
national
gas
energy
forum

Welcome

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Jake Tudge

Corporate Affairs Director
National Gas

Today's agenda

Part I – government & industry leader updates *0930 – 1030*
Matt Steele, National Gas
Tom Hughes, NISTA
Dr Eoin Devane, Climate Change Committee
Rachel Siddell, DESNZ
Break *(1030 – 1100)*

Part II – National Gas updates *1100 – 1200*
Luke Benson, Operational Updates
Craig James, Winter Review
Chris Thompson, Summer Outlook
Matt Newman, Market Change & UNC
Rachel Hinsley, General Updates

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Part 1

Government & industry leader updates

Today's speakers for our Part I session

Matt Steele
Chief Operating Officer

national gas

Tom Hughes
Assistant Director, Energy

National Infrastructure & Service Transformation Authority

Dr Eoin Devane
Team Leader, Carbon Budgets

Climate Change Committee

Rachel Siddell
Head of Hydrogen Networks Strategy

Department for Energy Security & Net Zero

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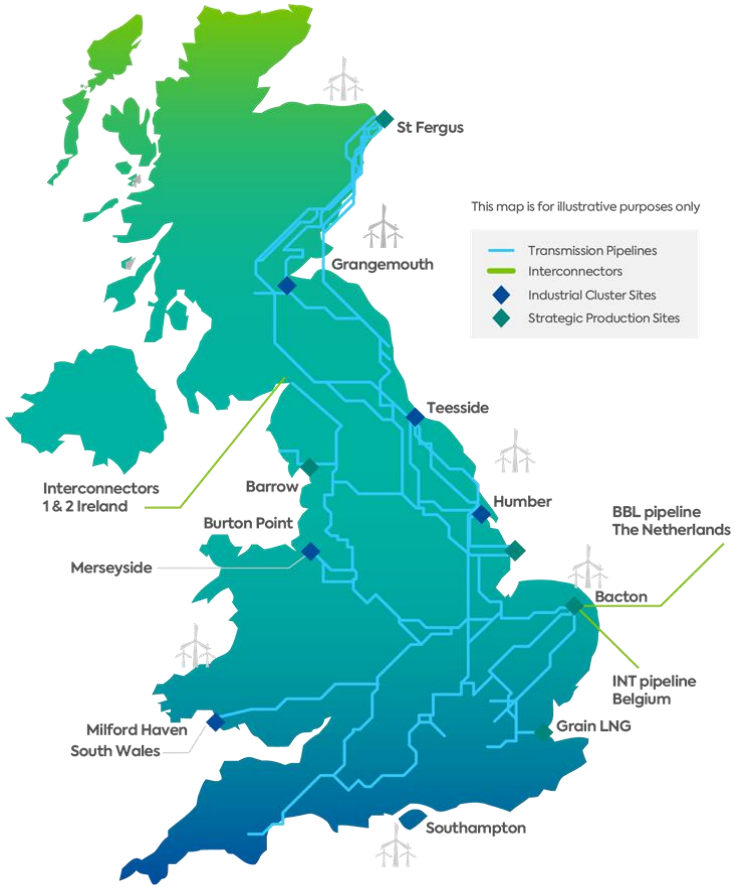
Matt Steele

Chief Operating Officer
National Gas

An introduction to National Gas – we are critical national infrastructure and have a vital role in securing Britain's energy whilst supercharging the delivery of net zero.

We operate the gas National Transmission System (NTS)



100% All GB gas imports and exports go through the NTS.

500k Businesses and industries supplied by gas in Britain.

>50% Dispatchable power capacity provided by gas (c.30GW).

100% NTS reliability and availability in recent years.

- **30+** power stations
- **15** major industries
- **9** storage sites
- **4** local networks
- **3** interconnectors
- **2** LNG terminals

5,000 miles of high-pressure steel pipeline

60+ jet engine compressors across 21 sites

3x the energy transported than by the power grid

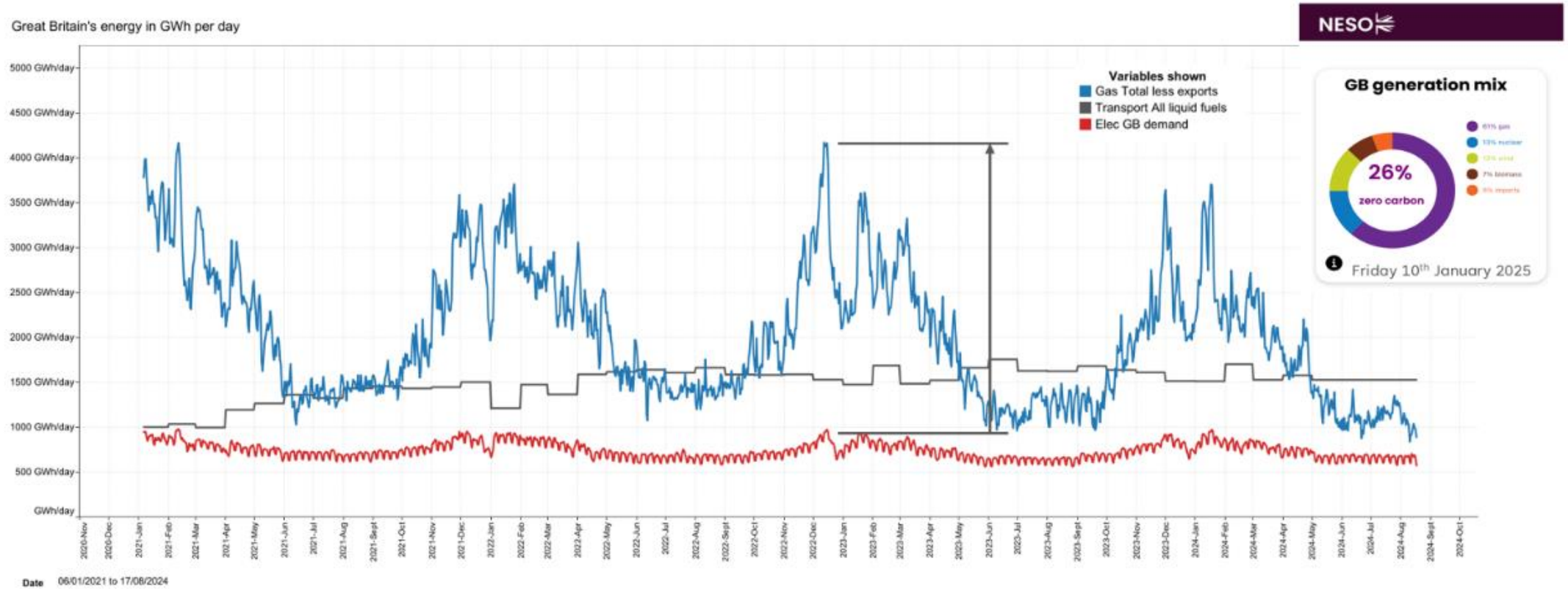
¼ of the UK's annual electricity generated by gas

£7.99 Average cost of the NTS on typical consumers' annual gas bill

The NTS supplies 36% of the UK's primary energy – also securing energy for the island of Ireland and continental Europe.

The challenge facing our energy system

During peak times, the level of energy carried through gas networks is more than 4x that of electricity networks.



UNIVERSITY OF BIRMINGHAM | INTERDISCIPLINARY DATA SCIENCE and AI | BIRMINGHAM ENERGY INSTITUTE

Underlying data are from National Grid ESO, National Gas, Elexon and DESNZ
Figure created by Dr Grant Wilson: i.a.g.wilson@bham.ac.uk
Energy Systems and Data Group, University of Birmingham

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Securing Britain’s Energy

Our recent £350m investment into our Peterborough, Wormington, and St Fergus compressors will ensure Great Britain’s security of supply, significantly reduce emissions and prepare for hydrogen.

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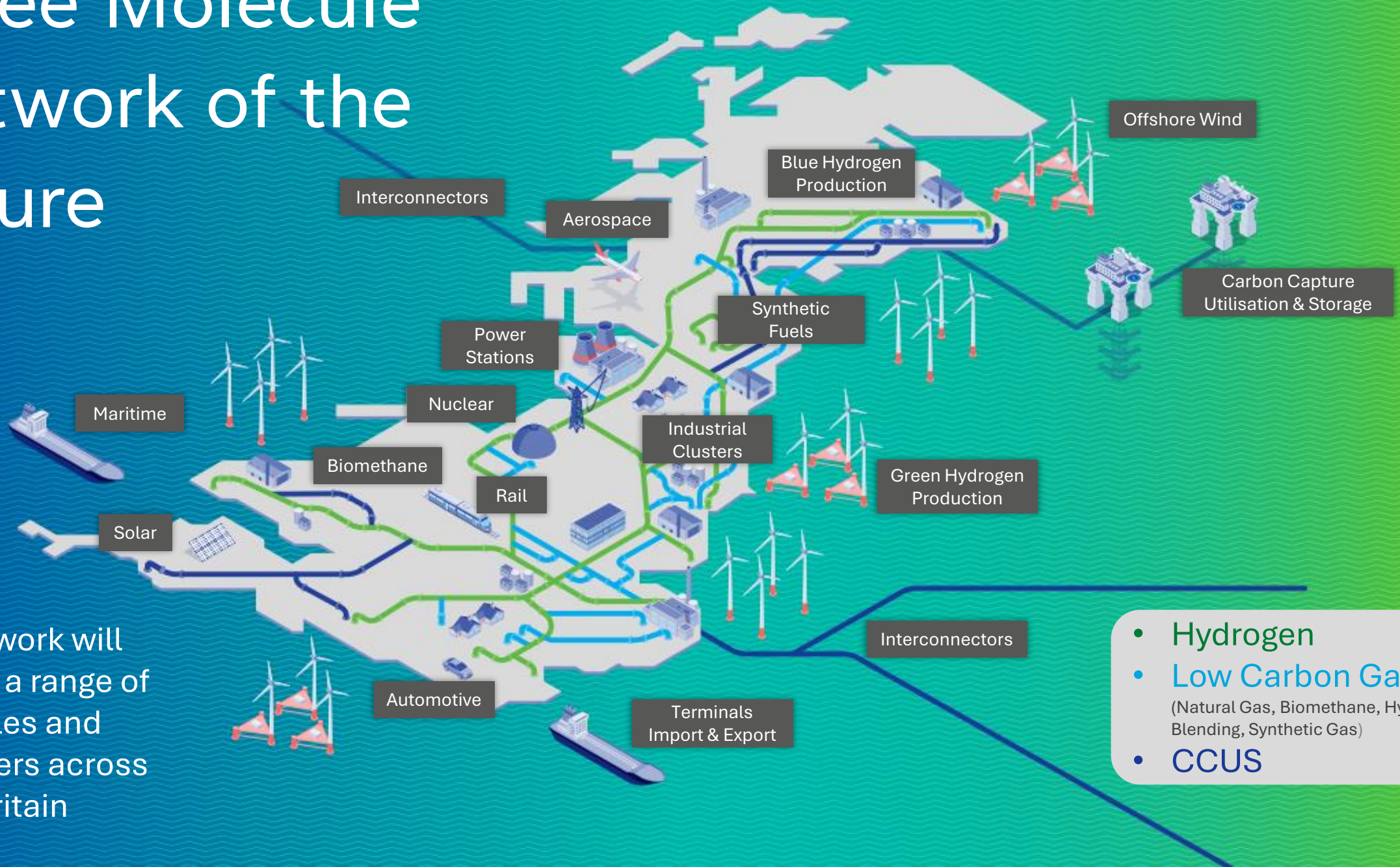
Three Molecule Network of the Future



Our network will support a range of molecules and customers across Great Britain

- Hydrogen
- Low Carbon Gas
  (Natural Gas, Biomethane, Hydrogen Blending, Synthetic Gas)
- CCUS

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Tom Hughes

NISTA

Energy sector priorities

2025

National Infrastructure & Service Transformation Authority

Tom Hughes – Assistant Director, Energy

What is NISTA?

Established to bring strategic policy and delivery together

NATIONAL INFRASTRUCTURE COMMISSION

Better infrastructure for all

+

Infrastructure and Projects Authority

=

National Infrastructure & Service Transformation Authority

What's different?

Directly accountable to Ministers for transforming strategy and policy into delivery and driving better outcomes

Key changes:

- Operate across economic, social and digital infrastructure
- Work with HMT to develop infrastructure strategy and oversee implementation
- Enhanced project assurance
- Support spatial coordination of relevant policies
- Advisory council

NISTA priorities

Spending review + 10 year Infrastructure Strategy

- Supporting HMT on development
- Will then oversee implementation
- Publishing in June

Sectoral priorities

Clean Power 2030

Strategic and spatial planning

RIIO3

Investment

Strategic policy decisions

Clean Power 2030

- Will continue to be the framing in the near term
- Maintaining resilience and security of supply as we scale

Strategic and spatial planning

- Development of draft Strategic Spatial Energy Plan (SSEP)
- Making key decisions on Regional Energy Strategic Plans (RESPs)

RIIO3

- Finalising gas transmission, distribution and electricity transmission
- Methodology for electricity distribution

Investment

- Meeting ambition for renewables
- Business models for new sectors – e.g. hydrogen

Strategic policy decisions

- Heat decarbonisation
- REMA
- Carbon budget delivery

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Dr Eoin Devane

Climate Change Committee

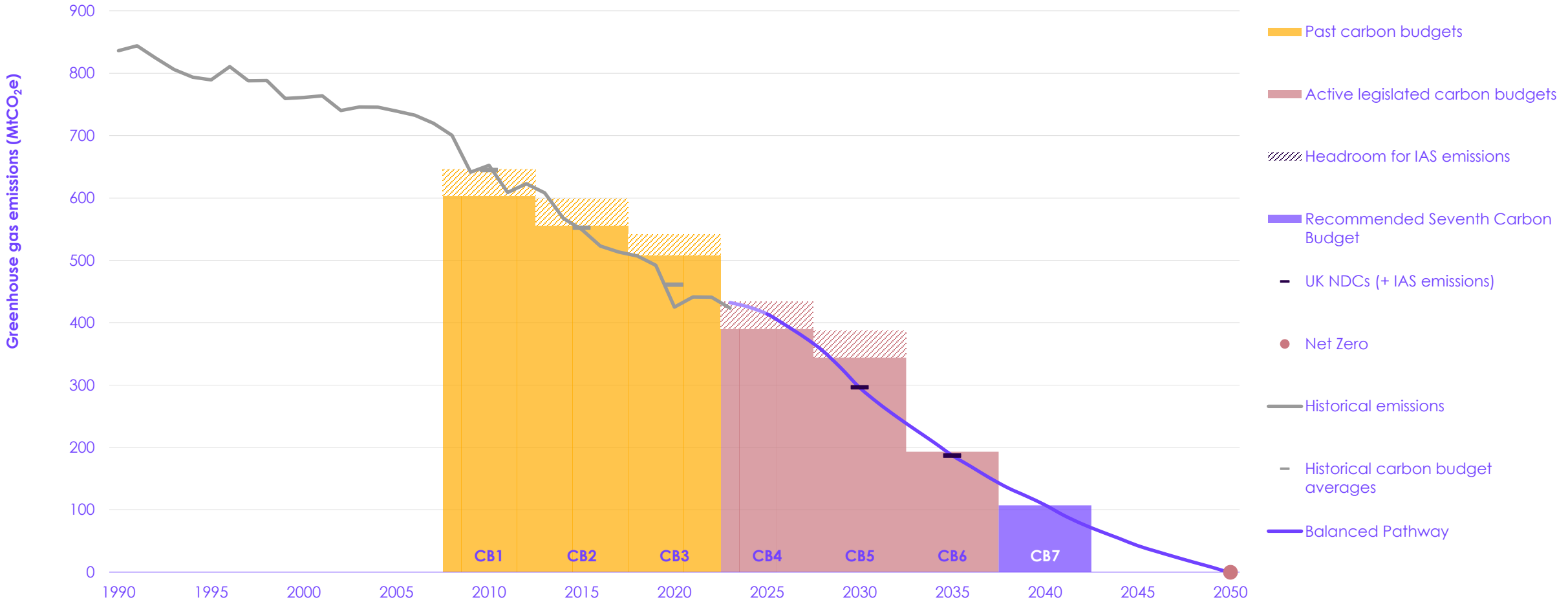
17 March 2025

CCC Seventh Carbon Budget advice

Dr Eoin Devane

The recommended Seventh Carbon Budget is 535 $MtCO_2e$

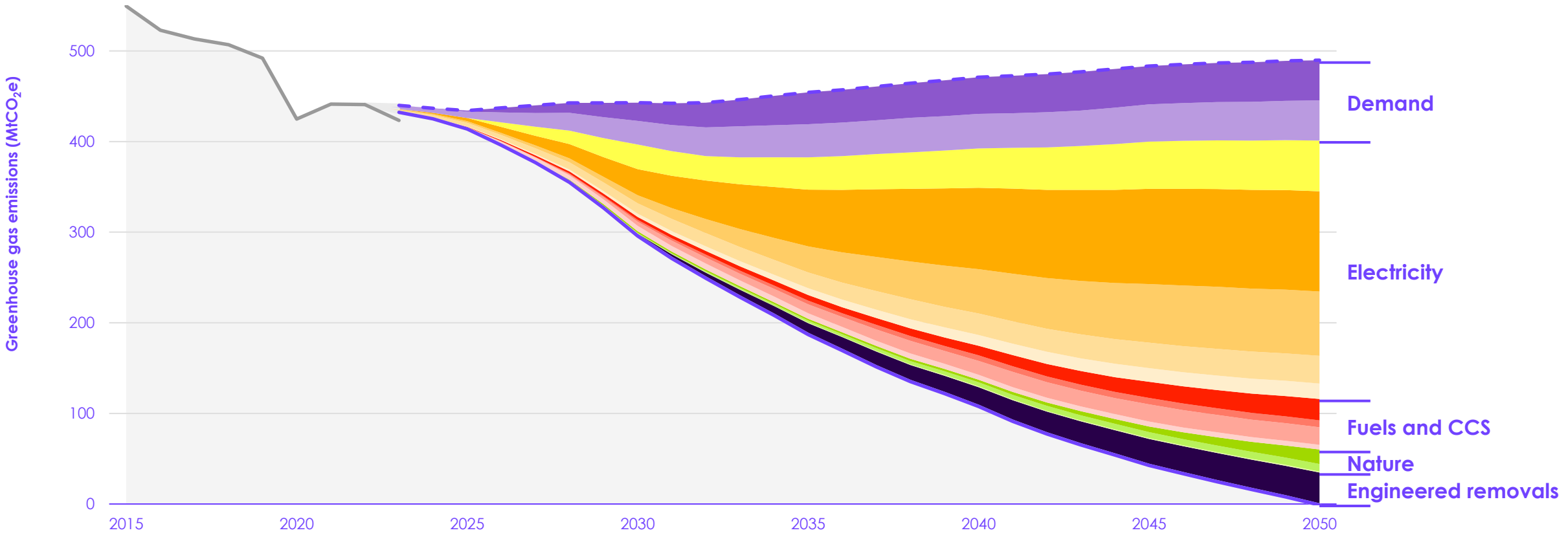
Our Balanced Pathway meets all existing carbon budgets, the UK's NDCs, and Net Zero



Source: CCC analysis

Where the emissions reductions are within the Balanced Pathway

60% from electrifying key technologies and decarbonising and expanding electricity supply



Demand:
- Low-carbon choices
- Efficiency

Electricity:
- Low-carbon supply
- Electric vehicles
- Heat pumps
- Industrial
- Other

Low-carbon fuels and CCS:
- SAF and shipping fuels
- Hydrogen
- CCS
- Other

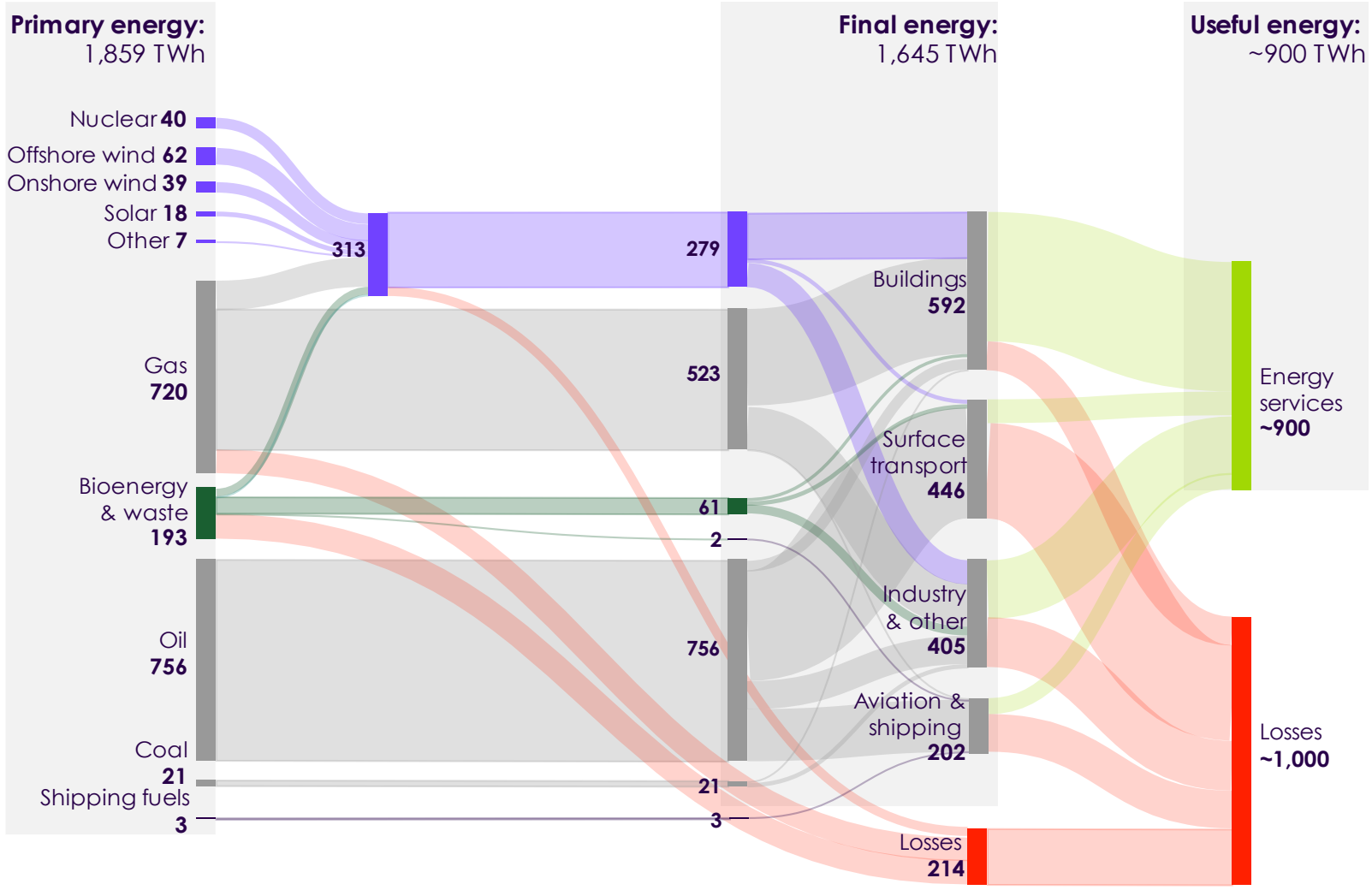
Nature:
- Tree planting
- Peatland restoration
- Other

Engineered removals:
- Engineered removals

Source: CCC analysis

The energy system

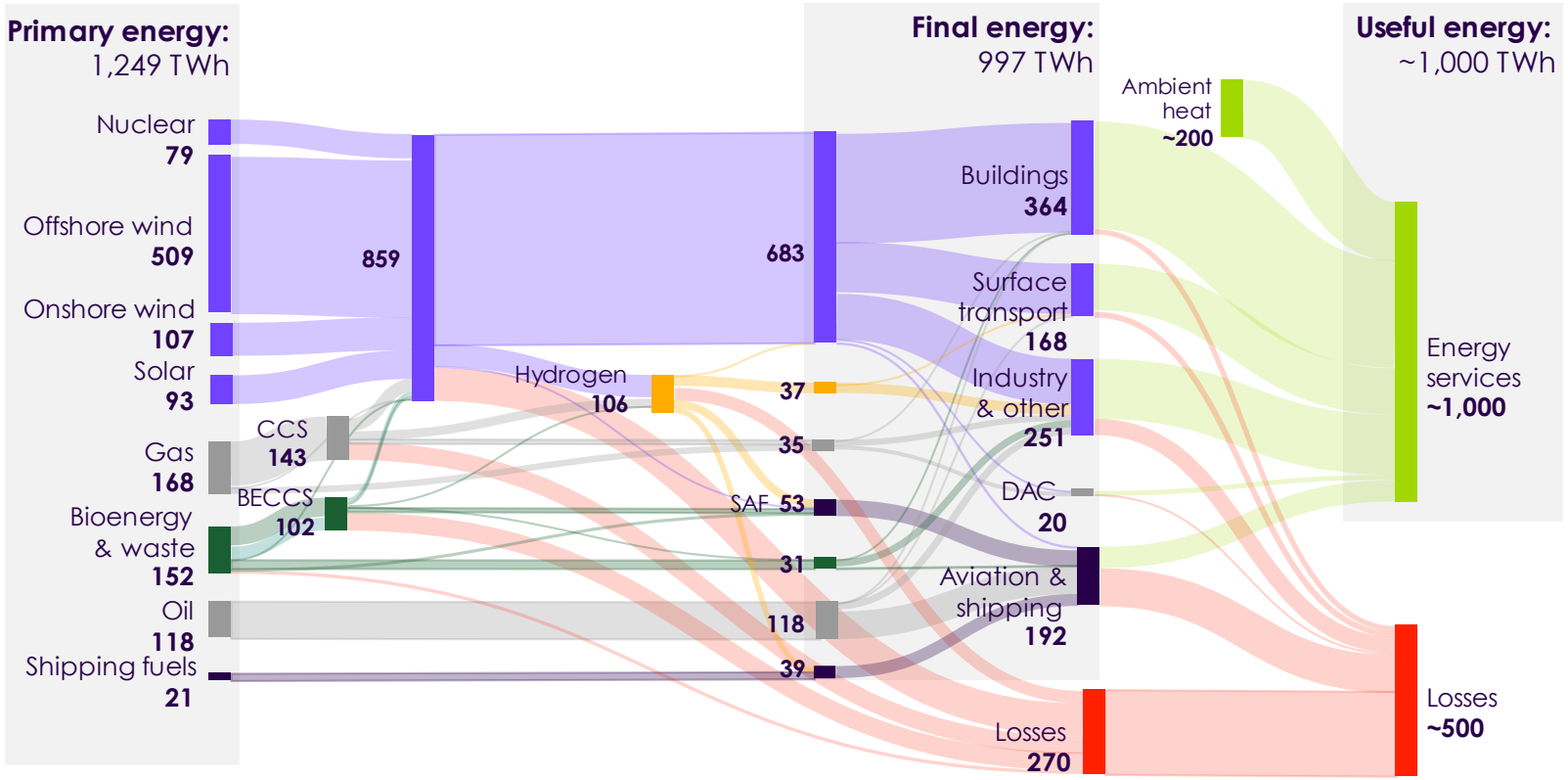
The 2025 system is dominated by oil and gas



Source: CCC analysis

The energy system

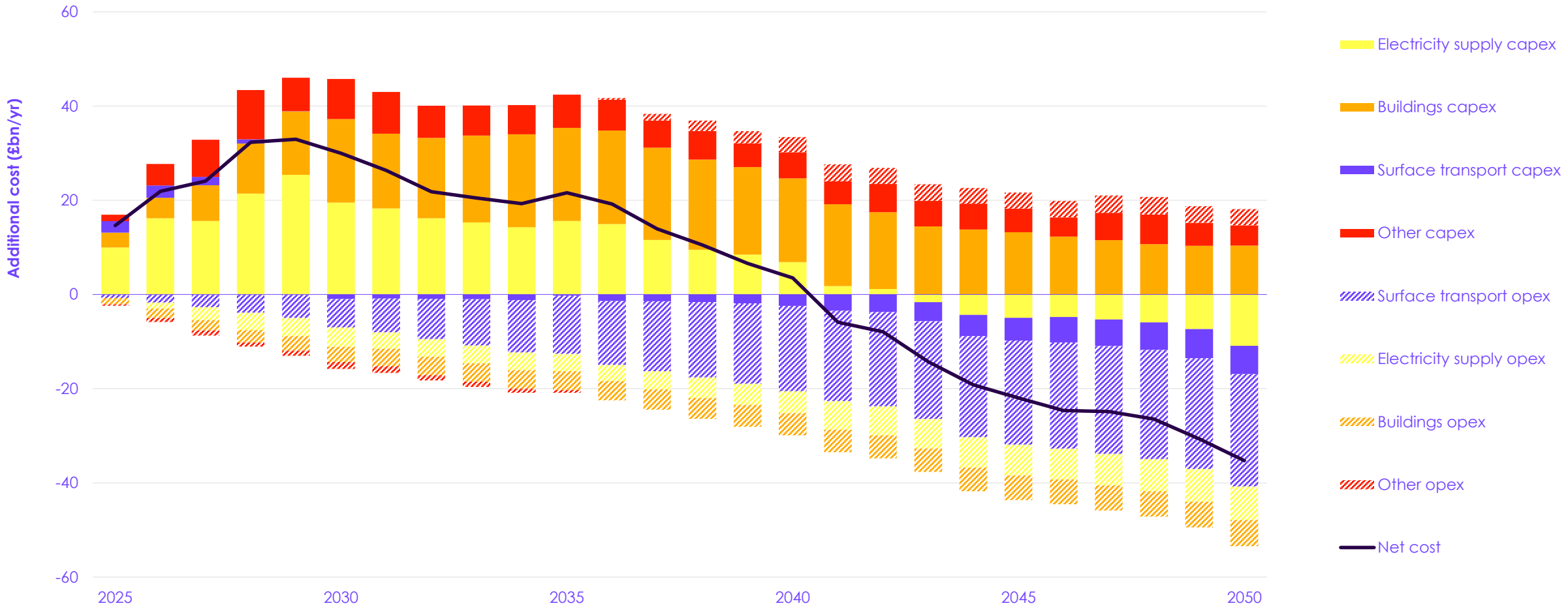
By 2050, electricity is the main energy carrier



Source: CCC analysis

Whole-economy costs, relative to the baseline

Upfront capital provides long-term savings, starting in the Seventh Carbon Budget period



Source: CCC analysis

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Rachel Siddell

DESNZ

Department for Energy Security & Net Zero

17th April 2025

Hydrogen Update

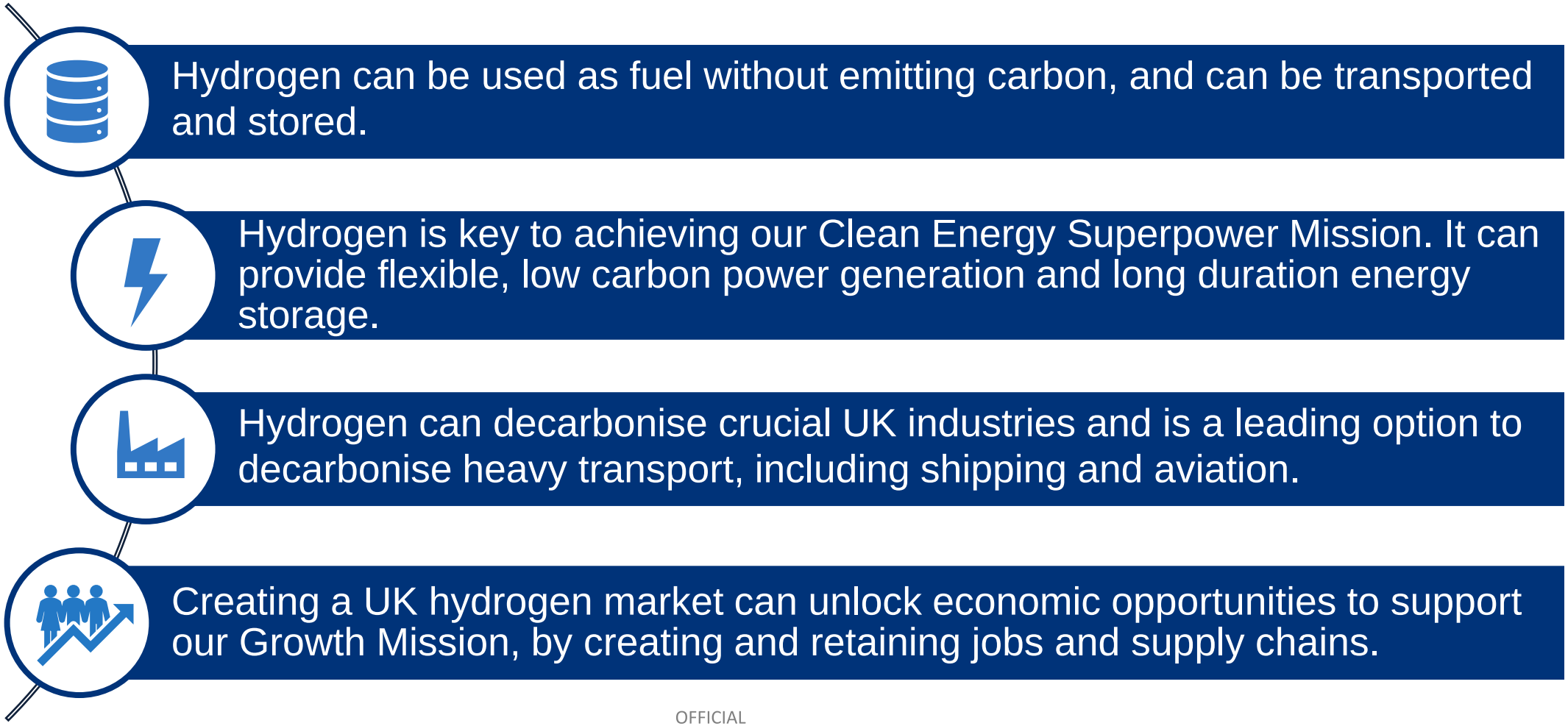
National Gas Energy Forum

Rachel Siddell, Head of Hydrogen Networks Strategy, DESNZ

Department for Energy Security & Net Zero

Hydrogen's role

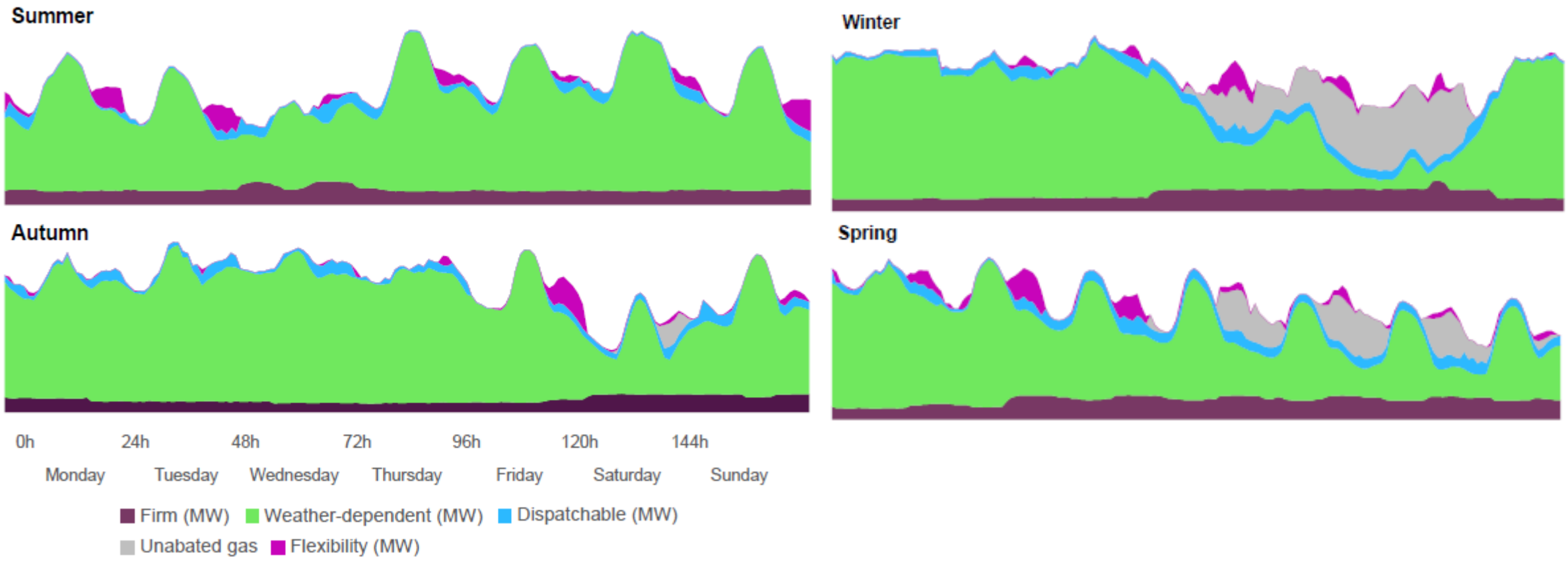
Low carbon hydrogen will play an important role in supporting the delivery of our **Clean Energy Superpower** and **Growth missions**, as a key enabler of a low carbon and renewables-based energy system.



- Hydrogen can be used as fuel without emitting carbon, and can be transported and stored.
- Hydrogen is key to achieving our Clean Energy Superpower Mission. It can provide flexible, low carbon power generation and long duration energy storage.
- Hydrogen can decarbonise crucial UK industries and is a leading option to decarbonise heavy transport, including shipping and aviation.
- Creating a UK hydrogen market can unlock economic opportunities to support our Growth Mission, by creating and retaining jobs and supply chains.

Department for Energy Security & Net Zero

Why do we need low carbon flexible technologies?



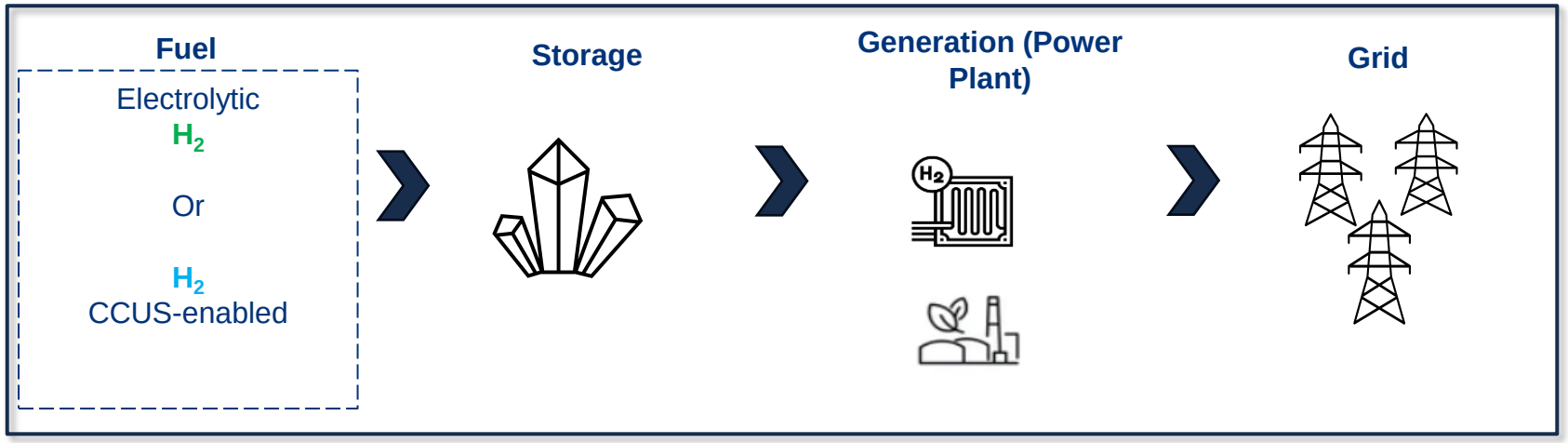
Source

NESO "*Clean Power 2030: Advice on achieving clean power for Great Britain by 2030*"

Department for Energy Security & Net Zero

Why do we need low carbon flexible technologies?

- Flexible technologies play a vital role in maintaining energy security, complementing renewables by adjusting their output quickly to match supply with demand, particularly over longer periods of low renewable output.
- Hydrogen to Power (H2P) is a low-carbon long-duration flexible technology which can help to achieve this, supporting decarbonisation of the grid.
- H2P can deploy at a range of scales and when connected to large-scale hydrogen storage, can enable inter-seasonal low carbon energy storage.
- H2P is also cost effective at low load factors (<30%), providing a key role in a post-2030 power system as greater renewable deployment reduces the running hours for flexible capacity.
- H2P is expected to be a key demand sector for the future hydrogen economy and will be reliant on enabling hydrogen infrastructure, especially storage, to operate flexibly.



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Hydrogen offtakers

Industry

- Hydrogen has an important role in decarbonising hard to electrify industries, and can be used as a fuel in high-temperature and energy intensive equipment, as well as a feedstock in industrial processes

Aviation

- The SAF Mandate is the UK's key policy to decarbonise jet fuel. It does this by obligating the supply of an increasing amount of SAF in the overall UK aviation fuel mix. We are also working with industry to design a SAF revenue certainty mechanism.

Maritime

- The UK is committed to maritime decarbonisation, with an objective of reducing the UK domestic maritime sector's fuel lifecycle GHG emissions to zero by 2050, with interim goals for 2030 and 2040, compared to 2008 levels. The IMO has also recently approved a landmark deal that can decarbonise international shipping.

Surface Transport

- We are supporting hydrogen's role in decarbonising hard-to-electrify transport through innovation and demonstration funding, as well as obligations on fuel suppliers to supply low carbon fuels including hydrogen.

Building Heat

- The UK Health and Safety Executive is currently assessing the safety evidence for hydrogen heating.
- We intend to consult on hydrogen for heating later this year.

Blending

- We intend to consult on the role of transmission-level blending of hydrogen into the gas grid this year.

Department for Energy Security & Net Zero

Hydrogen sector development

- A recent, industry-led Hydrogen Skills Workforce Assessment estimated that **the UK hydrogen economy could support 29,000 direct jobs and 64,500 indirect jobs by 2030**.
- Government launched the **National Wealth Fund, with £27.8bn capitalisation**, and **Great British Energy, backed by £8.3bn**, which will both help to deliver a world-class energy system, including for low carbon hydrogen.
- Government aims to publish the **Industrial Strategy**, including sector plans, in 2025.
- We have **close relationships with key partner countries, multilateral organisations, industry and investors**.
- The **£1 billion Net Zero Innovation Portfolio** continues to accelerate the commercialisation of low carbon technologies, such as hydrogen.
- The **Hydrogen Delivery Council** continues to be the primary forum for Government and industry to collaborate in achieving the UK's hydrogen ambitions.

Department for Energy Security & Net Zero

Progress Update

Business Models

- **Production –** on 7 April 2025 the Government announced a shortlist of 27 projects across England, Scotland and Wales that have been invited to the next stage of the Second Hydrogen Allocation Round (HAR2) process, which includes due diligence and cost assurance.
- **The Hydrogen to Power Government Response** – outlined our intention to implement a Hydrogen to Power Business Model (H2PBM) based on a DPA-style mechanism to support the deployment of H2P.

Innovation

- **H2P Innovation Call for Evidence –** seek industry views on bringing forward innovative H2P activities to deliver early 100% H2P projects ahead of large-scale hydrogen infrastructure coming online.

Strategy

- **Clean Power Action Plan –** positions hydrogen and H2P as a vital element in the transition to a clean, secure, and flexible energy system.
- **Hydrogen Strategy Update to the Market –** underscores the aim to leverage hydrogen as a key component in achieving a low-carbon, secure, and flexible energy system by 2030.

2025 onwards / Next Steps

- **Spending Review** – in June, the Chancellor will set out the Spending Review.
- **Business Models** – engaging with industry as we progress H2P, Transport and Storage Business Model design in 2025.
- **Due diligence HAR2** – considering the shortlisted projects and will provide an update on next steps in due course.
- **Strategy Refresh** – to be published later this year to reflect the progress and change we have seen in this space.

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Up Next: Part II – 11:00

National Gas updates,
including our Summer Outlook

Part II – National Gas updates *1100 – 1200*
Luke Benson, Operational Updates
Craig James, Winter Review
Chris Thompson, Summer Outlook
Matt Newman, Market Change & UNC
Rachel Hinsley, General Updates

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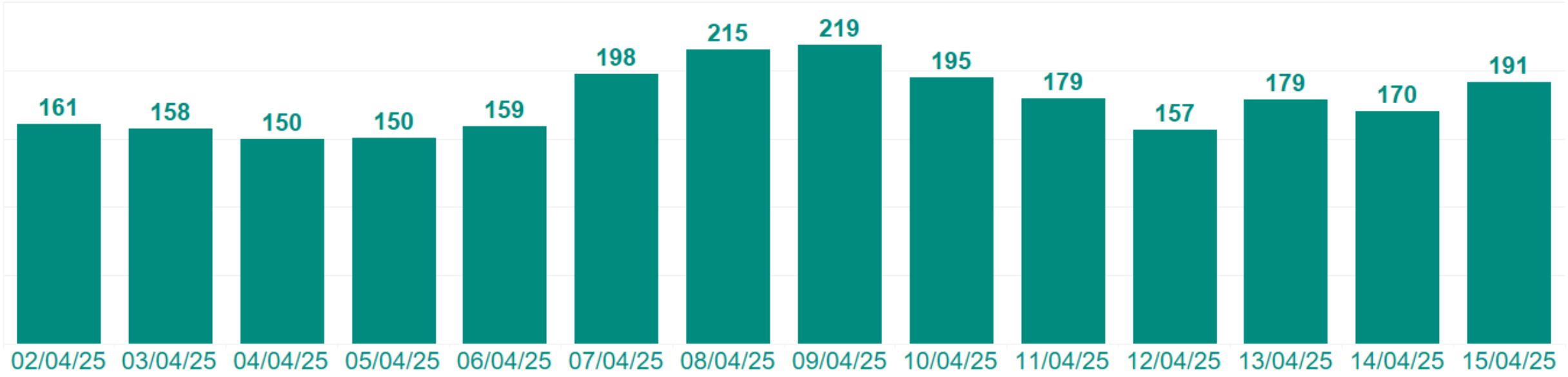
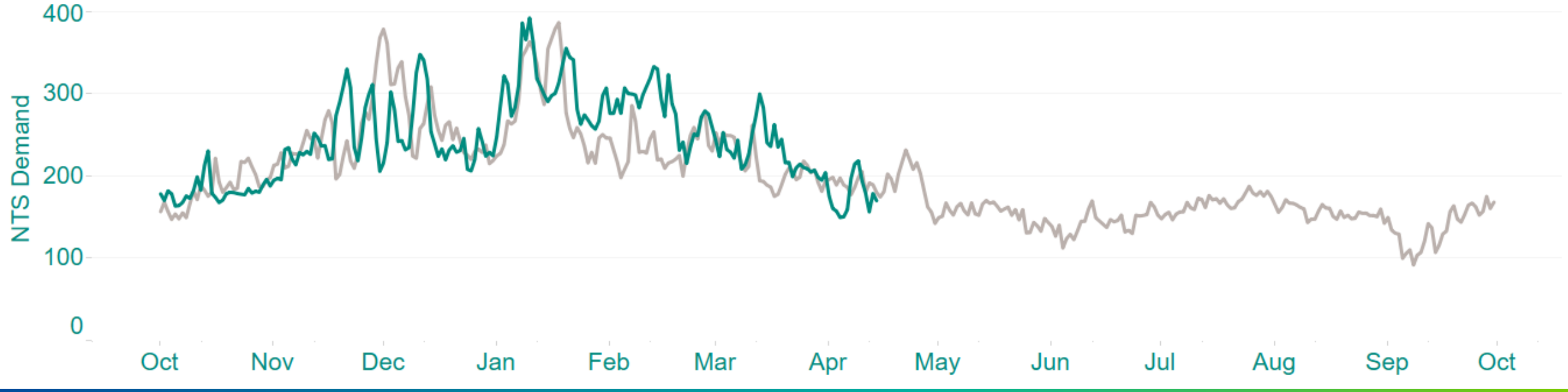
Luke Benson

Network Access & Short-Term Risk Manager
National Gas

NTS Demand



NTS Demand vs previous year

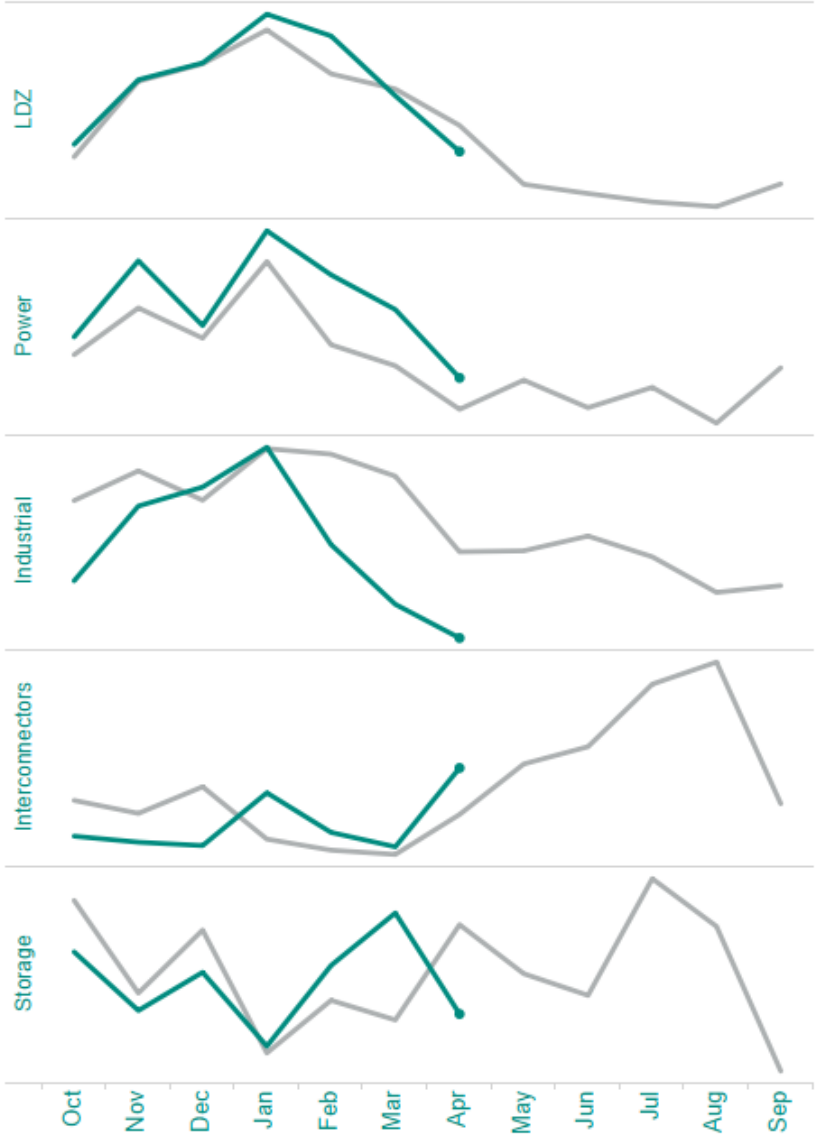


Demand Categories - Last 14 days

End of day values (mcm)

	02/04	03/04	04/04	05/04	06/04	07/04	08/04	09/04	10/04	11/04	12/04	13/04	14/04	15/04
LDZ	101	95	87	93	93	97	101	108	98	78	64	76	92	103
Power	13	20	19	13	25	55	57	47	38	35	16	14	23	38
Industrial	2	2	1	1	1	2	2	2	2	2	1	1	1	2
EU Export	15	19	17	20	17	17	31	41	32	35	26	26	26	23
Moffat	13	13	12	10	12	18	19	19	18	16	14	12	16	16
Storage	10	3	9	10	6	0	0	0	6	8	29	44	1	4

Monthly average end of day

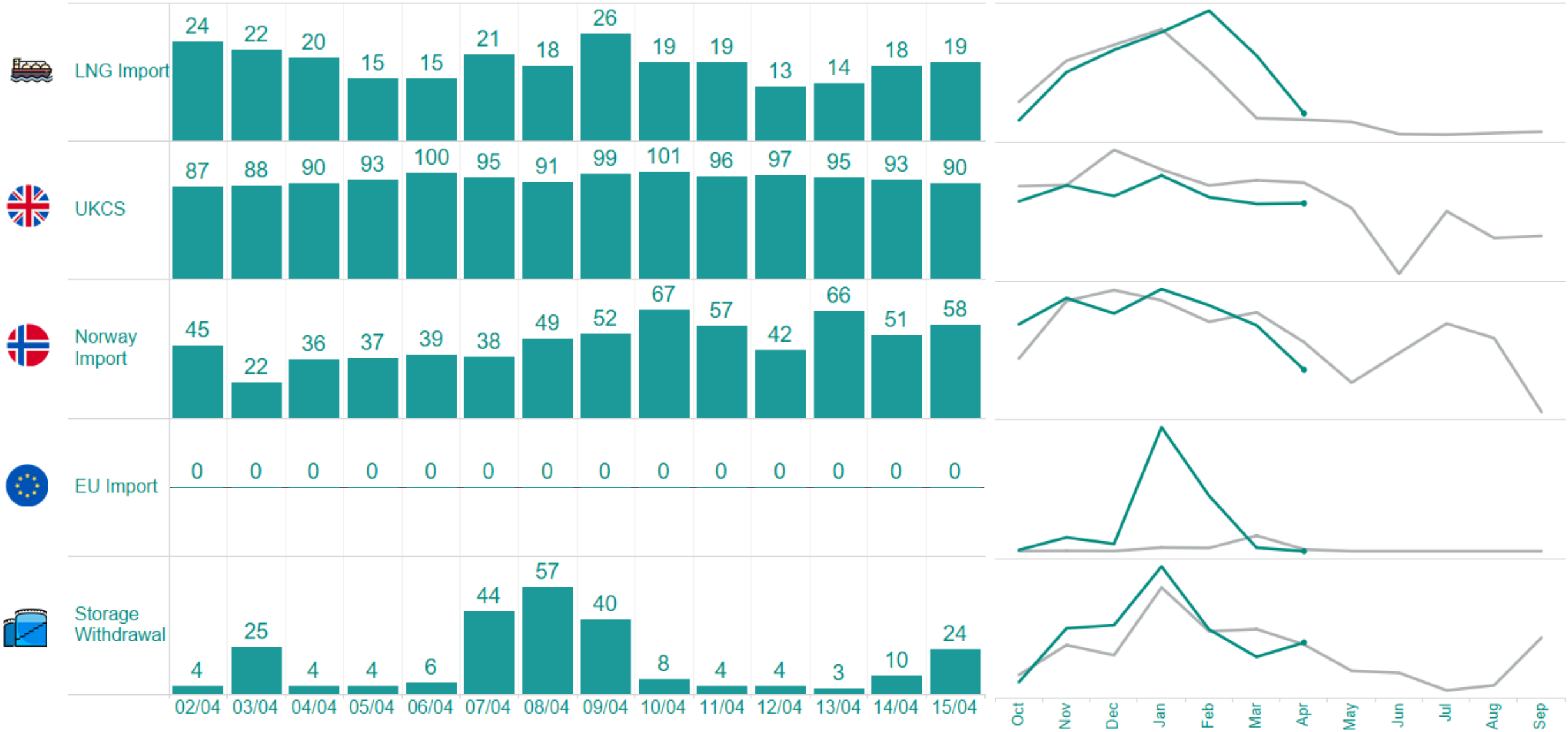


All values shown are volume in millions of cubic metres per day (mcm/d)

Supply Categories - Last 14 days

End of day values (mcm)

Monthly average end of day



All values shown are volume in millions of cubic metres per day (mcm/d)

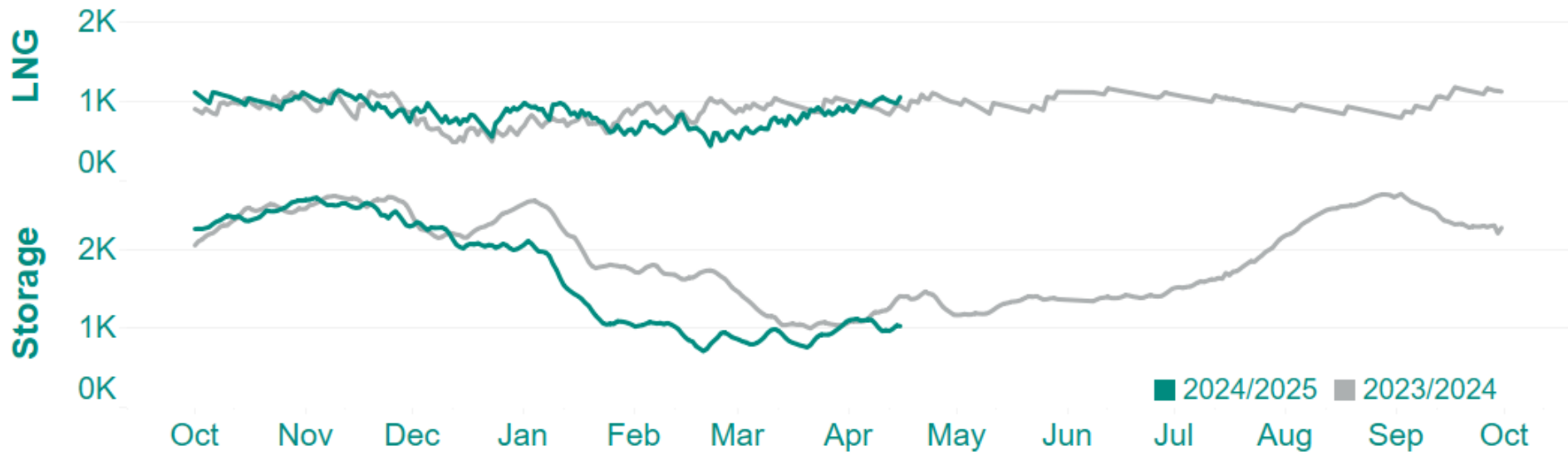
2024/2025

2023/2024

Total LNG Stock

1,067 mcm
83% full

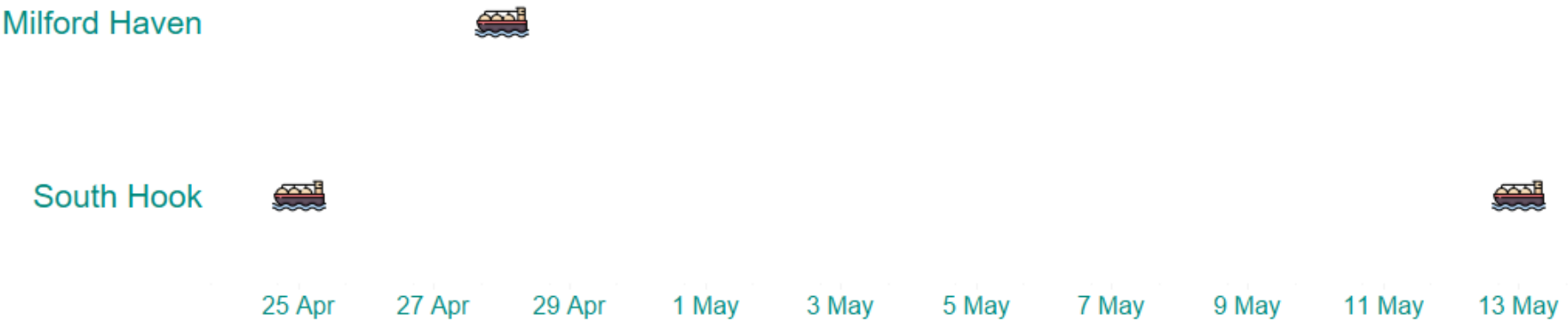
LNG & Storage stock (mcm)



Total GB Storage Stock

LNG Arrivals

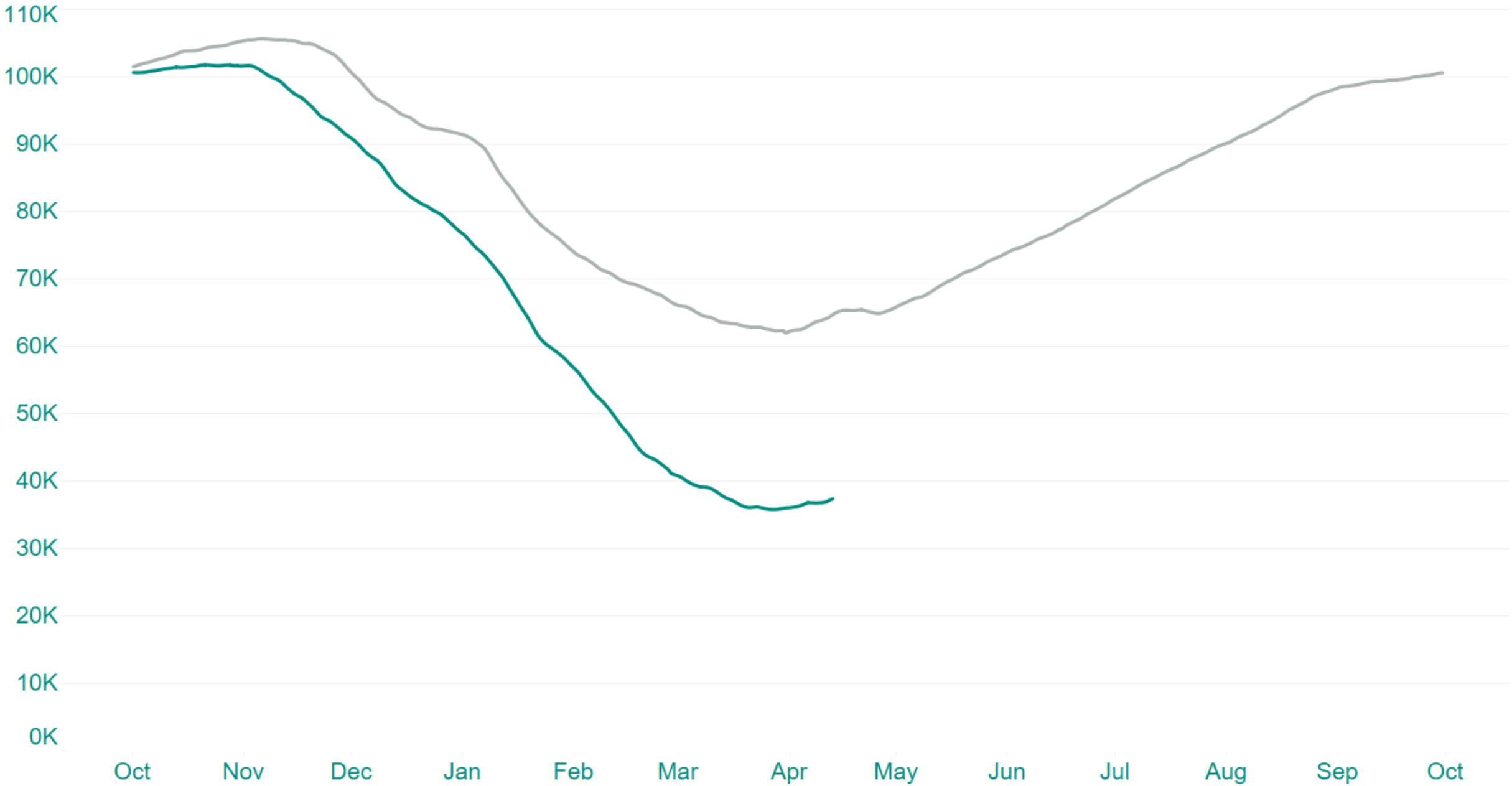
1,063 mcm
32% full



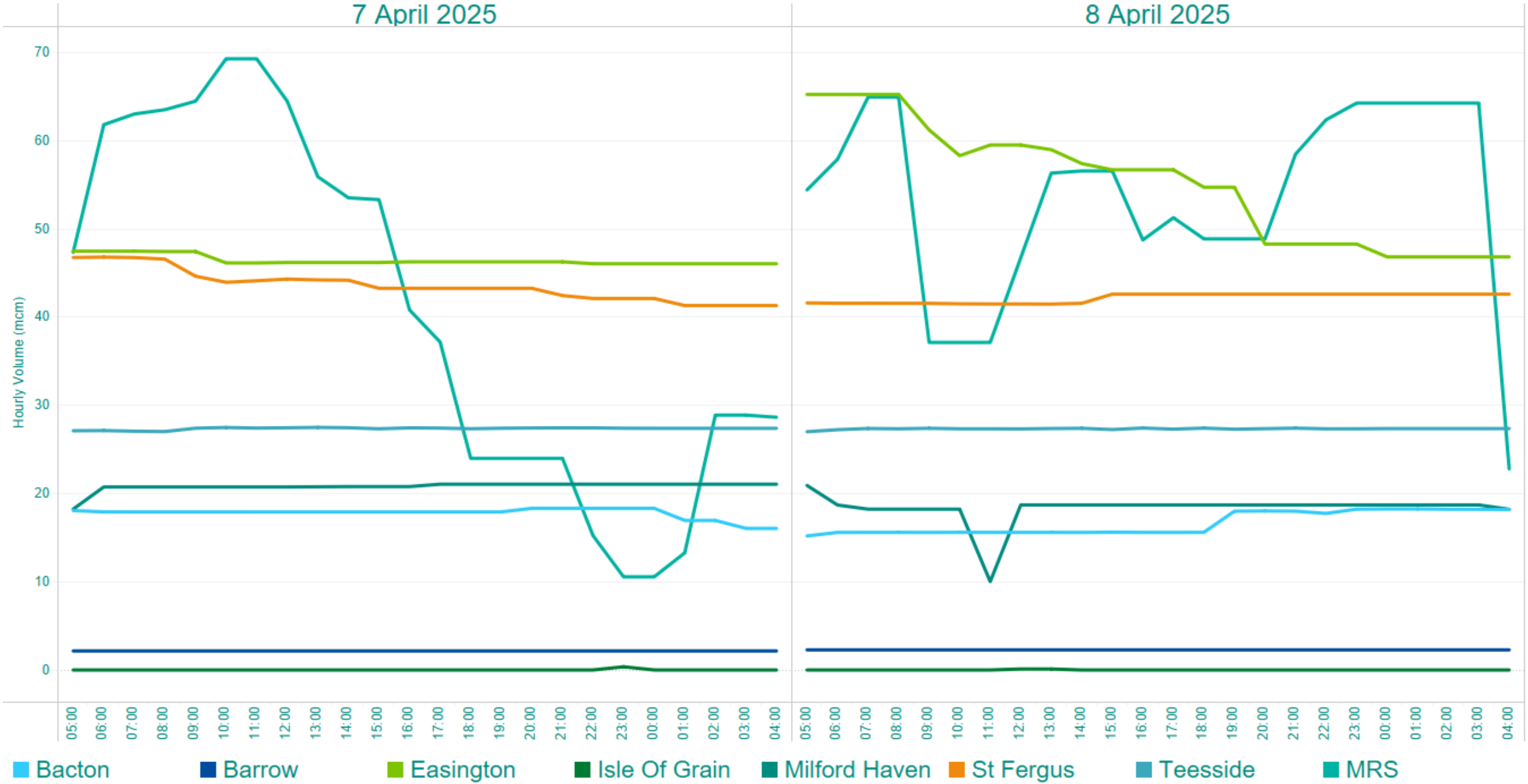
(LRS 17%) (MRS 44%)

All values shown are volume in millions of cubic metres (mcm)

EU storage stock (mcm)

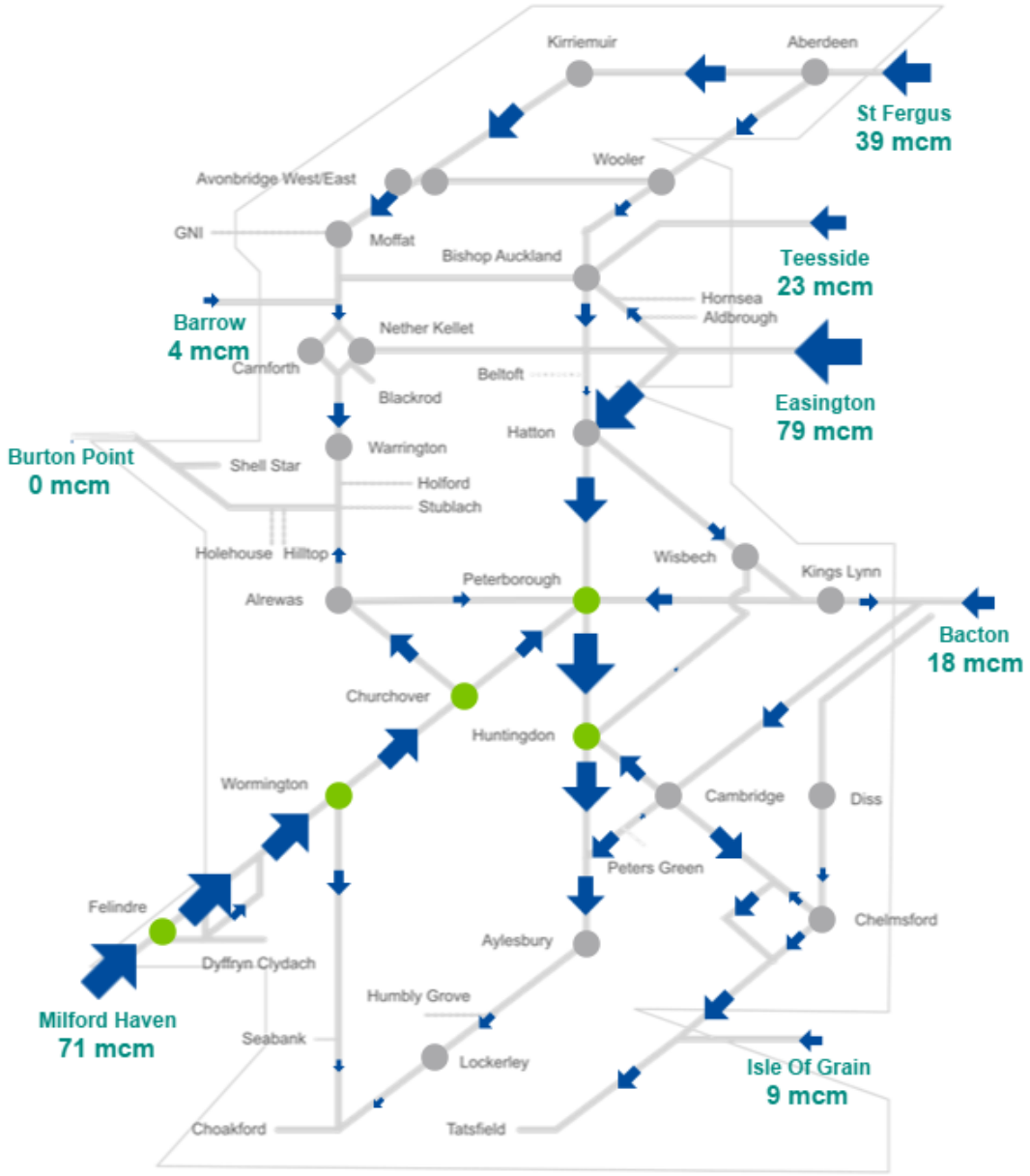


Supply Flows



3 March 2025

19:00



6 April 2025

19:00

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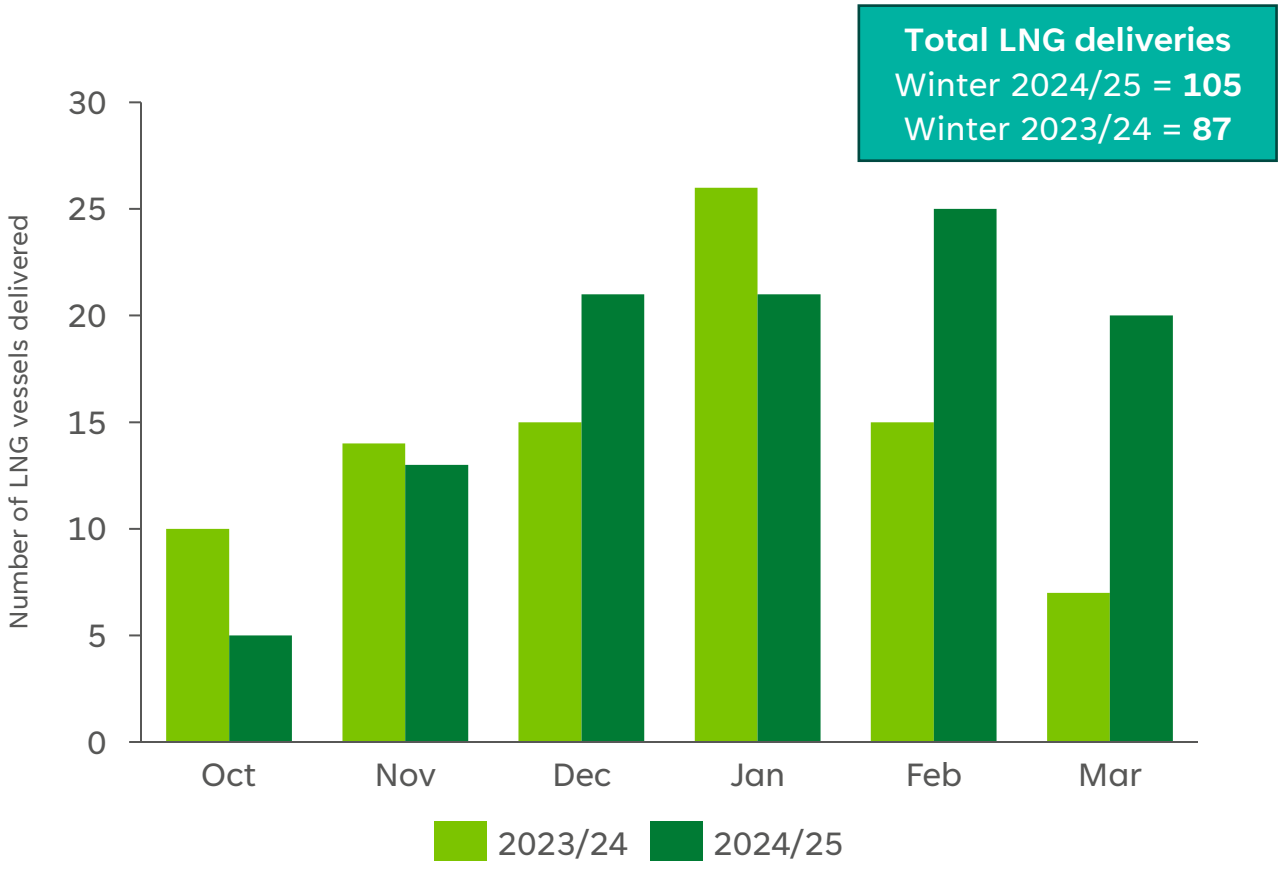
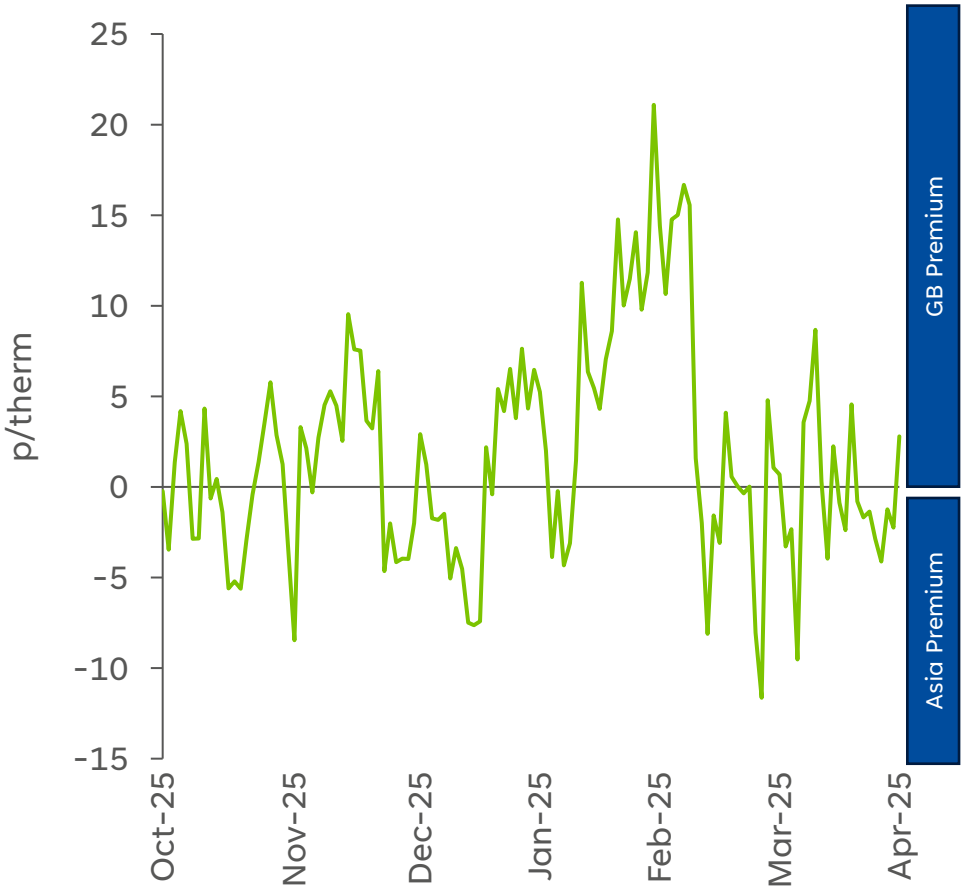
Craig James

Head of National Control
National Gas

Stronger GB price premiums across winter attracted more LNG, with the US dominating deliveries as new liquefaction projects ramp up over winter

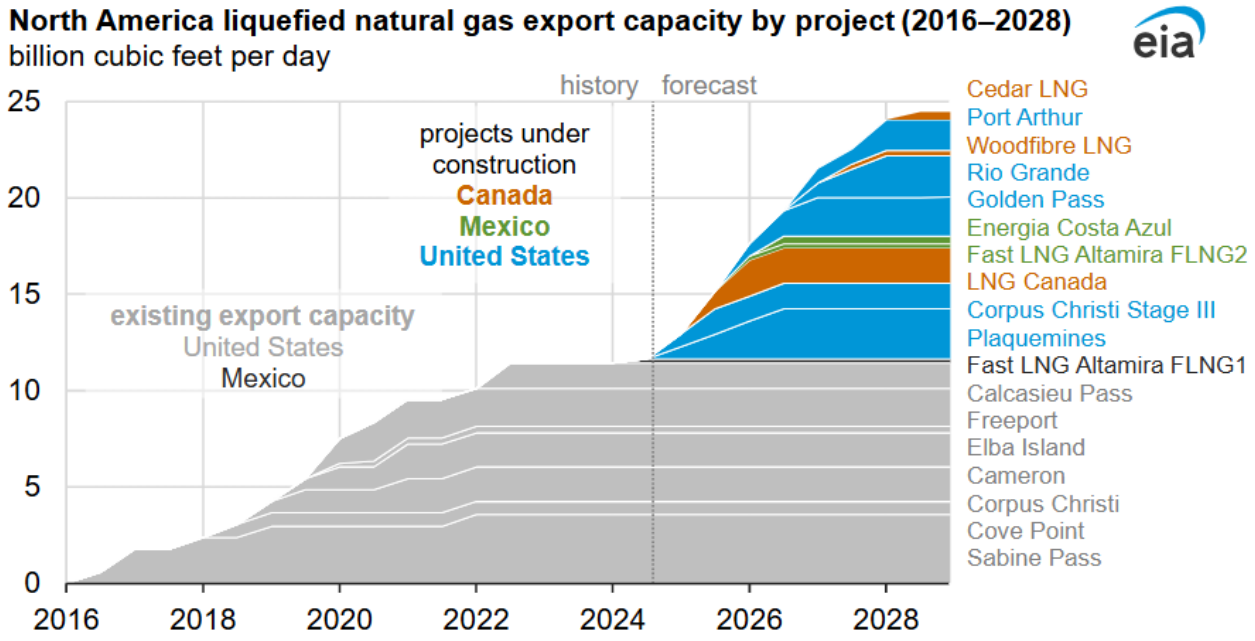
Number of LNG deliveries into GB over winter months

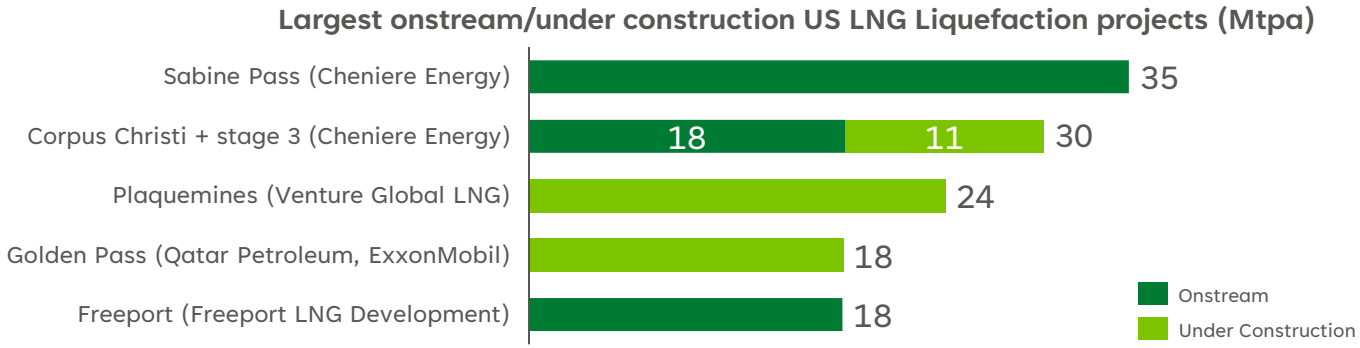


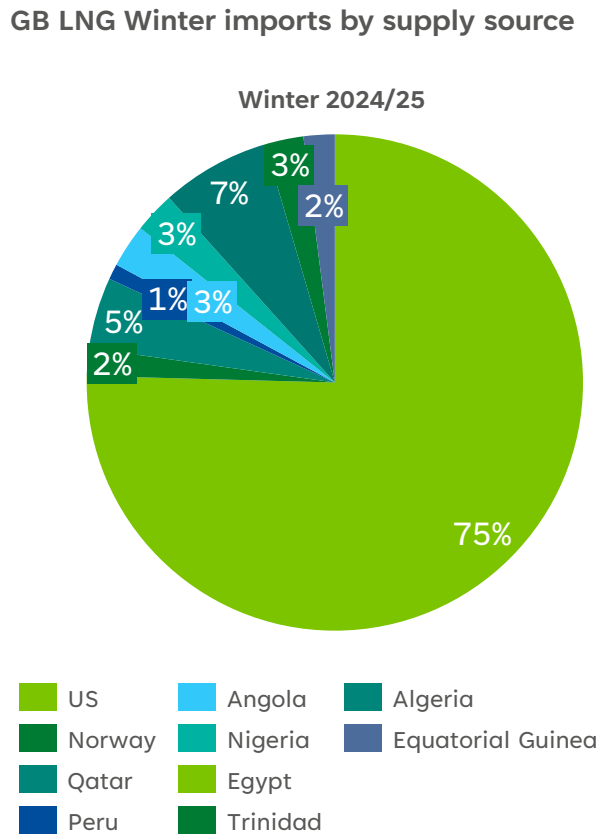


Source: Argus Direct

Stronger GB price premiums across winter attracted more LNG, with the US dominating deliveries as new liquefaction projects ramp up over winter

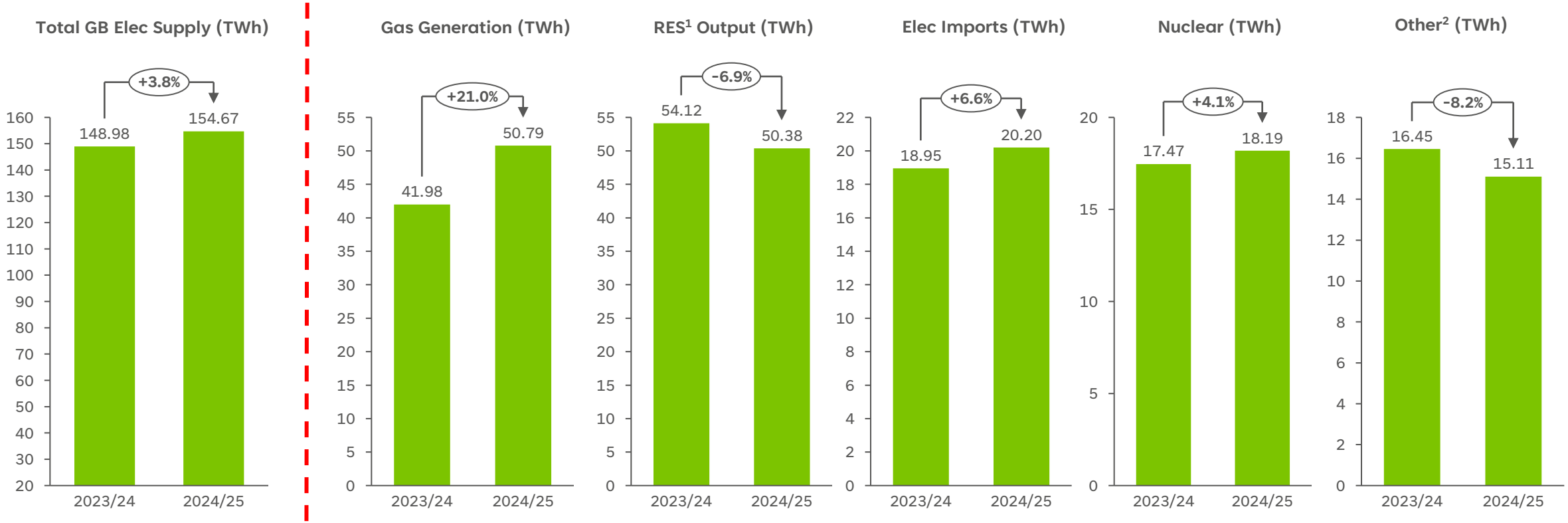






Source: Argus Direct, US Energy Information Administration (eia), 1 bcf = 0.028 bcm (28 mcm)

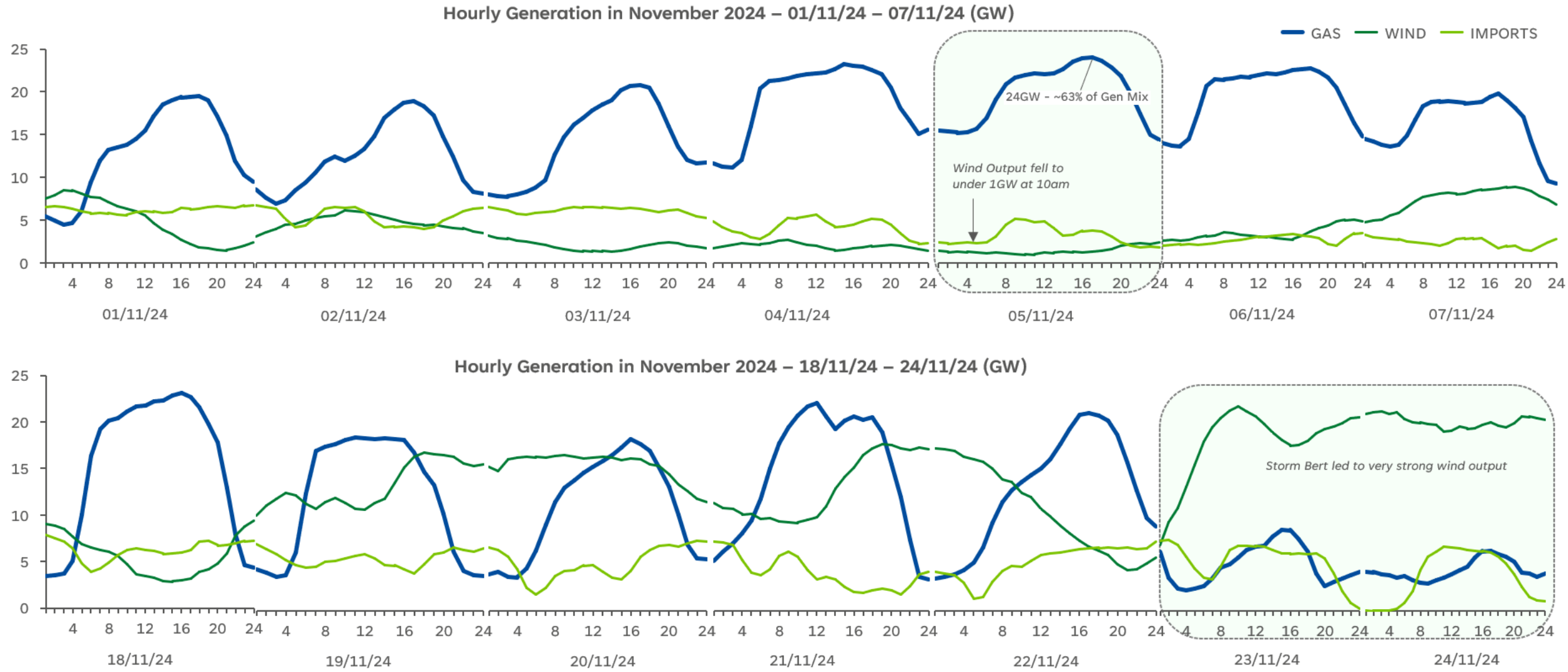
Winter 2024/25 increase in electricity demand Y-o-Y, as colder, stiller weather is balanced by a ramp up in dispatchable gas generation



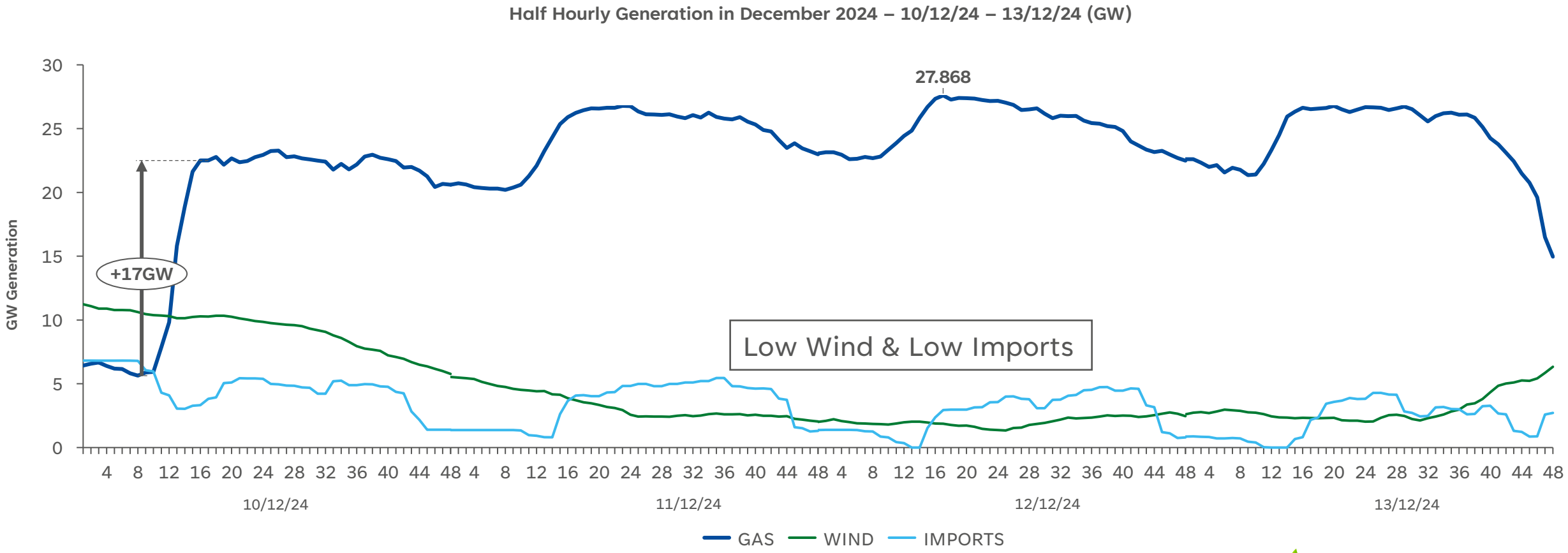
RES – renewable energy sources

Source: NESO, Elexon, NGT, RES [1] includes wind & solar only, Other [2] includes Hydro, Biomass and Storage.

November 24 – A tale of two halves: Gas Plant's response to varying wind highlights its critical role to the GB elec system



New Intra-day gas power generation record achieved December 2024, during Dunkelflaute event as gas dispatched to fill the supply gap



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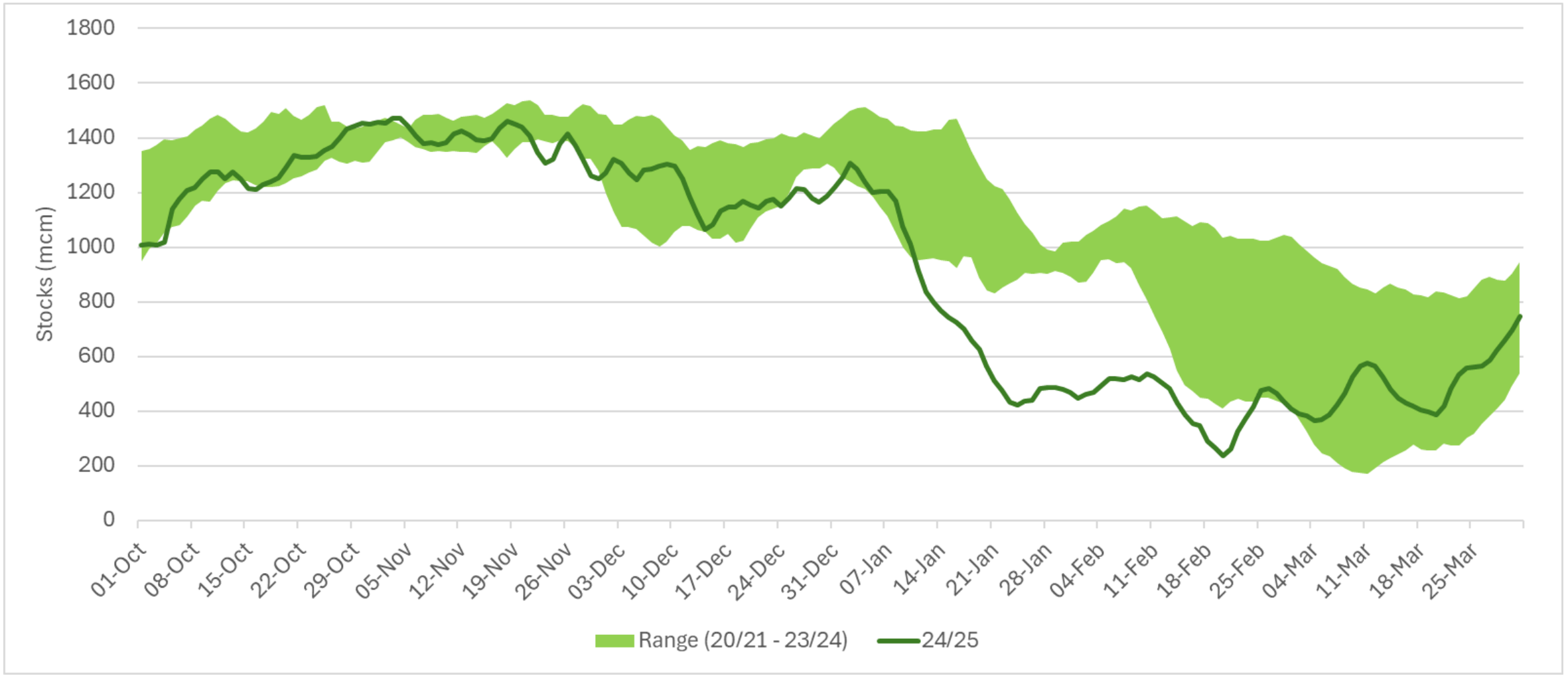
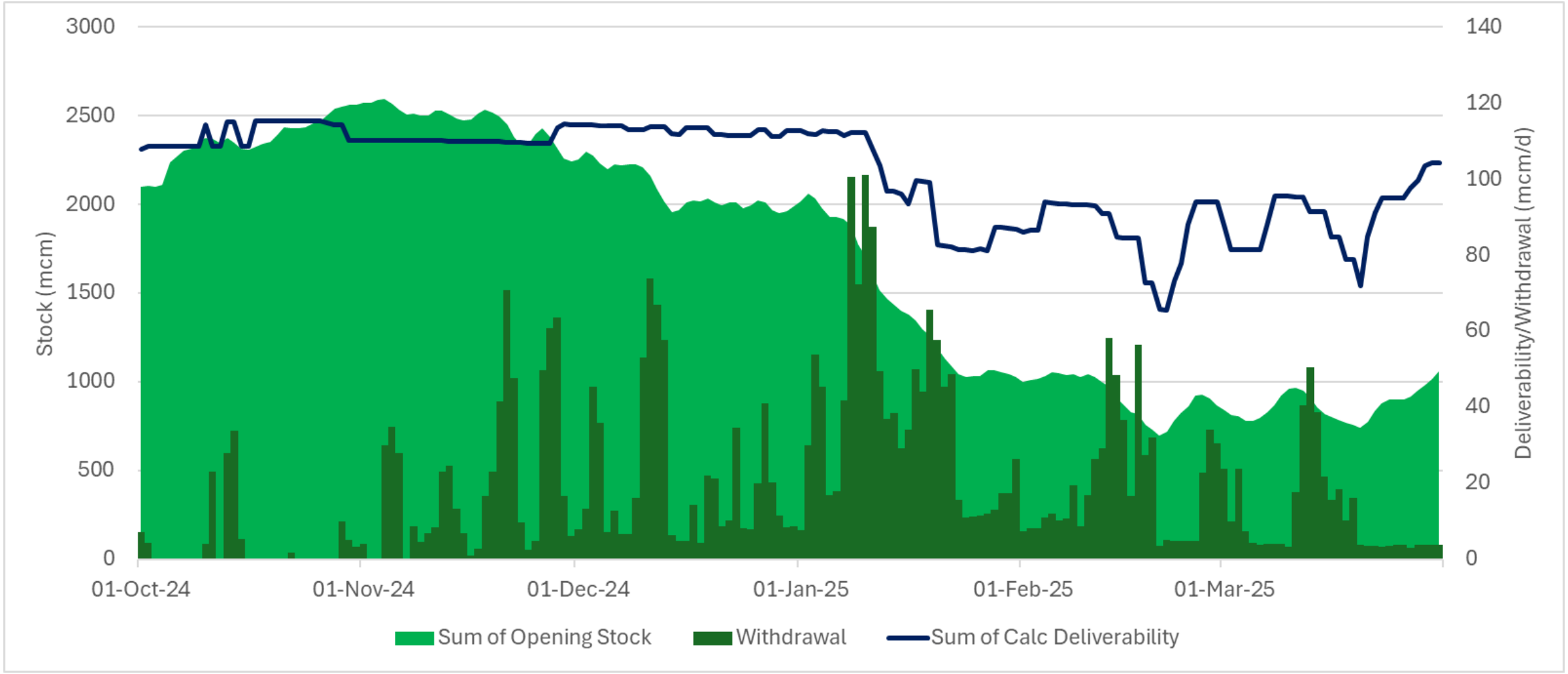
MRS Stocks depleted more rapidly than recent years, but ended the winter at a similar level



Very high storage withdrawals in early January but deliverability remained high for much of the winter



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Chris Thompson

Engagement & Publications Manager
National Gas

Gas Summer Outlook

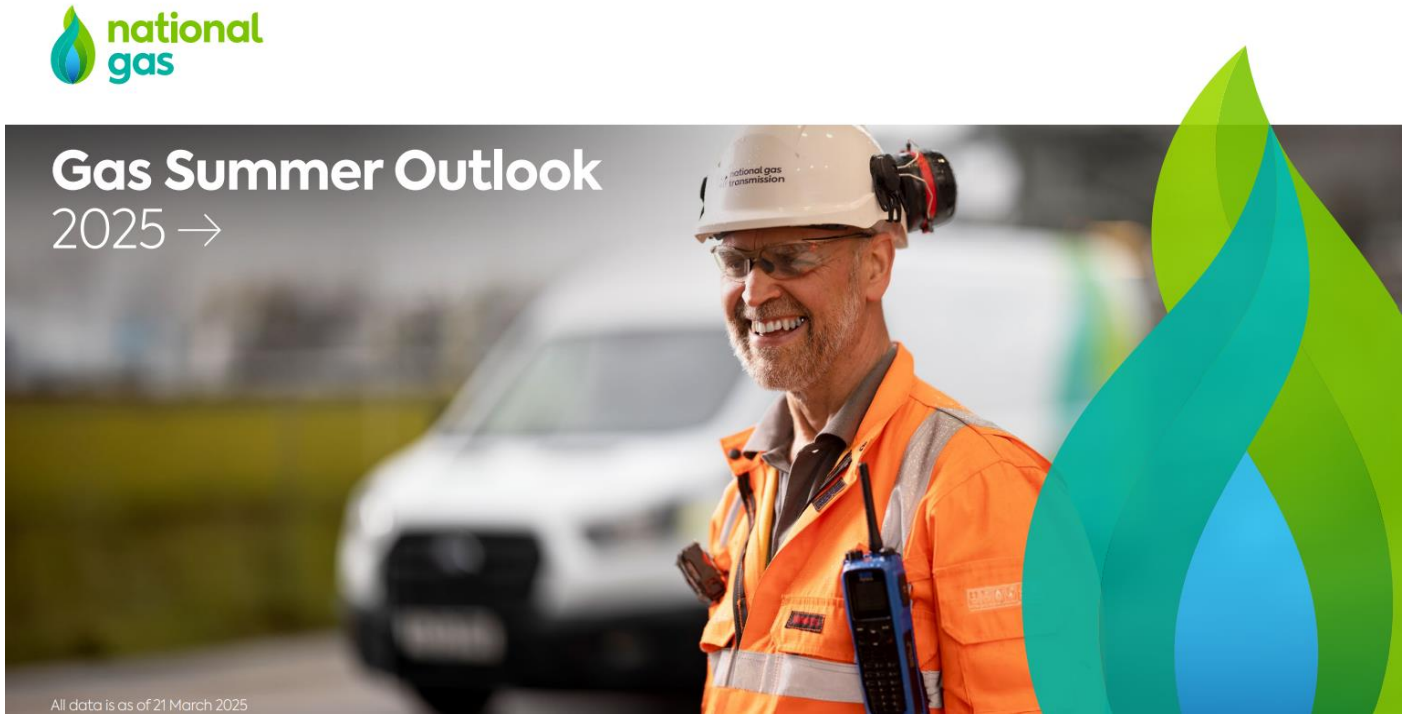
Our Gas Summer Outlook was published yesterday:

National Gas publishes Summer Outlook for 2025 | National Gas

Main aims of the publication:

- Provide you with our forecast view for supply and demand
- To share any other important information that could help you to prepare for the coming six months.

Feedback welcomed



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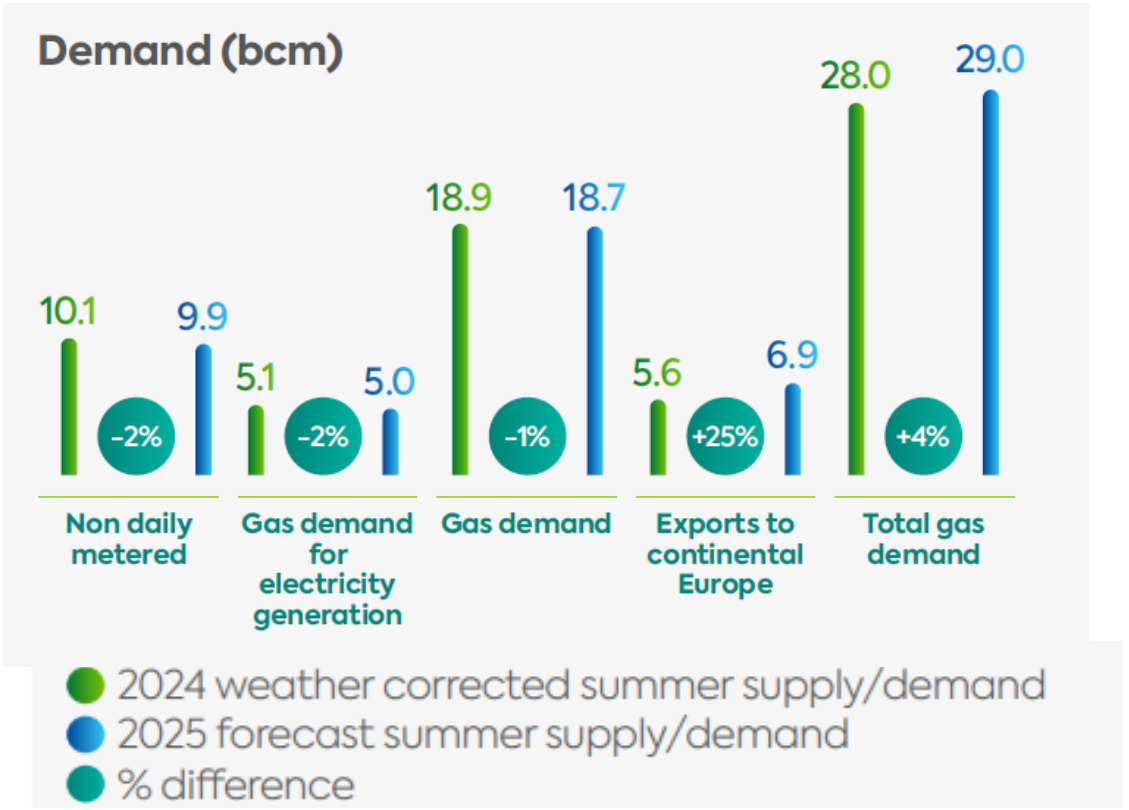
Gas Demand

Total forecast demand for 2025 is slightly higher than the previous summer, largely due to the forecast increase in exports to continental Europe (4%)

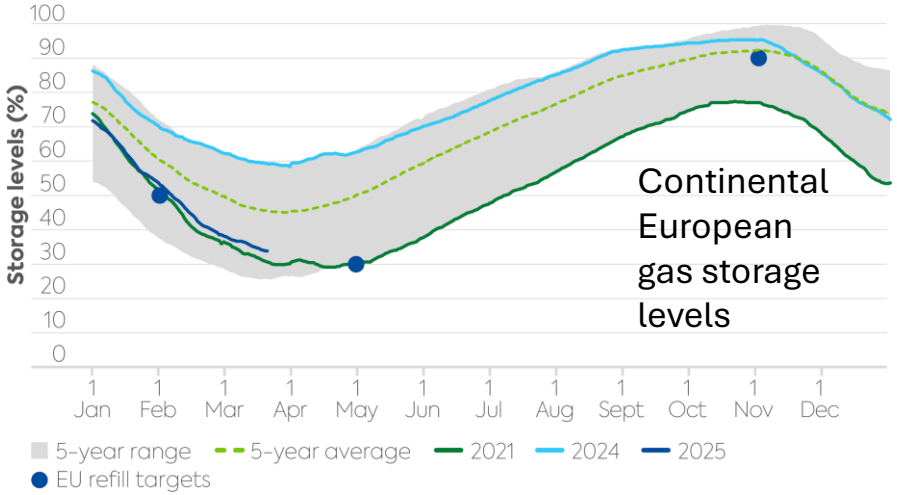
- **NDM (-2%)** Continuing high prices are likely to mean customers continue to save energy
- **NTS Power (-2%)** Expected increase in electricity imports slightly reduces gas demand for power
- **DM & Industrial (+5%)** Forecast demand is consistent with previous years (+0.2bcm)
- **Exports to continental Europe (+25%)** Significantly more demand required to fill continental European storage.
- **Net storage injection (+3.7%)** Storage stocks are expected to start the summer lower than last year, creating a greater demand for injection.
- **Ireland (-11%)** New interconnector 'Greenlink' expected to be net importing to Ireland meaning gas demand from GB is reduced

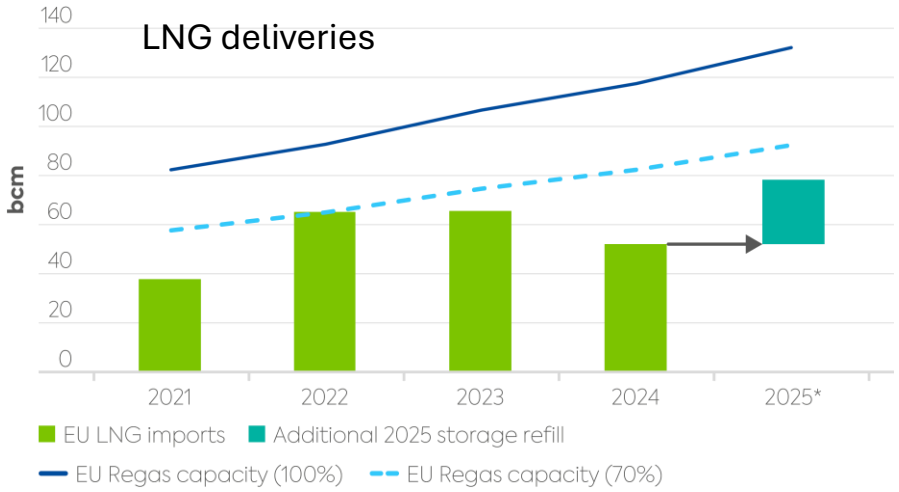


Exports to continental Europe

Exports to continental Europe are forecast to be ~25% higher than the previous summer

- Continental European storage ended the winter with significantly lower stocks than the previous year.
- LNG imported into continental Europe is capable of meeting this additional injection demand.
- Likely to be some increases in exports from GB to meet the additional injection.

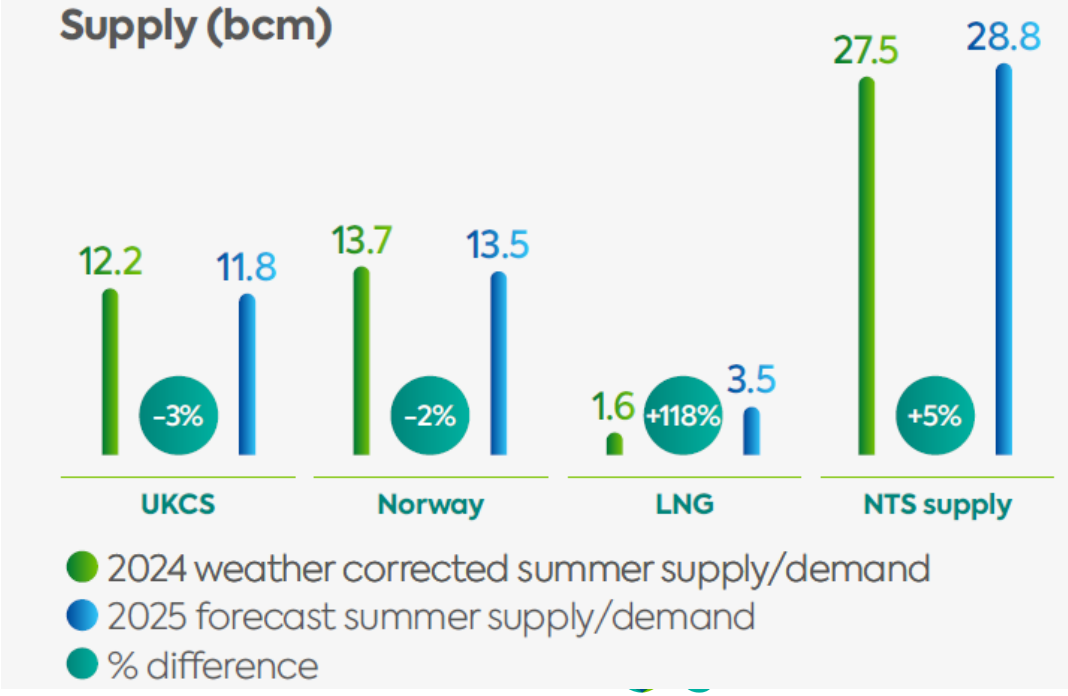




Gas Supply

During the summer, GB demand will be met primarily by gas from the UKCS and Norway, with the balance being secured primarily from LNG

- **UKCS (-3%)** UKCS production continues to decline
- **Norway (-2%)** Flows maybe slightly reduced due to higher demand in continental Europe to support storage
- **LNG (+118%)** The increase expected is largely driven by the anticipated increase in exports to continental Europe, which will contribute to filling continental European storage.
- **Imports from continental Europe (zero change**) Based on what we have seen over recent years we do not expect imported gas from continental Europe over summer

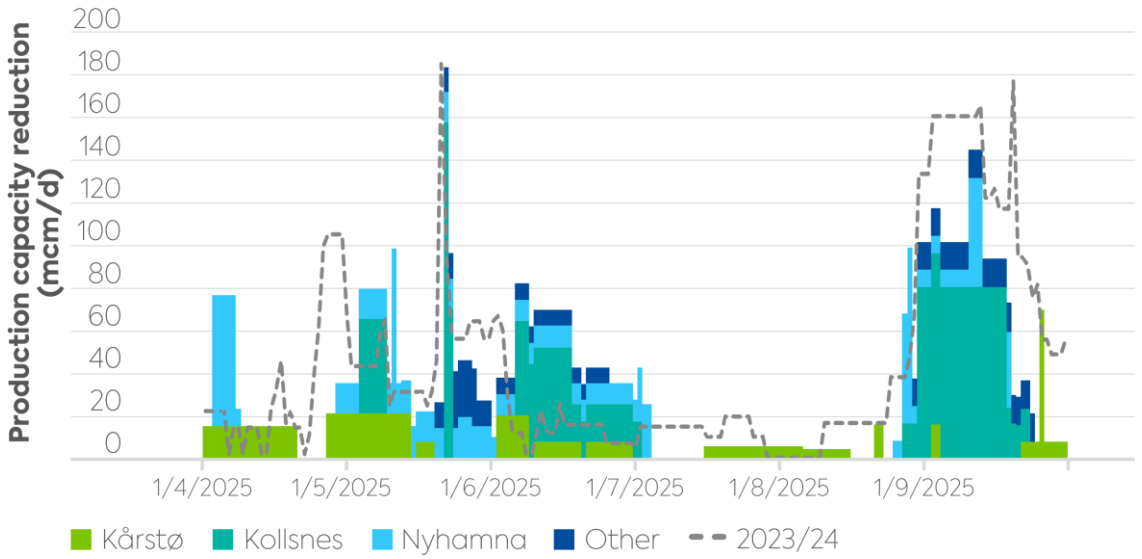


UKCS and NCS maintenance

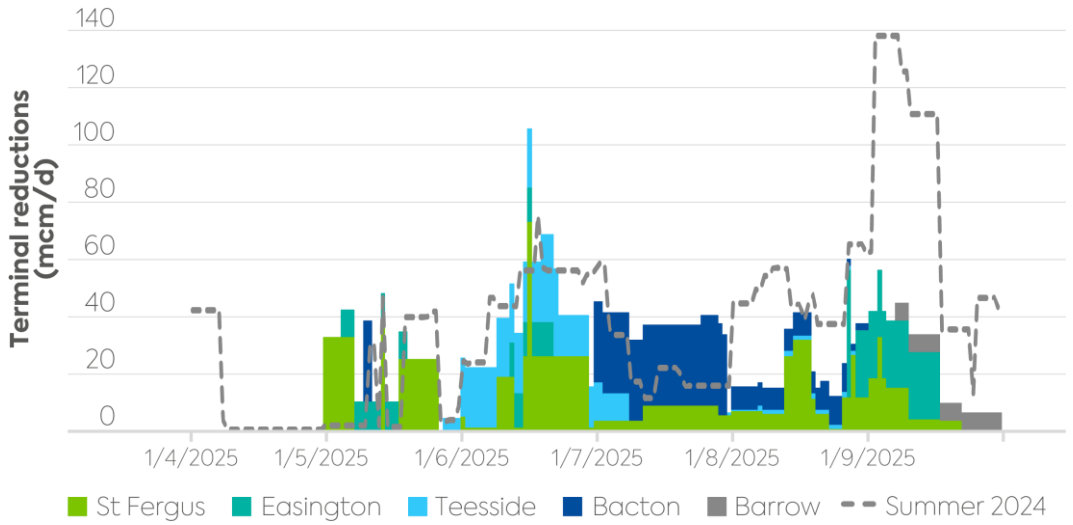
Slightly less maintenance outages planned for the coming summer

We continue to monitor proactively throughout the summer period

Aggregated UKCS terminal outages



Aggregated GASSCO outages



NCS

- Maintenance outages are less than the level seen in the previous summer

Asset maintenance

We're undertaking significant levels of maintenance activities across our network this summer, to ensure our network is ready for the winter ahead

Maintenance activities taking place on:

- 900km of pipe
- All our 21 NTS compressor sites
- 700km pipe undergoing inspections

Example of what are we doing:

- Progressing works at 3 of our main compressor stations
- New units at Peterborough and Huntingdon are now complete
    - Work will begin this summer to decommission the old units
- The new unit at Hatton will enter the final stages of testing early this summer.

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Matt Newman

Market Change Manager
National Gas

Team Overview

Access, Governance & Balancing

- UNC Panel representation
- Capacity Methodologies

Charging & Revenue

- NTS Transportation charges
- Charging Methodology

EU & Gas Quality

- EU policy development and engagement
- Gas quality issues

Future Frameworks

- Hydrogen Blending
- CCUS Licence & Network Code
- Certificate Scheme

Hydrogen Operability

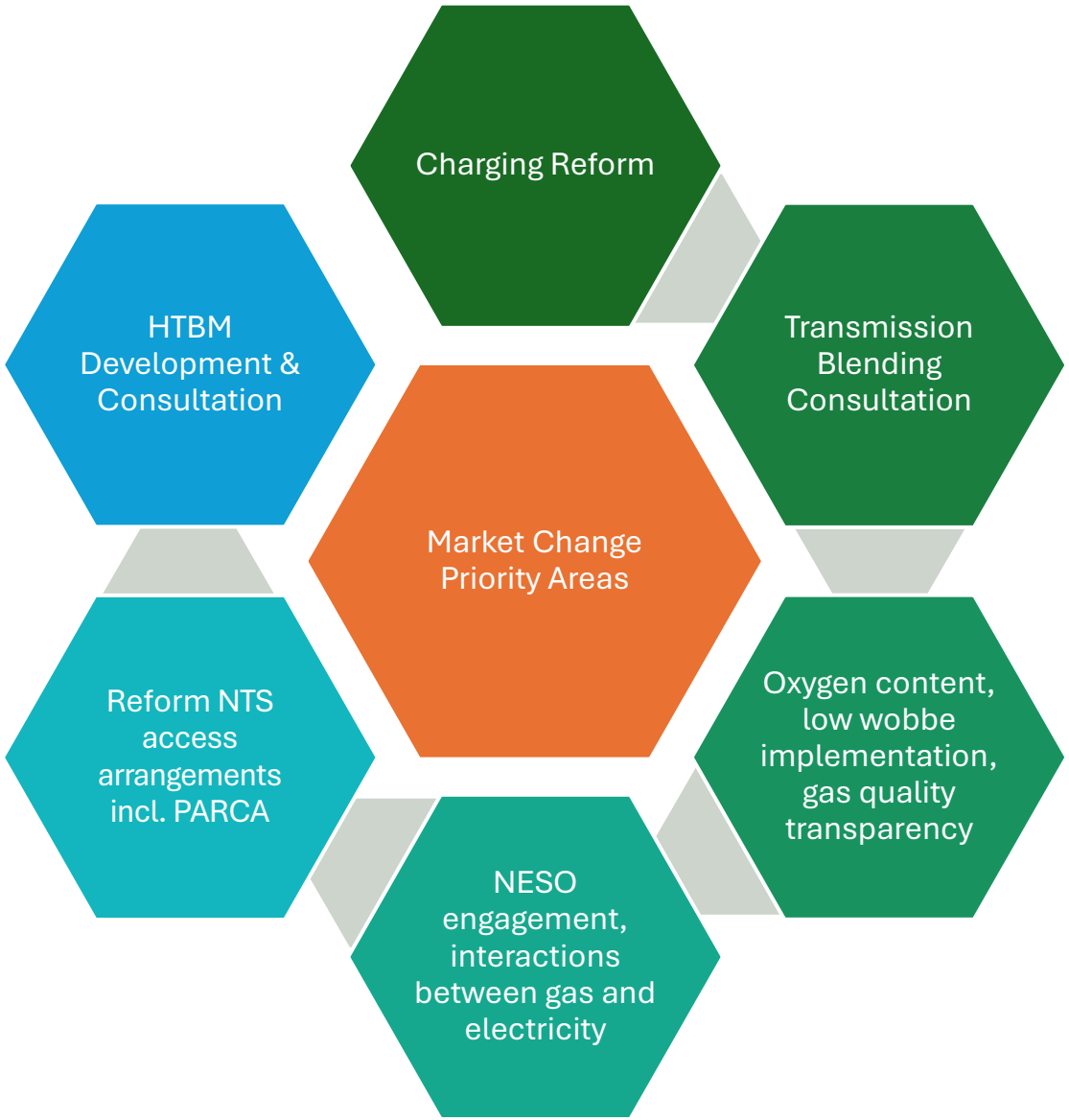
- Operate Project Union
- Hydrogen Transport Business Model (HTBM)

Future Networks Response & Resilience

- Support Whole Energy System resilience
- Manage NESO commissions
- Resilience for future network systems

UNC Modifications, Consultations

Looking ahead



How to contact us?

Charging Queries - box.ntsgascharges@nationalgas.com

All other parts of Market Change - box.gsoconsultations@nationalgas.com

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Rachel Hinsley

Ops Liaison & Business Delivery Manager
National Gas

Exercise Capricorn

Gemini Code Contingency & OCM Contingency Exercise

Date: **Wednesday 18th June 2025** (one day only)
Duration: **9am to 5pm**

Purpose: To raise awareness of code contingency arrangements for Gemini and test OCM (On-the-day Commodity Market) Contingency arrangements

This is a **communications test** and will not involve any testing of the Gemini or OCM systems. There will be **no impact to normal operations** for the Gas Day.

- National Gas will not be entering any data into Gemini or the OCM during the exercise
- All communications will be prefixed 'Exercise Capricorn'

Information packs and pro-formas will be available 2 weeks in advance of the exercise via Joint Office

Please confirm your intention to participate in Exercise Capricorn by 31st May 2025 to ebi.billing@xoserve.co.uk

If you have any queries regarding the exercise prior to the day, please contact the below:

- For all Gemini related queries (Capacity and Energy Balancing): ebi.billing@xoserve.co.uk
- For OCM queries: ocmcontingency@nationalgas.com

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Bacton Exit Capacity Update

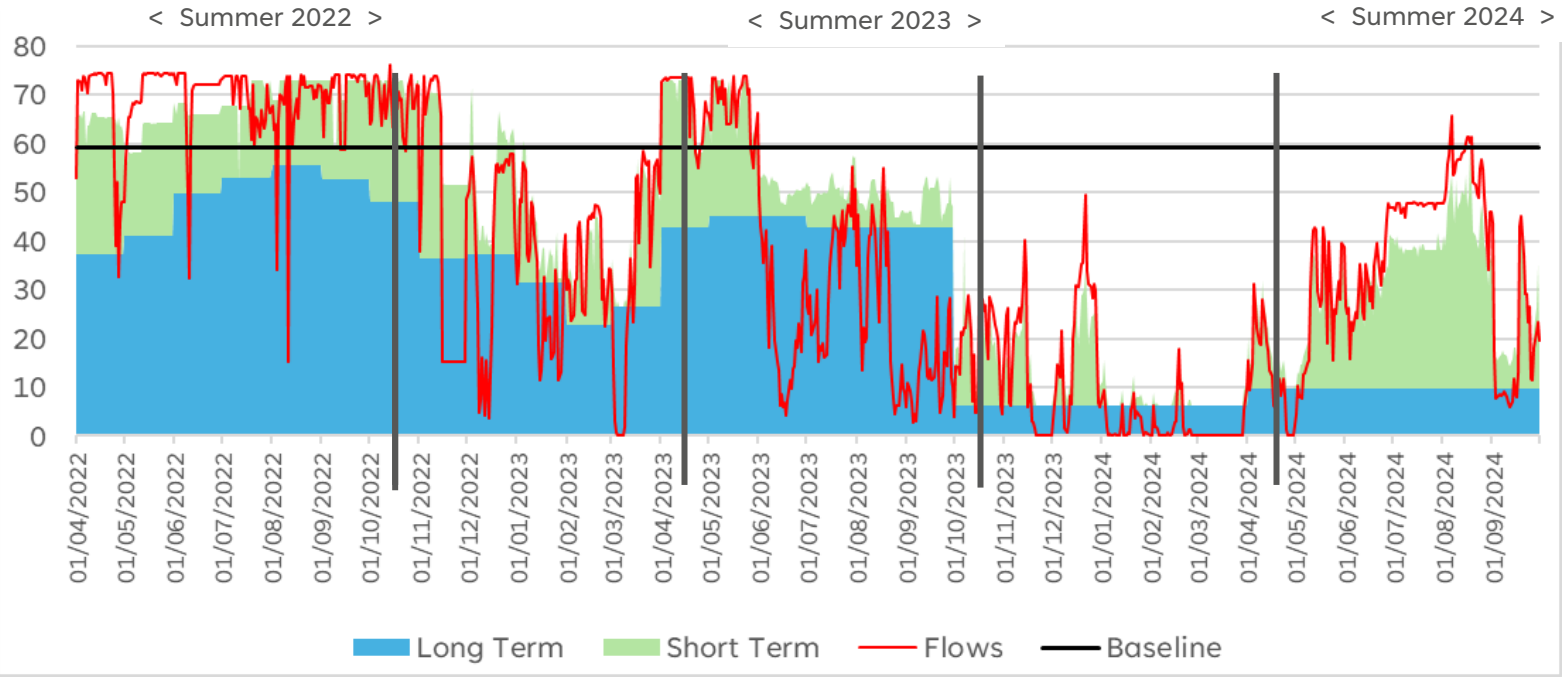
Bacton Exit Baseline
652 GWh/d (59 mcm/d)
BBL + Interconnector capability
~857 GWh/d (78 mcm/d)

Headlines

- Bacton Exit Capacity Baseline is ~59 mcm/d and we should be able to offer this throughout the Summer period
- Non-Obligated Exit capacity release (eg capacity > 59 mcm/d) should be possible Apr-Jun, post-July less likely

Throughout the Summer, we will monitor market need, assess capability and release more capacity if we are able

Bacton Exit Capacity and Flows Apr-22 – Sep-24 (*mcm/d*)



For any capacity-related queries, please contact us:

capacityauctions@nationalgas.com

+44 (0)1926 568057

Thank you for attending today's NGEF launch!

We look forward to seeing you online June 12th and in person July 17th

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