



national
gas



energy
forum

Agenda

Part I 9:30

Embedding Innovation through National Gas in T3
Katie Petherbridge Head of Innovation at National Gas

Powering Today, Transforming Tomorrow
Darren Davidson Vice President at Siemens Energy UK&I

Future Networks: Navigating the Shift to a Multi-Molecules Economy
Filippo Gaddo Managing Director at Alvarez & Marsal

National Gas Winter Outlook & Operational Update
Alison Tann Head of Operational Delivery, National Gas

Break (10:50 – 11:10)

Part II 11:10

Keynote with Q&A
Henry Tufnell MP, Member of Parliament for Mid and South Pembrokeshire

Keeping Britain Powered: Why Energy Security and Economic Growth Depend on Strategic Infrastructure
Tom Sawyer CEO at Port of Milford Haven

How Global LNG Markets will Impact Europe this Winter
Alex Frole Senior LNG Analyst at ICIS

Lunch (12:30 – 13:00)



**national
gas**

| energy
forum

Part I



Part I Speakers



Katie Petherbridge

Head of Innovation



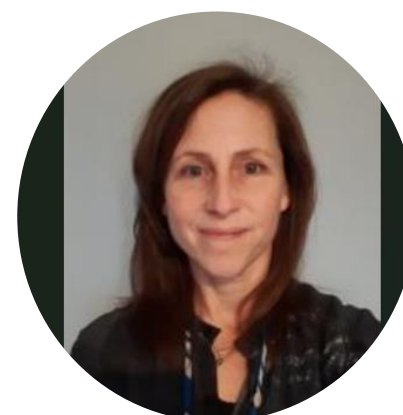
Darren Davidson

Vice President



Filippo Gaddo

Managing Director



Alison Tann

Head of Operational Delivery





**national
gas**

| energy
forum

Katie Petherbridge

Head of Innovation
National Gas





Embedding innovation through National Gas in RII0-3

Katie Petherbridge
Head of Innovation



Why innovation matters in RIIO-3

Innovation has always been central to how we respond to change, solve complex challenges and prepare our network for the future.

Across RIIO-3, our role will continue to focus on helping the business to:



What's changed for RIIO-3?

Innovation in RIIO-2

Heavily focused on developing the evidence case for hydrogen and net zero



We've seen changes in the energy landscape recently

As a result, the wider energy industry must focus on decarbonising energy supplies, while maintaining secure, affordable and reliable energy for consumers and businesses.

What this means for innovation in RIIO-3

Unlike in RIIO-2, innovation must not focus solely on enabling the transition to lower-carbon energy sources, but also on strengthening the resilience, flexibility and reliability of the network.

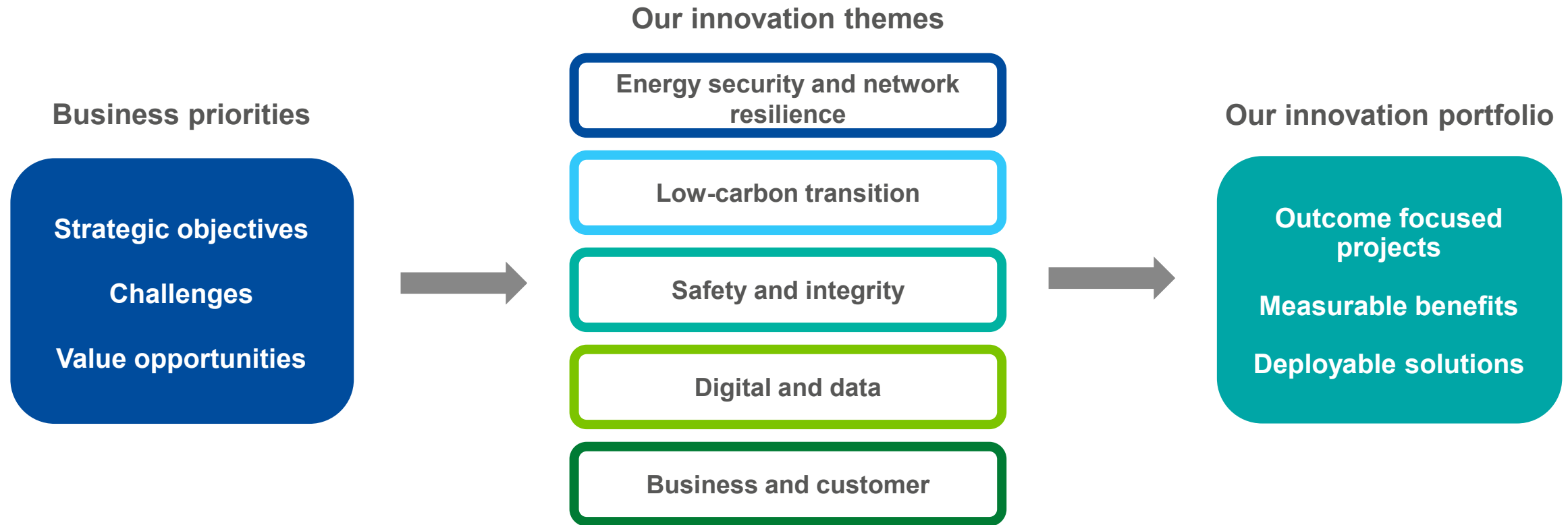
We're focusing on innovation activities with:

- Stronger alignment to strategic challenges
- Clearer routes from idea to implementation
- Greater focus on adoption, benefits and impact
- Earlier engagement with stakeholders and suppliers

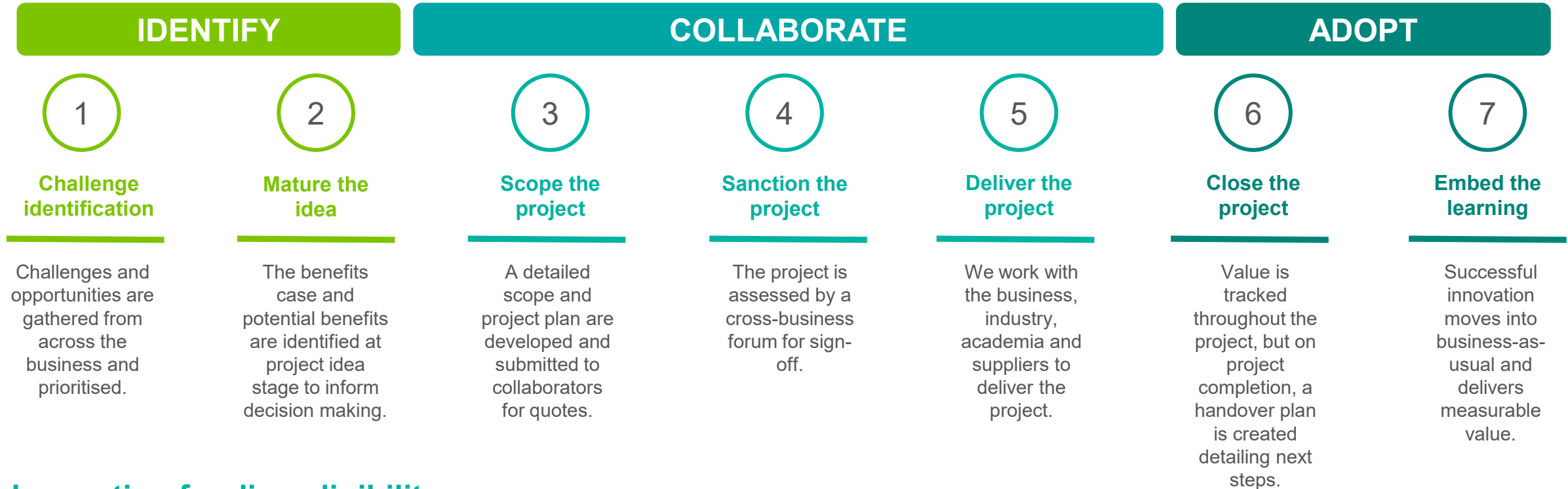
Our RIIO-3 funding needs to be utilised for projects that focus on emissions reduction, resilience, low-carbon technologies and safety of the existing network. Net zero and hydrogen activities should be funded by other means until Government policy decisions are made in the UK.

Our strategy provides a clear line of sight

Our strategy translates the business priorities into targeted innovation activity with clear outcomes.



Delivering innovation for the business



Innovation funding eligibility

Likely to be suitable for Innovation funding	May be suitable (depending on level of value & uncertainty)	Not innovation (better suited to BAU / standard)
➤ High uncertainty ➤ New or unproven solutions ➤ Generates learning or evidence ➤ Potential wider system impact	➤ Some uncertainty remains ➤ Adaptation of existing solutions ➤ Needs further testing or evidence ➤ Early-stage or developing ideas	➤ Proven, low-risk solutions ➤ Routine delivery or upgrades ➤ Standard tools and methods ➤ Focus on outputs, not learning

Our deployment approach

There are two areas of focus for deployment:

1

INNOVATION PORTFOLIO

We focus on embedding the solutions and knowledge gained from our RIIO-1 and RIIO-2 projects.

Routes to deployment include:

1

Deployment funding – a competition fund (we’re targeting January for our first project submission).

2

Utilising existing RIIO-3 business funding.

3

Building deployment activity into our RIIO-4 business plan.

4

Re-openers – forming part of our uncertainty mechanisms framework

2

EARLY DEPLOYMENT PLANNING

We ensure deployment is a focus when a project idea is first explored.

This includes:

1

Early consideration of the estimated value. When an idea is matured, a clear business case is created before sanctioning.

2

We’ve created a new cost-benefit analysis tool, to demonstrate the value of a project much earlier.

3

We’ve updated our value tracking categories, so they align with the business priorities.

4

Utilising Technology Readiness Level (TRL) planning – this will help focus deployment activity where it will have the most impact.

Deployment of Innovation across RIIO Periods

RIIO- 1: L555 Dent Tolerance <i>Deployed</i>	RIIO-2: Hydrogen Repurposing Process <i>In deployment</i>	RIIO-3 Proposed Project: Net Zero AGI <i>Pipeline</i>
 Following testing the pipeline dent tolerances were increased from 2% to 6%, enabling more informed decisions on when remedial work is required.	 £1m spent developing hydrogen repurposing policies 2 new policies developed (TR/9H and TR/10H)	 Problem being addressed: We currently vent methane to atmosphere in the normal course of inspection and maintenance activities.
 £84.6m cost avoidance to date 400 remedial actions avoided due to the increased tolerance £200k saving per avoided action	 5 TR/10H assessments already completed by Project Union 7 further applications planned across St Fergus to Teesside and North-West Repurposing assets avoids the need to design and build new pipeline sections	 Project purpose: This project will demonstrate all technologies required to meet the net zero 2050 target on one strategic site – showcasing a blueprint for the future network. An abetment of pig trap venting and gas actuators will be demonstrated, as well as maintenance and inspection venting and the deployment of continuous emissions monitoring.
 Fully rolled out across National Gas, with the findings incorporated into updated pipeline inspection and management procedures.	 TRL change: Start TRL2 – Finish TRL9 The two policies are now approved for Business-as-Usual use. The financial benefits of using these policies are still being quantified.	 Potential benefits: If deployed on every National Gas site, there could be a potential emissions reduction of 71,166 tCO₂e.

Thank you

Box.GT.Innovation@nationalgas.com





**national
gas**

| energy
forum

Darren Davidson

Vice President
Siemens Energy UK&I



Electrification, Resilience and the UK's Next Energy Challenge

Darren Davidson

Vice President UK&IE - Siemens Energy



Siemens Energy installed base across the UK's National Transmission System

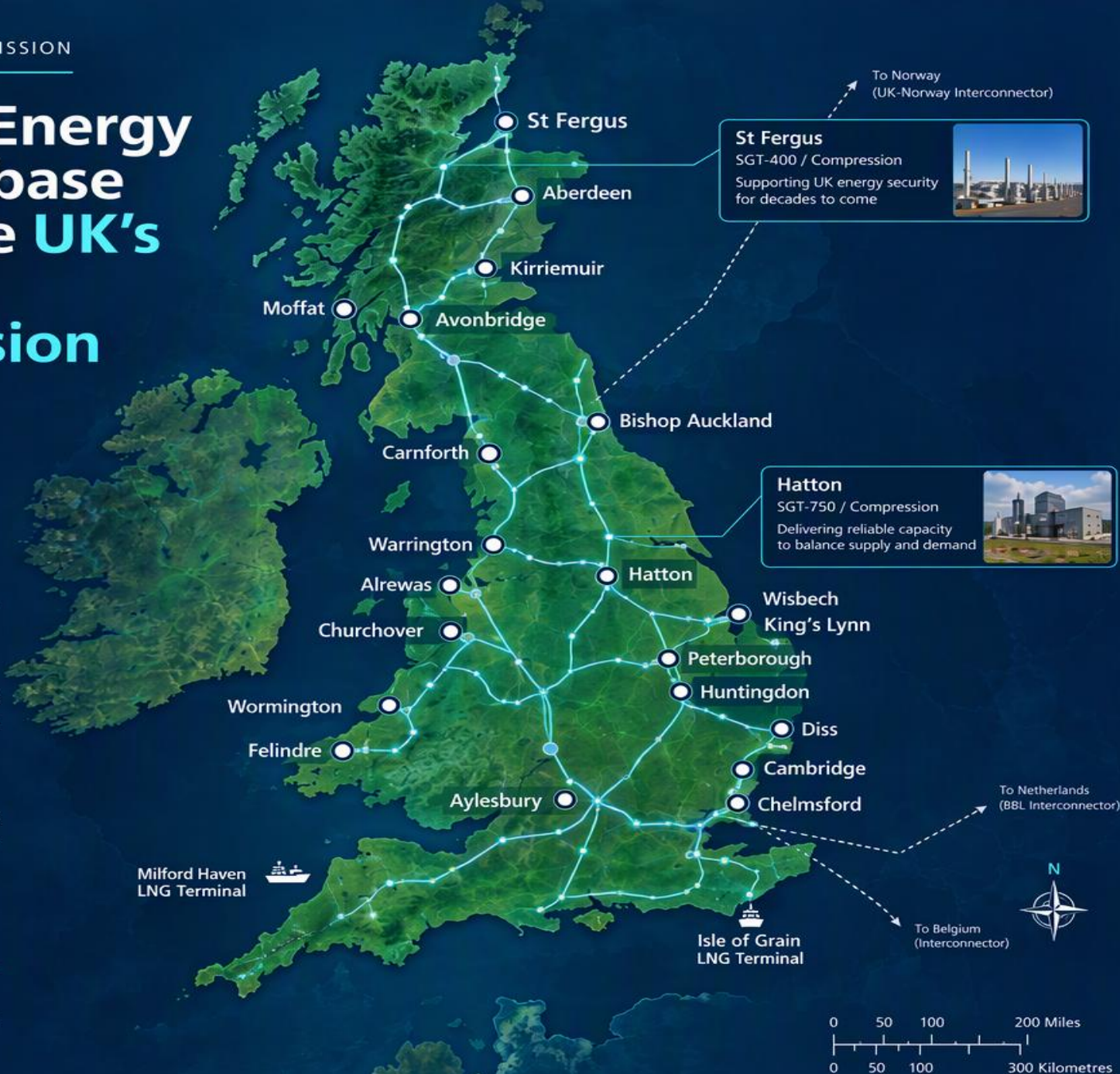
Proven technology.
Trusted partnership.
A more resilient
energy future.

 **20**
NTS sites
with Siemens Energy units

 **60+**
Gas turbine units
in operation and support

 Full lifecycle support
across the network

POWERING
A CLEANER, MORE SECURE
ENERGY FUTURE



SIEMENS ENERGY EQUIPMENT

- SGT-A20
- SGT-A35
- SGT-400
- SGT-700
- Industrial power turbine (TCP)
- LM2500
- Vectra

- Compressor station (Siemens Energy units)
- Other key NTS site
- National Transmission System (NTS) pipeline
- Interconnector
- LNG terminal



**SUPPORTING
ENERGY SECURITY**
Reliable compression across
the whole network



ENABLING TRANSITION
Ready for hydrogen and
low-carbon fuels



A LONG-TERM PARTNER
Investing in people, technology
and UK capability

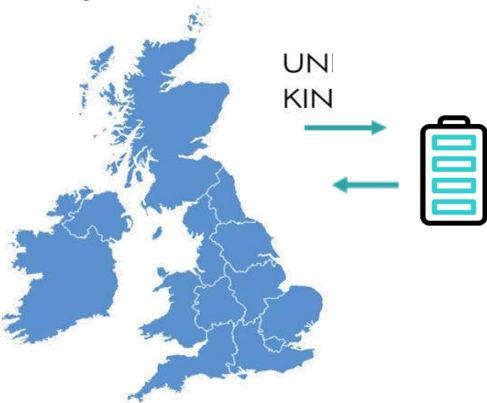
Engineering today.
For a cleaner tomorrow.

Powering UK Energy Resilience Through Hydrogen and Long-Duration Storage

Long-duration energy storage is increasingly important for the UK as wind and solar supply more electricity.
By storing surplus renewable energy and releasing it during periods of low generation or high demand, it helps maintain reliable supplies and lower exposure to volatile international fuel prices

Facility	Volume (bcf)	% UK Storage	Owner/Operator
Rough	54.0	48	centrica energy storage+
Stublach	14.0	13	storengy
Hornsea (Atwick)	11.0	10	sse Thermal
Aldbrough	10.4	9	sse Thermal equinor
Humbly Grove	9.0	8	HUMBLY GROVE ENERGY
Holford	8.5	8	uni per
Hatfield Moor	2.5	2	SCOTTISHPOWER
Hill Top Farm	2.1	2	edf

Rough – the UK’s largest battery

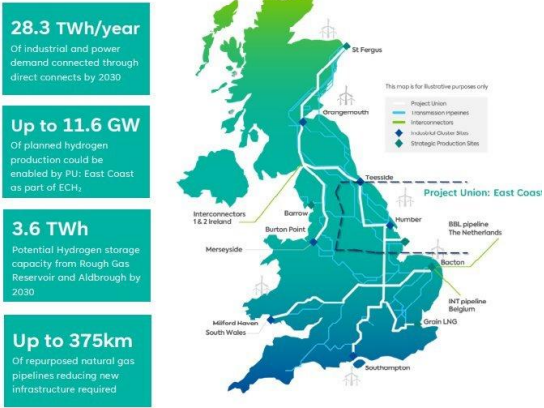


Energy Storage Capacity:
60TWhrs Natural Gas
20TWhrs Hydrogen

Daily Capacity In or Out:
1 billion cubic feet
29 million cubic meters

Equivalent Power Capacity
~6GWe Natural Gas
~2GWe Hydrogen

ProjectUnion: East Coast



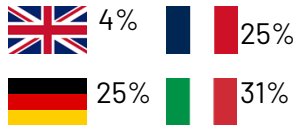
- 28.3 TWh/year
Of industrial and power demand connected through direct connects by 2030
- Up to 11.6 GW
Of planned hydrogen production could be enabled by PU: East Coast as part of ECH₂
- 3.6 TWh
Potential Hydrogen storage capacity from Rough Gas Reservoir and Aldbrough by 2030
- Up to 375km
Of repurposed natural gas pipelines reducing new infrastructure required

Key Deliverables

- East Coast FEED – Will identify a preferred routing option from the options identified during pre-FEED, where a revised options list will undergo conceptual design, lands and consents activities will be continued, and procurement activities will be commenced.
- Project Union: Essential Enabling Activities – Programme of work critical to ensuring a fully operational and accessible hydrogen transmission network. It will support the delivery of FEED and essential to ensure a fully operational network through demonstrating the potential to repurpose, defining operating procedures, adapting existing systems and assets for hydrogen, and developing and delivering a transition plan and governance structure to deliver FEED and further phases of Project Union.

UK Total 111.5

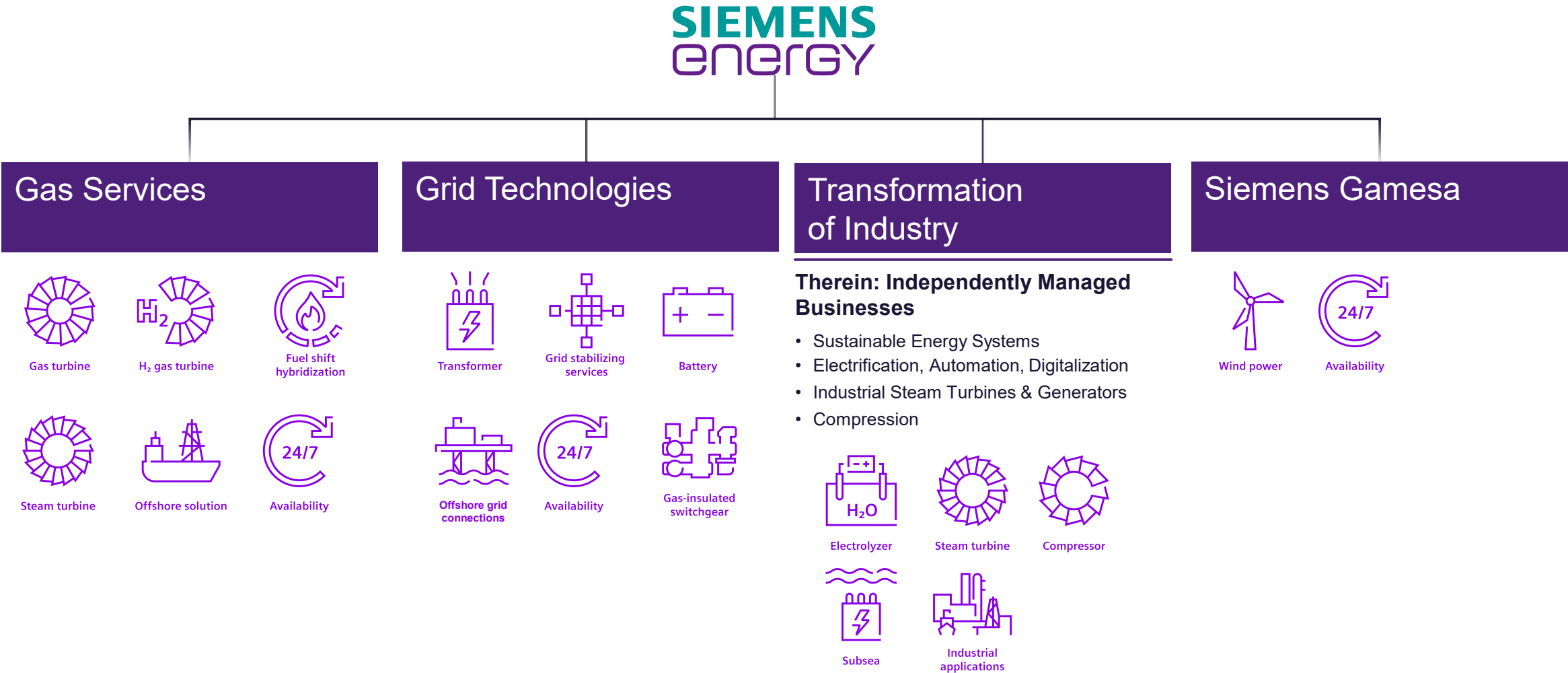
Storage versus Consumption %



Rough equivalent...

- 2.4 million homes heated over winter
- 18 LNG Tankers
- 60 Salt Caverns

We support our customers along the entire energy value chain



Keeping the UK gas flowing - Strengthening the Backbone of our Energy Security



Through strategic investments and operational excellence at key National Gas facilities, Siemens Energy is helping maintain the reliability, availability and resilience of the UK's gas transmission infrastructure.



St Fergus – MCPD Modernisation

- Three new SGT-400 driven compressor packages to replace existing mature fleet
- Class leading Enhanced Dry Low Emission (eDLE) combustion to meet future environmental requirements
- Fuel Flexibility to ensure site is ready for future energy mix scenarios (e.g.: H2)



Hatton – Unit Replacement

- Install of one SGT750 (41MW) to replace existing mature fleet
- Project ensures compliance with environmental requirements while ensuring Hatton continues to play an important role in moving gas around the country



Cyber Resilience – Control system replacement project

- OEM involvement from survey and Pre-FEED to ensure upgrades a secure and fit for purpose
- Controls and protection aligned to cyber requirements for now and future
- OEM-defined interfaces retain maintainability

Siemens Energy: We energise society



Employing more than **7,700** people in the UK with a real estate space of more than **281k m²***

Adding more than **£390m** social value to the UK in FY25

- 7 Manufacturing sites
- 13 Service centres / Warehouses
- 9 Project sites / Offices



Ulverston

12k m²
£6m
350+



Manchester

3.2k m²
£132m
350+



Warwick

1.7k m²
£45m
350+



Worcester

4.5k m²
£10m
100+

Lisburn

Corby



Aberdeen

25k m²
(tbd)
600+



Newcastle

41k m²
£31m
650+



Hull

92k m²
£28m
1,550+



Lincoln

88k m²
£29m
1,350+

Siemens Energy and Siemens Gamesa will be integrated into one joint, new brand



SIEMENS
energy



SIEMENS Gamesa
RENEWABLE ENERGY



omterra

Continuity and continued strength to support you

There will be **continuity** in every way that matters:
Our strategic direction, local presence, expertise, delivery, support, and relationships remain unchanged.

Everything that **matters** stays the same:
Same team, same expertise, same products, same service.

All existing contracts and agreements will remain in effect, incl. the financial ratings and guarantees that support them.





**national
gas**

| energy
forum

Filippo Gaddo

**Managing Director
Alvarez & Marsal**





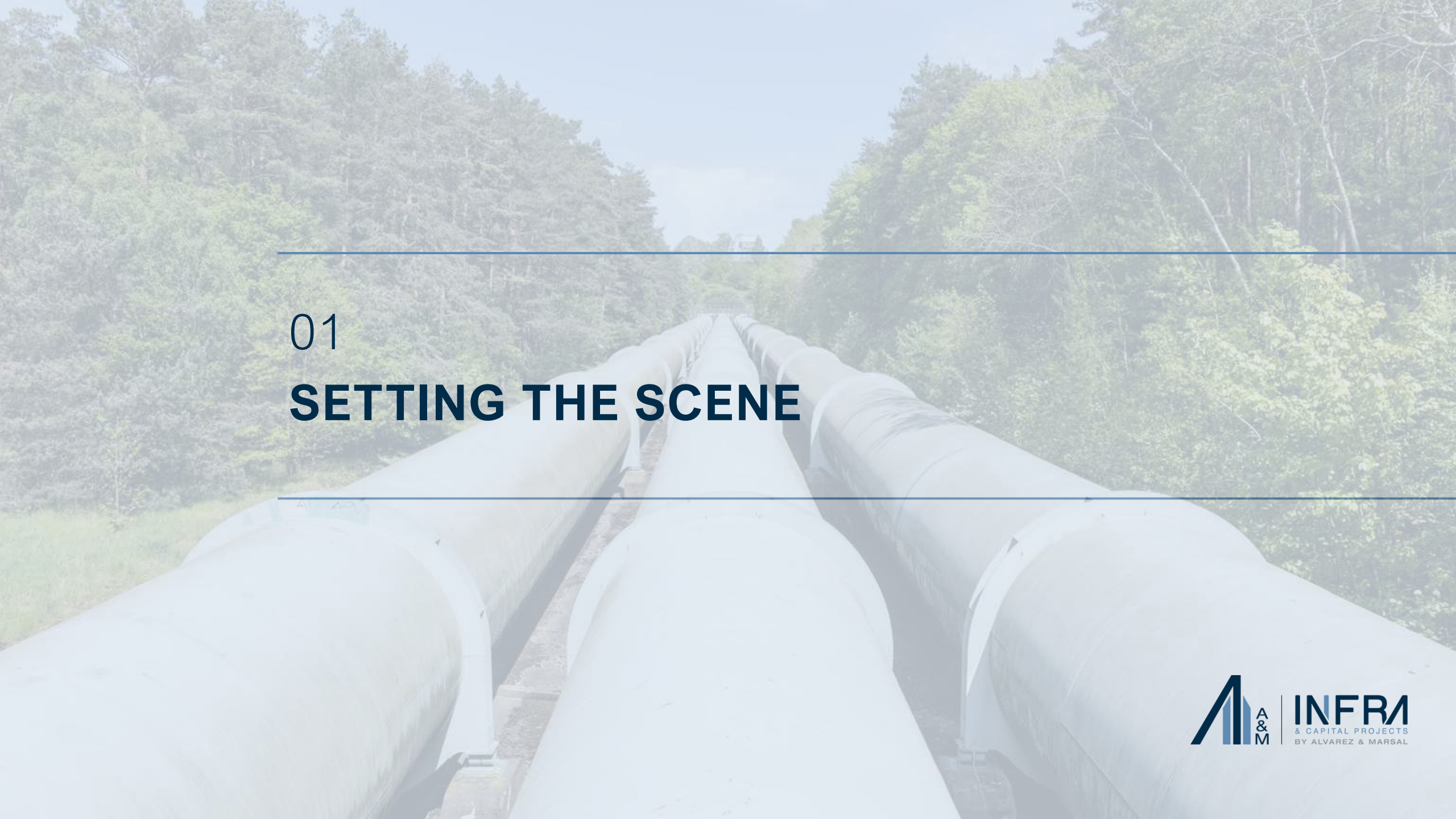
INFRA
& CAPITAL PROJECTS
BY ALVAREZ & MARSAL

The Future of Gas Networks: Navigating the Shift to a Molecule Economy

National Gas Forum – October 2026

Contents

01	Setting the scene	02
02	The German case study	05
03	Comparison with GB and Italy	11
04	Future investments: moving to a molecule economy	16

A photograph of several large, grey, cylindrical pipes or conduits running parallel through a dense forest. The pipes are supported by wooden or metal brackets and stretch into the distance, creating a strong sense of perspective. The surrounding trees are lush and green, and the sky is visible in the far distance.

01

SETTING THE SCENE

SETTING THE SCENE

Gas has moved from the default growth fuel to a security-of-supply asset, and its value now depends on policy and demand



SETTING THE SCENE

Decarbonisation splits the gas value chain into three investable trends, each with its own risk and timeline



1

ELECTRIFICATION

The largest switch away from natural gas

DISPLACES

Building heat and low-temperature industry

NEEDS

Grid reinforcement and competitive power

CONSTRAINT

Installation cost and grid queues

2

HYDROGEN

Broad gas network conversion

DISPLACES

High-temperature heat, feedstock and heavy transport

NEEDS

Cost parity with unabated gas

CONSTRAINT

Coordinating supply, network and demand

3

CO₂

The option that allows more gas to stay on the system

ENABLES

Gas in power and heavy industry

NEEDS

CO₂ transport and storage at scale, with a carbon price or CfD

ROLE

Cuts emissions from remaining gas use

The background of the slide is a photograph of a dense forest. In the foreground, several large, grey, cylindrical pipes or conduits run parallel to each other, receding into the distance. The pipes are supported by wooden or metal structures. The forest is composed of tall, green trees, and the sky is visible in the far distance.

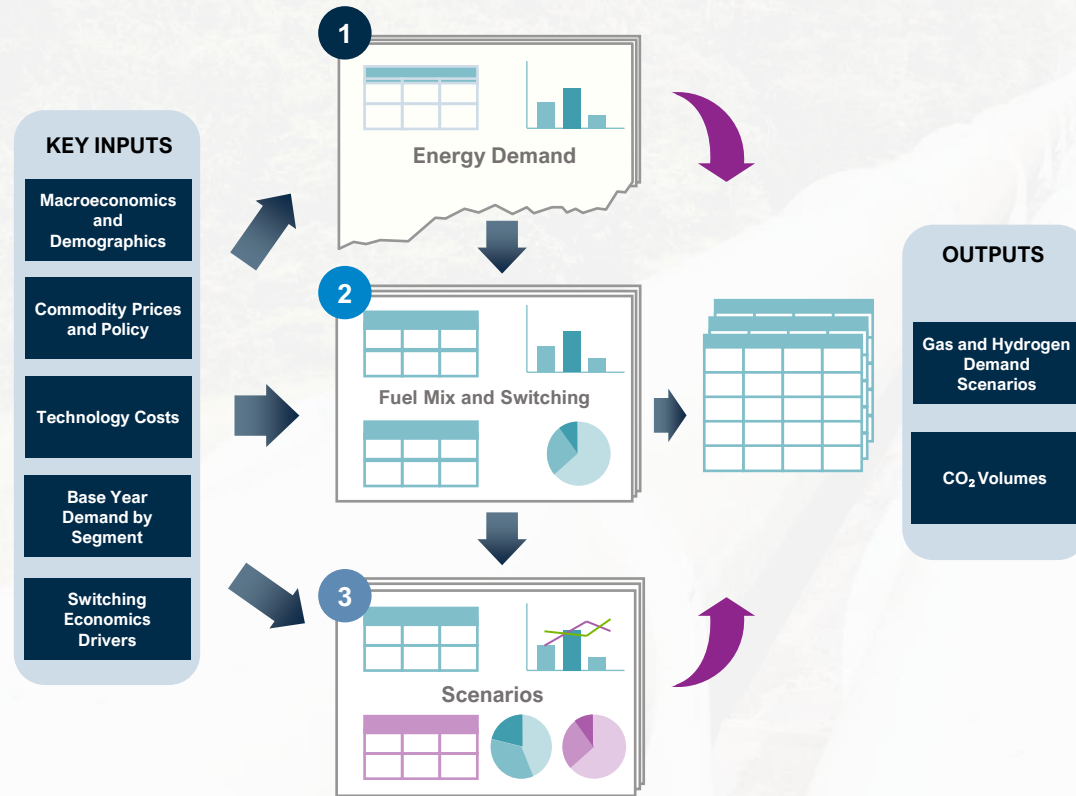
02

THE GERMAN CASE STUDY

THE DEMAND MODELLING TOOL: OVERALL ARCHITECTURE

A&M's demand model forecasts German gas and hydrogen demand and the CO₂ that needs capture

Demand Tool Architecture



1

Energy demand

How much energy each segment needs

2

Fuel mix and switching

Which fuel wins on economics and policy

3

Scenarios

Gas, H₂ and CO₂ outcomes to 2050

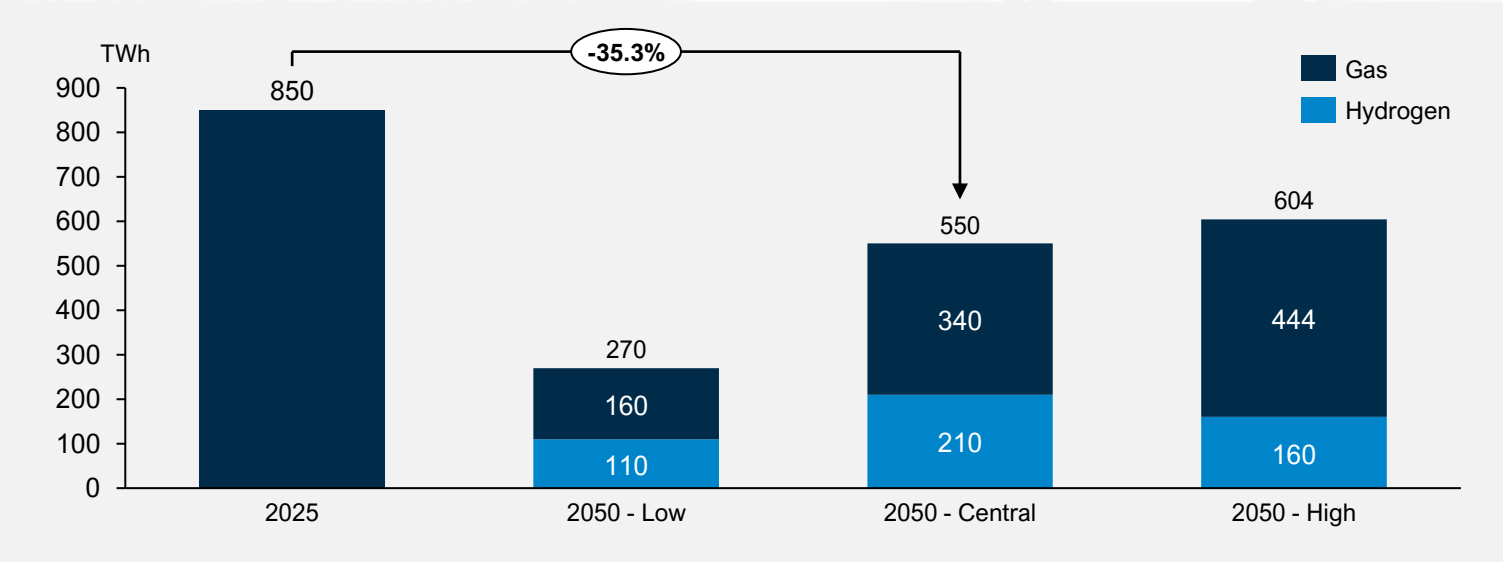


Germany's gaseous fuel demand is declining as electrification and hydrogen displace gas

Key Figures



Total Gaseous Fuel Demand – Gas & Hydrogen



-35%

Total gas and H₂ demand, 2025–2050 (Central)

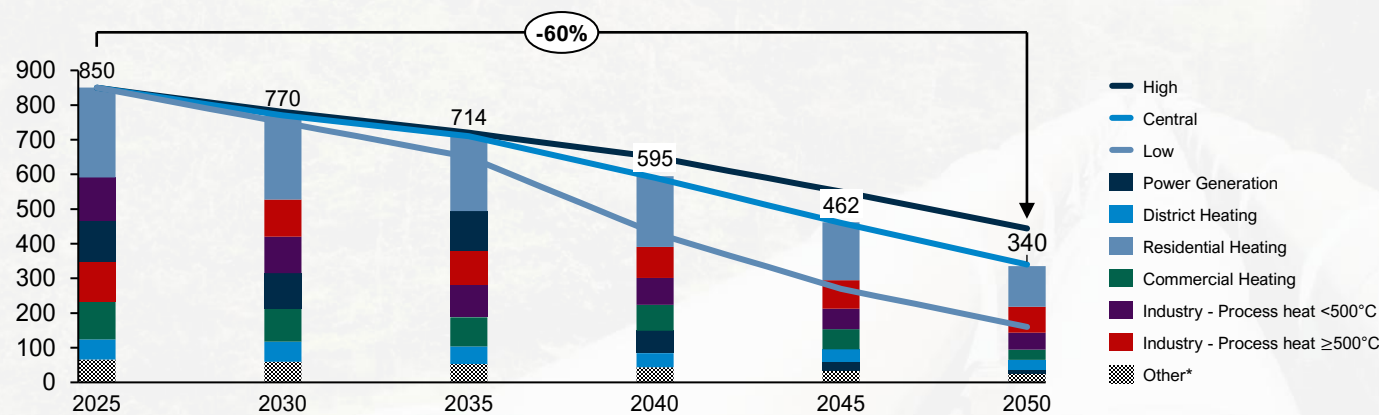
c.40%

Hydrogen share of the 2050 mix (Central)



Gas demand falls c.60% by 2050, with power and heating falling fastest and industrial process heat keeping the network in use

Gas Demand by Scenario (TWh)



-60%

Gas demand 2025–2050,
Central case

c.44%

Heating's share of remaining
2050 demand

c.2×

Share gain of ≥500°C industrial
heat

Effect on each group

NETWORK OPERATORS

Plan for a system c.60% smaller, with H₂ corridors following industrial clusters

PRODUCERS AND SHIPPERS

Shift capacity to industrial users

INVESTORS AND LENDERS

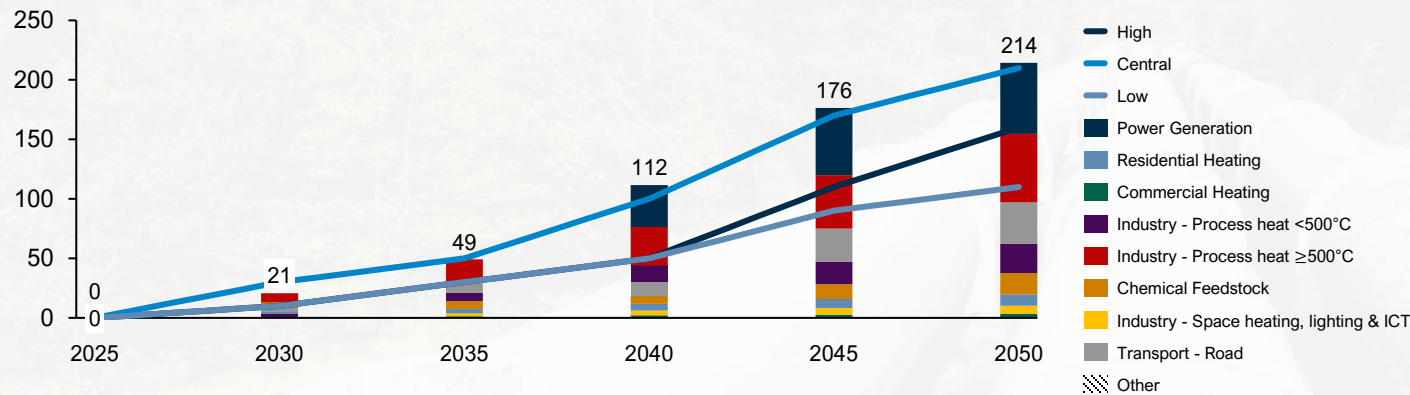
Value concentrates in hard-to-abate assets



GERMAN CASE STUDY

German hydrogen demand rises to c.214 TWh by 2050, concentrated in power generation and heavy industry

Hydrogen Demand by Scenario (TWh)



214 TWh

Hydrogen demand by 2050,
Central case

>50%

From power and $\geq 500^\circ\text{C}$
industrial heat

2035–45

Main growth period

Effect on each group

NETWORK OPERATORS

Repurpose pipes where H_2 follows gas routes, and build new pipe elsewhere

PRODUCERS AND USERS

Offtake timing drives electrolyser returns

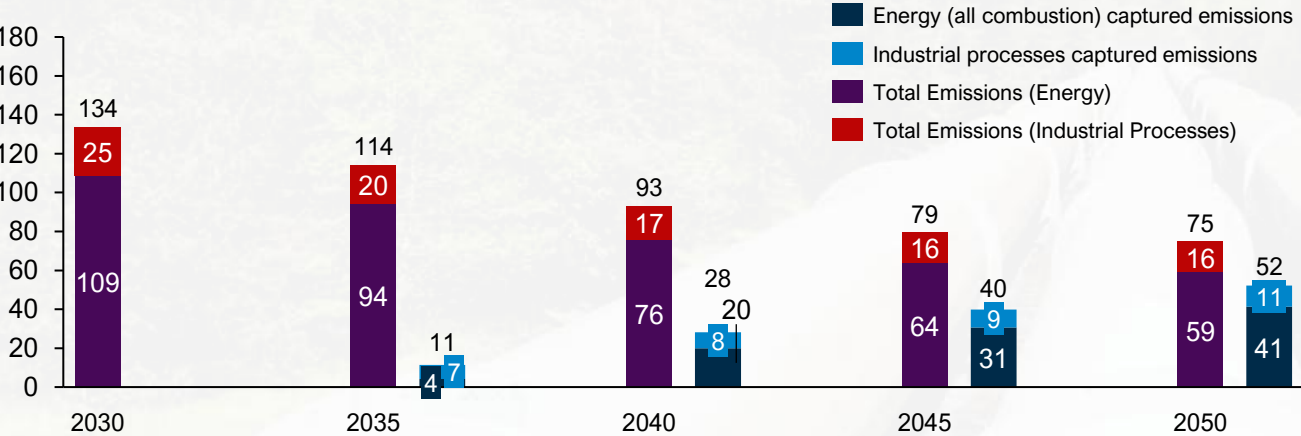
INVESTORS AND LENDERS

Early investors gain most as demand grows, and electrification is the main risk



Energy emissions drive the CO₂ decline, but industrial process emissions persist as a core capture market

Total and captured CO₂ emissions in Germany – Central Case (MtCO₂)



-44%

CO₂ emissions 2030–2050,
Central case

c.52 Mt

CO₂ captured by 2050

c.70%

Share of 2050 emissions
captured

Effect on each group

NETWORK OPERATORS

Early pipes carry utilisation risk until capture grows after 2035

EMITTERS

Process emitters are the largest customers

INVESTORS AND LENDERS

Access to North Sea storage is the main risk

The background of the slide is a photograph of a dense forest. In the foreground, several large, light-colored pipes or conduits run parallel to each other, receding into the distance. The pipes are supported by wooden or metal structures. The forest is lush with green trees, and the sky is visible in the far distance.

03

Comparison with GB and Italy



COMPARISON WITH THE GB CASE

GB gas networks face the same question as Germany's: how much of the network survives, and in what role

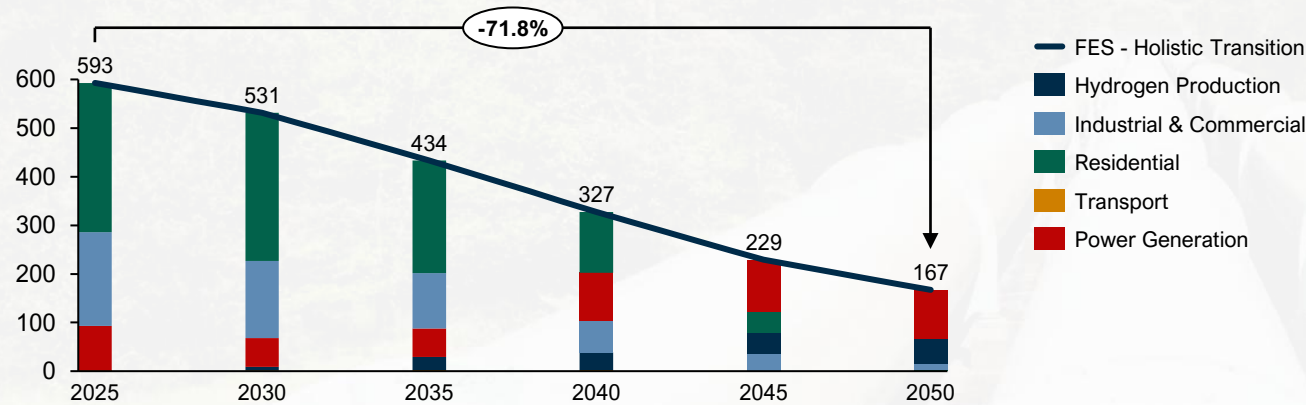
	Germany 	GB 	Implication 
GAS The base asset	Decline is priced into TSO planning, and the Kernnetz names what converts	Conversion routes are still undecided	GB gas asset values are uncertain
HYDROGEN The new corridor	c.9,040 km Kernnetz approved, with tariffs pending	c.2,500 km Project Union, with Hydrogen Transport Business Model (HTBM) funding undefined	Both have a planned corridor, and funding is unresolved
CO₂ Dedicated CO₂ transport routes	A national network framework (KSpTG) exists, with no domestic storage	Storage and contracts are in place, and the network is built cluster by cluster	Germany leads on network structure, and GB leads on storage
Bottom line	Germany more advanced on defining its gas and hydrogen networks. GB advanced on CO₂ storage and contracts.		



COMPARISON WITH THE GB CASE

GB gas demand falls by nearly three-quarters by 2050, with most of the loss still to come after 2035

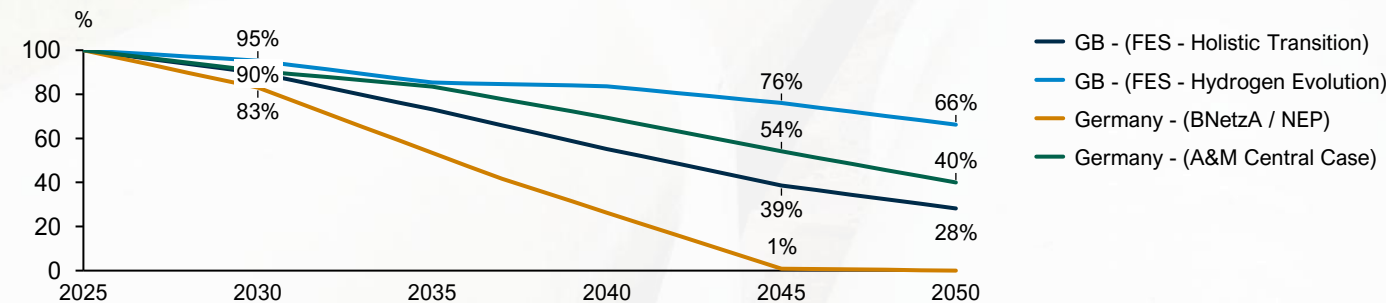
GB Gas Demand (TWh)



-72%
GB gas demand decline by 2050

63%
Share of the total decline that falls after 2035

German vs GB gas demand decline scenarios (indexed to 2025 = 100%)



Pace and pattern of decline

TIMING
The decline speeds up after 2035

END-USE
Heating demand falls first

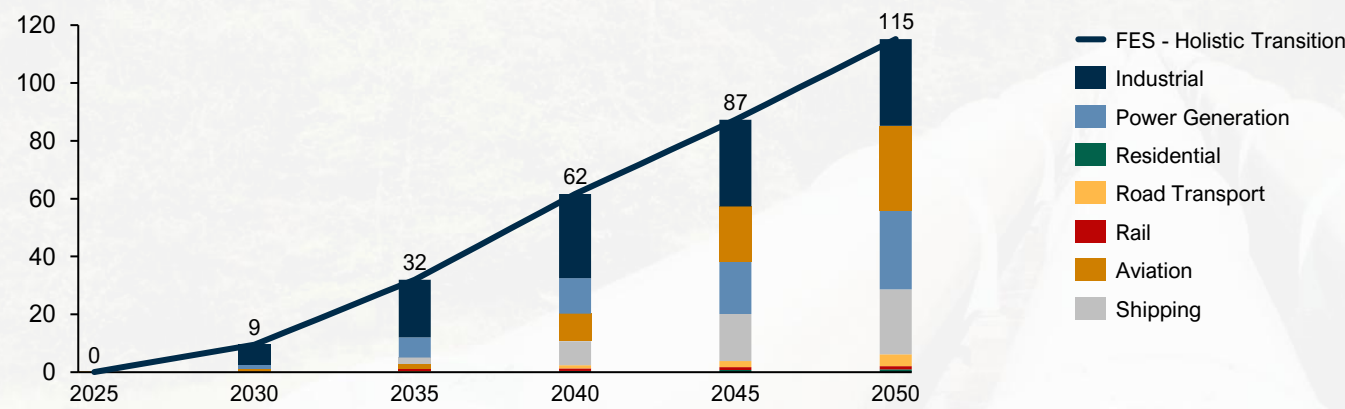
REMAINING DEMAND
Power and H₂ production remain



COMPARISON WITH THE GB CASE

GB hydrogen demand stays small until the mid-2030s, then more than triples across a wider set of users

GB Hydrogen Demand (TWh)



115 TWh

GB H₂ demand by 2050
(FES Holistic)

3.5×

Growth from 2035 to 2050

Effect on GB networks

MAIN RISK

Low use of new pipe

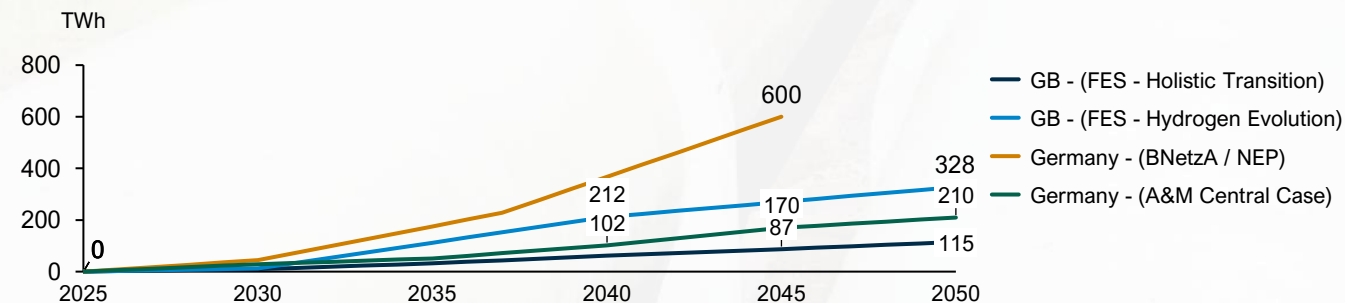
FIRST PROBLEM

Tariff design comes before engineering

SEQUENCING

Offtake is contracted before pipe is committed

German vs GB hydrogen demand ramp up scenarios (TWh)

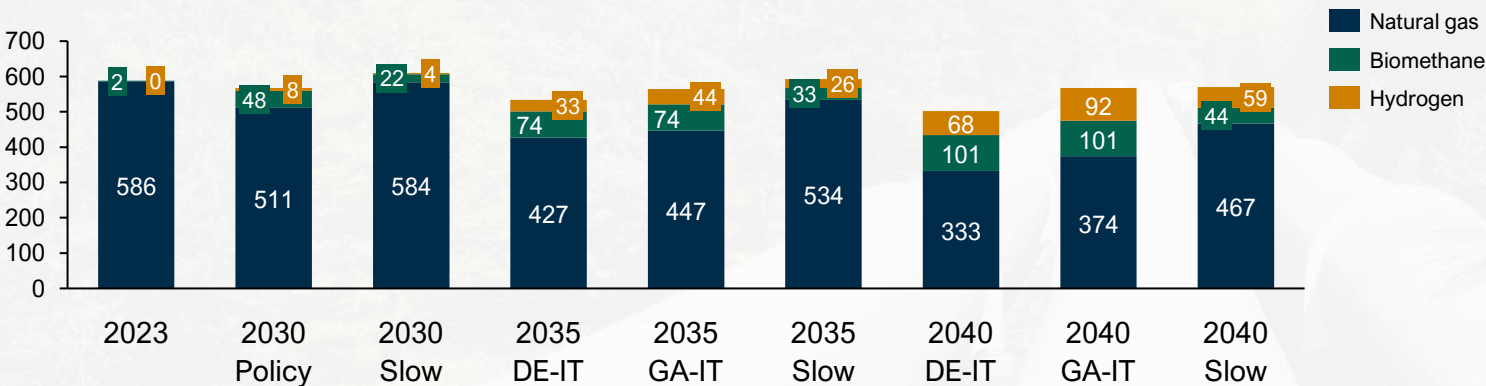




COMPARISON WITH ITALY

Italy: natural gas falls 20–43% by 2040, but biomethane and hydrogen fill much of the gap, and views on 2050 diverge widely

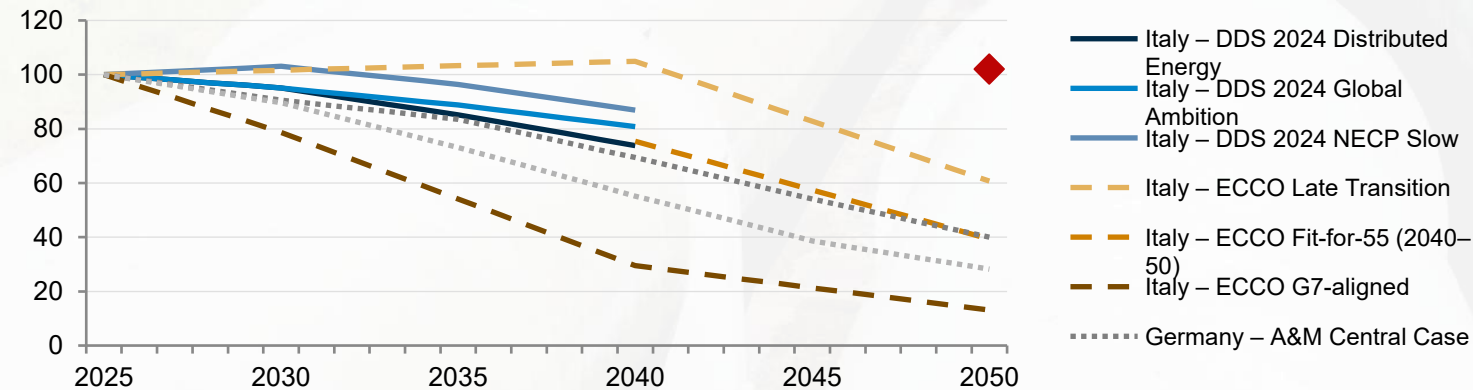
Italy gas, biomethane and hydrogen demand by scenario (TWh) – Snam–Terna DDS 2024



-20% to -43%
Natural gas demand by 2040 vs 2023 across DDS 2024 scenarios

169–193 TWh
Biomethane plus hydrogen in 2040 (DE-IT, GA-IT), from 2 TWh in 2023

Italian vs German and UK gas demand scenarios (indexed to 2025 = 100%)

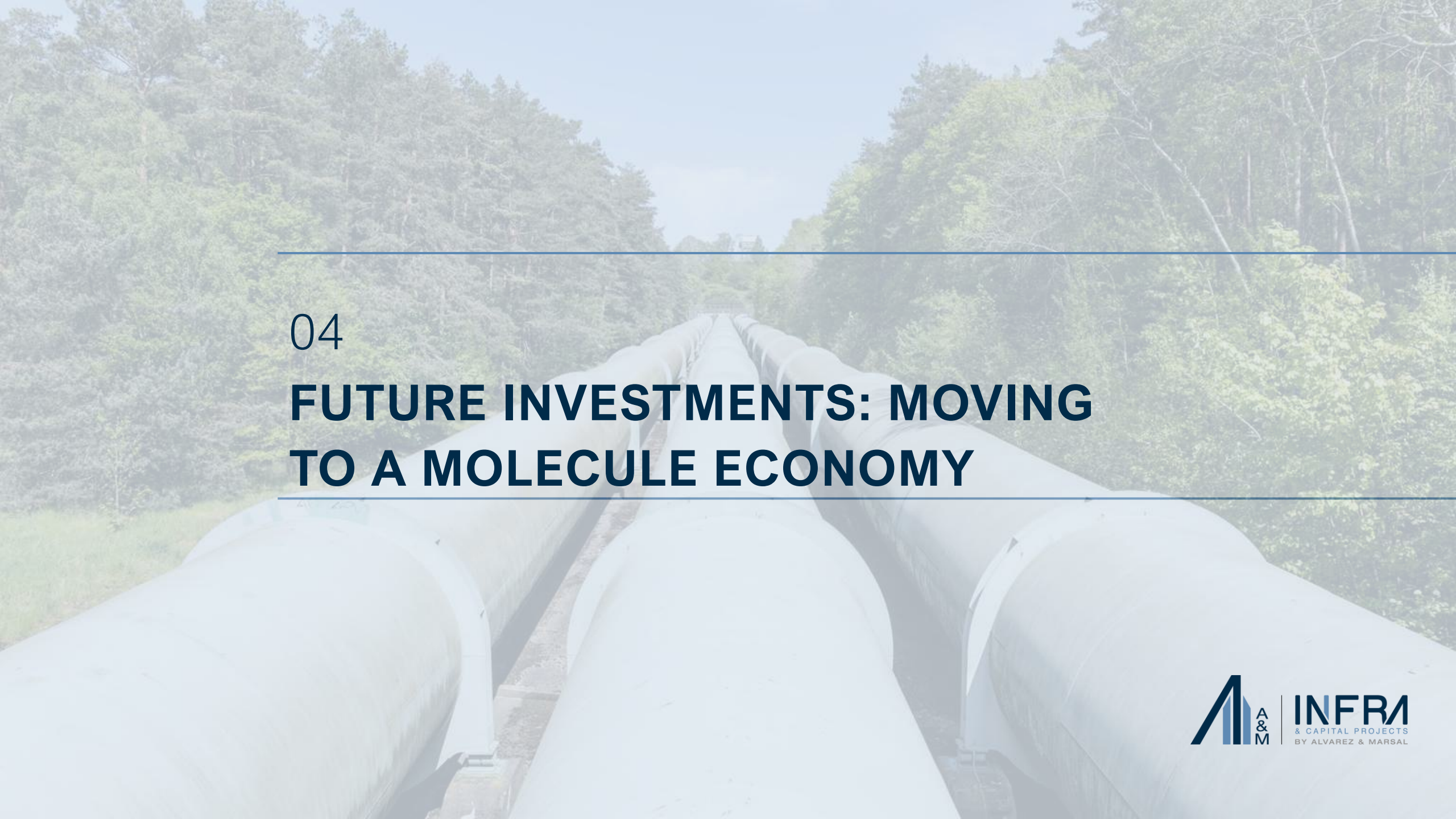


Molecules supply shift

MIX SHIFT
Biomethane reaches about 100 TWh and hydrogen 59–92 TWh by 2040, so all molecules fall only 3–15% while natural gas falls 20–43%

HYDROGEN IS IMPORTED
Snam expects 50–73 TWh of the 68–92 TWh of 2040 hydrogen to be imported, so corridors matter.

2050
Snam sees ~600 TWh of molecules; ECCO sees gas plus biomethane at 13–61% of today.



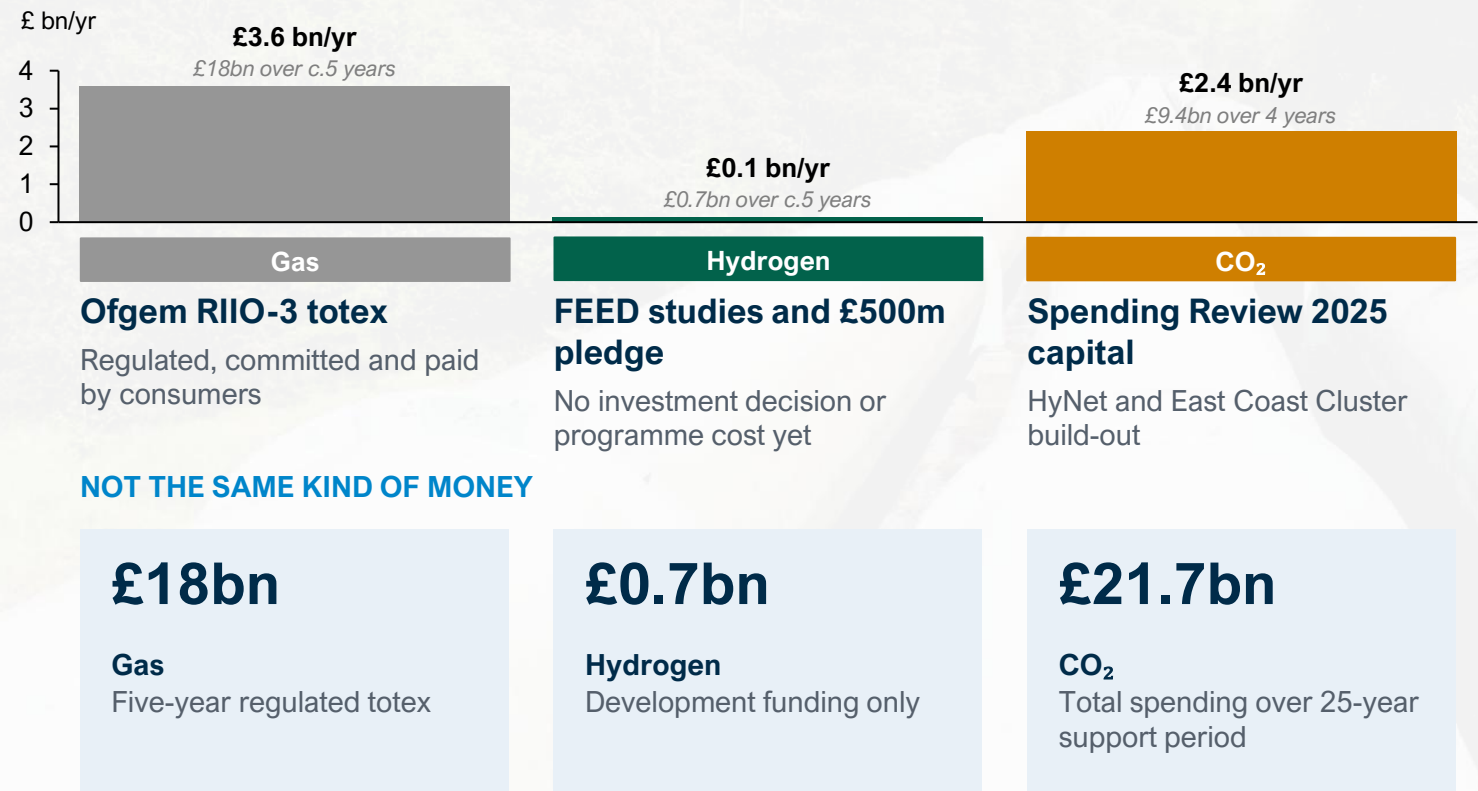
04

FUTURE INVESTMENTS: MOVING TO A MOLECULE ECONOMY



GB gas and CO₂ infrastructure attract c.£2–4bn a year of committed funding, while hydrogen transport attracts c.£0.1bn and is still at design stage

GB committed and approved infrastructure funding, annualised over each commitment period (£bn per year)



Why the gap matters

- 1. Gas attracts the most each year
- 2. CO₂ is second and concentrated in two clusters
- 3. Hydrogen transport has no final investment decision yet

Committed capital

Gas and CO₂ now have committed capital, and hydrogen transport does not.

Decisions on asset value and who pays what will set the future shape of GB's gas networks

Still open today: the value of repurposed pipes, who pays for stranded cost, the hydrogen tariff, heating policy and volume risk

1 MANAGED CONTRACTION

The network shrinks and is retired area by area

GAS NETWORK

Only the core serving industry and power remains.

HYDROGEN

Dedicated pipes serve the industrial clusters.

WHO PAYS

Remaining users pay through faster depreciation, and tax or securitisation covers the rest.

SIGNPOSTS

Hydrogen is ruled out for home heating, and Ofgem asks for decommissioning plans.

2 CONVERSION TO HYDROGEN

Gas pipes move into a hydrogen asset base

GAS NETWORK

Selected pipes are repurposed at a regulated value.

HYDROGEN

A national backbone opens with a capped tariff.

WHO PAYS

Gas users pay first and hydrogen users later, and the state carries most volume risk, as in Germany.

SIGNPOSTS

Hydrogen transport funding is allocated and industry signs offtake.

3 UNMANAGED DECLINE

GB risks this if decisions stay open

GAS NETWORK

The full network stays, volumes fall and unit charges rise.

HYDROGEN

Investors and users each wait for the other.

WHO PAYS

The last customers pay, and they are likely to include those least able to switch.

SIGNPOSTS

The heat decision slips, large industrial users close and RIIO-3 ends in 2031 with no hydrogen tariff.

Regulatory and policy choices on pricing, funding and risk allocation could ease the transition, or create new problems for gas customers and investors

1 SHARED PRICE Should gas and hydrogen share one asset base and one price during the ramp-up?	RISK Hydrogen costs fall on a shrinking group of gas users. OPTIONS Asset bases could stay separate, with a capped, time-limited transfer.	2 WHO PAYS Should some of the stranded gas cost move to general taxation?	RISK Charges rise for the last gas users. OPTIONS Taxpayer funding or securitisation could cover the rest, each at a fiscal cost.
3 ASSET VALUE At what value should gas pipes enter a hydrogen network?	RISK Conversion and gas investment both stall. OPTIONS Book, discounted and demand-linked values are all possible.	4 LAST CUSTOMERS Who pays to disconnect the last customers on a street?	RISK A full network serves a few customers. OPTIONS Decommissioning could run area by area, with disconnection funding unsettled.
5 UNINTENDED EFFECTS Could faster depreciation speed up the exits it is meant to pay for?	RISK Higher bills speed exits, and new pipe goes into areas due to close. OPTIONS Replacement spend could be linked to decommissioning plans.	6 INVESTMENT GAP Who carries the risk of hydrogen pipe built ahead of demand?	RISK Capital holds back, or pipe is built ahead of demand. OPTIONS Risk could be shared explicitly, as in Germany, or build linked to offtake.

KEY TAKEAWAYS

Gas, hydrogen and CO₂ each need a different investment case

GAS

A smaller but durable network

Industry and power keep it in use, and value concentrates in hard-to-abate assets

HYDROGEN

Volumes arrive after 2035

Utilisation and funding are the main risks

CO₂

A way to keep gas in use

Storage access and contracts set the pace



LEADERSHIP. ACTION. RESULTS. ^{BY}

ALVAREZ & MARSAL

CONFIDENTIAL – NOT FOR DISTRIBUTION

Alvarez & Marsal Holdings, LLC. All rights reserved. ALVAREZ & MARSAL®,

 and A&M® are trademarks of Alvarez & Marsal Holdings, LLC.

© Copyright 2026



**national
gas**

| energy
forum

Alison Tann

Head of Operational Delivery



Agenda

Operational Update



Winter Preparedness

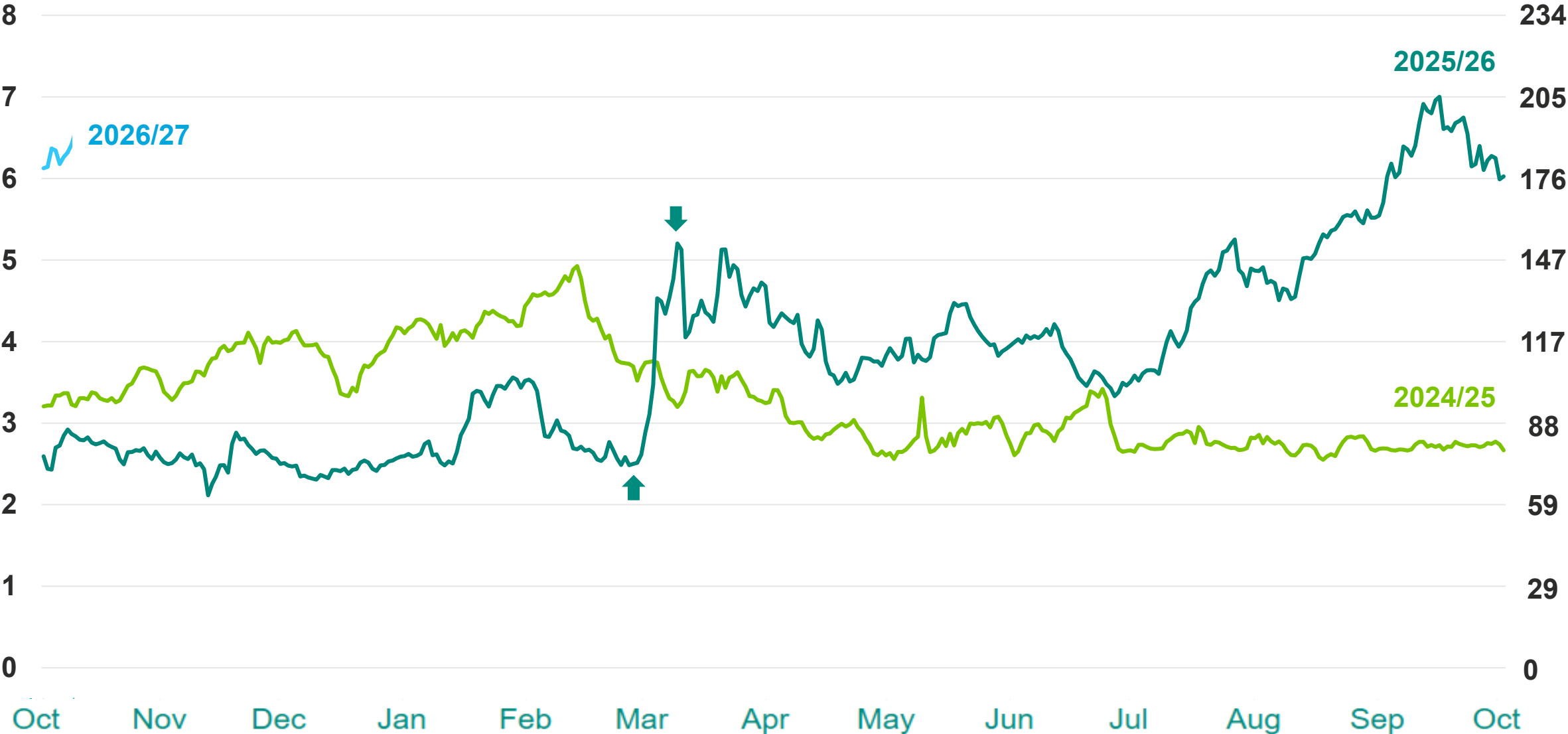




System Average Prices

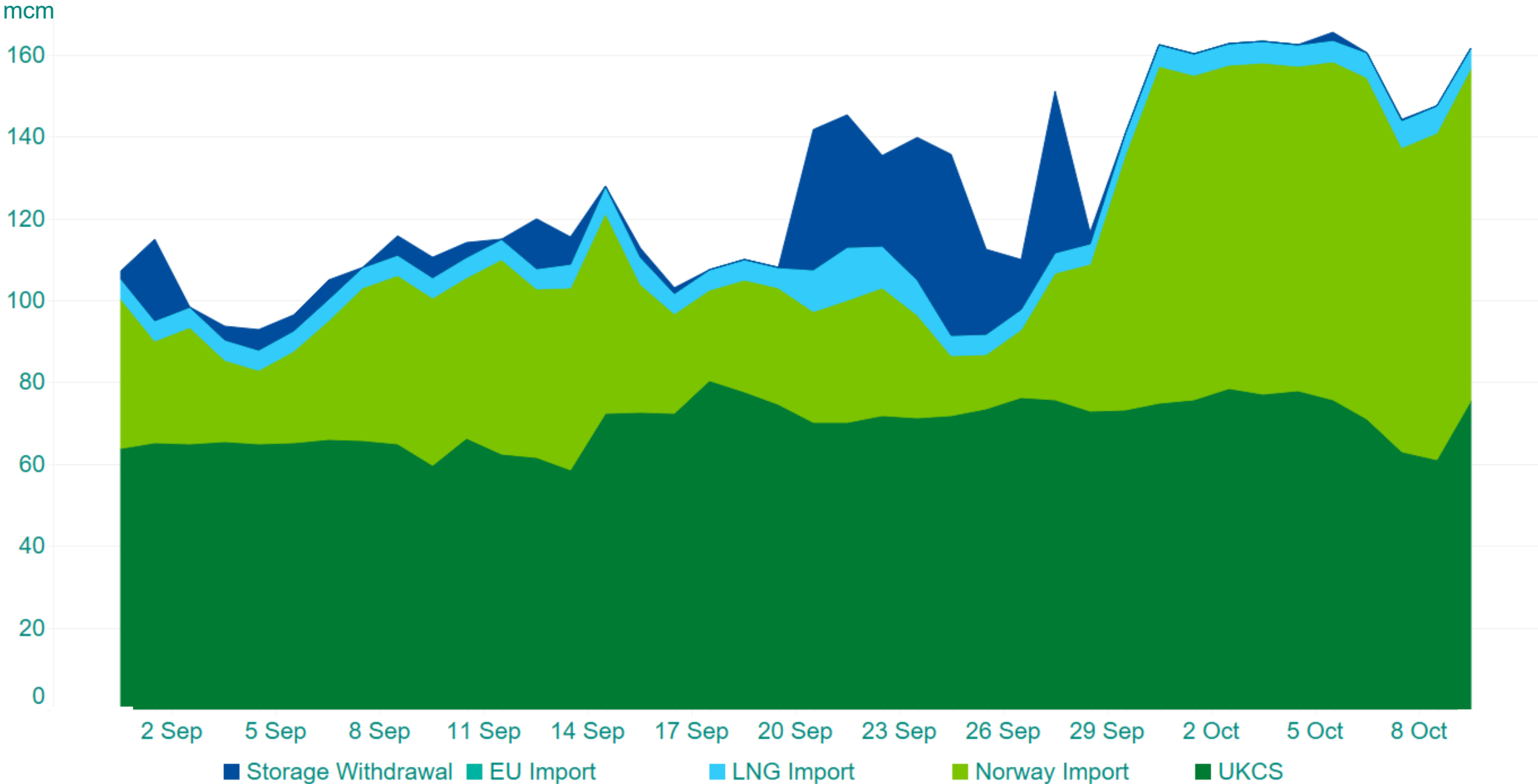
p/kWh

p/therm



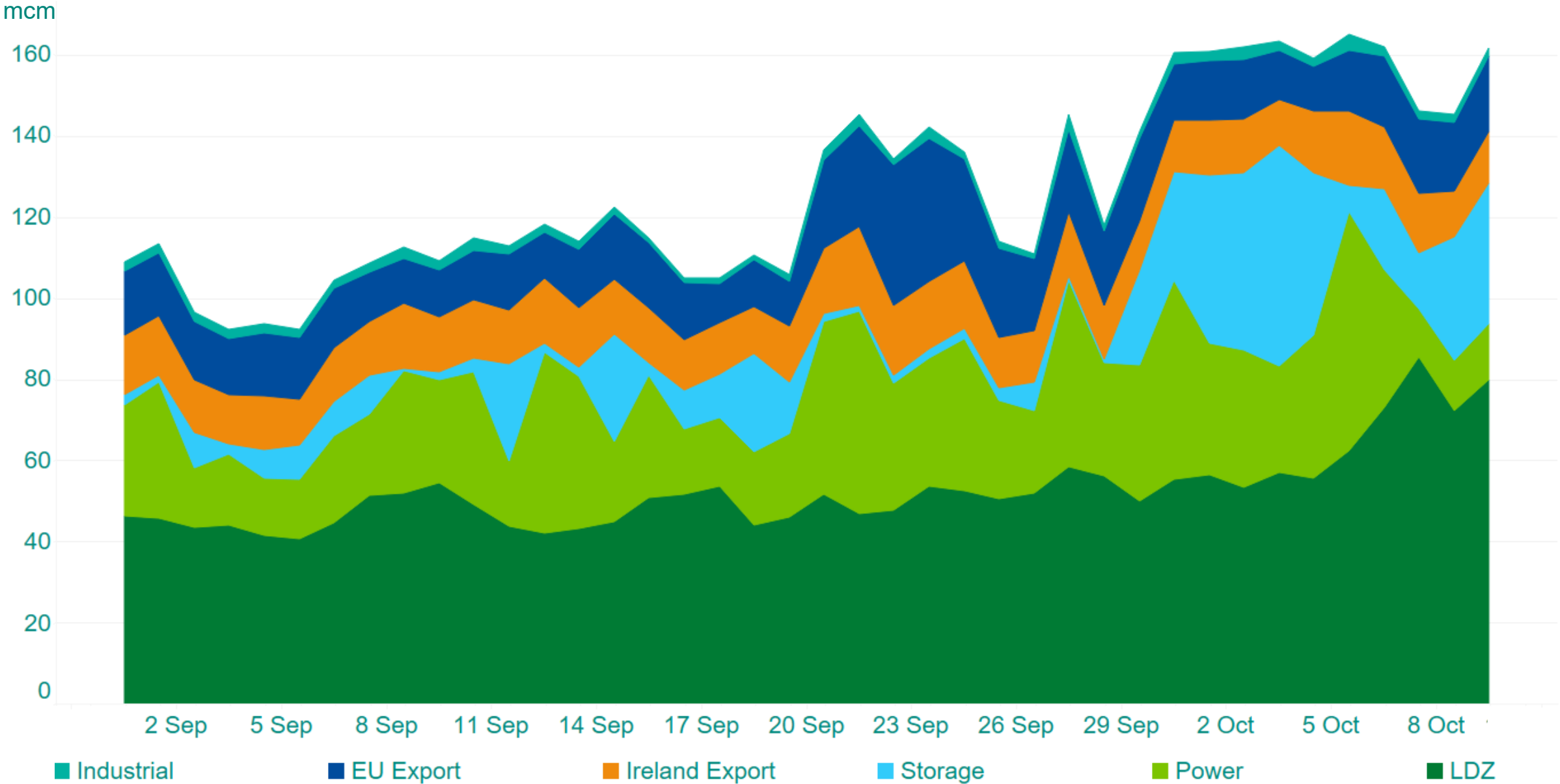


NTS Supply overview





NTS Demand overview



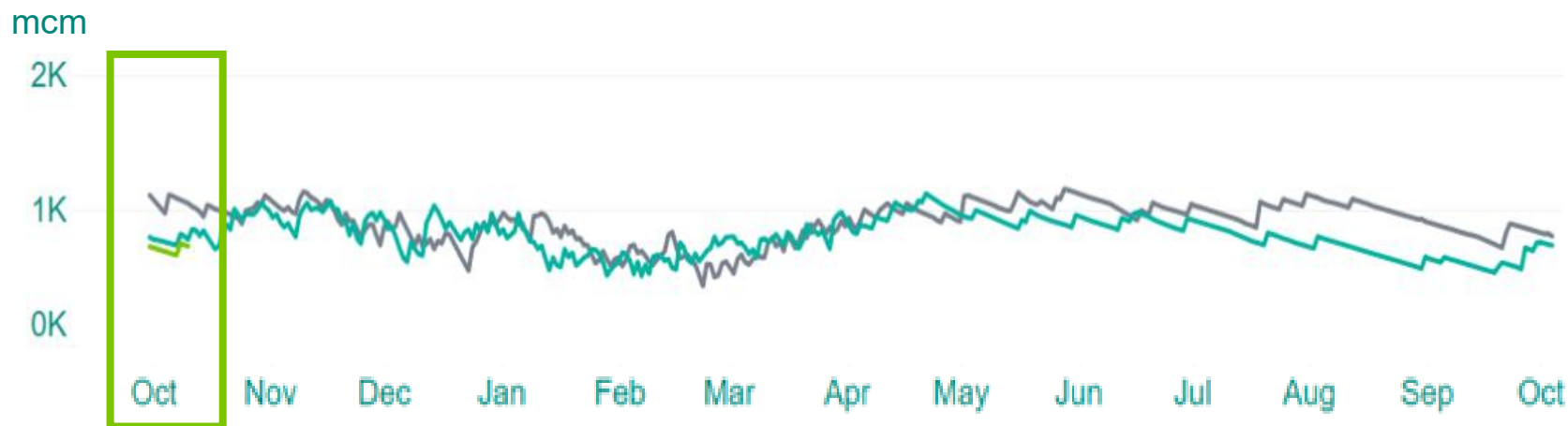
GB and LNG Storage Levels

Total LNG Storage Stock

748 mcm

52% full

- Oct 26
- Oct 25 – Oct 26
- Oct 24 – Oct 25



Total GB Storage Stock

1164 mcm

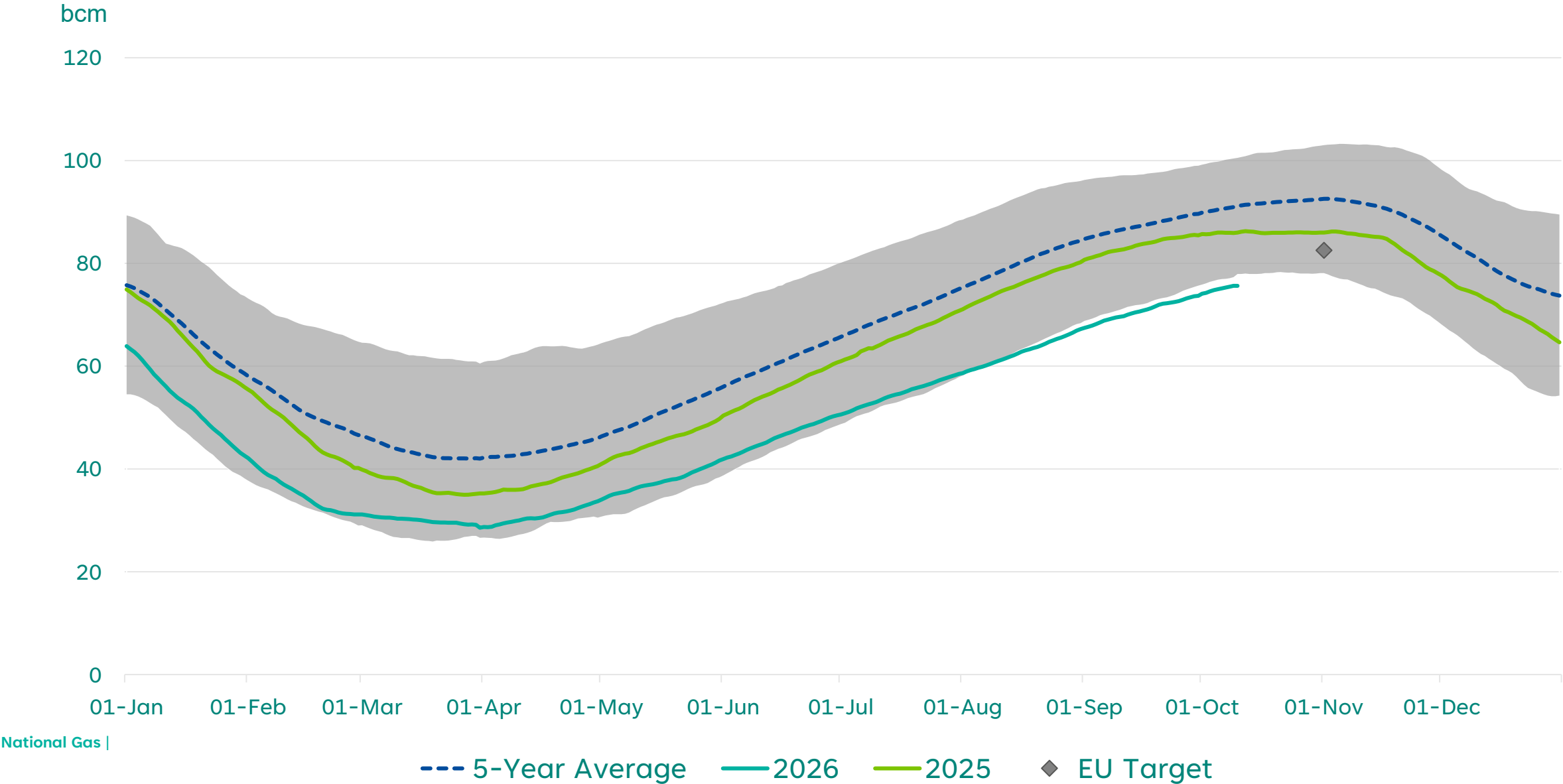
65% full (MRS)

- Oct 26
- Oct 25 – Oct-26
- Oct 24 – Oct 25





EU Storage Levels



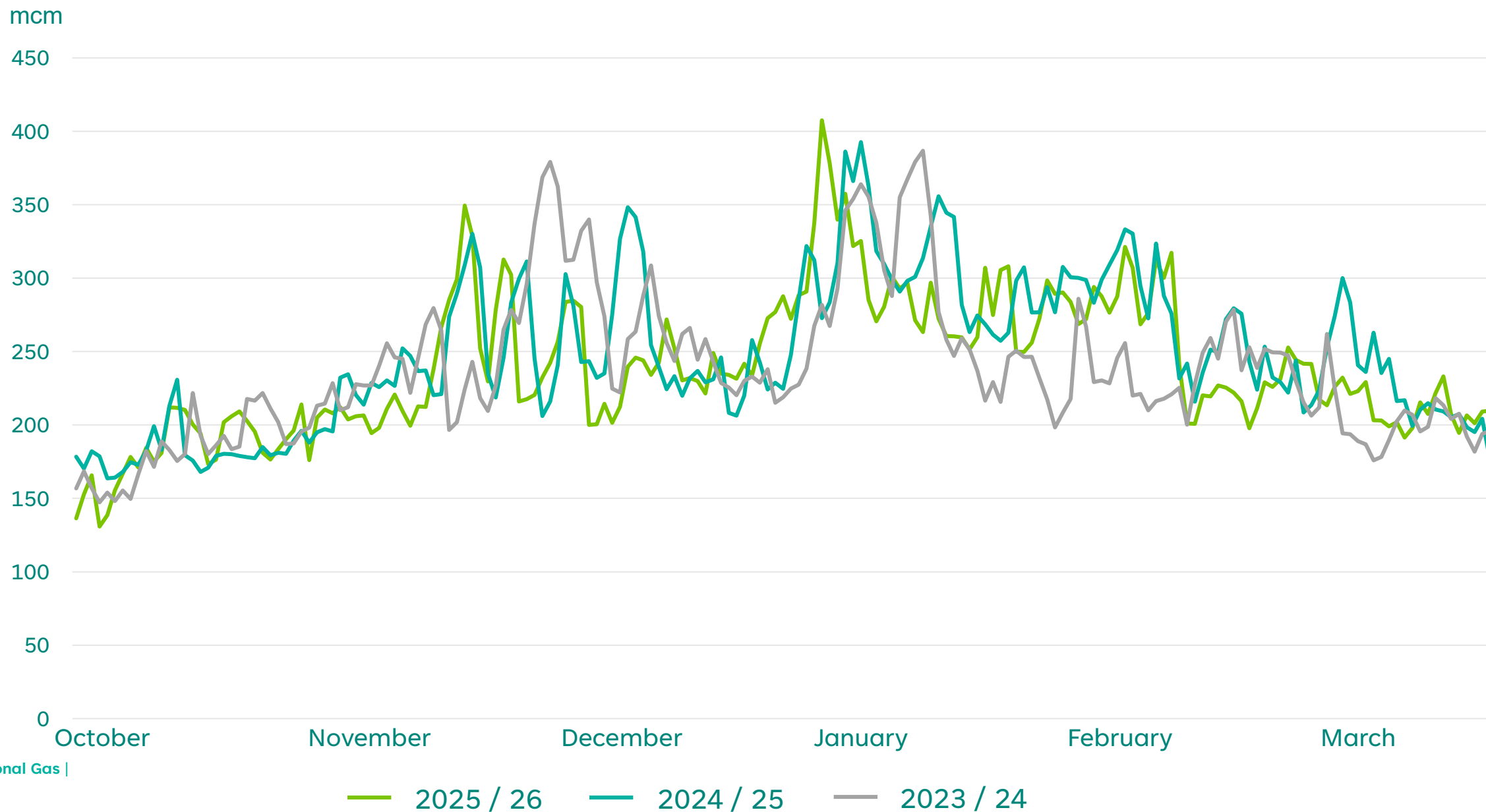


Winter Preparedness



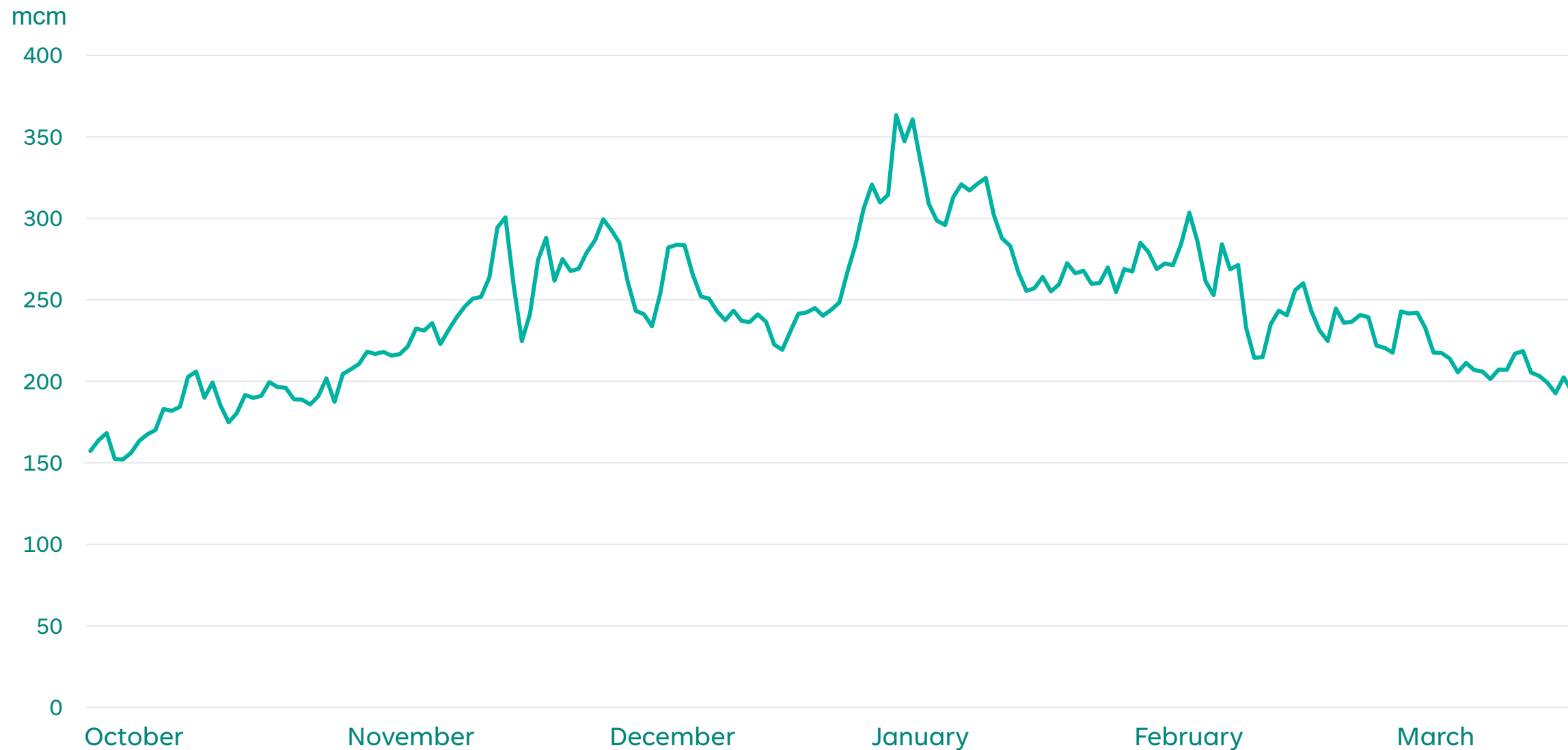


Winter Demand – year on year variation





Winter Demand – daily 3-year average





Winter 25/26 preparedness headlines



Our people are focussed and ready



Our assets give us operational flexibility



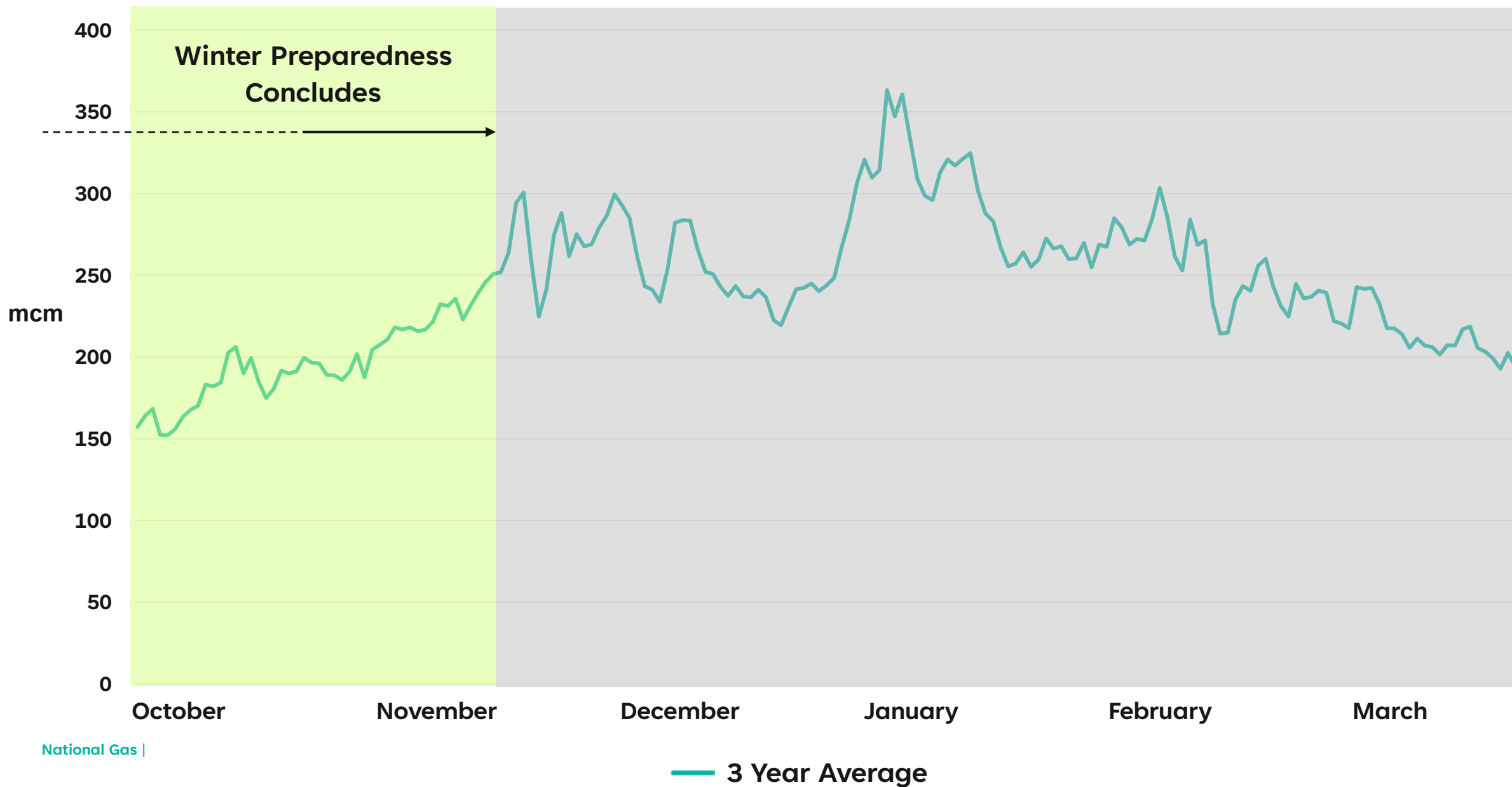
Our supply mix is diverse, also responsive



Our commercial strategies are in place

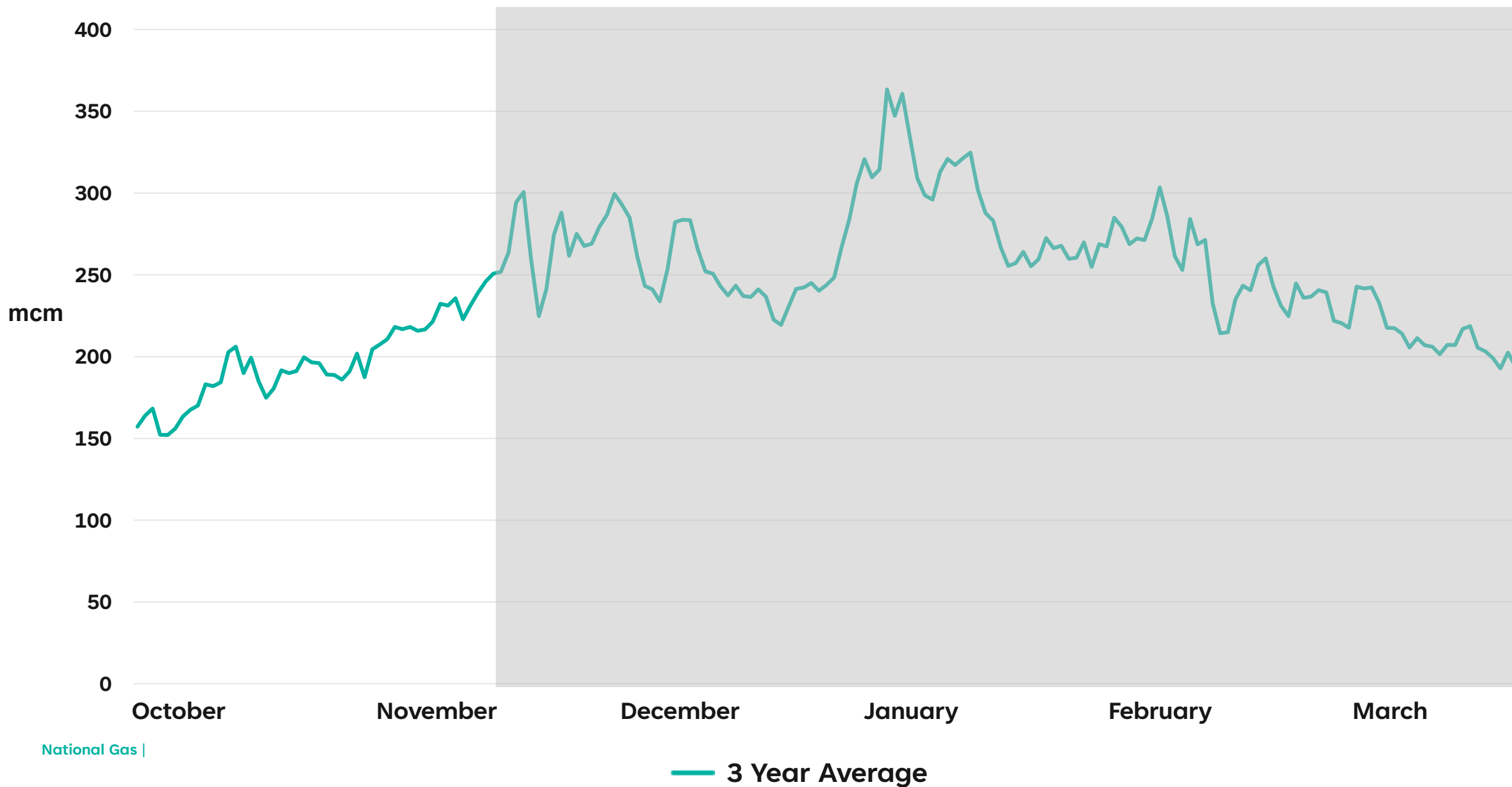


Winter Preparedness – Focus Areas



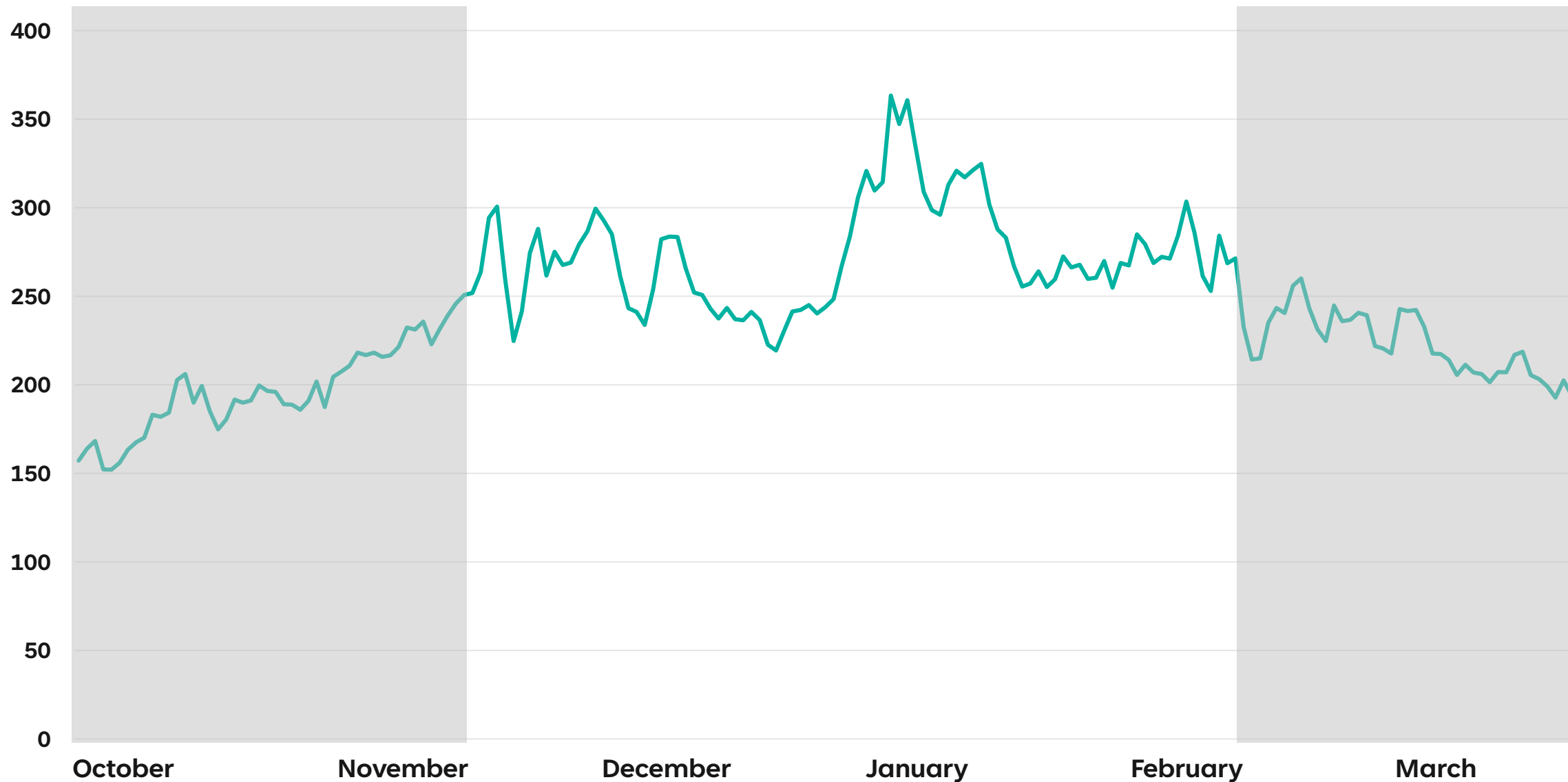


Winter Preparedness – Focus Areas



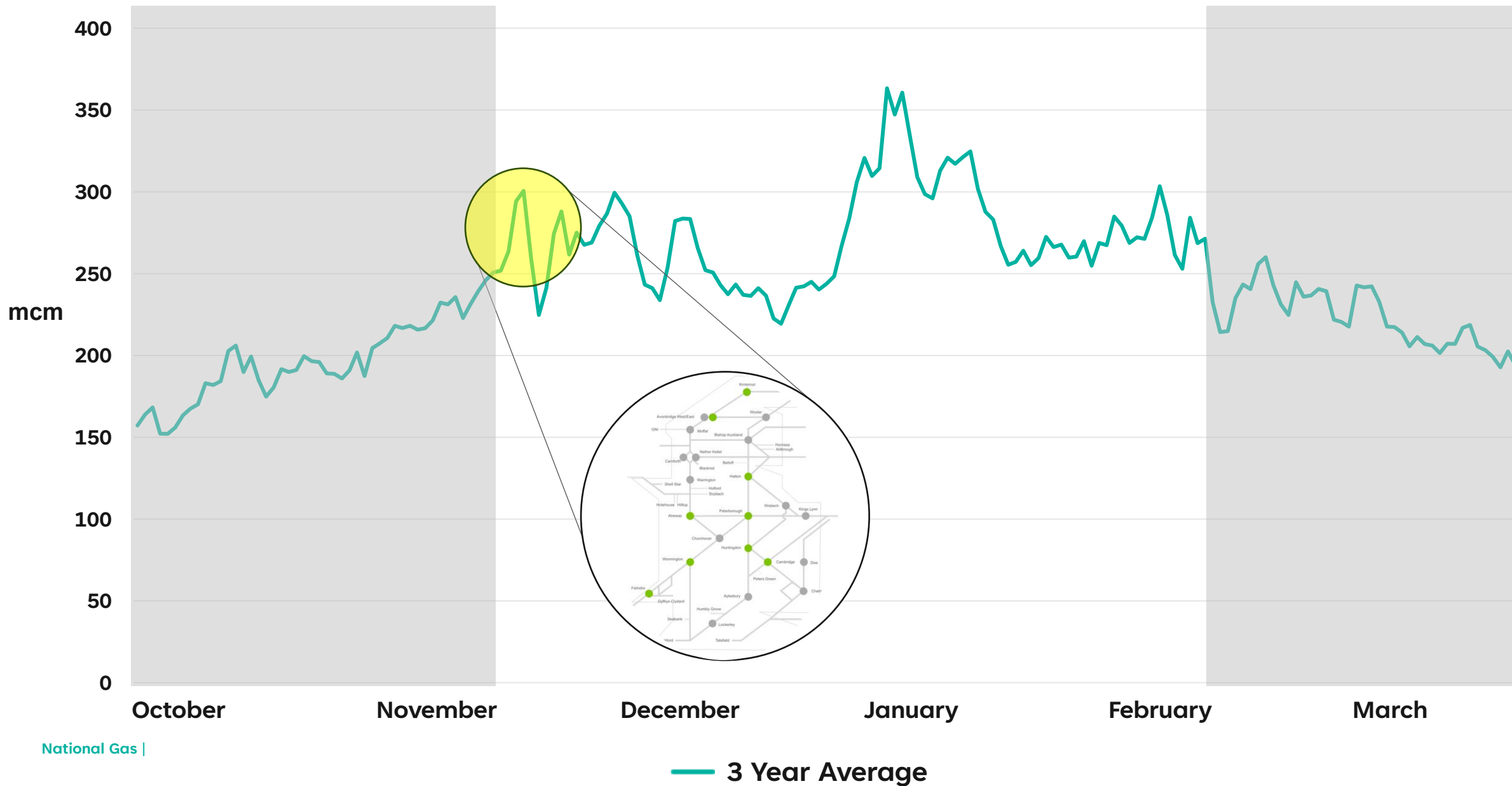


Winter Preparedness – Focus Areas



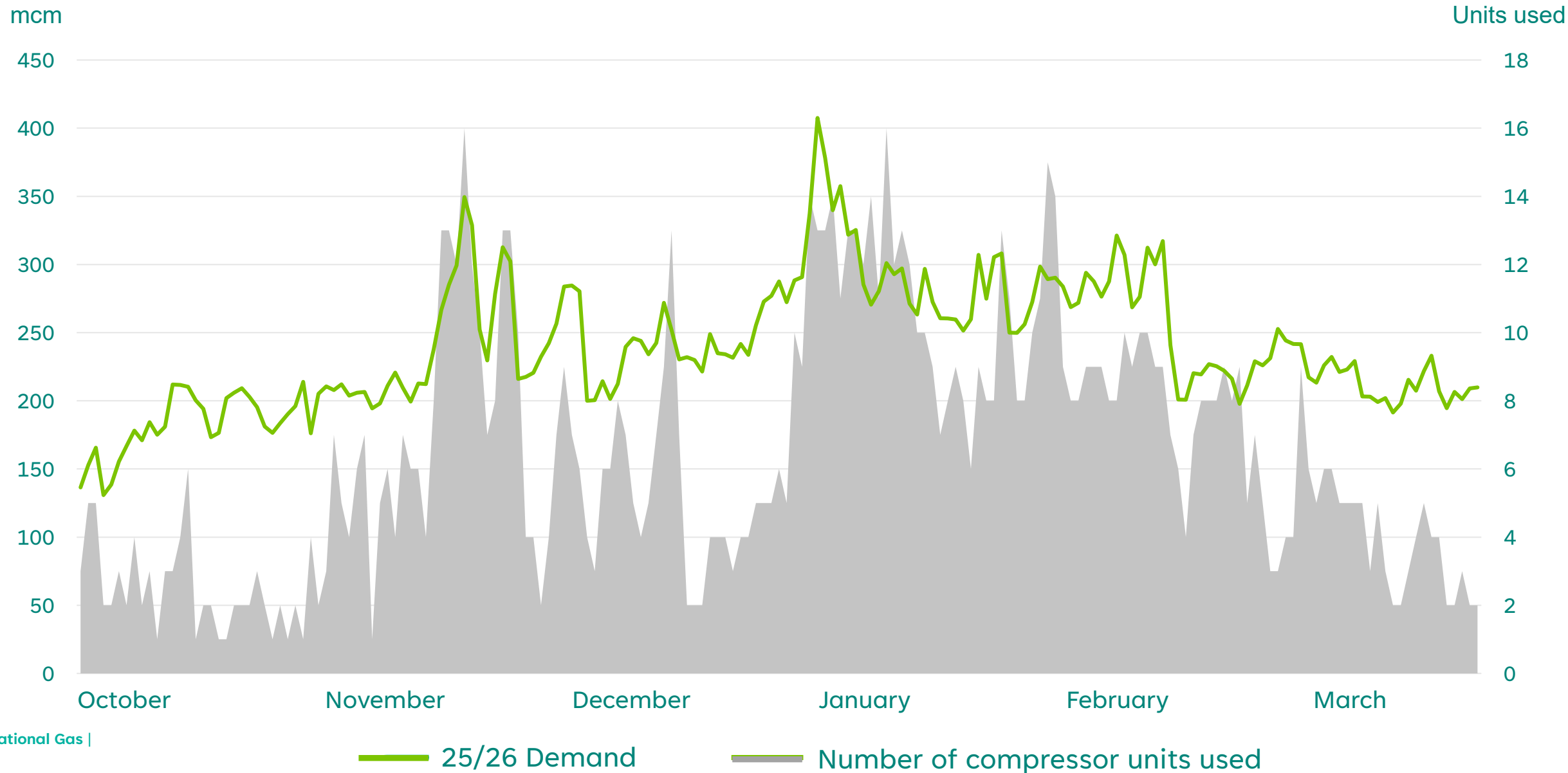


Winter Preparedness – Focus Areas





Winter 25/26 Demand and Compression





**national
gas**

| energy
forum

Up Next: Part II – 11:10



Part II Speakers



Henry Tufnell MP
Member of Parliament for Mid
and South Pembrokeshire



Tom Sawyer
Chief Executive Officer



Alex Frole
Senior LNG Analyst





**national
gas**

| energy
forum

Henry Tufnell MP

Member of Parliament for
Mid and South Pembrokeshire



Q&A with Henry Tufnell MP





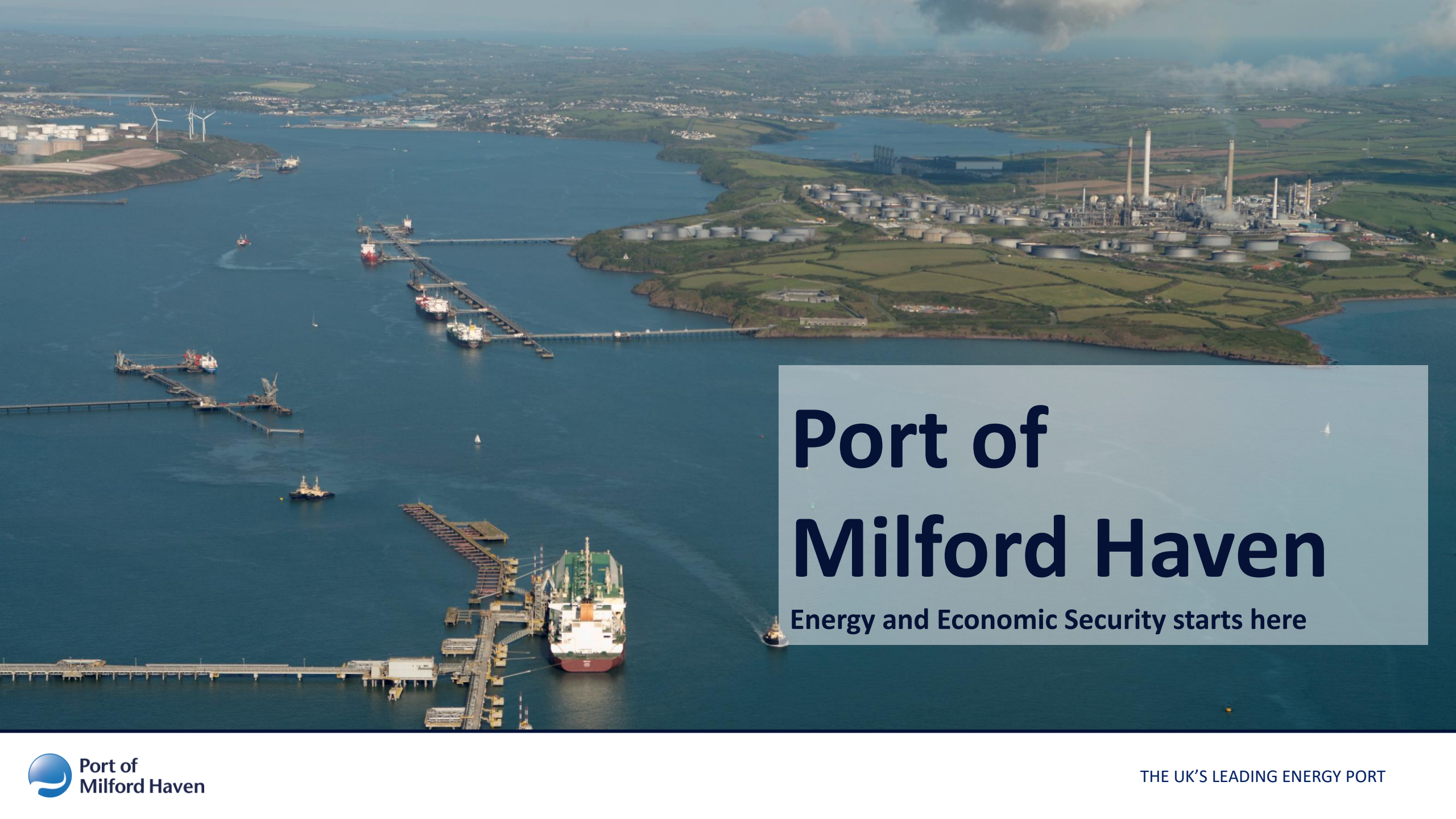
**national
gas**

| energy
forum

Tom Sawyer

**Chief Executive Officer
Port of Milford Haven**

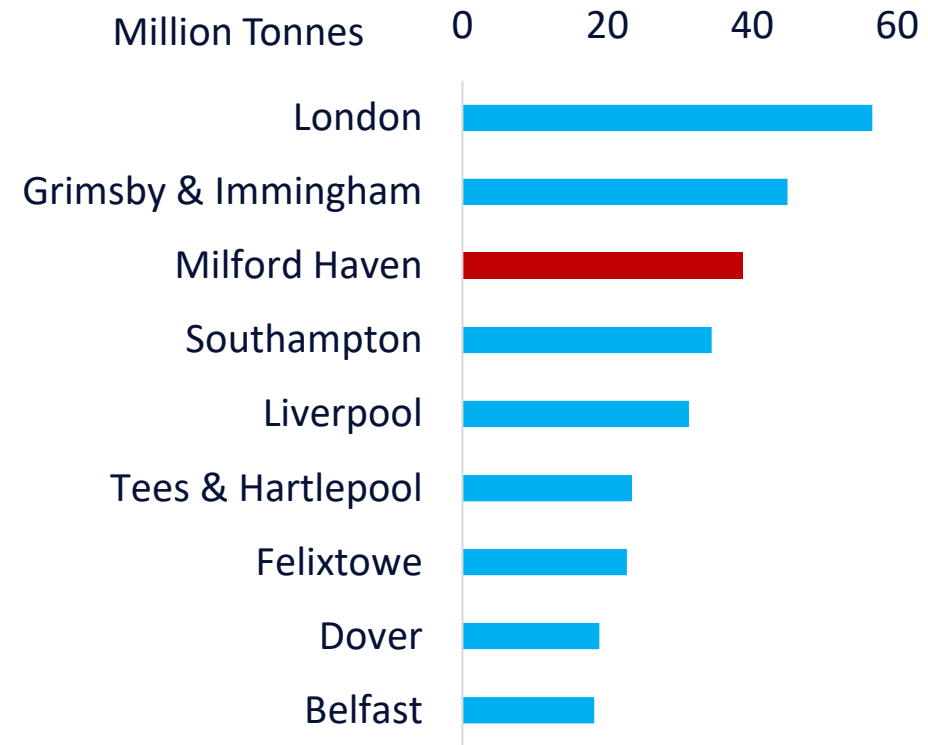




Port of Milford Haven

Energy and Economic Security starts here

One Place. National Significance.





**Capacity to supply one third of UK
natural gas demand**

One of Britain's most important Energy Clusters

RWE Pembroke Power Station
2200MW Combined Cycle Gas Turbine

Valero Pembroke Refinery
270,000 bpd, 10.5m barrels storage

Dragon LNG
Liquefied Natural Gas terminal

Valero Pembroke Oil Terminal
8.7mb petroleum products storage facility

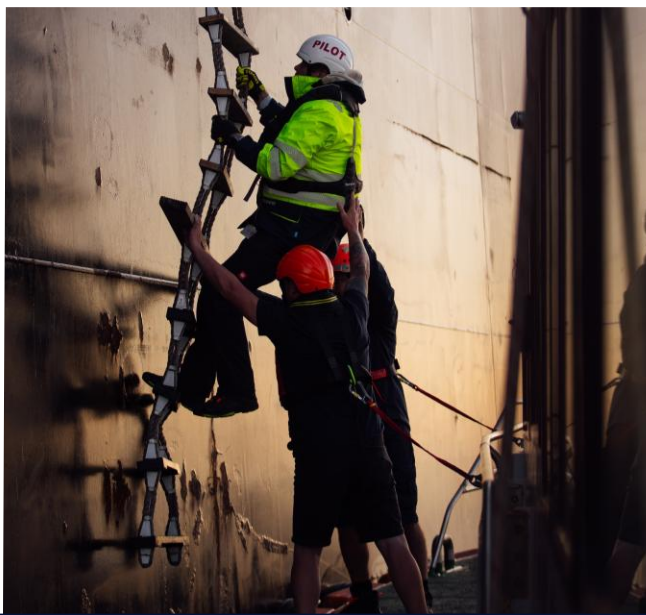
South Hook LNG
Liquefied Natural Gas terminal

Impala
8.81mb storage facility

Pembroke Port
Cargo handling, heavy lift , offshore renewables, passenger and freight ferry operations

**~£1bn Economic
Contribution
5,000 Welsh Jobs
£60k Average Salary**

Energy Security = Economic Security



From Energy Security to Energy Transition

Future Energy System:

- LNG
- Floating Offshore Wind
- Hydrogen
- Sustainable Fuels
- Industrial Decarbonisation



RWE Battery Plant

Project Overview:
350 MW Battery Energy Storage System



West Wales Hydrogen

Project Overview:
14.2 MW Green Hydrogen production facility

Pembroke Green Hydrogen

Project Overview:
110 MW Green Hydrogen production facility

RWE Synchronous Condenser

Project Overview:
Grid-stabilising condenser delivering inertia and reactive support for renewables

Milford Haven CO2 Project

Project Overview:
A CO2 storage initiative led by RWE and Dragon LNG

Dragon Renewables Energy Park

Project Overview:
Three new onshore wind turbines, integrated with the existing solar farm

Criterion Quay

Project Overview:
A dedicated marshalling and O&M facility supporting floating offshore wind

Energy Security Has A Geography



Deep Water Harbour
LNG Infrastructure
Oil Refinery
Major Power Generation
Skilled Workforce
Available Industrial Land
Marine Expertise
Future Energy Opportunities

A photograph of three large oil tankers docked at a port. The tankers are white with green and red accents. The names 'EMERALDWAY MONROVIA', 'LIVERPOOL', and 'THANLONDON' are visible on their hulls. In the background, several wind turbines are visible on a hill under a sunset sky. The water is calm, reflecting the ships and the sky.

Securing Britain's Energy Today While Enabling Tomorrow's



**national
gas**

| energy
forum

Alex Froley

Senior LNG Analyst
ICIS





National Gas Energy Forum, 15 October 2026

How Global LNG Markets will Impact Europe this Winter

Alex Frole

Senior LNG Analyst, ICIS

Alex.Frole@icis.com





Part 1: The Strait of Hormuz

The Strait of Hormuz remains *mostly* shut for LNG



QatarEnergy has 14 trains, two damaged in March



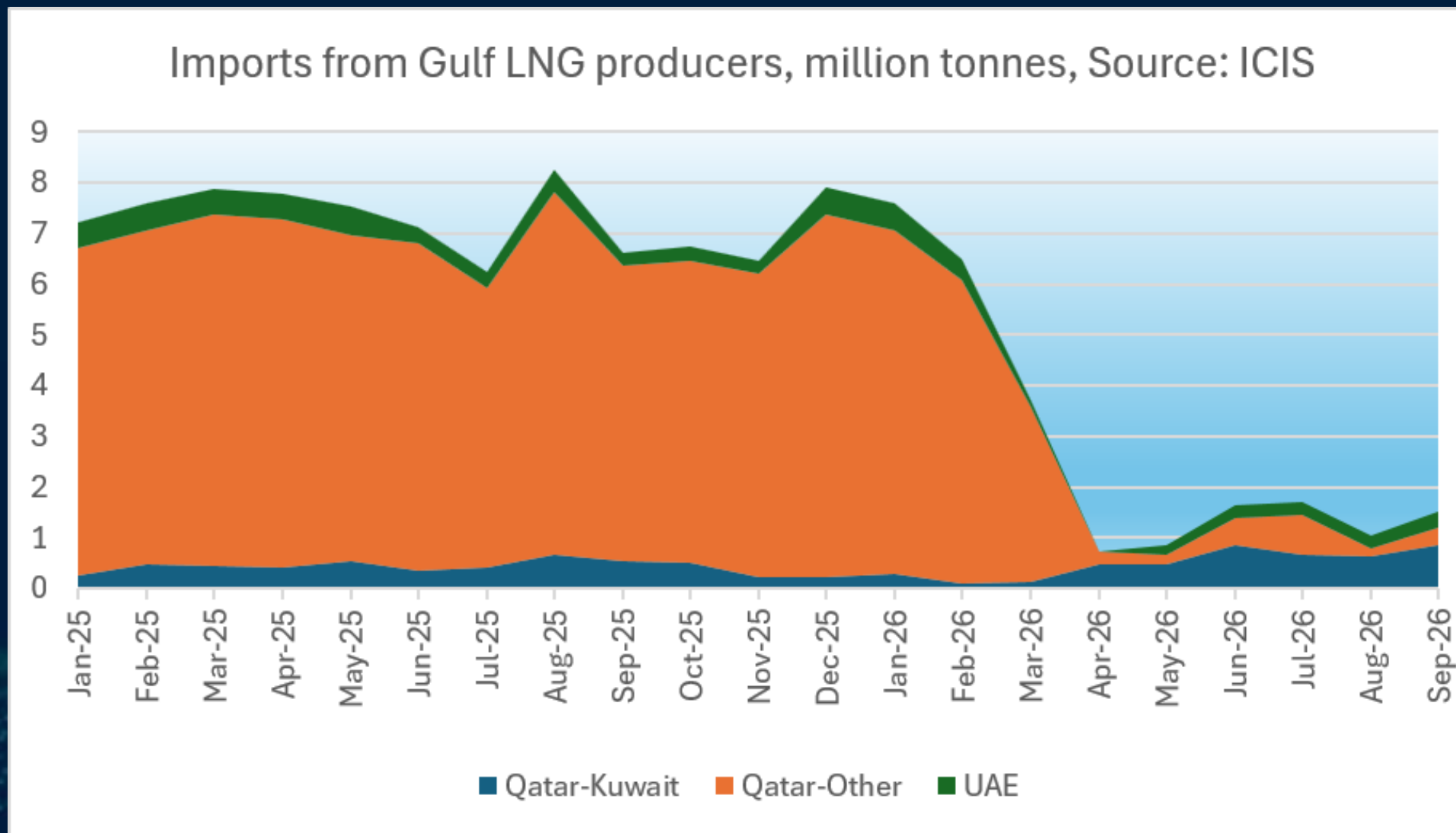
	(Former Qatargas)	(Former Ras Gas)
	QatarEnergy North	QatarEnergy South
Train 1	3.3	3.3
Train 2	3.3	3.3
Train 3	3.3	4.7
Train 4	7.8	4.7
Train 5	7.8	4.7
Train 6	7.8	7.8
Train 7	7.8	7.8
Total	41.1	36.3

Qatar has fourteen trains, divided into two production complexes. Capacity shown in mtpa.



QatarEnergy North shown in yellow
QatarEnergy South shown in blue

Collapse in Gulf LNG exports to low levels



QatarEnergy CEO's latest comments



- “Qatar is ready to resume normal operations within a few weeks of the reopening of the Strait of Hormuz.”
- Two damaged LNG trains will take three years to repair.
- LNG can't be sent by bypass pipelines to Oman. This would require new liquefaction. “This makes no economic sense”.
- “In the very near future, we will be the largest LNG trader in the world by far.”
- US Golden Pass trains 2 and 3 are due “in full operation” next year.

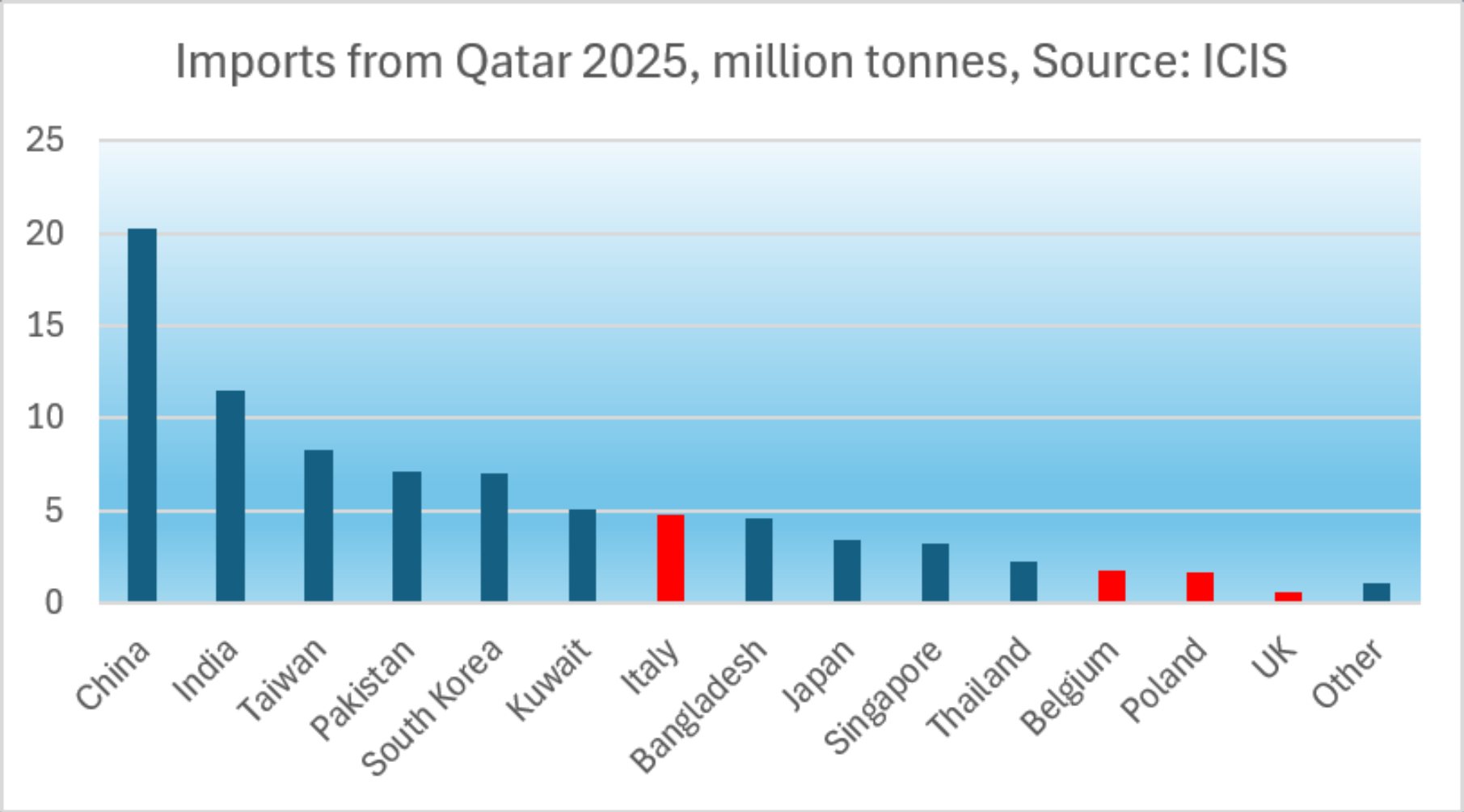


QatarEnergy CEO Saad Sherida al-Kaabi, speaking at the Qatar Economic Forum in New York on 20 September 2026



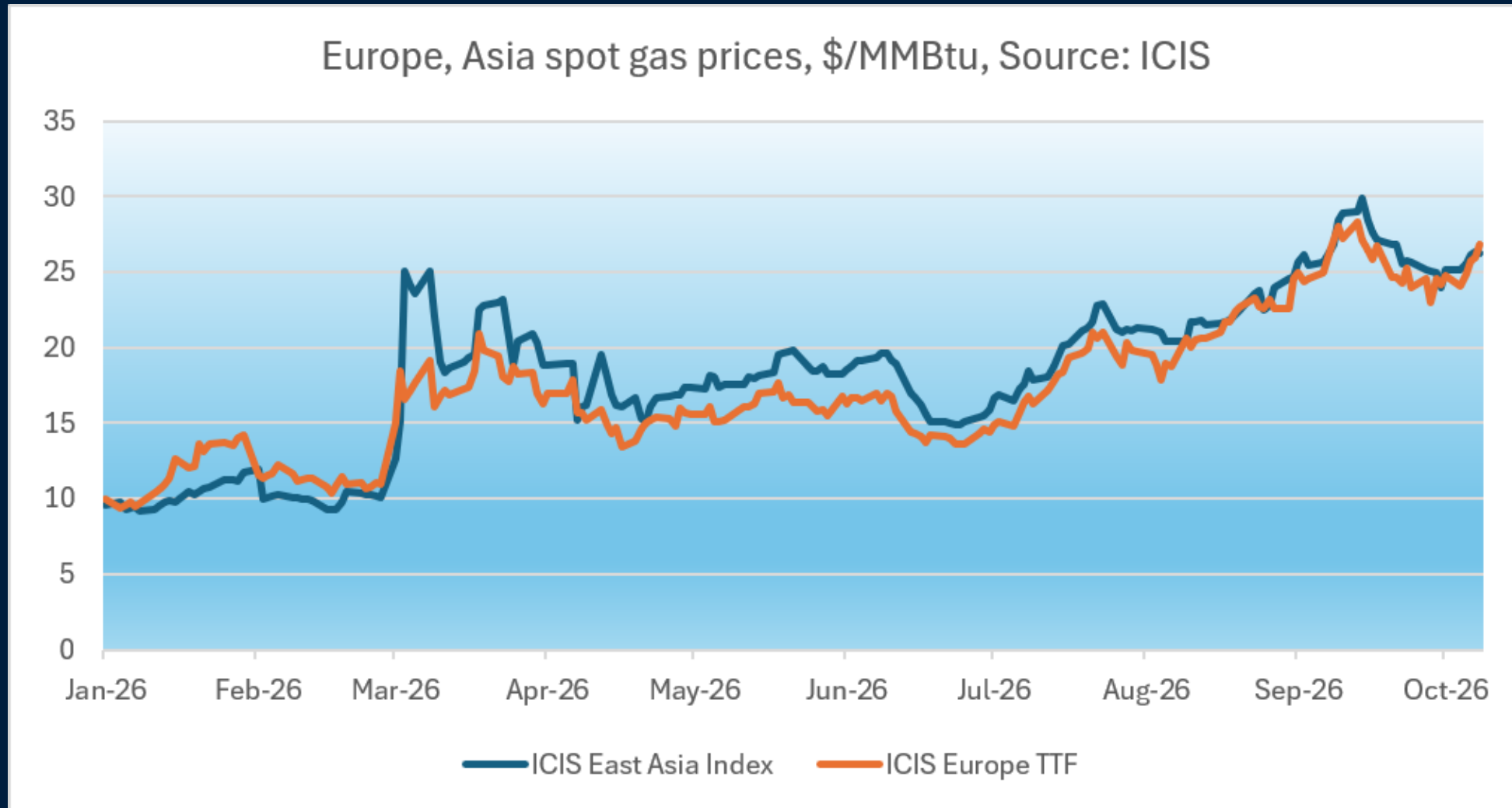
Part 2: Global supply/demand changes

Qatar's exports were focused mainly on Asia





Asia holds premium over summer, Europe rises for winter

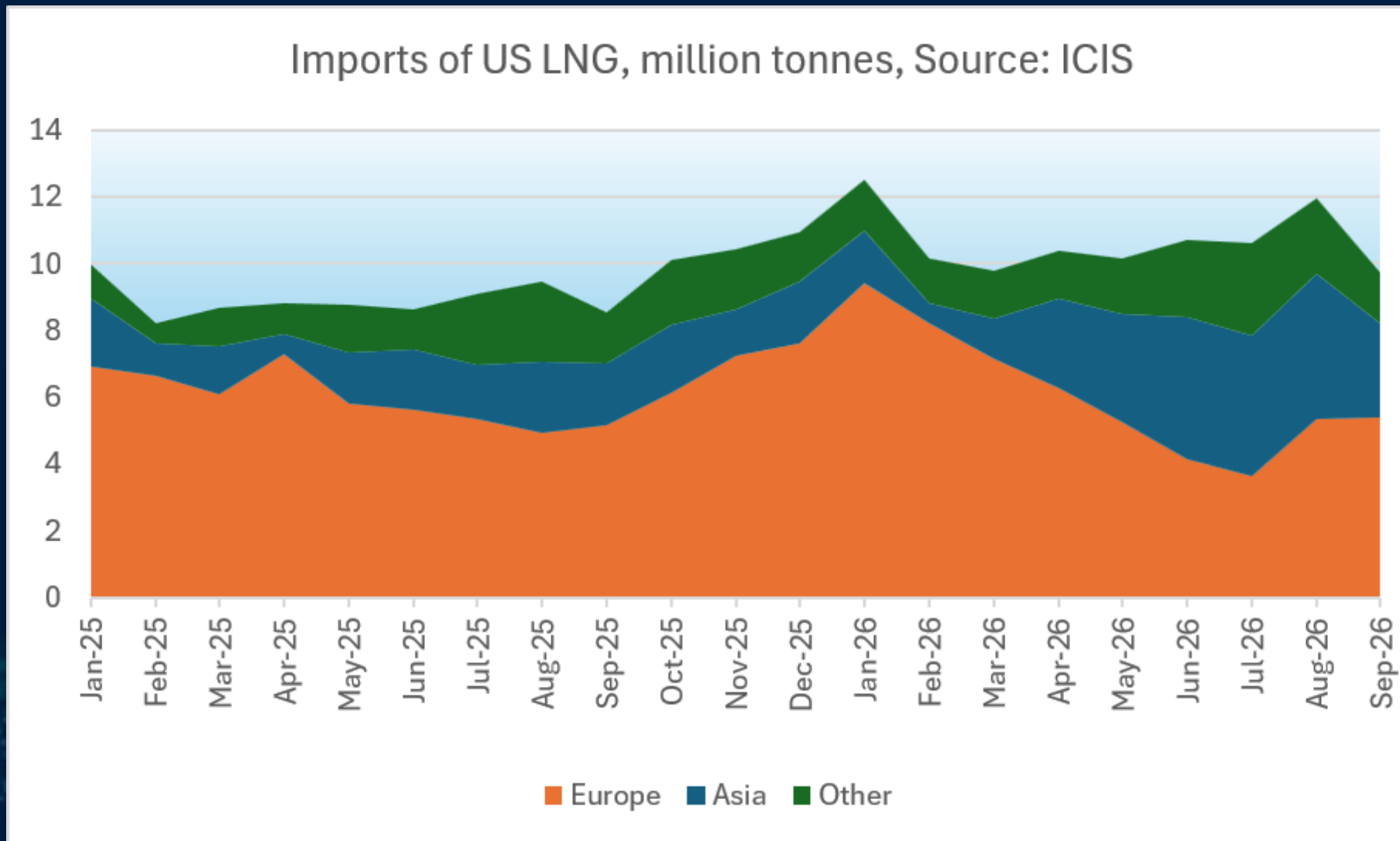


Steady stream of US cargoes heading southeast to Asia

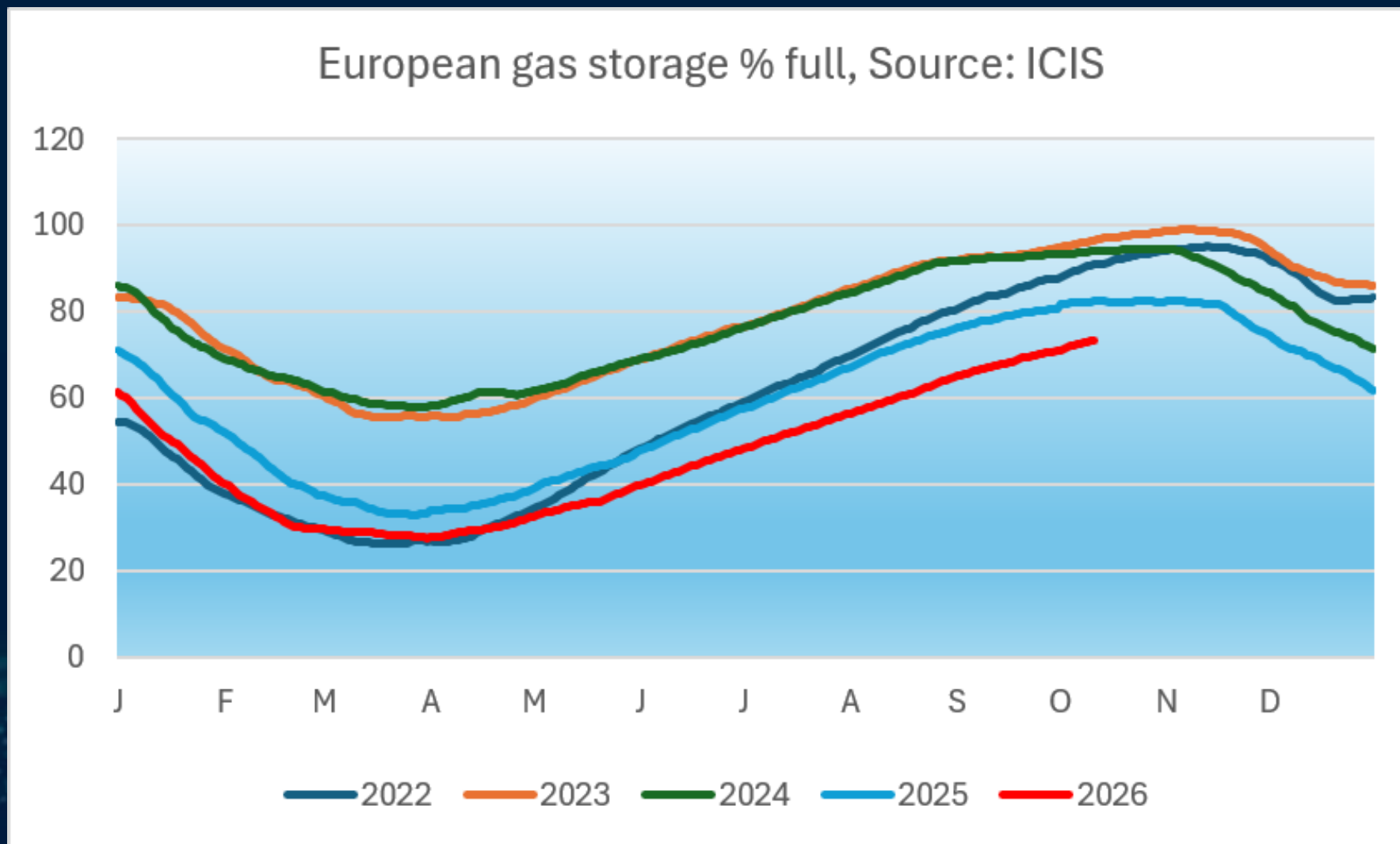


ICIS LNG Edge ship-tracking

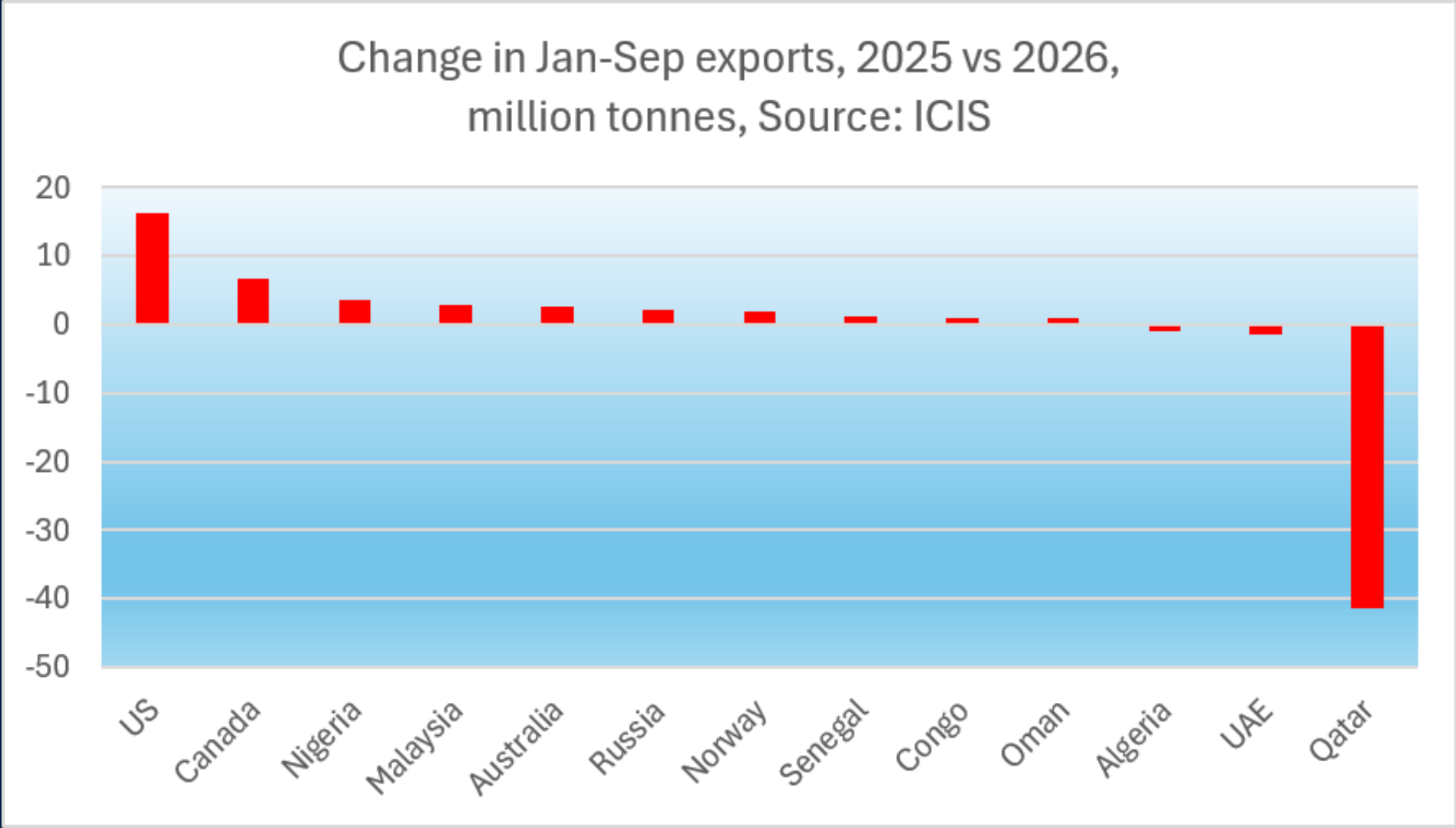
Asia takes increased share of US cargoes over summer



Europe's lost summer share limits storage injections



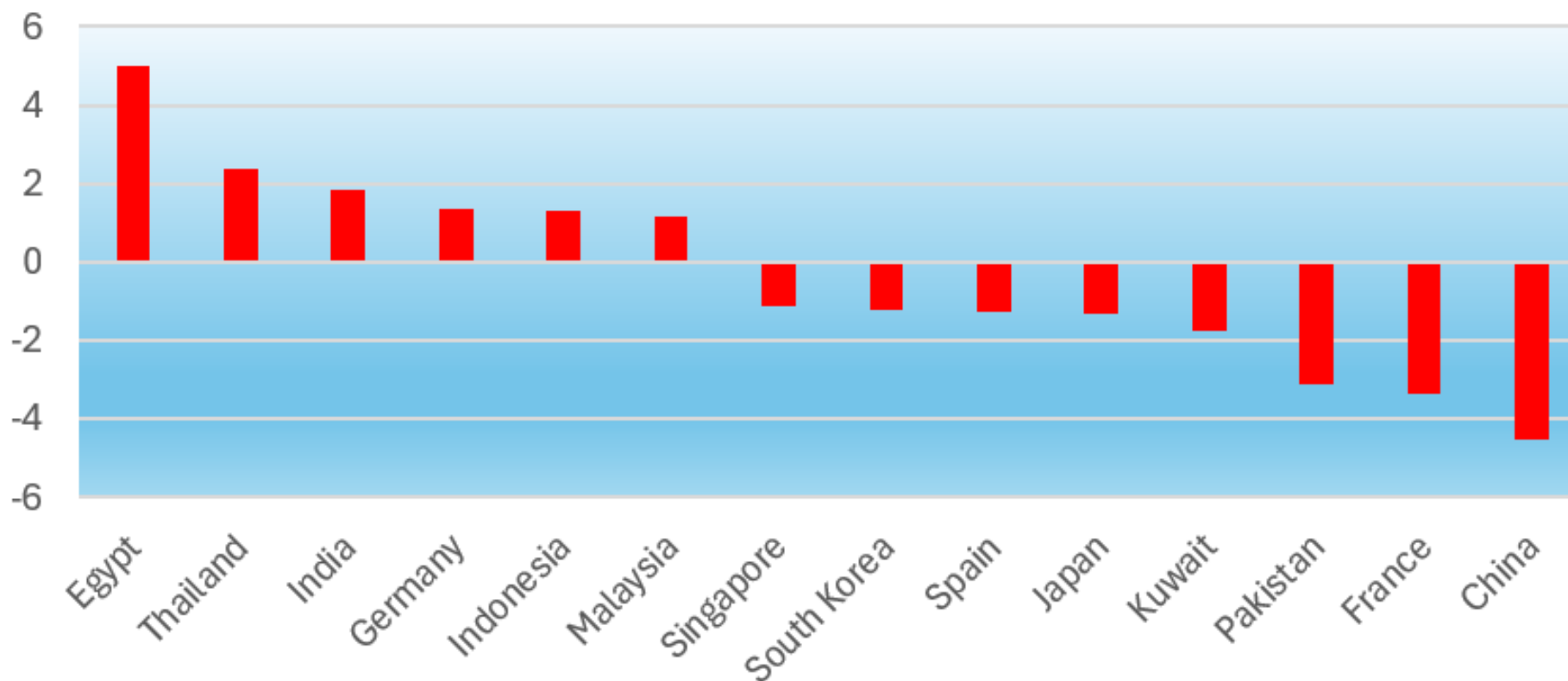
Changes in global supply: North America helps offset Qatar



Changes in global demand: Egypt grows as others fall



Change in Jan-Sep imports, 2025 vs 2026,
million tonnes, Source: ICIS





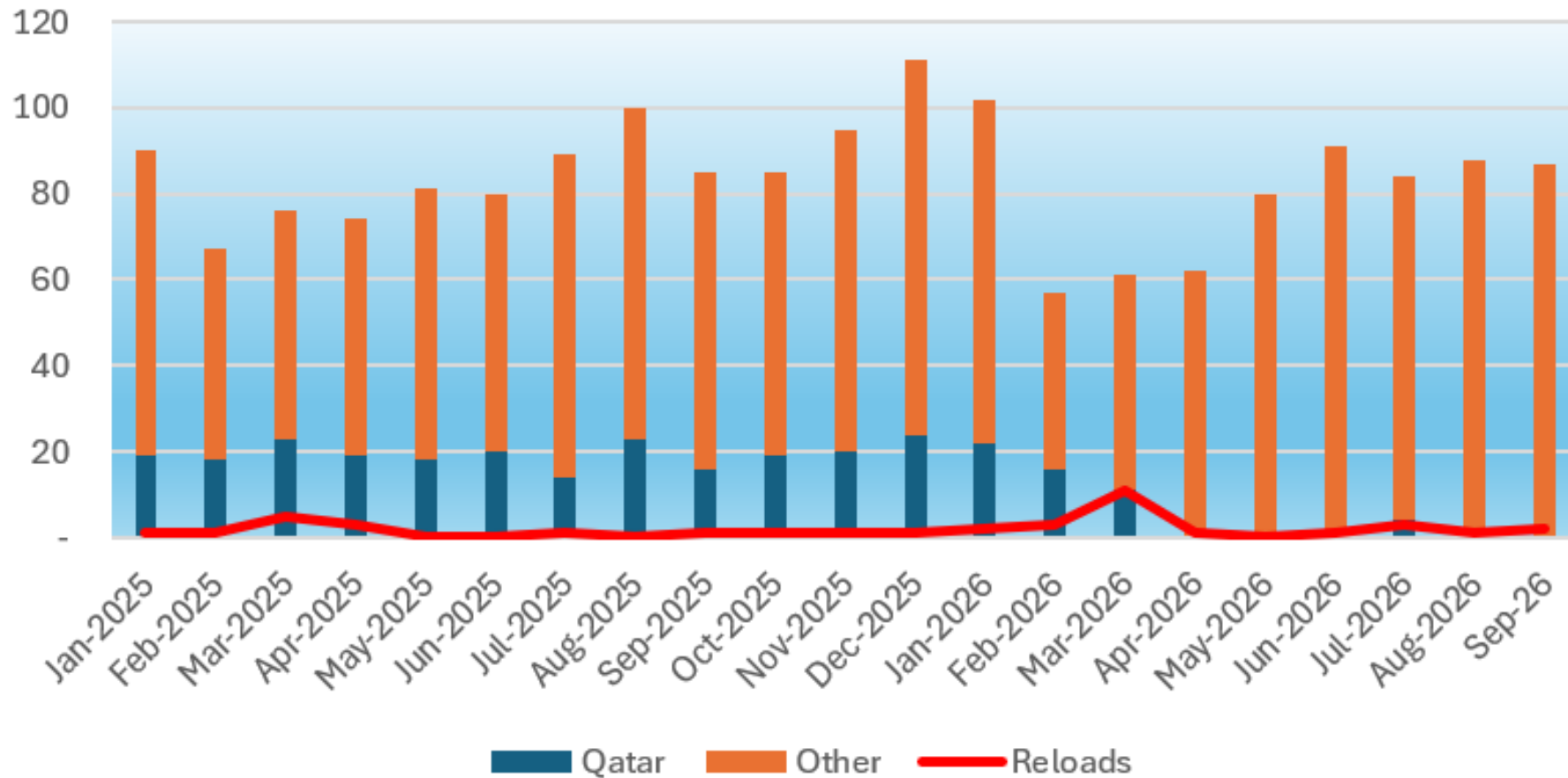
Part 3: Demand in Asia

China ... demand falling before Hormuz closed



Number of cargoes

Imports to China, reloads from China, ICIS LNG Edge

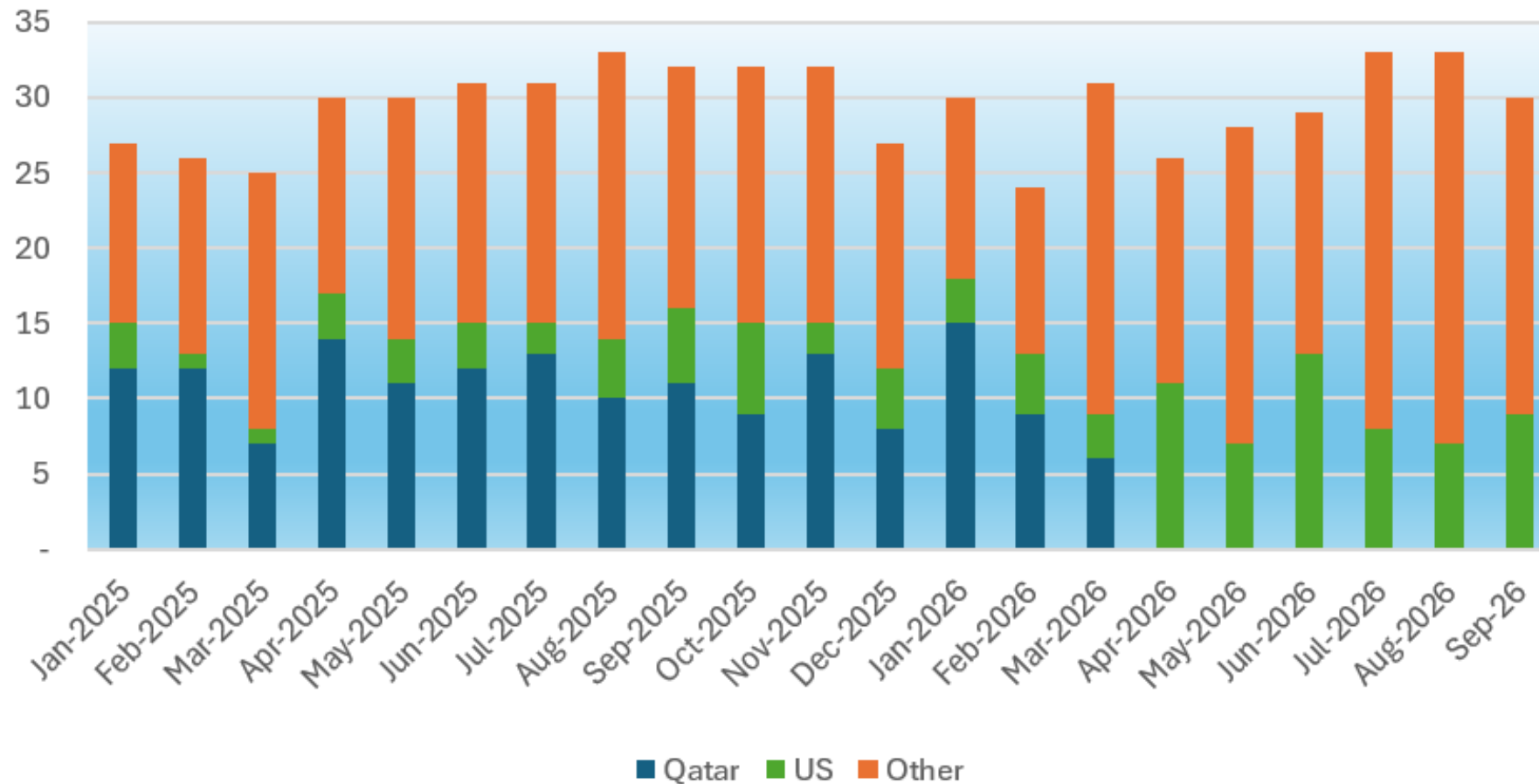


Taiwan, high exposure, replaced by spot purchases

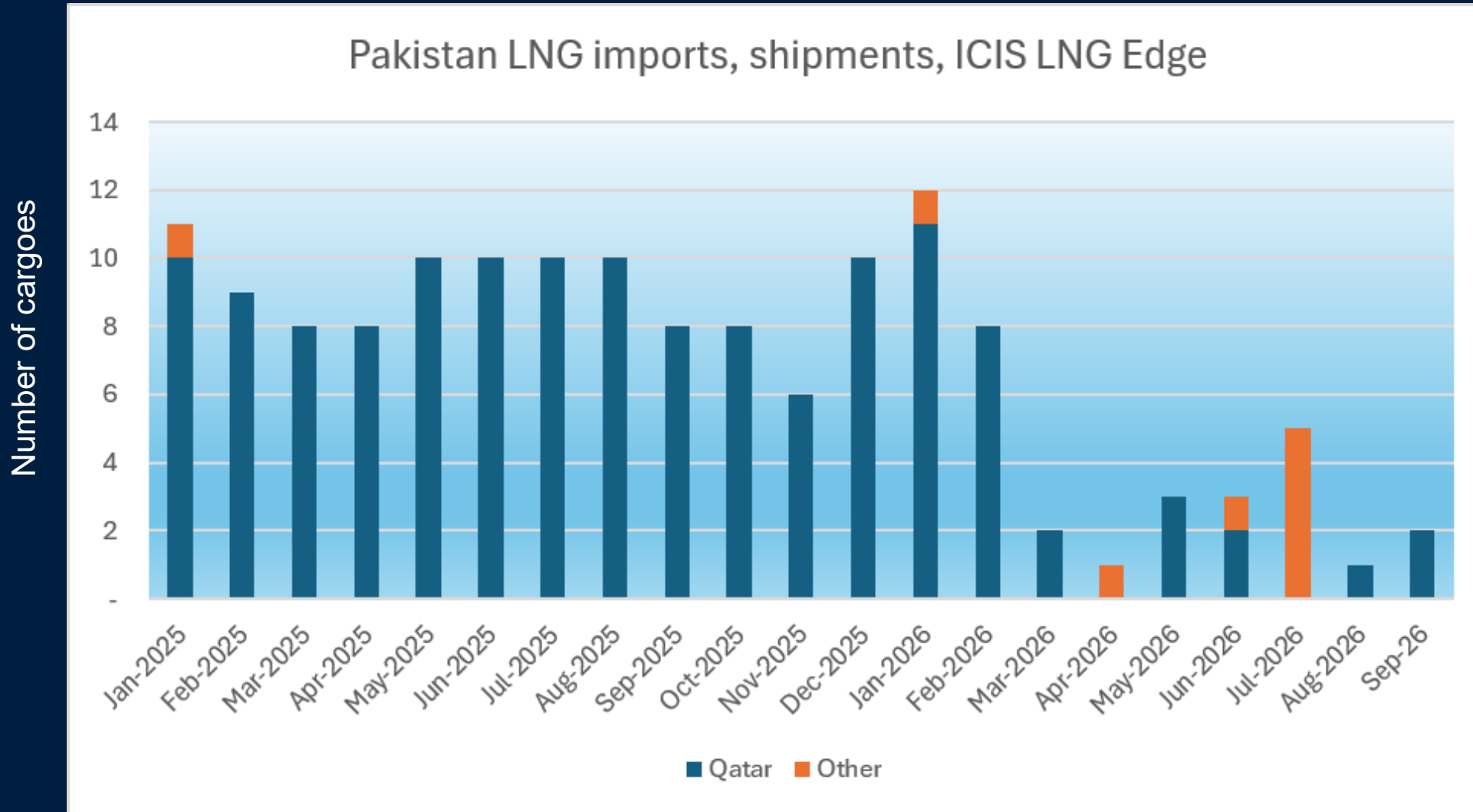


Number of cargoes

Taiwan LNG imports, shipments, ICIS LNG Edge



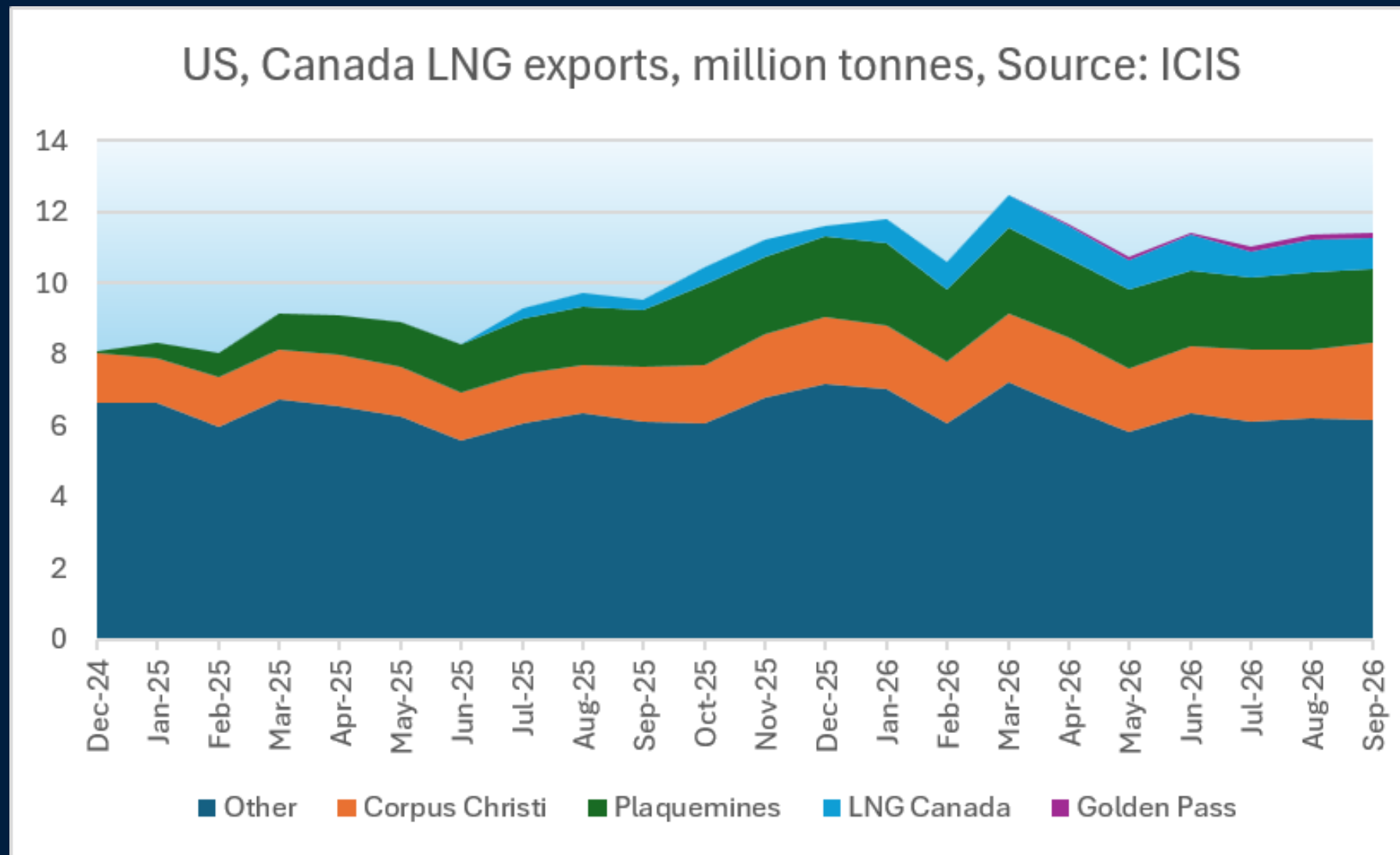
Pakistan, very highly exposed, energy shortages



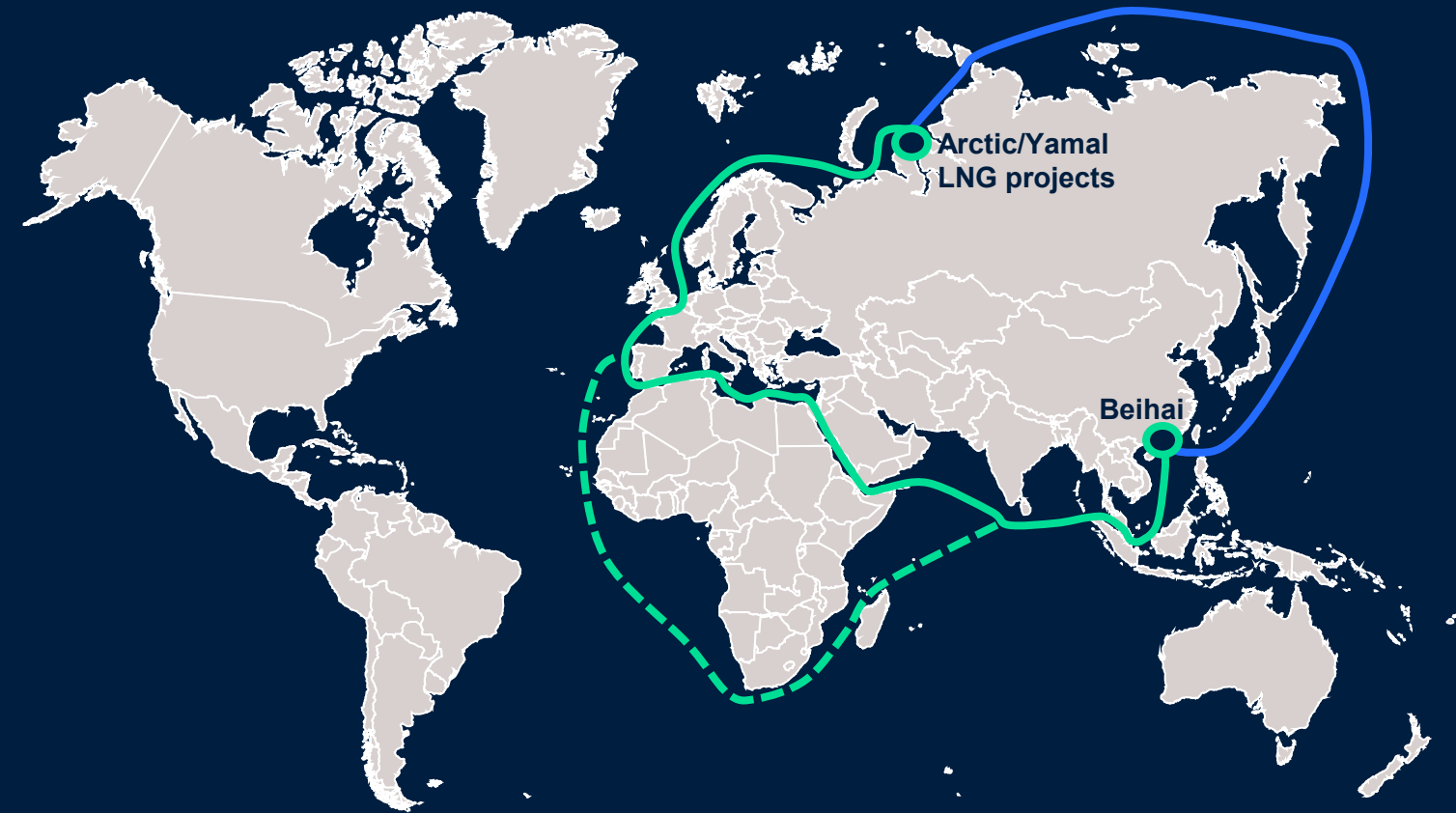


Part 4: Alternative supplies

North American growth has helped partly offset Qatari losses



Russian LNG faces logistical challenges from sanctions



- The Northern Sea Route (blue) through the Arctic to Asia is only available for half the year, around June to December.
- The sanctioned Arctic LNG 2 project has faced restricted output due to the long delivery chain to its only customer at Beihai in China.
- Europe has banned all Russian LNG deliveries to Europe from January 2027, which will force Yamal LNG cargoes to also take longer routes to Asia.

LNG market now shrinking slightly in 2026



At the start of the year we expected 2026 to be a year of supply growth and a move to lower prices, likely to pre-2022 levels.

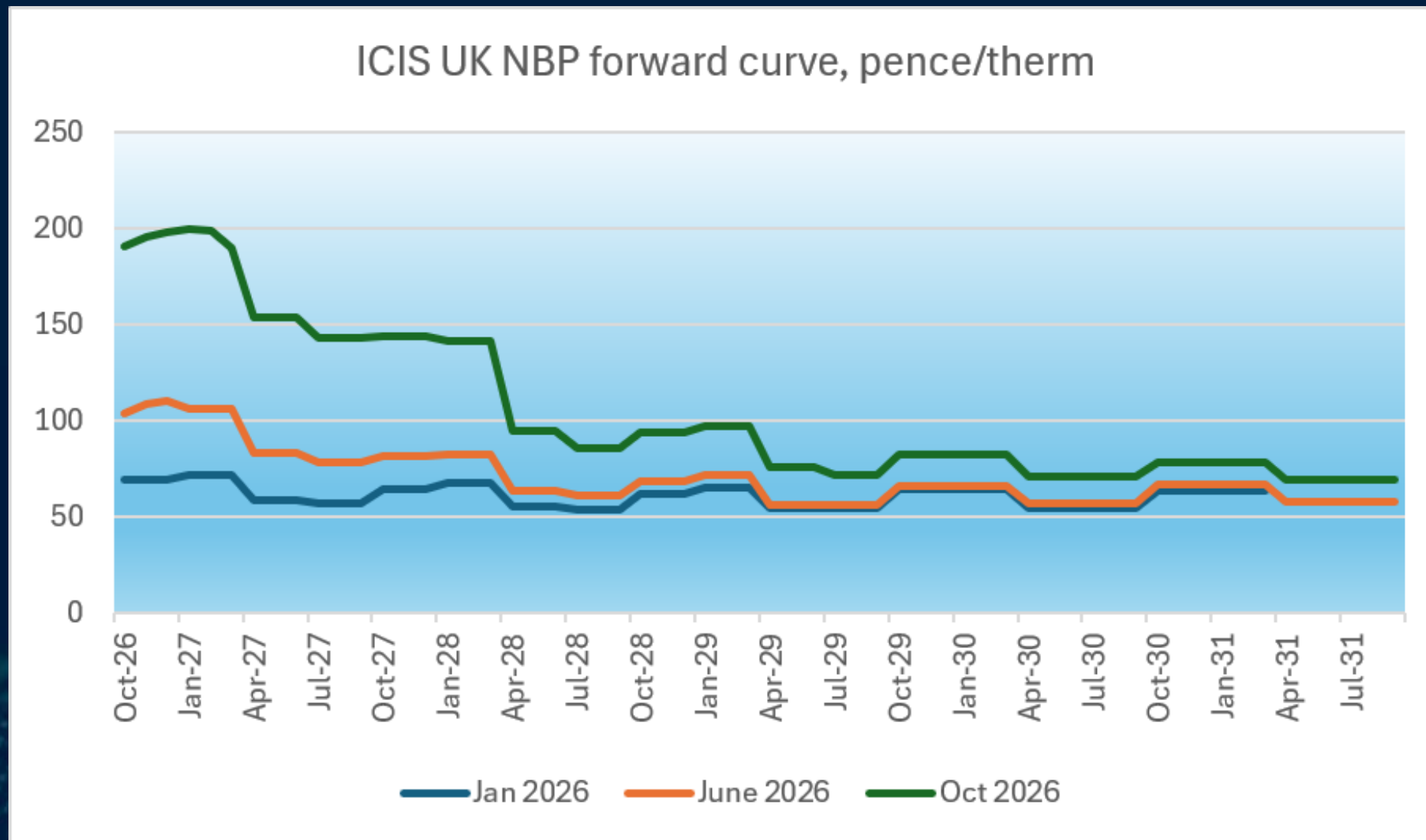
We now see the LNG market shrinking in 2026 from the year before.

Our base case is to return to growth in 2027, but this depends on Hormuz re-opening.



Part 5: Winter risks and outlook

Forward curve pushed higher as winter risks near

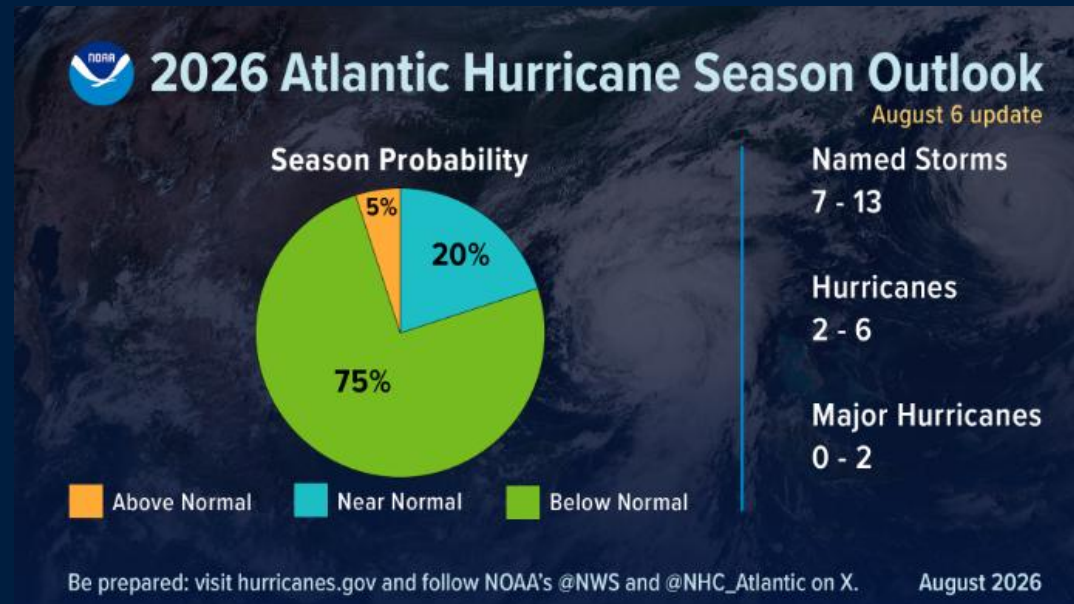




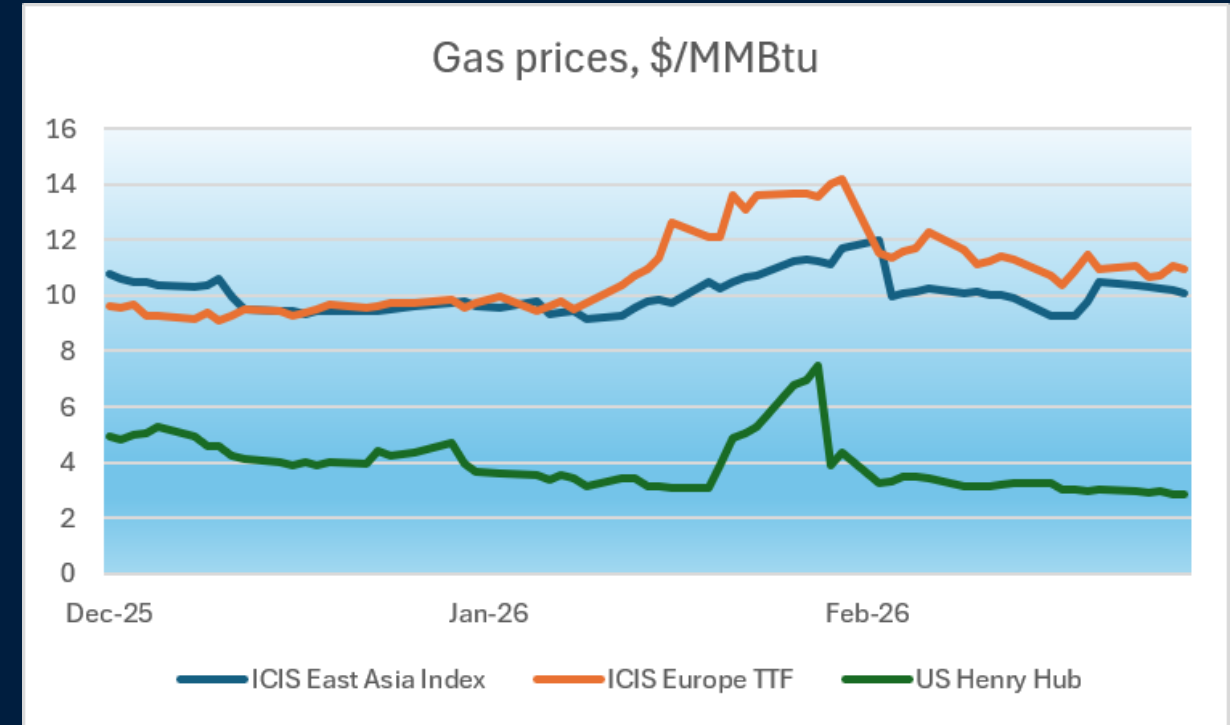
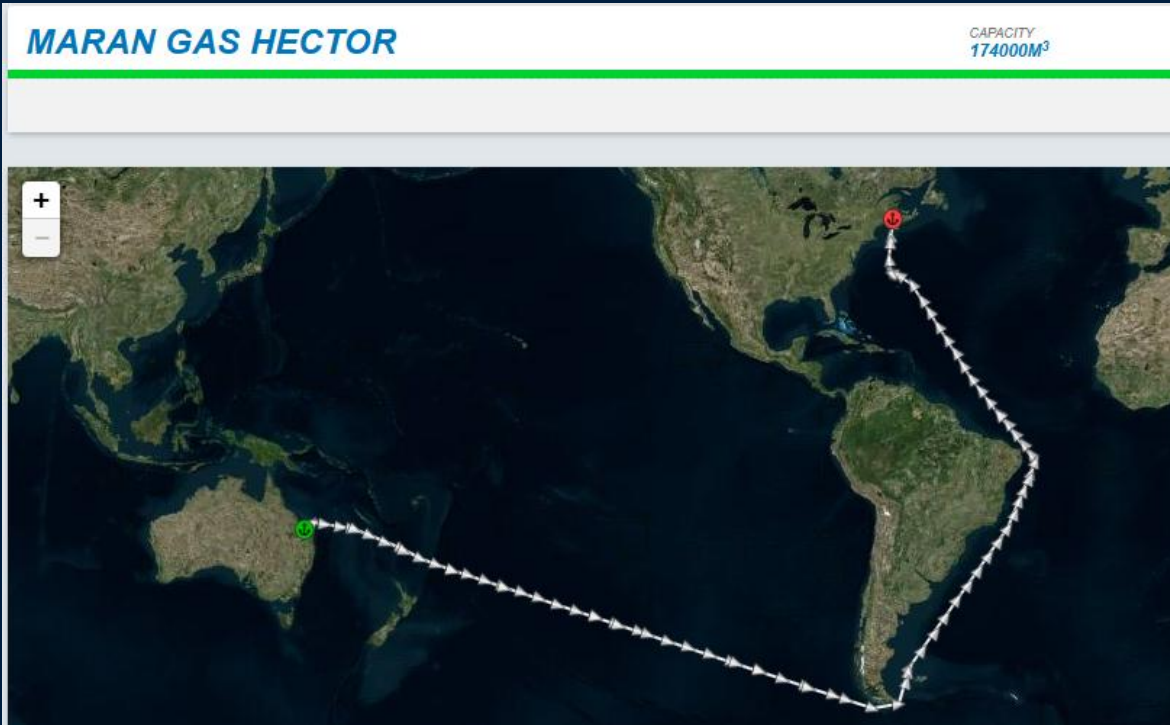
Warnings of high temperatures during “Godzilla” El Niño

The UN **urged** all countries on Tuesday to bolster early warning systems after confirming the onset of El Niño, warning that the Pacific Ocean-warming phenomenon will bring above-average temperatures “nearly everywhere” and fuel more extreme weather.

- A record El Nino will boost temperatures in the Pacific Ocean. Europe could potentially see milder, wetter Q4 weather.
- Atlantic hurricanes reduced, cutting risks to US Gulf LNG.
- Potential colder spells late winter.



Late winter cold snap risk remains



- In January 2026 the US suffered another extreme cold snap (also in February 2021), which drew Pacific cargoes into the Atlantic, including an unusual Australian cargo to east coast Canada.
- Late cold winter snaps in Europe include the February/March 2018 “Beast from the East”.

Winter Gas Market Risks



- Europe's storage is low for the time of year. Prices are soaring higher as Europe competes harder against Asia for cargoes ahead of winter.
- A record El Niño is due this year. It could bring a warmer start to Europe's winter, which could help reduce heating and also cut the risk of hurricanes affecting US supplies. But El Niño can also be linked to a risk of a colder end to the season next year.
- Russian LNG flows to Europe are banned from January 2027. Russia is increasing its shipping length, but overall exports could be constrained and it adds uncertainty to the middle of winter.
- The forward curve will continue to react to prompt market events. It could lower if Hormuz is resolved soon, but a cold winter or more permanent damage could push the forward curve up yet higher.
- If Hormuz is resolved early next year, 2027 could still be a year of LNG market growth, but Europe will need to refill storage again next summer and a prolonged Hormuz outage could limit supplies. In the longer term, however, the market should return to growth and lower prices later in the decade.

Thank you for attending!

We look forward to seeing you
online on 3rd December 2026 &
in person on 28th January 2027

If you would like to provide any feedback on the forum, please email
Box.OperationalLiaison@nationalgas.com

