Gas
Transmission

Gas Operational Forum

The Clermont Hotel & MS Teams
21 October 2021
9.32am

Questions
MS Forms (link in the chat)
Teams Chat

nationalgrid

Gas
Transmission

Introduction & Agenda

Joshua Bates
Operational Liaison Manager

nationalgrid

Presenters

National Grid

Joshua Bates – Operational Liaison Manager

Martin Cahill – Senior Operational Liaison Officer

Craig James – Operational Delivery Manager

Suki Ferris – Hydrogen Market Strategy Lead

Rachel Hinsley – Senior Codes Change Lead

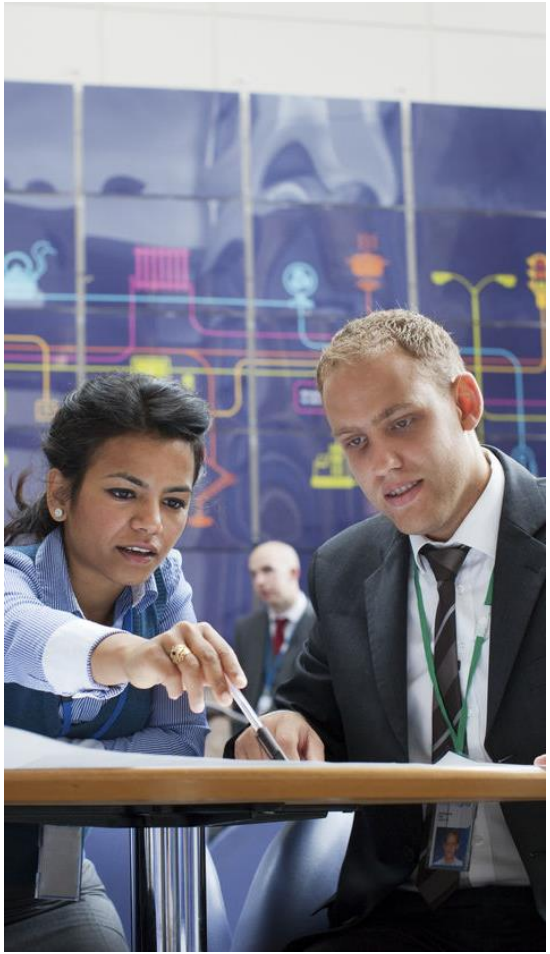
Rachel Woodbridge-Stocks – Commercial Officer (GNCC)

Argus

Matthew Monteverde – Senior Vice President, Commodity Markets

Corella on behalf of Xoserve

Neil Laird - Technology Operations Director



Calendar year 2021 Ops forums

All forums will be hybrid via Microsoft Teams and the Clermont Hotel, London.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Online	Online	Online	X	Online	Online	X	X	Online	Clermont & Online	Clermont & Online	X
28/01	25/02	25/03		20/05	17/06			23/09	21/10	25/11	

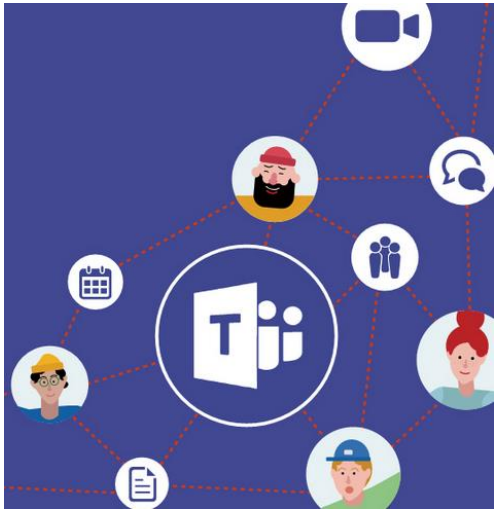
Registration is open November 2021 event at:
https://www.nationalgridgas.com/data-and-operations/operational-forum

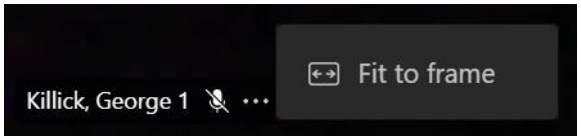
The Clermont Hotel
Charing Cross
London
WC2N 5HX

Housekeeping for Hybrid Forums

During our Teams events;

- Attendees will be automatically muted on dial-in and cameras will be unavailable.
- You can use the ‘raise a hand’ function if you would like to speak and we will enable your camera and microphone options.
- You will then need to un-mute yourself and turn your camera on to ask your question.
- We will be taking questions via the chat function, or if you would like to remain anonymous please use Microsoft Forms (link in the chat)



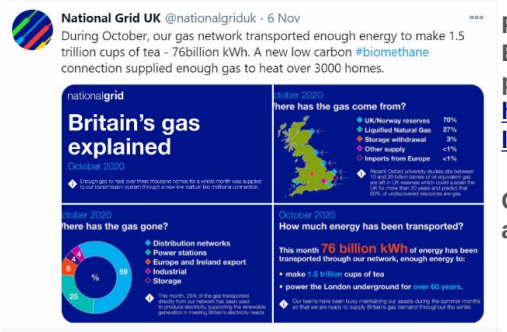


Key resources available to you

Registration is open for all events at:
https://www.nationalgridgas.com/data-and-operations/operational-forum

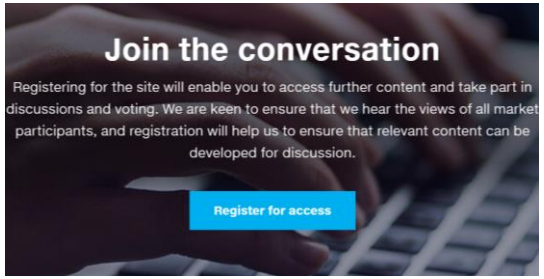
Gas Distribution List

https://subscribers.nationalgrid.co.uk/h/d/4A93B2F6FAF273DE



For the monthly Gas Explained information please visit;
https://twitter.com/nationalgriduk

Or follow our personal accounts on LinkedIn



For updates and interaction with National Grid please visit;
https://datacommunity.nationalgridgas.com/

For the National Grid Gas Website, please visit;
https://www.nationalgridgas.com/about-us

Maintenance Planning
https://www.nationalgrid.com/uk/gas-transmission/data-and-operations/maintenance

Energy Data Request Tool:
Microsoft Forms Link

How to contact us

Operational Liaison Team

Joshua Bates: Joshua.Bates@nationalgrid.com

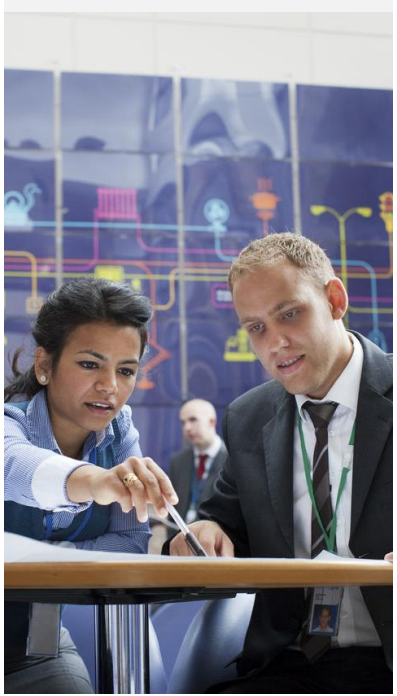
Martin Cahill: Martin.Cahill@nationalgrid.com

George Killick: George.Killick@nationalgrid.com

Operational Liaison Email:
Box.OperationalLiaison@nationalgrid.com

For updates and interaction with National Grid please visit;
https://datacommunity.nationalgridgas.com/

For the National Grid Gas Website, please visit;
https://www.nationalgridgas.com/about-us



Agenda for Today

01	Welcome and Introduction	09:32
02	Operational Overview	09:40
03	Winter Outlook (including annual winter preparedness breakout)	09:50 (10.05)
04	Argus Media Guest Presentation	10:15
05	Project Apollo	10:40
06	Hydrogen Guarantees of Origin (GoO)	10:50
07	Gemini Service Update Guest Presentation	11:10
08	Residual Balancing (GNCC)	11:20
09	Updates & Close	11:30

Please ask any questions using the chat function, or through Microsoft Forms (link in the chat).

Questions will be covered at the end of each agenda section.

Gas
Transmission

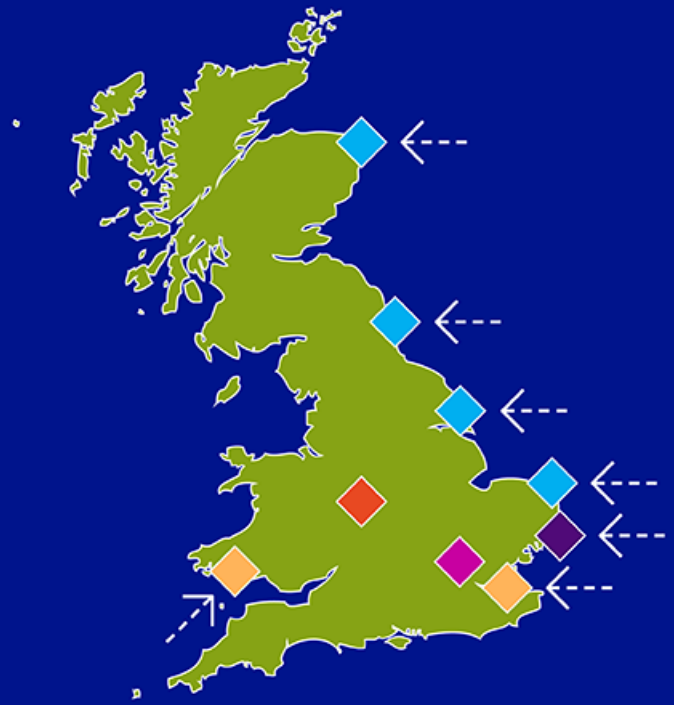
Operational Overview

Martin Cahill
Senior Operational Liaison Officer

nationalgrid

September 2021

Where has the gas come from?

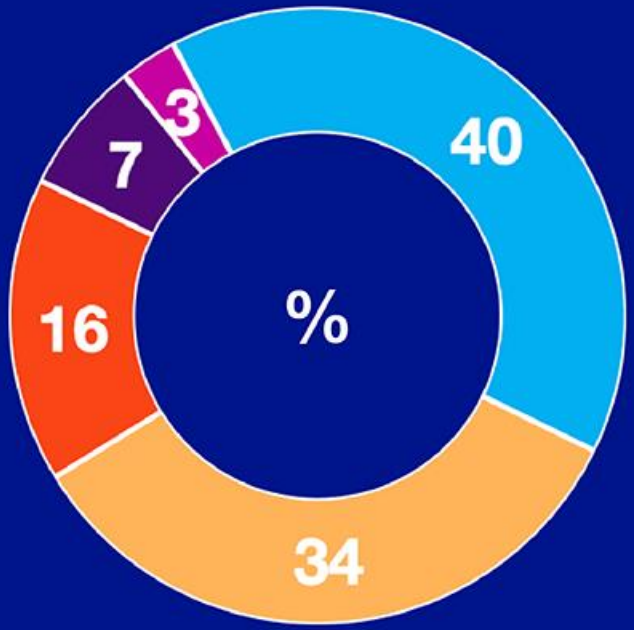


UK/Norway reserves	96%
Liquified Natural Gas	4%
Imports from Europe	<1%
Storage withdrawal	0%
Other supply	<1%

1. Natural Gas can be cooled to the point of liquification where it can be transported via ships around the world.
2. UK and Norwegian offshore gas fields supply gas to our network.
3. Storage sites alternate between taking and supplying gas to our network depending on total network demand.

September 2021

Where has the gas gone?



- Distribution networks
- Power stations
- Europe and Ireland export
- Industrial
- Storage

A. Gas can leave our transmission network into distribution networks which supply houses, factories, offices, power stations, hospitals etc.

B. Some power stations and industrial plants are connected directly to our transmission network, their demand is shown above.

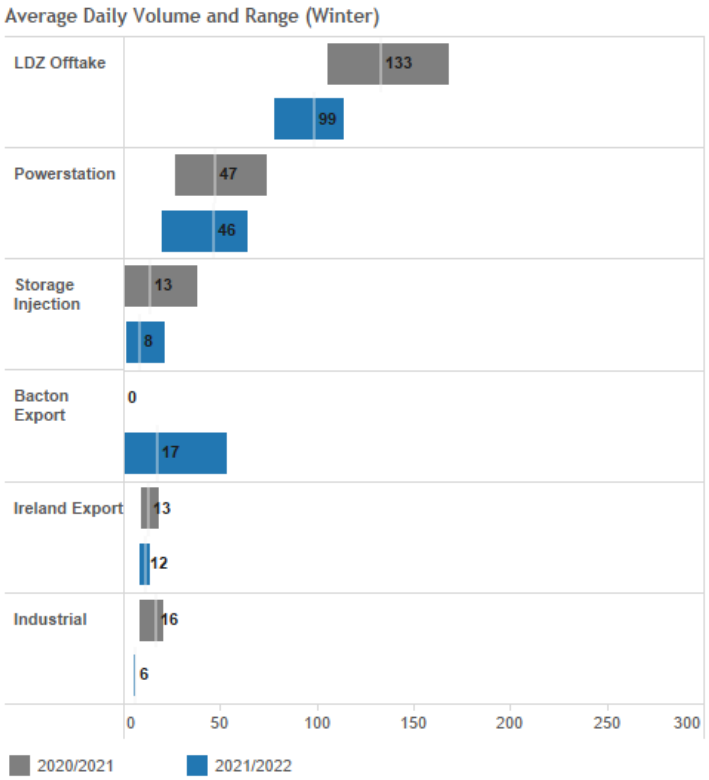
September 2021

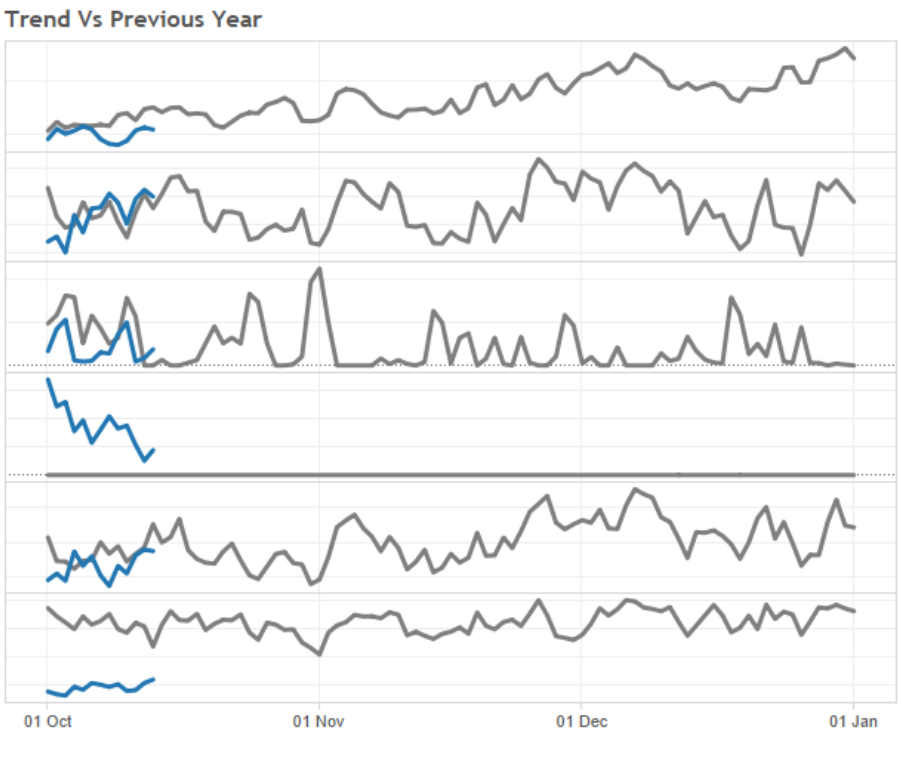
How much energy has been transported?

This month 53 billion kWh of energy has been transported through our network, enough energy to power 21 billion tumble dryers.

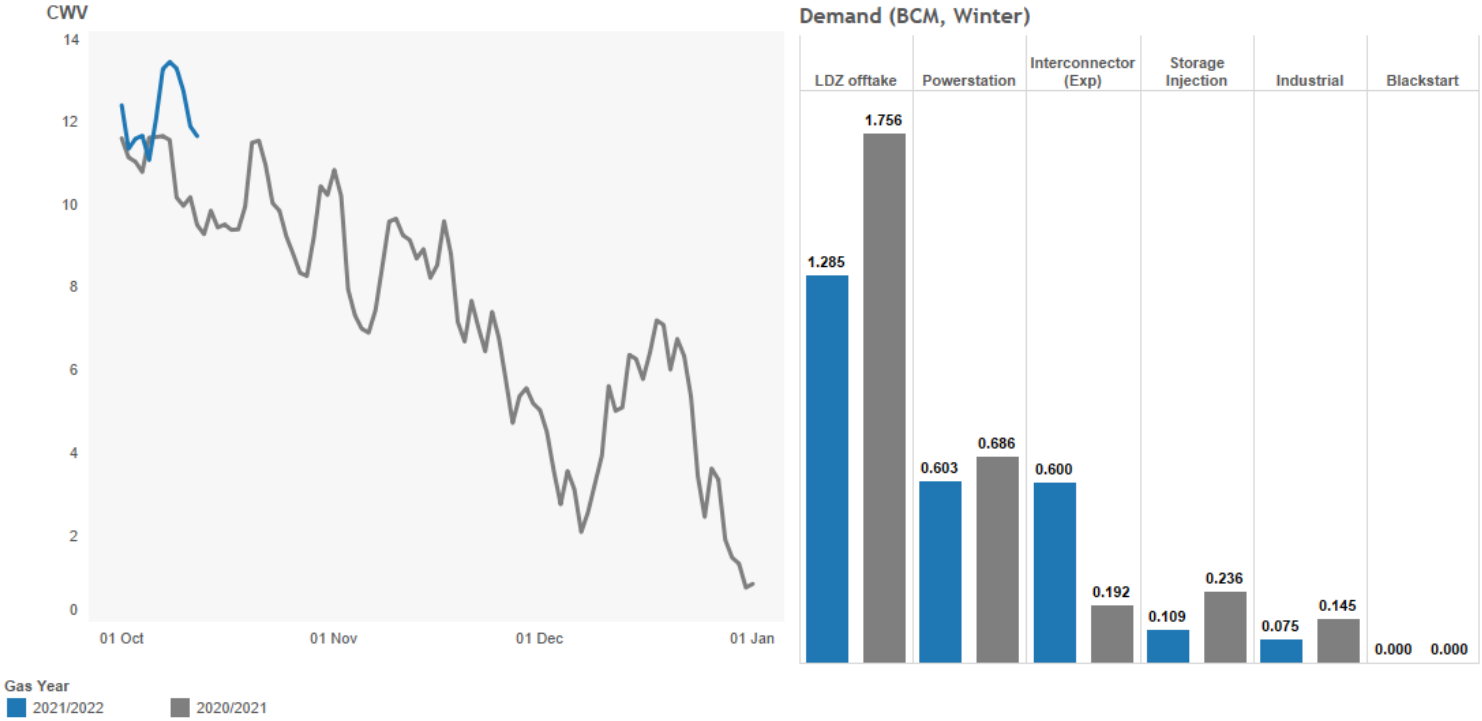
As we transition into the winter months, demand from power stations and the distribution networks will begin to increase due to the colder weather and less daylight hours. September's average daily demand was 10% higher than August's average daily demand. We have just released our Winter Outlook which gives our view on the winter ahead, and a review of last winter.

Components of NTS Demand

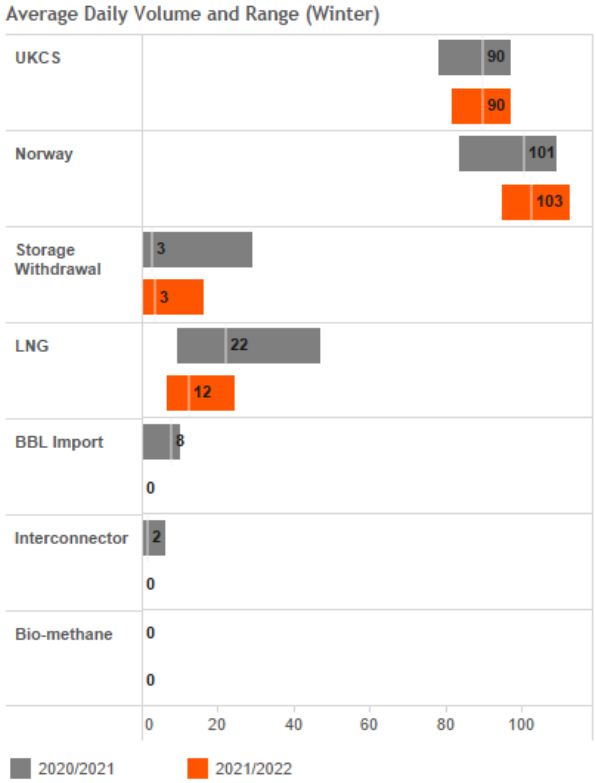


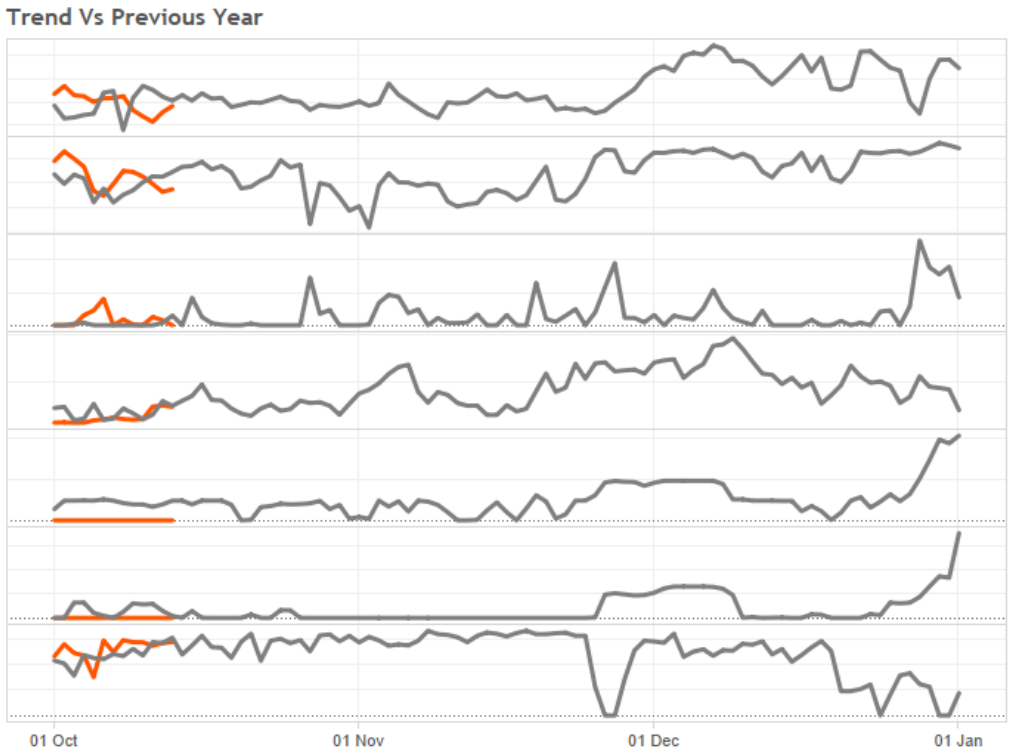


Demand – CWV & Components



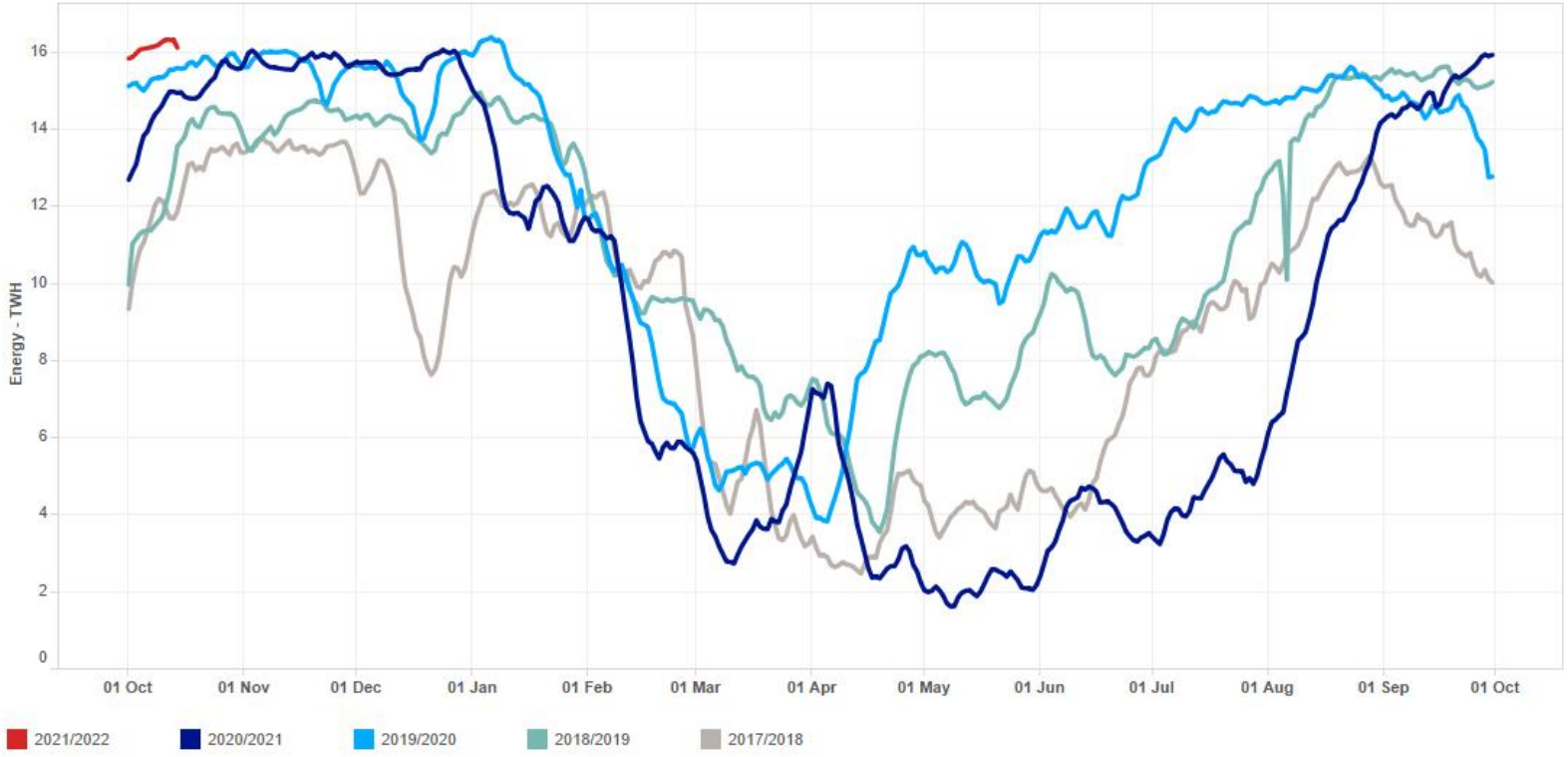
Components of NTS Supply





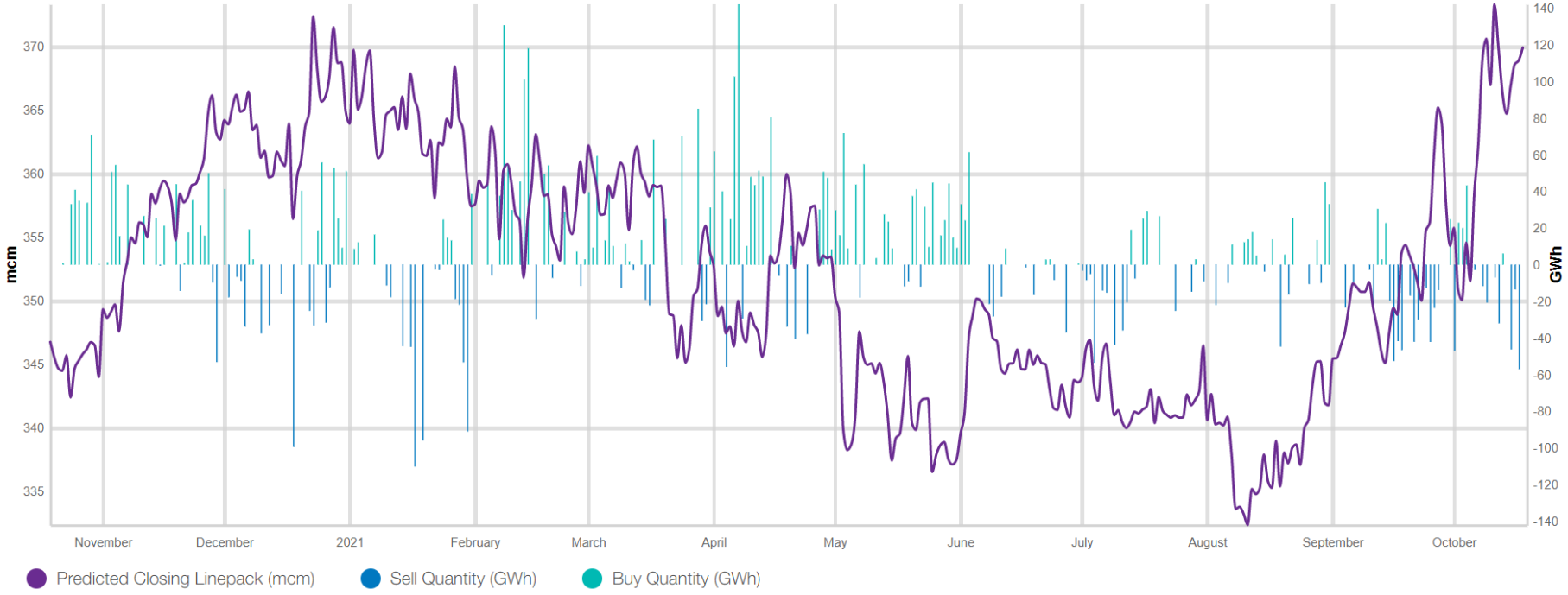
Medium Range Storage Stocks (MRS)

For last 6 years



Trading

Projected Closing Linepack (PCLP)



Gas
Transmission

Winter Outlook

Craig James
Operational Delivery Manager

nationalgrid

Agenda

01	Key messages
02	Gas Supply Margin
03	Gas Demand
04	Gas Supply
05	Storage
06	Connections to Europe & LNG
06	Summary / Contact us

Key messages

1. Supply continues to be available from a diverse number of sources. The gas supply margin is expected to be sufficient in all of our supply and demand scenarios.

2. The maximum supply capability across all supply sources into GB is comparable to last winter.

3. As in previous winters, a positive market price differential to both Global and European markets will be required for a number of sources of flexible supply to direct flow into GB.

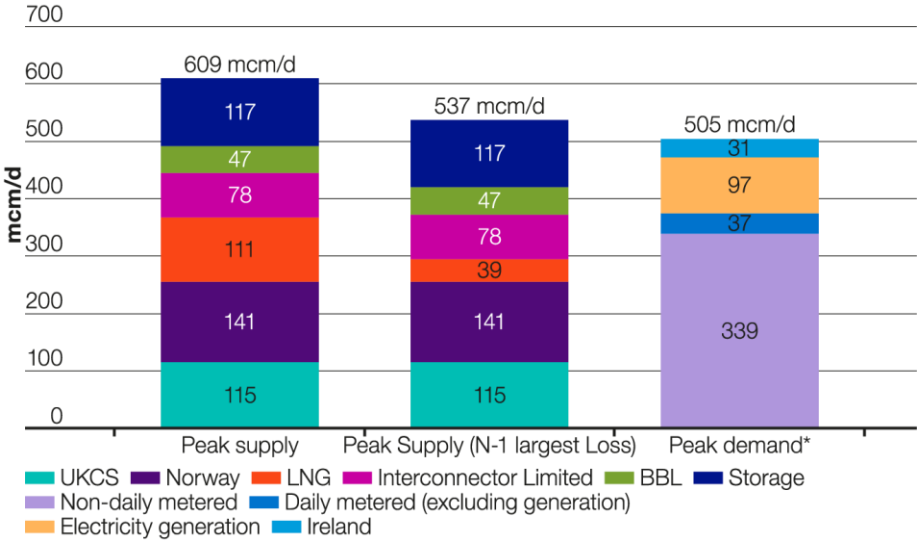
4. We have a range of tools available to manage any operational requirements throughout the winter period. This may include issuing margin notices to encourage market participants to take action should there be a forecast supply/demand imbalance for the coming gas day.

Did you know:

The gas supply margin is the difference between the forecast peak supply capability and demand

Gas supply margin (Peak Day)

- 1-in-20 peak day supply (609 mcm/d) is comparable to last winter
- Peak day demand has decreased from 531 to 505 mcm/d.
- The peak 1 in 20 supply margin is 104 mcm/d
- We retain a positive supply margin (32 mcm/d) under N-1 conditions.



Did you know:

The highest gas demand on record for a single day is 465 mcm/d

Gas demand (Winter 2021/22)

- Total gas demand for winter 2021/22 is forecast to be 49.4 bcm, compared to 50.7 bcm last winter.
- The reduction is largely due to a forecast reduction in gas demand for power.
- There remains the potential for significant within-day volatility in gas demand for electricity generation, due to inherent variability in solar and wind conditions
- We do not expect any significant operational challenges due to the ongoing effects of the Covid-19 pandemic.

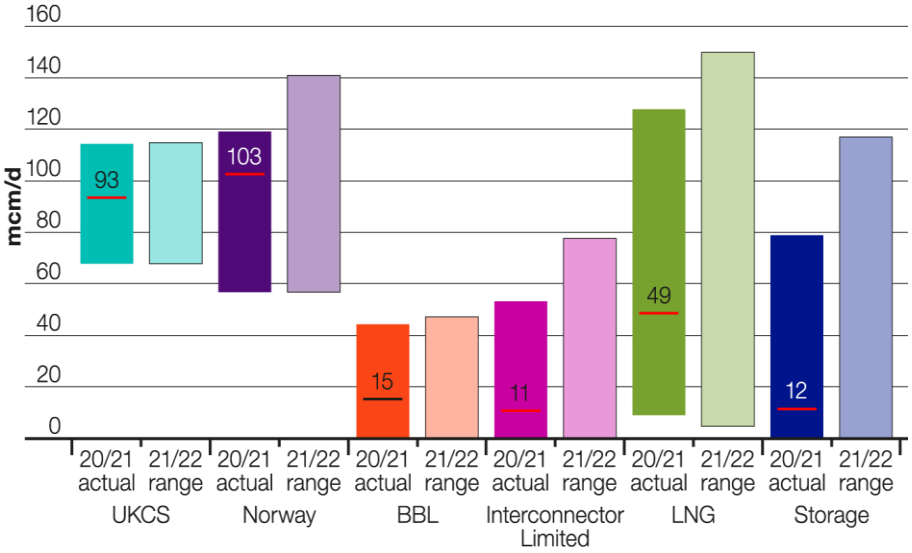
Winter demand (bcm)	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22 Forecast
Non-daily metered (NDM)	29.7	30.6	30.0	30.9	30.3	29.7
Daily Metered (DM, excluding Generation)	5.0	4.8	4.5	4.5	4.4	4.6
Electricity generation	13.8	12.8	12.3	10.6	11.0	9.4
Total GB demand	**48.5**	**48.2**	**46.8**	**46.0**	**45.7**	**43.7**
Ireland	1.6	1.8	2.1	2.6	3.0	3.3
Interconnector Limited and BBL export	0.8	0.7	0.0	0.5	0.0	0.5
Storage injection	1.8	2.3	1.5	1.4	1.6	1.7
Total gas demand	**52.9**	**53.3**	**50.7**	**50.8**	**50.7**	**49.4**

Did you know:

Exports to Ireland are increasing due to continuing declines in production from the Corrib gas field

Gas supply capability

- Supply sources to GB continue to be diverse and flexible
- Daily supply capability is sufficient to meet demand this winter
- The gas supply margin is expected to be sufficient in all of our supply and demand scenarios.
- The market and its participants determines when, where and how much gas flows into GB.

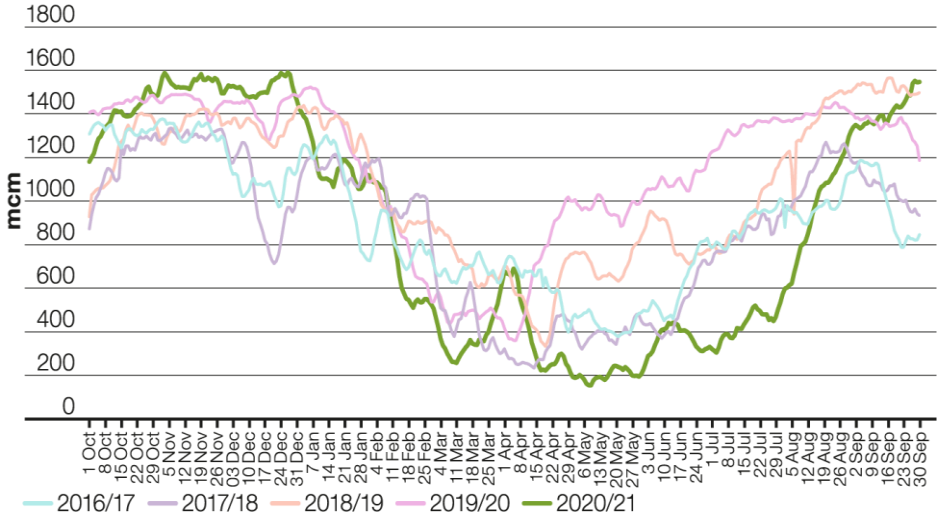


Did you know:

The supply capability range is developed with industry engagement via the ESO Future Energy Scenarios process

Storage

- Storage facilities connected to the NTS continue to be predominantly fast cycle.
- The projected starting level of gas in GB storage at the start of the 2021/22 winter is now within the range of the previous four winters.



Did you know:

Storage facilities connected to the NTS continue to be predominantly fast cycle which can respond quickly to market signals, injecting and withdrawing on the same day

Connections to Europe & LNG

- GB's main sources of flexibility is from the EU interconnectors and LNG.
- As in previous winters, there will need to be a positive differential to other adjacent markets in order to attract LNG and interconnector flows
- If low volumes of LNG are delivered to the UK this winter, then we would expect the shortfall in demand to be made up from imports through the European interconnectors and domestic storage, as was observed last winter.

Did you know:

In winter 2020/21 we experienced lower levels of LNG than previous years, but demand was met by higher imports from a combination of imports from Belgium, the Netherlands, and storage withdrawals

Summary

1. Supply continues to be available from a diverse number of sources. The gas supply margin is expected to be sufficient in all of our supply and demand scenarios.

2. The maximum supply capability across all supply sources into GB is comparable to last winter.

3. As in previous winters, a positive market price differential to both Global and European markets will be required for a number of sources of flexible supply to direct flow into GB.

4. We have a range of tools available to manage any operational requirements throughout the winter period. This may include issuing margin notices to encourage market participants to take action should there be a forecast supply/demand imbalance for the coming gas day.

Please contact us if you have further questions or feedback:

Box.OperationalLiaison@nationalgrid.com

Winter Preparedness - Breakout

1. What went well for your business or the industry last winter?
2. What is your greatest concern as a business going into this winter?
3. Do you require training or information in any of the following areas? (Please add any detail) - Gas Supply Emergency Process - Commercial Tools: What you need to do or when they are used by National Grid - Key Contacts within National Grid - Other (please specify)
4. Is there any data or analysis which you would find useful in addition to the winter outlook report?
5. Does your business have all the tools in place to be prepared for a 1 in 20 winter?

argusmedia.com

Winter 2021-22 and a new normal, eventually

National Grid Gas Operational Forum

Matthew Monteverde | October 2021

Market Reporting

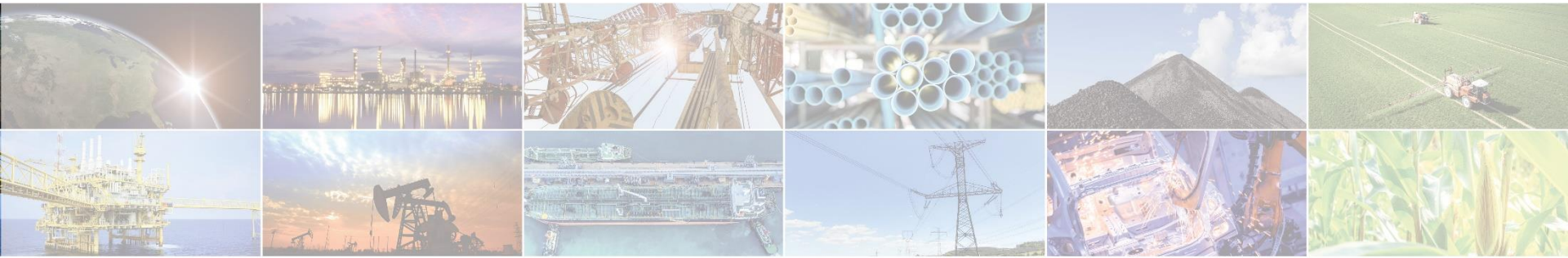
Consulting

Events

illuminating the markets

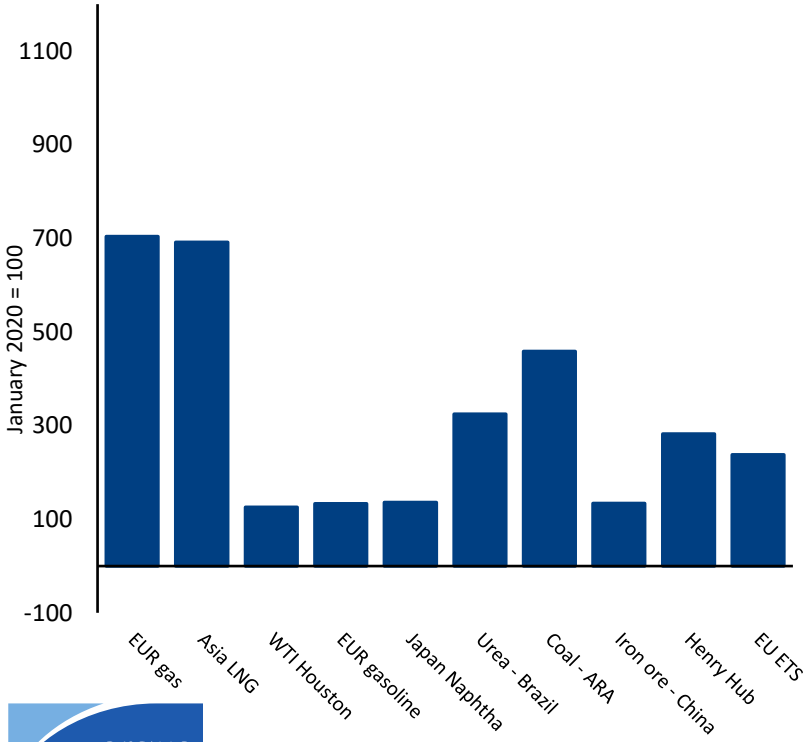
Introduction and the big picture

A new set of questions – is this really temporary?

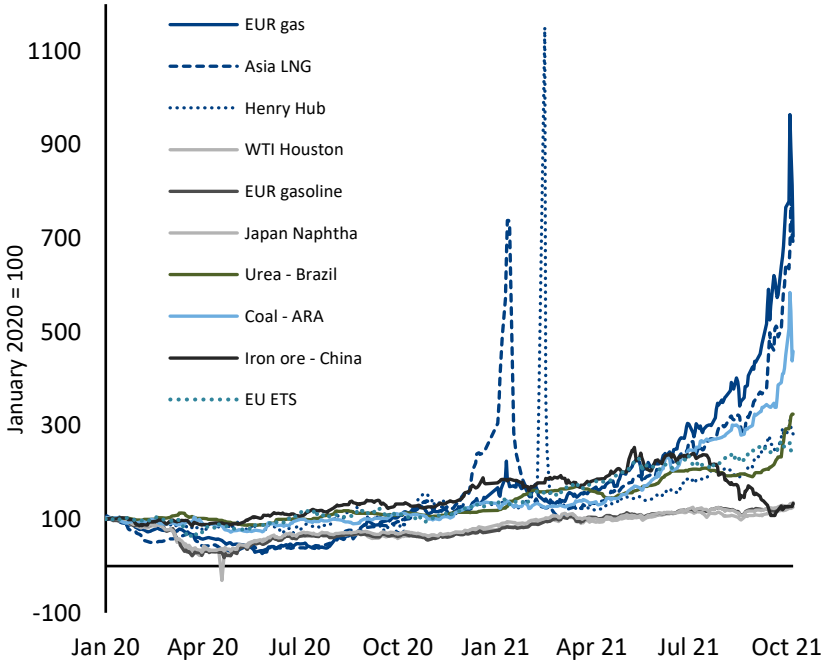


Gas as outlier

Pc change since January 2020

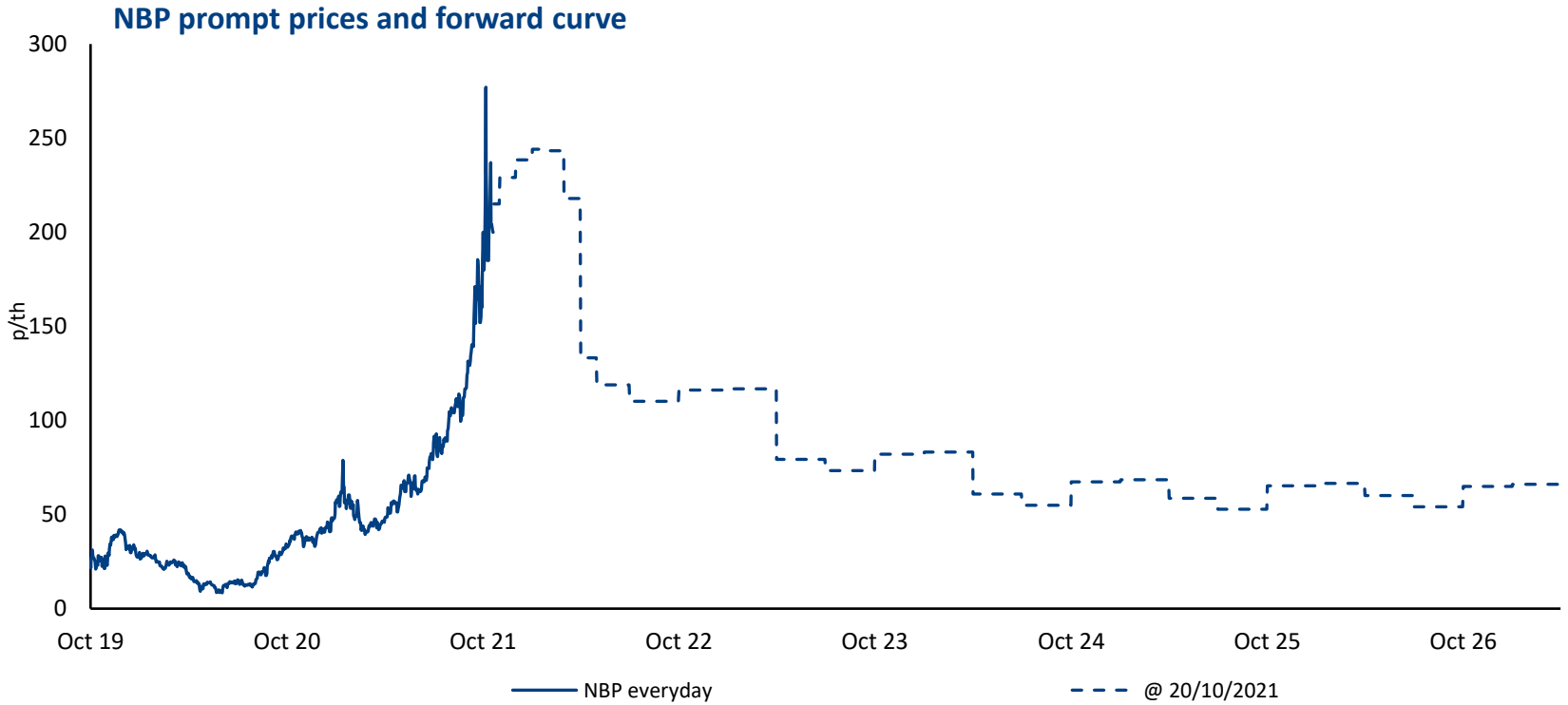


Global prices since January 2020



www.argusmedia.com

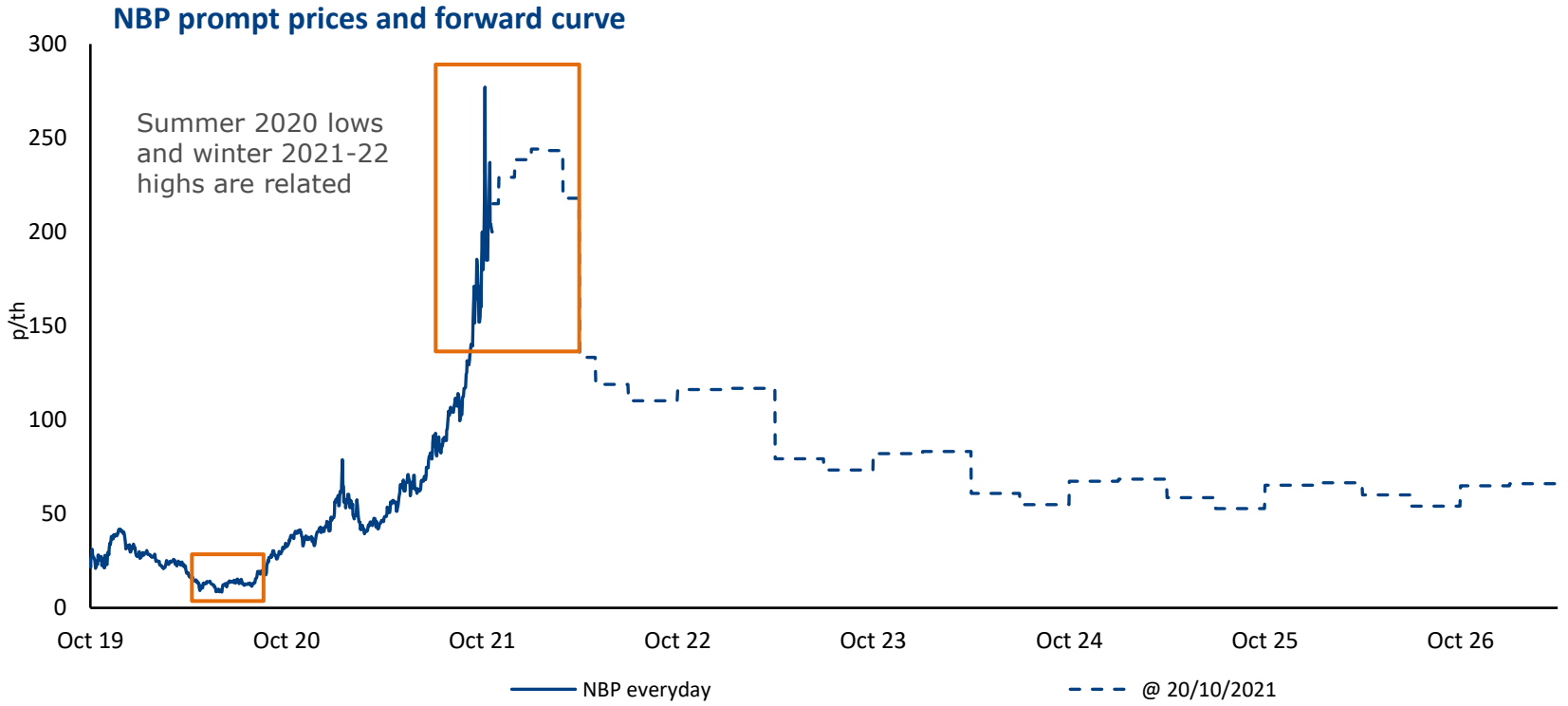
The big picture: NBP prices past and future



argus

www.argusmedia.com

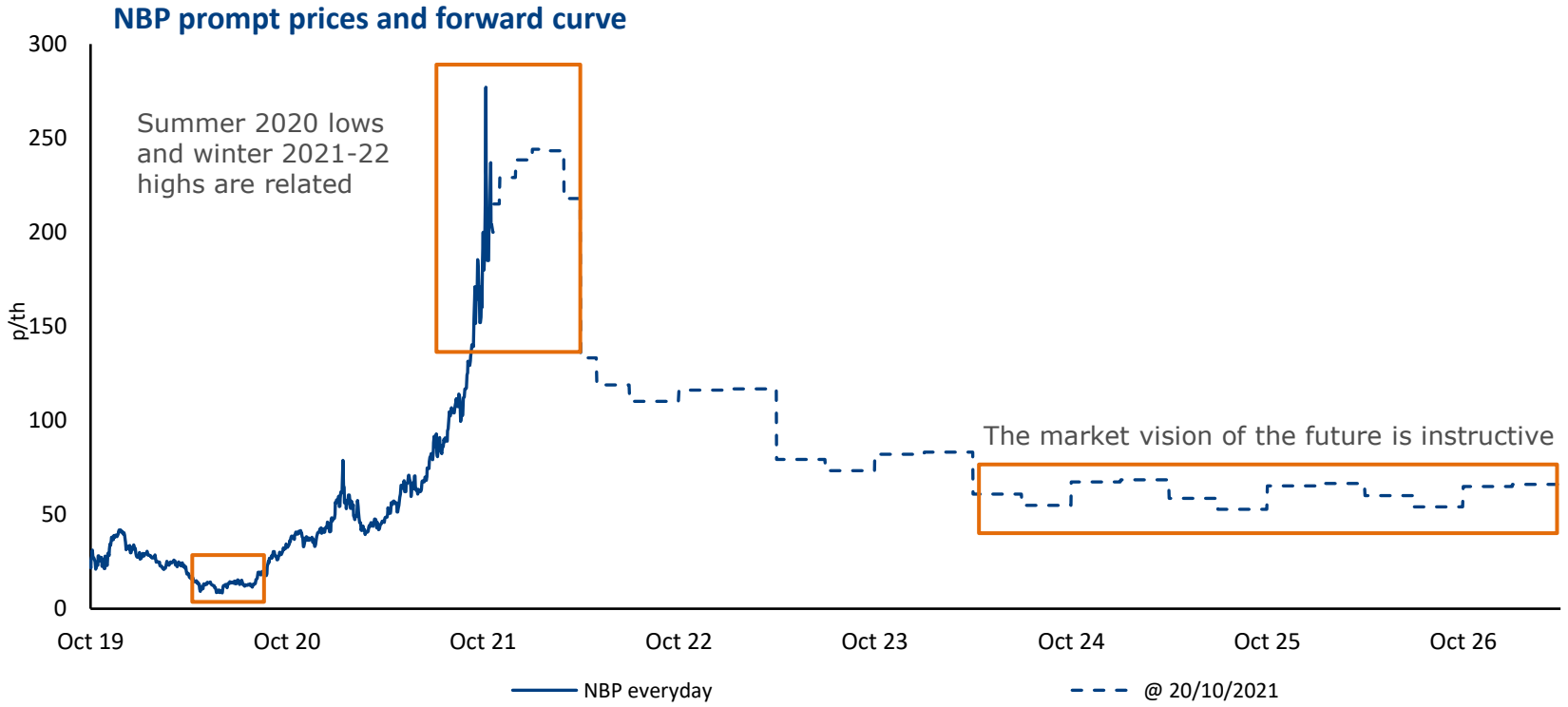
The summer lows and winter highs are related



argus

www.argusmedia.com

Forward prices and a post-coal future



argus

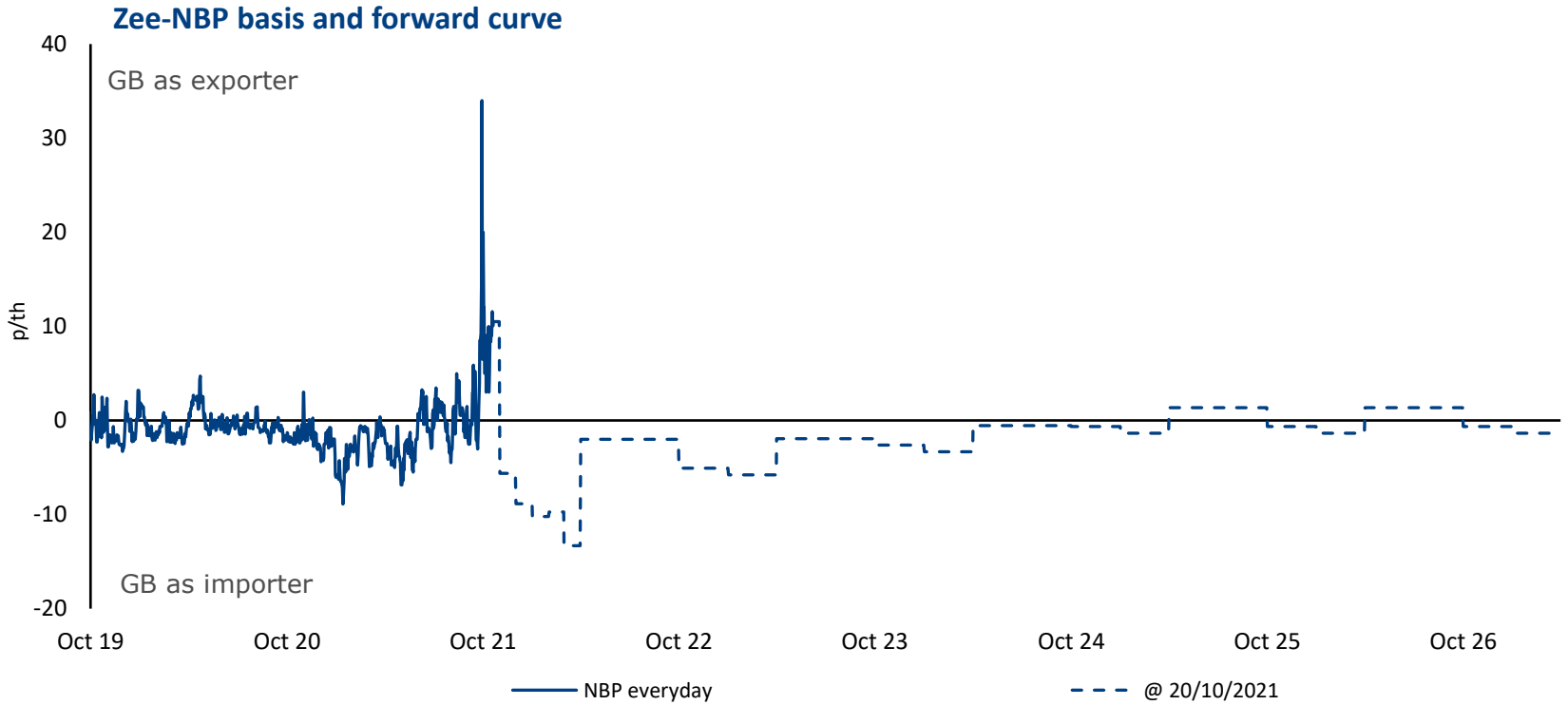
www.argusmedia.com

The awkward middle years

argus

www.argusmedia.com

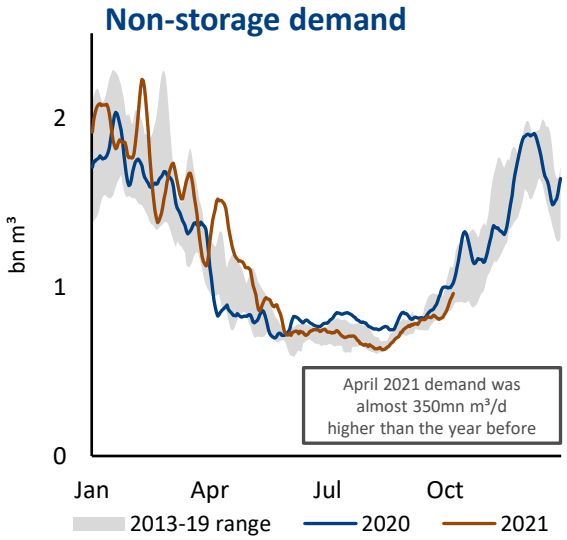
A similar pattern applies to the cross-Channel basis

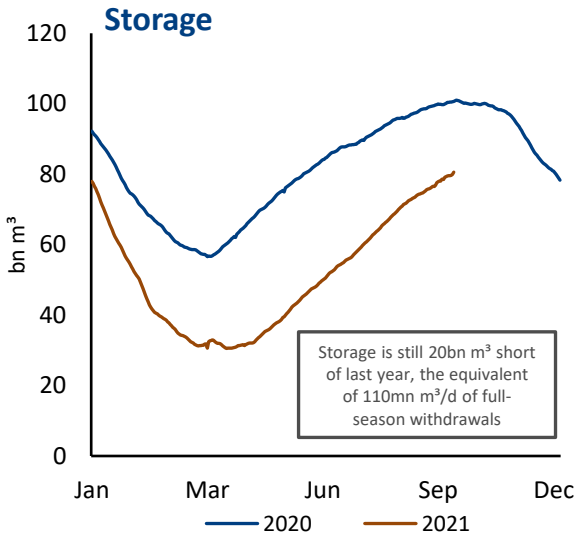


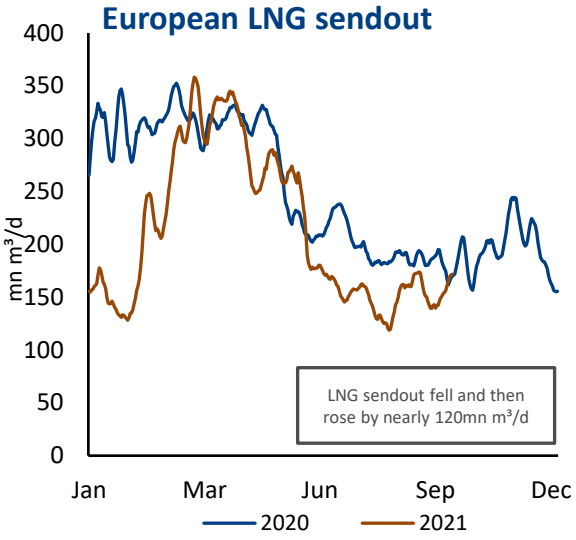
argus

www.argusmedia.com

Where we stand

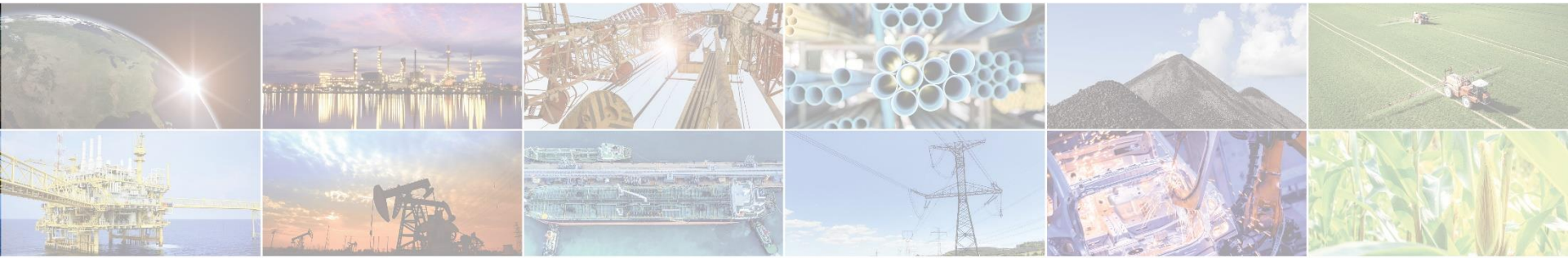






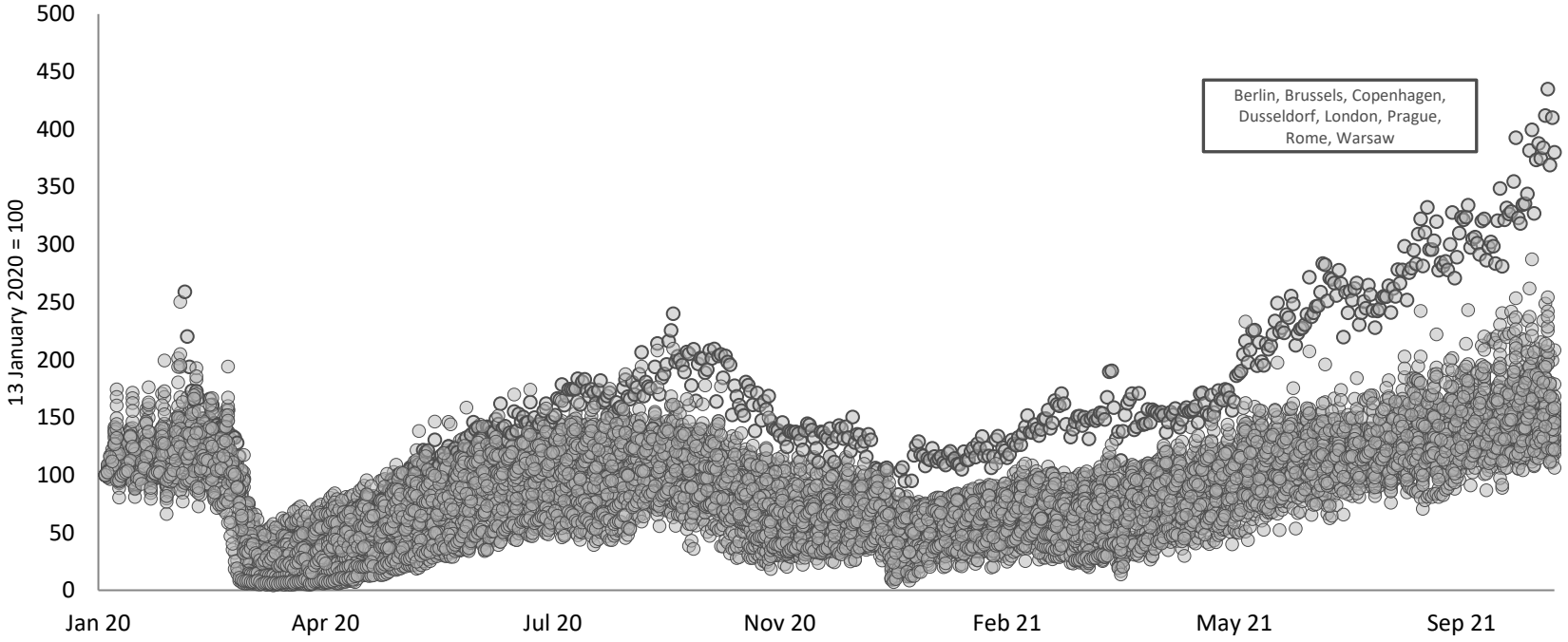
Demand

Differentiating the pandemic from the weather and price



Movement and demand

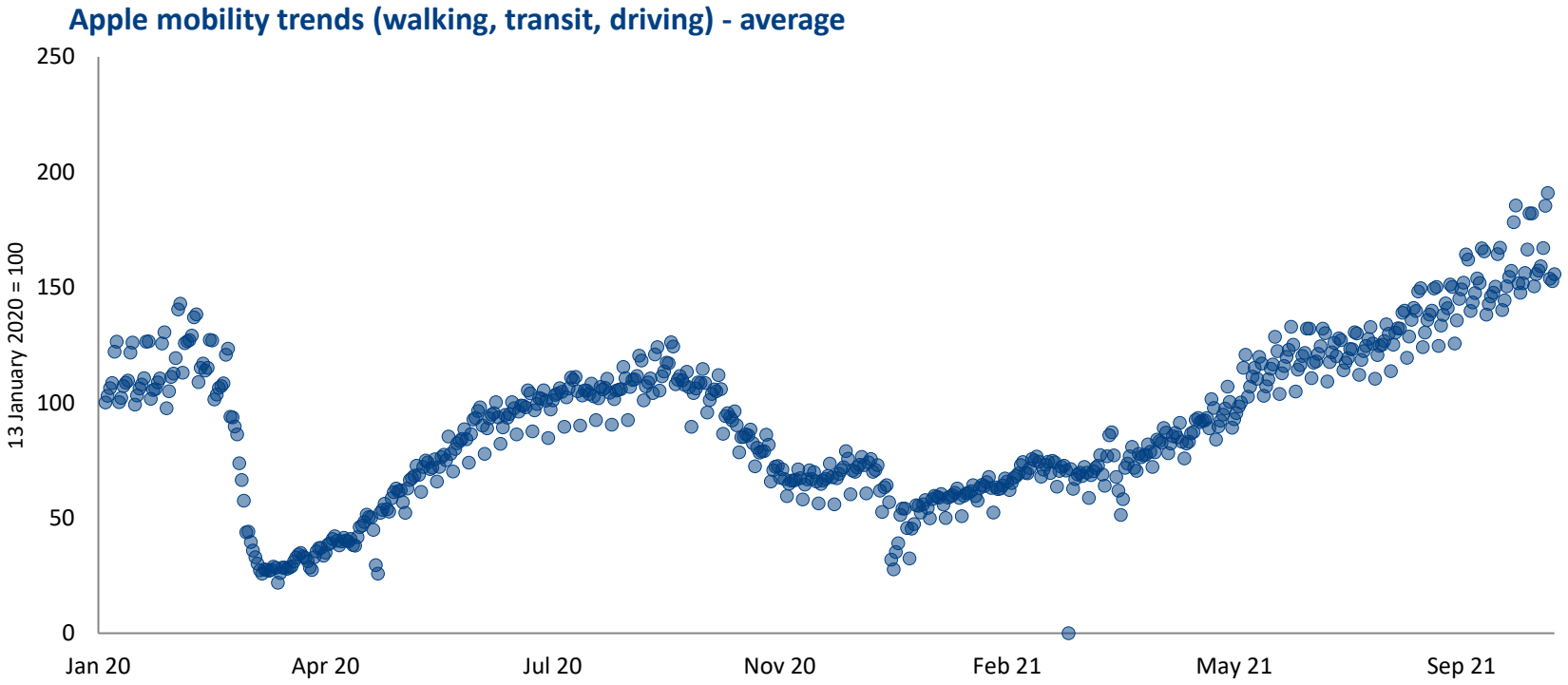
Apple mobility trends (walking, transit, driving)



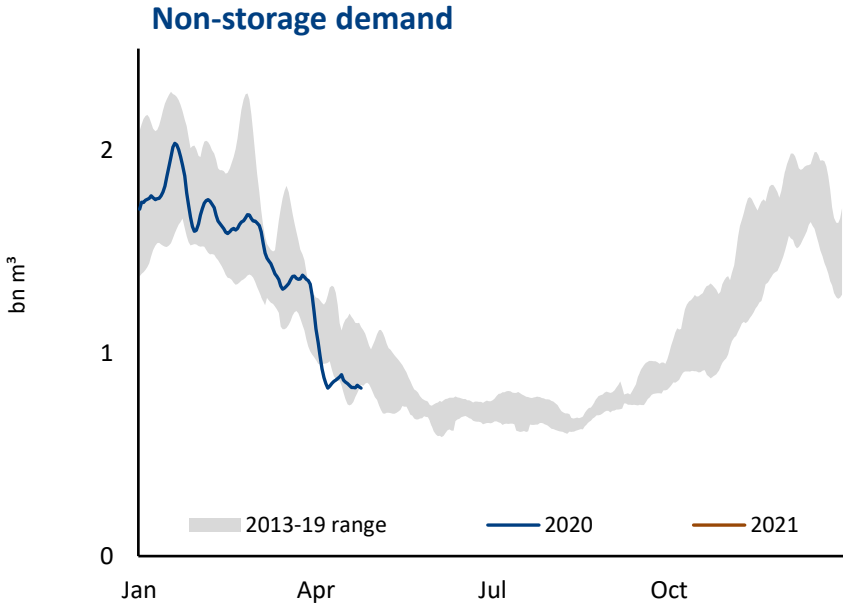
argus

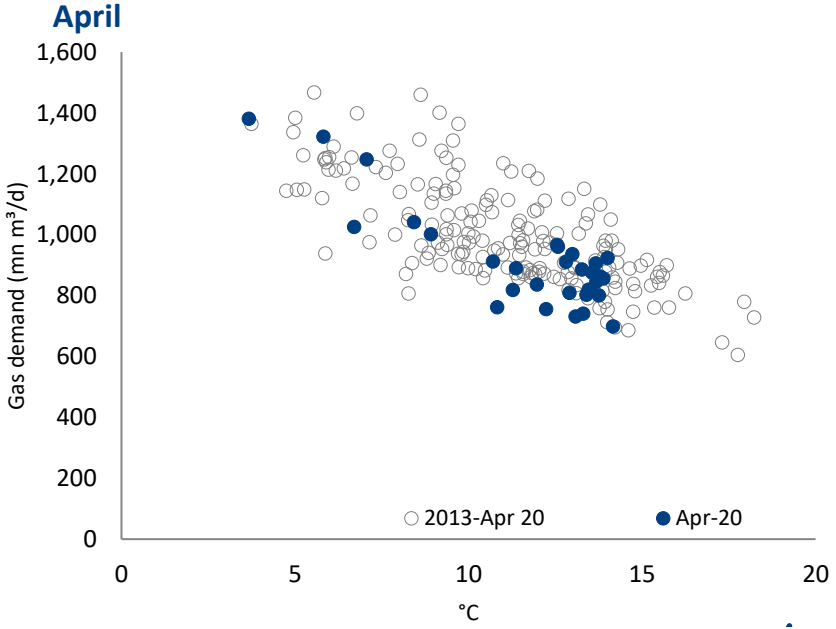
www.argusmedia.com

Movement and demand



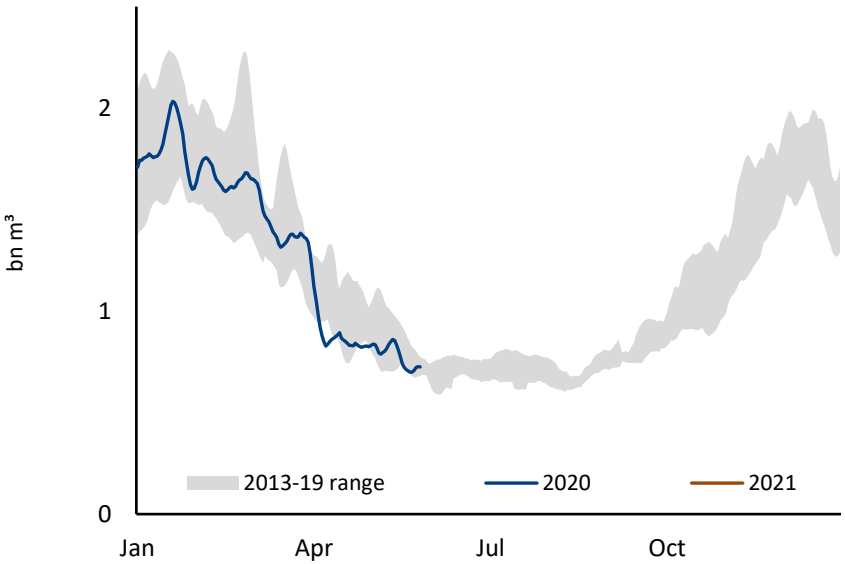
April – lockdown, holidays and an early spring



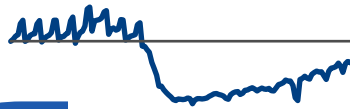


May

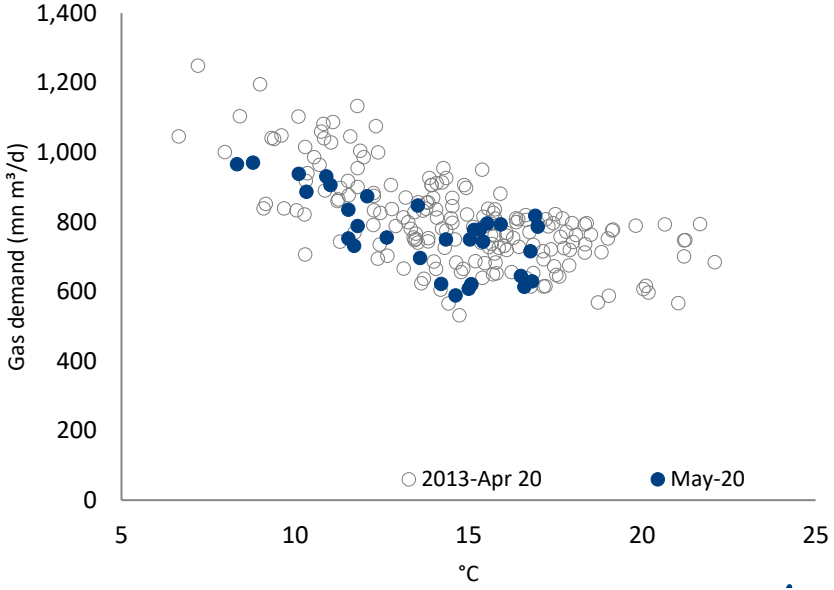
Non-storage demand



Apple mobility

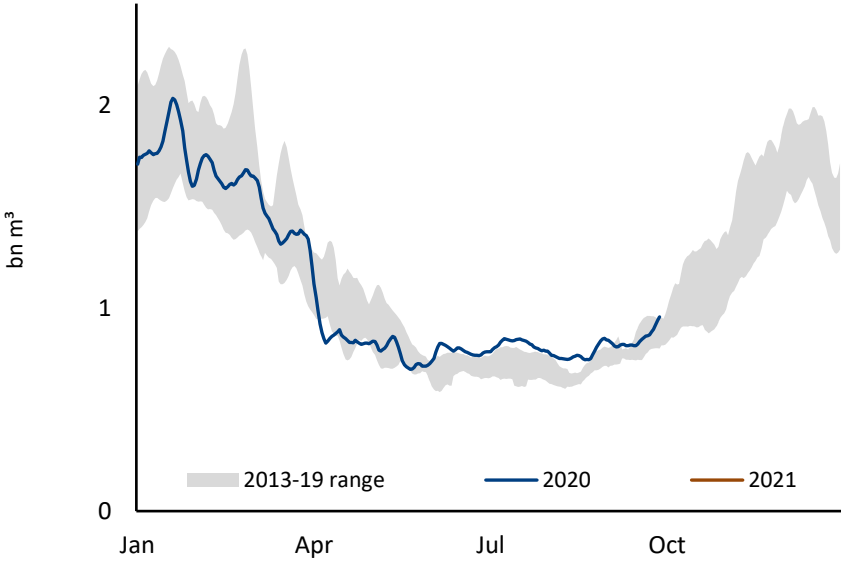


May

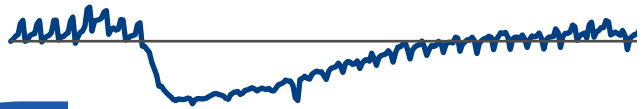


June-September

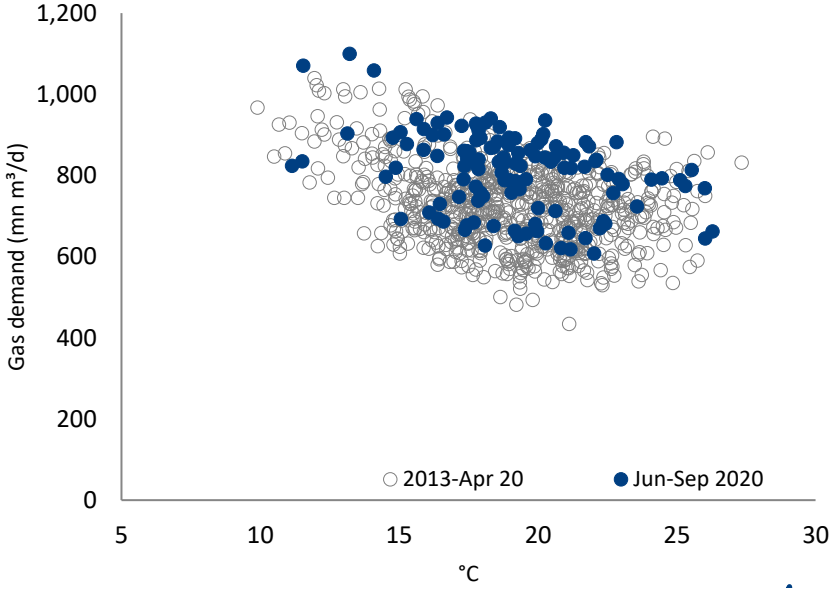
Non-storage demand



Apple mobility



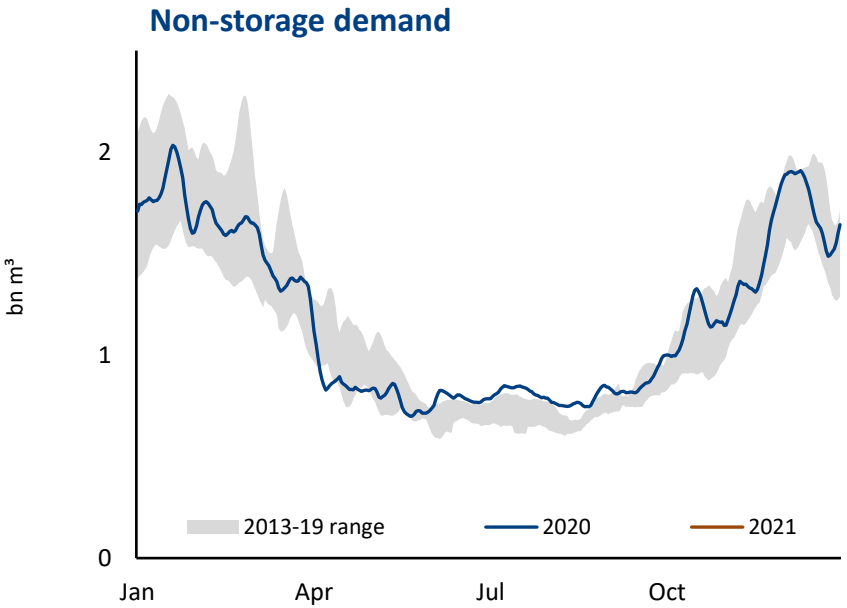
June-September

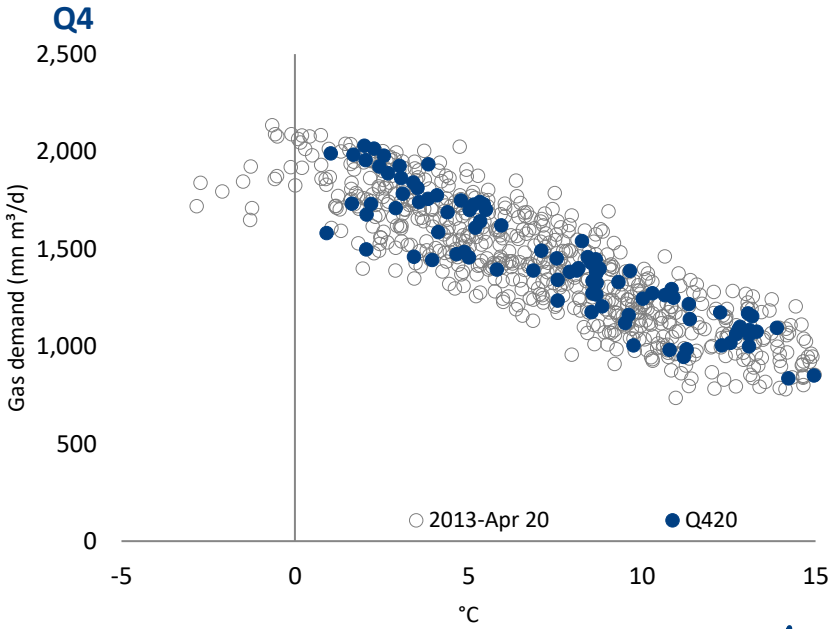


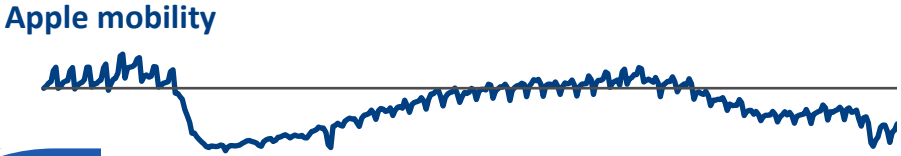
argus

www.argusmedia.com

October-December





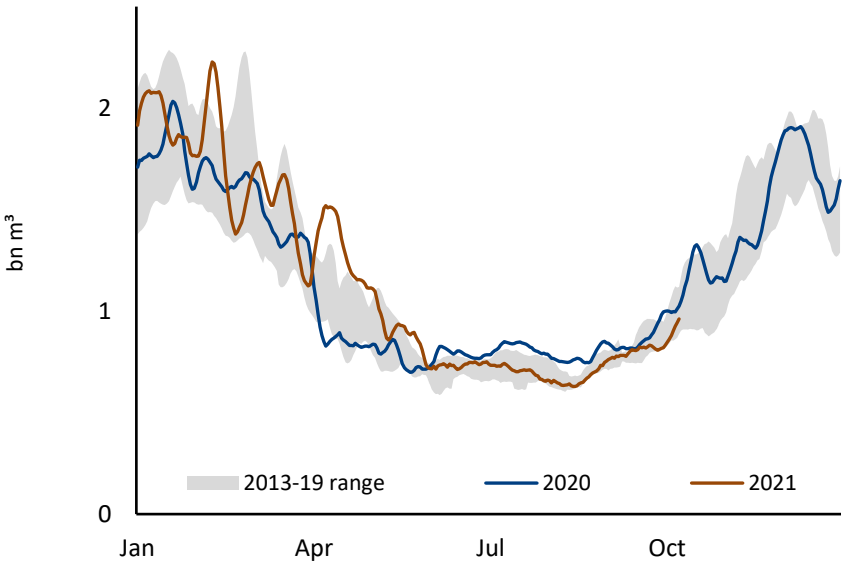


argus

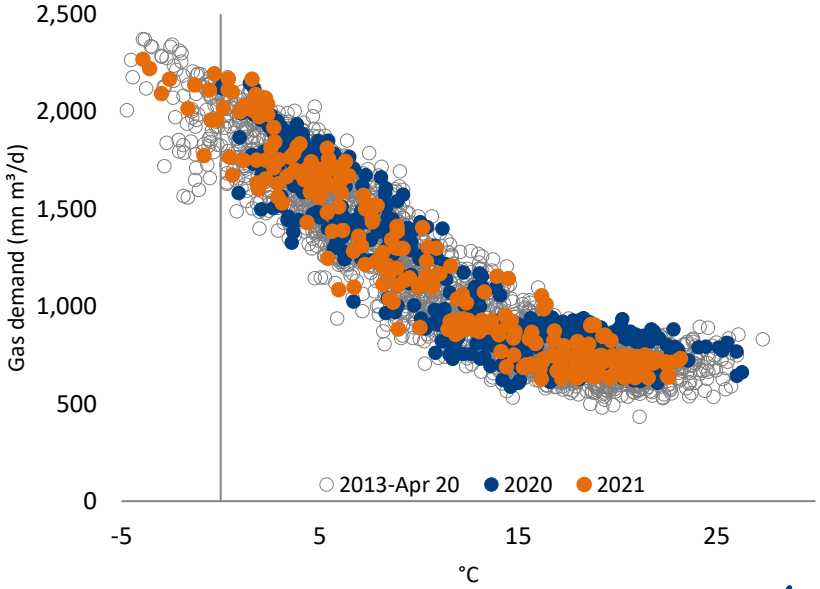
www.argusmedia.com

2021 so far

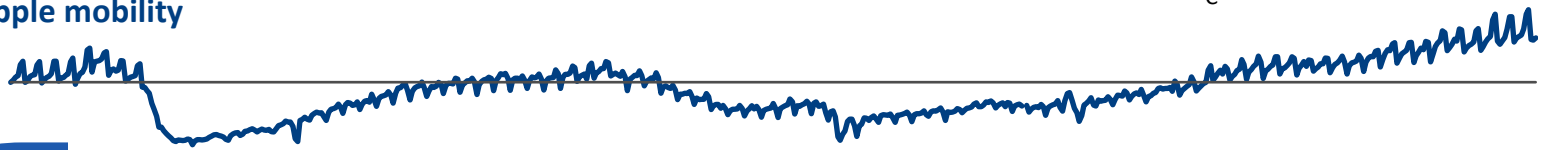
Non-storage demand



April 2020-present

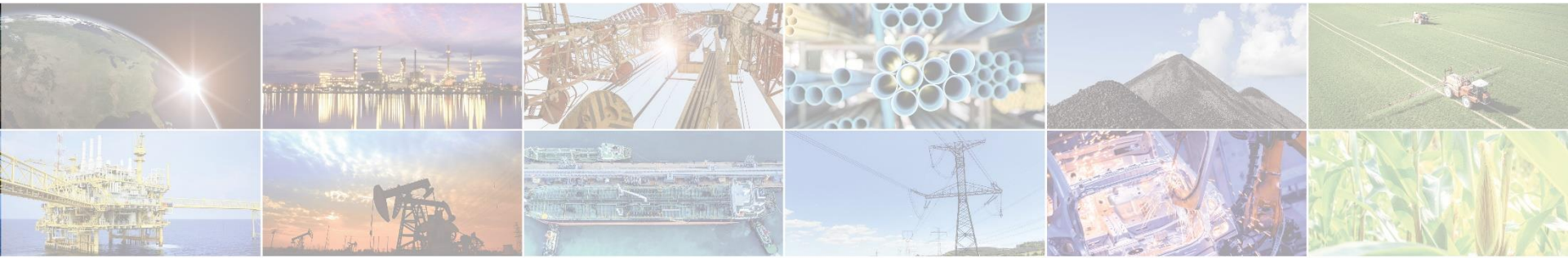


Apple mobility



Electricity

Fuel switching and the end of fuel switching



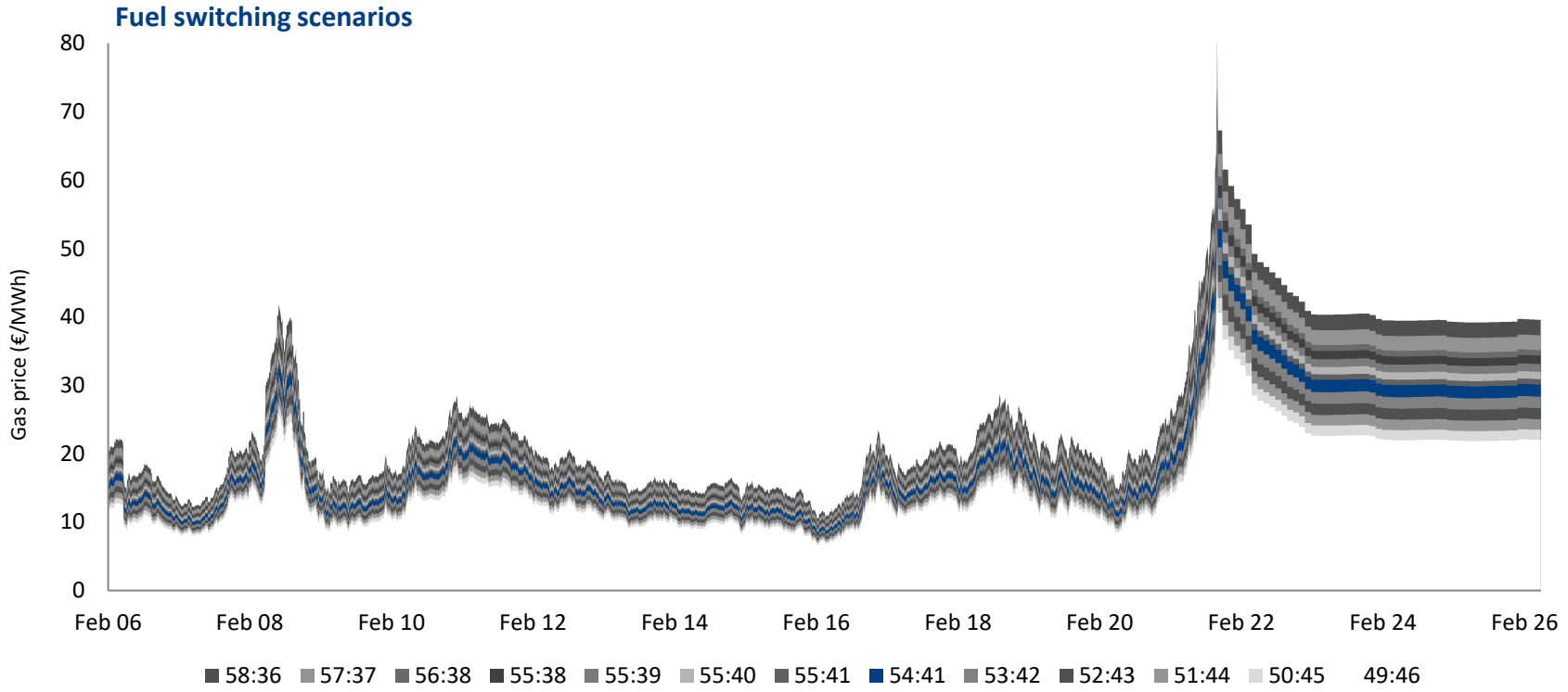
Market Reporting

Consulting

Events

illuminating the markets

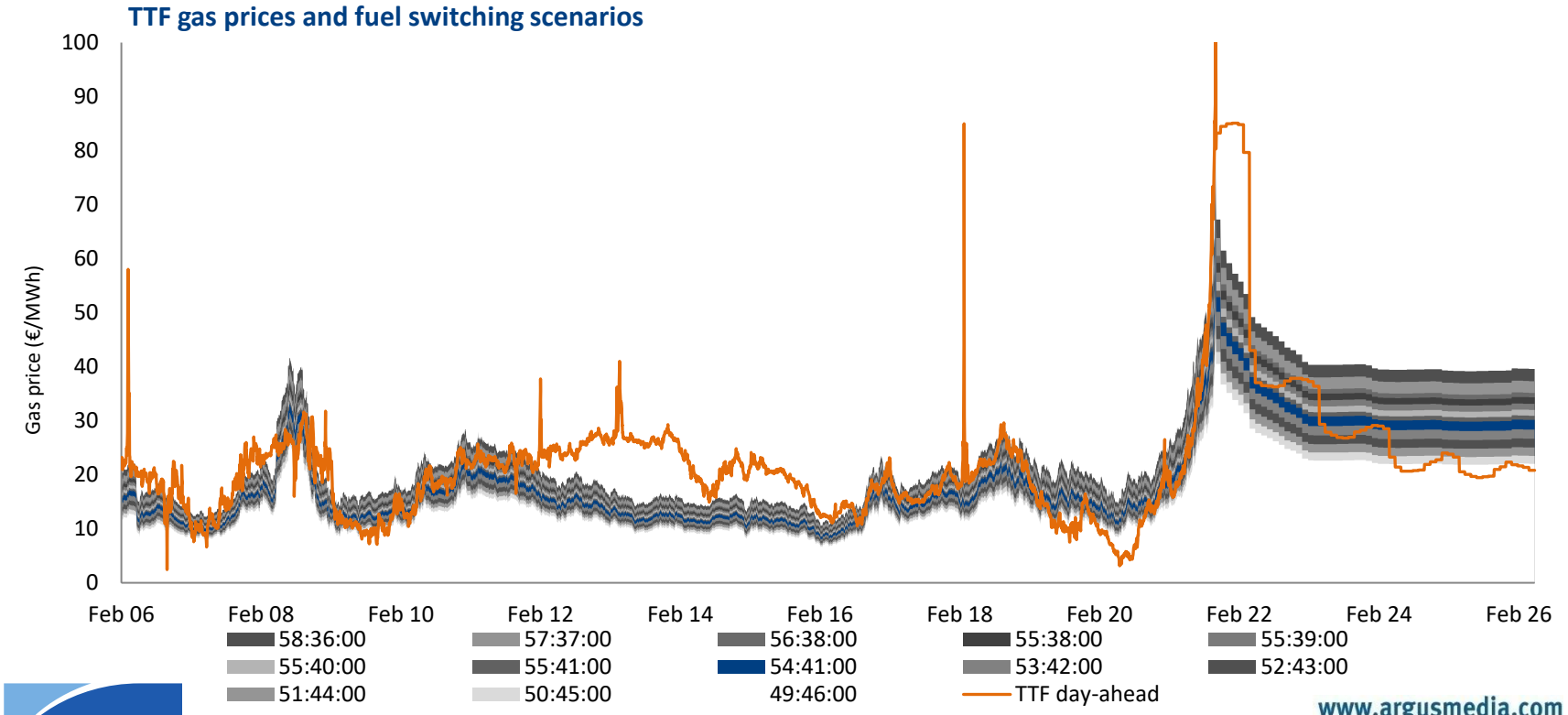
Gas prices beyond fuel switching



argus

www.argusmedia.com

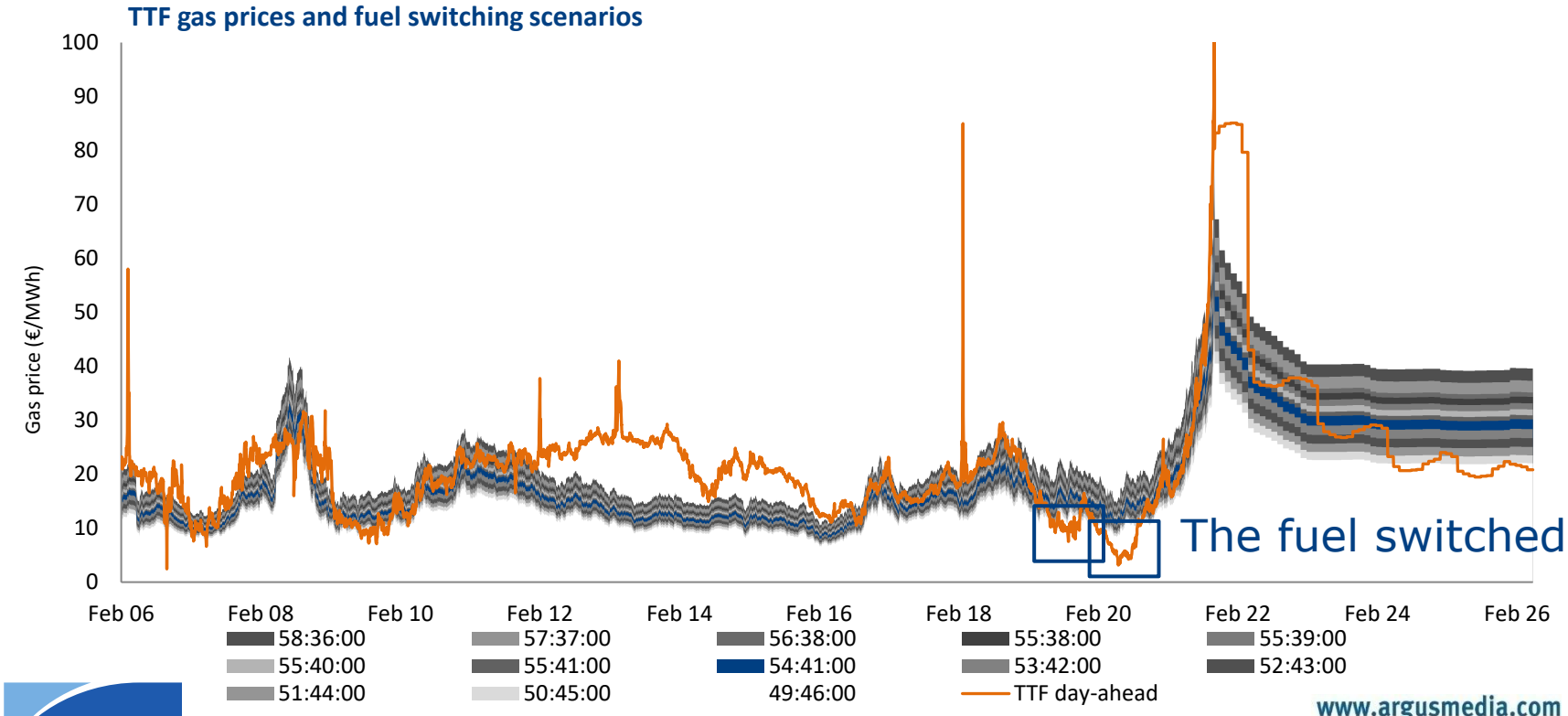
Gas prices beyond fuel switching



argus

www.argusmedia.com

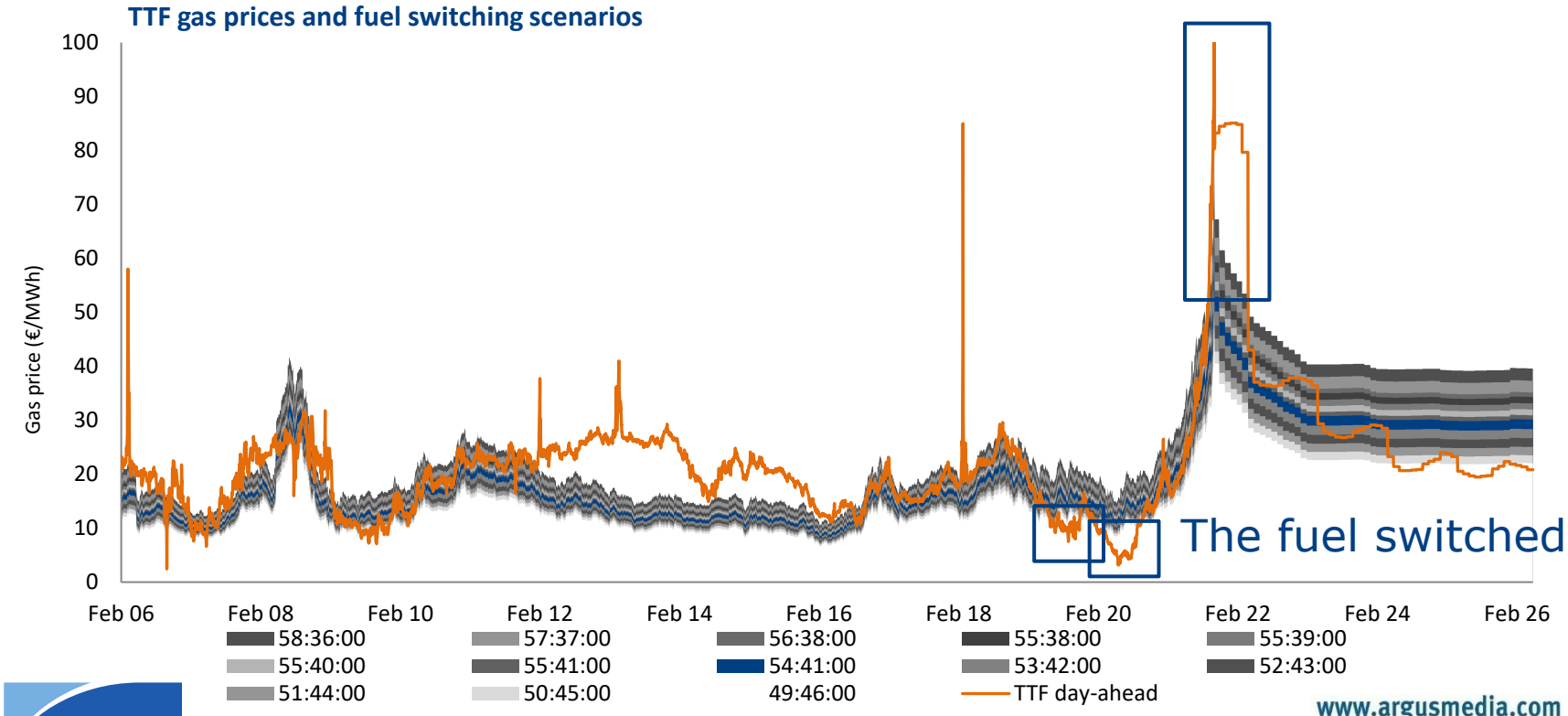
Gas prices beyond fuel switching



argus

www.argusmedia.com

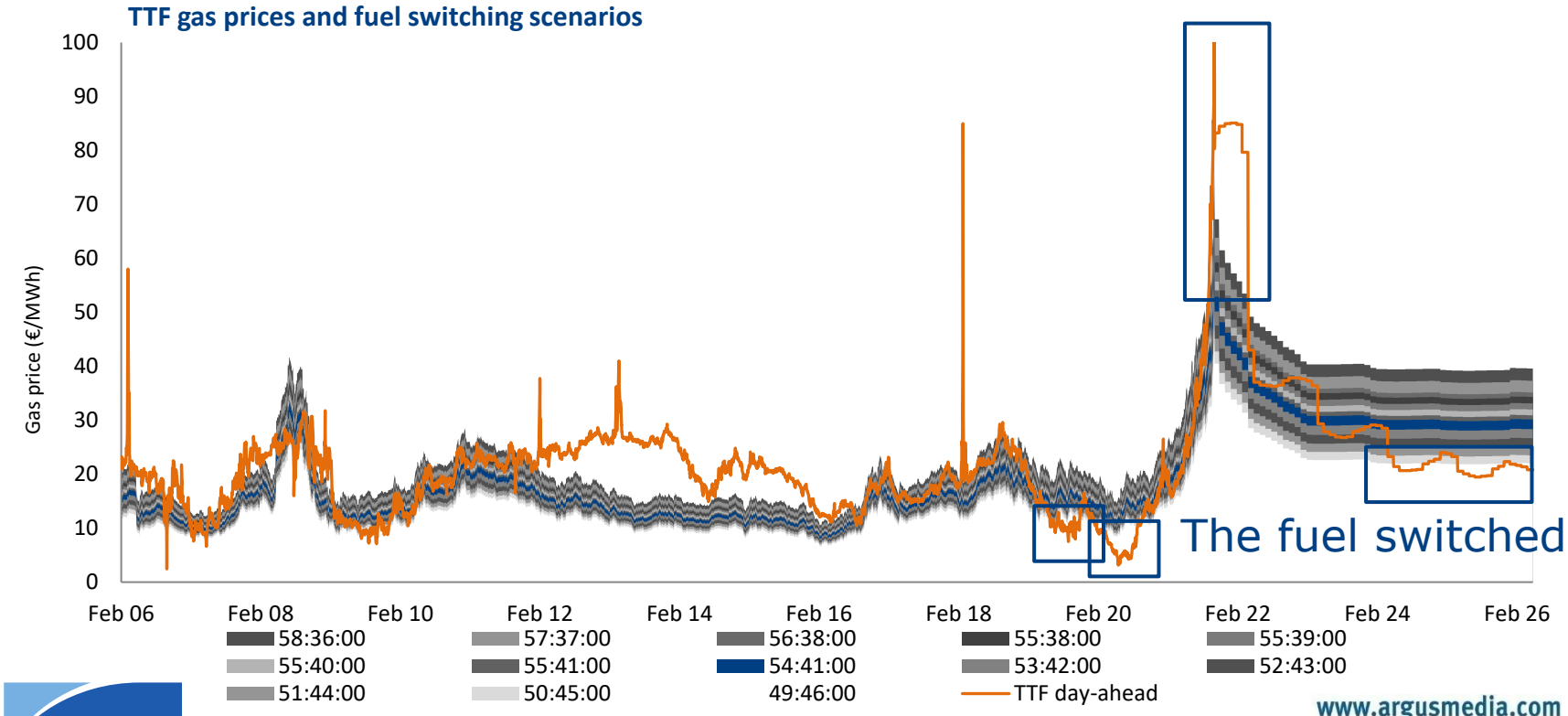
Gas prices beyond fuel switching



argus

www.argusmedia.com

Gas prices beyond fuel switching

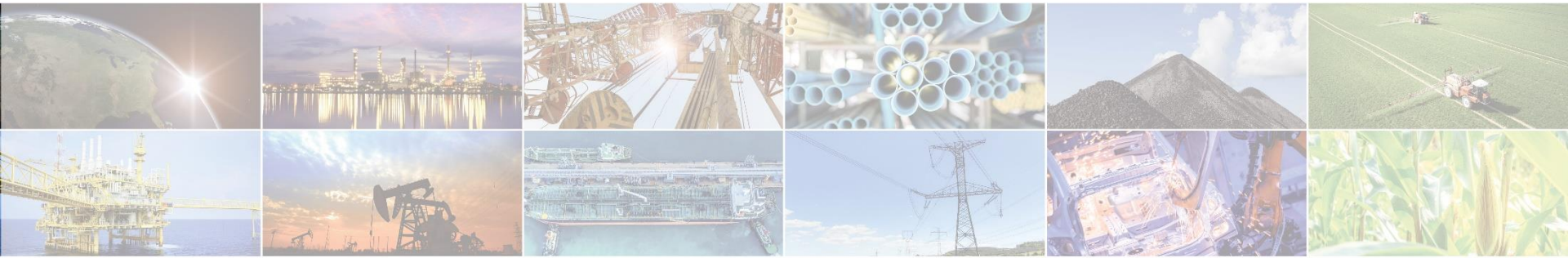


argus

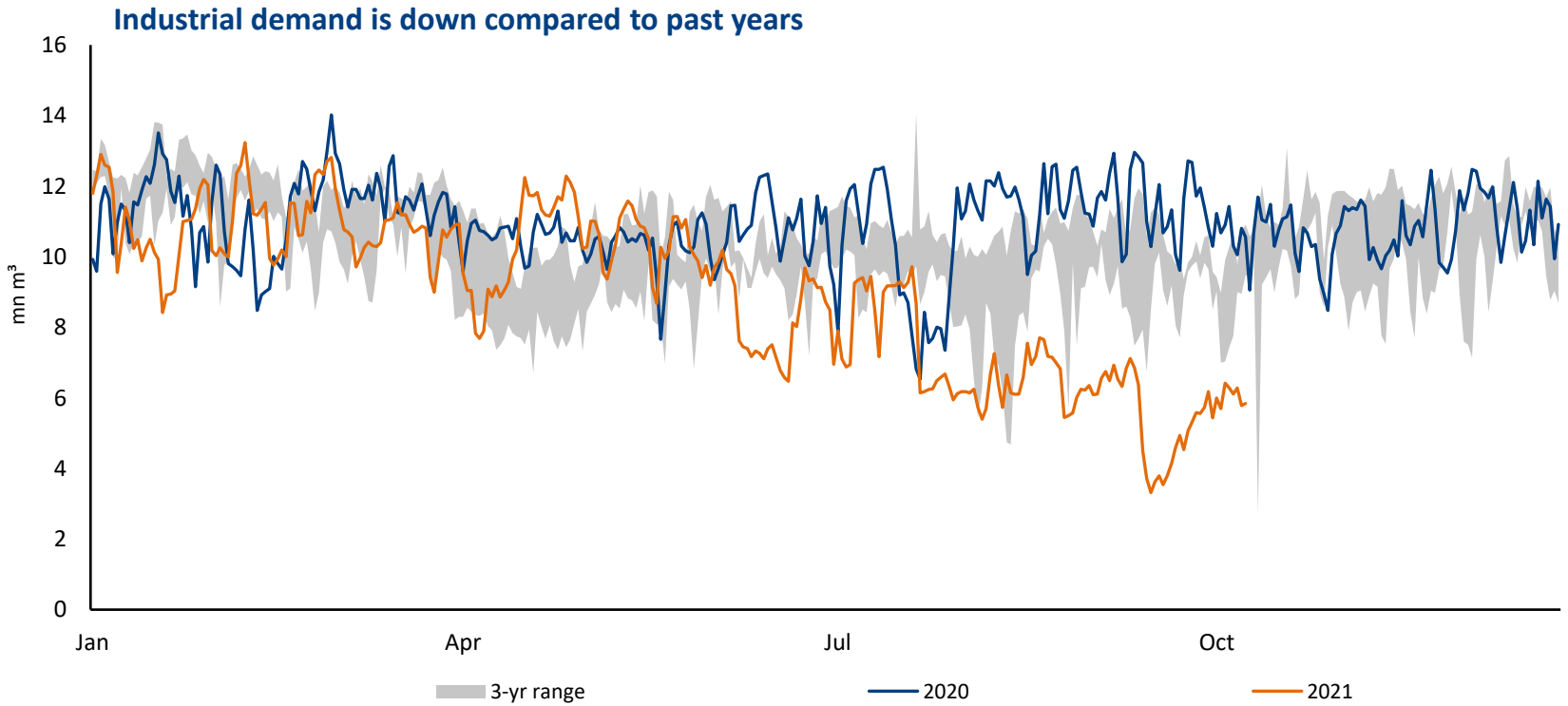
www.argusmedia.com

Industrial gas demand

Flexibility where you don’t necessarily want it



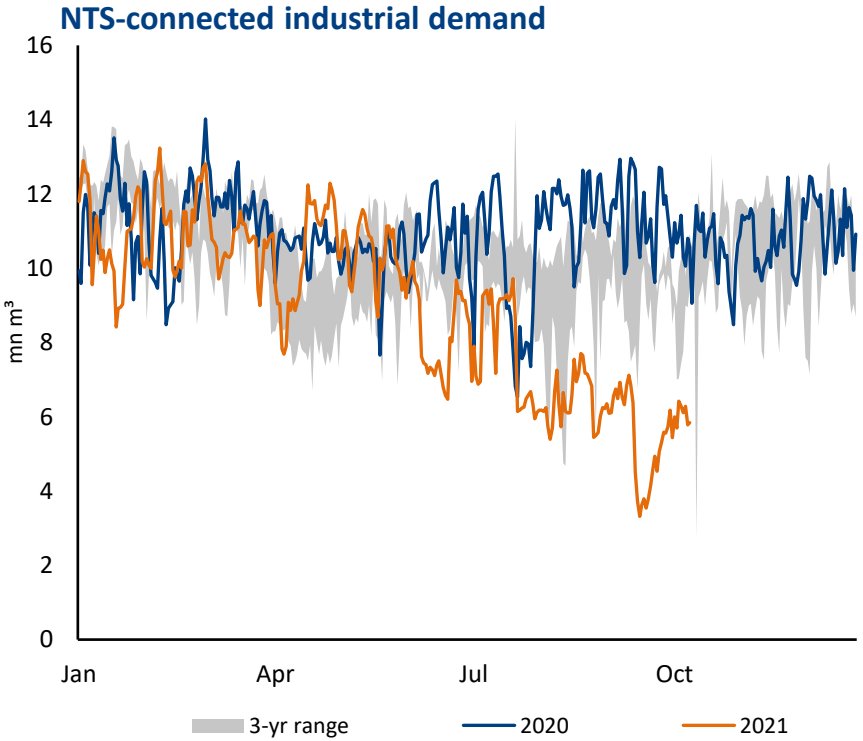
NTS-connected industrial demand

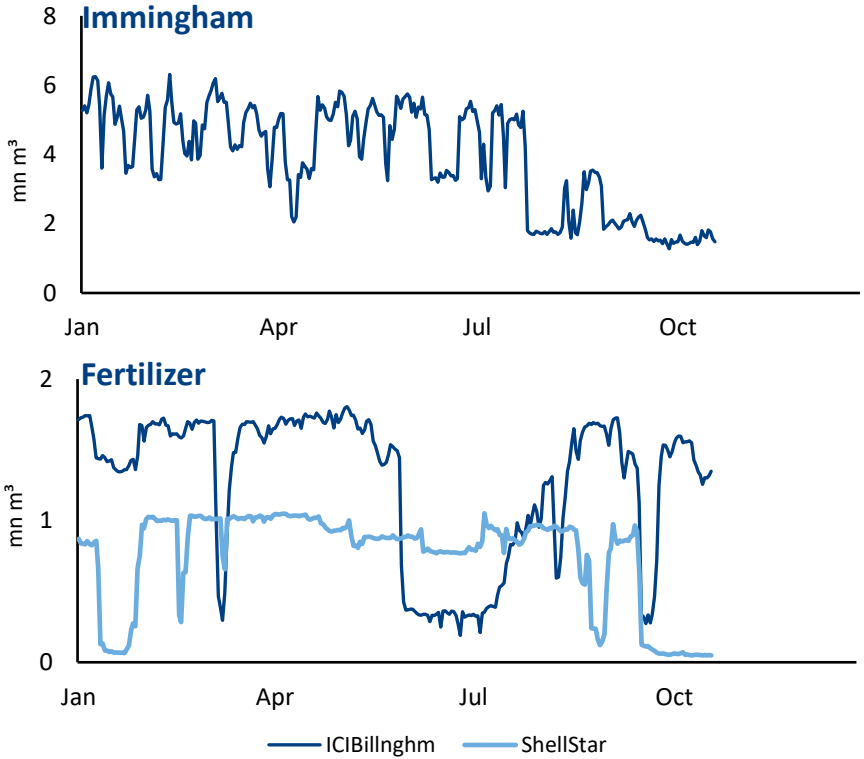


argus

www.argusmedia.com

NTS-connected industrial demand

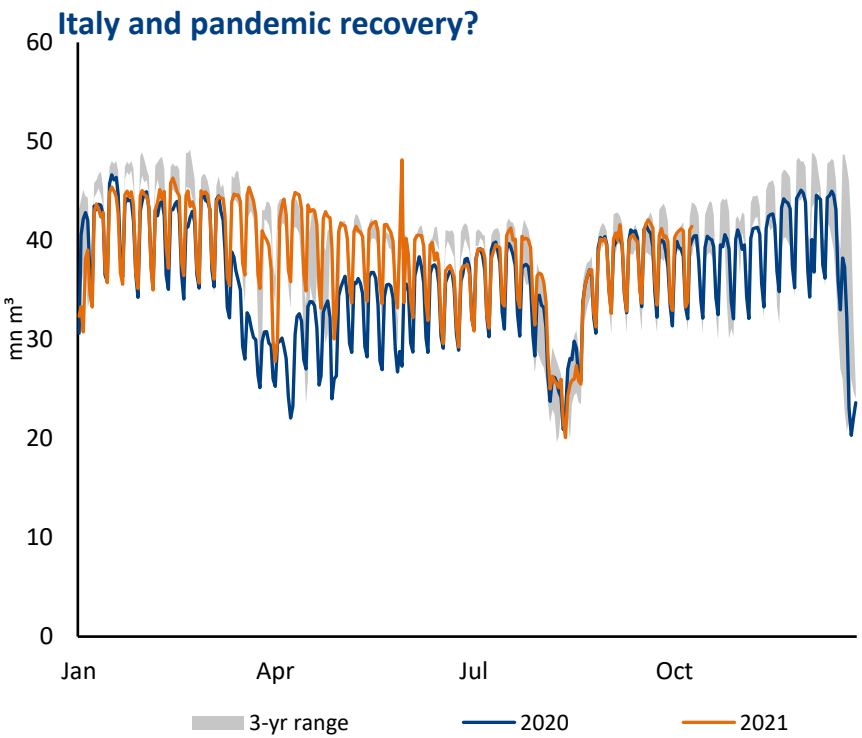


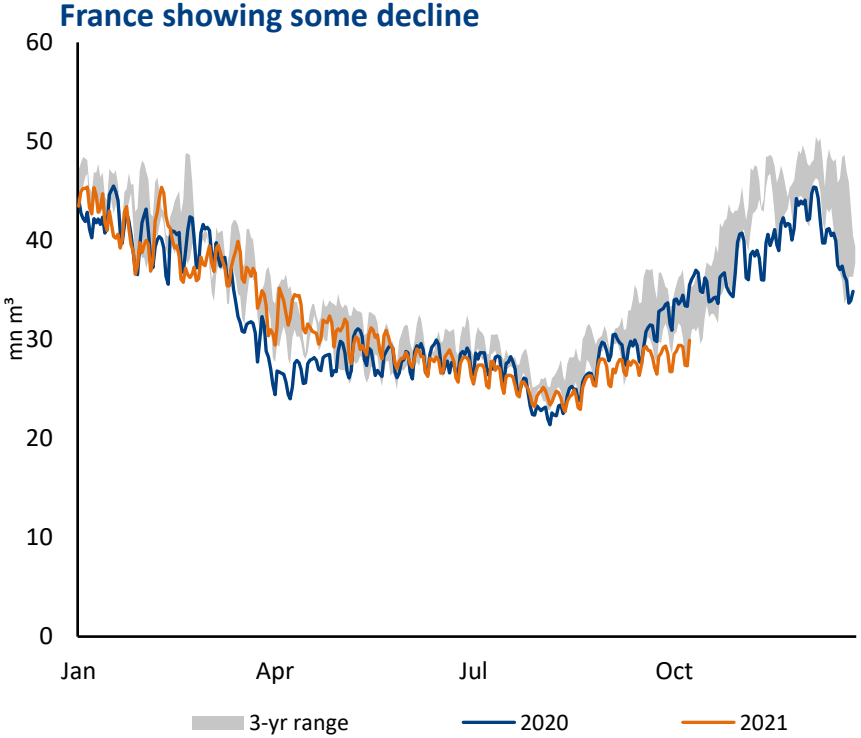


argus

www.argusmedia.com

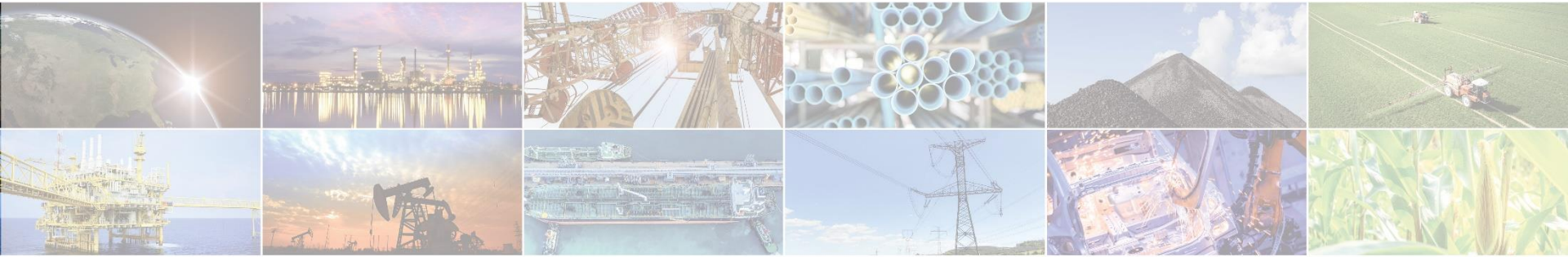
Italy and France



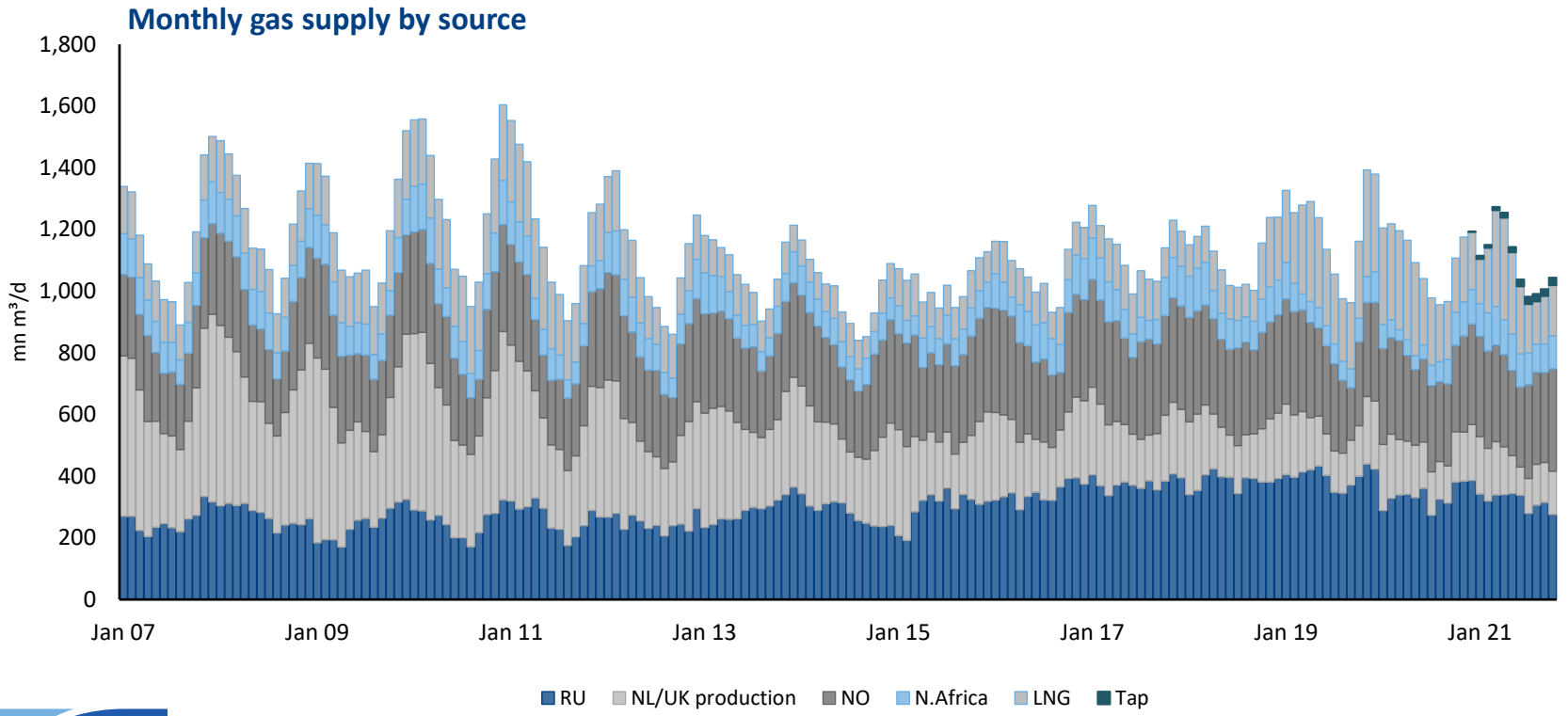


Supply

Where will we find flexibility if not from consumers?



The five (or six) sources of European supply

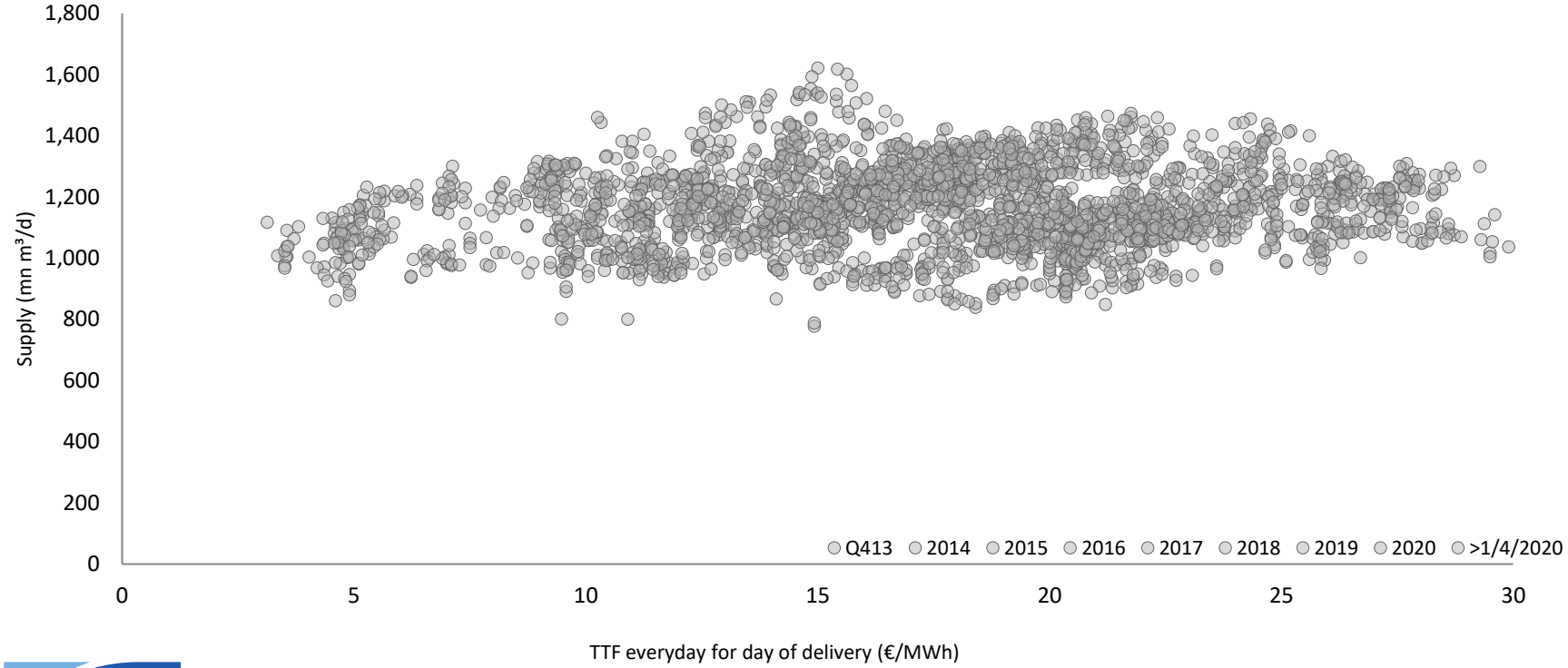


argus

www.argusmedia.com

European gas supply and prices

European gas supply and Dutch prompt prices October 2013-present

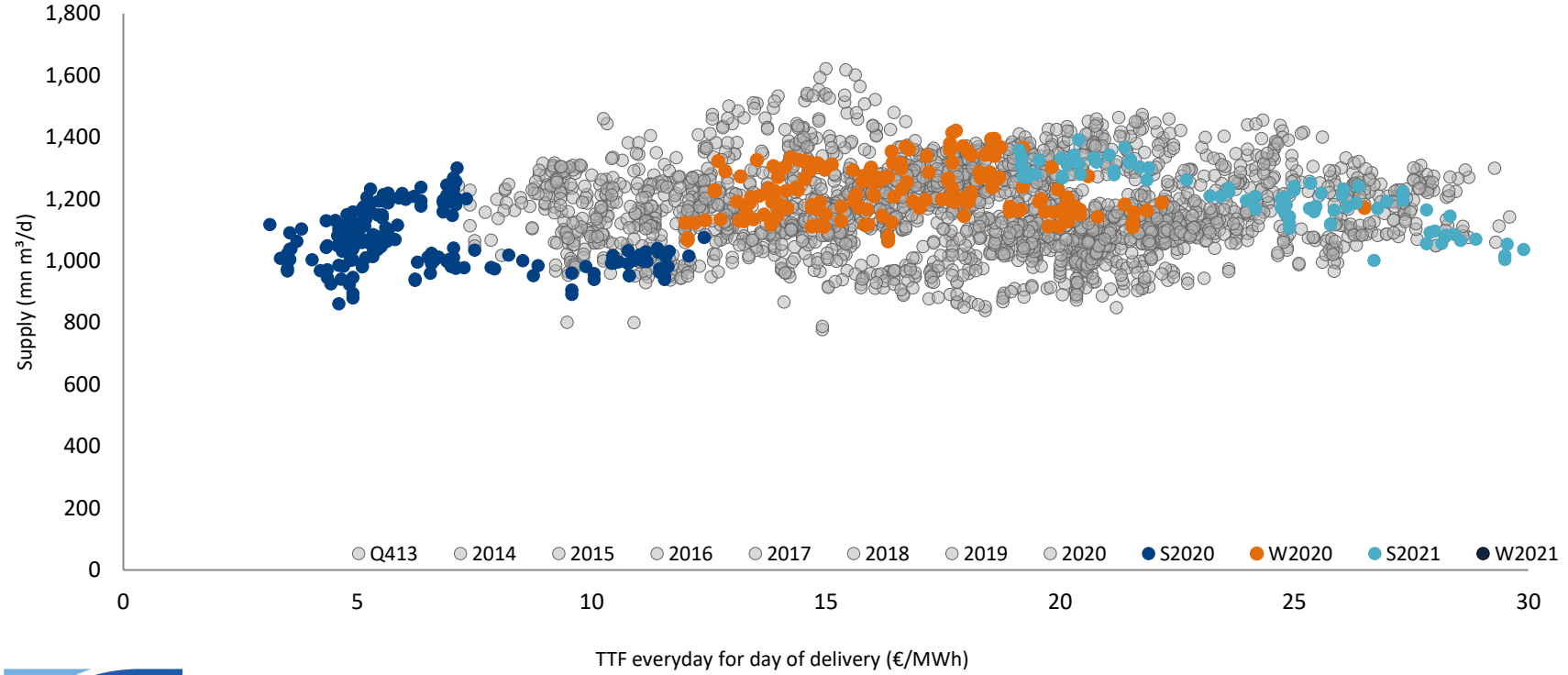


argus

www.argusmedia.com

European gas supply and prices

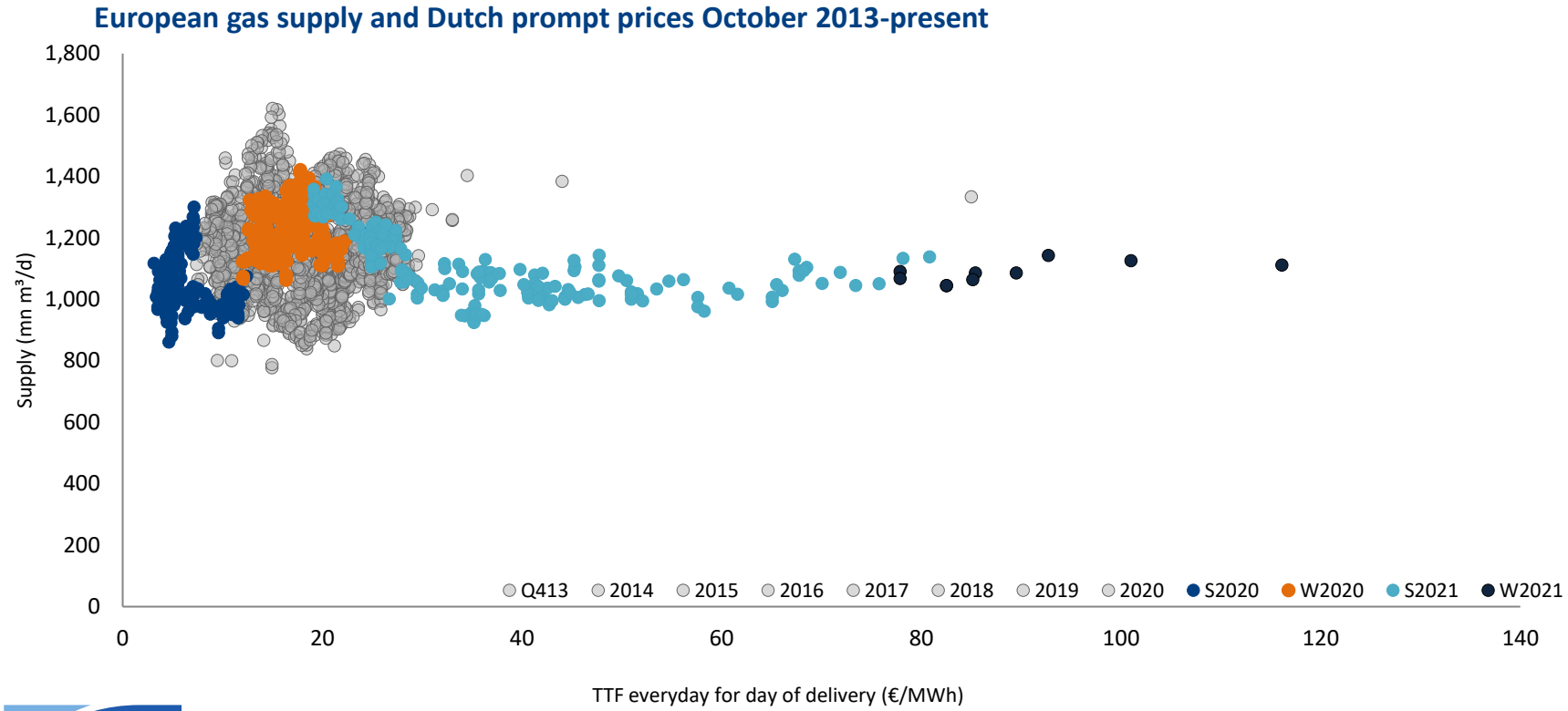
European gas supply and Dutch prompt prices October 2013-present



argus

www.argusmedia.com

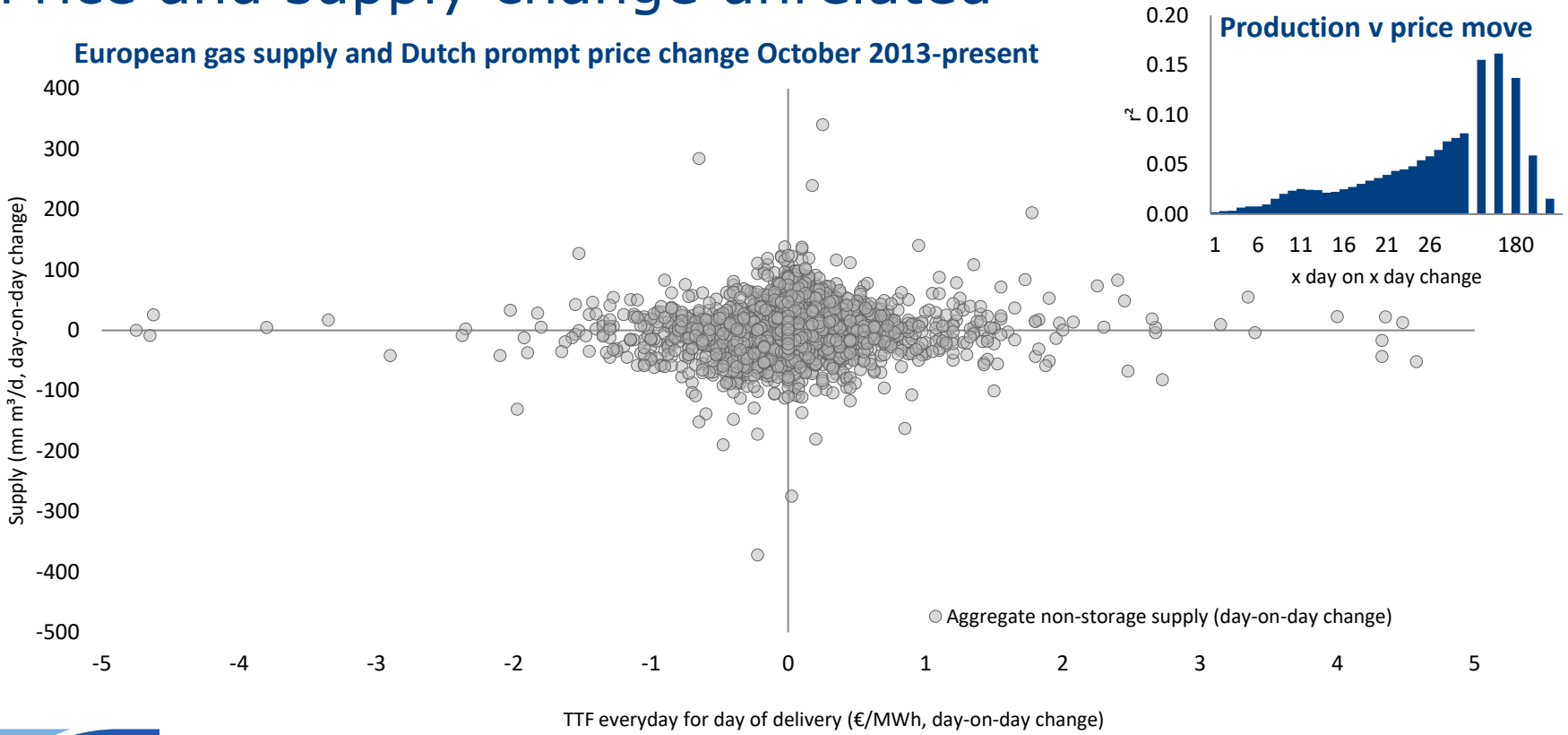
European gas supply and prices



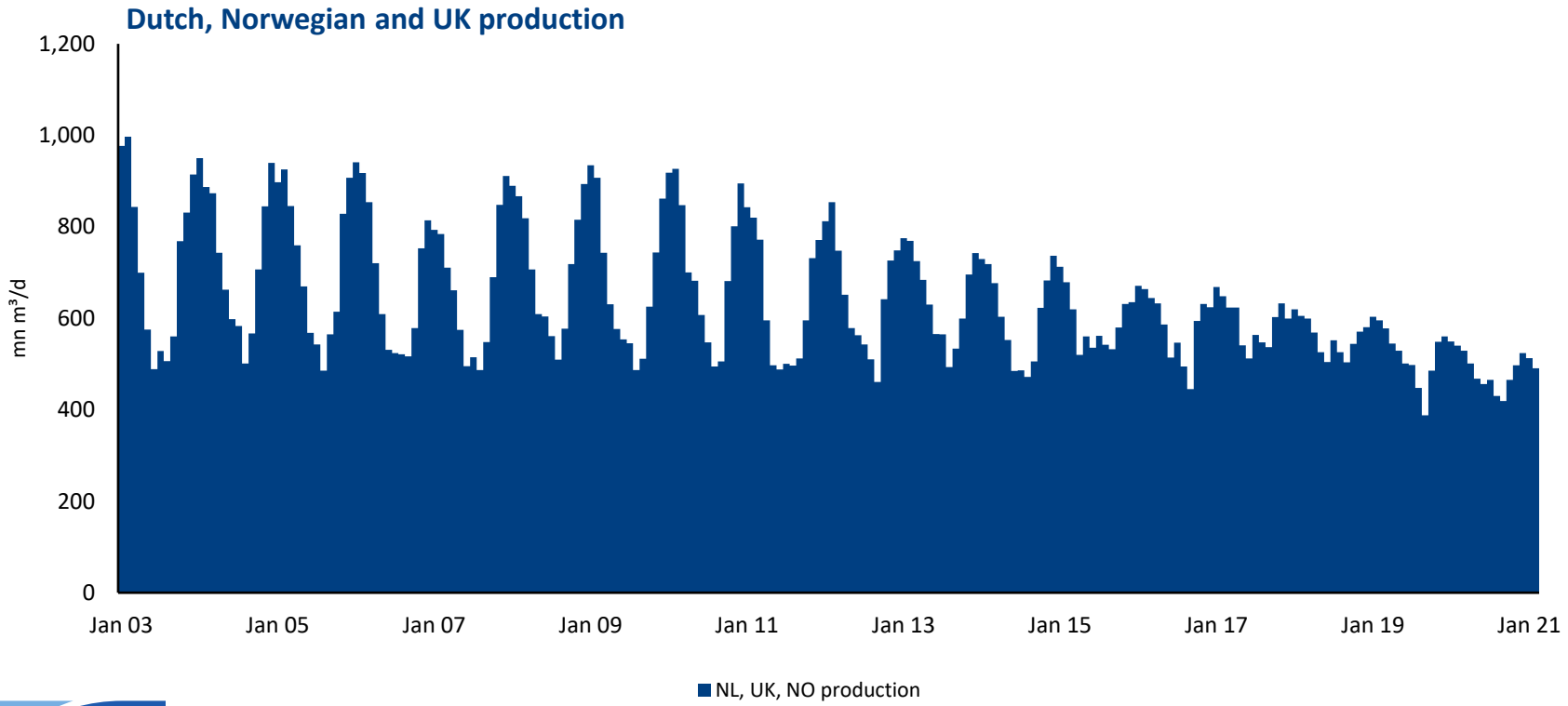
argus

www.argusmedia.com

Price and supply change unrelated



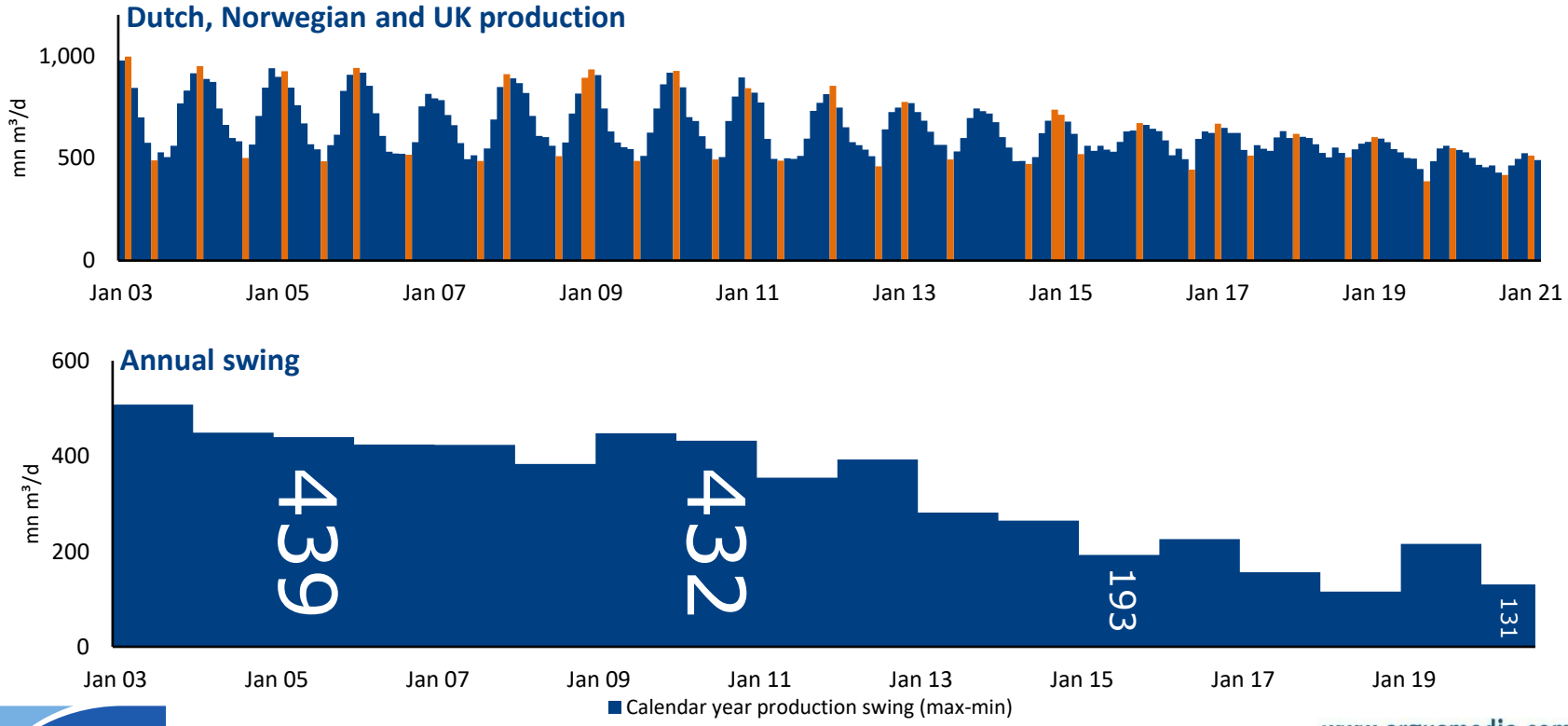
Production (and flexibility) decline



argus

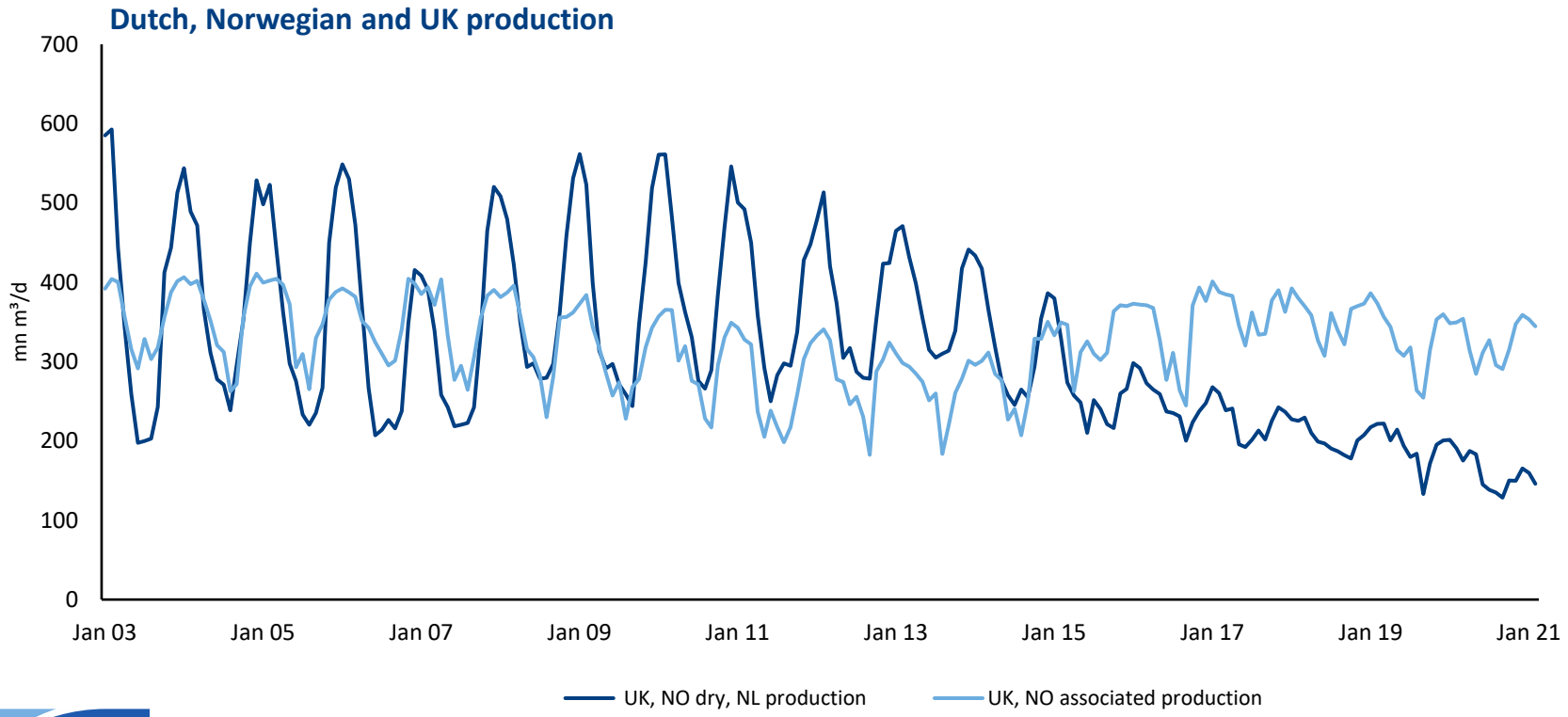
www.argusmedia.com

Production (and flexibility) decline



www.argusmedia.com

Production (and flexibility) decline

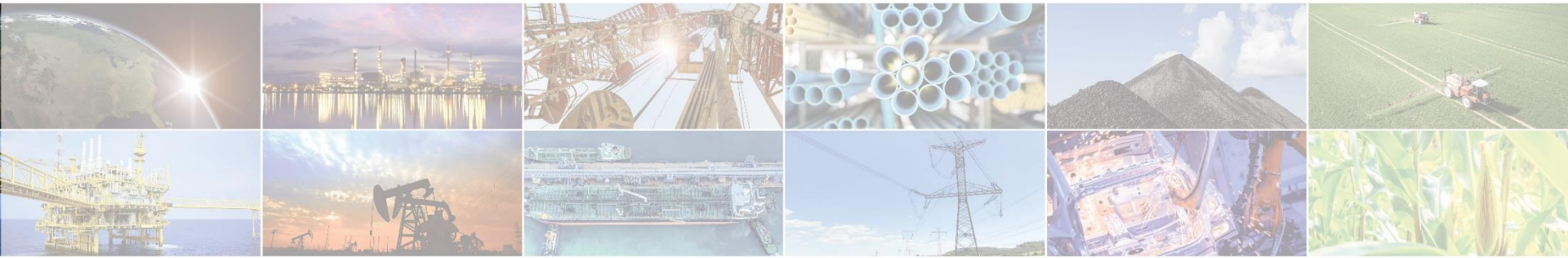


argus

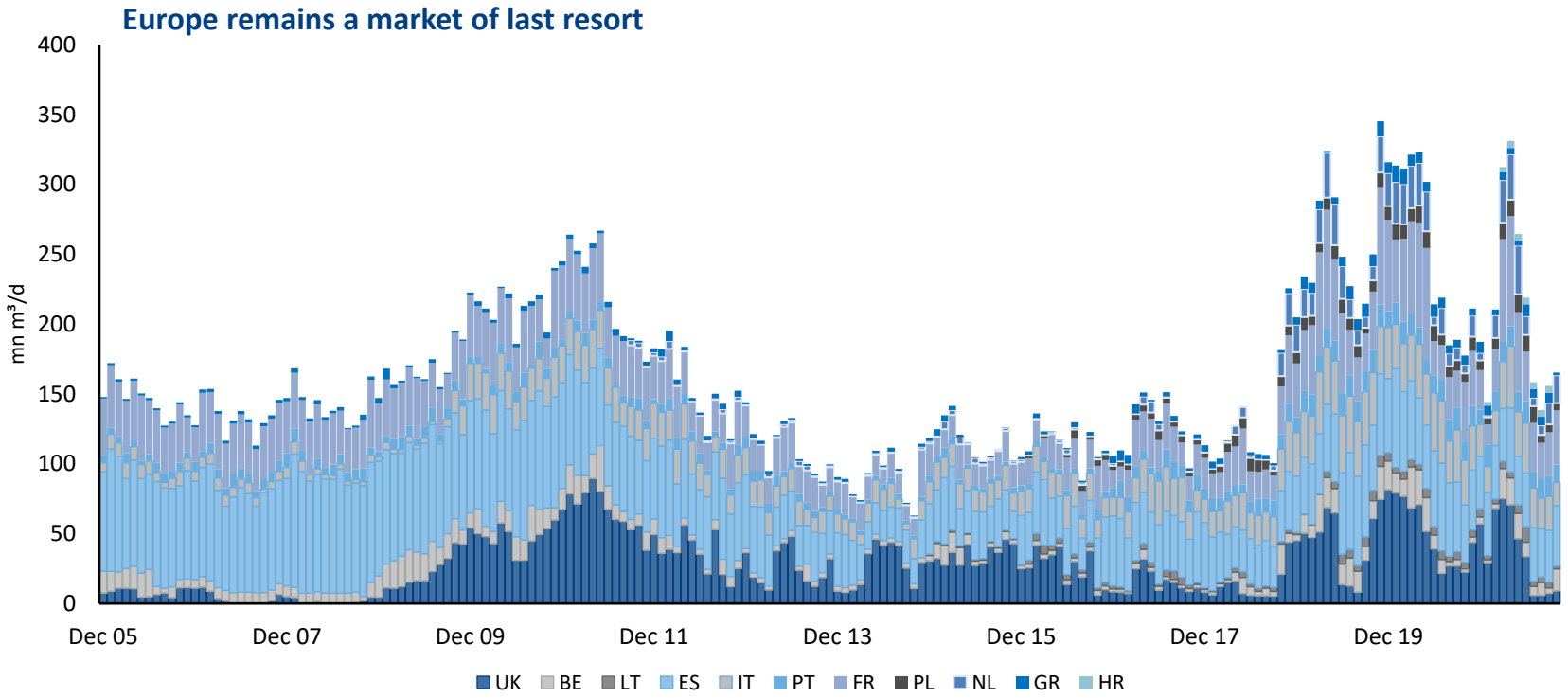
www.argusmedia.com

LNG

The competition metaphor struggles at these prices



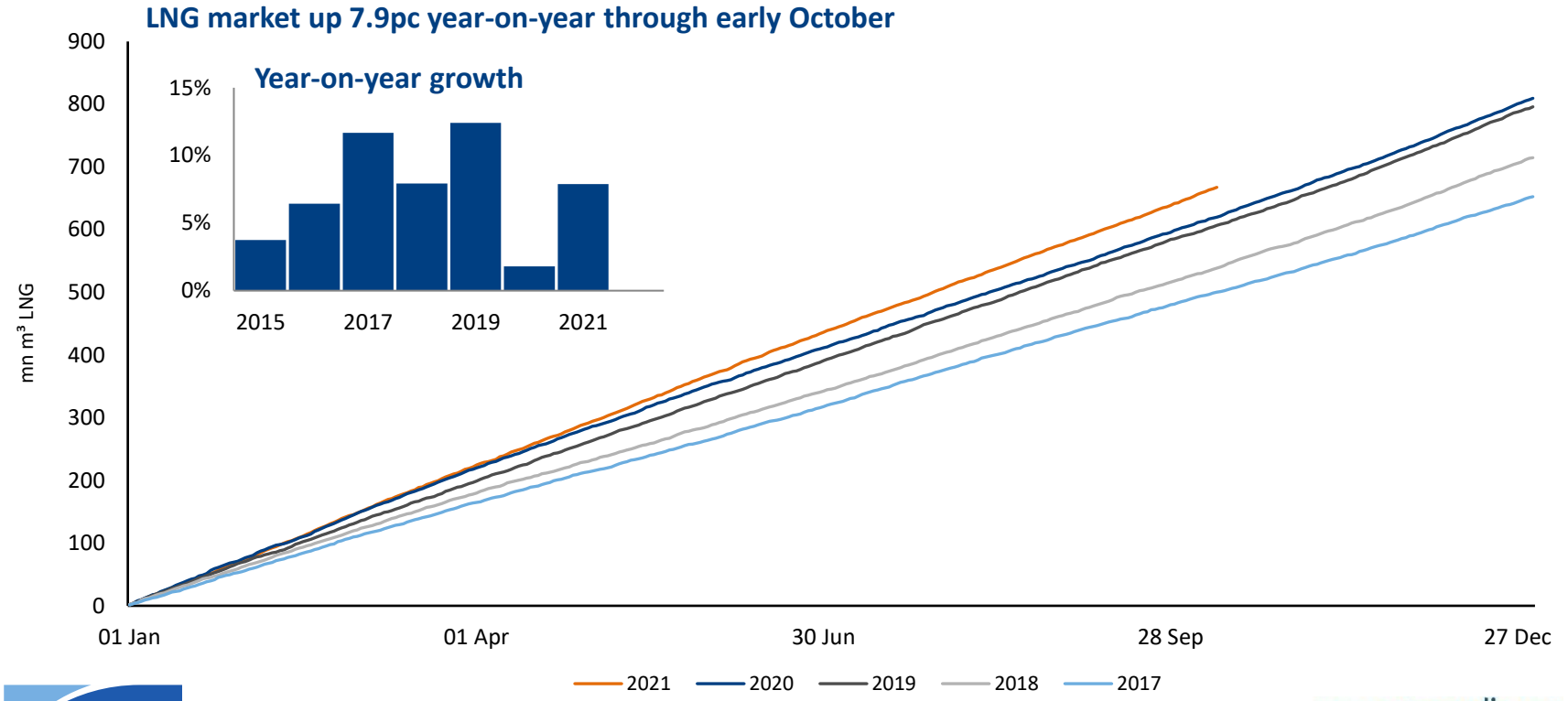
LNG responsive to global events



argus

www.argusmedia.com

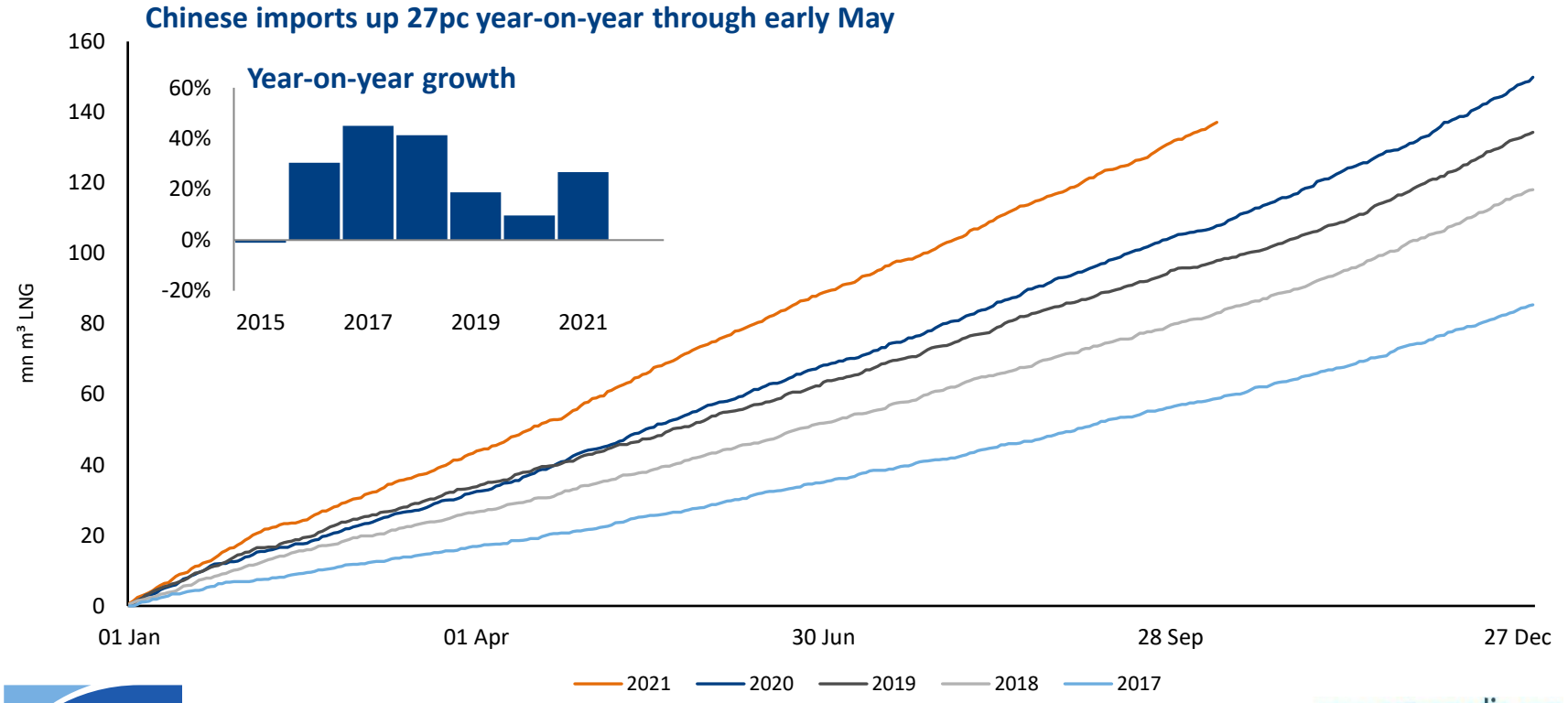
Global LNG market returns to growth



argus

www.argusmedia.com

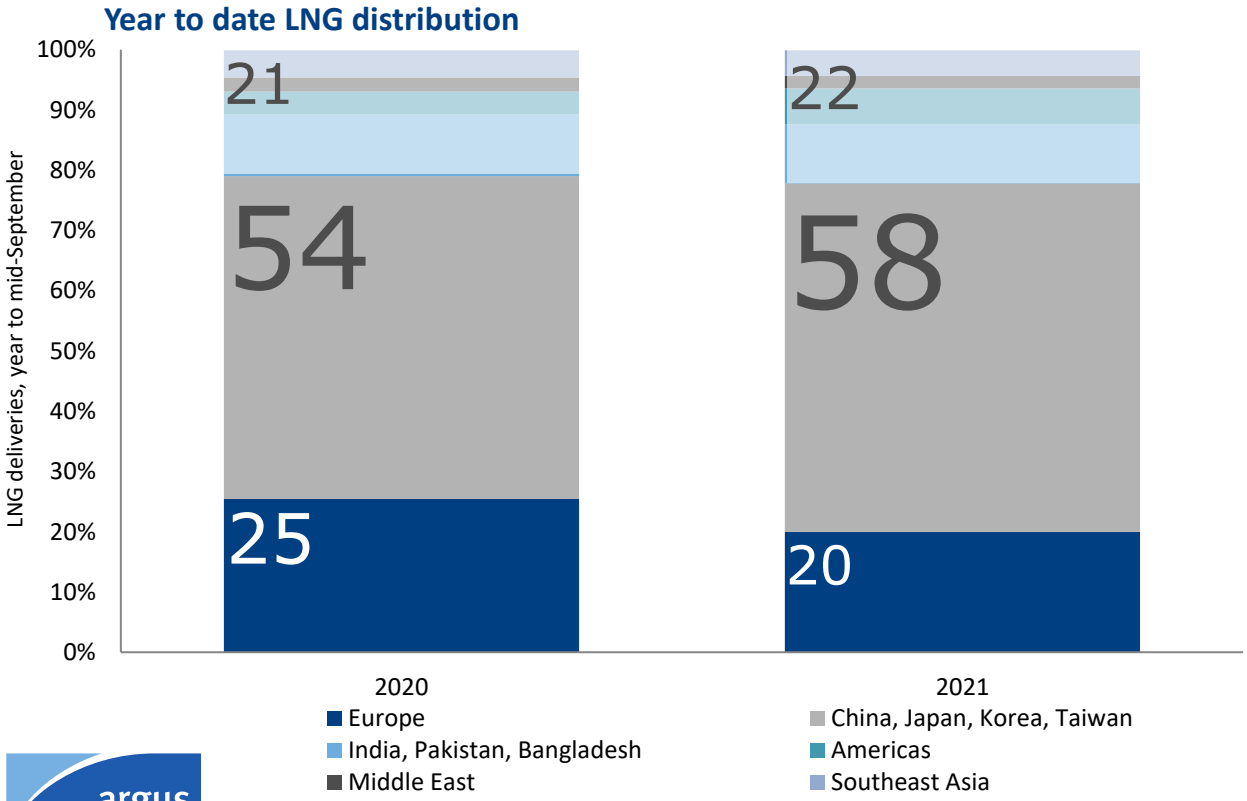
Chinese demand again growing



argus

www.argusmedia.com

Global LNG distribution tilts further towards Asia



European LNG sendout down

14.5bn m³

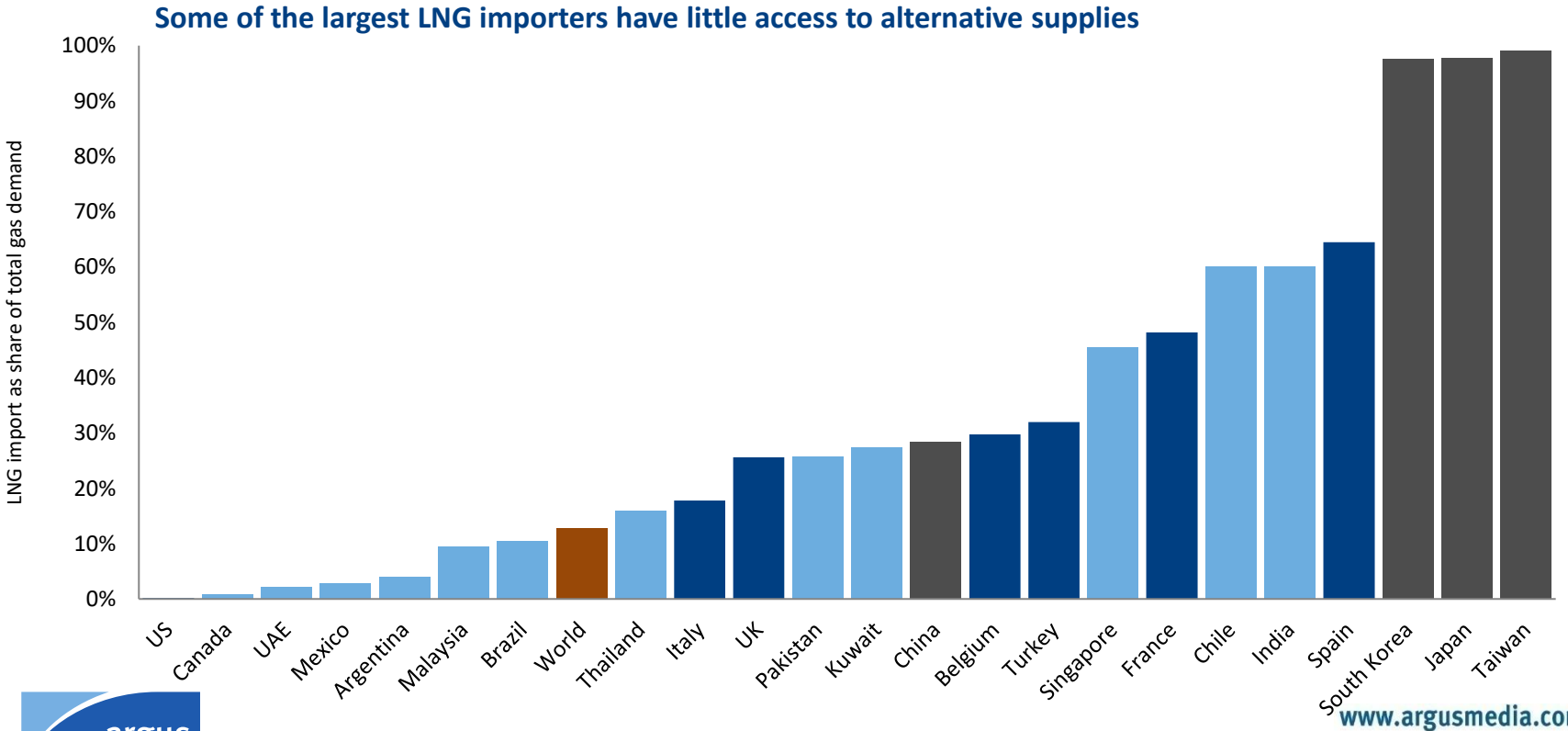
or

56.6mn m³/d

argus

www.argusmedia.com

LNG dependency of major gas economies

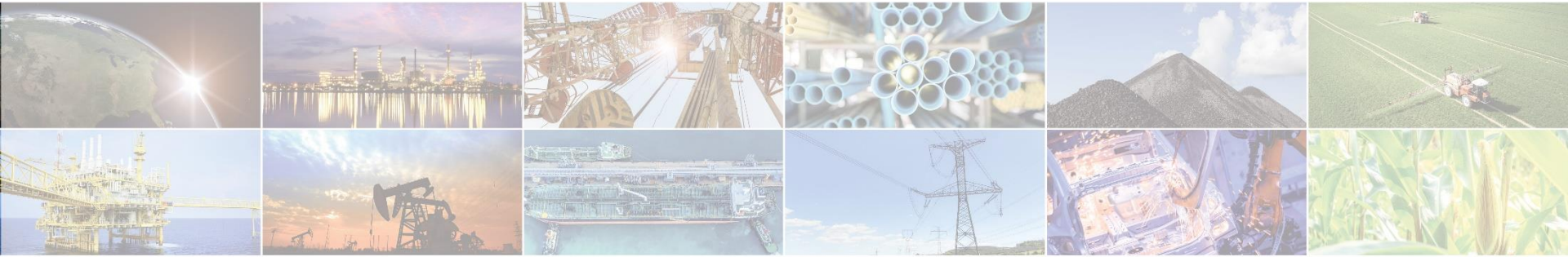


argus

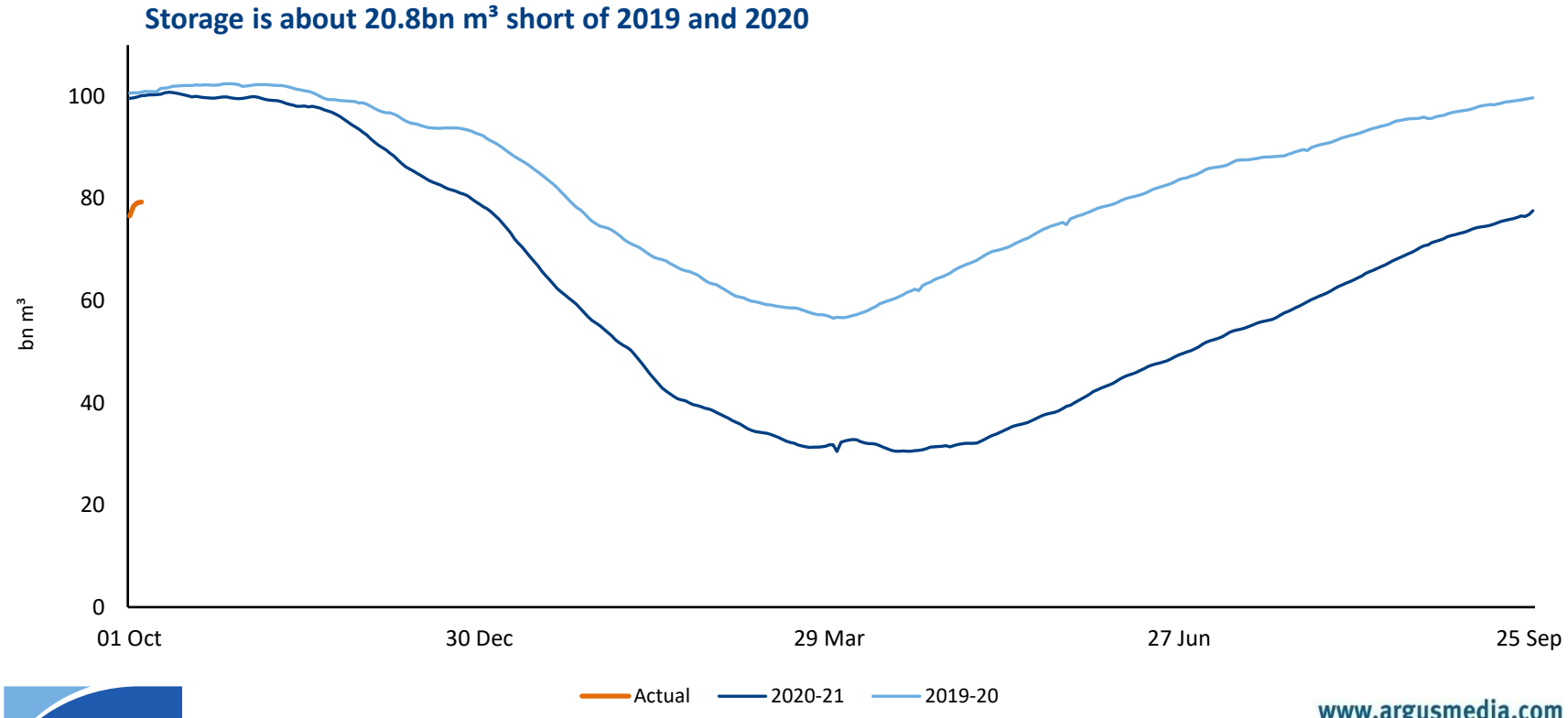
www.argusmedia.com

Storage

Weather and rhetoric

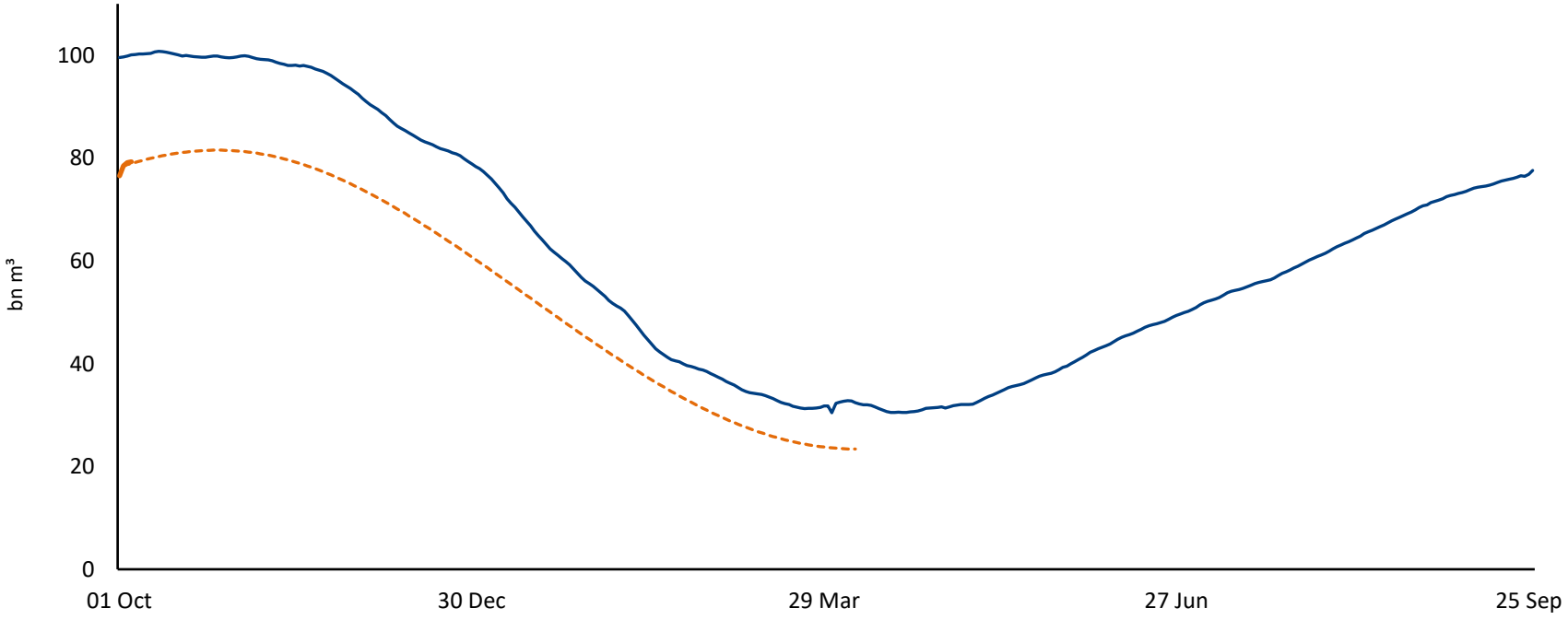


Storage



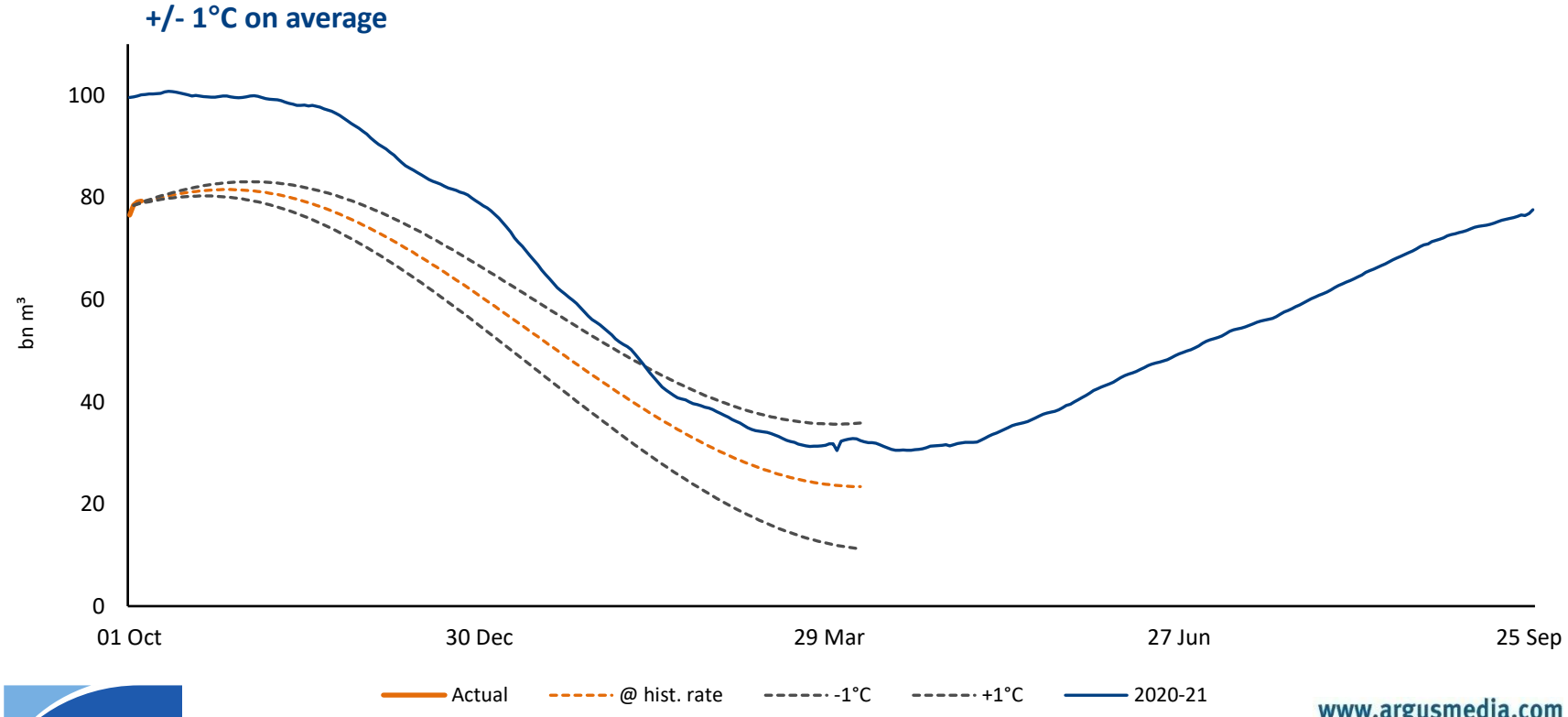
Storage

At average temperatures and historic withdrawal rates stocks could end lower than in 2021



www.argusmedia.com

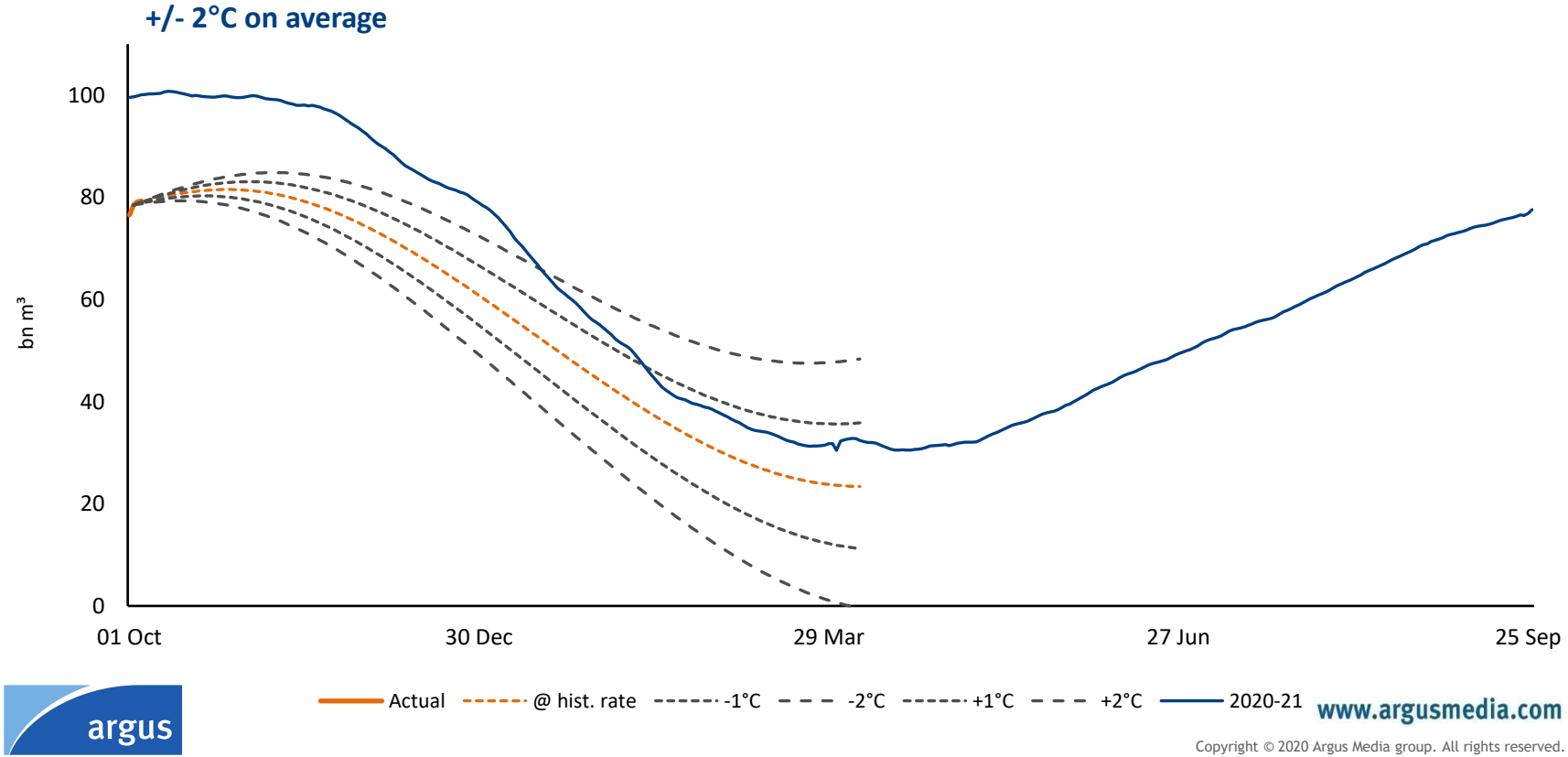
Storage



argus

www.argusmedia.com

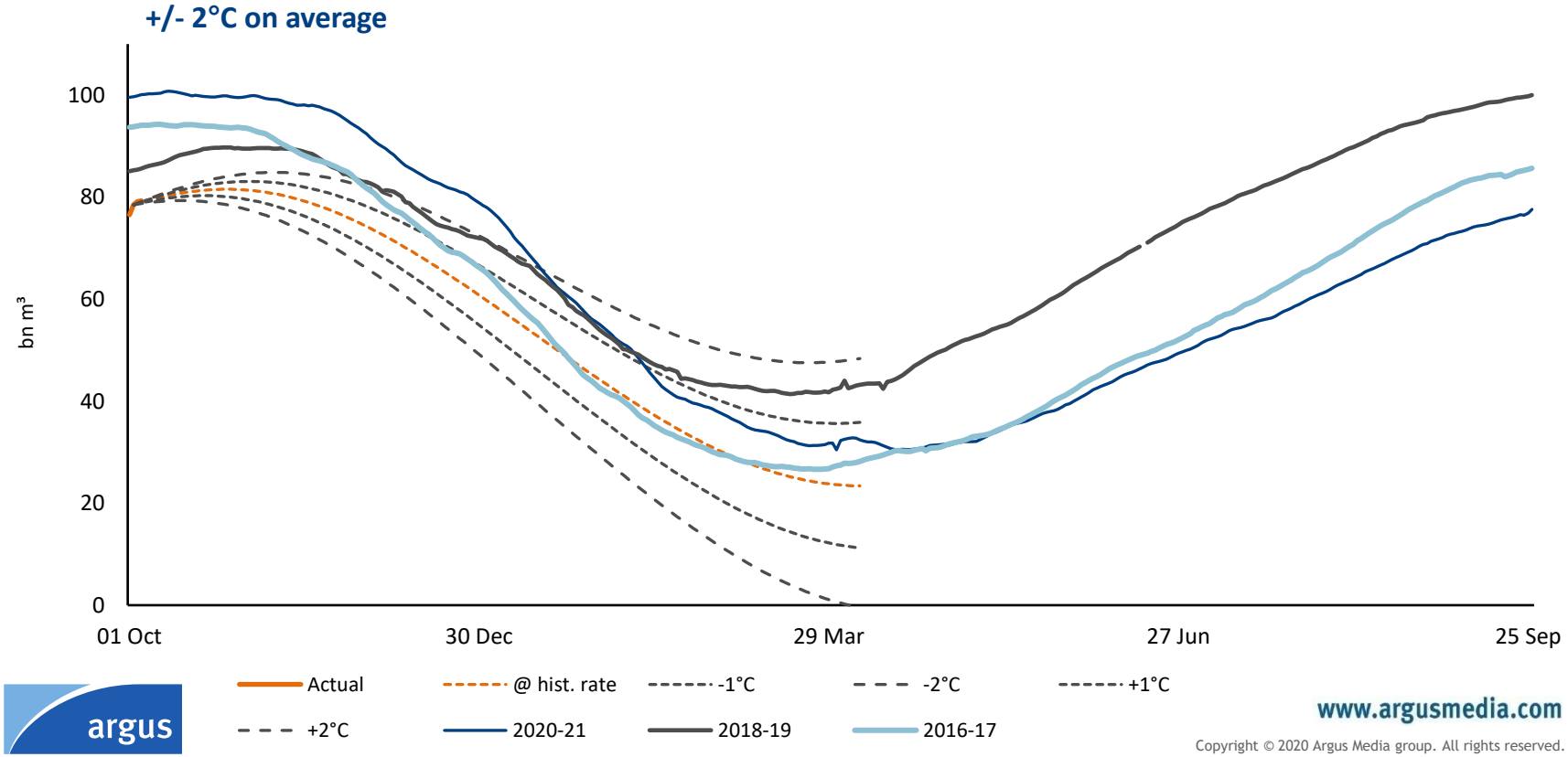
Storage



argus

www.argusmedia.com

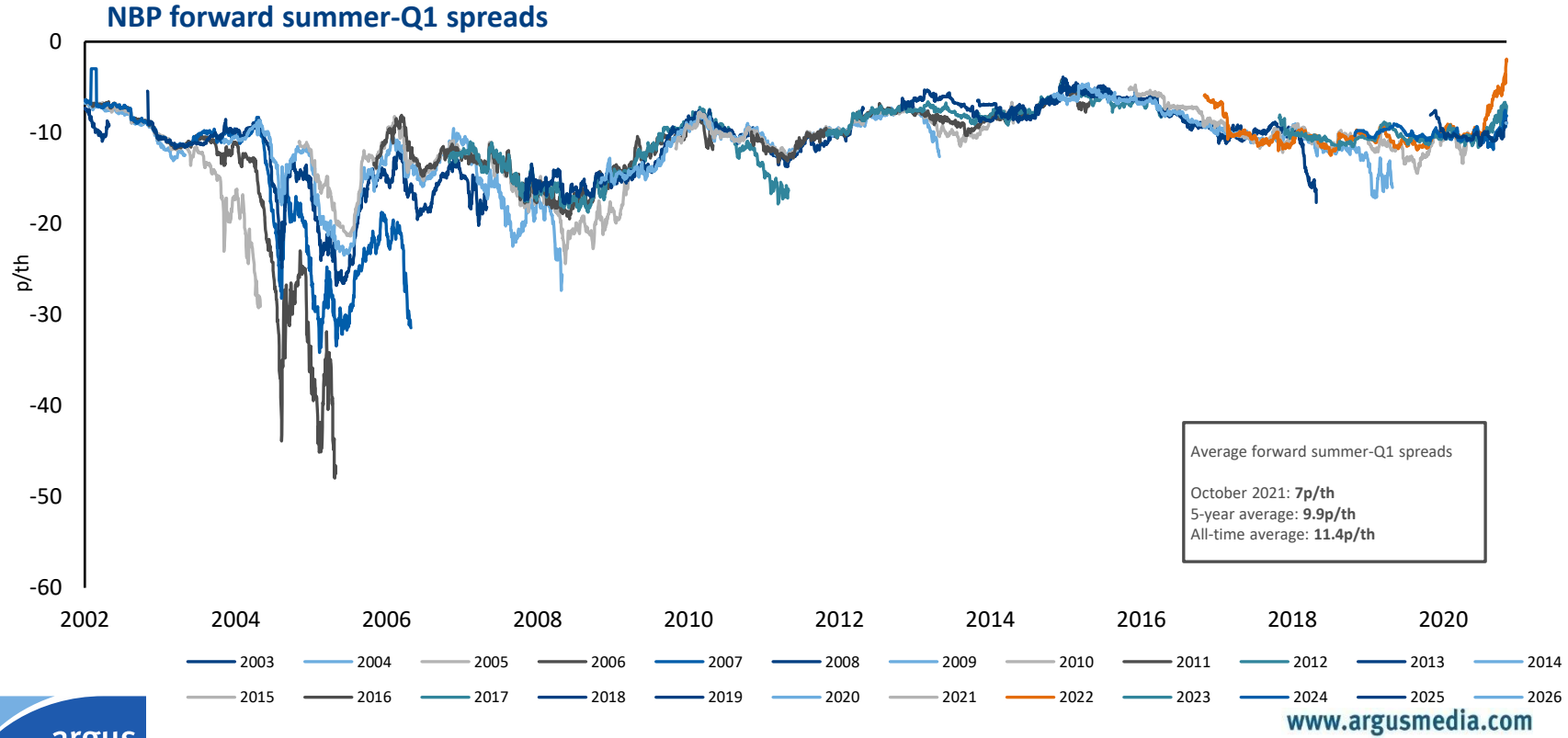
Storage



argus

www.argusmedia.com

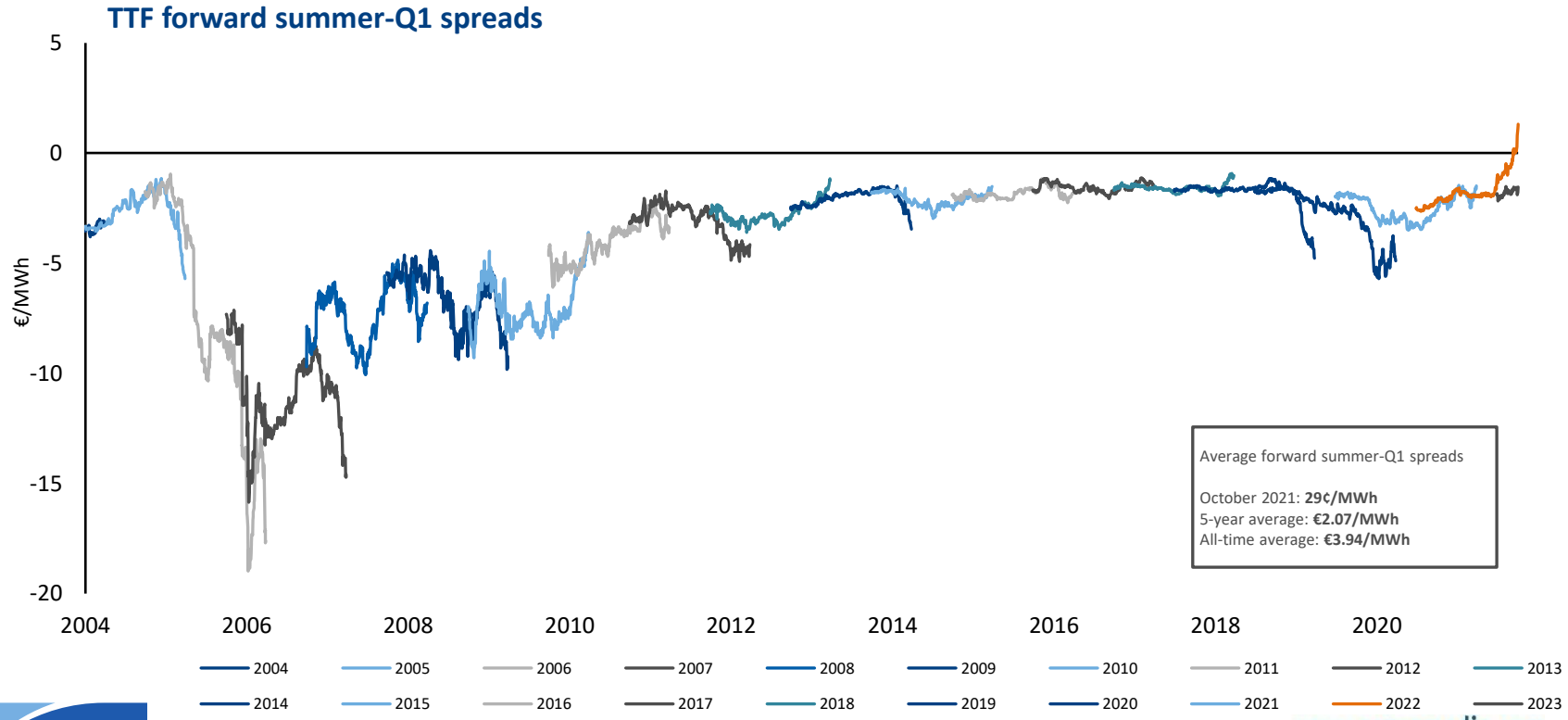
Summer-Q1 spreads historically narrow



argus

www.argusmedia.com

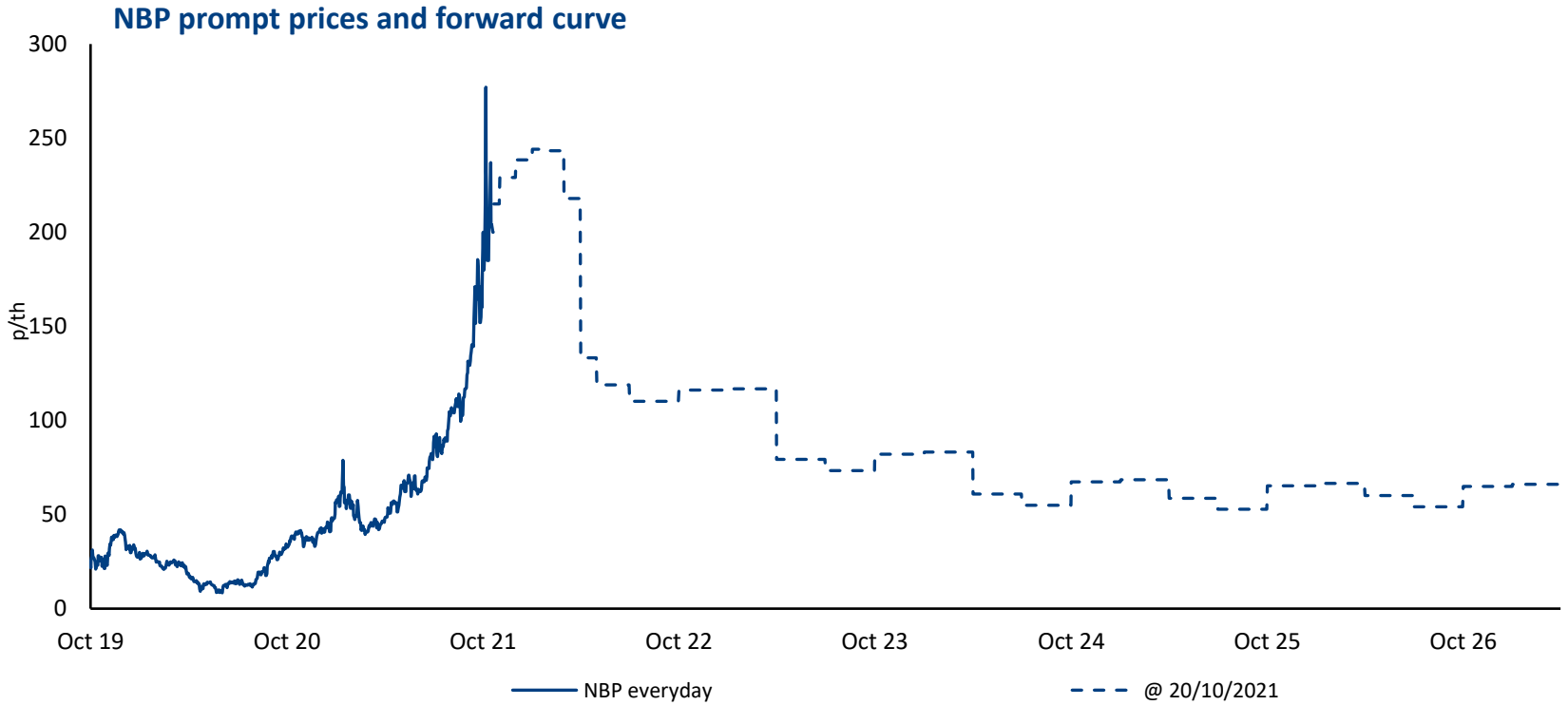
Summer-Q1 spreads historically narrow



argus

www.argusmedia.com

The big picture: NBP prices past and future



argus

www.argusmedia.com

Matthew Monteverde

Senior Vice President – Commodity Markets

matthew.monteverde@argusmedia.com
London
www.argusmedia.com

Gas
Transmission

Project Apollo

Rachel Hinsley
Senior Codes Change Lead

nationalgrid

Contents

Background: Apollo Project

The maintenance of the gas network balancing and capacity technology system and performing related services are currently procured by NGG through a third party (Xoserve)

Gemini is the **main system** NGG uses to communicate **commercial information to/from shippers**

Gemini is an aging legacy system. The tender will enable us to consider whether an alternative solution is appropriate, whilst considering the **changing energy landscape**.

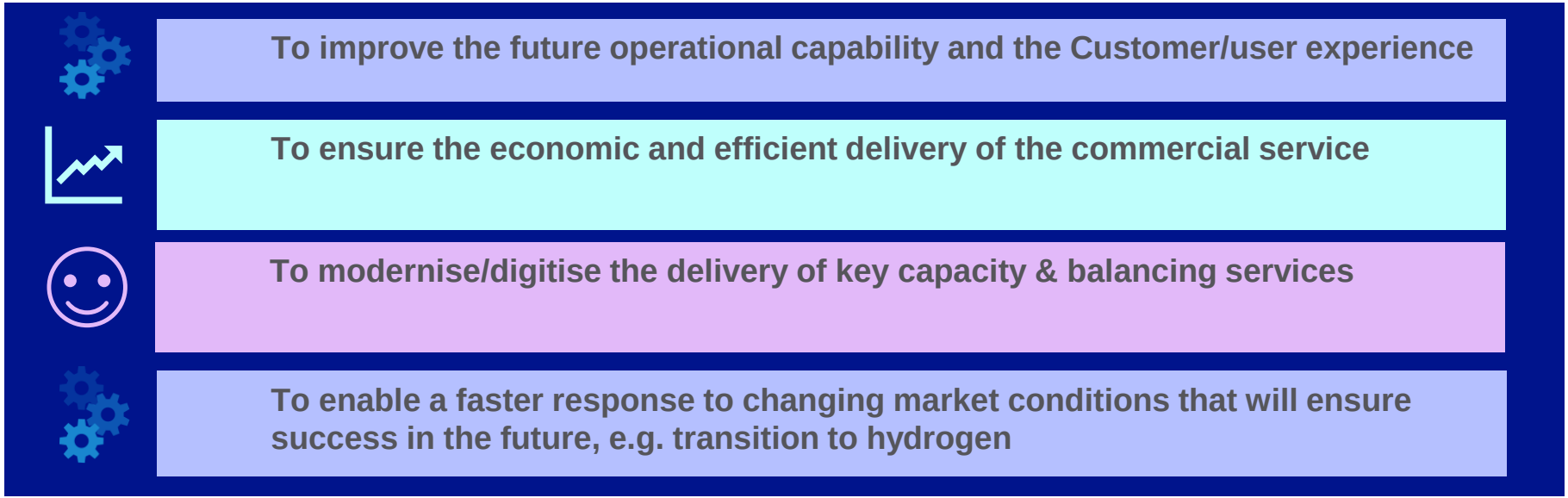
We have completed **Request For Information (RFI)** from the open market to assess potential to replace Gemini and support services

As a result we have initiated a **Competitive Tender Process** for supplier/solution selection

More about the Apollo Project

The purpose of the programme is to complete a competitive tender process, to ensure we are compliant with the Utilities Contract Regulations (UCR) and Uniform Network Code (UNC). This will help us to assess the market and identify any alternative solutions.

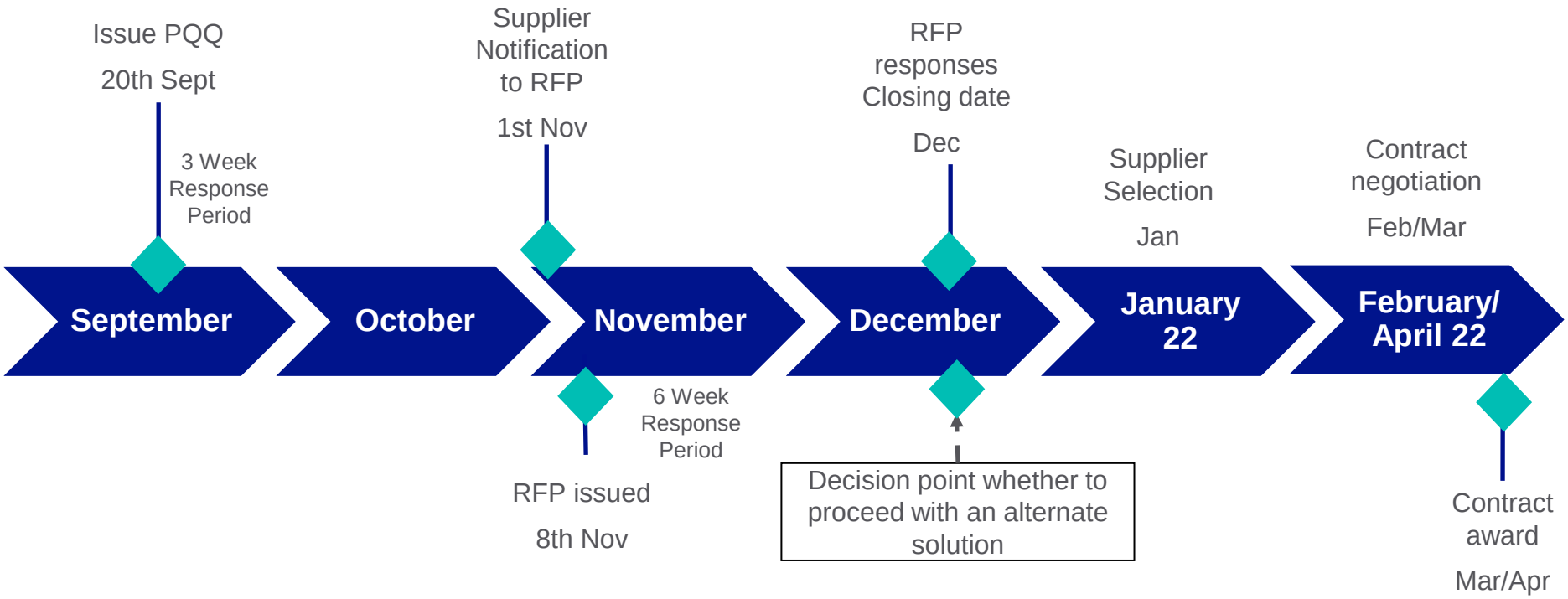
Project Drivers: key business outcomes



Considerations

- The current scope of Apollo includes 2 lots:
  - A potential new IT solution and associated services
  - A potential new invoicing solution and associated services
- Following the tender process any impacts of progressing with Apollo across the wider industry and for end consumers will be assessed to understand. This includes costs, system impacts and the volume of regulatory change required
- Based on the results of the competitive tender, and the assessment of impacts across the industry, there will be an option to retain the current contract with our service provider, complete the Gemini roadmap during T2 which will sustain and enhance Gemini

Apollo project timeline and milestones



Next steps:

- Complete gathering requirements for new solution and services
- Complete Pre-qualification and select suppliers for RFP (Request for proposal)

Thank You

Any queries please email: the Apollo Project Team

Please email Mark.Barnes2@nationalgrid.com with any queries

Please email Rachel.Hinsley@nationalgrid.com with any queries

Gas Transmission

Hydrogen Guarantees of Origin (GoO)

Suki Ferris
Hydrogen Market Strategy Lead

nationalgrid

H2 Gas Market Plan: H2 Guarantee of Origin project

70 Working group members from across the gas industry value chain

25 Detailed stakeholder interviews with SME's to gather GoO intelligence

4 Working group sessions to discuss and debate a UK hydrogen GoO scheme

30 Companies from within the UK and EU

Gas
Transmission

01

What is a Guarantee of Origin (GoO)?

nationalgrid

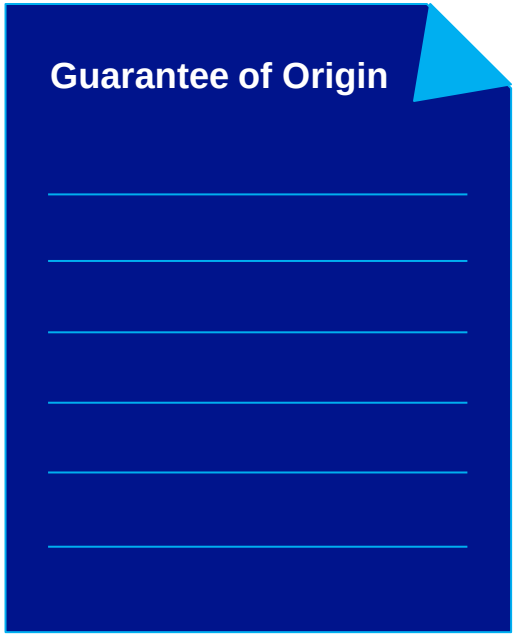
What is a Guarantee of Origin (GoO)?

GoO definition:

- **Provides information on the origin (source) of energy products.**
- GoO's can be traded separately from a physical commodity to maximise the climate attributes of an energy product.

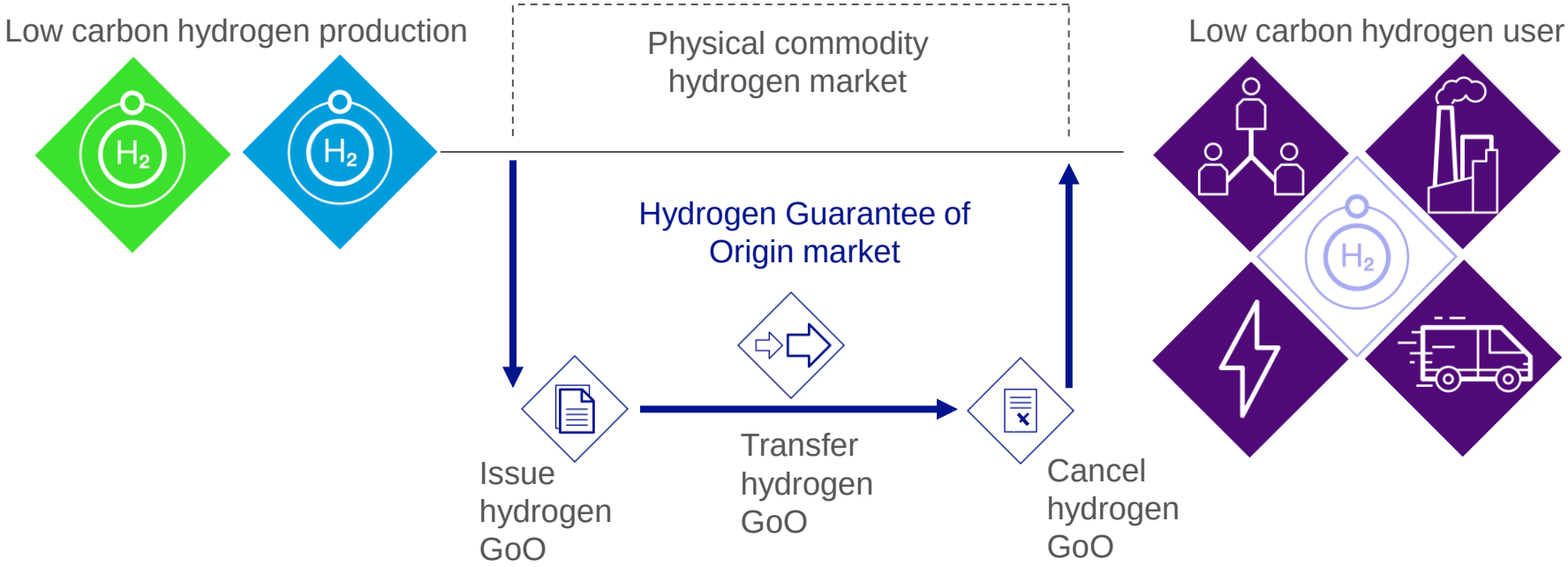
GoO analogy:

- **A crowd-funding tool for consumers to show preference for energy.**
- Buying a GoO doesn't mean you are buying or using the energy itself, it is a mechanism to indicate consumer preference.



Where, how, when energy was produced…

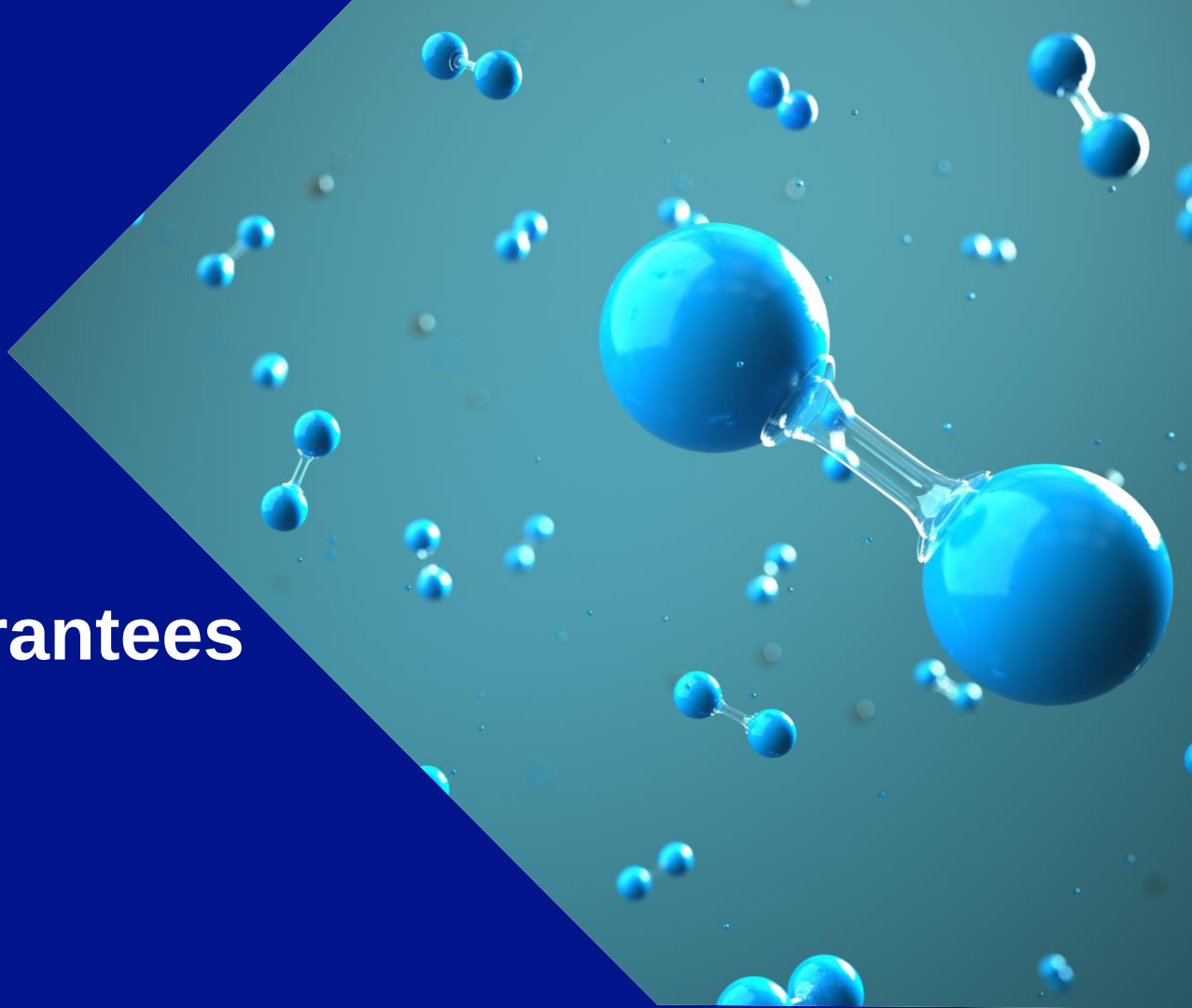
How do Guarantees of Origin (GoO) work?



Gas
Transmission

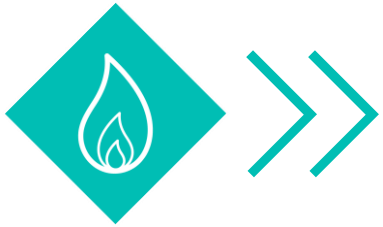
02

Why explore Hydrogen Guarantees of Origin?



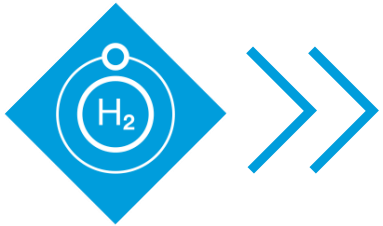
nationalgrid

Why explore H2 Guarantees of Origin (GoO)?



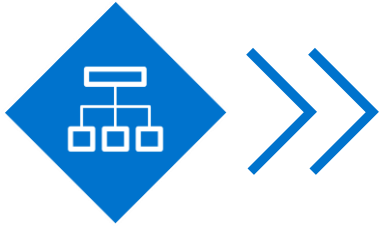
It will be important for market participants to disclose the climate value attributes of low carbon gases:

- **Biomethane**
- **Hydrogen**



Extensive H2 GoO work is taking place globally and in the EU, which will likely impact future cross-border trade:

- **CertifHy** (EU funded EU hydrogen GoO scheme)
- **RED II** (EU Renewable Energy Directive, recast)



A H2 GoO scheme will likely interact with existing UK climate value schemes:

- **REGO** (Renewable Electricity Guarantee of Origin)
- **ETS** (Emissions Trading Scheme)
- **RGGO** (Renewable Gas Guarantee of Origin - Biomethane)

Why explore H2 Guarantees of Origin (GoO)?

Project purpose:

What role could a UK hydrogen GoO scheme play in a future UK hydrogen market?

Project output:

- Assessment of current GoO landscape in the UK / EU
- Benefits of a UK hydrogen GoO
- Recommendations to implement a UK hydrogen GoO scheme

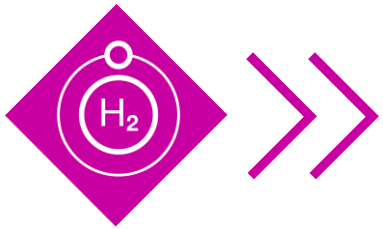
Gas Transmission

03

How could a UK H2 GoO benefit a UK H2 market?

nationalgrid

Benefits of a UK H2 GoO scheme:



Benefits to Hydrogen producers:

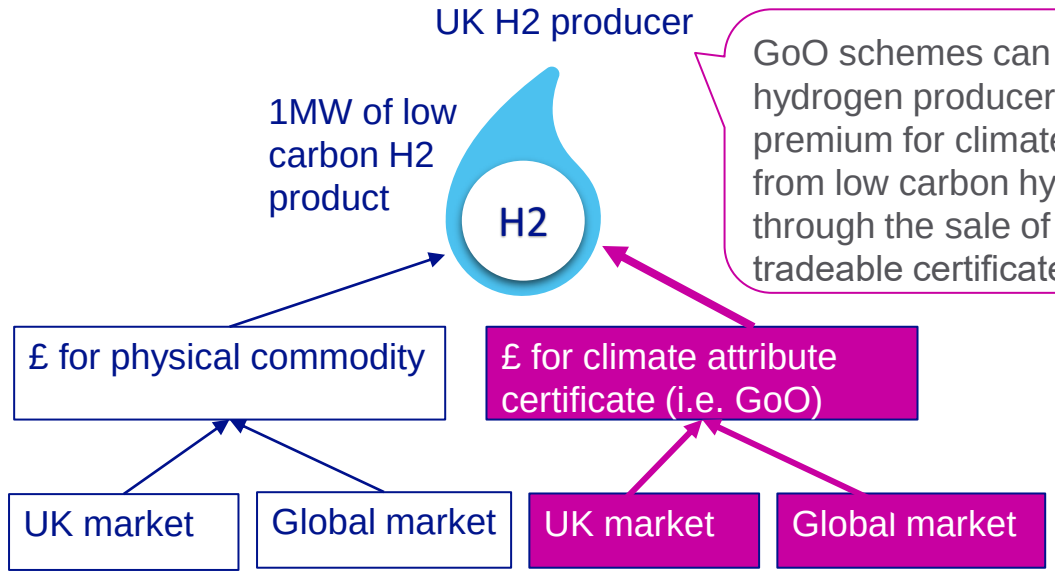
1) Premium for low carbon hydrogen products
2) Evidence of consumer appetite

Benefits of a UK H2 GoO scheme:

Ultimately, there is a need to support UK low carbon hydrogen producers.

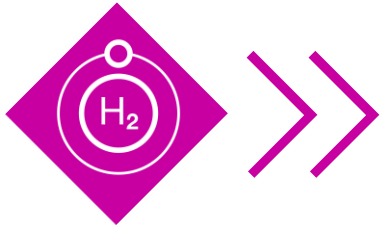
Benefits to Hydrogen producers:

1) Premium for low carbon hydrogen products
2) Evidence of consumer appetite



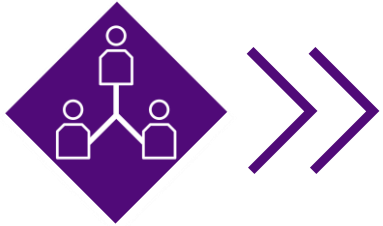
GoO schemes can enable UK hydrogen producers to gain the premium for climate value attributes from low carbon hydrogen products through the sale of independent tradeable certificates (i.e. GoO's).

Benefits of a UK H2 GoO scheme:



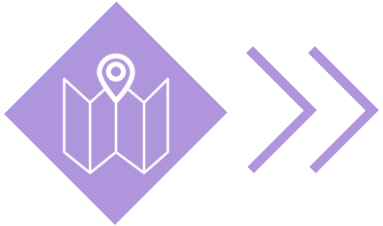
Benefits to Hydrogen producers:

1) Premium for low carbon hydrogen products
2) Evidence of consumer appetite



Benefits to Hydrogen consumers:

1) Mechanism to engage in hydrogen market
2) Mechanism to indicate preference for hydrogen energy products



Benefits to Hydrogen transporters:

1) Infrastructure facilitates the market
2) Mechanism to enable virtual trade ahead of physical change

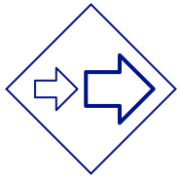
Gas Transmission

04

Recommendations for a UK H2 GoO scheme

nationalgrid

Key findings: Recommendations for a UK H2 GoO scheme



Timeline:

- ASAP
- Aligned with H2 production

Key findings: Recommendations for a UK H2 GoO scheme

Timeline:

- ASAP
- Aligned with H2 production

2020 - 2025	2025 - 2030	2030 - 2035	2035 - 2040
• H2 standard finalised 2022 • Decision on H2 blending 2023 • 1GW production capacity 2025 • **Design and develop UK H2 GoO scheme**	• Decision on H2 for heat 2026 • 5GW production capacity 2030 • Potential H2 town 2030 • **Initial use of UK H2 GoO's**	• **Expanding H2 GoO market**	• **Mature market for UK H2 GoO's**
• H2 Business Models support initial H2 producers. • A UK H2 GoO scheme should be developed in alignment	• H2 GoO's become more important with H2/ CH4 blending • GoO's can be used to differentiate low carbon H2 products from CH4 products	• H2 GoO's become important to associate premium **between** different H2 production technologies	• As H2 achieves/ close to achieving cost parity with CH4, H2 GoO's become important revenue stream to associate climate value for low carbon H2 producers

Key findings: Recommendations for a UK H2 GoO scheme

Timeline:
- ASAP
- Aligned with H2 production

Information to include:
- Mandatory information
- Supplementary information

Role within wider frameworks:
- Statutory mechanism

Interoperability:
- Whole system benefits
- Ability to transfer renewable attributes

Trade:
- EU as a priority
- Global as a secondary priority

Pilot scheme:
- Trial processes/ functionality
- Gain customer data

nationalgrid

Gemini Service Summary Comparison October 2021

correla
ON BEHALF OF xoserve

Improving Gemini Reliability

During 2020 we experienced a large volume of service disrupting events on Gemini or dependent systems, which often impacted our customers ability to use the system fully.

Confidence in the Gemini product and our service reliability is critical to us. So we made two promises. Firstly to reduce the number of events, and secondly if an event did occur, we would resolve it faster to minimise disruption to services.

Over the past 12 months we've deployed over 150 improvements, fixes, changes to process, skills, people, and developed a culture of continuous improvement in everything we do.

In this October update, we provide a brief update on the positive impact that these changes have had, and continue to have on our services to you.

Service Performance Improvement
Contributing Factors

This table highlights some (but not all!) of the changes we've implemented to improve service reliability.

Key improvements	Reduce likelihood of incident	Improve time to resolve incident	Reduce manual errors
Introduced Dynatrace Application Monitoring to provide intelligent monitoring to capture performance trends across the infrastructure	✓		
Knowledge Assessment of all Ops Resources conducted and quarterly assessments introduced, including access removal for those who do not meet criteria	✓		✓
Updated all work instructions and created online knowledge portal allowing keyword searching	✓	✓	✓
Introduced additional governance for Change Process to include peer review of all changes from inception through to execution	✓		✓
Automated Daily Health Check processes, Server provisioning and Code deployments	✓		✓
Automated the recovery process for file system encountering "Read only" Issue		✓	✓
Implemented Automation for service restoration for the Citrix VDA environment in case of an issue on that architecture		✓	
Implemented a Document Tracking system for the B2B service to track all file flows and prevent risk of missing files	✓	✓	
Implemented additional monitoring to identify dynamic queue build up on the B2B file flow platform to provide an early warning indicator	✓		

Performance Improvement Indicators

Correla Triggered Major Incidents Comparison 2020 vs 2021 – 78% reduction year on year

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
2020	2	0	1	5	1	2	4	3	4	22
2021	0	0	1	0	1	1	0	2	0	5

78% Reduction

Correla Triggered Service Interruption Comparison 2020 vs 2021 (timings in mins):

Average per incident service interruption duration 2020: 292 mins (4.8 hours)
Average per incident service interruption duration 2021: 110 mins (1.8 hours)

62% Reduction

Total Service Disruption Comparison 2020 vs 2021 (timings in mins)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
2020	92	0	182	822	743	212	1232	777	2363	6423
2021	0	0	72	0	136	210	0	135	0	553

91% Reduction

Always improving

Through our joint forum with National Grid, we will drive our continuous improvement process to further reduce incidents, speed up resolution and enhance customer experience.

This isn’t a process that will ever stop, it’s embedded in our service culture to find new ways to improve delivery to our customers whilst constantly striving to drive service excellence.

If you have any questions, or would like to pass on any feedback please feel free to contact us via Neil.Laird@Correla.com or Richard.Genever@Correla.com

Gas Transmission

Residual Balancing

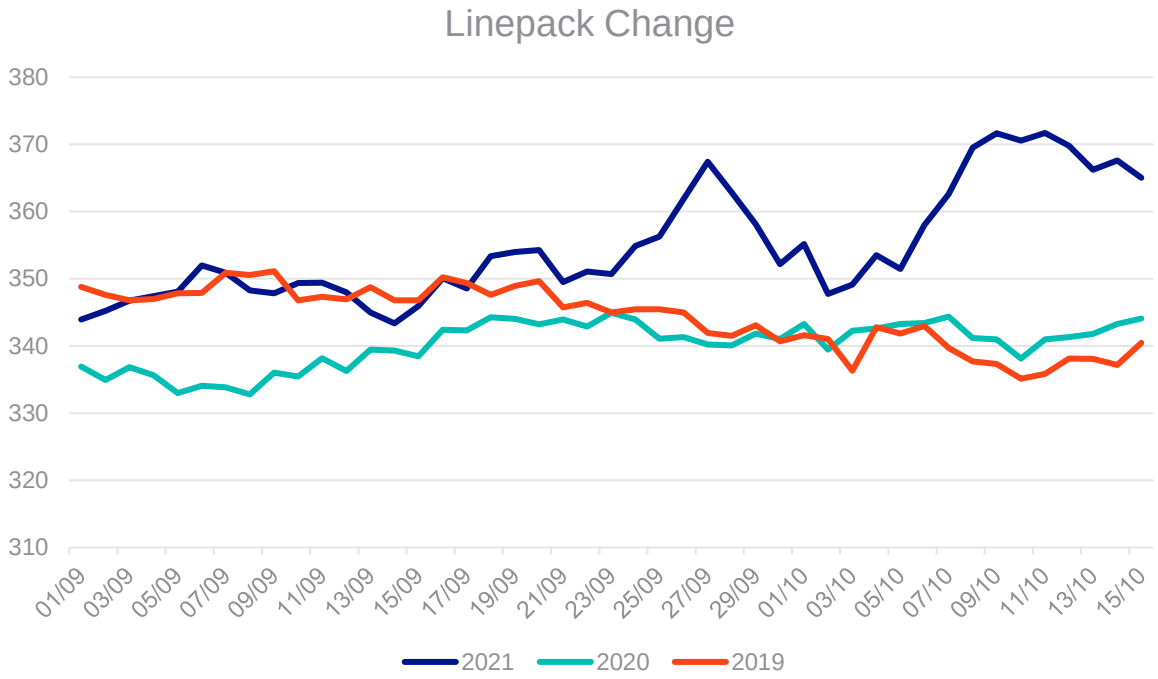
Rachel Woodbridge-Stocks
Commercial Officer (GNCC)

nationalgrid

General trends

- Less response and liquidity when trading later at night
- Larger within-day price volatility
- Trading not always resulting in a physical response
- Large SMPs having less effect
- Larger Closing Linepack changes

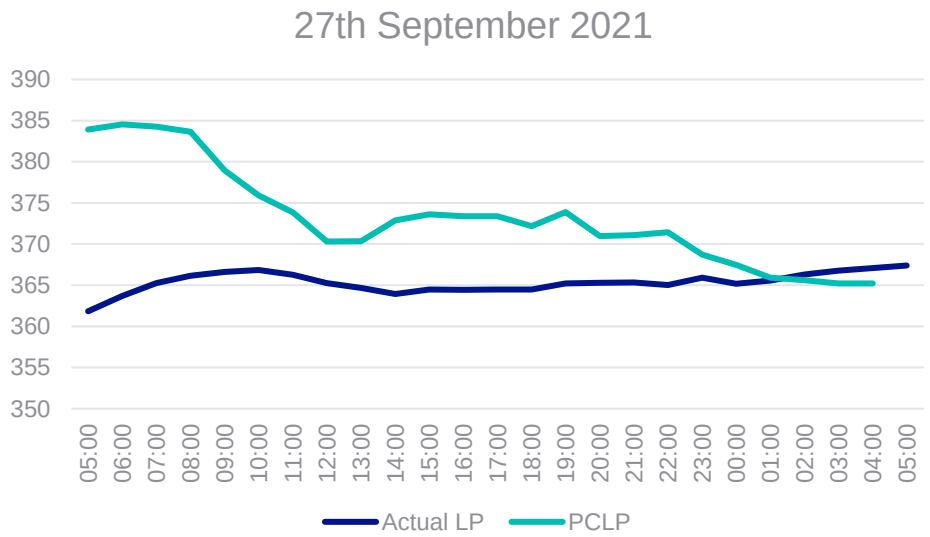
Changing Linepack Sep – Oct 2021



Monday 27 September 2021

Linepack opened at **361.8 mcm,** PCLP was **383.9mcm** at 05:00.

16:00	PCLP 373.4mcm SAP approximately 158p/thm Best Bid 170p/thm GNCC decide not to trade yet
17:00	PCLP still 373.4mcm, GNCC trade SMPS set at 152p/thm (SAP approximately 158p/thm)
00:00	PCLP 367.5mcm, GNCC trade again SMPS set at 130p/thm (22p/thm lower) Best Bid dropped to 95p/thm shortly after (Best Offer 129.97p/thm)

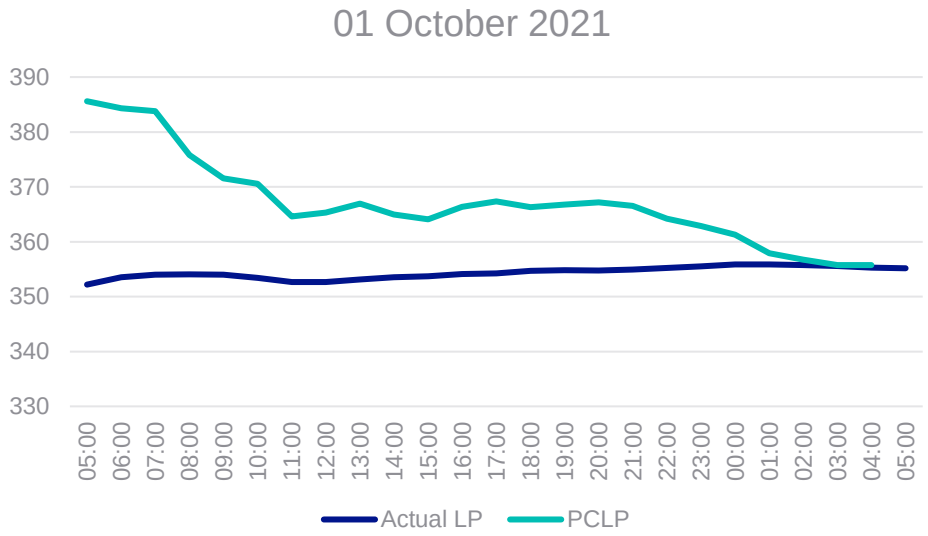


A total of **1.3 mcm** was Sold with a price spread of **14.7%**.
Linepack closed at **367.4 mcm** a Gain of **5.5 mcm** on the day.

Friday 01 October 2021

Linepack opened at **352.2 mcm**. PCLP was **385.6mcm** at 05:00.

18:00	PCLP 366.3mcm SAP approximately 210p/thm Best Bid 150p/thm (very low volume) GNCC decide not to trade yet
22:00	PCLP 364.2mcm, GNCC trade SMPS set at 181.5p/thm (SAP approximately 206p/thm)
01:00	PCLP 357.9mcm GNCC have continued trading SMPS set at 172.5p/thm SAP dropped to approx. 193p/thm



A total of **4.3 mcm** was Sold with a price spread of **4.7%**.
Linepack closed at **355.2 mcm** a Gain of **3.0 mcm** on the day.

Questions

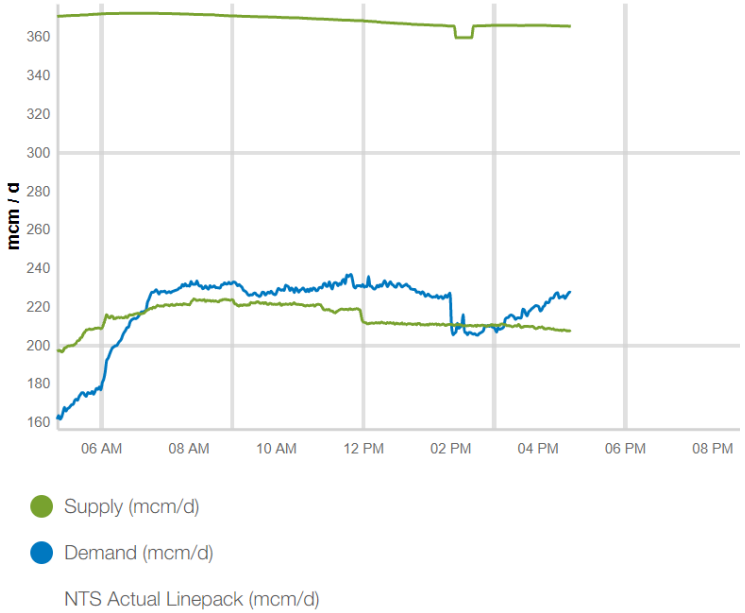
Gas
Transmission

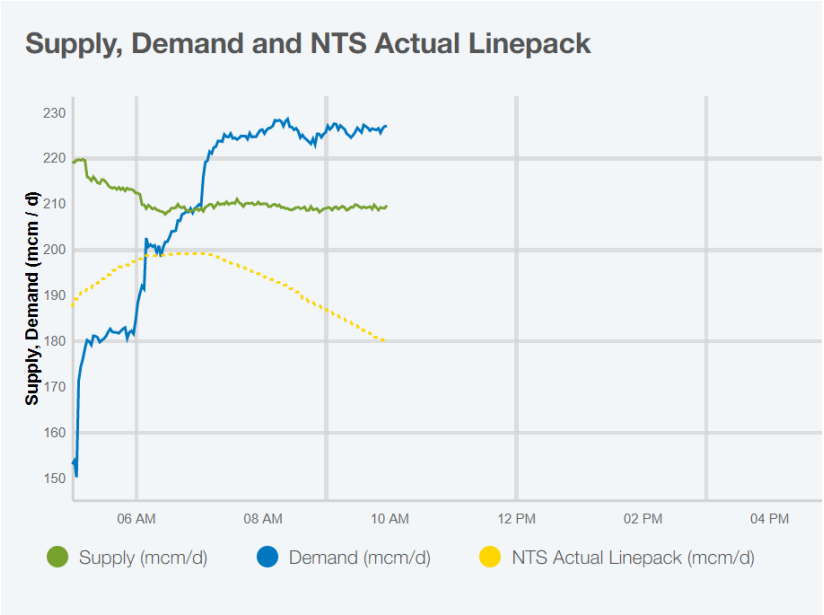
Updates

Joshua Bates
Operational Liaison Manager

nationalgrid

MIPI Prevailing View, linepack view is live!





Should your prevailing view look like the image on the left, please clear cached browsing data on your chosen internet browser and reopen MIPI to view the graph on the right.

Bacton Exit IP

Following a public consultation, on 15th October Ofgem published their decision to implement a change to NGG's NTS Licence. The change will:

- Remove the existing **Bacton IUK** and **Bacton BBL** NTS Exit Points.
- Create a combined **Bacton Exit IP** NTS Exit Point.

The Licence change is effective from the 15th December however there may, from a practical perspective, be some delay before industry is ready to implement the change. We will aim to minimise any delay. Practical steps that need to be completed are:

- Completion of a UNC modification - https://www.gasgovernance.co.uk/0785
- Completion of Operational and System readiness.
- Co-ordinated implementation with adjacent TSOs (and PRISMA).

We shall be communicating with industry and key stakeholders as we work to complete these steps. Key forums will include Transmission Workgroup and Operational Forum.

Shaping the gas transmission system of the future – have your say

Why?

- We have committed to undertake a **stakeholder-led decision making** approach to RIIO2. As part of this, in addition to our continuous engagement, we hold **annual engagement** to bring everything together for stakeholders. This allows a holistic conversation in one place.

What?

- A month long programme of **interactive webinars** and **roundtables** designed to gather stakeholder **insight** across all our stakeholder priorities.

When?

- The events kick off on **22nd November** with Jon Butterworth (CEO) giving a round up of our performance against all our priorities. There are a further 13 webinars throughout **November and December.**

How do I get involved?

- Each event has a **registration link** (see details on next slide).

What's on… 1 of 2

Name	Description	Details
Shaping the gas transmission system of the future - Key note speech	Join Jon Butterworth (CEO of National Grid Gas Transmission) as he explores some of the challenges facing the industry over the next 12 months.	Mon 22nd Nov 09.00 – 10.00 Register here
Future of Gas	Join Martin Cook, Commercial Director in Gas Transmission & Metering, for a closer look at the future of gas. In this session, Martin will talk about the role of gas today, and the role gas can play in the energy transition.	Wed 24th Nov 10.30 – 11.30 Register here
Innovation – broadening the horizon	Join Steven Vallender, Asset Director, as we explore how some unexpected innovations could unlock value for consumers.	Thu 25th Nov 12.00 – 13.00 Register here
Gas Market Plan	As decarbonisation policy impacting the use of gas ramps ups, the industry will need to come together to evolve the structure of the current gas market to facilitate low carbon and decarbonised gases. This session will explore the recent Gas Market Plan projects and recommendations.	Tue 30th Nov 09.30 – 10.30 Register here
Transitioning to a hydrogen backbone	Join us to explore the key challenges we need to address to transition the transmission network to hydrogen together with an overview of the projects that look to answer them.	Thu 02nd Dec 10.00 – 11.00 Register here
Managing methane emissions	With an increased focus from government on managing and reducing methane emissions, how are network companies responding?	Thu 02nd Dec 13.00 – 14.00 Register here

What's on…2 of 2

Name	Description	Details
Supporting regional hydrogen transitions	Join us to explore the key challenges we need to address to transition the transmission network to hydrogen together with an overview of the projects that look to answer them. This session will focus on what's needed to transition different regions across GB to hydrogen transmission.	Fri 02nd Dec 09.00 – 10.00 Register here
Understanding the skills needed for a net zero world	What does tomorrows workforce look like? How do we understand and then develop the skills needed to effectively achieve such a transition?	Mon 06th Dec 13.00 – 14.00 Register here
Digital Strategy and Information Provision	Join Steven Vallender, Asset Director, as we take a walk through our digital strategy including how to have your say to ensure we continue to deliver your data and information needs throughout RIIO-2.	Tue 07th Dec 13.30 – 14.30 Register here
Operating the network	Ever wondered how the gas gets from where it's produced to where it's used? Join us as we go back to basics on operating the gas system. During this session we'll cover the day to day running of the gas transmission system managing supply and demand and how hydrogen could impact this	Wed 08th Dec 09.00 – 10.00 Register here
FutureGrid 2021 Progress report	Join the FutureGrid Team for the official launch of the FutureGrid 2021 Annual Progress Report. Ask us about the project, the progress we've made and hear what's coming up in 2022.	Tue 14th Dec 10.00 – 11.00 Register here
Annual Network Capability Assessment Report	As part of the Annual Network Capability Assessment Review we welcome you to talk through the outputs of this years network capability review including potential areas of constraint.	Wed 15nd Dec 10.00 – 11.00 Register here

Gas
Transmission

Close

Joshua Bates
Operational Liaison Manager

nationalgrid

Next Forum

The last Operational Forum of 2021 will take place on the 25 November at the Clermont Hotel and via MS Teams.

Please send any topic requests to:

Box.OperationalLiaison@nationalgrid.com

Register now at:

Online
https://www.eventbrite.co.uk/e/november-gas-operational-forum-online-tickets-195177078897

In Person
https://www.eventbrite.co.uk/e/november-gas-operational-forum-in-person-attendance-tickets-195178242377

Guest Presentation from ICE Endex confirmed