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Gas System Operator

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Proposed new Margins Notice methodology

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Current Margins Notice calculation process

UNC TPD Section V

5.9.3 National Grid NTS shall issue […] a "Margins Notice" [where…] 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.

5.9.7 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

Current Margins Notice calculation process

(mcm/d)	2017/18				2018/19	
	Forecast range	Observed range	Cold day	350 + range	Forecast range	Cold day
UKCS	70 – 121	62 – 128	109	65 – 128	75 – 125	115
Norway	60 – 136	53 – 128	120	86 – 125	80 – 130	120
BBL	0 – 45	0 – 45	30	10 – 45	0 – 45	30
IUK	0 – 74	0 – 67	45	7 – 66	0 – 74	45
LNG	5 – 100	5 – 84	50	5 – 84	5 – 100	50
Total NSS			354			360
Storage	0 – 92	0 – 90		12 – 90	0 – 92	

Current process for calculating NSS components:

- **UKCS** – National Grid calculation based on the Future Energy Scenarios, historic flows, NTS capability, and engagement with relevant parties

- **Norway, LNG & Interconnectors** – Based upon recent historic flows and engagement with relevant parties

Background of the NSS figure

- When the NSS figure was developed, storage was our main source of supply flexibility

- At that time, a straightforward calculation for the NSS figure was appropriate as non-storage supplies were more stable

- However, as LNG and Interconnectors now play a more significant role in supply flexibility, we have been considering how to best reflect our assumptions of what they may each be able to supply

Proposed new process for Margins Notice calculation

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

- **NSS** [Monthly review] – Just UKCS & Norway, with LNG & Interconnectors removed

- **Storage** [Daily process] – Current process to remain

- **LNG** [Daily process] – New methodology

- **Interconnectors** [Daily process] – New methodology

And an additional notification to be issued when we reach a certain percentage of the Margins Notice trigger.

We propose to include in UNC these changes to the methodology, the frequency of these processes and reviews, and the additional notification.

Proposed new process for Margins Notice calculation

Potential options for new Interconnector methodology:

- Set at zero

- Set at maximum delivery capacity

- Use D-1 nominations

- Use flows from previous Gas Day

- Use booked capacity

- Average figure from previous few days

This would be a daily process.

Proposed new process for Margins Notice calculation

Potential new LNG methodology:

- As LNG is akin to storage - mirror existing storage methodology?

  - Deliverability set at two days at maximum withdrawal rates, assuming more than two days stock is available

  - If above two days stock available, then we assume full deliverability

  - Once this falls below two days stock available, then assume a percentage of deliverability

This would be a daily process.

Proposed new process for Margins Notice calculation

Based on the existing methodology, if we had applied a notification at 80% of the Margins Notice trigger, what difference would this have made on 26th Feb – 1st March 2018?

- We would have issued a notification to state we were at 80% of the Margins Notice trigger (26th Feb = 79.5%, 27th Feb = 86.2%, 28th Feb = 87.9%)

- Appropriate % for notification is important to ensure significance of message is not devalued.

Gas System Operator

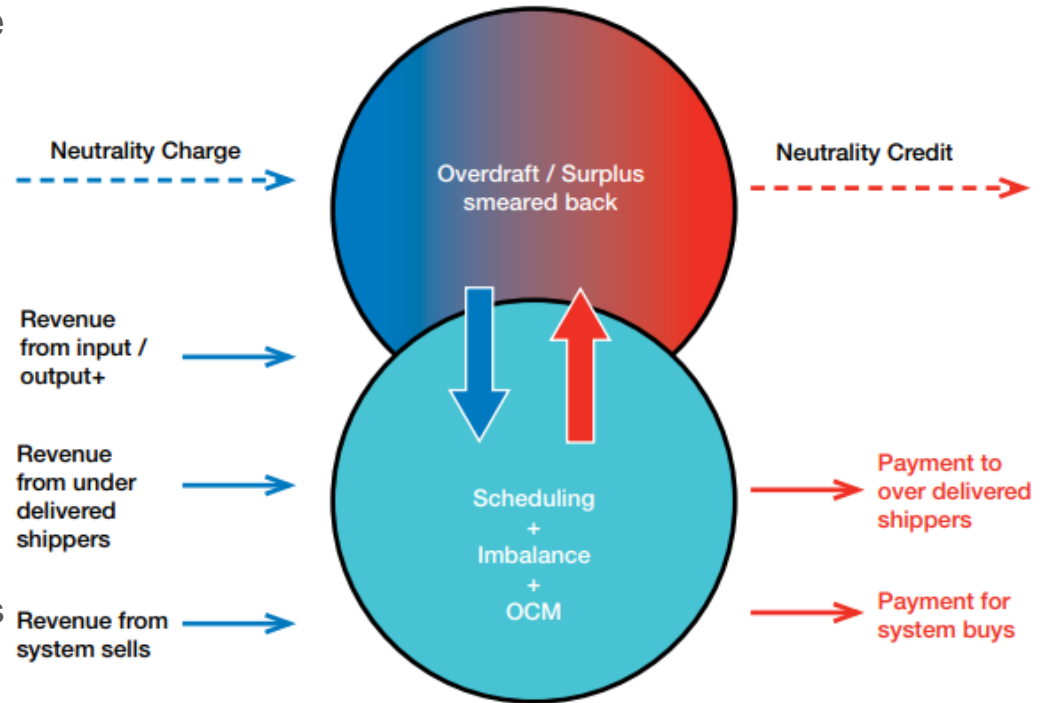02

Action updates

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Action 1201 – Balancing Neutrality

Balancing Neutrality (BN)	27th February	28th February	1st March	2nd March
BN Charges (apportioned)	**-2,335,586.31**	**-7,670,978.66**	**1,237,368.11**	**20,692,162.33**
Revenue/Costs into BN				
Other	0.28	0.28	-1,261.92	-1,261.92
Cashout (shipper imbalance)	2,735,630.83	11,609,207.51	5,618,341.82	-17,274,941.08
Scheduling Charges	16,556.25	114,230.49	201,161.52	173,997.45
NG Balancing actions (Trades)	-416,601.03	-4,052,459.68	-7,055,609.47	-3,589,956.81

Action 1201 – The Neutrality Mechanism

For each balancing period (Gas Day) we work out:

- **net neutrality amount** – all balancing payments made by NG, minus all receipts due to NG as part of system-clearing process (can be a + or - value)

- **neutrality unit price** – net neutrality amount divided by sum of total physical gas throughput (all system inputs and outputs) for all shippers

- **shipper's proportion of the neutrality costs (or revenues) –** calculated by multiplying neutrality unit price by shipper's total physical gas throughput (system inputs and outputs) in balancing period

Neutrality Charge

Neutrality Credit

Overdraft / Surplus smeared back

Revenue from input / output+

Revenue from under delivered shippers

Revenue from system sells

Scheduling + Imbalance + OCM

Payment to over delivered shippers

Payment for system buys

Action 0101 – The G.A.S report

- The proposed new methodology for the Margins Notice involves less reliance on the G.A.S report

    - LNG and Interconnector figures would instead be informed by the new methodology

- The G.A.S report provides the upstream view of maximum deliverability, which may not align with NG assumptions for the amount of gas we can physically move away from a certain area into the NTS

- This information is important for the Network Emergency Coordinator to understand what physical gas may be available should we enter an emergency.

Action 0101 – Meeting with OGUK members

- Requesting the G.A.S report more frequently is unlikely to offer significant insight for National Grid regarding UKCS

- The usual expectation for UKCS sites is to continuously flow at maximum rates unless there is an issue or outage

- Where there is an outage, sites are required to publish a Remit notification, so National Grid should already be informed via this route

- Also, for many sites, the information they provide for the G.A.S report is not owned by them

- The Memorandum of Understanding with the OGA protects them when providing this information when a constraint is forecast, but would not cover them to provide this information on a more frequent regularised basis

- We've agreed to continue engagement with the upstream terminal operators and OGA to explore opportunities to improve this process further.

Action 0102 – Non-Storage Sources (NSS) change notifications

- At January Workgroup, proposed changes to the NSS would be published as a news item on the Operational News feed

- Workgroup requested a notification so they would not need to seek out updates regarding the NSS

- Going forward, amendments to the NSS figure will also be communicated via ANS

Action 0104 – Compliance with EU Regulation

Crisis Levels

3.1 There are different classifications of NGSE and the NEC may declare up to four stages of a NGSE. These classification levels sit alongside the crisis levels established under Regulation 994/10, as defined in paragraph 3.4. BEIS determines the level and tells stakeholders, including the European Commission. Figure 10 shows the different classifications of NGSE, the corresponding crisis levels, and indicates the possible actions at each stage of the NGSE that may be implemented by NGGT as part of the emergency strategy authorised by the NEC.2

Extract from BEIS National Emergency Plan: Downstream Gas & Electricity

https://www.gov.uk/government/publications/national-emergency-plan-downstream-gas-and-electricity-2016

EU Regulation Crisis Levels[3]	NGSE Emergency Stage[4]	Gas Deficit: Insufficient Gas Supplies Available to the NGGT		Critical Transportation Constraint in the NGGT
		Gas Deficit Emergency	GS(M)R Monitor Breach	
Early Warning	NGSE not declared	-	-	-
Alert	1 (Potential)	- Emergency Spec Gas - NGGT Linepack - Distribution Network Utilisation: Distribution Network Storage & Emergency Interruption - Public Appeals	- Instruct shippers & storage operators to amend storage flows - Public Appeals	- Emergency Spec Gas - NGGT Linepack - Distribution Network - Utilisation: Distribution Network Storage & - Emergency Interruption - Public Appeals
Emergency	2	- National Grid Gas plc's participation in the On The Day Commodity Market (OCM) will be suspended - Maximise supplies - Firm Load Shedding	- National Grid Gas plc's participation in the OCM will be suspended - Maximise Supplies - Firm Load Shedding	- Maximise Storage - Firm Load Shedding
	3	Allocation & Isolation		
	4	Restoration		

PCLP & OLP for 26th Feb – 3rd March 2018

Gas System Operator

03

Operational data enhancements – Project update (Action 0103)

nationalgrid

Operational Data Enhancements Project - Aims

(1) To deliver an industry enhancing IT solution which will maintain compliance to our current licence and contractual operational data requirements and facilitate the changing needs of the industry both now and into the future.

(2) To deliver an industry collaborative platform to enable:

- All industry players to feed into the change needed for transparency of gas operational data now and into the future so market needs can be anticipated for change.

- To enable a mechanism for NG to provide transparency to the market in an efficient manner on on residual balancing decisions – e.g. 'Day in brief.

- To provide better visualisation of operational data.

- To test concepts and gain feedback on requirements for new data both now and into the future.

Feedback so far – what would be useful?

Instantaneous demand
Currently instantaneous supply flows are available, but not demand

Trading data
More information about National Grid trades – either within day or after the day per hour

Day in Brief
'Interesting days' looking at unexpected trading or supply/demand patterns are currently presented at ops forum, but these could be provided online sooner

Gas Quality actuals (within day)
CV data at points on the network

Alerting
e.g. when there is an ANS message or REMIT message

Third Party data
e.g. UIG or embedded supply at DN level

What further feedback do we need?

What new NTS data does the industry value?

Is there value in closing NTS data gaps?

What other 3rd party data would industry value on one platform?

What current NTS data is not valued

After the day data – how is this used what could be changed?

How do the industry wish to receive/view data?

Industry desire/value for a collaboration platform

Transparency on NG decisions which could be provided

How to get involved

You can sign up to the community website, which allows for feedback about what is important to you, polling of priorities; and trial publications such as instantaneous demand, days in brief, trading data, and new visuals

https://gasoperationaldatacommunity.spin-up.io/

Over the next month we will be scoping requirements for delivery in 2019, for anything you would like to see delivered this year please feed back in this next few weeks. Please contact Karen Thompson for any other queries:

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