

Gas System
Operator

0669R - Review of MN & GDW Arrangements

4th October 2018

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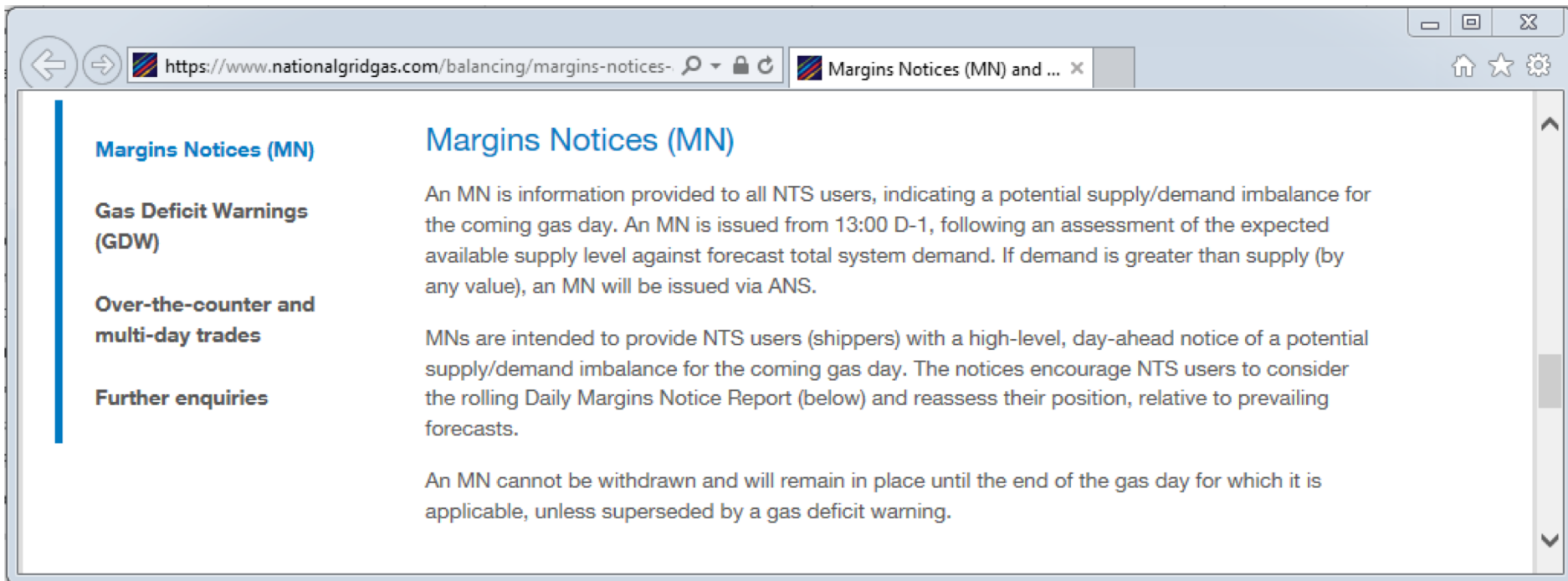
01

Margins Notice

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Margins Notice



The screenshot shows a web browser window with the address bar displaying <https://www.nationalgridgas.com/balancing/margins-notice->. The page title is "Margins Notices (MN) and ...". The main content area is titled "Margins Notices (MN)" and contains the following text:

Margins Notices (MN)

Gas Deficit Warnings (GDW)

Over-the-counter and multi-day trades

Further enquiries

An MN is information provided to all NTS users, indicating a potential supply/demand imbalance for the coming gas day. An MN is issued from 13:00 D-1, following an assessment of the expected available supply level against forecast total system demand. If demand is greater than supply (by any value), an MN will be issued via ANS.

MNs are intended to provide NTS users (shippers) with a high-level, day-ahead notice of a potential supply/demand imbalance for the coming gas day. The notices encourage NTS users to consider the rolling Daily Margins Notice Report (below) and reassess their position, relative to prevailing forecasts.

An MN cannot be withdrawn and will remain in place until the end of the gas day for which it is applicable, unless superseded by a gas deficit warning.

<https://www.nationalgridgas.com/balancing/margins-notice->

Margins Notice

What does the UNC say?

TPD Section V

5.9.3 National Grid NTS shall issue (by means of publication on its website) a notice (a “Margins Notice”) where, after forecasting demand for a Gas Flow Day in accordance with Section H 5.2.3 and Section H5.2.4 on the Preceding Day, the Forecast Total System Demand for the Gas Flow Day in question is greater than or equal to the Expected Available Supply for such Gas Flow Day.

5.9.4 Where a Margins Notice is issued, it shall remain in force until the end of the Gas Flow Day to which it is applicable, unless superseded by a Gas Deficit Warning.

Margins Notice

5.9.7 For the purposes of the Code:

(a) **“Expected Available Supply”** shall mean the sum of:

- (i) the amount of gas NG NTS reasonably expects could be delivered onto the Total System from non-storage sources (taking into consideration all information available to it) from time to time as published on its website; and
- (ii) the qualifying Storage Deliverability from relevant Storage Facilities over two (2) full Days at maximum withdrawal rates;

Margins Notice triggered if: Total Max Use (NSS Assumption + Storage Max Use) < Demand Forecast

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.						
<p>Notes</p> <ul style="list-style-type: none"> - 13:00 demand forecast is used for all D-to D-5 calculations. - NSS values are set before October 1st and stated in the NG Winter Outlook report. Revisions may occur during the winter period based on actual NSS performance - Storage sites are included in the DMN calculation when there is sufficient commercial stock to withdraw at max. rate for two or more days. Sites are removed from the calculation when commercial stocks fall below this level. - Max Use and Min Use calculations are based on the description above. - Total Capability is the sum of NSS and total storage delivery capability for each day. <p>Extract from Daily Margins Notice & Safety Monitor Position Report from 27th Feb 2018</p>						

Margins Notice

How is the Nominated Storage Supply (NSS) Assumption calculated?

- Extract from Winter Outlook Report
(<https://www.nationalgrideso.com/sites/eso/files/documents/Winter%20Outlook%202017.pdf>)

	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	

Margins Notice

- National Grid is obliged (UNC TPD Section H 5.2.4) to publish NTS demand by 14:00, 18:00 and 02:00 D-1
 - Typically this is done by 13:00, 16:00, and 00:00
- The Daily Margins Notice process is carried out following the approval of the 13:00 D-1 Demand Forecast figures – the data for the DMN process should be committed by 15:00 at the latest
- The GNCC can reassess the necessity to raise a MN when the demand forecast data is made available at 13:00, 16:00, and 00:00
- If it is calculated that a MN should be applied, the following ANS message (MN01) will be issued:
 - *National Grid has issued a Margins Notice for Gas Day xx/xx/xx.*
 - *Please see Prevailing View for the latest Supply / Demand position or refer to the Daily Margins Notice & Safety Monitor Report also available at <http://www2.nationalgrid.com/uk/Industry-information/Gas-transmission-system-operations/Balancing/Daily-margins-notice-report/>*
- Contact with Ofgem is required following the issue of a MN.

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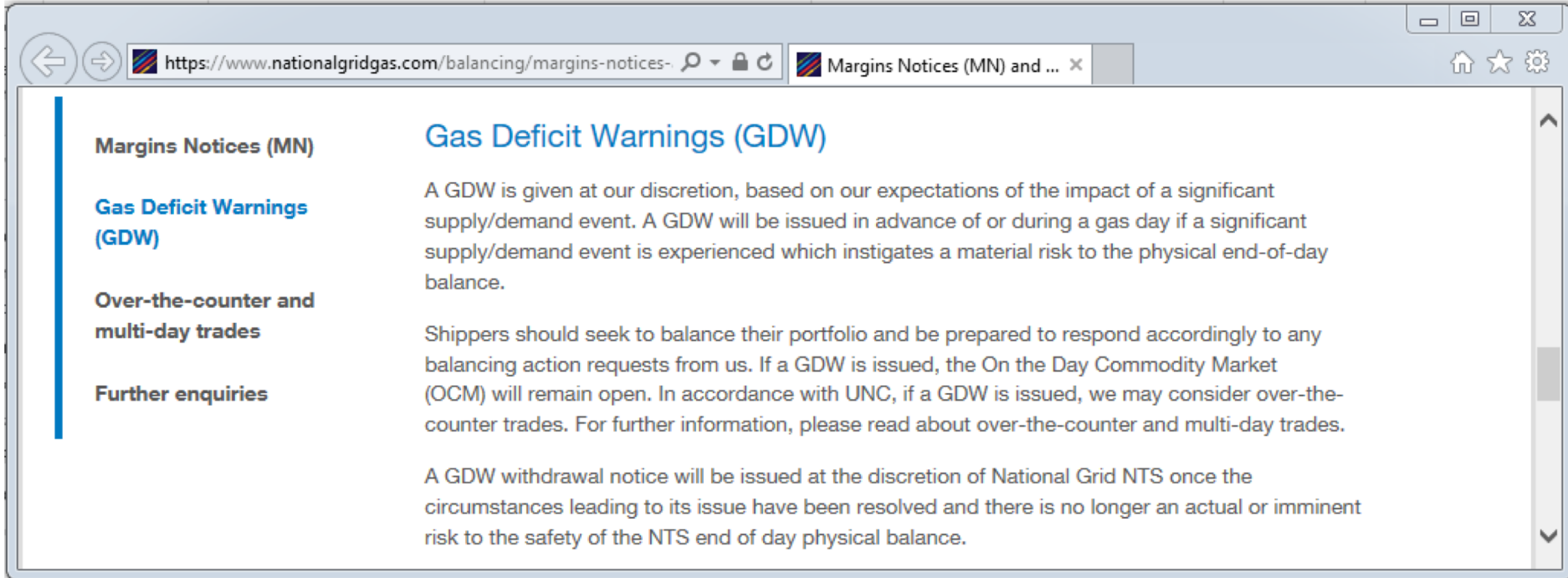
02

Gas Deficit
Warning

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Gas Deficit Warning



The screenshot shows a web browser window with the address bar displaying <https://www.nationalgridgas.com/balancing/margins-notice->. The page title is "Margins Notices (MN) and ...". The main content area is titled "Gas Deficit Warnings (GDW)" and contains the following text:

Margins Notices (MN)

Gas Deficit Warnings (GDW)

Over-the-counter and multi-day trades

Further enquiries

A GDW is given at our discretion, based on our expectations of the impact of a significant supply/demand event. A GDW will be issued in advance of or during a gas day if a significant supply/demand event is experienced which instigates a material risk to the physical end-of-day balance.

Shippers should seek to balance their portfolio and be prepared to respond accordingly to any balancing action requests from us. If a GDW is issued, the On the Day Commodity Market (OCM) will remain open. In accordance with UNC, if a GDW is issued, we may consider over-the-counter trades. For further information, please read about over-the-counter and multi-day trades.

A GDW withdrawal notice will be issued at the discretion of National Grid NTS once the circumstances leading to its issue have been resolved and there is no longer an actual or imminent risk to the safety of the NTS end of day physical balance.

<https://www.nationalgridgas.com/balancing/margins-notice-and-gas-deficit-warnings>

Gas Deficit Warning

What does the UNC say?

TPD Section V

5.9.5 National Grid NTS may issue (by means of publication on its website) a warning (“Gas Deficit Warning”) where during or before a Gas Flow Day, an event affecting either supply or demand, for the Gas Flow Day in question is notified to National Grid NTS, or National Grid NTS otherwise becomes aware of circumstances, that may (in the reasonable opinion of National Grid NTS) result in the quantities of gas

on the Total System being insufficient for the purpose of meeting the Forecast Total System Demand. The issue of a Gas Deficit Warning by National Grid NTS shall indicate the start of a Voluntary DSR Period for the purposes of Section D5.

5.9.6

Where a Gas Deficit Warning is issued, it shall remain in force until National Grid NTS issues a GDW Withdrawal Notice.

Gas Deficit Warning

- As agreed in Mod 0415, there are no predefined triggers for the issue of a GDW. However, the following are likely to be factors in our decision making on whether to issue a GDW:
 - Forecast Supply – Short term GNCC view of available supply based on recent NSS and actual storage performance
 - Forecast NTS Demand – Up to 1 week ahead
 - Actual EOD Linepack Projection
 - Other relevant information / intelligence – For example, any supply loss, updates from DFOs, REMIT publications, number of hours left in the day vs time for physical actions and market responses
- Once a GDW is issued, an ANS message (GDW01) will be sent for each day the GDW is active.
 - *National Grid has issued a Gas Deficit Warning for Gas Day xx/xx/xx.*
 - *Please see Prevailing View for the latest Supply / Demand position.*
 - *This warning has been issued in response to [a significant supply loss / a series of significant supply losses / a significant variance in demand forecasts (delete as appropriate)] resulting in a forecast end of day supply deficit.*
 - *National Grid will now consider any user offers for single or multiple day trades via the OTC or OCM. Note OTC offers can only be made by non OCM subscribers.*
- Contact will be made with Ofgem as soon as possible to inform that a GDW has been issued, and a REMIT notification will be issued.
- Communications will also be sent via MailChimp Email Service and SMS.

Gas Deficit Warning

Accepting Offers

- OCM subscribers can post offers on the OCM locational market for multiple days from gas day D, for a maximum of 7 days ahead from the date they are posted.
- Following the issue of a GDW, National Grid is able to accept OTC offers for single and multiple days. Offers can be made for a maximum of 7 days ahead from the date they are posted.
- Single or Multi Day Demand Side Response (DSR) offers may also be posted on the OCM locational market. These offers may be placed by shippers at any point but are only visible on the market for National Grid to consider after a GDW has been issued.

GDW Withdrawal

- A Gas Deficit Warning Withdrawal notice will be issued at the discretion of National Grid NTS once it is determined that:
 - There is no longer an actual or imminent risk to system safety; or
 - The circumstances leading to its issue have stabilised to a satisfactory level and are no longer an imminent threat to the EOD NTS balance position
- The same information provisions apply as for the issue of a GDW (ANS, Ofgem comms, REMIT, Email, SMS)
- After the conclusion of the GDW, no further OTC or Multi Day offers can be accepted and the DSR market will be reset by ICE.

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03

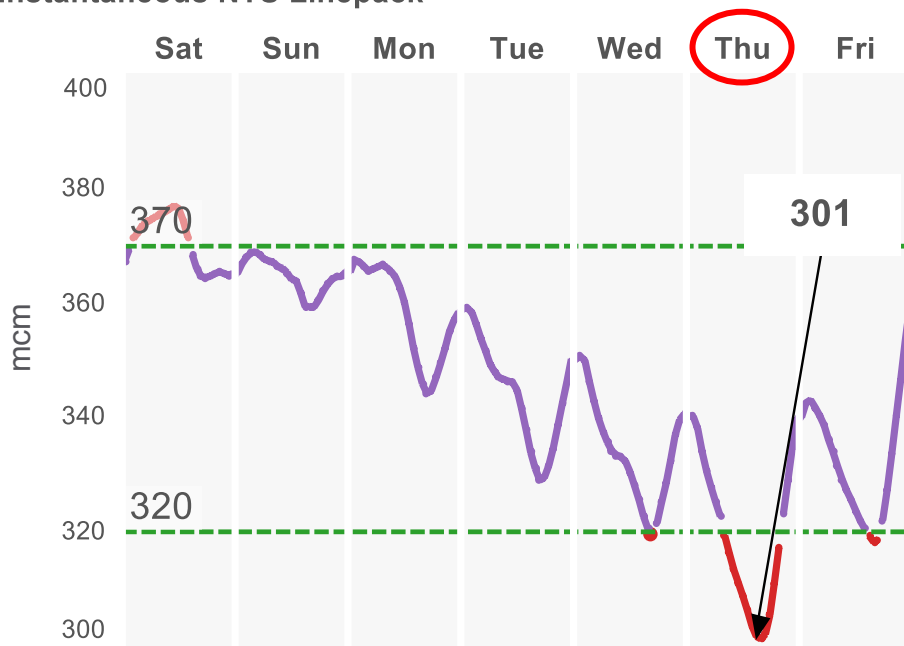
1st March 2018
GDW

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1st March 2018 GDW

Instantaneous NTS Linepack



- 1st March 2018 was coldest day since winter 1986/7, which occurred during a period of cold weather
- Opening linepack was gradually lost over the week:
 - **Monday** – end of day reduction of 7mcm
 - **Tuesday** – 8.2mcm end of day reduction as a result of late within day supply reductions and lack of response to residual balancing actions
 - **Wednesday** – 10mcm end of day reductions as a result of insufficient supplies and overnight supply losses
- Over the night of 28th February, to the start of the Gas Day of 1st March, there were a number of supply losses

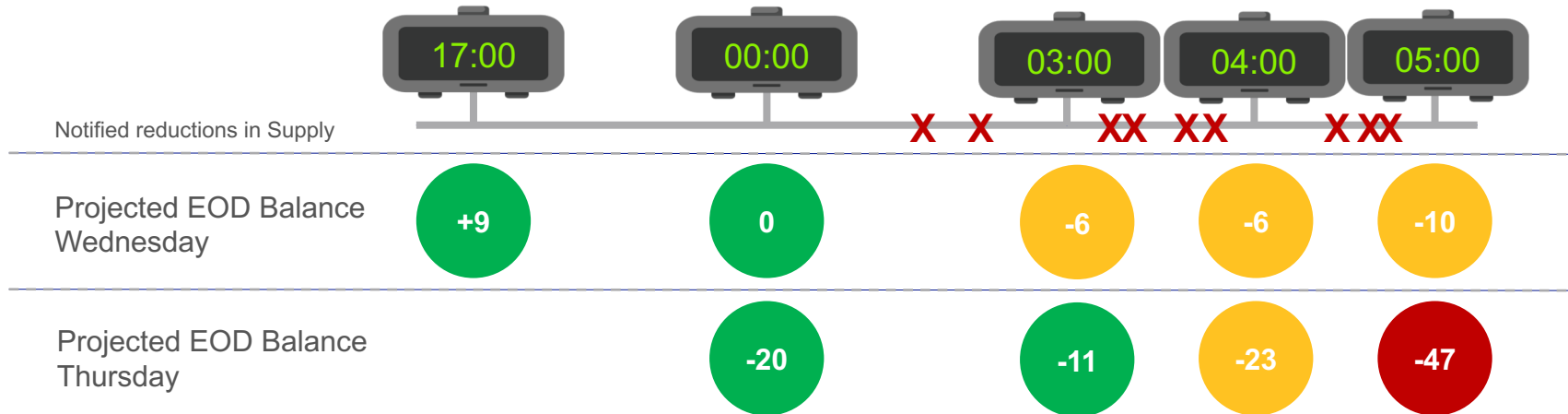
1st March 2018 GDW

Wednesday 28th February

- For the majority of Wednesday, we had projected that the NTS would be balanced – until late reductions in supply.
- The already reduced linepack on Wednesday compounded the affect of reduced supply on Thursday

- Changes to supply on Wednesday came too late for any response within day

X = Supply Loss

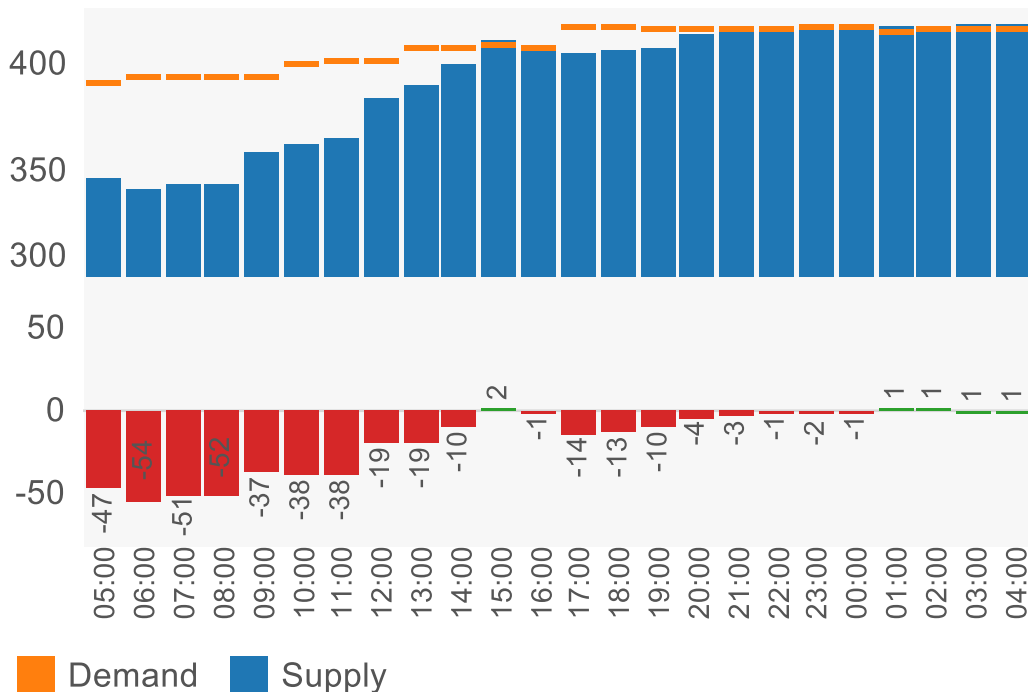


1st March 2018 GDW

Thursday 1st March

- **05:39** – ‘Rules on’ issued
- **05:47** – NG national buy actions
- **05:47** – GDW issued
- **06:00** – Scale back off-peak capacity (effective from 13:00)
- **08:00** – Minimal market response
- **08:33** – Request bids to buy locational gas
- **10:00** – Supply starting to respond but demand also increasing
- **10:45** – Further national buy actions
- **11:45** – Further national buy actions
- **15:00** – Significant response in Supply with EOD position now projected to be balanced
- **16:00** – Imbalance increased
- **17:00** – NG completed further national buy actions and OM utilised
- **20:00** – Further market response reduced imbalance
- **22:00** – EOD balance restored

Projected EOD 01/03/2018



1st March 2018 GDW

- Events of 1st March caused a ‘perfect storm’ which meant a MN could not be issued at D-1
- Experienced alarmist and exaggerated reporting in the Media
- National Grid believes now is an appropriate time to review because:
 - Captured learnings from 1st March – First time GDW used since implementation in 2012
 - MN was not issued prior to GDW – as may have been anticipated
 - Changes in the electricity market occurred since MN / GDW introduced

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04

Areas to
Review

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Areas to Review

1) Non-Storage Supply (NSS) Accuracy

- Interconnector flows are difficult to forecast and may not be accurately reflected in the MN trigger level
- NSS published in Winter Outlook Report and only updated if a significant change in supply – updated once in 2017/8 winter, but not updated during the previous 5 winters
 - Should this be more frequently updated, including during summer months to ensure the MN trigger is not over inflated? And incorporating notices of reduced supply availability?
- Uncertainty regarding LNG deliverability

2) GAS Report Frequency

- National Grid can request the Gas Availability Status (GAS) Report to be produced by the terminal operators via the Oil & Gas Authority (OGA)
 - Can currently only be requested if there has been a significant supply loss. Would it be beneficial to request this more regularly?

Areas to Review

3) Change name of Gas Deficit Warning

- The purpose of a GDW is to convey to GB market participants that they need to provide more gas or reduce demand
- National Grid considers that the term 'Gas Deficit Warning' may not adequately reflect this purpose and could be misinterpreted by the public
- Should the name be updated to an alternative which will not cause wide, unwarranted alarm?

4) Timeliness of National Grid Notifications

- Can we identify any opportunities for improvement?

Areas to Review

Improvements implemented or in progress

- GNCC carried out a number of process and systems improvements after an internal review of the events of 1st March
- Training and webinars in development to provide the industry guidance on how to use pre-emergency commercial tools (including for the Margins Notice and Gas Deficit Warning)