Gas Operational Forum

Clermont Hotel & MS Teams
18th May 2023
10:02am

Questions
SLIDO = OPSFORUM

Introduction & Agenda

Nicola Lond
Operational Liaison and Business Delivery Manager

national gas transmission

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

Agenda for Today

Welcome and Introduction	Nicola Lond - Operational Liaison & Business Delivery Manager	10:02
Review of Winter & Looking Ahead to Summer	Chris Thompson - Engagement and Publications Manager	10:10
What we've seen so far	Chris Thompson - Engagement and Publications Manager	10:25
Operational Overview	Bridget Hartley - Operational Delivery Manager	10:45
Gas Prices	Omar Choudry - Emissions & Shrinkage Manager	11:05
Xoserve Service Update	Guest Speakers: Phil Wood & Sue Treverton	11:15
Emergency Exercises Update	Sam Collinson – Emergency planning Officer	11:30
General Updates	Nicola Lond - Operational Liaison & Business Delivery Manager	11:45
AOB & Close	Nicola Lond - Operational Liaison & Business Delivery Manager	11:55

Please ask any questions using Slido: #OPSFORUM

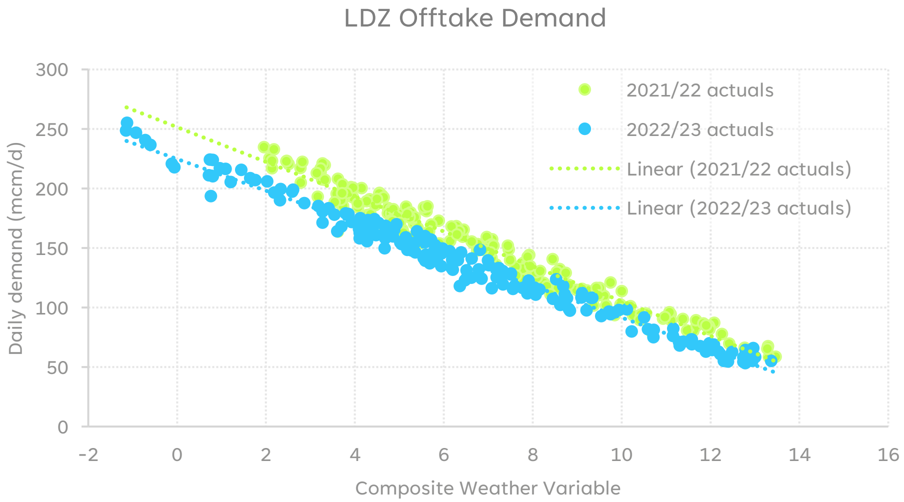
Questions will be covered at the end of each agenda section.

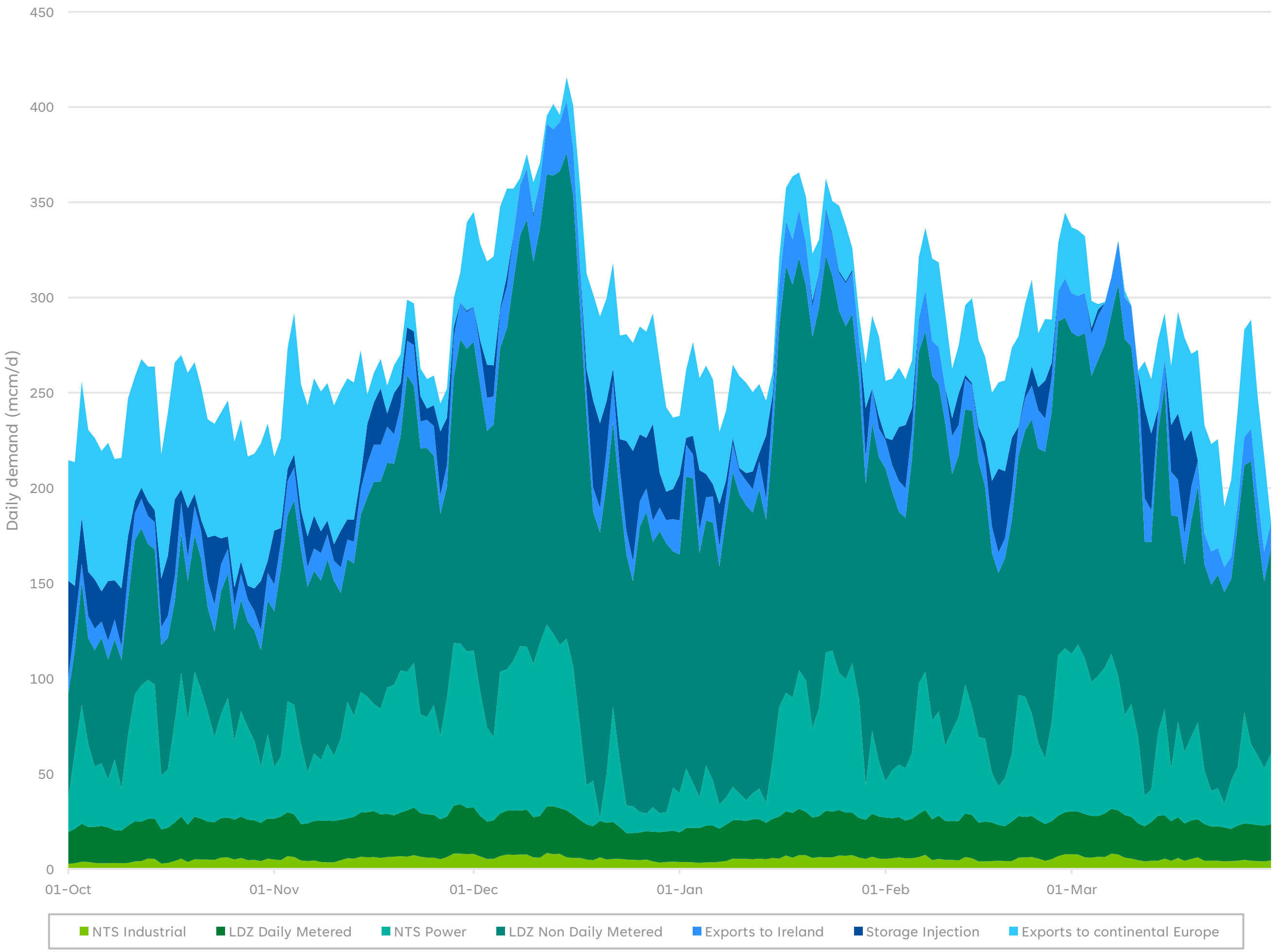
Review of Winter and looking ahead to Summer

Chris Thompson

Demand summary

- We saw **average demand suppression of 14%** in residential properties/from residential consumers.
- We saw record levels of exports to Europe of 7.6bcm, around double that of the previous Winter
- Demand for power has become increasingly variable, with the highest range of daily demands to date (9.4mcm/d to 95.9mcm/d), largely due to the intermittent nature of renewable generation
- Storage was utilised more frequently this Winter, providing higher supplies to the network during the cold spells and then re-filling
- **Winter 2022/23 included a demand day of 417mcm, the highest we've seen since 'Beast from the East' 5 years ago**





Supply summary

- Baseload supplies from the UK Continental Shelf (UKCS) were broadly in line with our expectations, with Norwegian Continental Shelf (NCS) supplies slightly lower than anticipated due to flows being favoured to Europe
- Flexible supplies predominantly came from high volumes of Liquefied Natural Gas (LNG) supported by GB storage
- We did see limited imports from Europe during cold spell
- LNG supplies were at a record level, the highest we have seen during any winter to date

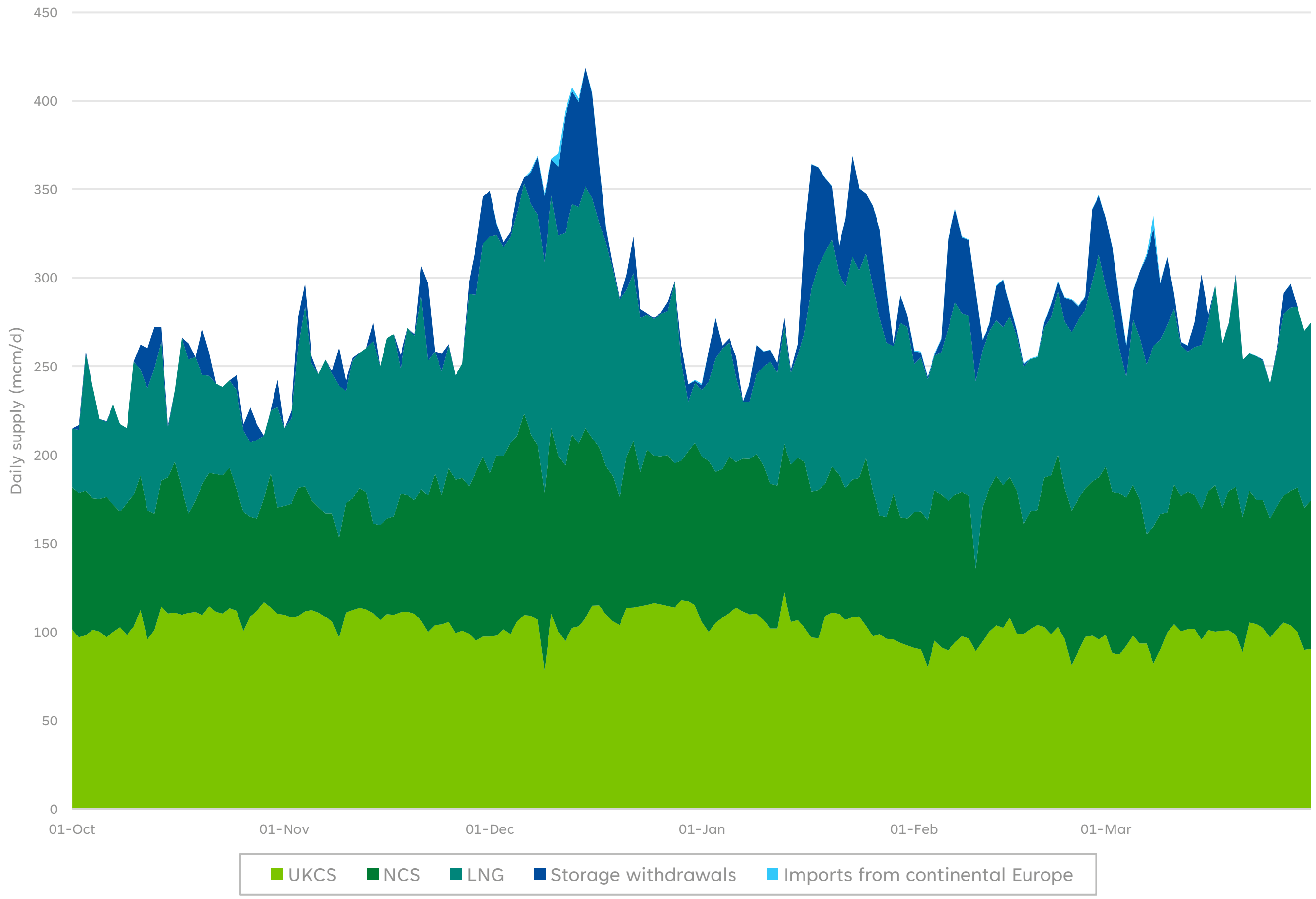
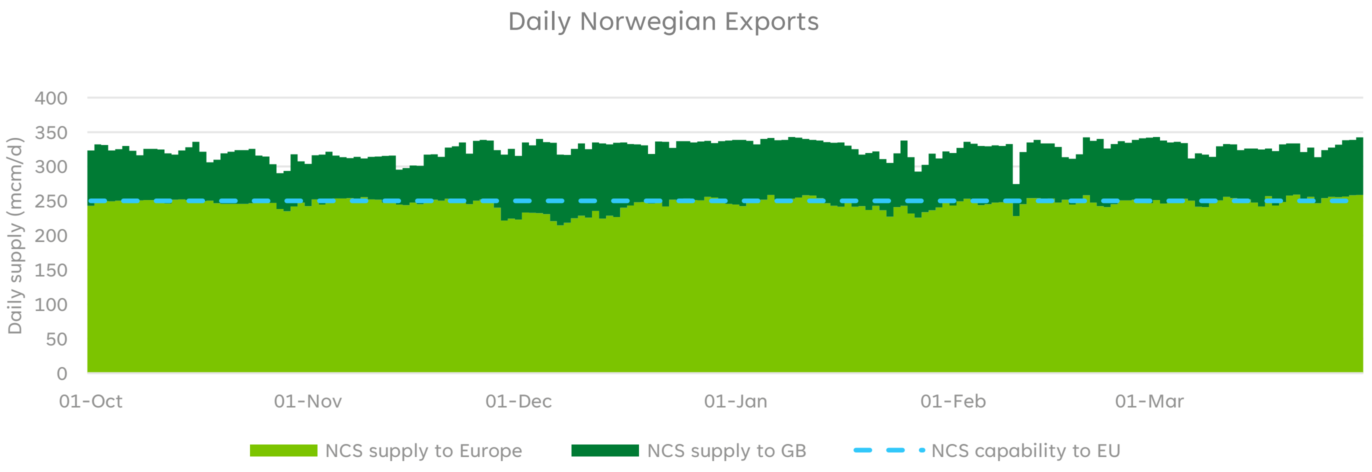


Figure 2– Breakdown of Daily Gas Supply

Norway

- Winter
  - Flows to EU at maximum levels for most of the winter, with UK receiving the excess
  - During colder periods UK prices rose and we saw imports increase to UK, with Norwegian exports to France falling in this period
- Summer
  - Our forecast for Norwegian imports is reduced from our 2022 forecast and actuals.
  - Significant maintenance during summer expected to reduce UK flows



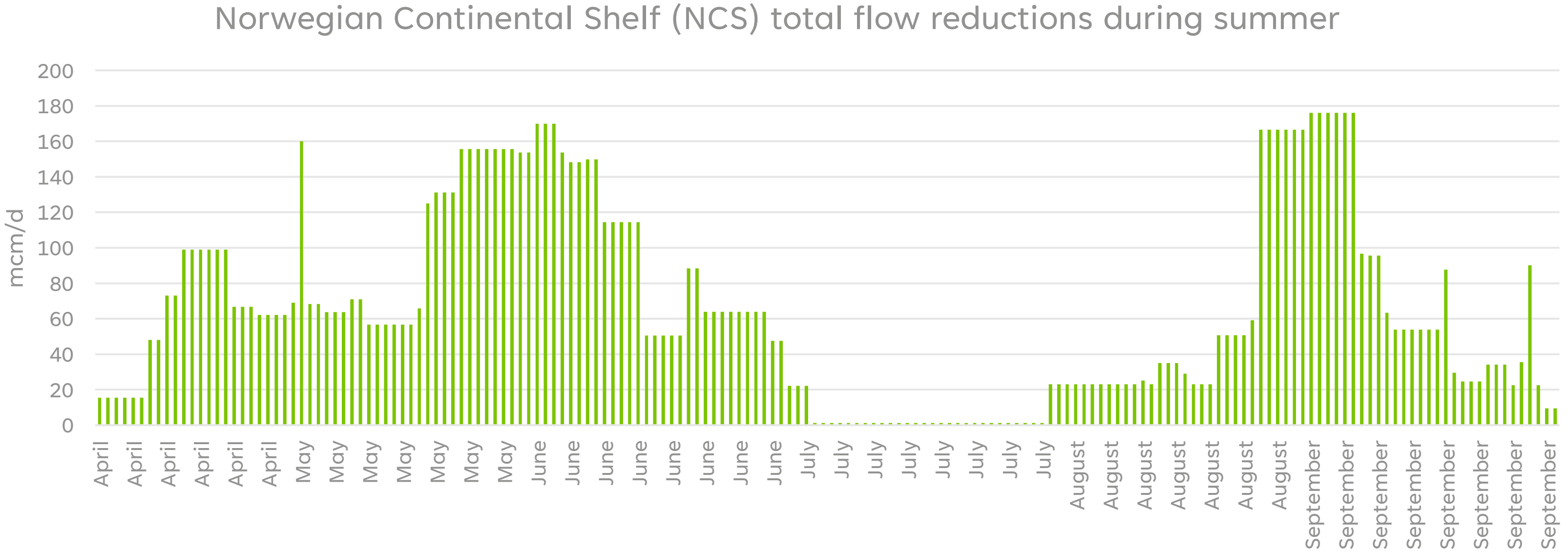


Table 2 – Breakdown of Gas Supply - – A version in TWh can be found in the appendix

Factors that could influence the outlook for summer

1. **European storage stocks are higher** than they were this time last year, which we expect will reduce the need for GB supplied gas into Europe, although uncertainties remain.
2. **EU regasification capacity could increase** by around 30 bcm from 2022
3. Due to a combination of these factors we **anticipate lower demand for gas exports from GB to the EU this summer**. This would also reduce the demand for LNG to support these exports.
4. Globally hot dry weather could increase cooling demand and reduce both Hydro and Nuclear output. This could **increase demand for LNG** to support increased demand for gas powered generation. Alongside these factors increased economic growth in China could also increase global demand for LNG.

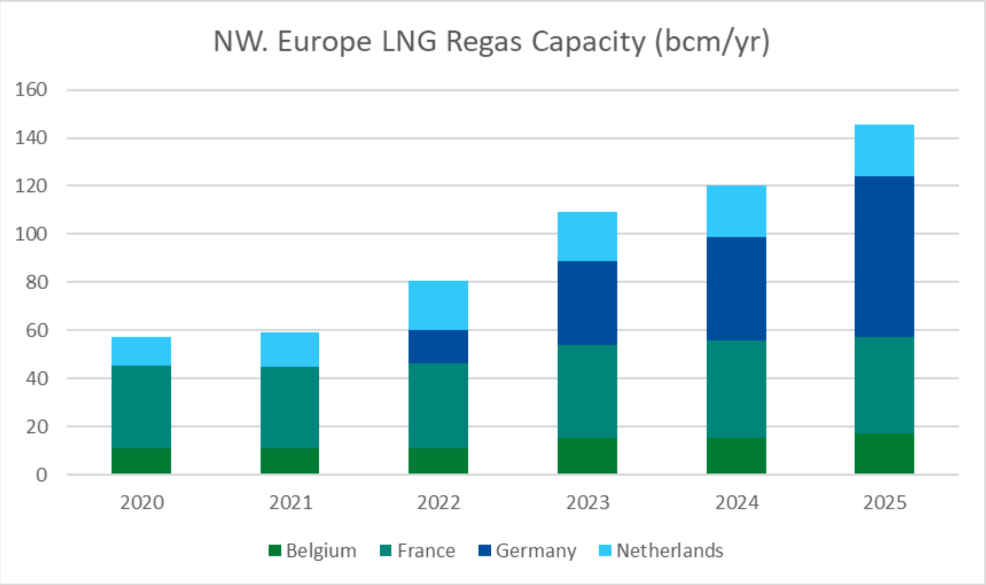
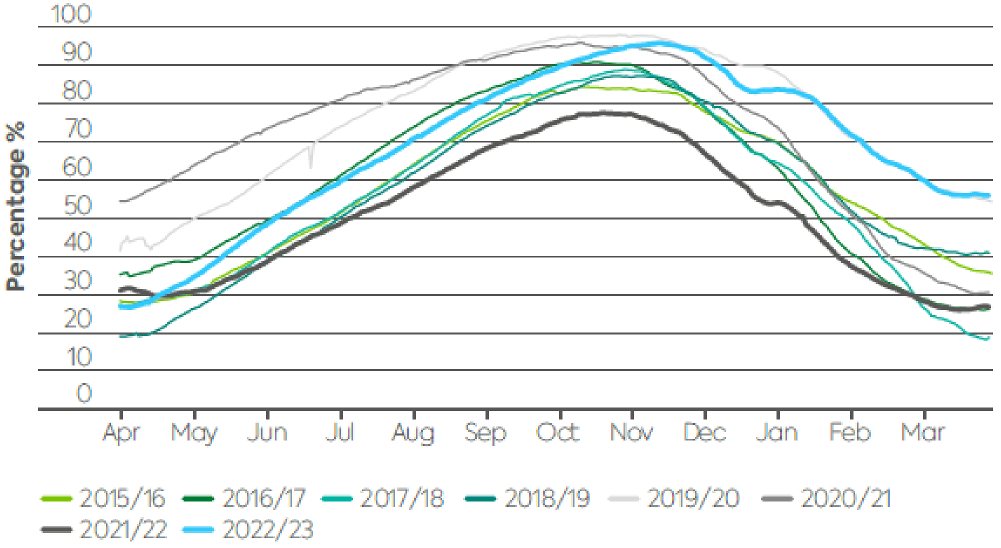


Figure 6
Total gas in European storage, from April 2015 to date



Demand & Supply Patterns so far this summer…

Chris Thompson
Engagement & Publications Manager

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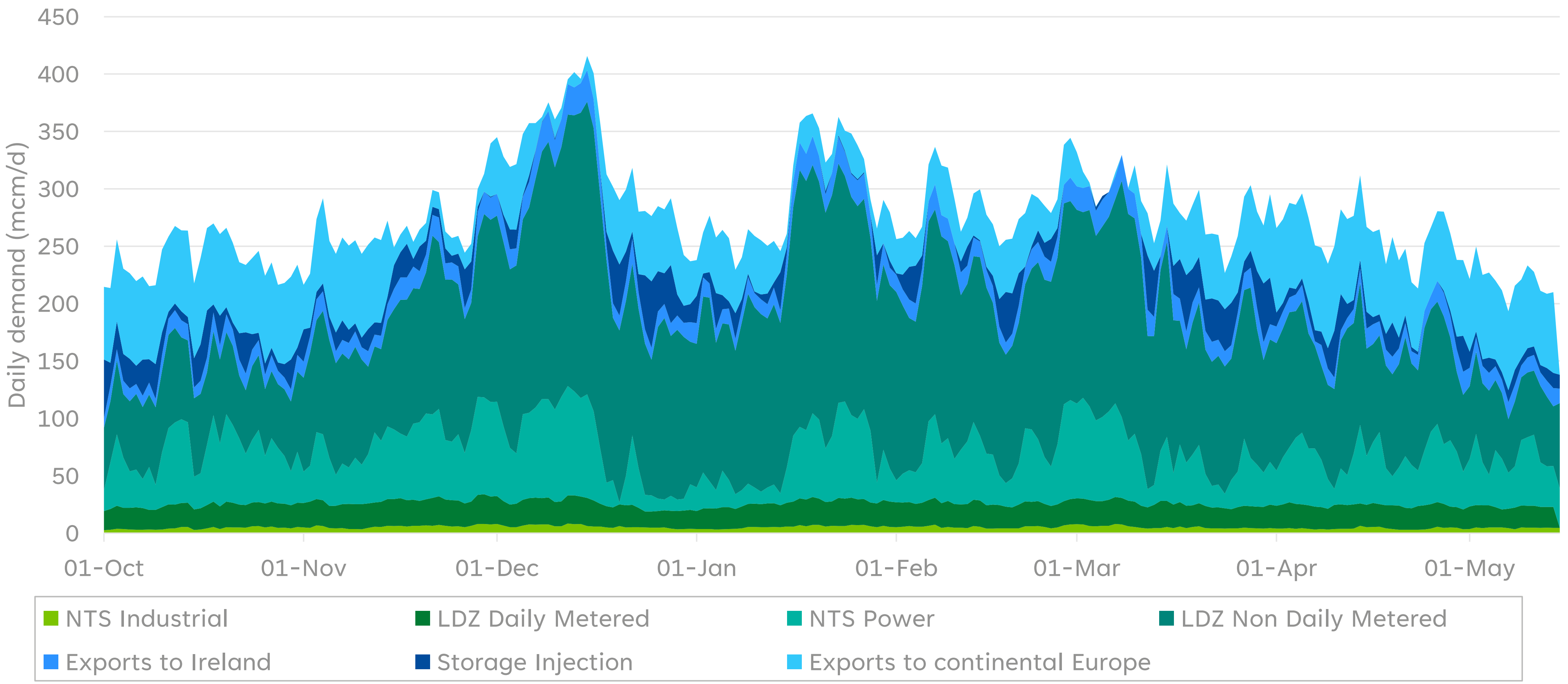
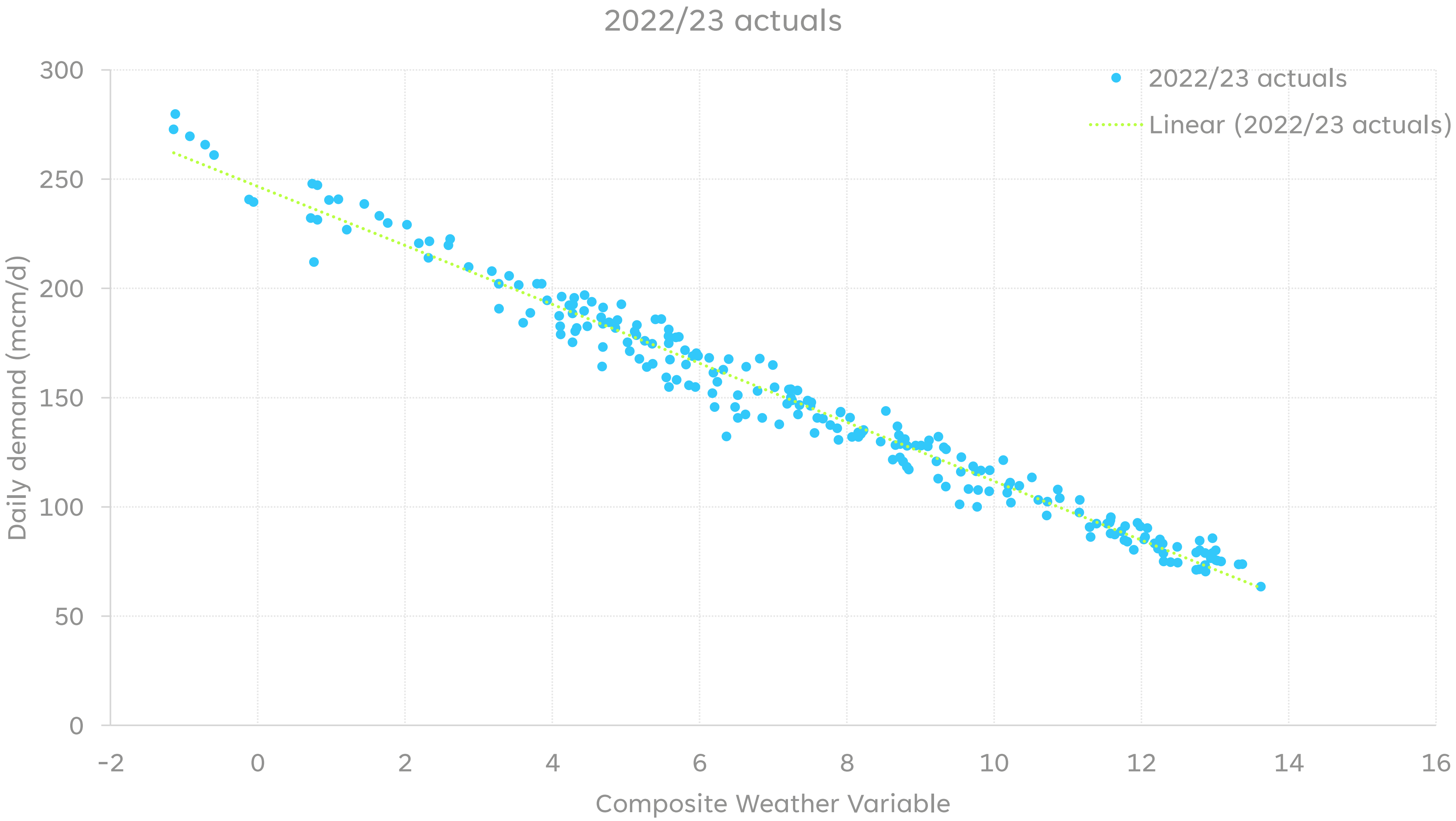
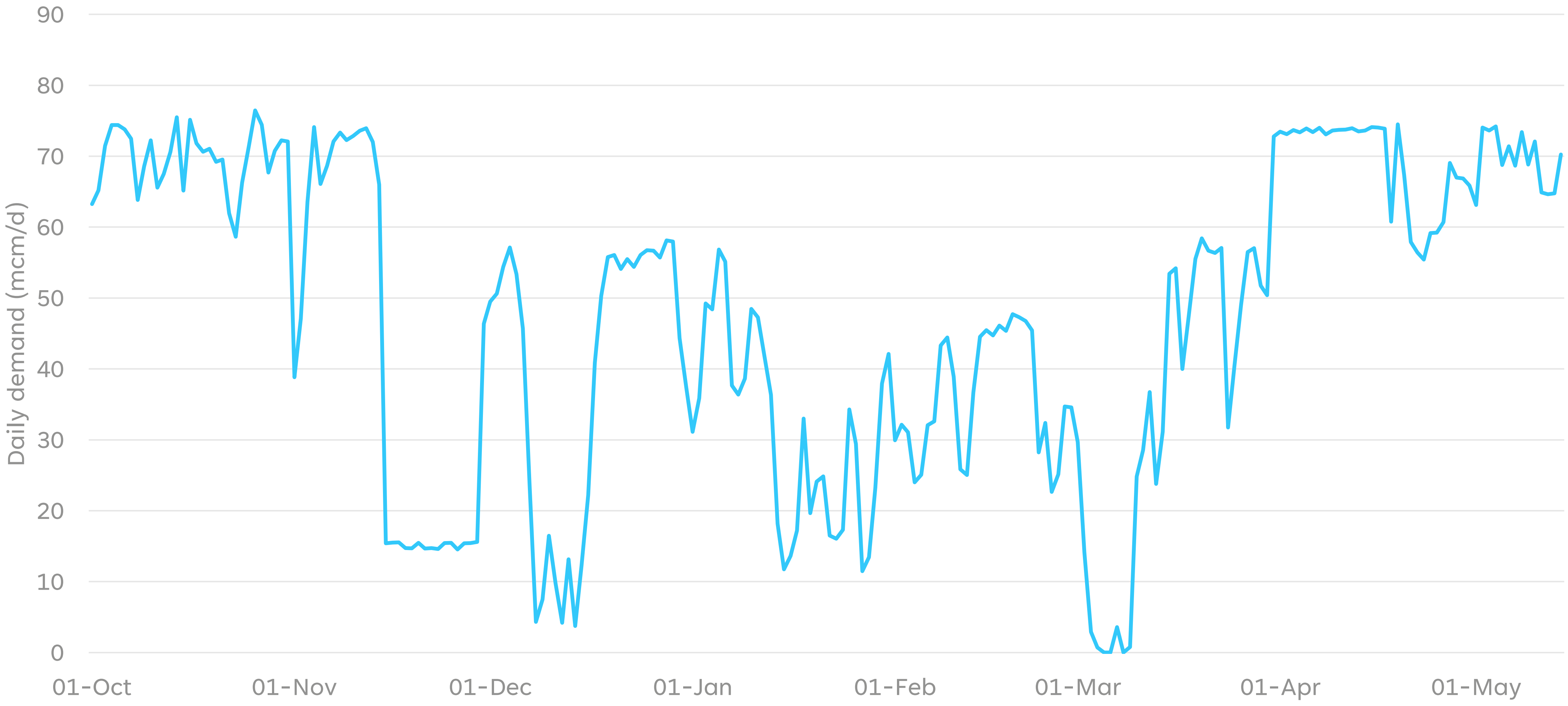
Demand Summary



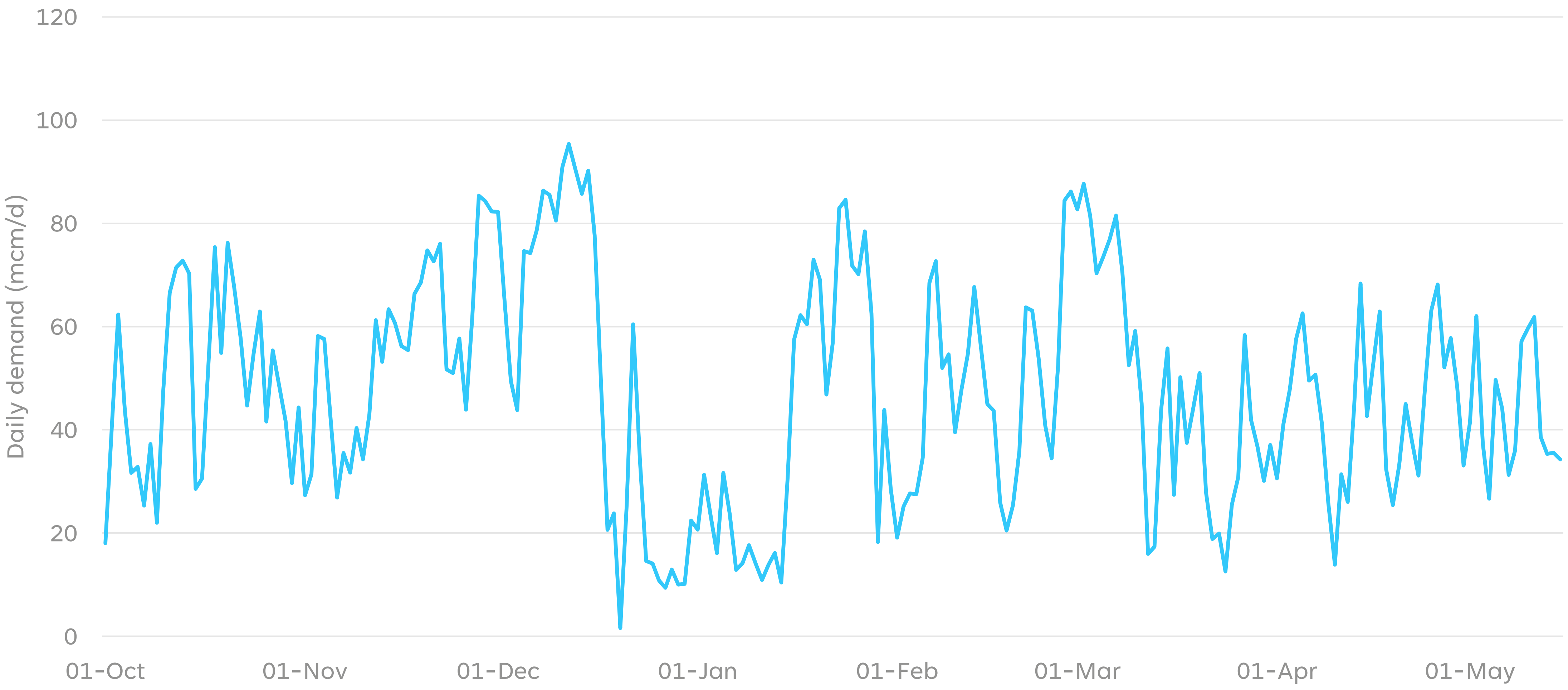
LDZ offtake demand



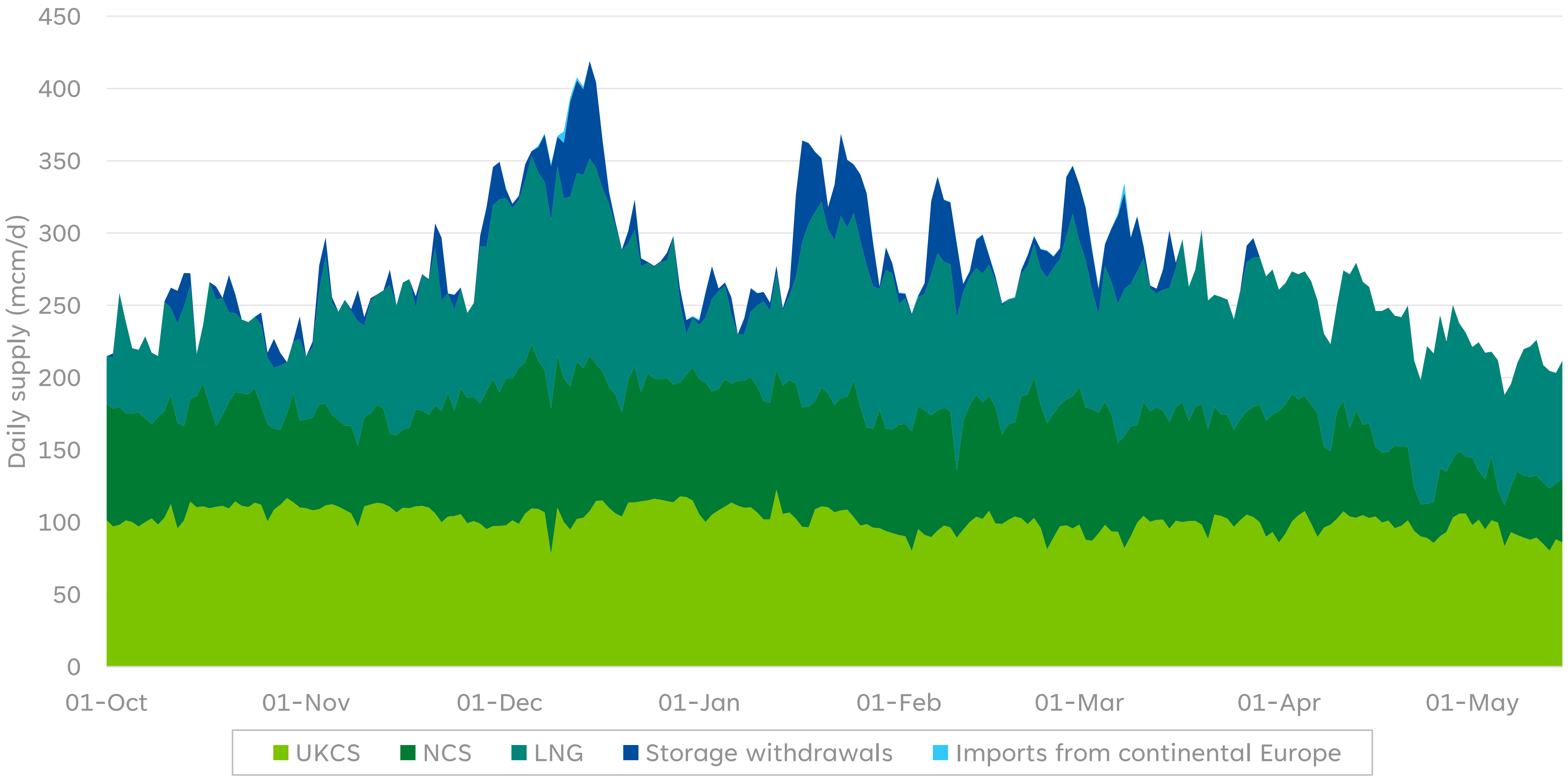
Exports to Continental Europe



NTS Demand for power generation



Supply Summary



LNG supply


160
140
120
100
80
60
40
20
0
Daily supply (mcm/d)
01-Oct
01-Nov
01-Dec
01-Jan
01-Feb
01-Mar
01-Apr
01-May

Operational Overview

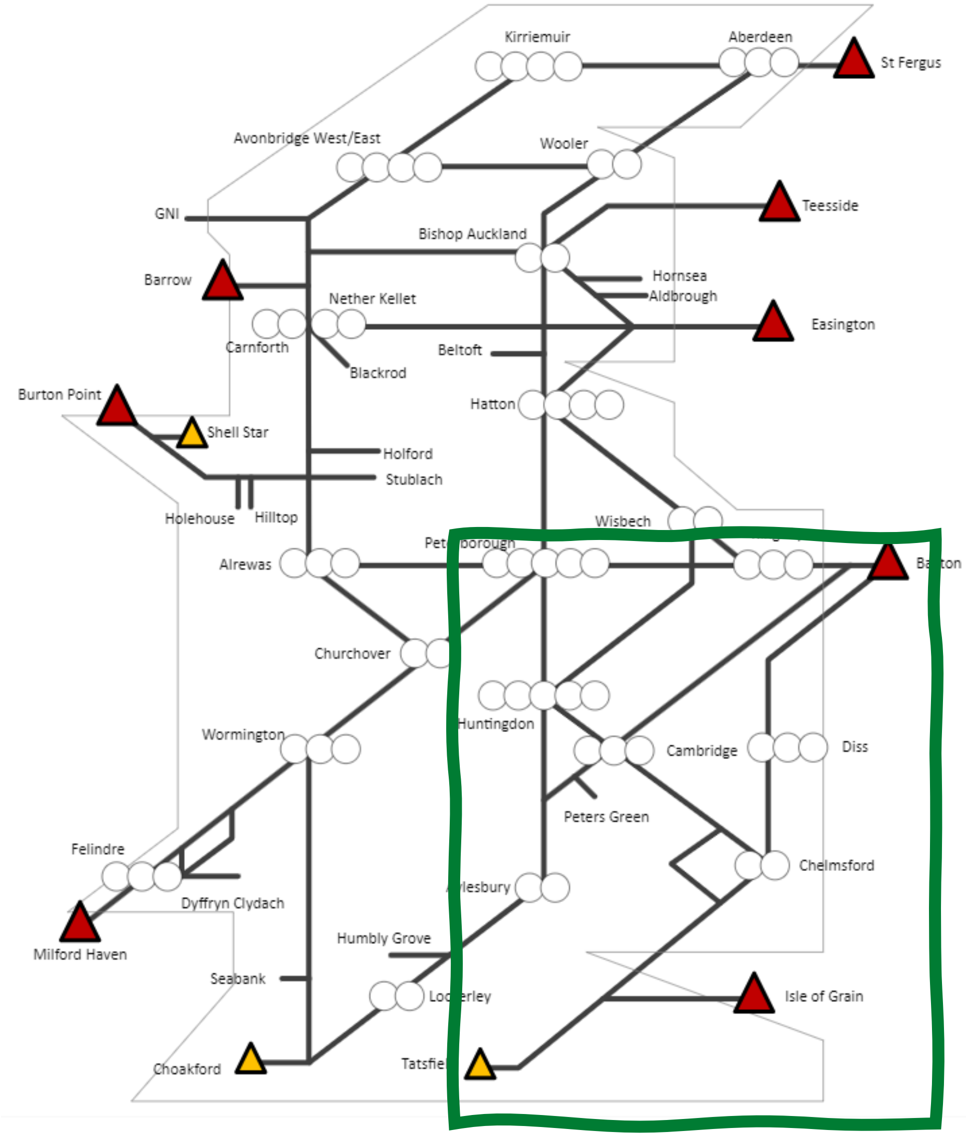
Bridget Hartley

- SE Operational Overview
- Bacton-Perenco loss of supply
- St Fergus Commercial Actions

national gas transmission

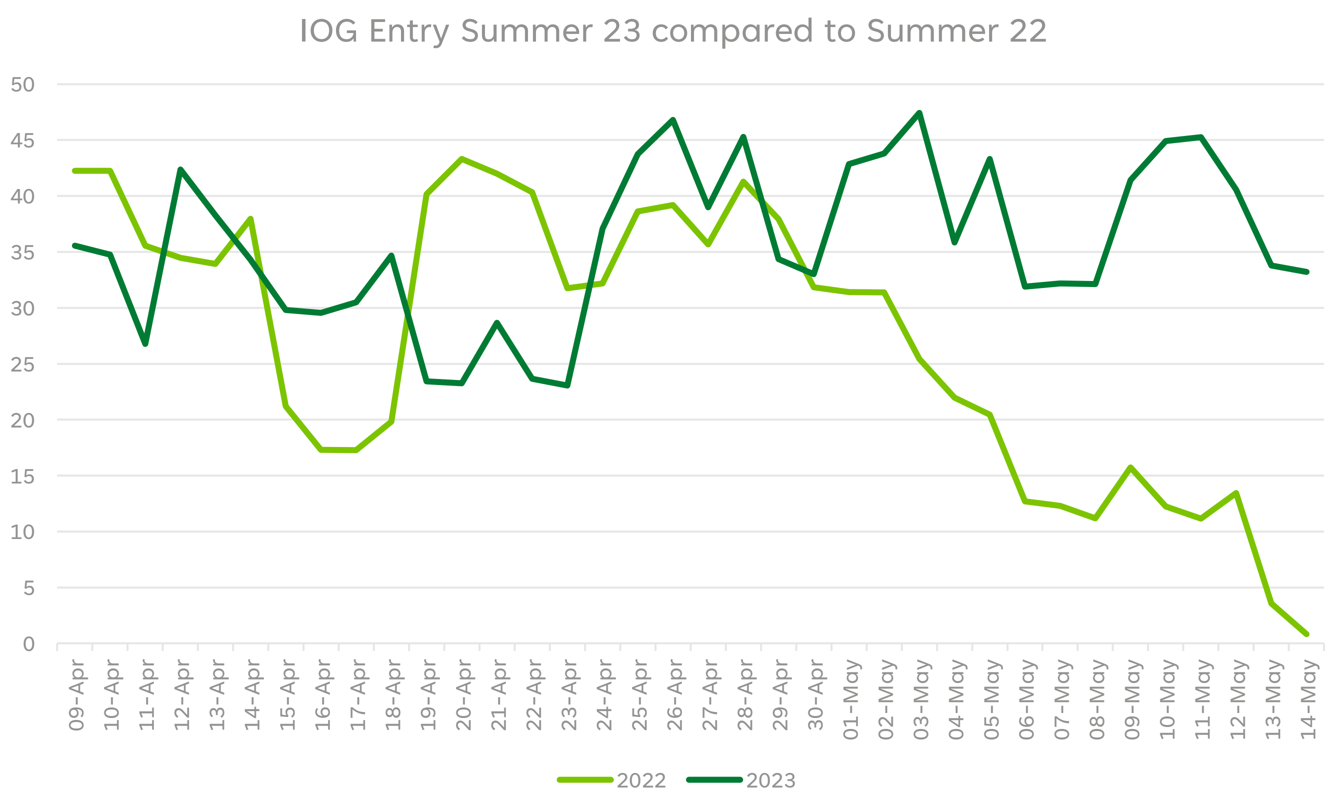
The South East (SE) Area of the NTS

- The SE of the NTS has the highest network demand in the country
- It contains 7 gas fired power stations
- It is usually run as it's own discreet network
- The SE gets gas from 3 main sources; Bacton, Grain LNG and from the centre of the network



Grain LNG NTS Flows Into NTS

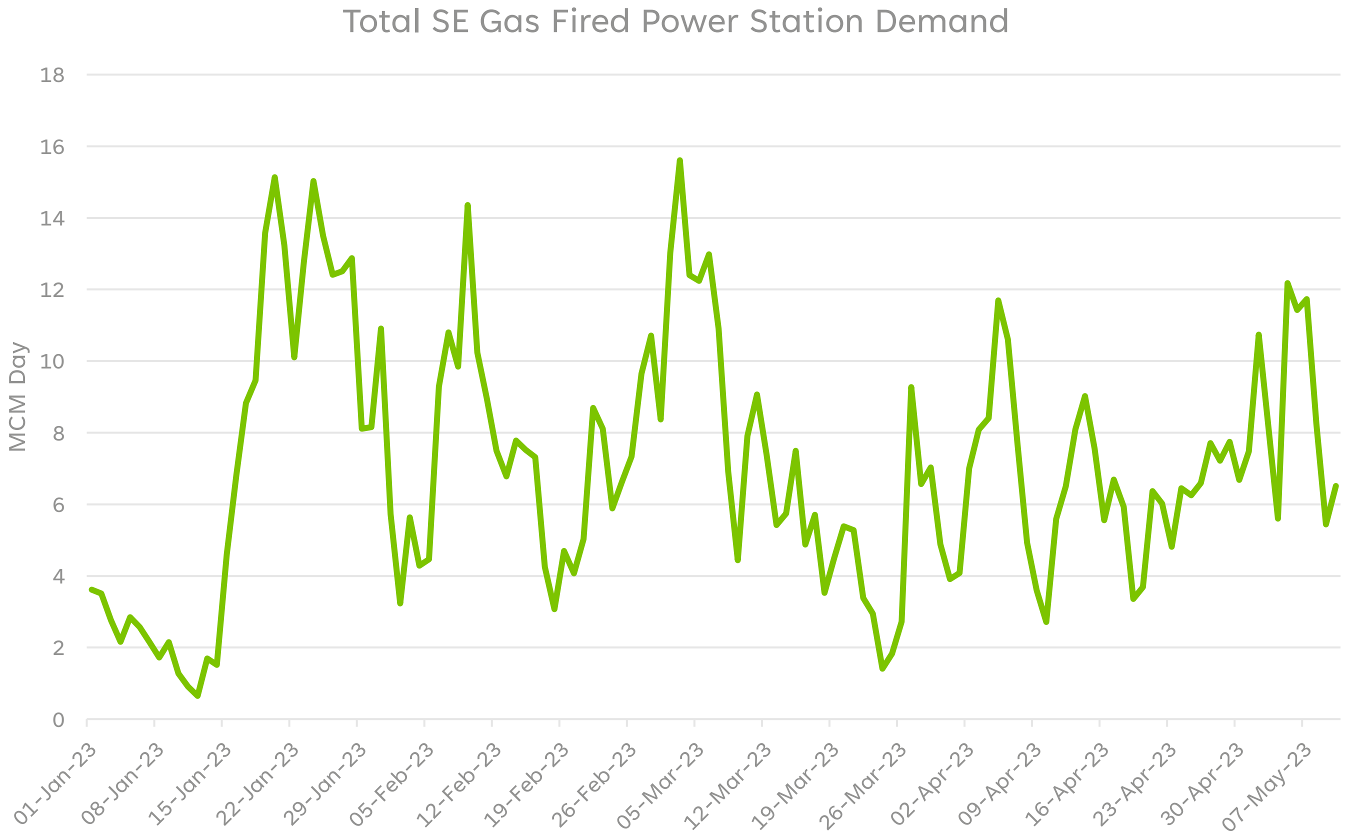
- Grain traditionally flow the majority of their gas onto the NTS during the Winter months
- This flow then typically subsides around May of each year
- This year flows have remained consistently high and are predicted to remain so into the coming weeks



Power Stations in the South East

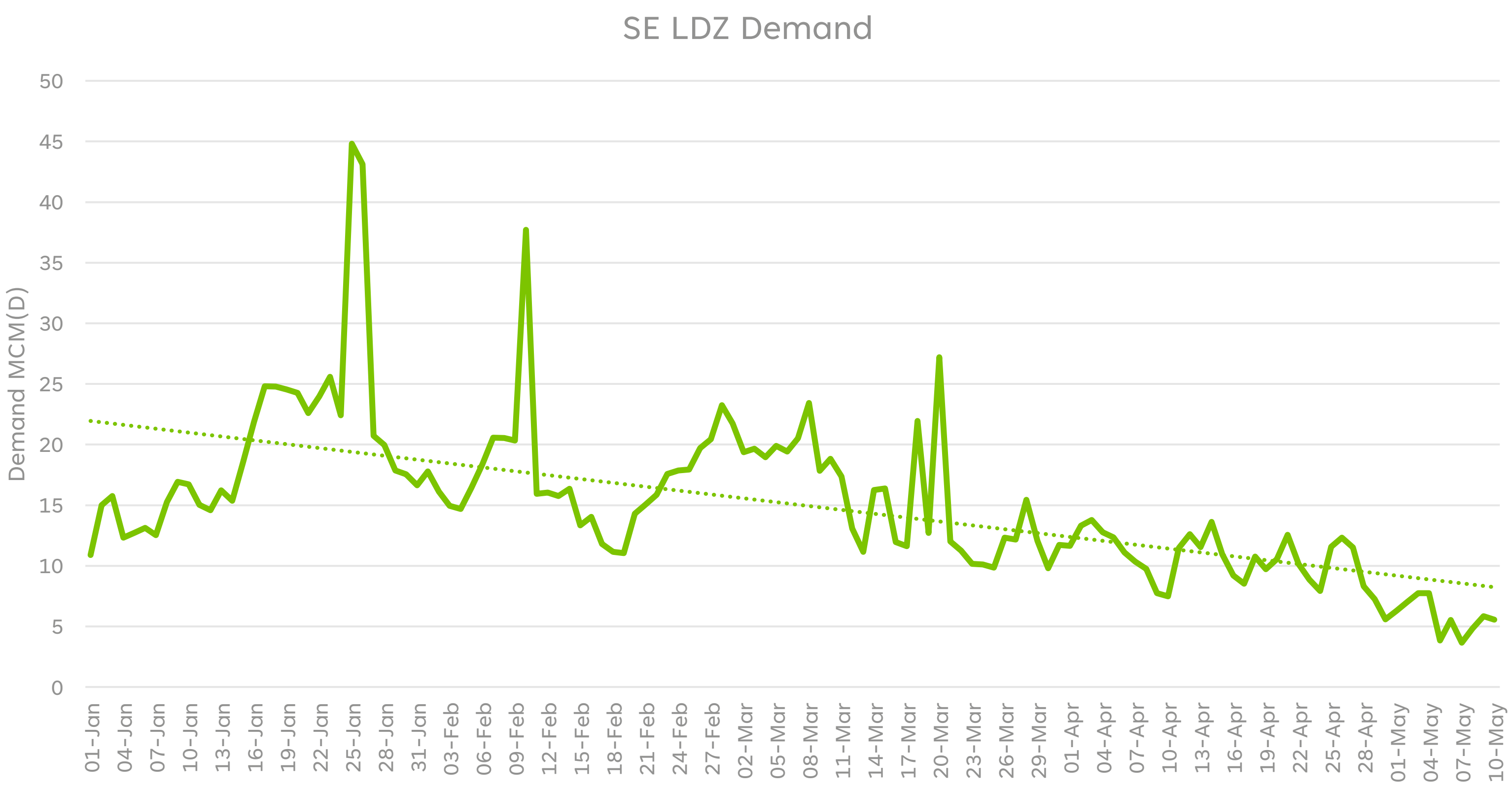
- In the South East of the country, there are 7 gas fired power stations connected to the NTS

- These stations often ramp up in rate when there is no wind to power the wind turbines in order to help meet the demand on the electricity network



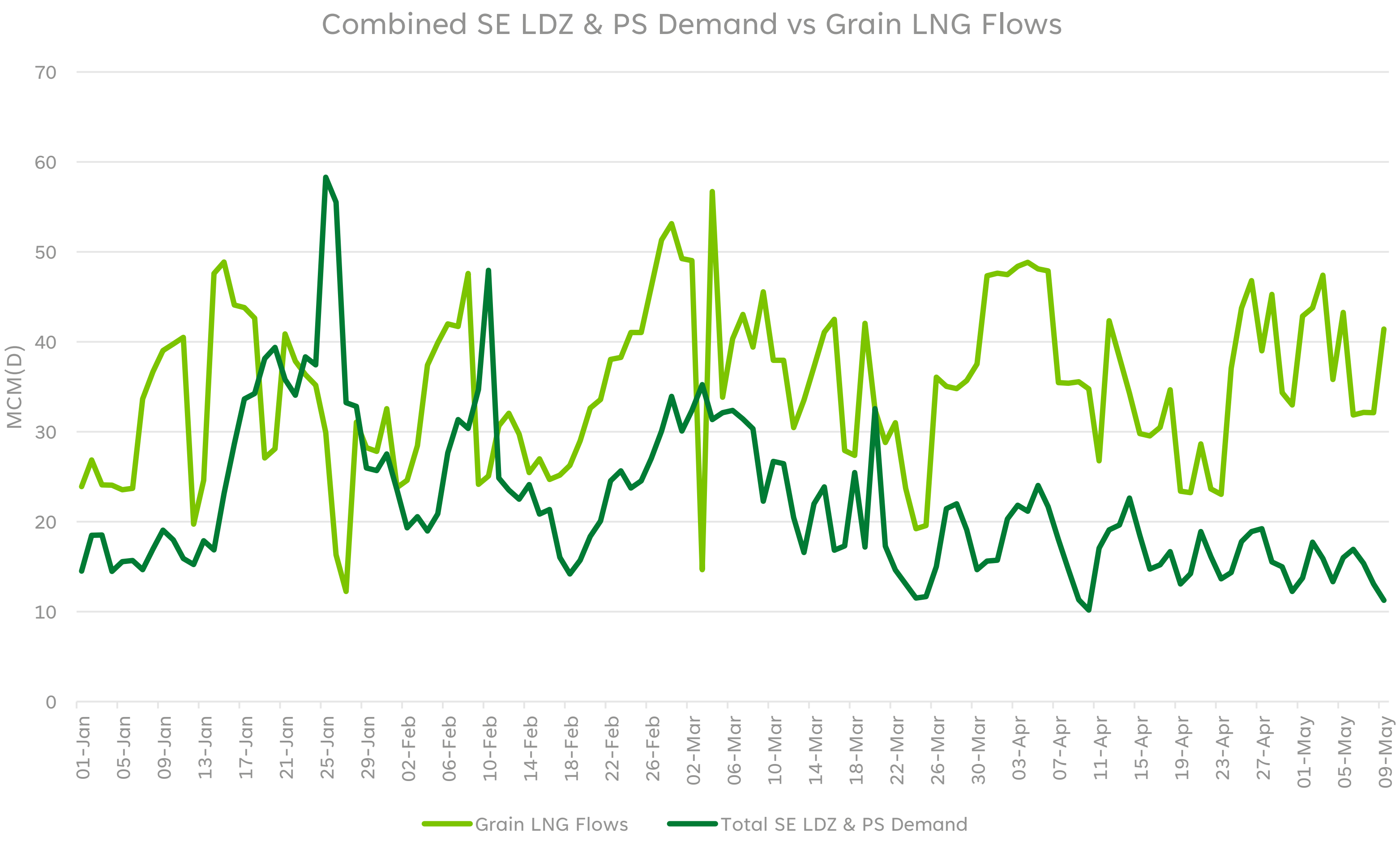
LDZ Demand in the South East

- SE Demand variation is driven predominately by ambient temperatures and the weather
- As it gets warmer, LDZ demand drops



What all this means...

- Consistent high Grain LNG flows requires demand to absorb this surplus gas
- LDZ demand is dropping due to warmer weather
- PS demand is variable depending on the wind
- Ultimately there's surplus gas in the SE area and it's challenging to move gas out of the area



How We’re Currently Running

- Using Cambridge compressor to move gas away from the Grain entry point
- This compressor wasn’t ever designed or configured to run this way – and can only move some of the input from Grain LNG
- All other compressors cannot pump gas out of the SE due to network configurations
- Working closely with Grain to profile to maximise flow inputs

Commercial Actions

1st May

- Scaleback of Interruptible Capacity
- Restricted WDDSEC Firm Capacity
- Requested Locational bids

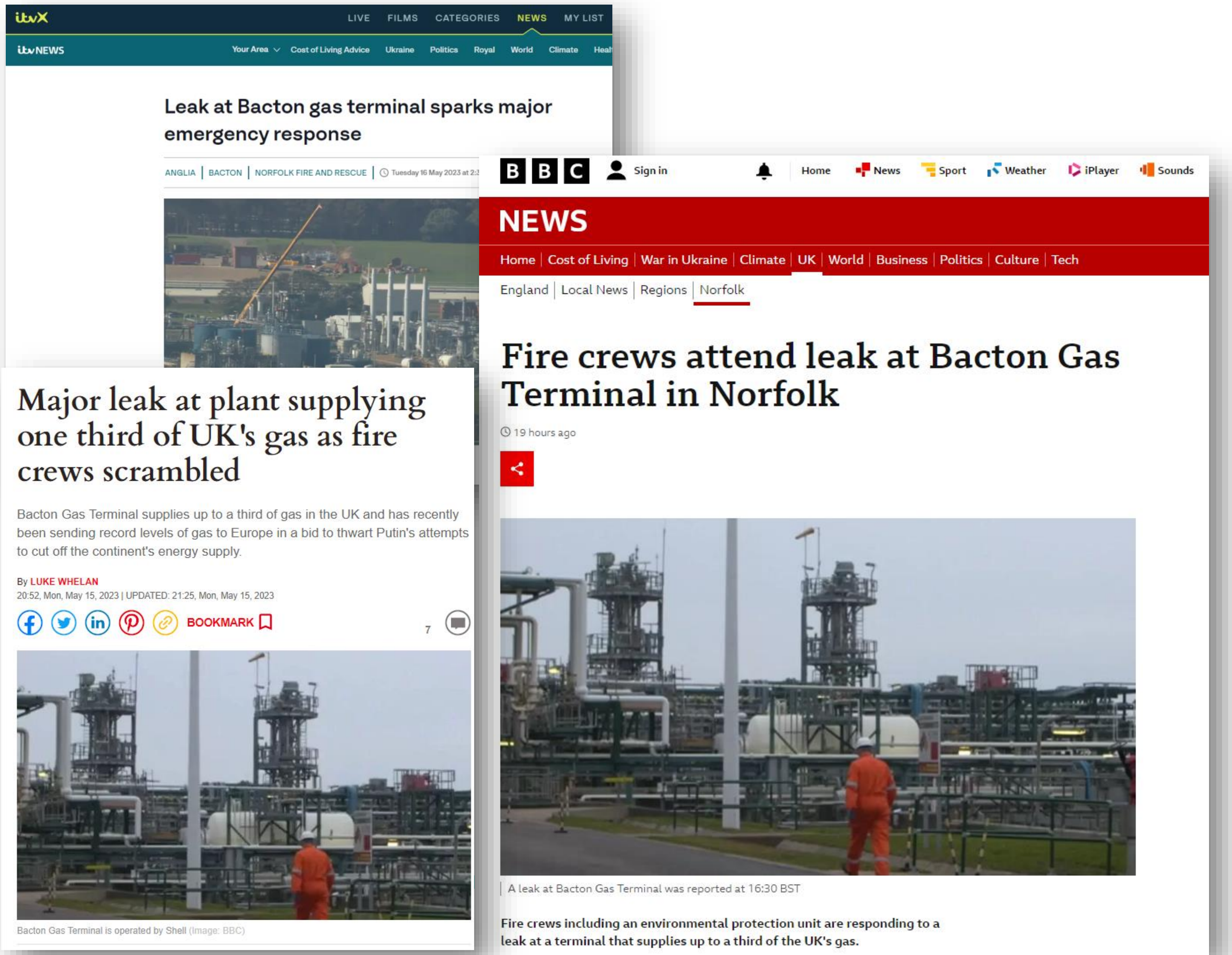
- **3rd & 5th May**

- Scaleback of Interruptible Capacity
- Restricted WDDSEC Firm Capacity

Key Challenges

- Power station flow profile volatility
- Power stations react to the demands from the electricity system – can be called on at short notice
- Lower seasonal distribution demand
- Cambridge is some distance from Grain
- Utilising all of our physical strategies and some commercial tools

Bacton



On 15th May we had a release of gas at our Bacton terminal on the Perenco incomer.

This led to cessation of Perenco flows from 10mcm/d to 0mcm/d.

No one was injured and supplies to homes and businesses were unaffected.

No commercial actions were taken due to the immediacy of the incident and it being at sub-terminal level with overall Bacton capability unaffected.

Further information will be provided at the June Ops forum.

St Fergus

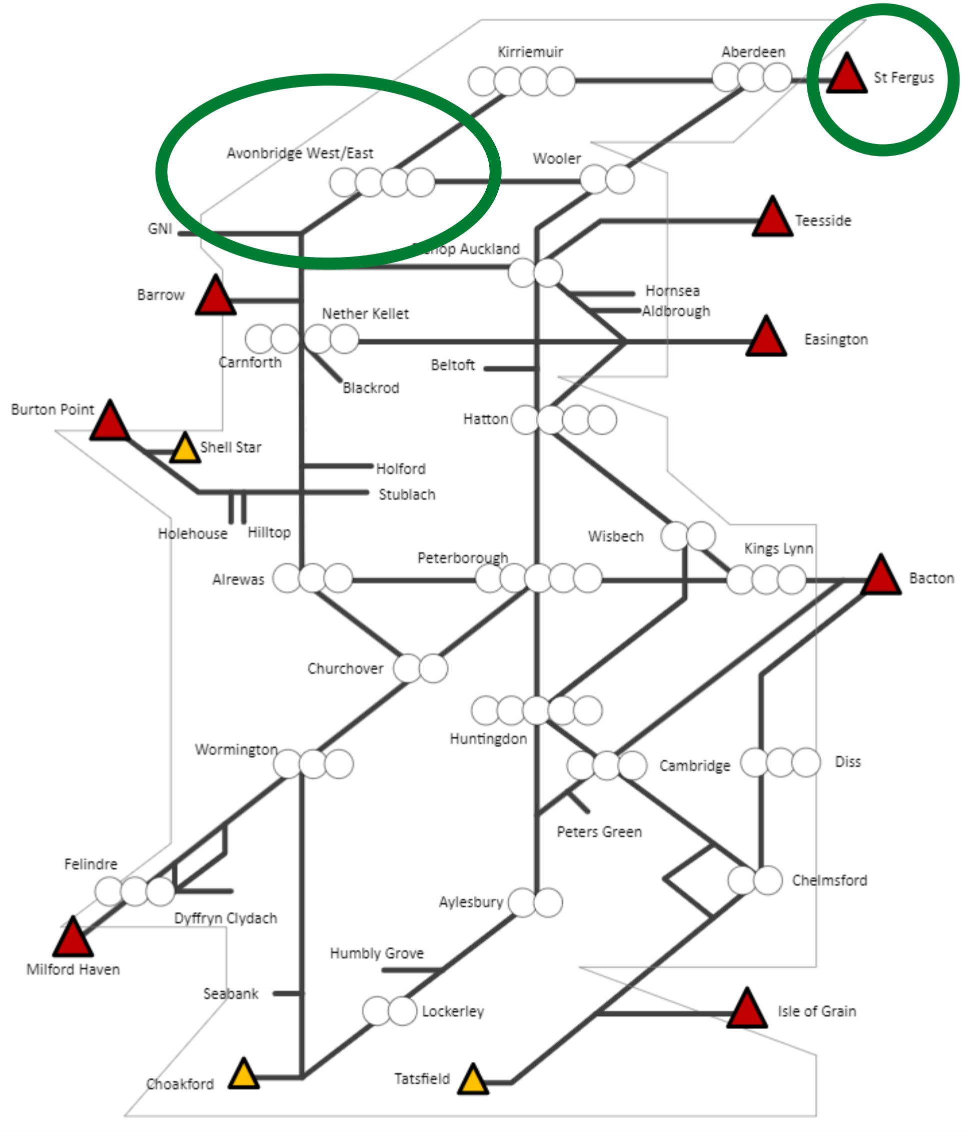
St Fergus – Gas Day 15.05.23

- Trip at Avonbridge Compressor late in the gas day of 15.05.23 resulted in the reduction of our ability to move gas away from St Fergus Terminal

- Aberdeen Compressor is not available to assist with this issue due to ongoing summer maintenance

- We scaled back interruptible capacity for gas day 16.05.23 and restricted release of firm capacity at St Fergus to 60mcmd to reduce inputs into St Fergus whilst we re-established compression

- Unit was re-established on the 16th May and standard transmission was resumed



St Fergus 16th & 17th May

- Network pressures were seen to be increasing at St Fergus and Teesside and pressure limits forecast to be exceeded during the morning of the 17th at St Fergus.
- With significant maintenance ongoing on the network the root cause of this increase in pressure was not quickly identified.
- This resulted in us withholding interruptible capacity and issuing a TFA at St Fergus at 8am.
- During the morning of the 17th we altered the configuration of the network which resolved the issue.
- This was resolved and pressures reduced at St Fergus and Teesside.

Gas Price Analysis

Omar (Sakhi) Choudry

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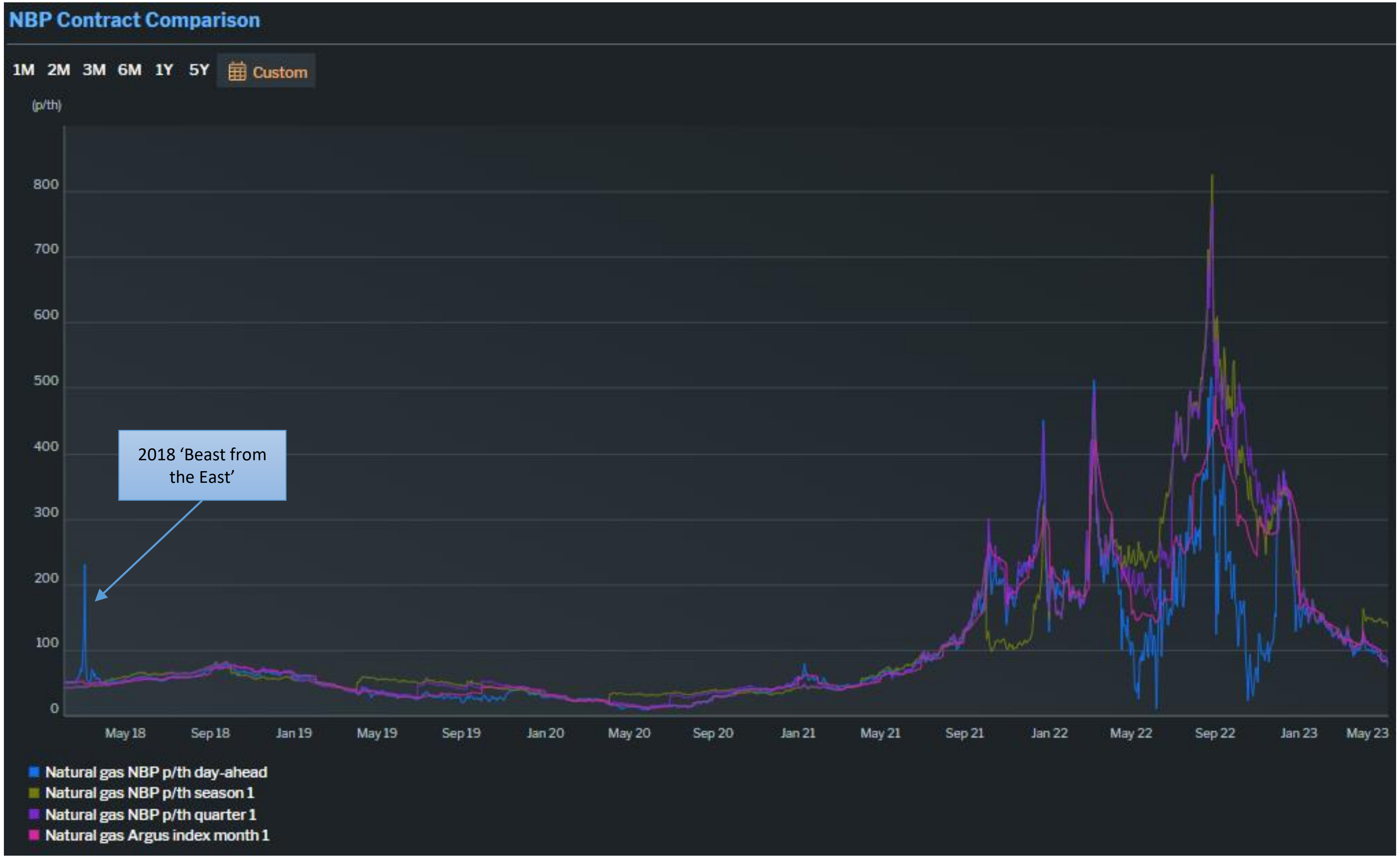
NBP Contract Prices

Price Volatility



- The graph to the left details several different contracts (Day-Ahead, Monthly, Quarterly and Season) that NGT trade on the NBP and their price curves over the last 5 years, we also included a comparison to extreme costs from the 'Beast from the East' in 2018 on the Day-Ahead curve (blue line).
- The record high gas prices in 2022 were accompanied by extreme volatility and short-term month ahead, daily and within day variability, further increasing the complexity (and cost) of risk management in gas trading for all market participants.
- We have seen market volatility in the day ahead product increasing by 30% between 2021 and 2022 (year to date).
- For the front season product increases have been between 300% and 1700%.
- For the front month contract, we have seen increases of between 50% and 900%.

NBP Contract Prices

Market fundamentals

Rising/sustained high prices were the hallmark of 2022, with the drivers of this price volatility well documented. We have seen prices fall since the start of 2023, driven by storage existing winter at near 5-year highs, mild winter temperatures, high renewable output, and the commissioning of new LNG regasification capability in Europe.

There are however some potential fundamentals that could (plausibly) come into play and which market participants maybe be watching closely:

- The strong growth in regasification capacity in Northwest Europe that should help bring in more LNG into the region
- The competition from Asian markets could potentially be strong (during both the summer and winter)
- There is a risk that Russia could shut down all pipeline flows (Ukraine Transit, TurkStream and LNG) to Europe or reduce LNG exports creating a bullish risk to prices.
- Although Norway achieved record piped exports in 2022 and will continue to maximise production (while we expect similar winter exports) summer exports are likely to be lower amid heavy summer maintenance
- Unexpected outages pushing down LNG supply: the risk of outages is especially elevated in light of postponed maintenance during 2022
- Another factor to consider is that Germany and Belgium have decommissioned their nuclear fleet
- Weather will remain a factor in gas prices moving forward, both for the summer and winter of 2023

Guest Speakers – Xoserve Updates

Phil Wood and Sue Treverton
Xoserve

national gas transmission

Gas Ops Forum– Service Desk Update

Phil Wood – 18.05.23

Service Desk Overview

What does the desk do?

- Operate 24x7x365
- Front door for Customers to:-
    - Report incidents
    - Raise queries
    - Make requests
    - Initial triage and pass / engage support teams
- Instigate & Support Major Incidents
- Involved with Security incidents and escalations
- Password Resets
- Continuous Improvement of Service Desk scripting.
- Monitor auto alerts and route to resolver groups

How to contact us

- servicedesk@xoserve.com
- **0845 6000 506 option 1 or 3**
- Web form tickets raised via **Xoserve.com**
- Check status of ticket

  https://www.xoserve.com/help-and-support/check-status-of-an-existing-support-request/
- ServiceNow portal

Improvements

- Replacement phone system (benefits include)
    - Improved IVR messaging
    - Introduction of call back option
    - Improved line quality
- Call calibration (Soft Quality Checks)
- Password reset process; request remain open for an extended period
- Service Desk readiness packs – closer engagement with projects.
- Continual refresher training with Service Desk Analysts
- Reintroduced job scheduling template to drive more consistency and reduce errors with requests.

125 calls/month

900 emails/ month

30 / 10 Website and ServiceNow portal tickets / month

2-3000 (2800) Invoiced alerts / month

Customer Feedback

Satisfied	Neutral	Dissatisfied
8	0	1

Updates/Follow Up
Additional training within the Service Desk team is in progress to provide a more robust service around Password Renewal / Self Service.

Gas Ops Forum

Sue Treverton

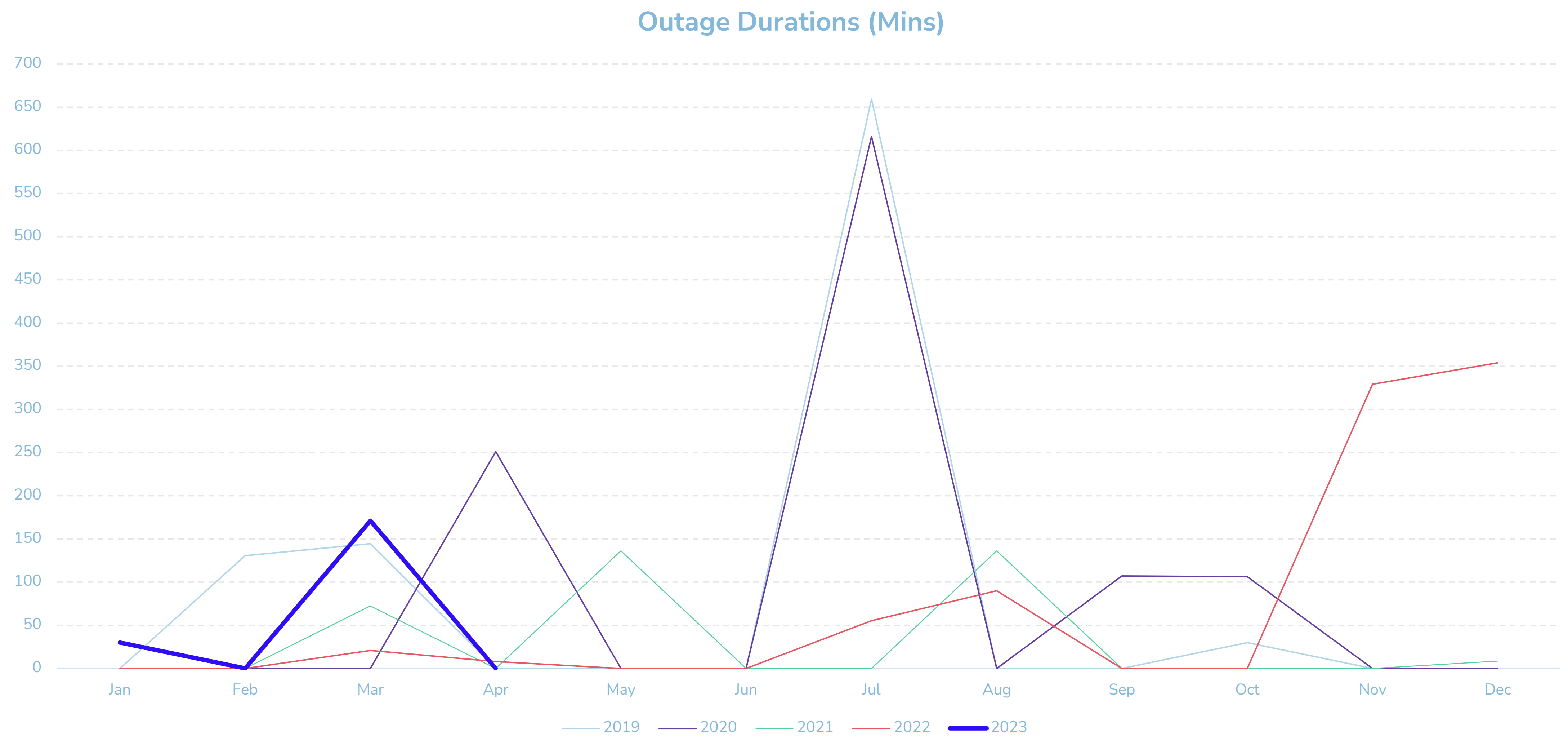
May 2023

Core System Availability

12 Month View					
Month	P2 Outage (Mins)	HPP3 Outage (Mins)	Total Outage (Mins)	% Target	% Actual
May	0	0	0	99%	100%
June	0	0	0	99%	100%
July	55	0	55	99%	99.87%
August	90	0	90	99%	99.79%
September	0	0	0	99%	100%
October	0	0	0	99%	100%
November	329	0	0	99%	99.20%
December	334	20	354	99%	99.17%
January	30	0	30	99%	99.93%
February	0	0	0	99%	100%
March	171	0	171	99%	99.69
April	0	0	0	99%	100%
TOTAL	**1009**	**20**	**700**	**99%**	

No Outage	Met	Failed

Monthly Service Availability (YOY)



Issue Summary

Incident Date	Created Time	What Happened	What do Correla understand our customers experienced?	Why did it happen	What did the Correla team do to resolve
08/02/2023	11:15	The SC3 file to publish demand values was not received from National Gas Transmission for the 10:00 hour bar.	Customers that were attempting to view the Demand values in Gemini prior to the contingency procees being run and published would not have been able to see the data at the standard published time	National Gas Transmission confirmed there was an internal issue with their system which caused this issue	Correla notified National Gas Transmission of the issue and requested they undertake the agreed contingency process and broadcast an ANS message to all Customers until the issue was resolved. Further monitoring was in place to ensure the remaining files for the day were received on time with the correct information prior to processing
09/03/2023	11:29	An auto system generated alert was received notifying that the Gemini Service was unavailable	There was intermittent access to the Gemini service for a period of 25 minutes, this impacted a small number of Customers attempting to log into the service	Intermittent connectivity loss was identified on the inter DC link which was confirmed by the vendor that this was due to preparation work taking place for planned maintenance activities.	A problematic node was detected and isolated from the load balancer; services were then redirected to the working primary node.
11/03/2023	08:21	Customers reported they were unable to access the Gemini Service.	External customers were unable to access the Gemini Service	The vendor confirmed that the patch only works with the latest version of Citrix products, this will be taken into consideration for future updates	The scheduled patching activity that had been undertaken was rolled back restoring service.
08/04/2023	09:14	Through auto alert monitoring it was found that the EU Nomination files were not processing via Gemini B2B as expected	Mismatches occurred in EU Nominated nominations and confirmed quantity processed from Gemini for one TSO	RCA is in progress with the vendors	A restart of services within the B2B Gateway platform was undertaken. Following the restart files were successfully processing as expected
10/04/2023	19:05	There was a failure in the Unidetified Gas (UIG) allocation job causing incorrect values to be published	Customers would have seen incorrect values until the next evening when the UIG job completed succesfully	An upstream job had been configured using a standard SAP time zone, following the clock change this job failed as the start and end parameters were in differing time zones. As there was no data to be sent to Gemini this caused the UIG allocation job to fail	The time zone was amended and the failed data was loaded to Gemini and the UIG allocation job ran as expected the following evening

national gas transmission

EVEREST

NEC ASSURANCE EXERCISE

Sam Collinson

Emergency Incident Framework Officer (Secondment)

Exercise Degree

- 2022 NEC assurance exercise
- Report (link below) summary of the exercise
- Ongoing assurance programme
  - Isolation workshops
  - Four CTC exercises
- Post Exercise report

Exercise Everest

Tuesday 3rd October	Wednesday 4th October	Thursday 5th October
Pre-emergency	**Emergency**	**Isolation**
• Gas Transporter collaboration • Gas Balancing Notification • Gas Availability Status (GAS) report • OCM balancing trades • Scaleback off-peak exit capacity • Operating Margins • Electricity System Interactions	• **Stage 1**: 'Emergency Specification Gas' (live exercise activation) • **Stage 2**: Flow Direction & Load Shedding (live exercise activation) • Electricity System Impact	• **Stage 3**: Public Appeal and Allocation & Isolation
09:00 – c.16:00	**09:00 – c.16:00**	**09:00 – c.16:00**

Everest Objectives

Use real Data	→	1. *'Test industry's ability to utilise real life data to respond to a gas deficit emergency on the NTS, challenging the transaction of information between operators including Gas Transmission, Gas Distribution Networks and the Electricity System Operator.'*
Test cross network and external communications	→	2. *'Test industry's ability to warn and inform the public through participation of Corporate Affairs' representatives from the Energy Networks Association, Gas Transporters, the Electricity System Operator and Electricity Network Operators, including changes made to modernise the public appeals process'*
Continue to develop whole energy system interactions	→	3. *'Practice and enhance processes and tools associated with the interactions between gas and electricity organisations in the face of stress on the Whole Energy System, supported by active participation from the Electricity System Operator and Electricity Distribution Network Operators'*
Apply learnings from Exercise Degree	→	4. *'Test that recommendations from previous industry emergency exercises have been delivered and are effective'*

Close

- Industry briefing note – 30th June
- Pre-exercise briefing in September Ops Forum
- SLIDO – Shipper participation in Exercise Everest

Any questions or suggestions please contact our team .box:

gasops.emergencyplanning@nationalgrid.com

SLIDO Poll

#OPSFORUM

“Would Shippers find value in the opportunity to test commercial tools in Exercise Everest? If so, please suggest what should be included"

General Updates

Nicola Lond
Operational Liaison & Business Delivery Manager

national gas transmission

UNC0814 – BBL Enhanced Pressure Service & Increased MNEPOR - Update

- UNC Modification 0814 was approved on 06/03/23 by Ofgem

- Working on finalising the associated contractual and process changes required for implementation
- Continued discussions ongoing with relevant parties
- Further communications will follow with implementation date via Joint Office

- Solution is temporary and will be in place until the end of September 2023.

- For more information please click here which will take you to the UNC0814 page on the Joint Office website

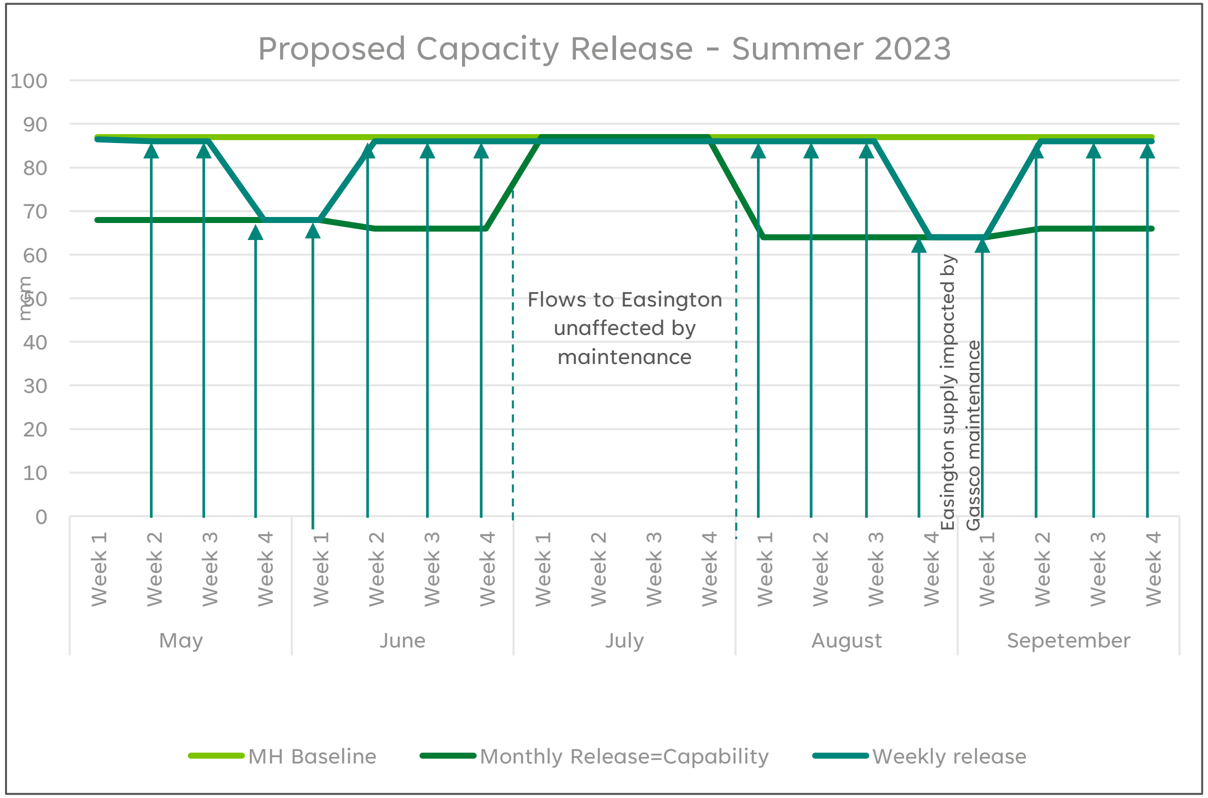
ECR at Milford Haven Update

On the 20th April Ofgem announced their decision to reject our proposed changes to reduce capacity at Milford Haven this summer. [Decision on proposed revisions to the Methodology Statements held by National Gas Transmission Plc | Ofgem]

The key reason for the decision was given as:

Ultimately, Ofgem is of the opinion that NGT have not sufficiently demonstrated that high capacity constraint costs are likely as informed by a probability assessment, nor that the impact of withholding capacity would be less damaging to the GB market and GB consumers, a sentiment which has been echoed by several stakeholders both pre- and post-consultation.

We'd like to thank those of you who have participated in this consultation which we feel has produced a helpful industry debate on this subject.



Mercury Survey Update

- **Timeline**

Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
HSE	Follow up Survey	Survey closes	Survey Results		Update		GTYS publish update	

- **Survey to be circulated next week and open for 4 weeks**
- This builds on the previous survey following our spot sampling on the NTS
- Please engage if you have views on the NTS Mercury limit to inform our decision
- Standard distribution lists will be used.
- If you have anyone to be added to receive this specifically can email nicola.j.lond@nationalgas.com

Data Community Site retirement

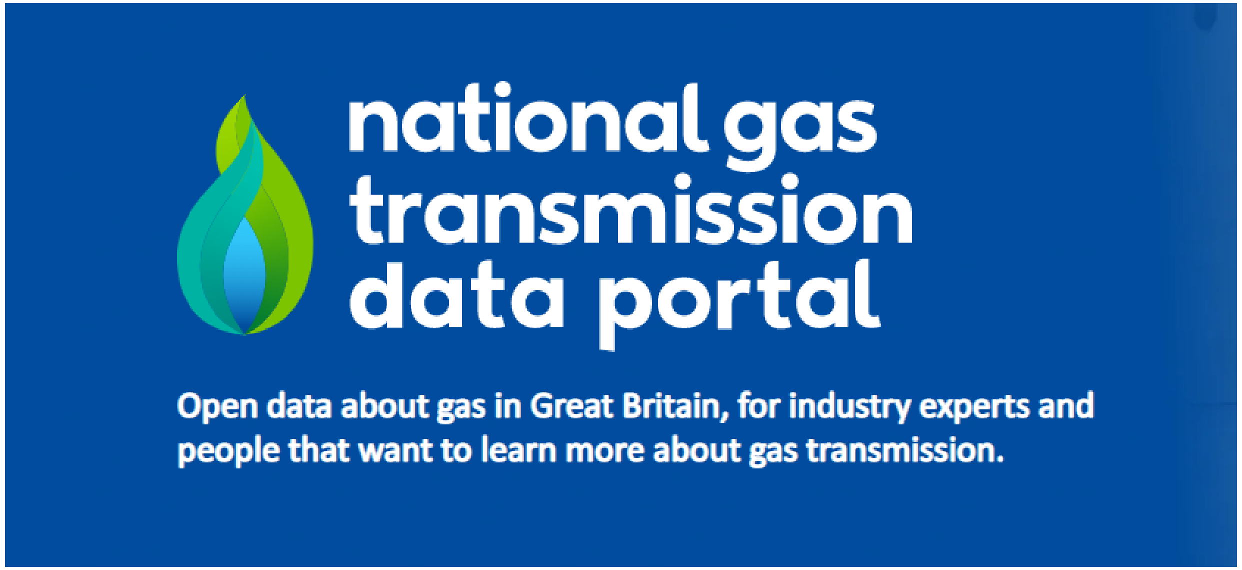
- Due to rationalisation of web sites the Data Community website will be retired on **4th June** https://datacommunity.nationalgridgas.com/
- All content from the site will be retained.
- Ops Forum slides are available here: https://www.nationalgas.com/data-and-operations/operational-forum
- Webinars/old documents are available on request
- News will resume here: Operational news | National Gas

Information Provision Release Update

Release Date: Summer 2023

What are we working on:

- Finalising the design features for the National Gas Transmission Data Portal.
- Undergoing a suite of testing to ensure the system will be fit for purpose for Go Live.
- Working on Communications to support Go Live.



Get in touch:

If you have any questions or are interested in engaging on our improvement project please get in touch by sending us an email at Box.OperationalLiaison@nationalgrid.com

How to contact us

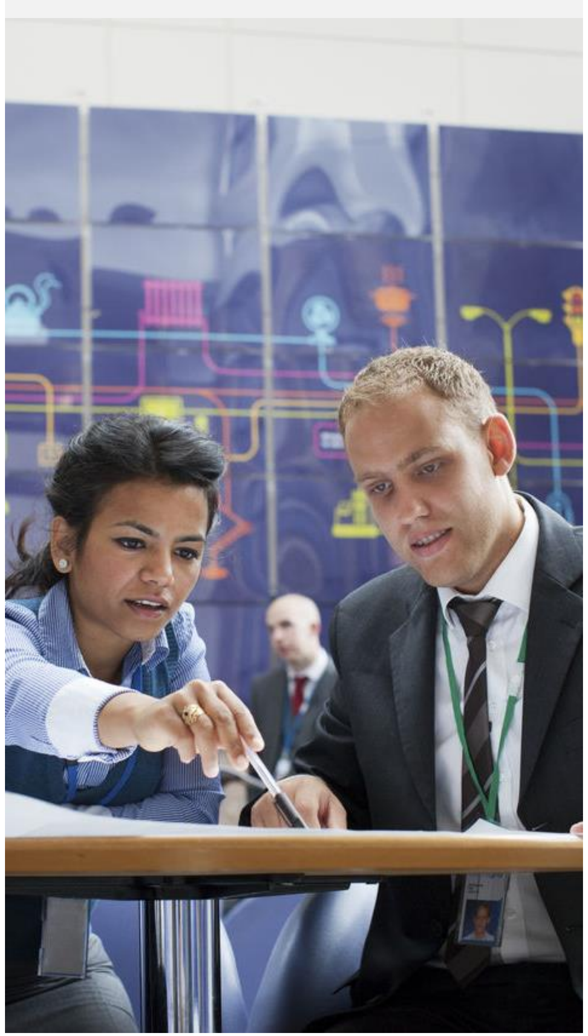
Operational Liaison Team

Note our email addresses are transitioning to nationalgas.com

- Nicola Lond: Nicola.j.lond@nationalgas.com
  Team Manager (covering Rachel Hinsley maternity leave to 31st Dec 2023)
- Mathew Currell: Mathew.Currell@nationalgas.com
- Craig Shipley: Craig.Shipley@nationalgas.com
- Charlotte Gillan: Charlotte.gillan@nationalgrid.com
- Operational Liaison Email: Box.OperationalLiaison@nationalgrid.com

If you have any Operational enquiries or would like a liaison meeting please get in touch.

For the National Gas Website, please visit;
Gas Transmission | National Gas



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	TBC	TBC	Clermont & Online	x
26/01	23/02	23/03		18/05	22/06			21/09	19/10	23/11	

We welcome your views - What do you want to hear about?

Registration is open for the June event at:

In Person: https://www.eventbrite.co.uk/e/637458434337

Online: https://www.eventbrite.co.uk/e/637460029107

The Clermont Hotel
Charing Cross
London
WC2N 5HX

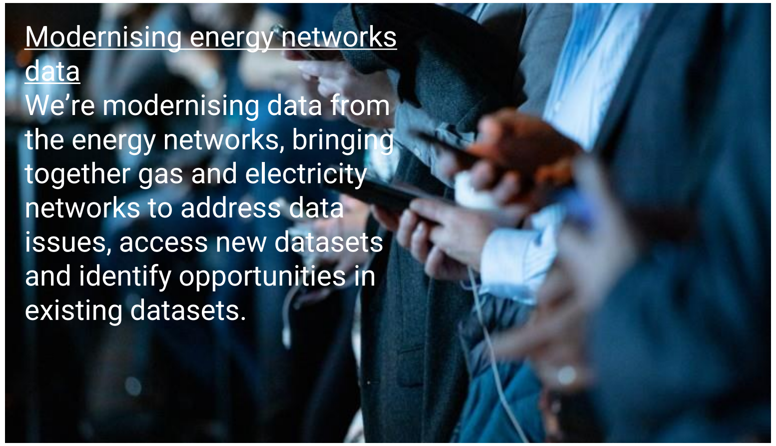
Key resources available to you

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.

Activity	Link
Registration for Gas Ops Forums and Gas Ops Forum materials	www.nationalgas.com/data-and-operations/operational-forum
Subscription to distribution list	Please email: box.operationalliasion@nationalgrid.com
National Gas Transmission Website	www.nationalgas.com
Maintenance Planning	www.nationalgas.com/data-and-operations/maintenance

The monthly Britain's Gas Explained information is on LinkedIn; this is information showing the key role Gas plays that is easy to digest for all; especially end consumers



The Energy Data Request Tool to request the publication of any data is available here: Microsoft Forms Link

AOB & Questions?

Thank you

national gas transmission