## Gas Operational Forum

MS Teams
15th September 2022
10.02am

**Questions**SLIDO = OPSFORUM

**Gas Transmission** 

## Introduction & Agenda

Martin Cahill
Operational Liaison & Business
Delivery Manager



nationalgrid

#### **Presenters**

#### **National Grid Gas**

Martin Cahill – Operational Liaison & Business Delivery Manager

Mathew Currell – Senior Operational Liaison Officer

Craig James – Head of National Control

Sam Holmes - Operational Liaison Analyst

Tom Wilcock - Emergency and Compliance Manager

#### **Guest Presenters**

Jake Stones – Hydrogen Editor (ICIS)



#### Calendar year 2022 Operational Forums

The forums will be hybrid via Microsoft Teams and at the Clermont Hotel, London (exc. January).

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Online	Clermont & Online	Clermont & Online	Х	Clermont & Online	Clermont & Online	Х	Х	Online	Clermont & Online	Clermont & Online	Х
20/01	24/02	31/03		19/05	30/06			15/09	20/10	24/11	

### Registration is open for the October 2022 event at:

https://www.eventbrite.co.uk/e/gas-operational-forum-october-in-person-tickets-419104120707

The Clermont Hotel
Charing Cross
London
WC2N 5HX

#### 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



#### 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

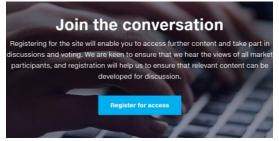
**Gas Distribution List** 

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



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

Or follow our personal accounts on LinkedIn



For updates and interaction with National Grid please visit; <a href="https://datacommunity.nationalgridgas.com/">https://datacommunity.nationalgridgas.com/</a>

For the National Grid Gas Website, please visit;

https://www.nationalgridgas.com/about-us

Maintenance Planning https://www.nationalgrid.com/uk/g as-transmission/data-andoperations/maintenance



Energy Data Request Tool: Microsoft Forms Link

#### How to contact us

#### **Operational Liaison Team**

Martin Cahill: Martin.Cahill@nationalgrid.com

Mathew Currell: mathew.currell@nationalgrid.com

**Operational Liaison Email:** 

Box.OperationalLiaison@nationalgrid.com

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

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



#### **Agenda for Today**

Welcome and Introduction			
Operational Overview			
Guest Presentation: ICIS Hydrogen	10:20		
Overview of Winter Prep:  Margins Notice Forecast Operating Margin Tender Exercise Degree Demand Side Response Rough	10:45		
MIPI Winter Changes	11:15		
Updates: Milford Shaping The Future Bacton Exit			
	Operational Overview  Guest Presentation: ICIS Hydrogen  Overview of Winter Prep:  Margins Notice Forecast Operating Margin Tender Exercise Degree Demand Side Response Rough  MIPI Winter Changes  Updates: Milford Shaping The Future		

Please ask any questions using Slido: #OPSFORUM

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

**Gas Transmission** 

## **Operational Overview**

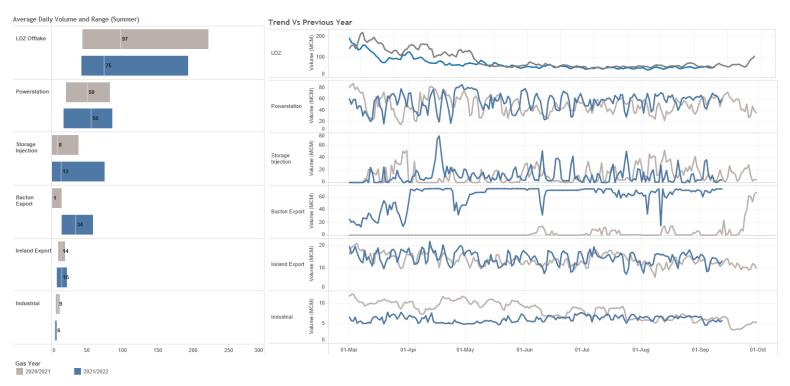
Mathew Currell
Senior Operational Liaison Officer



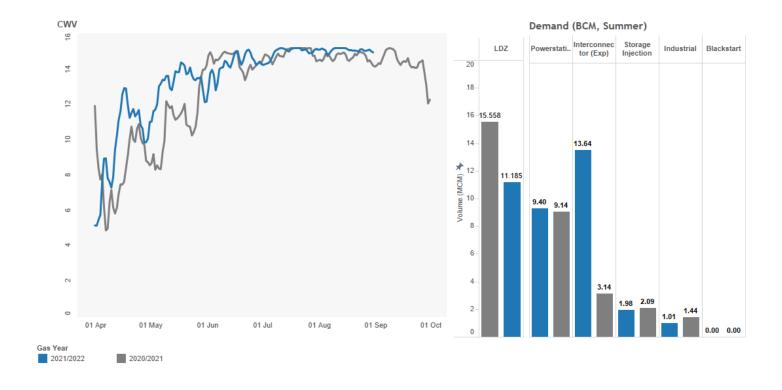
nationalgrid

### **Components of NTS Demand**

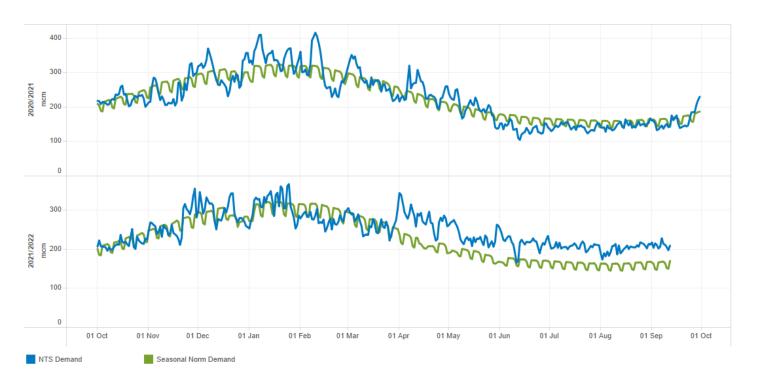
#### **Components of NTS Demand**



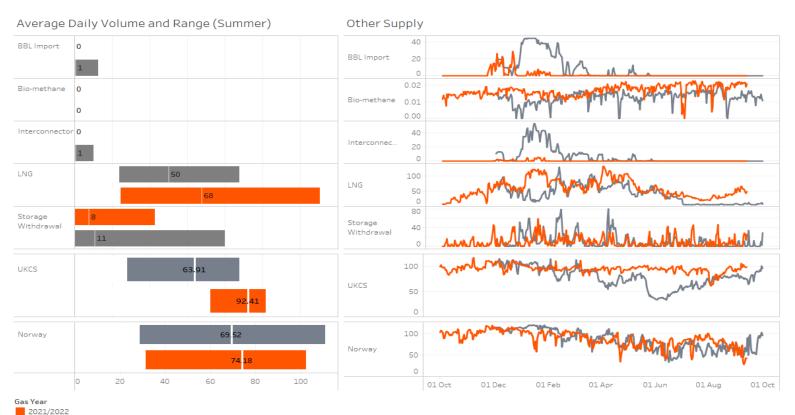
#### **Demand – CWV & Components**



#### **Demand – Comparison to seasonal norm**



### **Components of NTS Supply**

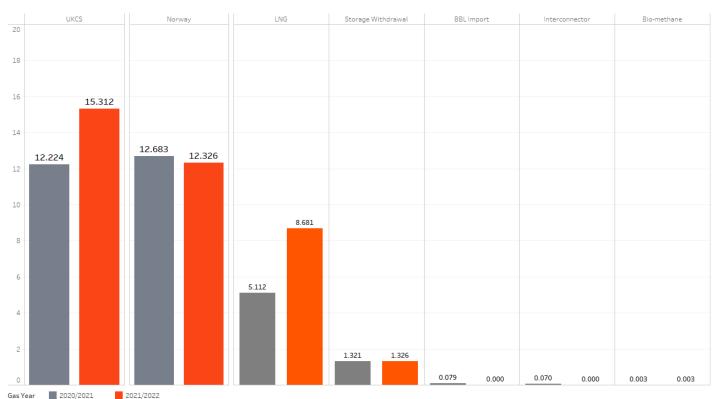




2020/2021

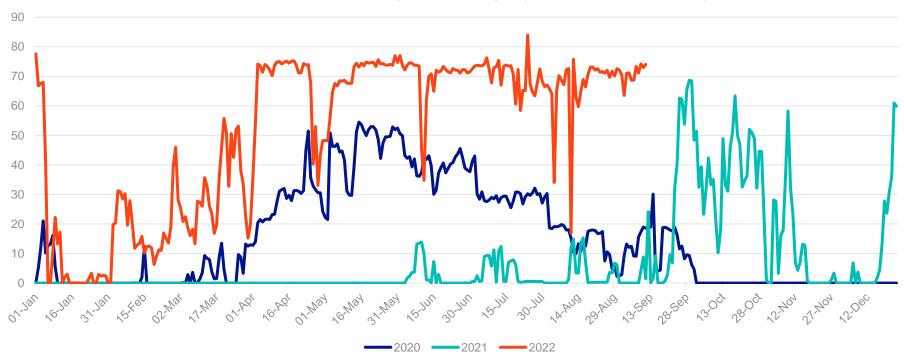
### **Supply - Components**





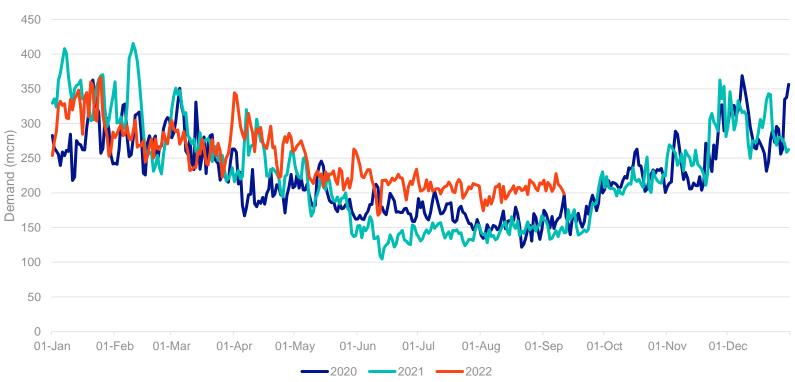
#### **Total Interconnector Exports**



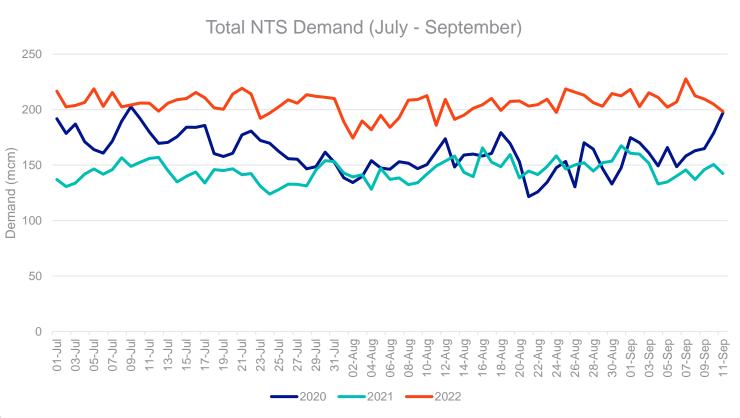


#### **Total NTS Demand Year on Year**





#### **Total NTS Demand Year on Year (July – September)**





## National Grid Ops Forum

15 September 2022

Jake Stones, Hydrogen Editor, ICIS

#### **Contents**



- Market structure and regulatory support
- Future markets
- Impact of record gas prices on production costs



### Market structure and regulatory support

#### **Current state of hydrogen market**



- Highly localised production and demand (industrial processes, chemicals, refineries)
- Low transparency: producers are often the offtaker, or, bilateral agreements between producers and users
- Minimal infrastructure outside of standard regulation
- Current production predominantly based on fossil fuels (reforming of natural gas without abatement technology)

#### **Lessons from liquid gas markets – the British NBP and Dutch TTF**



- Information and price transparency are key, and led to the development of the UK gas market the NBP
- Delivery of near-to-real-time information on system balance, supply and demand, underpinned by the Regulation on Energy Market Integrity and Transparency (REMIT)
- As well as data reporting, REMIT also requires all wholesale market trades to be reported to the regulator
- Supporting independent, third-party assessment of gas trades, providing fair market value

#### **Lessons from liquid gas markets – Where are we with hydrogen?**



#### Development of liquid wholesale gas markets:

- Abundance of supply
- Established infrastructure (offering flexibility to market participants)
- Demand
- Information and price transparency
- Regulation

#### Regulatory and political support



#### UK government hydrogen business model

- CfD framework where hydrogen producer will be paid difference between strike price and reference price (potentially gas price)
- Agreed sales price disclosure, supporting price transparency and building towards a benchmark hydrogen assessment
- Supports supply-side growth
- Ensures low carbon hydrogen progresses in the market
  - To qualify as "Low carbon", emissions must not exceed 20gCO2e/MJ across scopes 1 (direct), 2 (emissions from power generation), 3 emissions from gas recovery



### Future markets

#### Future markets – export



- Hydrogen Strategy initially focused on domestic production and use of hydrogen
- However, recently released "Hydrogen Development Action Plan" (24 August) outlined ambitions for export markets
- Primary focus is exporting to mainland Europe, such as to the Netherlands or Germany
- In order to support exports, the UK government aims to engage internationally regarding a certification scheme for different types of hydrogen

#### Future markets - export





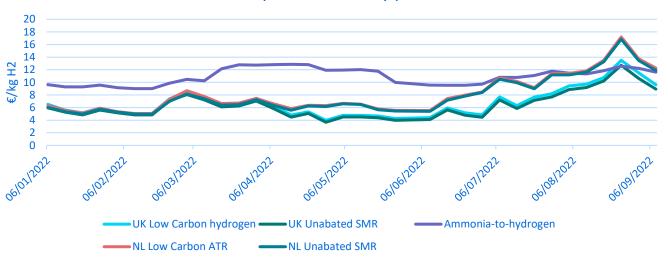


- Amid glut of LNG to UK, hydrogen production costs compared with NL have plummeted
- Potential export market for hydrogen in the future
- Dependent on mainland European infrastructure availability

#### **Future markets – import**



### Ammonia-to-hydrogen as import vector competitive against high European commodity prices

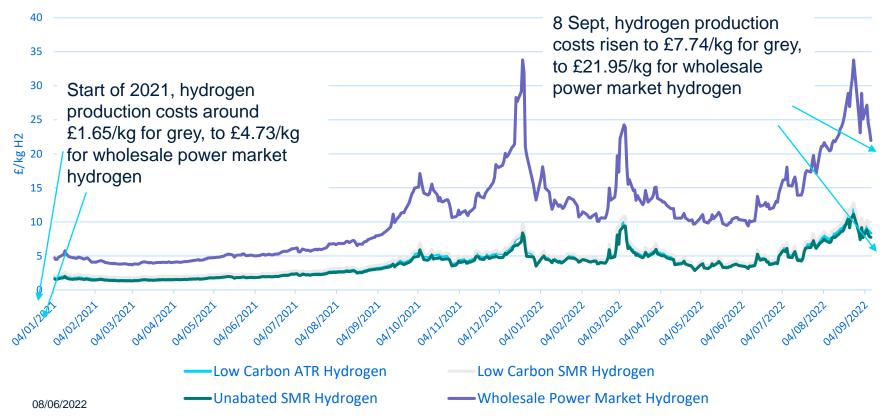


- Policy developments within the UK show reduce appetite for imports, however due to the European Commission's revised targets for hydrogen import (10mt import by 2030)
- Due to the established infrastructure and trade flows of ammonia, potential for ammonia as a transport vector initially is high



# Impact of commodity price spike on hydrogen

### Snapshot impact of wholesale market price spike on hydrogen production costs (based on ICIS front month power and gas assessments)



### Commodity price spike resulted in mixed impact on blue-grey difference





Blue premium to grey narrowed substantially over the past year amid changing carbon prices However, gas and power prices also impact production costs in different ways Based on

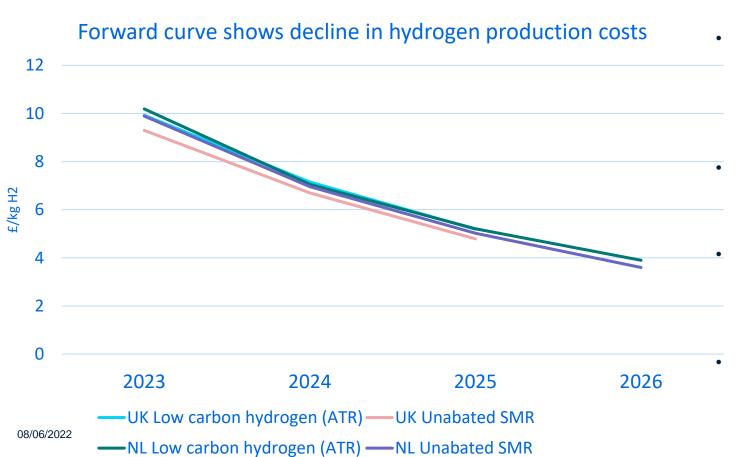
current gas and power prices, a carbon price of

€120/tCO2e and €175/tCO2e would close blue

around

10 11 0 10 0 i 1 1 100





Backwardation along the far curve indicates the market is pricing a rebalancing of supply Current price spike largely linked to infrastructure restrictions New renewable capacity could result in gradual decline in gas demand Far curve production costs around £4-5/kg

hydrogen



## Thank you Q&A

**Gas Transmission** 

## Winter Preparedness

**Craig James**Head of National Control



nationalgrid

#### Our Role ahead of Winter

- In the next few sections we will cover the following;
  - Margins Notice Forecast
  - Operating Margin Tender
  - Exercise Degree
  - MIPI Winter Changes
  - Demand Side Response

**Gas Transmission** 

## **Margins Notice Forecast**



national**grid** 

# 5 Day View Limitations & New Margins Notice Forecast

### **Existing 5 day view**

- The 5 day view often shows a significant reduction in supply availability because it assumes storage facilities withdraw gas at their maximum rates based on prevailing stock level
- · This is often not reflective of actual storage behaviour unless it coincides with a period of high demand
- Actual Margins Notice trigger levels therefore tend to remain more constant than the 5 day view suggests

### **Margins Notice Forecast**

- Intended to provide a more realistic view of what the day ahead trigger level might be on any day out to D-7
- Based on week ahead demand forecast and different storage and LNG assumptions
- Our intention is to publish it every day on National Grid Prevailing View between 1 October and 30 March

# **Changes to Methodology**

	New	Previous
Non Storage/LNG Supplies (NSS)	<ul> <li>Determined by National Grid based on best available information of maximum upstream asset capability for terminals and interconnectors.</li> <li>Reviewed regularly throughout the winter.</li> </ul>	(Same Methodology)
Storage	<ul> <li>Uses the relationship between stock level and deliverability (decay) curve provided by the site operators.</li> <li>Assumes max deliverability for each site based on its deliverability curve but reduces the stock value by the 7 day historical average withdrawal for the following day's calculation (up to D-7).</li> </ul>	Assumes max deliverability for each site based on its deliverability curve and reduces the stock value by this amount for the following days calculation (up to D-5).
LNG	<ul> <li>Assumes LNG will deliver at average of last 7 days actual flow.</li> <li>Minimum tank level is determined by lowest historical stock observed at each terminal plus X days worth of boil off flow (X based on number of days until next cargo through National Grid LNG cargo monitoring).</li> <li>Applies average of last 7 days actual flow into the NTS every day unless stock level drops below min tank level in which case limited to available volume and then boil off for subsequent days (up to D-7).</li> </ul>	<ul> <li>Assumes LNG will deliver at 95<sup>th</sup> percentile of their flows over the last 3 winters (cold weather capability).</li> <li>Min tank level is determined by lowest stock we've seen plus 18 days worth of boil off flow (assumed typical boat transit time).</li> <li>Applies cold weather capability everyday unless stock level drops below min tank level in which case limited to available volume and then just boil off for subsequent days (up to D-5).</li> </ul>

### **Confidence Bands**

#### **Demand Forecast**

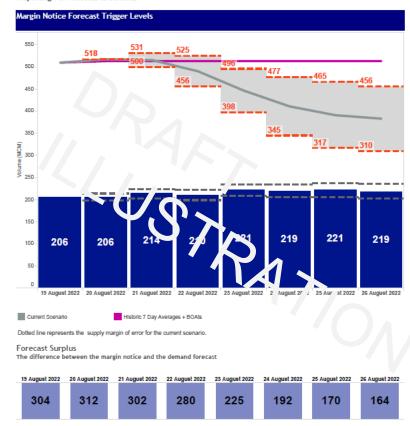
 Confidence bands will be placed around demand forecasts based on the historic average error (in mcm) for each forecast day (D-1 to D-7)

### Margins Notice Max Available Supply Forecast

 Confidence bands will be placed around the max supply forecast based on historic error (in % terms) between final margins notice on D-1 and earlier forecasts of this (D-2 to D-7)

#### Margin Notice Forecast

Gas Day Executed on: 19/08/2022 Reporting For: 19/08/22 to 26/08/22



# **Gas Operating Margin Tender**



### **Gas Operating Margins for Winter 22/23**

- Operating Margins is gas which National Grid may use to manage the system at times of stress - as a short term measure over a day to manage network pressures.
- The Operating Margins Portfolio is comprised of LNG, Gas in storage and demand reduction contracts.
- Currently we have 869GWh of Operating Margins procured for 2022/23.
- National Grid keeps the Gas Operating Margins volumes under constant review, and as per UNC may enter into OM contracts within the OM year.

Key message:

OM a short term product used to manage system stress events. We currently have 869GWh booked for 2022/23.

### **Gas Operating Margins for Winter 22/23**

- During summer 2022 a reassessment was made of the requirement for 22/23, following developments in the gas market since February.
- The reassessment included analysing different supply flow patterns to meet the winter peak demand day.
- The outcome was that an additional 75GWh (minimum Operating Margins Gas may be required to support the additional scenarios identified\*)

OM Requirements 2022/23 (GWh)*								
Category	Current Requirement	Revised Requirement	Change					
Supply Loss	545	605	+60					
Locational South West	101	101						
Locational South East	39	39						
Non Locational	145	160	+15					
Orderly Rundown	38	38						
TOTAL	869	944	+75					

<sup>\*</sup> All requirements are indicative and subject to technical, contractual and economic assessment. Requirements may vary depending on bids received

National Grid is tendering for the additional OM, for a service from 01/12/2022 until 30/04/2023.

### **Tender Indicative Timelines**

	WEEK COMMENCING											
Activity		19/09/2022	26/09/2022	03/10/2022	10/10/2022	17/10/2022	24/10/2022	31/10/2022	07/11/2022	14/11/2022	21/11/2022	28/11/2022
Tender Period (Closes 03/10/2022)												
Assessment and Evaluation Period												
Results Notification												
Contract Finalisation and Signature												
Service Commencement (01/12/2022)												

For further information including the Tender Documentation, please see <a href="https://www.nationalgrid.com/gas-transmission/balancing/operating-margins-">https://www.nationalgrid.com/gas-transmission/balancing/operating-margins-</a>

Demand Side Response Reform



# **Current Regime Overview**

- Gas DSR enables consumers to offer to reduce their demand via their shipper/supplier during the build up to a gas emergency, in return for a payment which they define
- During times of insufficient gas supply, the use of gas DSR could reduce the likelihood, severity and duration of a gas deficit emergency
- Intended to provide a 'route to market' for large consumers to receive greater financial compensation by voluntarily curtailing demand ahead of an emergency than if they were involuntarily curtailed in an emergency.
- Envisaged to be more suitable for large industrial and commercial sites rather than power generation
- Shippers may place offers to sell quantities of gas on the OCM DSR locational market which NGG may accept after a Gas Balancing Notification (GBN) has been issued prior to declaration of a Stage 2 emergency
- 'Exercise' payments only apply currently

# **Key Principles**

- Allows consumers to define their VoLL (Value of Lost Load)
- Presents a commercial opportunity to voluntarily curtail flow prior to entering a Stage 2
   Emergency where Firm Load Shedding could take place
- DSR Market hosted on OCM with a minimum offer quantity of 4,000 Therms/d
- Tranches of load can be offered
- Market available to parties defined as "DMC" in UNC eg sites with consumption of >2m therms pa
- DSR market opens following the issue of a Gas Balancing Notification (GBN)
- Requires a within-day reduction

# Why Is Reform Needed?

- Zero Bids were placed when the DSR Market opened in 2018
- DSR reviewed as part of Winter Preparedness activities
- Engagement with Customers and Stakeholders has confirmed:
- Scheme does not compensate parties enough for them to participate
- Within-day response is not possible for most sites
- Backup fuels are no longer in place for most sites

# What Are We Proposing?

Invitation to Offer

Hold an Invitation to Offer (ITO) inviting shippers to place offers for a demand reduction for the next two Winters

Shippers whose offers are accepted will receive an Option / Availability Payment

Receipt of an Option payment obligates the shipper to place a bid onto the OCM DSR Market within 1 hour of it opening

Ensures a guaranteed level of response in the event of the DSR Market opening Option / Availability Payment

Include the provision of an Option or Availability payment to make the scheme more attractive and encourage participation

Funded by Energy Balancing Neutrality and paid monthly during the Winter months

Receipt of an Option payment obligates the shipper to place a bid onto the OCM DSR Market within 1 hour of it opening. If an Offer is not posted Penalties can be applied Extend DSR Window

Amend the trigger for the DSR market opening to include a Margins Notice (MN) at D-1 or the issuing of a GBN

Feedback suggests some sites can provide a demand reduction within 24-48 hours

# **Next Steps**

- Consultation runs until 5pm on 22<sup>nd</sup> September
- Review consultation responses
- Final Modification Report available for Panel on 26<sup>th</sup> September
- Modification Panel provides recommendation on 28<sup>th</sup> September
- Final Modification Report sent to Ofgem for authority direction on 28<sup>th</sup> September

Rough Storage Update



# **Rough Storage**

- Rough Storage site is now operational and has begun injecting
- A remit notice has been published by Centrica regarding initial injection testing
- All data for site is available via Data Item Explorer, Report Explorer, Instantaneous Flows, and Storage & LNG Report

# **Rough Storage Data**

- Storage Injection data will be available in 'Rough, Storage' data items
- Storage Withdrawal data will be available in 'Rough' data items
- 'Rough-sub' will continue to exist for UK Continental Shelf supplies via the Rough NTS entry point. This will include the gas supplied from the Humber Gathering System in the Southern North Sea
- The daily storage & LNG report will include Rough Storage when site begins flowing gas
- Some further capacity and nomination data items have been added for withdrawal in early September at a newly created ASEP for Rough Storage
- Instantaneous Flows will be aggregated
- Rough Arrangements are temporary, requirements for any permanent arrangement will be re-assessed

### Where to find Information

Publication according to Article 4(1) of REMIT/UMM - Urgent Market Message

# Planned other unavailability at Rough Storage Facility - Update

poperations@centrica-sl.co.uk

Active

Gasday 🔻	Operator Type 🔻	Site Name 🔻	Opening Stock	Inflow 🔻	Outflow 🔻	Available Capacity	Injectability 💌	Deliverability 💌
13-Sep-2022	STORAGE	Rough	76570035	76570035	0	8369532691	3.03333E+11	21640667
13-Sep-2022	STORAGE	Hornsea	2944011146	0	18273470	148988354	30000000	100000000
13-Sep-2022	STORAGE	Hill Top	502656476	0	37777	-42461612	146535500	146535500
13-Sep-2022	STORAGE	Aldbrough	2244218266	0	20576234	-182718266	311000000	342300000
13-Sep-2022	STORAGE	Stublach	4355160678	0	201586695	-57160678	182000000	200000000
13-Sep-2022	STORAGE	Humbly Grove	2715131577	0	0	396873321	91000000	79000000
13-Sep-2022	STORAGE	Holford	2302215642	0	43220200	256492228	286000000	238333344
13-Sep-2022	STORAGE	Holehouse Farm	232091822	0	0	142908178	0	0
13-Sep-2022	LNG	Dragon	1821049394	48117958	0	297830606	1450000000	300000000
13-Sep-2022	LNG	South Hook	4984767990	893654180	0	235232010	9999999999	99999999999
13-Sep-2022	LNG	Isle Of Grain	3974576516	0	214105426	2452620706	649000000	649000000

#### Scheduled time period

Saturday 10th September 2022 at 9:30am to Wednesday 14th September 2022 at 12:00pm

2022-005-A-W-----CSLROUGH - CSL are intending to perform testing of the Rough field for injection operations from [09:30: 10/09/2022]. Injection and storage operations are not expected to impact gas production through the Easington Terminal

Injection commissioning



### **Data Item Explorer**

Select Data Item(s)

View Data for Data Items

System Entry Volume, HumblyGrove, D+1
System Entry Volume, HumblyGrove, M+15
System Entry Volume, MoffatInterconnector, D+1
System Entry Volume, MoffatInterconnector, M+15
System Entry Volume, Murrow, D+1
System Entry Volume, Murrow, M+15
System Entry Volume, Rough, D+1
System Entry Volume, Rough-Sub, D+1
System Entry Volume, Rough-Sub, M+15
Criteria
Officia
Latest Values
Applicable At
Applicable For

All data presented on the MIPI and GMRS applications are in GB standard reference

**Exercise Degree Update** 

**Tom Wilcock** Emergency and Compliance Manager



# **Update**

- Exercise Degree will focus on NEC communications with all industry participants through all stages of an emergency, both in the lead up and during an NGSE.
- Due to the sad passing of Her Majesty the Queen, we have postponed the first two days of this exercise (13th and 14th September).
- The first day of the new event will be 28<sup>th</sup> September.
- The previously scheduled 4<sup>th</sup> and 5<sup>th</sup> October exercise days will go ahead as planned.
- A fourth day of exercise will be on 11<sup>th</sup> October this will complete the full exercise scope.

# Scope

# Wednesday 28<sup>th</sup> September

### **Emerging issues**

- Gas Transporter collaboration
- Gas Availability Status (GAS) report (live exercise activation)
- Strategy for restricting release of further NTS capacity
- Simulated communications issues
- Margins Notice (live exercise activation)

09:00 - c.16:00

### Tuesday 4<sup>th</sup> October

### **Pre-emergency**

- Gas Balancing Notification (live exercise activation)
- OCM balancing trades (notional)
- Scaleback off-peak exit capacity (notional)
- Operating Margins (live exercise activation)
- Electricity System Interactions
- Stage 1: 'Emergency Specification Gas' (live exercise activation)

09:00 - c.16:00

# Wednesday 5<sup>th</sup> October

### **Emergency**

- Stage 2: Flow Direction
   & Load Shedding
   (live exercise activation)
- Electricity System Impact
- Stage 3: Public Appeal and Allocation & Isolation
   (live exercise activation)

09:00 - c.16:00

### Tuesday 11<sup>th</sup> October

### Restoration

- Stage 4: Restoration (live exercise activation)
- Issue of Revocation Notices
- (live exercise activation)

  Declaration of the end

of an NGSE

(live exercise activation)

09:00 - c.16:00

# MIPI Winter Changes

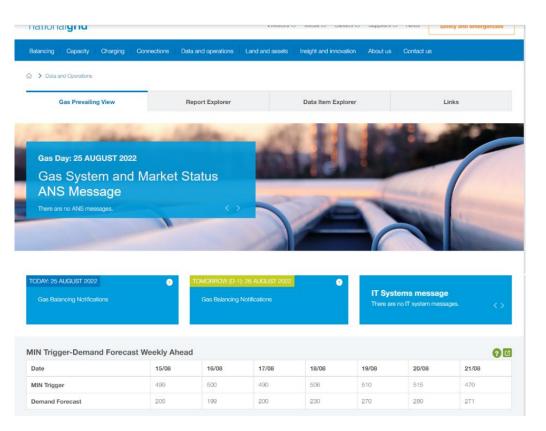
**Sam Holmes**Operational Liaison Analyst



**Margins Notice and Demand Forecast Week Ahead** 

**View** 

Week Ahead view to show difference between Margins Notice Trigger and Demand Forecast Values

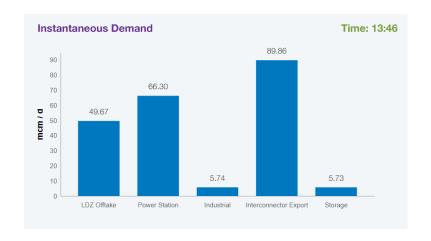


## **Interconnector Instantaneous Exports**

- Demand only available at category level currently
- Plan to make live export flows available at each individual Interconnector

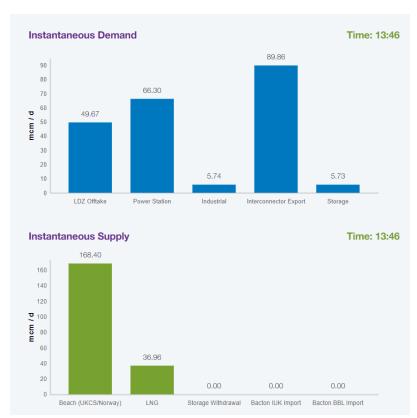
Category Demand Flow

		Instantaneous Flows (mcm/day)									
	Terminal Totals	13:24	13:26	13:28	13:30	13:32	13:34				
y	Industrial Demand Flow	5.92	5.92	5.92	5.86	5.89	5.71				
	Interconnector Export Demand Flow	89.83	90.08	89.89	89.87	89.66	90.03				
	LDZ Offtake Flow	49.13	49.30	49.26	49.56	49.43	49.22				
	Power Station Demand Flow	67.73	67.15	67.09	66.43	66.62	66.90				
	Storage Demand Flow	5.43	5.51	5.41	5.56	5.62	5.72				



# Instantaneous flow graphs

- Category level charts to be converted to line graphs
- These will show flow changes across a period of time rather than one individual snapshot



# **Historical Supply and Demand Data**

- As part of our Data Triage/Open
  Data process we have made
  available some historical supply
  and demand data at a site level
- Currently 5 years of historical data is available this spreadsheet provides an additional 2 years worth of data
- The data is available here:
  https://www.nationalgrid.com/gastransmission/open-data-requests

### Is there any data that you would like to see which is not currently available?

If you are not sure who the right network is to provide this data then please request for the data using the ENA data request template https://www.energynetworks.org/creating-tomorrows-networks/modernising-energy-networks-data and they will ensure your request gets passed through to the relevant network. If there is any data relating to the National Transmission Network that you would like to be made available then you can contact us at the following email address: box.operationaliaison@nationalgrid.com and we will assist you with your data request.

Please see below the datasets that we have made available through this process:

### Name ^

- National Grid Total Compressor Power
- Supply and Demand Data 2015-2017

### Want to find out more?

If you have any questions or would like to know more about this process then please contact us at box.operationaliaison@nationalgrid.com

# **Updates**



### Milford Haven – Summer 2023

- In the last couple of months, we have engaged with the industry to develop a solution which would
  minimise a risk of high constraint management costs materialising at Milford Haven entry point next
  summer. Should the risk unfold, the costs of the constraints might be passed on to our customers and
  end consumers. For background information on the risk and the steps we have taken to mitigate
  against it earlier this year, please follow the <u>link</u>.
- We have recently launched an online survey and we will appreciate your views on different risk mitigations which could be applicable ahead of summer 2023.
- To start the survey, please follow the link <u>Milford Haven Survey</u> or you can scan the QR code on your smart phone / tablet. The survey will close on **Friday**, 23<sup>rd</sup> **September**.
- If you have any questions or would like to discuss the topic further, please email anna.stankiewicz@nationalgrid.com or matthew.newman2@nationalgrid.com.



**Shaping the Future Webinars** 



# **Shaping the Future Webinars**

We are a stakeholder-led organisation and incorporating the views of our stakeholders into our plans is critical to navigate the journey to net zero.

Our 'Shaping the Future' Programme of Events will take place at the end of November – Early December

As always we are interested in topics that you are keen for us to cover, subjects you would like additional information on, or where you would like us to update you on action we have taken as a result of your feedback. Look out for invitations and more details early November. If you would like to offer suggestions please get in touch with Jennifer.pemberton@nationalgrid.com

### **Previous Webinars – Nov/Dec 202**

- Future of Gas
- Innovation
- Gas Markets Plan
- Transitioning to a Hydrogen Backbone
- Managing Methane Emissions
- Supporting Regional Hydrogen Transitions
- Understanding Skills Needed for a Net Zero World
- Digital Strategy & Information Provision
- Operating the Network
- Gas Emergency Frameworks
- Future Grid
- Network Capability

### **Feedback**

You can provide your feedback now on Slido:

What would you like to see covered?

Do you find the Shaping the Future Webinars useful?

# Bacton Exit Webinar



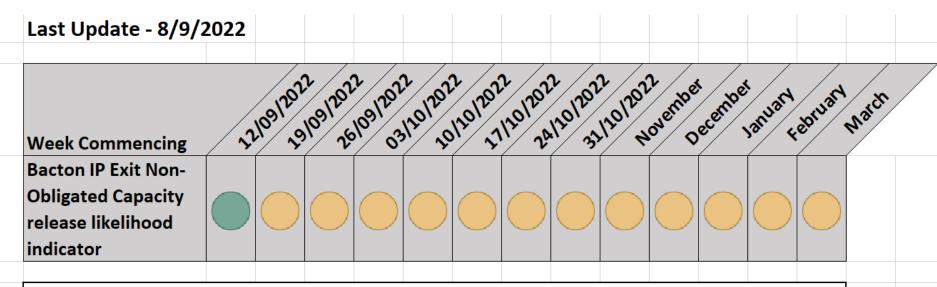
### **Bacton Exit Webinar**

Slides, Recording and Questions available here -

https://datacommunity.nationalgridgas.com/key-documents/webinars/supporting-gas-flows-to-europe-bacton-overview/

At this event, you told us that you wanted to see the Bacton RAG Indicator continue over the summer (90% in our poll), and we have committed to continue providing until the end of this winter

### **Bacton RAG**



#### Notes -

Green indicates that we are forecast to release non-obligated capacity so a total capacity of circa 74mcm/d (814,000,000 kWh/d) will be available based on current operating pressure assumptions

Yellow indicates that baseline capacity will be met however further non-obligated capacity may not be released, enhanced pressures may also not be available (if applicable)

Red indicates that we are currently forecasting that baseline will not be achievable

# Close



### **Next Forum**

The next Gas Operational Forum will take place on the 20<sup>th</sup> October.

Please send any topic requests to:

Box.OperationalLiaison@nationalgrid.com

### Register now at:

#### In Person

https://www.eventbrite.co.uk/e/gas-operational-forum-october-in-persontickets-419104120707

#### **Online**

https://www.eventbrite.co.uk/e/gas-operational-forum-october-online-tickets-419106858897

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