

**Gas
Transmission**

Gas Operational Forum

Clermont Hotel & MS Teams

24th November 2022

10.02am

Questions

SLIDO = OPSFORUM

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**Gas
Transmission**

Introduction & Agenda

Rachel Hinsley

Operational Liaison & Business Delivery
Manager

national**grid**



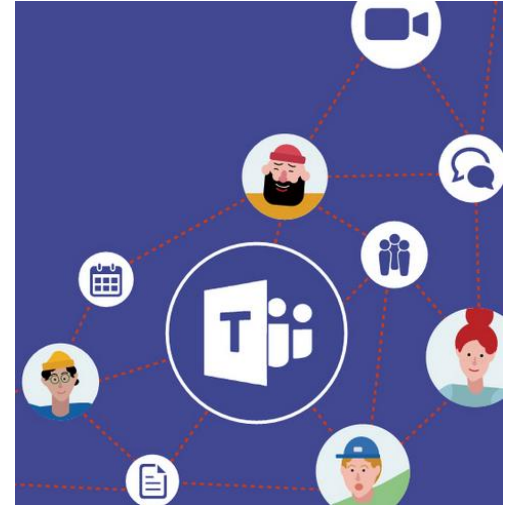
Housekeeping for Forum

For Microsoft Teams participants;

- Attendees will be automatically muted on dial-in and cameras will be unavailable.
- You can ask questions via Slido (#OPSFORUM)
- We have included some time to answer questions following the presentations

Joining as a participant?

OPSFORUM



Agenda for Today

Welcome and Introduction	Rachel Hinsley - Operational Liaison & Business Delivery Manager	10:02
Operational Overview	Mathew Currell – Senior Operational Liaison Officer	10:10
UK Demand Trends	Beth Foster – Commercial Analyst	10:20
Demand Side Response	Phil Hobbins – Commercial Codes Change Manager	10:40
Ice Endex	Wouter de Klein – Guest speaker	10:55
Resilient Communications Project	Rajesh Sukhija - Systems Delivery and Change Manager	11:20
Update on the Gas Markets Plan	Jen Randall - Gas Market Strategy Manager	11:30
Updates, AOB & Close	Rachel Hinsley - Operational Liaison & Business Delivery Manager	11:45

Please ask any questions using Slido: #OPSFORUM

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

October Stat

In October 81 billion kWh of energy was transported through our network.

With a volume of over 7 billion cubic meters that's enough gas to fill Wembley Stadium over 6,000 times.

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Operational Overview

Mathew Currell
Senior Operational Liaison Officer

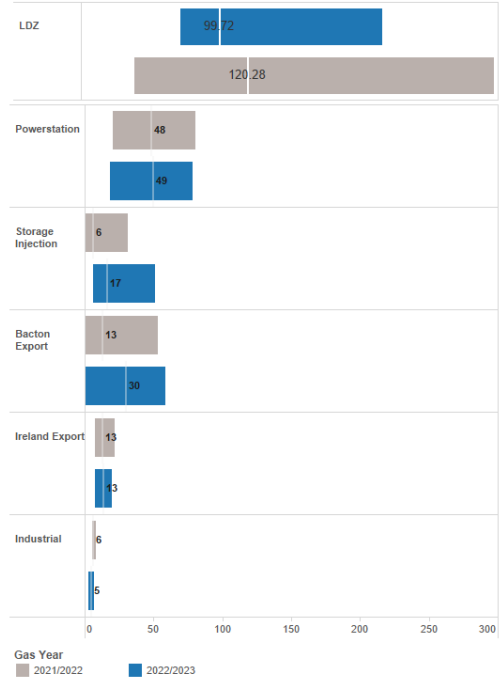
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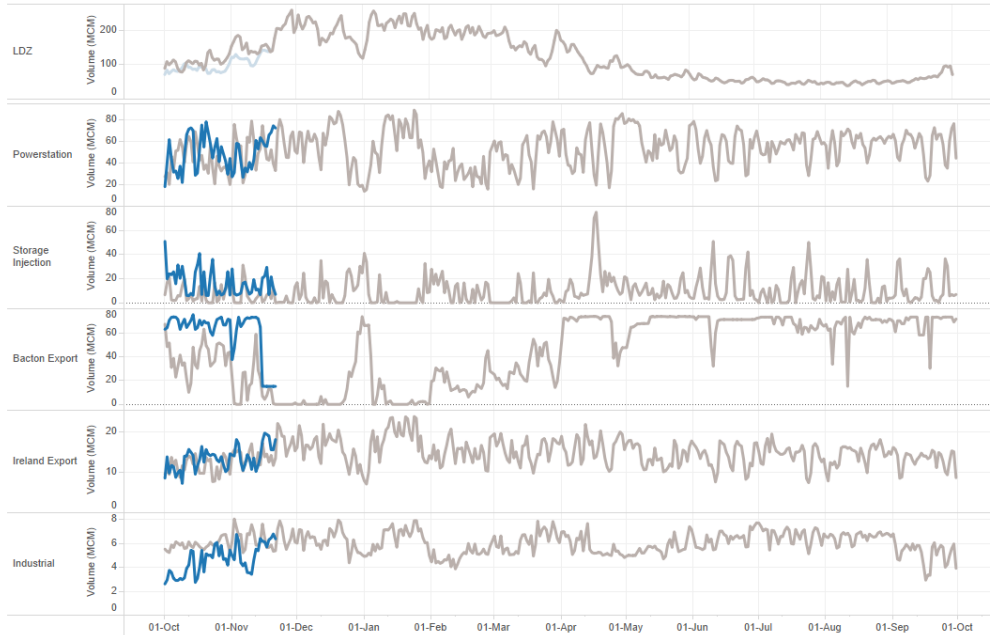
Components of NTS Demand

Components of NTS Demand

Average Daily Volume and Range (Winter)

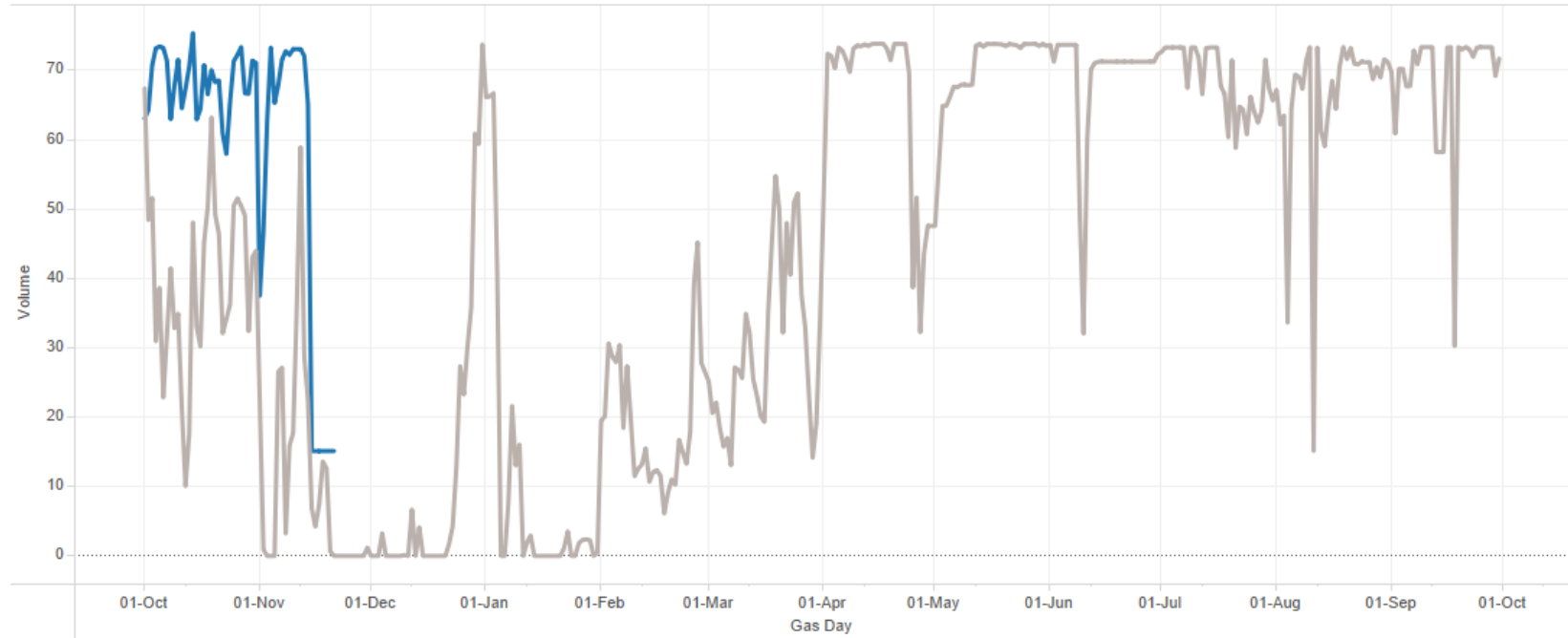


LDZ Trend



Interconnector Export Demand

Interconnector Exports - Winter

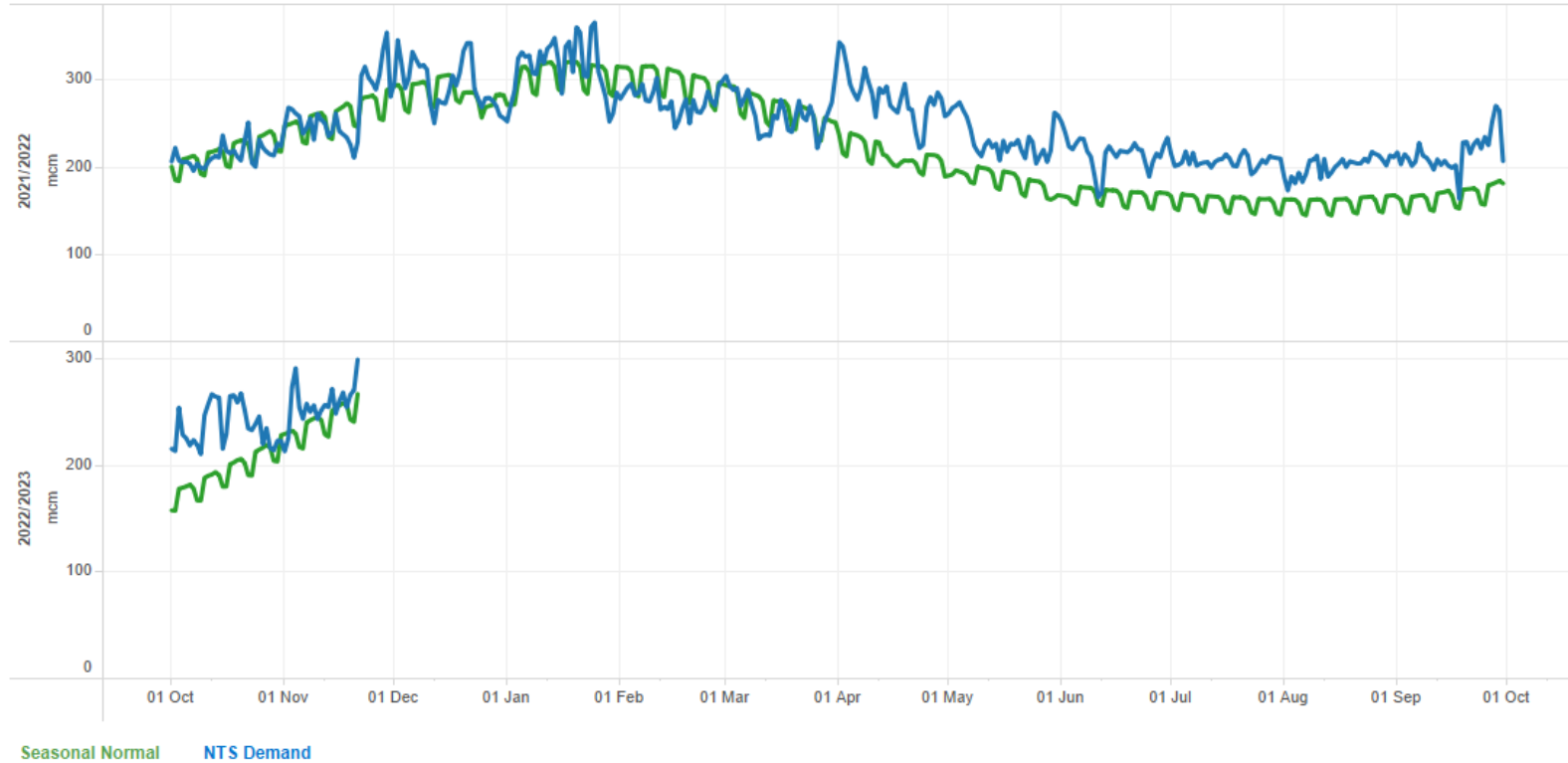


Gas Year

■ 2021/2022

■ 2022/2023

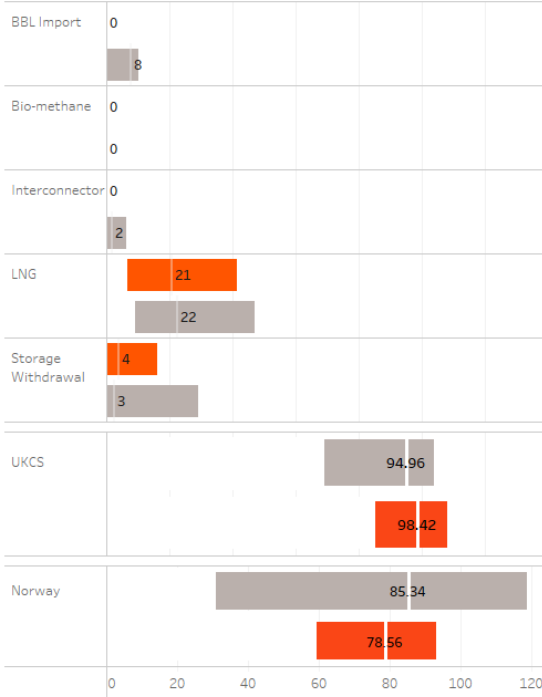
Demand – Comparison to seasonal norm



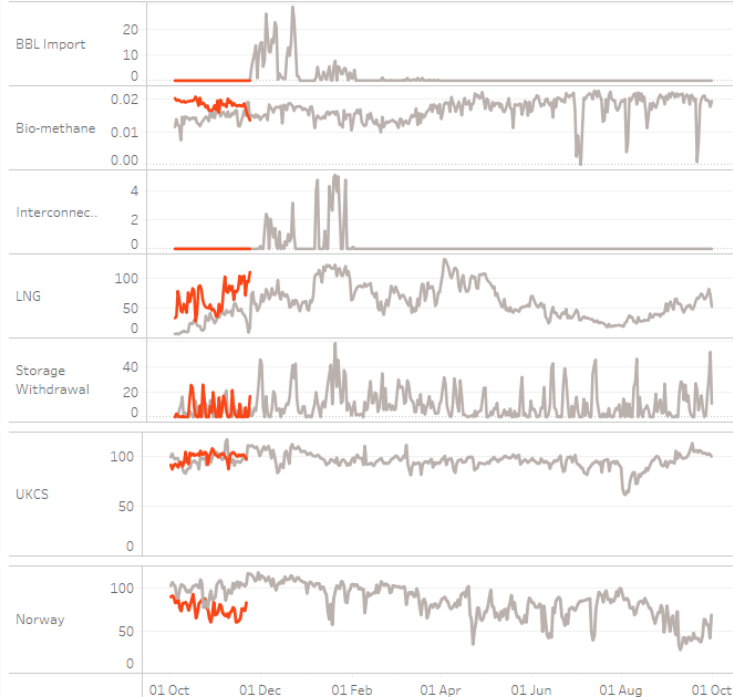
Components of NTS Supply

Gas System Operations | Trends - Supply Categories

Average Daily Volume and Range (Winter)



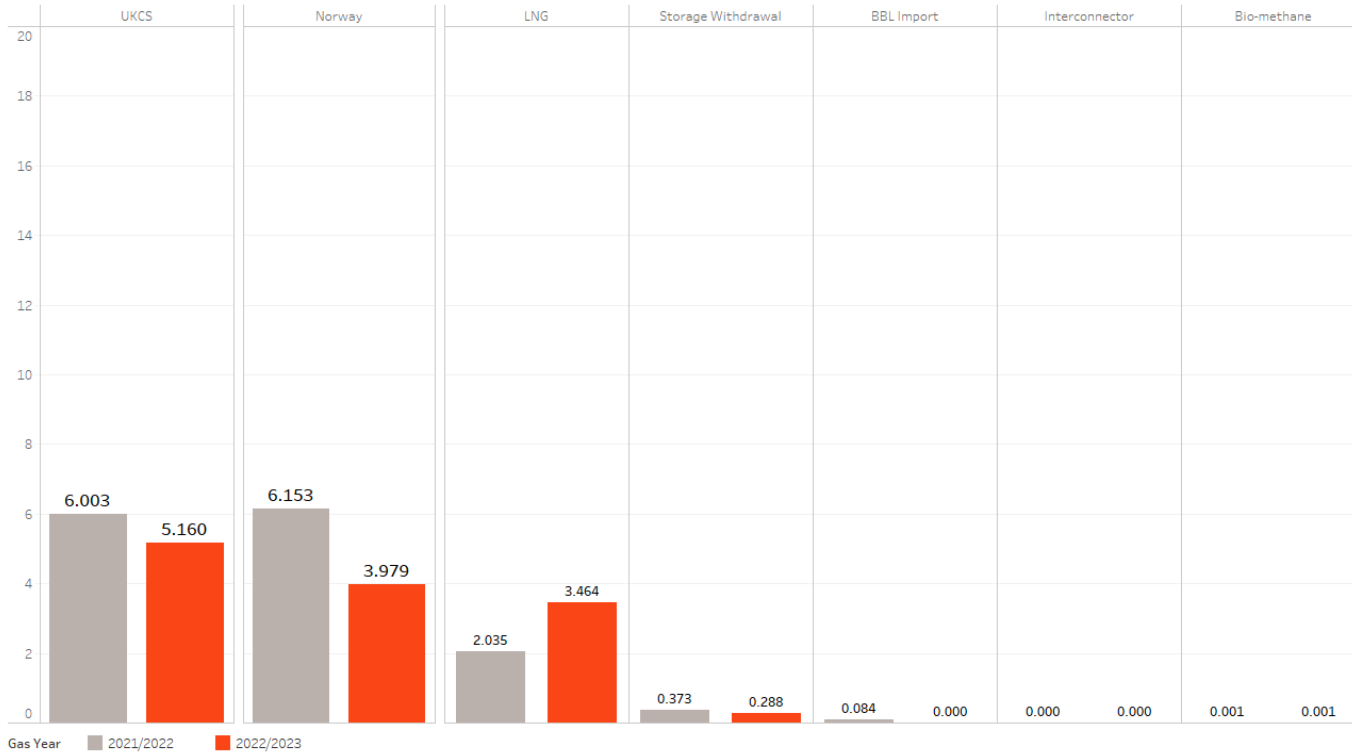
Other Supply



Gas Year
■ 2022/2023
■ 2021/2022

Supply - Components

Supply BCM (Winter)



UK LNG & Storage Stock

Total LNG Stock and Percent Full

851 mcm
66% full

Total GB Storage Stock and Percent Full

2,130 mcm
83% full

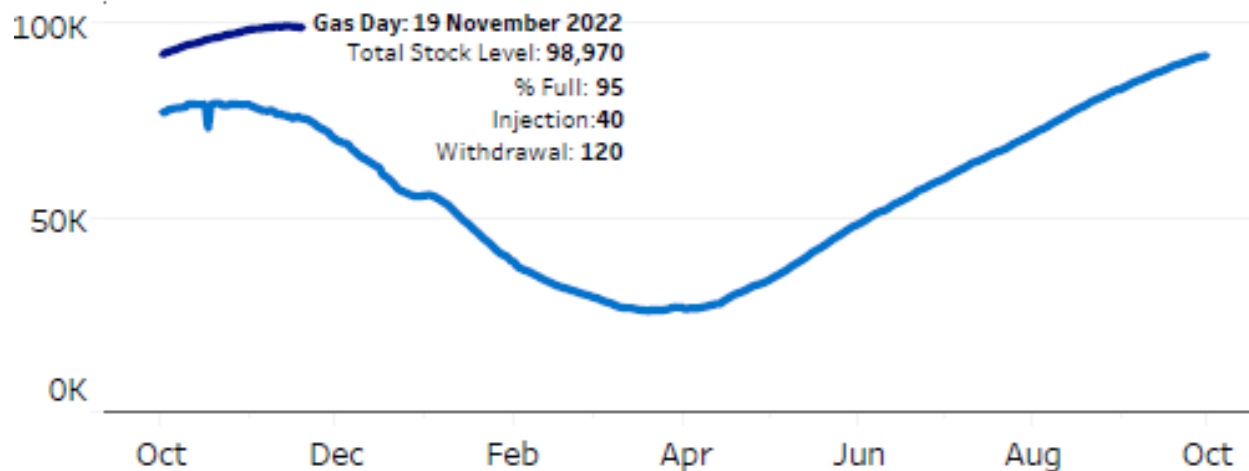
* Rough storage stock added from 14/09/22,

LNG & Storage stock (mcm)



EU Storage Stock

EU storage stock (mcm)



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UK Demand Trends

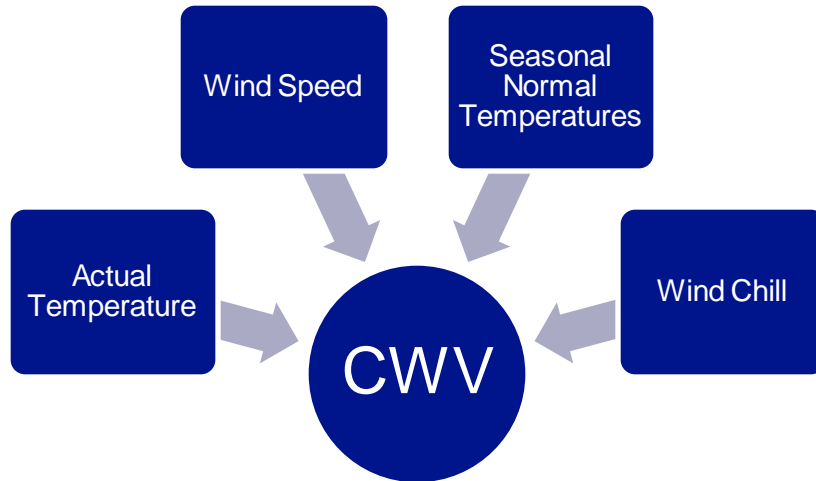
Beth Foster
Commercial Analyst

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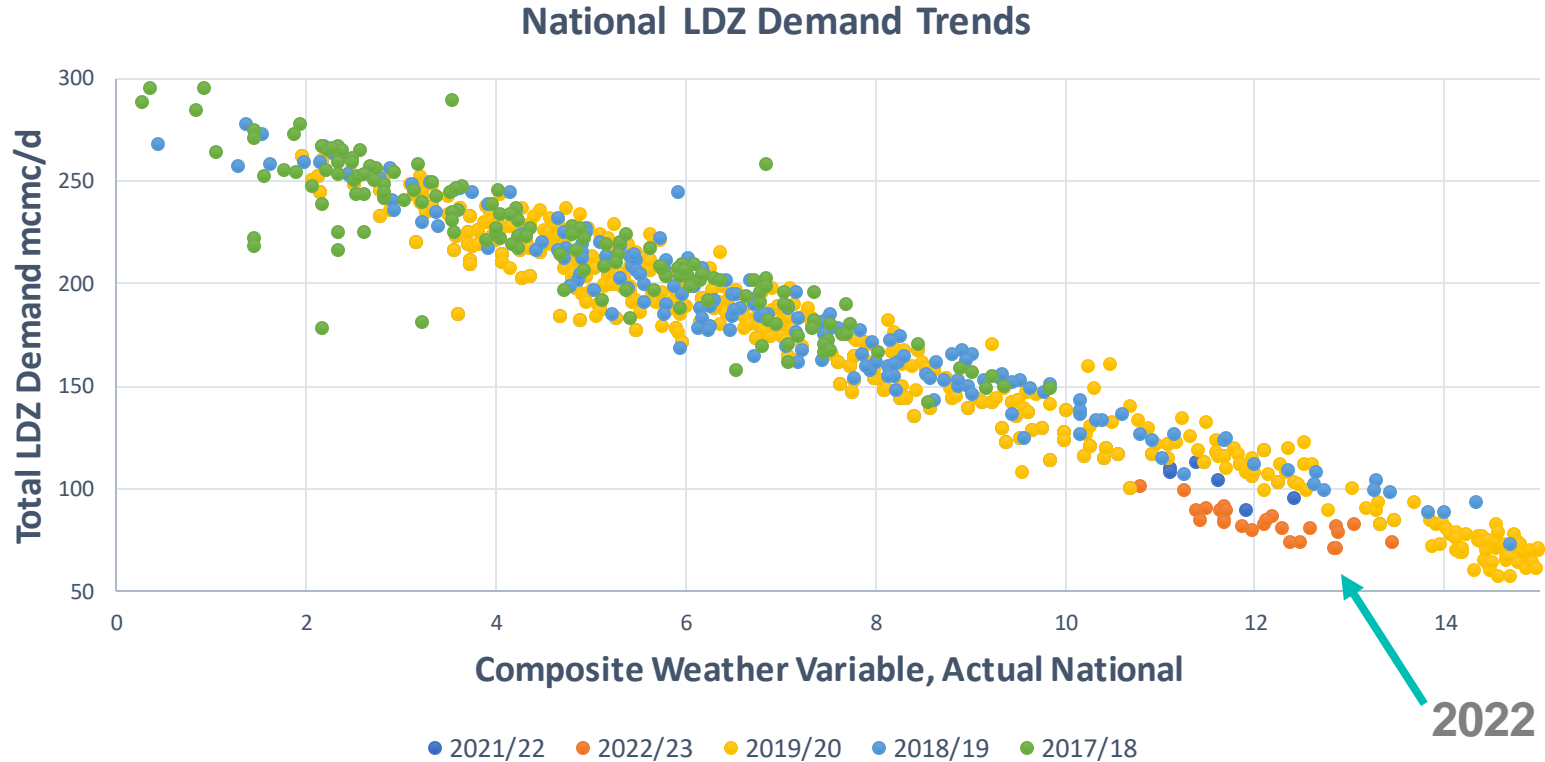
Are we seeing a drop in consumer demand this winter and how do we measure this?

- Measured the correlation between Composite Weather Variable and LDZ offtake demand
- Scaled for weather differences



LDZ National Trends 2017-2022

*Figures scaled to factor for weather differences

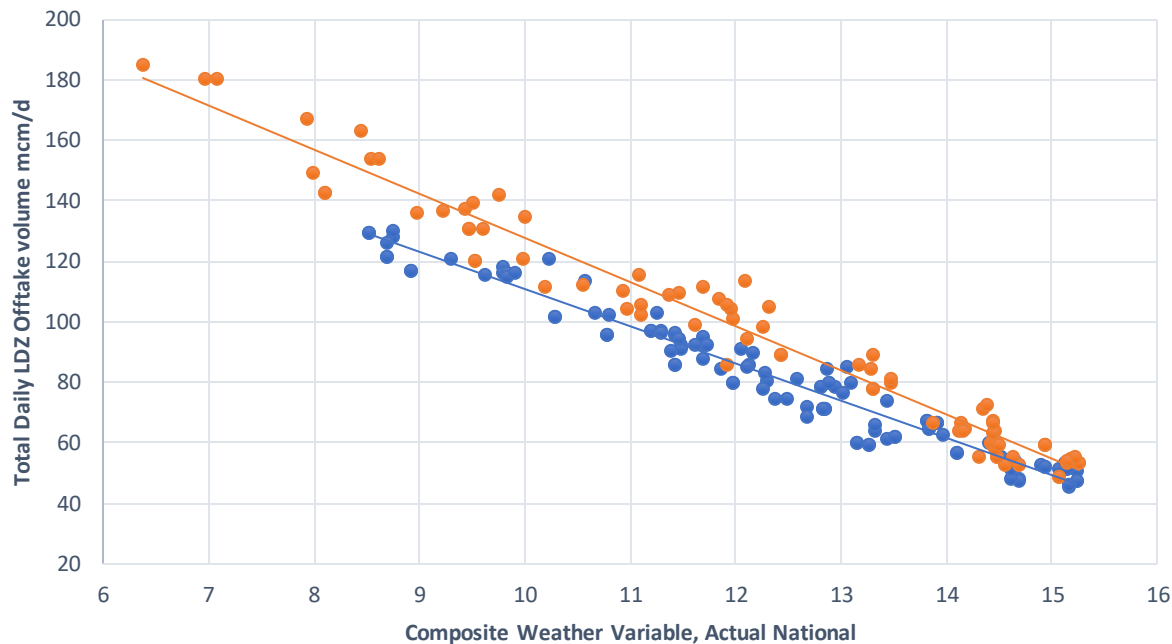


2022

Shoulder months

*Figures scaled to factor for weather differences

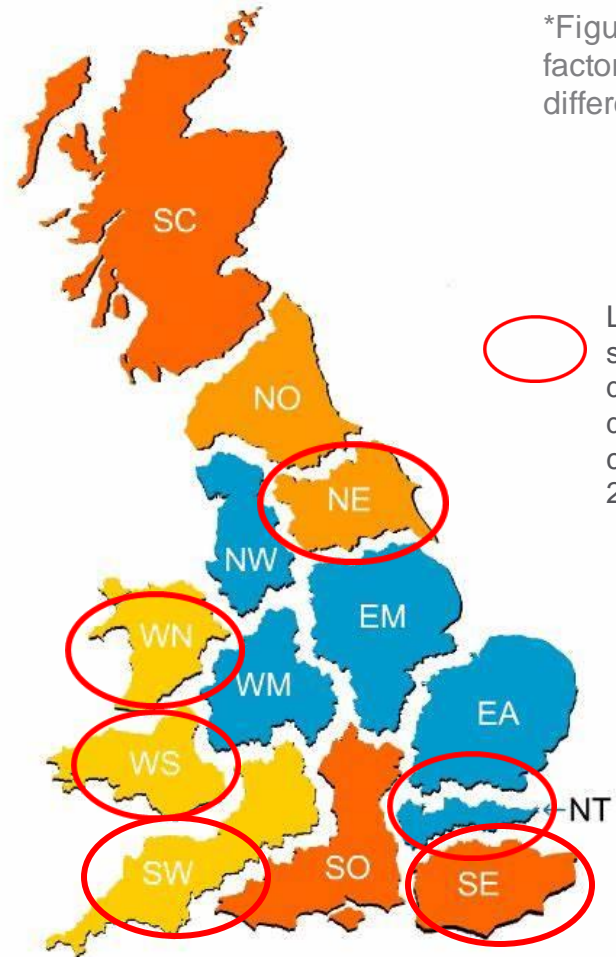
Total LDZ Offtake Demand Trends for Shoulder Months 21 Vs 22



- -13% drop in LDZ Offtake volume throughout September
- -13% drop in LDZ offtake volume throughout October

LDZ Regions

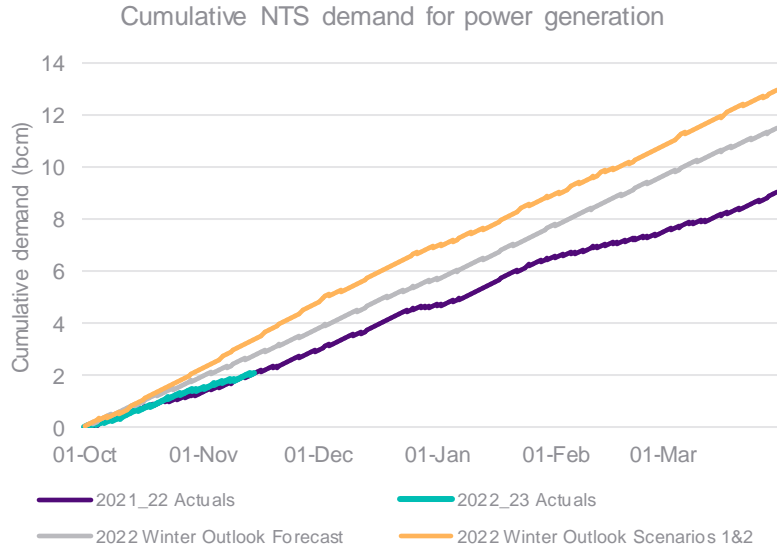
LDZ Offtake Region	% Variance between October 2022 and 2021*
WN	-21
SE	-21
WS	-20
SW	-19
NT	-18
NE	-17
EA	-16
WM	-15
EM	-14
NW	-14
SO	-13
NO	-13
SC	-12



Key Notes on LDZ Offtakes

- ◆ **2022 LDZ Offtake Demand is 13% lower on average than 2021**
- ◆ **Certain LDZ regions are showing up to a 21% drop in Offtake Demand compared to 2021**
- ◆ **Why are we seeing higher variance in different LDZ regions?**

Power demand



- ◆ **Electricity imports were 60% lower, exports 420% higher this October compared to 2021**
- ◆ **Generation from gas and wind were both higher by 15-20%**
- ◆ **Wind generation was higher in the first half of November, reducing the impact on gas demand**

Summary

- ◆ **LDZ gas consumption this winter is significantly lower than trends we have seen in the last 5 years.**
- ◆ **The impact on gas demand of higher electricity exports has been mitigated by higher wind generation**
- ◆ **Continued transparency with DNs to collate consumer demand insights.**

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Demand Side Response

Phil Hobbins
Commercial Code Change Manager

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Agenda

1. Gas DSR Recap

2. DSR Reforms for this Winter

3. Summary

Gas DSR Re-cap

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Gas DSR: Re-cap

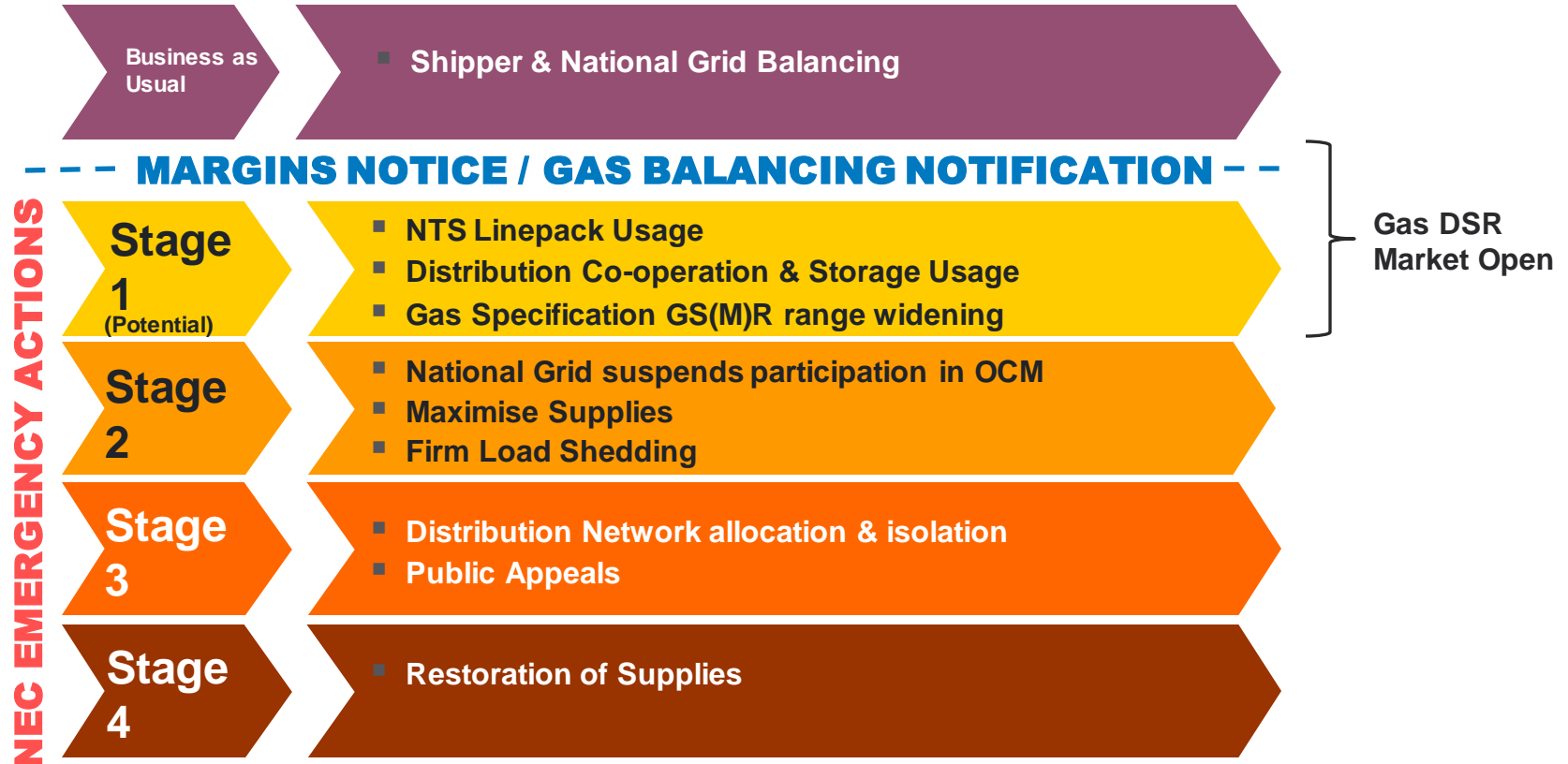
Voluntary gas demand reduction by large consumers at times of supply shortage

Could **reduce the likelihood** of a gas supply emergency

Large consumers can receive **greater compensation** than if they were **involuntarily curtailed** in an emergency.

More suitable for **industrial sites** rather than power generation

Overview of Gas Emergency Arrangements



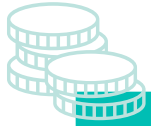
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DSR Reforms for this Winter

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Stakeholder Views



**Costs &
Incentives**



Lead-time



**Alternative
Fuels**

Overview of DSR Reform Proposals for this Winter

Invitation to Offer

For this Winter and/or the next two Winters

Shippers offer option quantities, option price and exercise price

Delivers a guaranteed level of response

Option Payment

Designed to be passed onto the relevant consumer

Obligation to trade with National Grid when supplies are tight

Funded by all other shippers

Extend DSR Window

Extend the trigger from within-day to D-1

Enables more participation

DSR Options Invitation to Offer

- Timeline of Key Events

Process		Key Dates	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
D-1 and Within Day DSR Options	Pre-tender communication and timetable issued	04-Nov-22	★						
	D-1 and Within Day options tender published	18-Nov-22	★						
	Tender period			→					
	Tender period closes	09-Dec-22		★					
	Offer evaluation period			→					
	Notify tendering shippers of outcomes*	23-Dec-22			★	→			
	Notify wider industry of aggregate tender outcomes				→				
	D-1 and Within Day DSR options effective					→	→	→	→
* Plus potentially a 10 day reference to Ofgem for >£5m options fees.									

In this process, we are also seeking non-binding D-5 DSR option offers

Acceptance of D-5 offers would be subject to an extension of the DSR scheme for which a further UNC Modification is required

3

Summary

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Summary

Gas DSR has been reformed based on stakeholder views
Benefits to the consumer and helps avoid an emergency
DSR option offers invited **by 9th December 2022**
We will further engage on introduction of a D-5 product

**For more information
please contact:**

Gas DSR Rules

philip.hobbins@nationalgrid.com

The DSR options invitation
to offer process

andrea.godden@nationalgrid.com
or
brendan.mullan@nationalgrid.com

<https://www.nationalgrid.com/gas-transmission/balancing/demand-side-response-dsr>



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Ice Endex (Guest Presentation)

Wouter De Klein

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OCM Market Update National Grid Operational Forum

Wouter de Klein
Senior Director, Utility Markets

24 November 2022





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[UK OCM Gas Spot | ICE](#)

**Slides currently redacted.
Awaiting approval from ICE
prior to upload.**

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Resilient Communications Project

Rajesh Sukhija
Systems Delivery & Change Manager

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Resilient Communication

- **National Grid Gas is undertaking a communication upgrade programme, to provide a safe and resilient communication network between National Grid Gas and the rest of the Gas network**
- **This will ensure emergency plans and procedures can still be implemented and communicated in a Power Outage**
- **This could help prevent any Gas supply emergencies that could occur due to restrictions on timely and critical communications**

Resilient Communication - Satellite

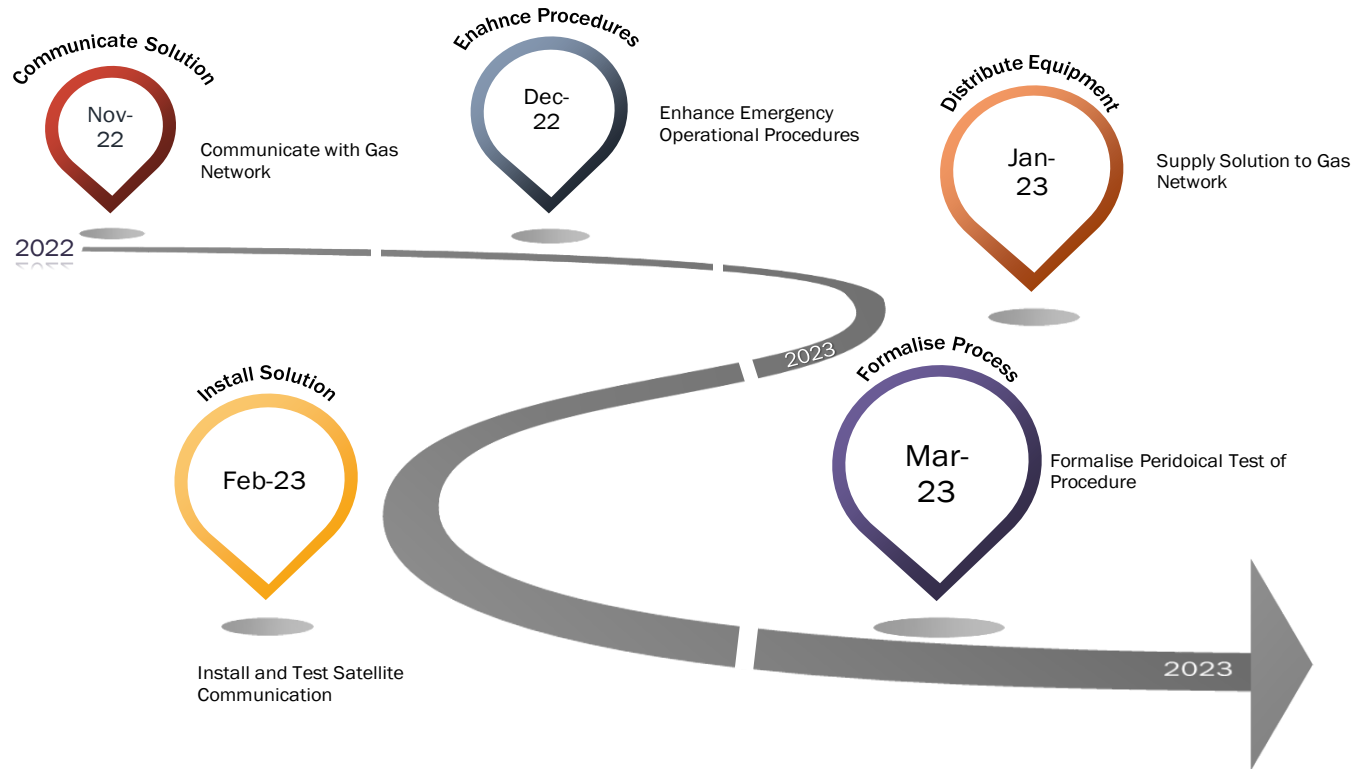
- **National Grid Gas will be able to communicate resiliently with the Gas Distribution Networks and critical manned sites (including Terminals, Storage and Compressors) via satellite**
- **Crucially, these satellites are not powered by terrestrial infrastructure and therefore will not be affected in the event of a National Power Outage**
- **In the unlikely event of a National Power Outage, maintaining communications between operationally critical sites, authorities and the National Transmission System are essential to secure the efficient movement of gas across the Transmission System and the regular flow of information across key sites**

Resilient Communication – Satellite Benefits

- **This satellite technology will have wide coverage, flexibility to connect to smartphones across different platforms and allow data transmission through text and email**
- **The technology operates on lower earth orbit Satellite communication system and therefore, has a very wide coverage**



Resilient Communication – Timeline



Resilient Communication

- **National Grid Gas would like sites to install and test the new satellite equipment to guarantee sites have robust and resilient communication measures, as part of wider preparedness measures**
- **The Department for Business, Energy and Industrial Strategy supports the adoption of robust communications as part of emergency preparedness and resilience and encourages sites to install and test the capability as soon as possible**

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Update on the Gas Markets Plan

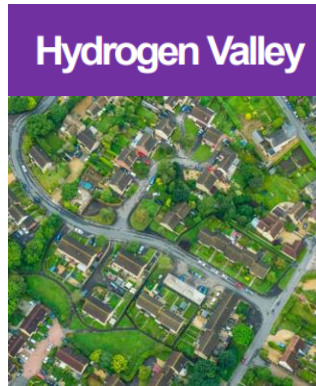
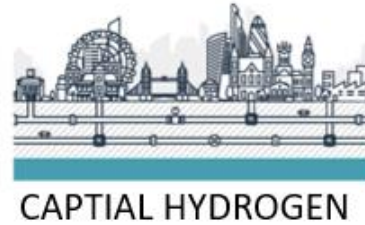
Jen Randall
Gas Markets Strategy Manager

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National Grid Gas: Future of Gas projects

FutureGrid



GMaP Themes: 2022/23 Focus Area



Hydrogen (full/ 100%):

We have been working with industry on a GMaP project to explore how the development of Project Union could impact existing gas market design and commercial arrangements.

This year we have also published our GMaP report on [The role of Guarantees of Origin in driving a future UK hydrogen market](#)

Government are due to make a decision on hydrogen in domestic heating in 2026. As part of GMaP we have been working on a study looking at the different types of housing and levels of insulation in homes in England and Wales to identify geographical areas where Hydrogen could provide a solution for decarbonising home heating.

As we decarbonise, particularly using Green hydrogen, there will be an ever increasing interaction between renewable electricity generation, hydrogen production and energy consumption. The GMaP project in this area will look at how gas market frameworks need to evolve to facilitate this interaction.

Within the business we are engaging with our industrial customers to understand plans and considerations for decarbonisation. Within this area of the GMaP program we will take this output and develop appropriate market framework solutions.

There are a range of market mechanisms available to the Gas System Operator to manage the gas transmission network at the pre-emergency stage. The GMaP project in this area will be looking at the suitability of those market mechanisms for a decarbonised gas future and identify new mechanisms appropriate for the differing characteristics of low carbon gases.

Hydrogen Blending:

We are feeding into the [ENAGGG Blending project](#) looking at facilitating a 20% H2 blend into gas networks from 2023, particular focus on capacity allocation and market framework changes required.

We have also explored this year how existing market frameworks may need to evolve to accommodate de-blending technology on the UK's gas networks [Hydrogen deblending feasibility study \(phase 2\) markets workstream](#)

Heat:



Power:



Industry:



Pre-emergency market mechanisms:

Market framework development: **Impact***

* For illustration purposes only, no clearly defined market developments yet in place



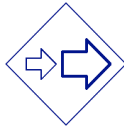
System Operation

- Dual system operator role may be developed
- **Residual balancer role of the Gas System operator may be adapted**
- Supply and demand more regionalised



Balancing

- May require a change to the daily balancing regime
- Balancing regime dependent on market development



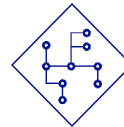
Trading

- Alternative approach to trading functions dependent of the development of emerging markets
- Concept of a centralised trading hub (NBP) may differ



Gas Quality

- GSMR changes for different specification of Gas in Transporter networks pipes



Capacity

- Possible change in requirement for network Users to book capacity to secure commercial right to flow gas on the Transmission network



Charging

- Regulatory model for hydrogen network development may impact charging framework



Connections

- More strategic approach to connections could be needed
- **Increased number of network entry points**

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Updates

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Provisional Calendar year 2023 Operational Forums

The forums will be hybrid via Microsoft Teams and at the Clermont Hotel, London

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Clermont & Online	Clermont & Online	Clermont & Online	X	Clermont & Online	Clermont & Online	X	X	Clermont & Online	Clermont & Online	Clermont & Online	X
26/01	23/02	23/03		18/05	22/06			21/09	19/10	23/11	

**Registration is open for the
January event at:**

<https://www.eventbrite.co.uk/e/gas-operational-forum-january-in-person-tickets-474227004737>

The Clermont Hotel
Charing Cross
London
WC2N 5HX

SO Incentive Reports

We have recently published **two of our SO Incentive reports**

1. Our **annual** incentive performance report; it is available here: [202122 Support Information v5 0.pptx \(live.com\)](#)
This report provides a summary of the National Grid Gas (NGG) Financial Incentive Schemes and performance for Financial Year 2021/22.
 - This pack covers
 - Capacity Constraint Management
 - Demand Forecasting D-1
 - Residual Balancing
 - Maintenance
 - Greenhouse Gas Compressor Emissions incentives
2. Our **quarterly** SO incentive external report for Q2 2022/23. [Microsoft Word - RIIO-GT2 Quarterly Report Jul - Sep.docx \(nationalgrid.com\)](#) this is produced every quarter, six weeks after the quarter closes out when our regulatory reporting submissions have been submitted to Ofgem.

Gas Ten Year Statement (GTYS)

In May we presented that the **upcoming GTYS** will have a **renewed feel and look**.

- We have **listened to your feedback** saying it was overcomplicated and not user friendly.
- We also identified a lot of repeated content between the document, other publications and National Grids website.

With this in mind, we have made a **number of changes** to make the document easier to read and navigate.

This year's GTYS will be published on **November 29th**.

We would greatly **appreciate any feedback** on the new look and feel and/or the content

Shaping the Gas Transmission System of the future

Our latest **engagement programme** to update you on the **future** of the gas transmission system is running from 28th November until the 14th December.

Shaping the future		
28/11	11:30	Key note speech
29/11	9:30	Facilitating commercial and regulatory change
30/11	9:00	Sustainable construction – an update
01/12	11:00	Accessing energy data
02/12	13:00	Operating the gas network
08/12	10:00	An update on Non-Transmission Charges
08/12	13:00	Monitoring and mitigating methane emissions
14/12	10:00	Driving a positive environmental and community impact

Net zero		
05/12	10:00	Blending
06/12	11:00	Transitioning to 100% hydrogen
07/12	12:00	Hydrogen Regulatory framework
09/12	13:30	Future of heat
12/12	14:00	FutureGrid
13/12	13:00	Innovation

More information can be found here: [Shaping the gas transmission system of the future | National Grid Gas](#)

Gemini – Sustain Plus Survey

Sustain Plus is a **two-year programme** of work to **significantly upgrade** Gemini.

Building off previous industry engagement, NGG are looking to send out a **short survey** to gain further understanding.

We would like to encourage **all Gemini Users** to complete this survey, as this will help the programme to effectively improve the Gemini System and further **enhance customer experience**.

The Survey is due to be sent week commencing **5th December** for a **three-week period** and closing date of **23rd December**.

Polls

Which agenda items did you find were of the most benefit to you today?

Please rank the agenda items from 1-6 with 1 being the highest scores / most benefit and 6 being the lowest

Please rank the proposed agenda items for 2023 to show which agenda items you would most like to be presented at Gas Ops Forum

Please rank the agenda items from 1-6 with 1 being the highest scores / most benefit and 6 being the lowest

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Q&A

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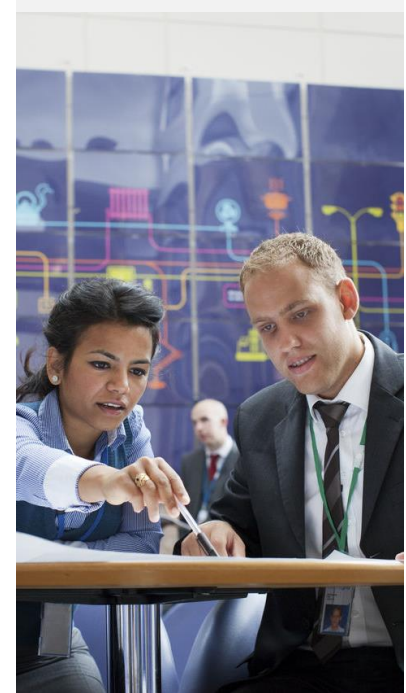
How to contact us

Operational Liaison Team

- Rachel Hinsley: Rachel.Hinsley1@nationalgrid.com
- Mathew Currell: Mathew.Currell@nationalgrid.com
- Craig Shipley: Craig.Shipley@nationalgrid.com
- Operational Liaison Email: Box.OperationalLiaison@nationalgrid.com

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

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



Key resources available to you

Gas Ops Forums

Throughout the year, we hold regular Operational forum meetings. This forum aims to provide visibility and awareness for our customers and stakeholders to help understand and discuss the operation and performance of the National Transmission System (NTS). We also proactively invite any suggestions for operational topics that would promote discussion and awareness.

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>

Join the conversation

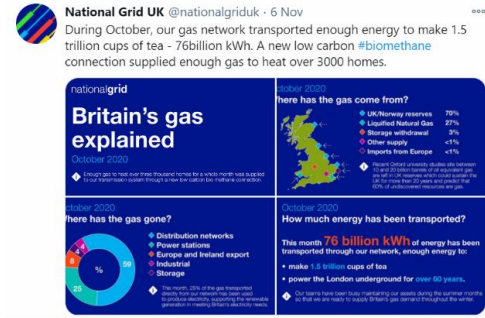
Registering for the site will enable you to access further content and take part in discussions and voting. We are keen to ensure that we hear the views of all market participants, and registration will help us to ensure that relevant content can be developed for discussion.

Register for access

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>



The monthly Gas Explained information is published on the data community website

Or follow our personal accounts on LinkedIn

Modernising energy networks data

We're modernising data from the energy networks, bringing together gas and electricity networks to address data issues, access new datasets and identify opportunities in existing datasets.

Energy Data Request Tool:
[Microsoft Forms Link](#)

Next Forum

The next Gas Operational Forum will take place on the 26th January 2023.

Please send any topic requests to:

Box.OperationalLiaison@nationalgrid.com

Register now at:

In Person

<https://www.eventbrite.co.uk/e/gas-operational-forum-january-in-person-tickets-474227004737>

Online

<https://www.eventbrite.co.uk/e/gas-operational-forum-january-online-tickets-474228820167>

Pre-Register for 2023 Events

<https://www.eventbrite.co.uk/e/pre-registration-2023-operational-forums-online-tickets-460807556807>

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