

Gas System
Operator

0669R - Review of MN & GDW Arrangements

1st November 2018

nationalgrid



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01

Actions &
Questions from
Oct Workgroup

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Ops Forum slides regarding 1st March [Action 1001]

Link to March 2018 Ops Forum slides on National Grid website:

<https://www.nationalgridgas.com/sites/gas/files/documents/Ops%20Forum%20pack%20March%202018.pdf>

Pre-emergency Commercial Tools [Action 1002]

First Webex session held 22nd October and positively received. General trends of feedback received so far:

- Happy with the approach.
- Keen to see the scope expanded to cover other infrequently used tools.

Webinar Overview

https://players.brightcove.net/867903724001/74b4f6ae-bb3f-4534-beb9-787ad6a0c1a1_default/index.html?videoid=5831481131001

Guidance documents

<https://www.nationalgridgas.com/sites/gas/files/documents/Pre-emergency%20Commerical%20Tools%20Visual.pdf>

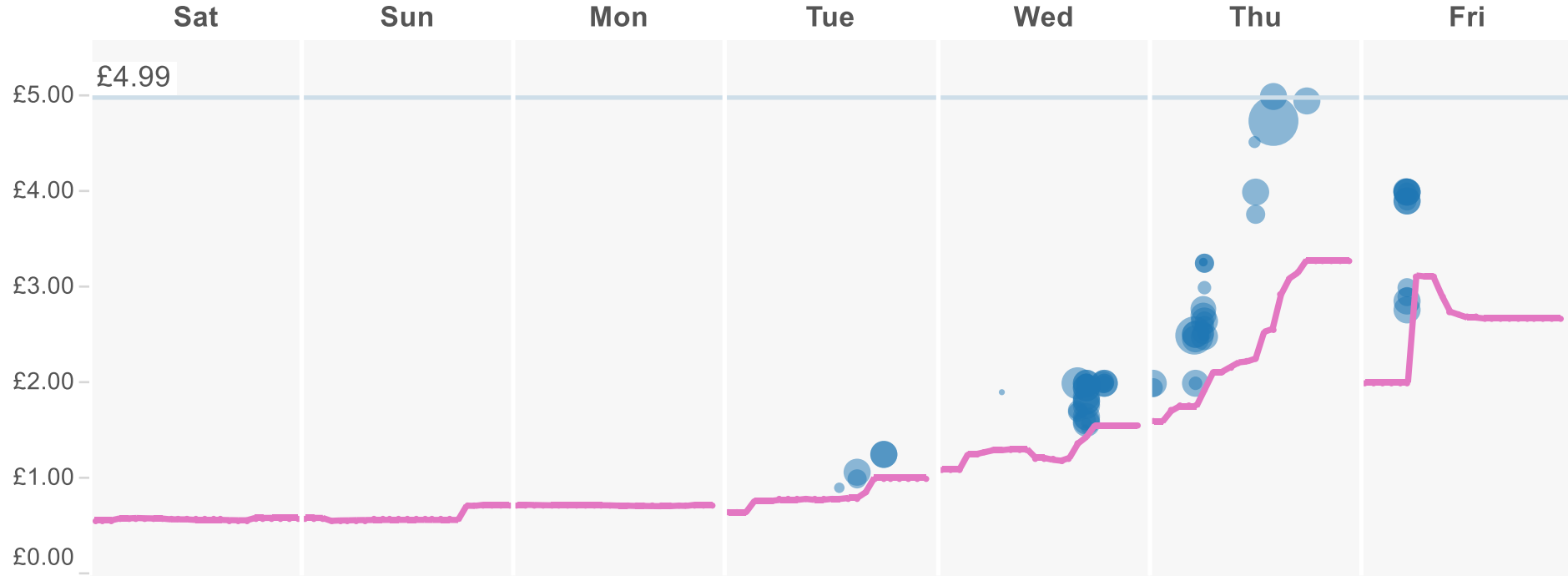
Both available on National Grid website at

<https://www.nationalgridgas.com/data-and-operations/transmission-operational-data>

Price & NG balancing actions taken [Action 1003]

— SAP
● NG Trades Made

SAP and NG Trades



Supply Data [Action 1003]

Received by the Control Room daily:

- Within Day and Day Ahead shipper nominations
- Within Day and Day Ahead supply notifications from terminals and storage sites
- Remit Notifications
- Live data of actual supply and demand, and real-time linepack data

Received in times of system stress:

- G.A.S Report

Could Remit Notifications help with supply loss information?

- Remit Notifications are one of the pieces of information the Control Room uses to manage the NTS
- We mostly check the Remit Notifications of large scale suppliers – where a supply loss would have a significant system impact
- When one of these terminal operators posts a Remit Notification, the Control Room will call them to discuss the details (e.g. scale & duration)

However

- Remit Notifications are currently published across a number of different sites
- Benefit is based on timing – generally we will see the loss before the Remit Notification

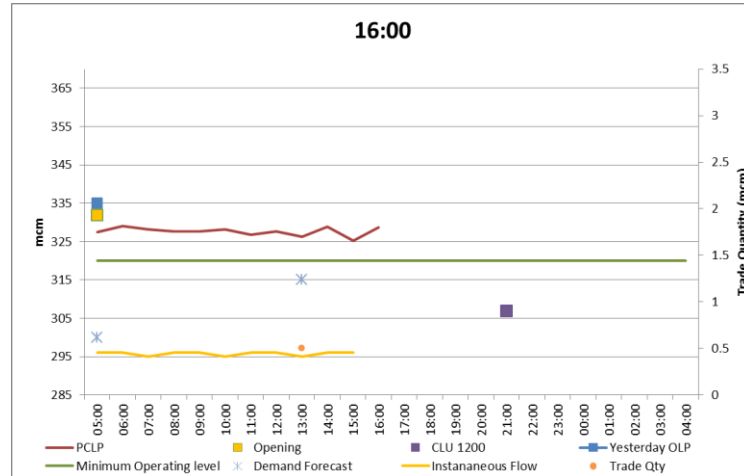
A Day in the Life of the Control Room

Developed an interactive scenario using only information found on the National Grid website.

Presented at the Ops Forum, and took participants through a fictional day in the life of the Control Room.

Demonstrated what information is available to the market, and when it is published during the Gas Day.

Feedback for the scenario was positive, and we are now looking to record a webinar version for publication on the National Grid website.



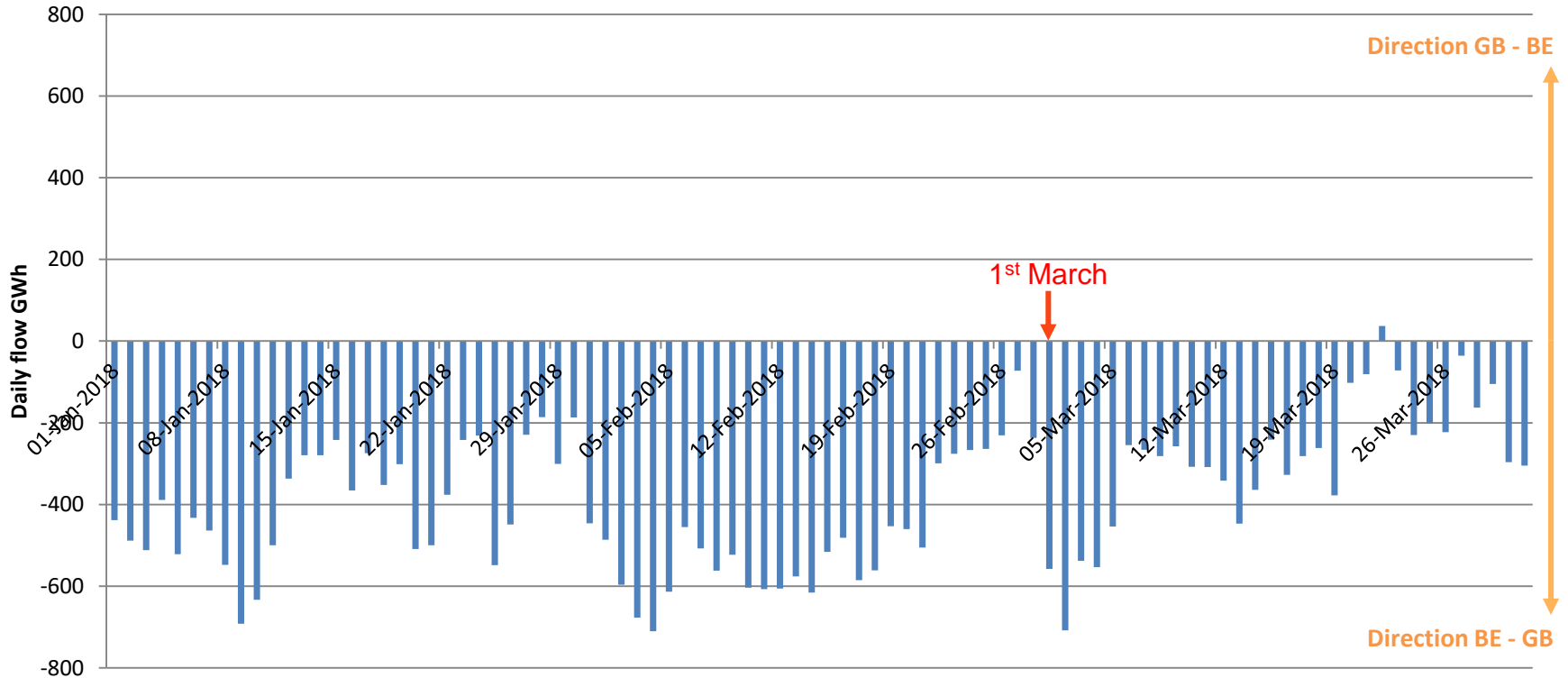
Data Feed:
Margins
Notice

Data Feed:
Instantaneous
flow data

Data Feed:
D-1 & D2-D5
forecast 14:00

IUK Flows leading up to 1st March

IUK daily flow



GBA vs Margins Notice & GDW

Day Ahead GBA

- Mechanistic
- Calculated using 'Forecast Total System Supply'

Margins Notice

- Mechanistic
- Calculated using 'Expected Available Supply'

Within Day GBA

- Prescriptive
- Remains in place until end of Gas Day
- Same name as Day Ahead alert, which makes it difficult to communicate severity
- Can only be issued during the affected Gas Day

GDW

- National Grid discretion
- Can be withdrawn
- Different name to Margins Notice, which signals to market degree of severity
- Can be issued prior to the Gas Day if National Grid becomes aware of relevant information

GNCC Learnings & Improvements

- NTS Flexibility - Operating the NTS at record low and rate of change linepack levels has added valuable learning across the teams.
- Procedure Reviews - Following the actions taken over the constraint days a review of procedures has been initiated with a view to improving the process.
- NTS user response – A review of material is underway to support NTS users in responding to uncommonly used tools (i.e. locational & DSR OCM markets)
- Review of System Messages - Working group initiated to review messages issued by National Grid. Potential for change or enhanced transparency based on user feedback.

Daily Margins Notice / GDW – Feedback from Shippers

[Action 1004]

At October Workgroup:

- Discussed option to use a ‘Daily Margins Notice / Gas Deficit Warning’ using a traffic light approach
- Could help to maintain a constant mindfulness of proximity to issuing a Margins Notice / GDW
- Shippers asked to consult their commercial operations staff to understand if this would be a useful supplement to the actual Margins Notice / GDW.



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Assessing the
NSS figure

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What is the NSS figure – A reminder

Margins Notice triggered if:

Total Max Use (NSS Assumption + Storage Max Use) < Demand Forecast

	2015/16	2016/17				2017/18	
(mcm/d)	Observed range	Forecast range	Observed range	Cold day	350 + range	Forecast range	Cold day
UKCS	73 – 118	70 – 118	89 – 132	107	100 – 130	70 – 121	109
Norway	55 – 118	60 – 136	67 – 134	115	115 – 134	60 – 136	120
BBL	0 – 33	0 – 45	0 – 45	35	14 – 45	0 – 45	30
IUK	0 – 14	0 – 74	0 – 51	45	5 – 45	0 – 74	45
LNG	6 – 59	5 – 100	5 – 27	50	5 – 21	5 – 100	50
Total NSS				352			354
Storage	0 – 98	0 – 130	0 – 88		40 – 88	0 – 92	

Summary Data						
Current Daily Margin Notice Trigger Level: 459						
Date & Day Number	Demand Forecast	NSS Assumption	Storage		Total	
			Min Use	Max Use	Min Use	Max Use
28/02/2018 (D-1)	400	382	#N/A	82	#N/A	464
01/03/2018 (D-2)	410	382	#N/A	77	#N/A	459
02/03/2018 (D-3)	392	382	#N/A	72	#N/A	454
03/03/2018 (D-4)	335	382	#N/A	67	#N/A	449
04/03/2018 (D-5)	335	382	#N/A	58	#N/A	440

All Figures in mcm and may be subject to rounding.

Risk Bow-Tie

CAUSES

- CA1. Lack of awareness of offshore problems
- CA2. Over inflated view of how much LNG terminals can provide
- CA3. Over inflated view of how much interconnectors can provide
- CA4. Set pre-winter and updated infrequently
- CA5. Review of NSS is currently just an internal NG exercise
- CA6.

PROACTIVE CONTROLS

- *Link Proactive Controls directly to Causes
- [CA1]
- [CA1]
- [CA2]
- [CA2]

REACTIVE CONTROLS

- *Link Reactive Controls directly to Consequences
- [CO1]
- [CO1]
- [CO2]
- [CO2]

CONSEQUENCES

- CO1. Supply figures appear more inflated than they really are
- CO2. Supply figures appear too low
- CO3. The Margins Notice is not triggered often enough
- CO4. The Margins Notice could be issued too frequently if trigger levels are too low and would lose its potency
- CO5. We move directly into a GDW because we are unable to trigger a Margins Notice using the current calculation
- CO6.

There is a risk that the NSS figure underpinning the Margins Notice calculation is not dynamic enough

Time

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03

GDW –
Suggestions for
name change

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GDW – Suggestions for name change

Gas	Deficit	Warning
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- Could become one of the following:

Gas	Balancing	Notice
	Market	Notification
	Linepack	Signal

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04

Further
information

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G.A.S Report

Had initial meeting with Oil & Gas Authority to discuss the G.A.S Report, this included the following:

- Where the obligation to run the G.A.S Report originated
- The actions required from the OGA, terminal operators and National Grid to populate the G.A.S Report
- How National Grid uses this information
- How the G.A.S Report could improve the accuracy of the NSS figure

Next meeting to discuss the G.A.S Report scheduled for November.

EU Compliance

Extract from Article 11: Declaration of a crisis

1. There shall be the following three crisis levels:

- a) **early warning level:** concrete, serious and reliable information that an event which is likely to result in significant deterioration of the gas supply situation may occur and is likely to lead to the alert or the emergency level being triggered; the early warning level may be activated by an early warning mechanism;
- b) **alert level:** disruption of gas supply or exceptionally high gas demand which results in significant deterioration of the gas supply situation occurs but the market is still able to manage that disruption or demand without the need to resort to non-market-based measures;
- c) **emergency level:** exceptionally high gas demand, significant disruption of gas supply or other significant deterioration of the gas supply situation and all relevant market-based measures have been implemented but the gas supply is insufficient to meet the remaining gas demand so that non-market-based measures have to be additionally introduced.

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1938&from=EN>

GB Crisis Levels

Margins Notice

Gas Deficit
Warning

Gas Deficit
Emergency

Interesting Days

October has proved a challenging month to date with high day on day variability.

Two events are under investigation:

1st – 2nd October

Issue: Loss in Linepack and subsequent gain the following day despite GNCC trading

Preliminary investigation leads to physical drivers

21st October

Issue: limited physical response to GNCC trades and high gain in Linepack (15m)

Preliminary investigation leads to commercial drivers (unseasonably warm/ low demand, low market liquidity, EU price differential)

Further work is required to understand the full circumstances and will be covered at the November Ops Forum.

Next Steps

At October Workgroup we identified the following areas to review:

- Non-Storage Supply (NSS) Figure
- G.A.S Report
- Gas Deficit Warning name
- Timeliness of National Grid notifications

What other elements of the Margins Notice and the Gas Deficit Warning could be valuable to review?