Digital Strategy and Information Provision

We will start at 13.32 to allow participants to finish previous meetings and join the call

While you are waiting, please access Sli.do which we will be using for Q&A

Event Code:

#GTX9

Sli.do Instructions:

You can access Sli.do at www.sli.do or by downloading the Sli.do app.

Once you've logged on, enter the code above when prompted.

nationalgrid

Welcome and Opening

Thank you for joining us today

Please feedback via SLIDO

Slido.com
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Who will be speaking today?

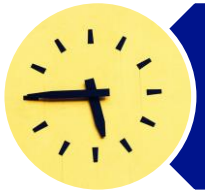
Harj Kandola
Data Insights Manager

Dan Clarke
Head of Innovation, ENA

Joshua Bates
Operational Liaison Manager

Emma Radley
Customer & Stakeholder Specialist

Logistics



Should last for approximately about 60 min

Questions and polling via slido.com #GTX9

All callers will be placed on mute

We will circulate the slides and a recording of this webinar

Agenda

Energy Data Taskforce and ENA Data Strategy

National Grid's Digital Strategy and Action Plan

Public Domain: External Opportunities and Real World Examples

Q&A

Quick poll

Q. Is there anything you would like the Energy Networks to provide in order to facilitate the journey to fully open source data?

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Modernising Energy Data

October 2018 → **June 2019**

ofgem Making a positive difference for energy consumers

Innovate UK

Department for Business, Energy & Industrial Strategy

Energy Data Taskforce established to provide Government, Ofgem and Industry with a set of recommendations on:

How data can assist with unlocking the opportunities provided by a modern, decarbonised and decentralised Energy System at the best value to consumers.

In June 2019 the Energy Data Taskforce published a report:

"A Strategy for a Modern Digitalised Energy System"

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Modernising Energy Data

The Energy Data Task Force (EDTF) made five key recommendations:

1. Digitalisation of the energy system
2. Maximising the value of data
3. Visibility of data
4. Coordination of asset registration
5. Visibility of infrastructure and assets

CATAPULT Energy Systems

"Digitalisation releases value, opportunity and resilience, enabling decarbonisation and de-centralisation to be delivered at optimal cost for the benefit of consumers"

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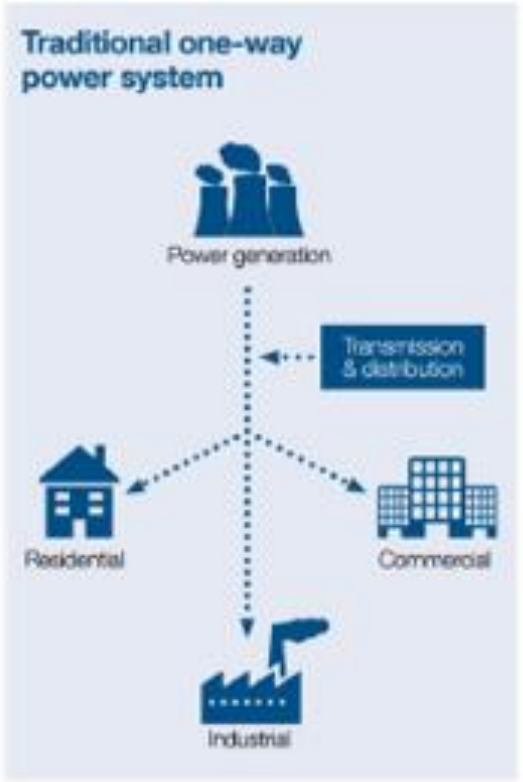
Digital Data Strategy Group

Energy Network Association (ENA) has set-up a **Digital Data Strategy group** to cover Gas & Electricity across UK & Ireland.

The Data Working Group is supporting the delivery of the **Energy Data Taskforce** recommendations.



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Quick poll - results

Q. Is there anything you would like the Energy Networks to provide in order to facilitate the journey to fully open source data?

Gas
Transmission

Shaping the Future Of Gas
NGGT Digital Strategy

nationalgrid

Quick Poll

Q. Does your company have a digital strategy?

- **Yes**
- **No**
- **Unsure**

Q. If yes, how do you engage with industry regarding your digital strategy?

Our Digital Themes

Optimised System Operator

We will utilise **smart tooling** to help us understand the **drivers** and **behaviours** of our customers and the **impact** of our **actions** and **decisions**.

Operations Enablement

Our Plant Operations field force will be **empowered** to make the **right decisions** and have everything they need on their **mobile** devices

Data Driven Asset Management

We will collate **more data** on our assets than ever before and use this to **understand risk** and make **informed decisions**.

Regulatory Change

We will deliver **system changes efficiently** to **enable a** more **effective commercial regime**.

Market & Customer Insights

We will have **clear processes** and provide greater **understanding** of our **interaction** with customers and their needs .

Data, Insights & AI

We will have more **analytics capability** than ever before and use this to make more **data driven decisions**

Workstreams

Optimised System Operator

- New demand forecasting models
- GCS Refresh
- Gas Control Room Enhancements
- Telemetry Re-opener and Satellite Replacement

Operations Enablement

- Field Force Devices
- DWM Phase 2 & 3
- Asset Protection Service

Data Driven Asset Management

- Digital Content Management
- Asset Performance Management
- Digital Asset Management

Regulatory Change

- Regulation Changes
- Gemini Replatform (Apollo)

Market & Customer Insights

- Data triage process
- New data sets
- National Energy System Map
- Decision making process for new data

Data, Insights & AI

- Data Platform
- People Capability

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Platform Enablement

- EPIC’s Features Uses Cases
- Business Outcomes
- Roadmap
- Safe Agile
- Ofgem Data Best Practise Guidance
- Best Practise
- Net Zero

Investing in our people

We know that ability to execute our digital strategy and harness the **opportunities** that our data offers depends on more than simply investing in technology

We recognise the need for our people to have the right **skills** and environment to take advantage of our investments in **technology** and enable digital transformation.

That's why we have brought together data experts from across the business to establish a dedicated **Data Team**, a centre of excellence for all things data and a driving force in our delivery of **digital transformation**.

We are committed to growing our **capability**, ensuring that our people have the skills needed to lead our digital transformation.

As we continue onboard new technology on our digital journey, we will grow our **people** capability through training and recruitment.

"We are committed to growing our capability

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An example of how we're using our data

There is lots of data, which traditionally has been quite difficult to navigate, however we are now unlocking the value in that data.

We're working to make our data more **accessible** and insightful, by creating solutions that help our people to see and understand our data.

Example…

An example of how we're using our data

By making data available in a way that is easy to navigate and interpret, we are increasing the speed to insight, enabling more data-driven thinking and freeing up our people to spend more time using their skills and expertise.

There is still lots more that we plan to do with our data, particularly in terms of advanced analytics and data science solutions and our anticipation is that by being able to more easily see and understand our data, we will be empowered to identify more opportunities for these types of solutions.

Digital Strategy Update March 2022

- Customer and Stakeholder Engagement
- Ofgem Feedback
- Investment Roadmaps for Data & Data Platforms
- Creation of a separate NGGT Digitalisation Strategy in readiness for Sale

Quick Poll - results

Q. Does your company have a digital strategy?

- **Yes**
- **No**
- **Unsure**

Q. *If yes, how do you engage with industry regarding your digital strategy?*

Poll Question

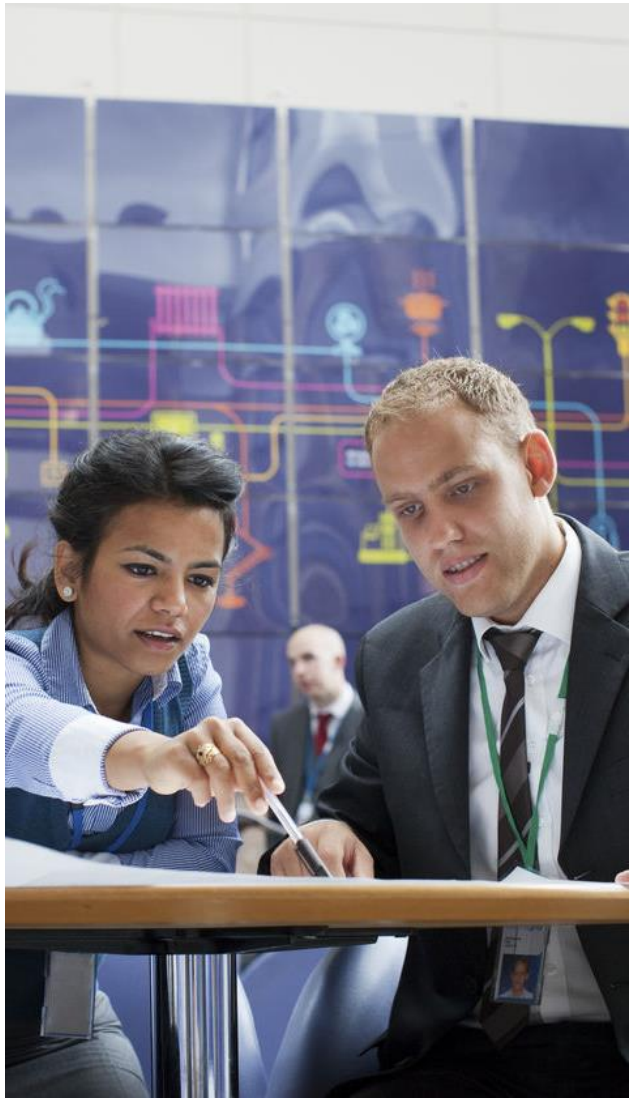
Q. How important is open source data to your company?

- **Very important**
- **Somewhat important**
- **Not important**

Q. Please explain why

Why do we publish data?

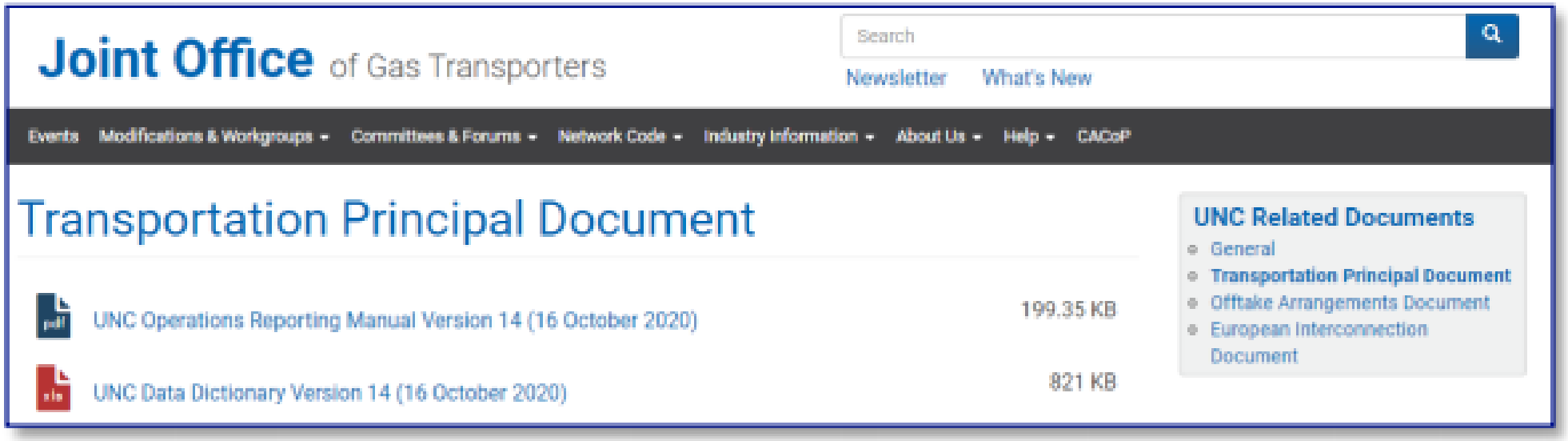
What data do we hold and why?	
Key market information	LNG
Balancing actions and tools	Operating Margins
Calorific Value	Price Reports
Demand	Shrinkage
Entry Capacity	Storage
Entry capacity trading analysis	Supplies to the UK
Exit capacity	Weather
Linepack	And more!



Why do we publish data?

- UNC special condition 8F
- Obligated data set as defined by UNC Section V9
- Following through on our responsible business charter to release data above and beyond our obligations to enable market efficiency

Governance



MIPI Report	Data Item	Unit of Measurement	Publication Frequency (Hourly,Daily, Weekly Monthly)	Publication For (Hourly,D, D+1,D+2,M+15 etc OR ADHOC)	Approx Scheduled Publication Time	Relates to Network (NTS,LDZ or Both)	Data Source	Associated Data	Proposed Definition (MIPI)	Proposed Definition (Data Dictionary Short)	Proposed Definition (Data Dictionary Long)	Status- data still published?	First date of publication
NB05	Input Balance Requested Energy	kWh	Hourly	D-1 - D	Hourly	NTS	-	-	The aggregate Shipper requested input nominations	The aggregate Shipper requested input nominations	The aggregate Shipper requested input nominations, determined hourly from 05:30 the day ahead through to 02:30 on the Gas Flow Day. If these requests are approved by the System Operator then they will be scheduled in Gemini.	Live	>5 Years

https://www.gasgovernance.co.uk/tpddocs

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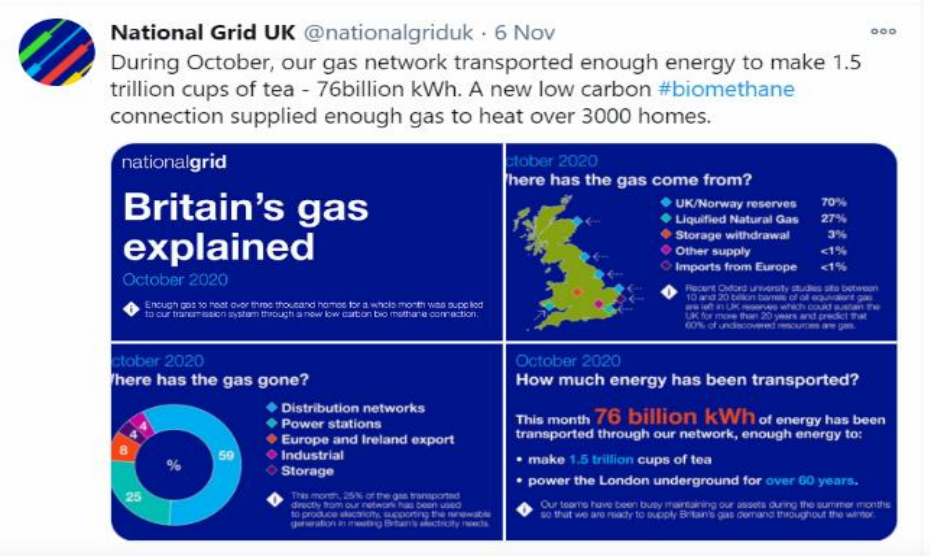
Key resources available to you



Gas Operational Forums. In person (London) and Virtual (Microsoft Teams) Conference held eight times per year to discuss the UK gas industry.

1st hour: Operations and UK Gas information from National Grid

2nd hour: Guest presentations from Gas industry participants, Code modification updates, Future looking workstreams (ie Hydrogen), industry developments.

Data Community Site. For fast cycle data, discussions, debates, updates and interaction with National Grid please visit;
https://datacommunity.nationalgridgas.com/

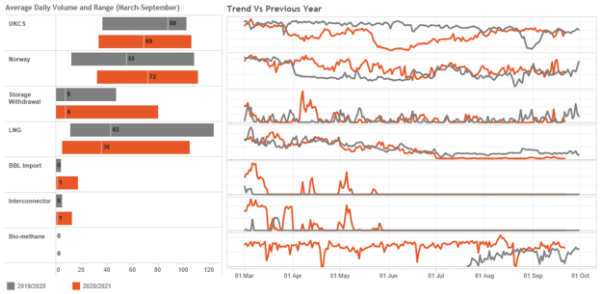
National Grid Website. For slow cycle data, legislation, static factual information please visit the National Grid Gas Website;
https://www.nationalgridgas.com/about-us

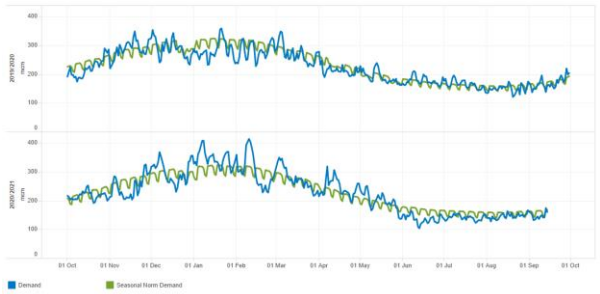
Maintenance Planning Website. For Maintenance Planning and scheduling, please visit https://www.nationalgrid.com/uk/gas-transmission/data-and-operations/maintenance

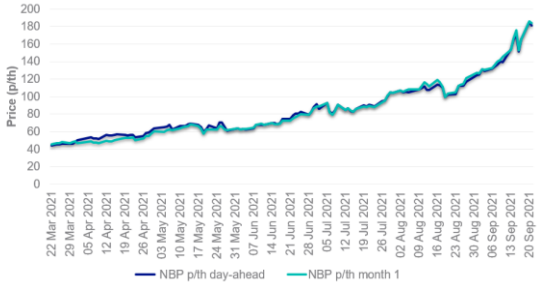
MIPI. Market information data https://www.nationalgrid.com/uk/gas-transmission/data-and-operations/transmission-operational-data

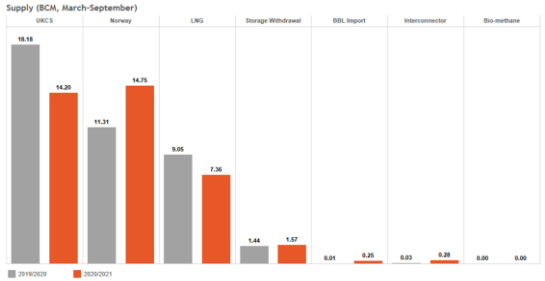
Britain's Gas Explained
An overview of the UK gas industry, with the target audience being the general public. https://twitter.com/nationalgriduk or follow our personal accounts on LinkedIn

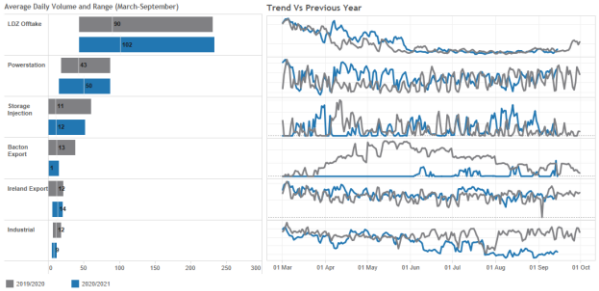
Operational Forums

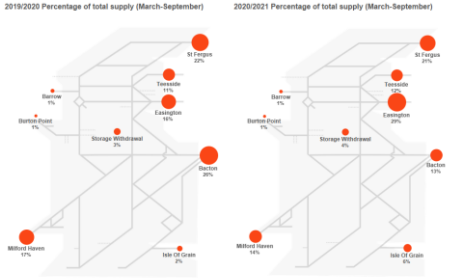




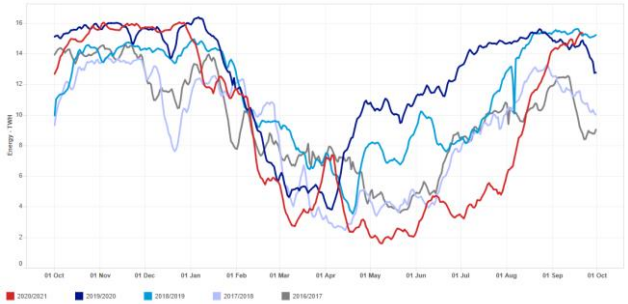


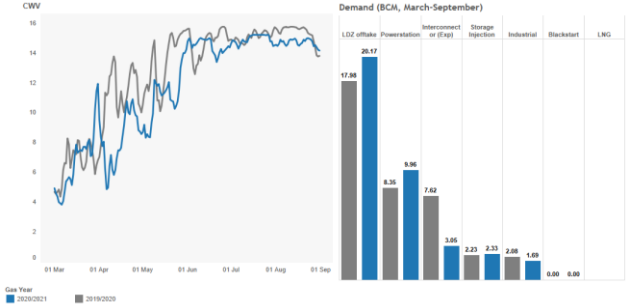






- **NTS Demand**
- **Demand & CWV**
- **Demand comparison to seasonal norm**
- **NTS Supply**
- **Supply Yearly Comparison**
- **Supply Map**
- **Storage Stocks**
- **Prices**





Free to attend, all are welcome, registration is open for all 2022 events at:
https://www.eventbrite.co.uk/e/pre-registration-2022-operational-forums-online-tickets-223354006847

Past presentations available at
https://datacommunity.nationalgridgas.com/key-documents/gas-ops-forum-2019/

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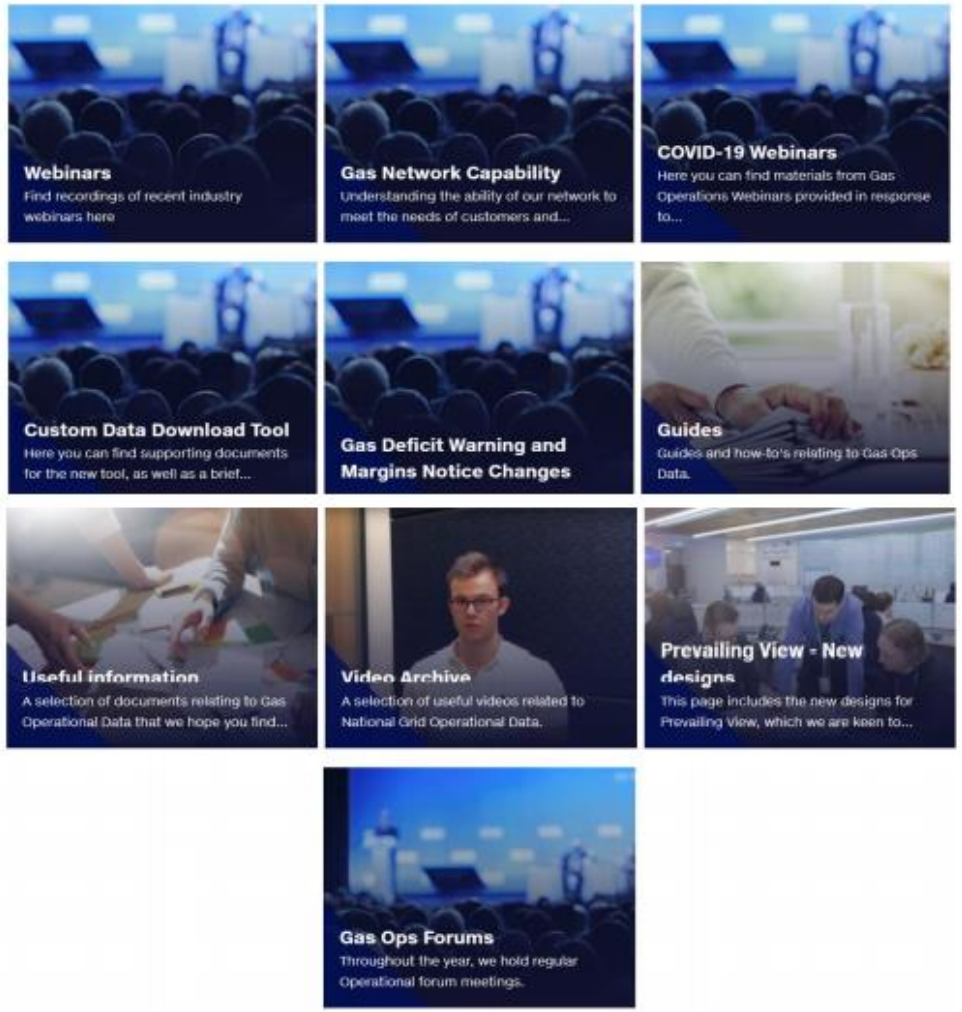
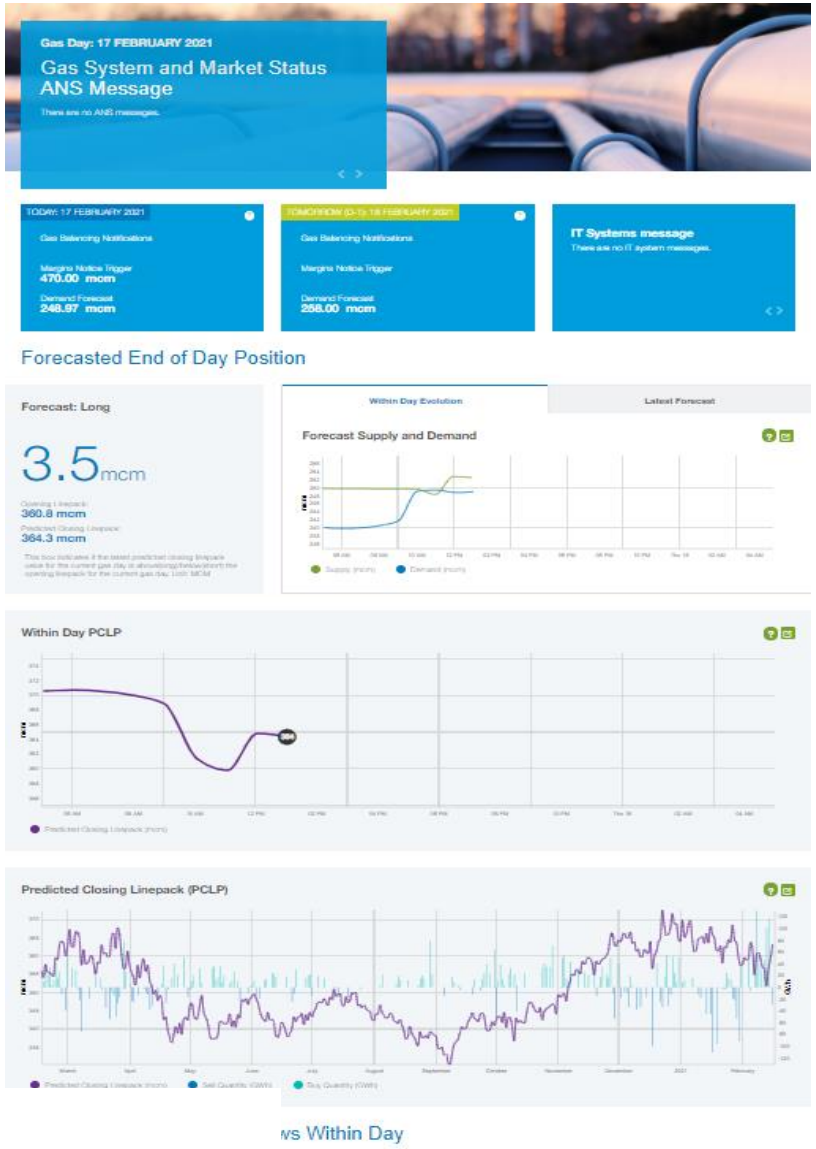
Data Community Site

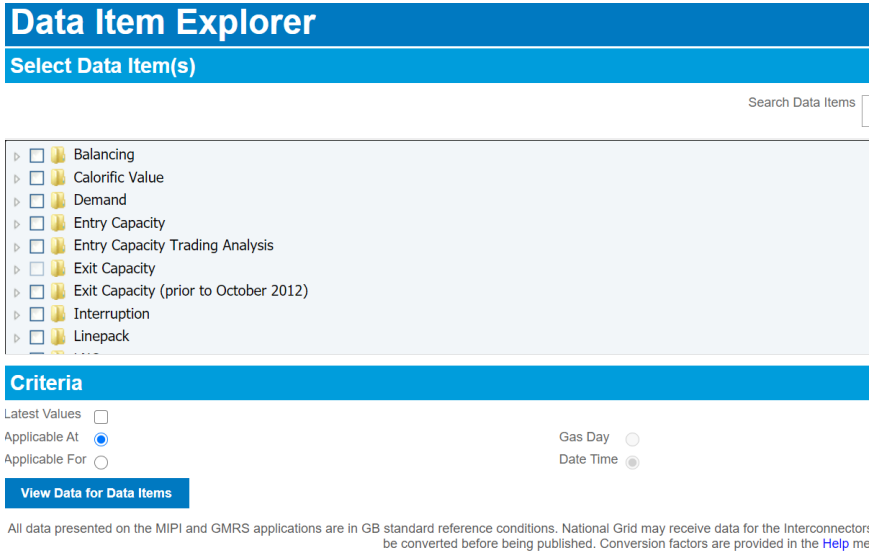
We host a **data collaboration platform** to maximise the shared value of open and real-time information.

- Speak to the Gas National Control Centre
- **Tutorials and guides**
- **Webinar recordings** of the Operational Forums and our Covid webinars
- Free **data downloads**



MIPI – Market Information Provision Initiative





- Instantaneous Flows
- Data item Explorer
- Prevailing View
- Report Explorer
- Entry Zone Graphs
- User Defined Downloads

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Britain’s Gas Explained

June 2021

How much energy has been transported?

This month **45 billion kWh** of energy has been transported through our network, enough energy to power Wembley Stadium for over 1.8 million match days!

Did you know? June saw the start of the Euro 2020 football tournament. These large stadiums use around 25,000 kWh of electricity on match days. This month the energy equivalent of the gas transported through our network would be enough to power over 1.8 million stadiums on match day.

July 2021

How much energy has been transported?

This month **48 billion kWh** of energy has been transported through our network, with a total volume of over four thousand million cubic meters, enough gas to fill Wimbledon’s Centre Court over fifty thousand times.

Did you know? National Grid calculates and monitors the volume of gas being transported through our network of high pressure gas pipelines in “million cubic meters”, whereas the gas being delivered to domestic properties and alike is measured as energy (kWh). The Calorific Value of the gas is also closely monitored, which is used as part of the energy calculations.

August 2021

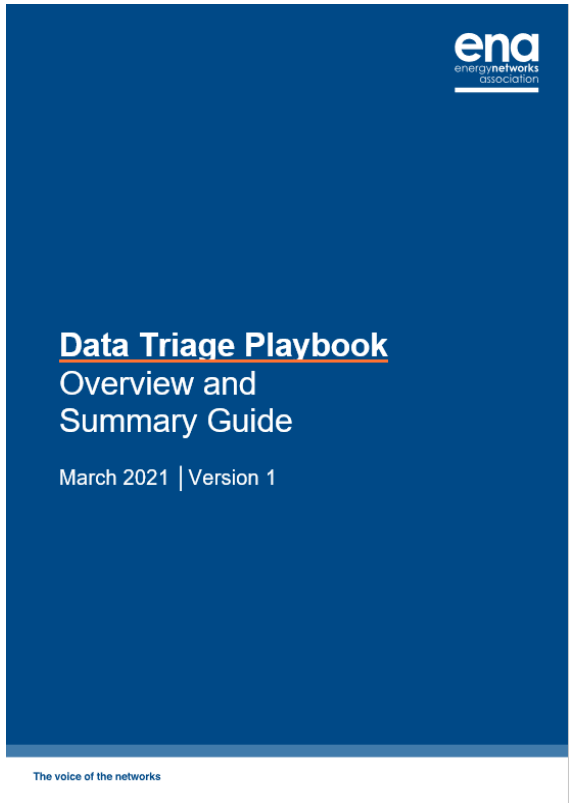
How much energy has been transported?

This month **49 billion kWh** of energy has been transported through our network, enough energy to power the Tokyo Olympic games over 600 times.

Have you heard about **FutureGrid**? National Grid is working alongside project partners to build a hydrogen test facility in Northern England. This test facility will enable us to determine how hydrogen could be an alternative to natural gas. You can find out more about **FutureGrid** and the project’s progress on our website nationalgrid.com.

Data Triage - Centralised Data Request Form

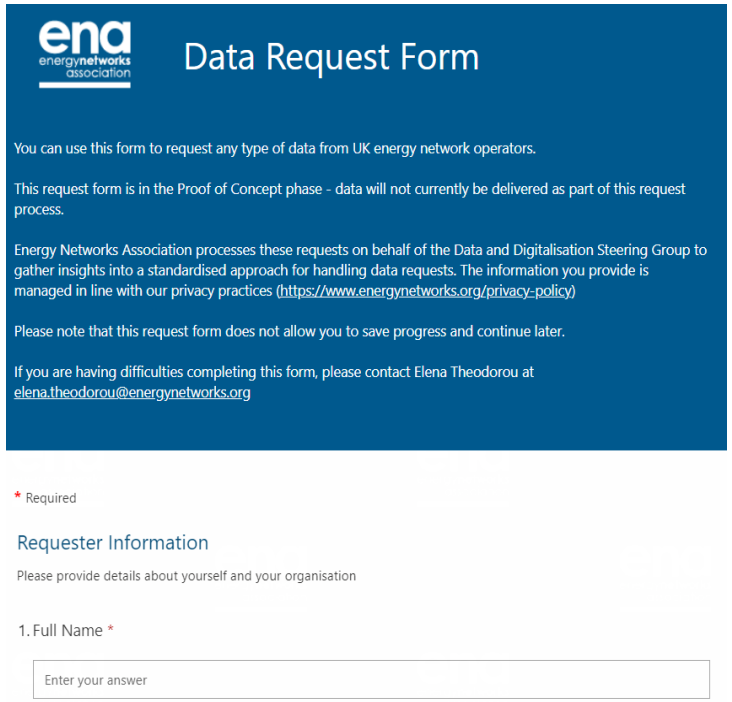
- Creation of **centralised data request** form, hosted on ENA website, and request triage process
- You can still **directly contact** the relevant networks



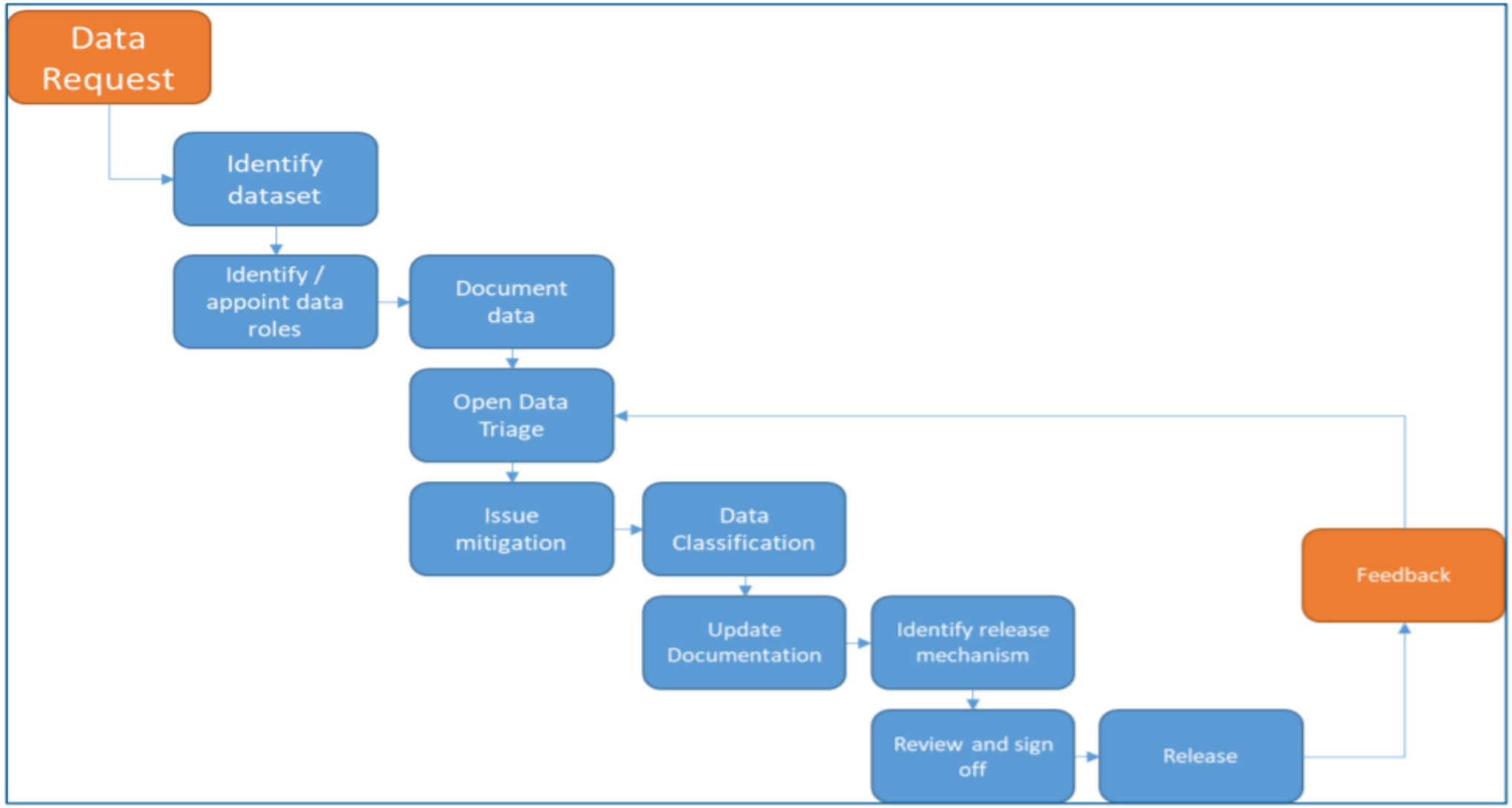
Data Triage Playbook

Creation of data triage playbook to guide networks from point of receiving request to responding to requestor.
Steps in guide include:

- **Documenting** data – metadata and data dictionary
- **Classifying** the data – Open, Public, Shared, Closed
- **Redocumenting** data – updating existing document with results from triage
- Identify **release mechanism** – how should data be shared
- **Feedback** – how effective was the process for the requestor



Data Triage - Process Overview



Data Triage - Data Sets

A usable dataset is likely to be centred around:

- Data source
- Subject of data
- Time and granularity
- Location
- Other logical categorisations

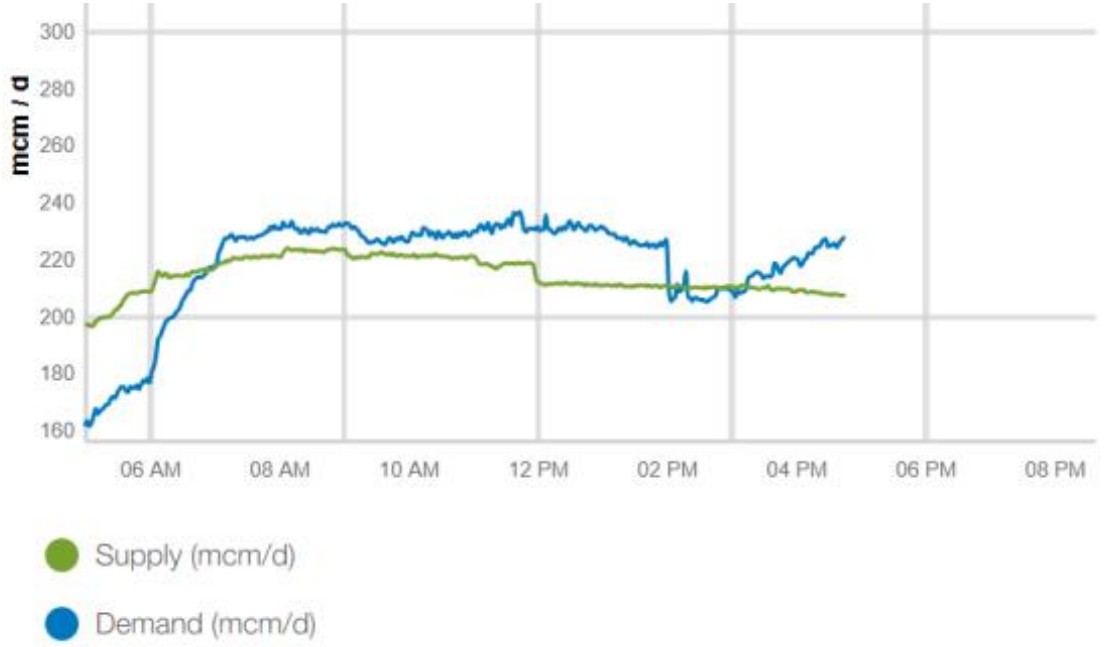
Benefits

- Anyone can request data sets
- Ensures that request is targeted to the relevant provider
- Relevant provider is obliged to demonstrate auditable investigation
- Data becomes public
- Allows multi-network requests

Data Triage – Application

Data requested by industry for consideration		Status
Power of compressors	Request for a static data set on information about the power rating of compressors on the National Transmission System to inform university research.	Data set available on National Grid Website
Instantaneous Linepack	This will provide a live view of the linepack within the NTS system and how it is being used due to the supply and demand mismatch. This could provide insight into how different supply and demand profiles can impact linepack utilisation.	Live on MIPI Oct 21
Final Actual Demand at site level (D+6)	This data will complement the data already published at D+1 and will improve data quality to allow model dataset training	Expected Jan 22
Pressure forecasting for points on NTS	Request for forecasting pressures at various points in the National Transmission System requiring investment into hardware and simulation software.	Information not currently available, incorporated into Data transparency paper 2022
Live operating pressures on the NTS	Undergoing Triage currently, validating against legislative requirements and commercial restrictions.	Operating Pressures – Undergoing Triage

Data Triage - Instantaneous Linepack example (MIPI)

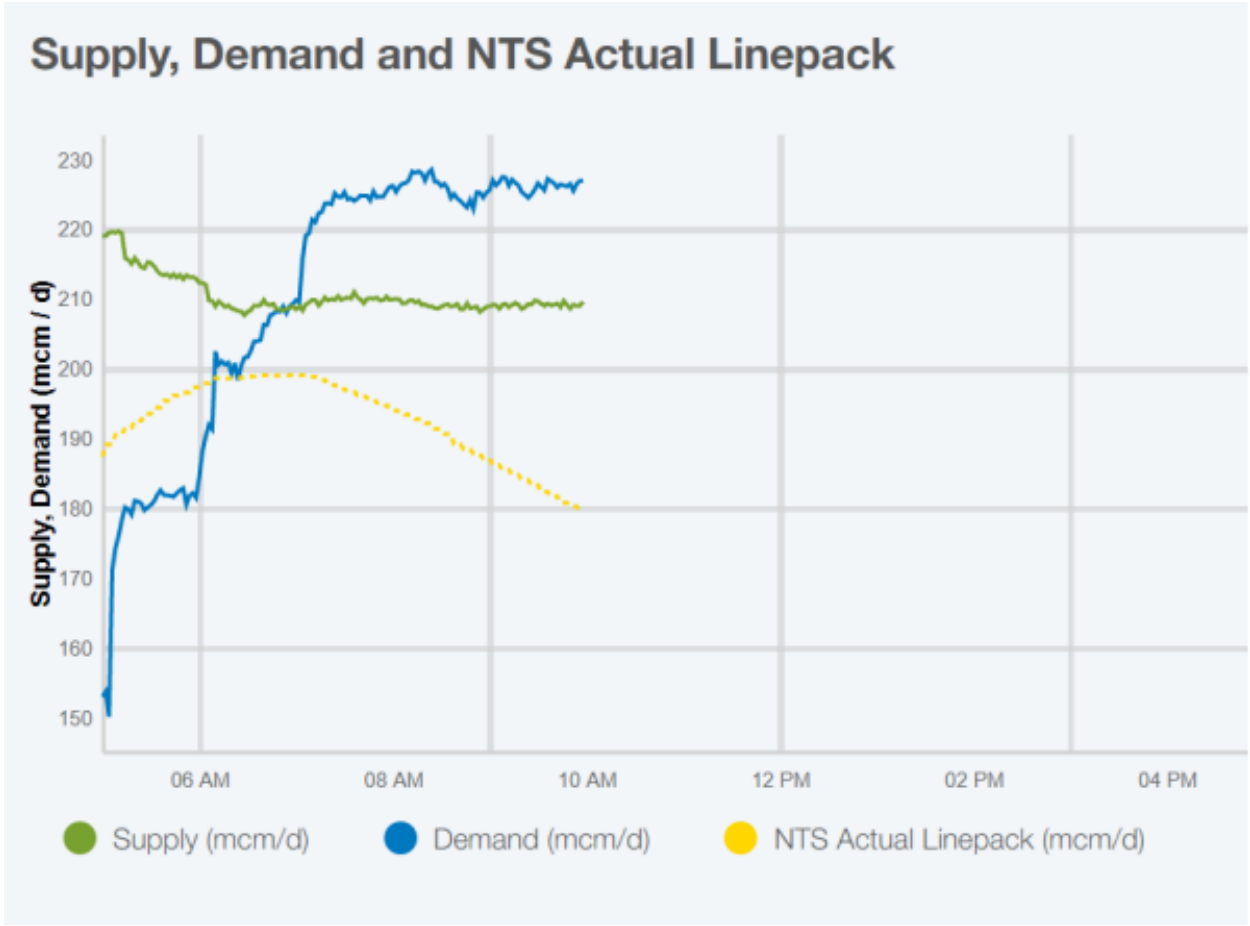


Total Demand

	Instantaneous NTS Demand Flow					
Total Demand Data	12:48	12:50	12:52	12:54	12:56	12:58
NTS Demand Flow	255.19	256.20	254.91	254.24	252.05	252.06

NTS Actual Linepack

	Instantaneous NTS Actual Linepack Flow					
NTS Actual Linepack	12:48	12:50	12:52	12:54	12:56	12:58
NTS Actual Linepack	420.00	380.00	390.00	399.00	410.00	420.00



Poll Question - Results

Q. How important is open source data to your company?

- **Very important**
- **Somewhat important**
- **Not important**

Q. Please explain why

Q&A

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Thank you for joining us today

Keynote speech	Complete	Watch again
Future of Gas	Complete	Watch again
Innovation – broadening the horizon	Complete	Watch again
Gas Market Plan	Complete	Watch again
Transitioning to a hydrogen backbone	Complete	Watch again
Managing methane emissions	Complete	Watch again
Supporting regional hydrogen transitions	Complete	Watch again
Understanding the skills needed for a net zero world	Complete	Watch again
Digital Strategy and Information Provision	Complete	
Operating the network	Wed 08th Dec 10.00 – 11.00	Register here
Gas Emergency Frameworks Overview	Thu 09th Dec 14.00 – 15.30	Register here
FutureGrid 2021 Progress report	Tue 14th Dec 10.00 – 11.00	Register here
Annual Network Capability Assessment Report	Wed 15nd Dec 10.00 – 11.00	Register here

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What next?

You will receive the recording and material from today’s session

If you have any further questions or would like to discuss anything specific please get in touch with Box.OperationalLiaison@nationalgrid.com

Feedback is important to us, therefore if you have not already taken part, we would like to put you forward for a survey

Thank you for joining us

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