at events throughout the year to raise awareness of upcoming activities and promote networking.

North Sea Future Plan

NSTA will work with industry to develop a 'basin-wide plan' to improve the visibility of operators' future activities.



*– OEUK, RGU

Energy Pathfinder

Our revamped Energy Pathfinder portal is a free, one-stop-shop providing visibility of contracting opportunities for energy production and decarbonisation projects. It is key to the oil and gas supply chain's diversification into clean energy.

Bill Cattanach, Head of Supply Chain

Energy Pathfinder

Scan to see how it works

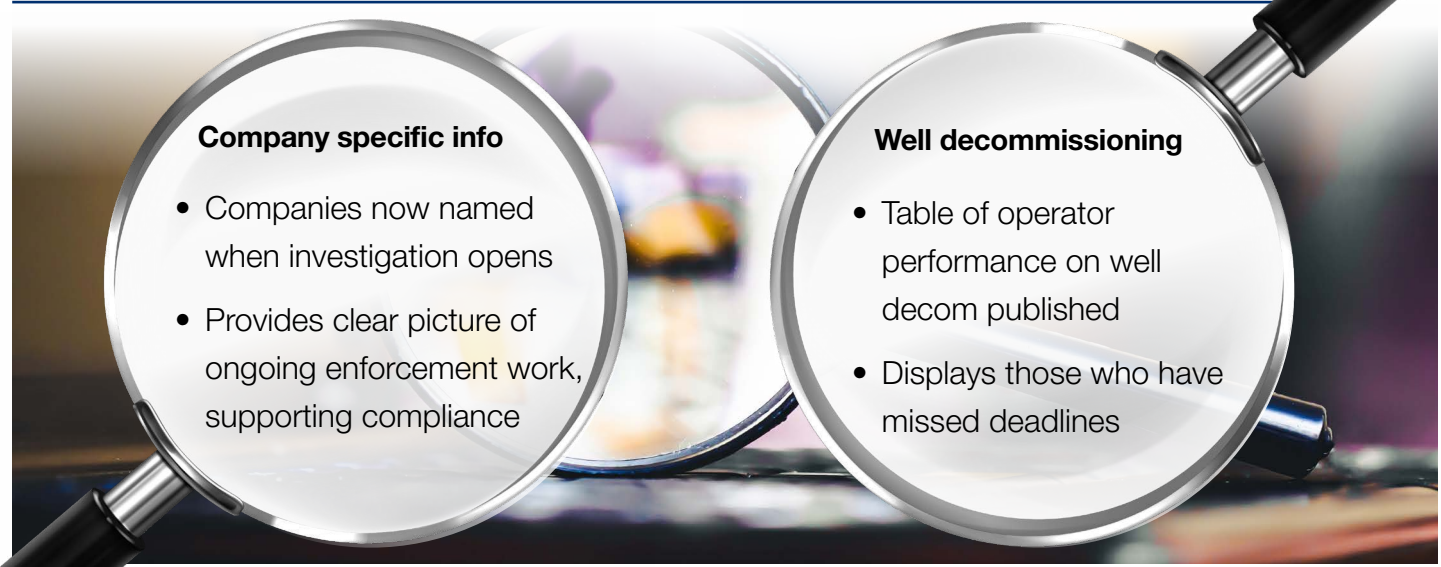
- Revamped in 2025 with input and backing from Renewable UK and Scottish Renewables
- More than 170 projects listed, including oil and gas, emissions reduction, decommissioning, CCS, hydrogen and wind power
- Over 2,700 subscribers for monthly updates
- Tier one suppliers now advertising contracting opportunities, including dozens of tenders for CCS projects
- Allows operators to tap into service sector expertise and solve complex challenges
- Forward work plans section for operations and maintenance tenders

Transparency

The NSTA believes greater transparency can promote confidence in a stable and fair regulatory system, enhance compliance and encourage investment in the UKCS. We've taken important steps on that journey.

Dr Russell Richardson, General Counsel and Company Secretary

Transparency initiatives launched in 2025:



Measuring success

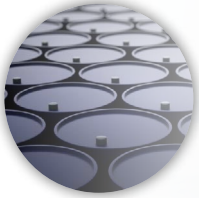
The NSTA worked closely with industry to deliver 233 success stories between February 2021 – when our revised Strategy came into force – and December 2025.

4.5 $MtCO_2e$

lifetime emissions prevented

£531m

cost mitigated



552m

barrels of oil equivalent

£367m

decom cost savings

£4.4bn

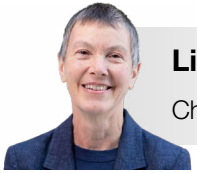
value of investments

433 days

time saved to industry (fast tracked consents days)

Experienced leadership

Board of Directors



Liz Ditchburn
Chair of the NSTA

Stuart Payne
Chief Executive

Dr Sarah Deasley
Non-Executive Director

Iain Lanaghan
Non-Executive Director

Dr Russell Richardson
General Counsel and Company Secretary

Nic Granger
Chief Information and Financial Officer

Sara Vaughan
Non-Executive Director

Vicky Dawe
Shareholder Director

Malcolm Brown
Non-Executive Director

Experienced leadership

Leadership Team

Stuart Payne
Chief Executive

Hedvig Ljungerud
Director of Strategy

Andy Brooks
Director of New Ventures

Dr Russell Richardson
General Counsel and
Company Secretary

Nic Granger
Chief Information
and Financial Officer

Pauline Innes
Director of Supply Chain
and Decommissioning

Tom Wheeler
Director of Operations

Jane de Lozey
Director of Regulation

Suzanne Lilley
Head of Human
Resources

Who does what in government?

Energy transition including:	
Carbon storage and offshore hydrogen transportation and storage licensing and permitting authority	**NSTA**
UK energy policy, including CCS, hydrogen, renewable energy, legislation	**DESNZ**
Seabed leasing	**The Crown Estate** (England and Wales), **Crown Estate Scotland**
Marine licensing	**Marine Management Organisation (England), Scottish Government, Natural Resources Wales**
Offshore transmission, economic regulator for CCS	**OFGEM**

Oil and gas policy including:	
Overall oil and gas policy, legislation	**DESNZ**
Offshore decommissioning	**DESNZ – OPRED, NSTA, HMT**
Fiscal and taxation	**HMT, HMRC** (NSTA providing expertise and evidence)
Supply chain and business impact	**DESNZ and NSTA**
Environment	**DESNZ – OPRED**
International relations and trade	**DESNZ, DBT, NSTA, FCDO**

Who does what in government?

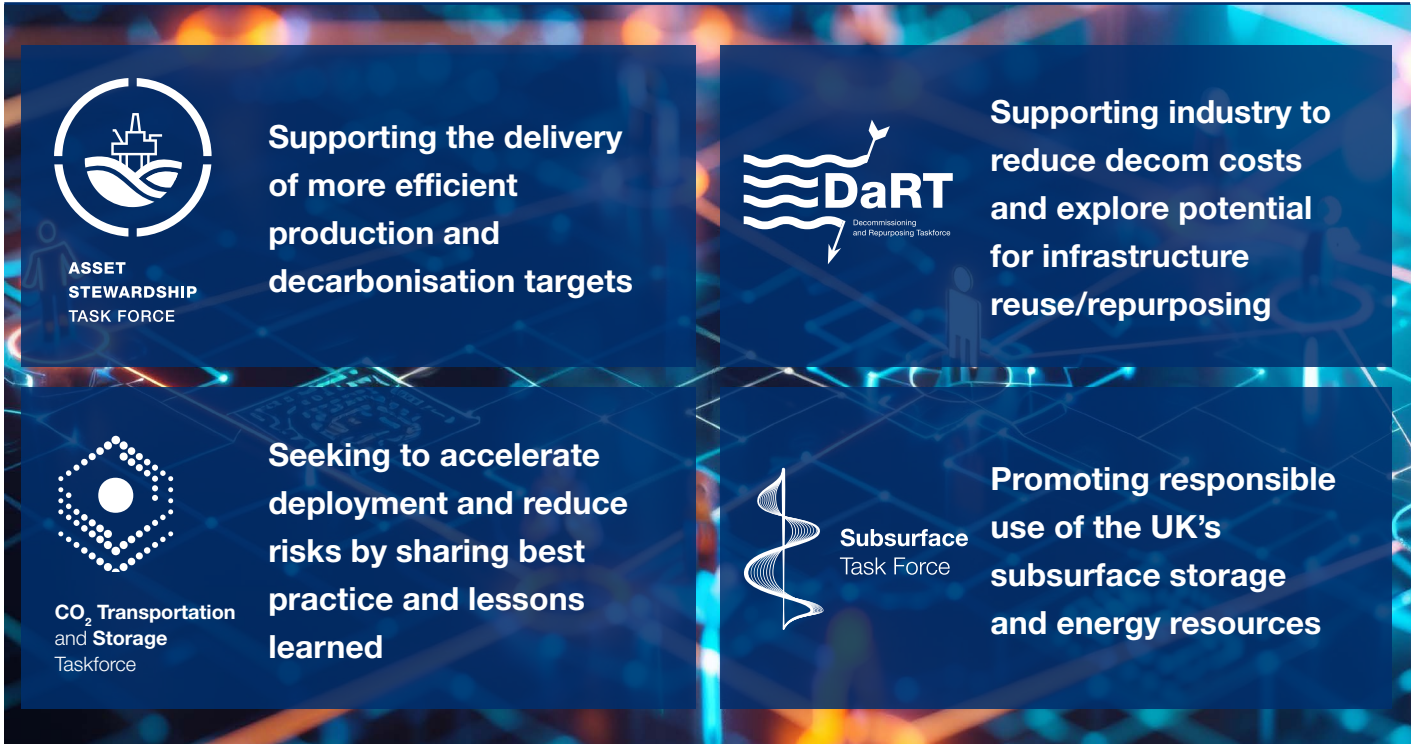
Exploration and production including:	
Offshore, onshore, gas storage and gas unloading licensing and stewardship Field development plan consents Offshore pipeline works authorisation Infrastructure Commercial matters and changes of control Flaring and venting consents Metering and allocation Production outages Offshore decom efficiency, costs, technology Supply chain action plans Effective net zero assessment Emissions benchmarking	**NSTA**
Offshore decom programme approval, execution and monitoring	**DESNZ – OPRED**
Offshore environmental management and inspection	**DESNZ – OPRED**
Health and safety management	**HSE**
Environmental aspects of onshore regulations	**Environment Agency (England)**

Key:

DESNZ: Department for Energy Security and Net Zero, **OFGEM:** The Office of Gas and Electricity Markets, **HMT:** His Majesty's Treasury, **DBT:** Department for Business and Trade, **FCDO:** Foreign, Commonwealth and Development Office, **OPRED:** Offshore Petroleum Regulator for Environment and Decommissioning, **HSE:** Health and Safety Executive

Task forces

Seven task forces, each co-chaired by industry and the NSTA, focus on improving performance across the offshore energy industry by promoting best practice.



Task forces

The North Sea Transition Forum, supported by a steering group, oversees the task forces and provides leadership and strategic direction for industry.

WELLS TASK FORCE

Improving well management to optimise production and reduce costs

Supply Chain and **Exports** Taskforce

Collaborating with government and trade bodies to strengthen the oil and gas service sector

technology leadership board

Accelerating the deployment of innovative technologies for offshore energies

North Sea Future Plan

The forum and task forces will work alongside the new North Sea Future Board, which will oversee delivery of the North Sea Future Plan.

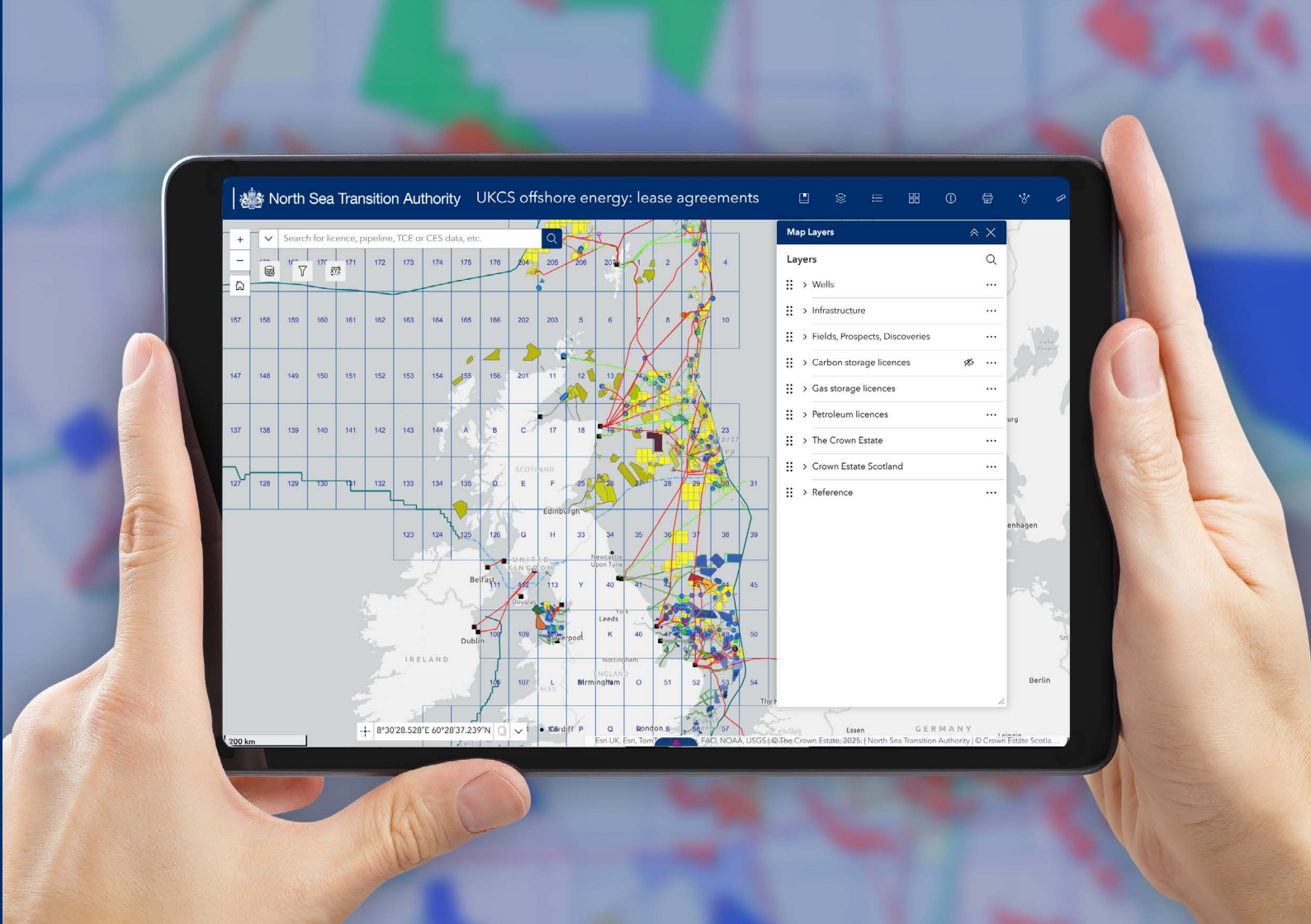
Interactive energy map for the UKCS

The NSTA has worked with The Crown Estate and Crown Estate Scotland to create the app, which, at launch, listed more than 60 in-construction or active wind, wave and tidal sites on the UKCS as well as recently awarded carbon storage licences and 489 petroleum licences.

The application is automatically updated as each organisation logs new information and is the first time that the locations of all oil and gas and renewables sites have been presented together.

The application shows the proximity of existing oil and gas infrastructure to wind farms, electrical cables and carbon storage sites, which will assist in gauging the potential for reuse when decommissioning assessments are being made. It has also provided valuable information in prioritising areas for seismic shooting before a wind farm development is built.

Scan to see how it works:


North Sea Transition Authority
UKCS offshore energy: lease agreements
Search for licence, pipeline, TCE or CES data, etc.
Map Layers
Layers
Wells
Infrastructure
Fields, Prospects, Discoveries
Carbon storage licences
Gas storage licences
Petroleum licences
The Crown Estate
Crown Estate Scotland
Reference
8°30'28.528"E 60°28'37.239"N
200 km
Edinburgh
Belfast
Dublin
Leeds
Liverpool
Birmingham
Nottingham
Newcastle upon Tyne
IRELAND
SCOTLAND
GERMANY
Berlin
Essen
Esri UK, Esri, Tom
FAO, NOAA, USGS | © The Crown Estate 2025 | North Sea Transition Authority | © Crown Estate Scotla

North Sea Transition Authority

The North Sea Transition Authority is the business name for the Oil and Gas Authority, a limited company registered in England and Wales with registered number 09666504 and VAT registered number 249433979.
Our registered office is at 4th Floor Broadway Buildings, 50 Broadway, London, SW1H 0DB.

www.nstauthority.co.uk