Gas Operational Forum

22 February 2018 09:30AM

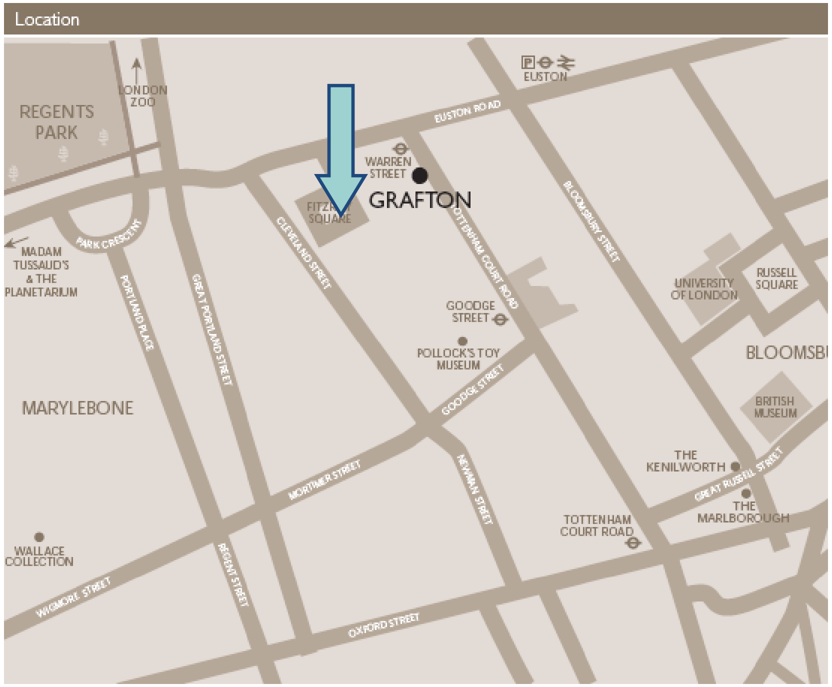
Radisson Blu Hotel, 130 Tottenham Court Road, London

Health & Safety Brief

No fire alarm testing is planned for today.

In the case of an alarm, please follow the fire escape signs to the evacuation point.

At the rear of the hotel by Fitzroy Court



Feedback and questions

Please use the IPads on the tables during the forum

For questions during the forum you can:
(1) Ask during the presentations
(2) Use post it notes and place on ‘question car park’.
(3) Speak to an NG rep during break
(4) Utilise the Query Surgery time at the End of the forum.

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Agenda

09:30 **Previous Ops Forum actions and feedback since last forum**
Did you see & are you aware of?

09:40 **Operational overview**

- Supply & demand
- Interesting days (Gemini issues B2B etc & lessons learnt)

10:10 **Customer Requested topics**

- UIG
- Update on MIPI data impacts at Rough
- Charging Review Overview (to be covered in key mods)

10:30 **Break**

10:45 **Customer Feedback**

- Future Compressor investment on the NTS.

11:05 **Sign posting topics of interest**

- Future of Gas (FOG)
- Key UNC mods

11:20 **Customer Feedback required**

- Sustaining and improving Gemini (re-platforming)
- Future Market Services & Gemini system

11:50 **Close & summary of any questions received**

11:50 –12:15 **Optional Query surgery for our Gas Customers & Stakeholders**

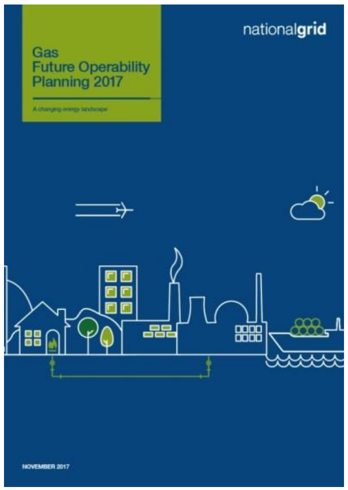
Previous Actions

Action Ref	Discussion Item	Action	Who is Responsible	Due Date	Closed/ Open
1	Terminal flow advice (TFA)	NG team to go back to Ops forum in next couple of months to confirm our position on providing further information to the industry upon issuing a pressure TFA.	NG	ASAP	Open
2	Xoserve	Xoserve to keep industry updated in the status of urgent UIG mods	NG	Ongoing	Open
3	MIPI	NG team to keep industry updated over the coming ops forum to advise on change to MIPI to facilitate Rough.	NG	Feb Forum	Open
4	UNC Mods	National Grid (Market Change Gas) to attend February forum to articulate key UNC modifications including the Charging Review.	NG	Feb Forum	Open

Feedback since the last forum

Feedback Topic	Feedback	Action
REMIT	Clarity around NG's interpretation of REMIT	We are considering what further clarification we are able to offer to market participants as regards our own approach to compliance in this area, and the most effective way to do this
MIPI helpline	Feedback that MIPI helpline has not been manned during office hours.	Team has been alerted to this feedback and measures have been taken to ensure multiple members of team can answer phone. If you are having difficulty in using the MIPI number then please escalate to Karen Thompson
Query Contact List & general feedback received on management of queries	Positive feedback received to date on contact list .	NG currently looking to include more query types to try and ensure all key Gas Queries can be identified and appropriate contacts highlighted. Feedback needed from customers on first draft. Escalate if you are having an issue in resolving queries to the named contact or to Karen Thompson.

Did you see? Are you aware of?



30th Nov 2017
GFOP Doc 1 published

March 2018
GFOP 2018 – An uncertain gas-fired generation future

Q2 2018
Engagement events

Summer Outlook published 27 March 2018

Stakeholder Priorities

Industrial and Domestic consumer priorities …

- I want to use energy as and when I want
- I want an affordable energy bill

…are delivered through our stakeholder priorities…

- I want to move gas on and off the Tx system where and when I want
- I want to connect to the Tx system where and when I want
- I want you to protect the Tx system from cyber and external threats
- I want the gas system to be safe
- I want you to leave a positive impact on our communities and the environment
- I want all the information I need to run my business, and to understand what you do and why
- I want you to facilitate the energy system of the future – innovating to meet the challenges of an uncertain future
- I want you to be efficient and affordable

…these were developed by consulting with

- Consumers
- Landowners
- Other networks
- Customers
- Think tanks and academics
- Government
- Industry bodies
- Interest Groups

Operational Overview - Supply and Demand

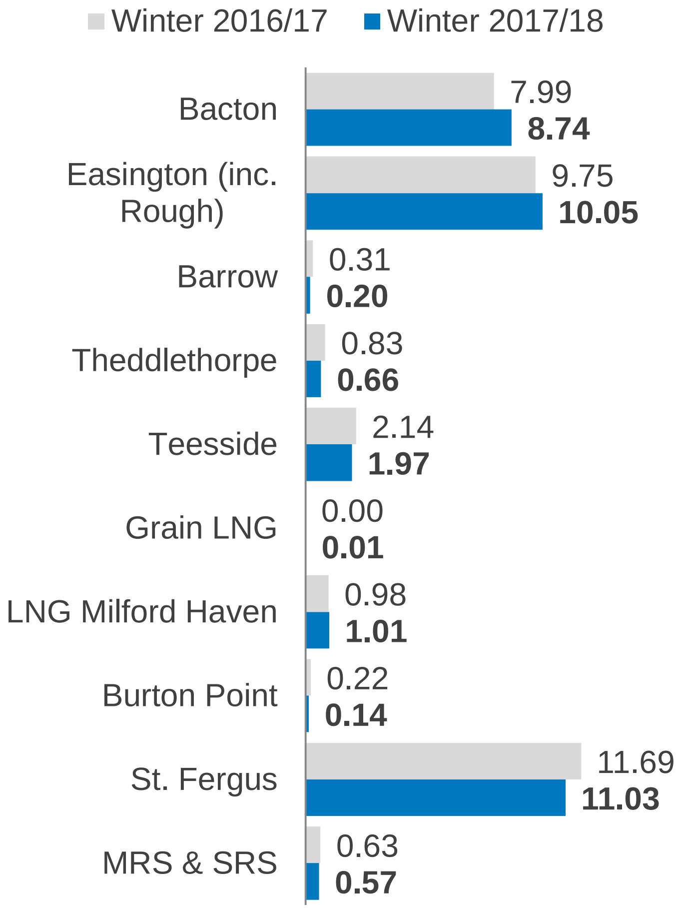


Operational Forum – February 2018
Karen Thompson

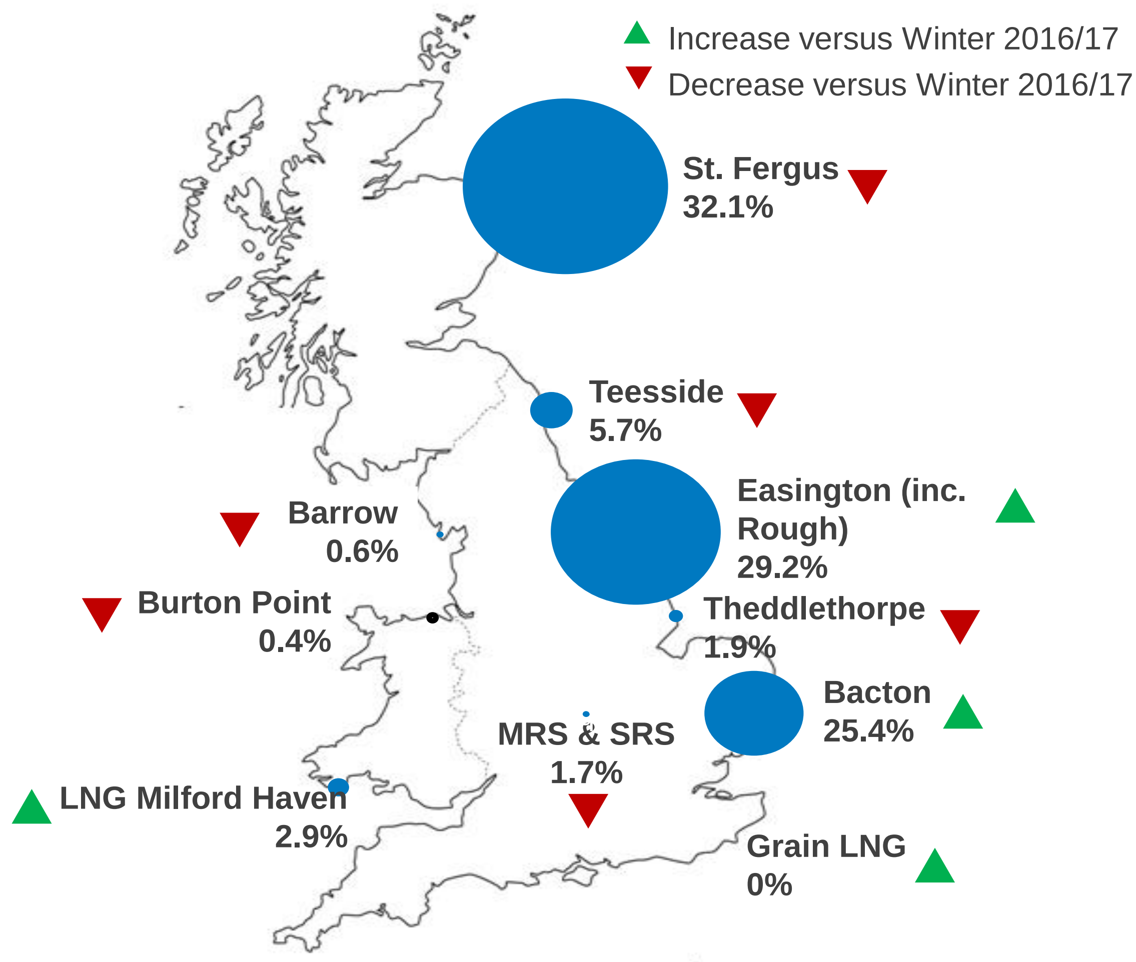
Gas Supply Map

1st Oct 2017 to 31st Jan 2018 vs Same Period Last Year

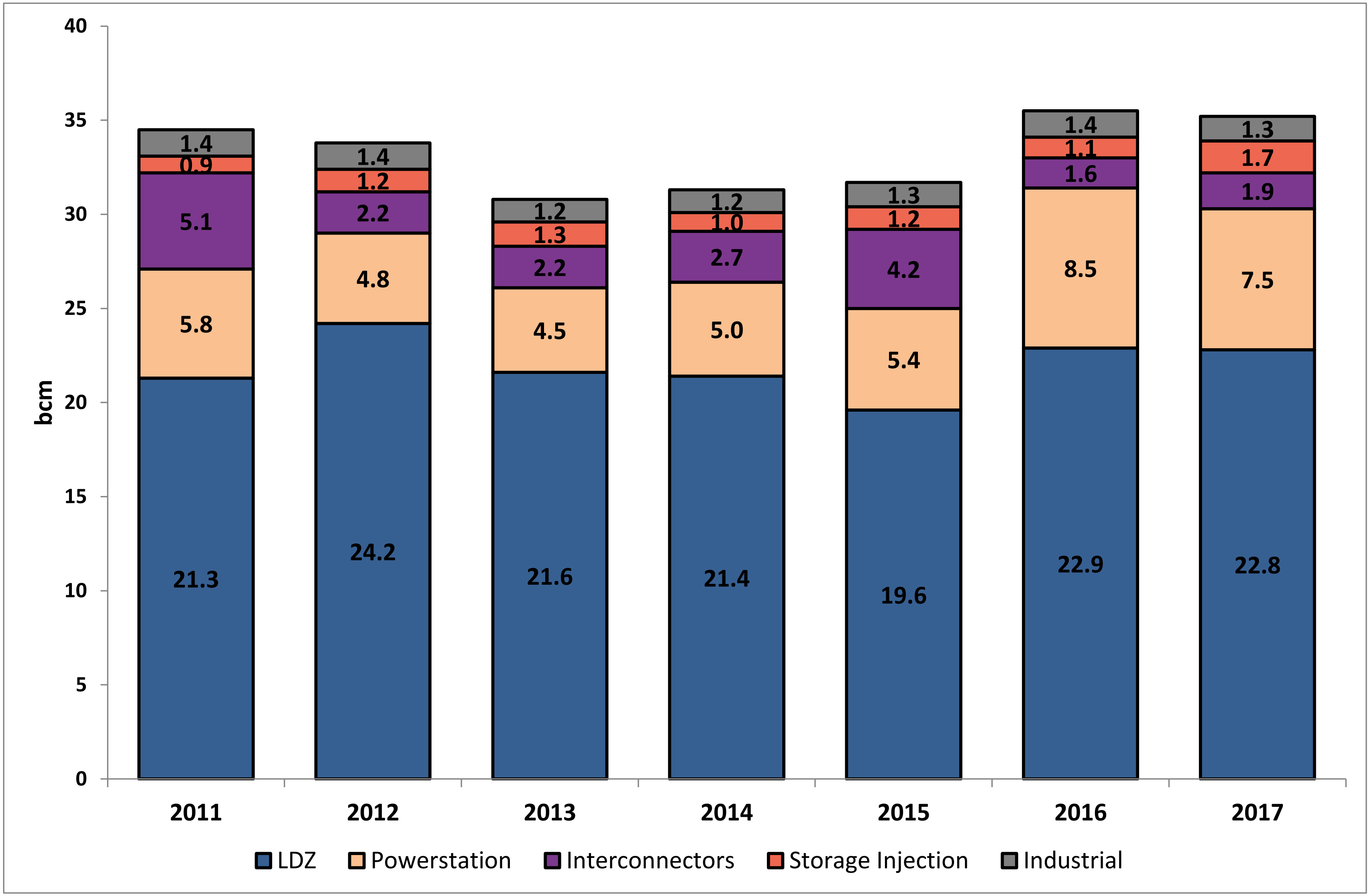
Supply volumes (BCM)



Winter 17/18 Supply as percentage of NTS



Gas Demand Breakdown (bcm): 1st Oct to 31st Jan



NTS Supply Winter (mcm): 1st Oct 2017 to 31st Jan 2018

Entry	Min	Max	Avg	Winter Outlook Range Oct2017 - Mar 2018	Winter Actual Range Oct 2016 - Mar 2017
UKCS	62.1	126.5	106.0	70 - 121	81- 132
NORWAY est*	52.9	127.2	113.5	60 - 136	67 - 134
INTERCONNECTORS BBL	0.0	46.4	16.7	0 - 45	0 - 44
INTERCONNECTORS IUK	0.0	67.1	21.9	0 - 74	0 - 51
LNG	5.0	26.6	8.3	5 - 100	5 - 33
STORAGE WITHDRAWAL	0.0	90.2	19.4	0 - 92	0 - 88

Comments

- UKCS reliable; low flows attributable to Forties Pipeline [12th to 29th Dec 17 approx].
- Storage Withdrawal has marginally increased on the same period in 2016/17 [~17.9mcm].
- Norwegian Flows into the UK have remained reliable and are slightly lower than the same period in 2016/17 [~119mcm].
- BBL imports to the IUK have remained at similar levels to the same period in 2016/17
- IUK imports to the UK have significantly increased on the levels seen in the same period in 2016/17 [~16mcm].

Entry	Min	Max	Avg
Actual Supply	194.2	381.4	286.0
Actual Supply Exc. Storage	159.9	340.3	266.6

NTS Demand Winter (mcm): 1st Oct 2017 to 31st Jan 2018

Exit	Min	Max	Avg	Winter Outlook Range Oct2017 - Mar2018	Winter Actual Range Oct2016 - Mar2017
LDZ	78.0	286.8	185.2	31 - 352 (NDM)	90- 280
INTERCONNECTORS Ireland	3.3	19.4	9.9	6 - 11	0 - 16
INDUSTRIAL	8.2	14.0	10.7	19 - 31 (DM + Ind)	8- 16 (DM + Ind)
POWERSTATION	28.3	90.4	60.7	17 - 116	24 - 94
STORAGE INJECTION	0.0	63.3	13.6	0 - 75	0 - 74
INTERCONNECTORS IUK	0	44.3	5.4	0 - 40	0 - 28

Comments

- LDZ demand has maintained at similar levels to the same period in 2016/17.
- The average Power Demand has significantly reduced on the same period in 2016/17 [~69mcm]; this attributable to an increased wind generation over this period by ~50%.
- IUK export to Europe average has marginally increased on the same period in 2016/17 [~3.7mcm].
- The average Storage Injection has significantly increased on the same period in 2016/17 [~8.8mcm].

Exit	Min	Max	Avg	2017 /18 Winter Outlook Range
Demand exc. IUK & SI	130.2	384.0	266.6	199- 474
SND exc. IUK & SI	148.0	319.0	264.0	

Operational Overview – Interesting Days (Gemini)

Operational Forum – February 2018
Mike Wassell

Gemini issues - Capacity

- 29th January
  - Affected area: EU and GB day ahead and within day auctions
    - WDDSEC – Failed from 06:00hrs and ran for first time at 15:00hrs
    - DISEC - Failed at 14:00hrs. Ran at 18:00hrs.
    - IPWDDSEC – Failed until 11:00hrs.
    - IPDONEX & IPDISEC (for gas day 30th Jan) – Failed.
  - NG Actions: ANS was sent requesting bids to be e mailed through to the NTS Capacity team. The NTS Capacity Team have contacted the parties who e mailed and will ensure any overrun positions are adjusted appropriately prior to being invoiced.
- 30th January
  - Affected area: EU day ahead Auction
    - IPDONEX (for gas day 31st January) failed.
  - NG Actions: as above

Gemini issues - Nominations

- 4th/5th January
  - Affected area: EU Nominations
  - NG Actions: Complete - Affected nominations were rescheduled within D+1 window, a few reconciliations were later required and have been processed.
- 29th January
  - Affected area: UK Nominations
  - NG Actions: Ongoing - Comprehensive review of all scheduling charges and trade mismatches following close out, with target rectification prior to invoice generation.
- 3rd February –
  - Affected area: EU Nominations.
  - NG Actions: Complete - Reconciliations processed for the affected nominations.

High Level Analysis
Gemini application availability
January/February 2018

22nd February 2018
Dave Turpin

Gemini/B2B Issues Summary

- 3 issues experienced since the beginning of 2018:
- 4th/5th January – outage to the Gemini B2B service disrupting service to flows between Gemini and TSOs via the B2B service
- 29th January – following the daily maintenance window a failure on the primary Gemini application resulted in a requirement to failover to the Disaster Recovery (DR) application. This resulted in a Gemini outage until the failover was completed
- 3rd February – screen error experienced by one TSO when submitting EU nominations (DELRES files) related to the synchronous submission of more than one file

Gemini B2B Outage Details

- Immediate investigations in response to a system alert at 10:04 on 4th January 2018 following an unexpected reboot of the B2B servers did not reveal any system issues. However, a High Priority ticket was raised by GNCC (National Grid Transmission) at 14:28 highlighting issues for both TSO’s and Shippers

- Two additional calls were raised directly to the Xoserve Service Desk, from GNI and EON

- Further investigations identified corruption in configuration files and environment variables which were rebuilt enabling a clean start of the service to be performed. The issue was resolved on 5th January 00:10

- A residual issue occurred on 5th January, resulting in a partial service affecting BBL and IUK. A correction to a security file was made in order to restore service

Actions

- Automatic restart improvements for future Amazon reboots to facilitate security management – *Completed*

- Improved communication update procedures between B2B & Amazon – *Completed*

- Automate platform monitoring and enhanced alerting procedures to support solution management – *In progress, expected delivery in May 2018.* (Additional monitoring currently in place)

- Improvements to connectivity monitoring between Gemini & B2B – *In progress, expected delivery in May 2018*

- Improved communication processes to highlight issues earlier – *Completed*

- Service Desk improvements ongoing.

Gemini Unavailability Issue – 29th January

- Confirmation received at 05:29am UK GMT that the Gemini application database at Kettering went down following the daily maintenance window Quality Assurance activities. This impacted both TSO's, Shippers and GNCC users. Users experienced a database error once logged into Gemini.

- Investigations to restore the service at the primary site were undertaken, including an unsuccessful attempt to move the application database from primary to standby infrastructure at the primary site.

- To restore service, the supplier performed a failover of the application database to the DR site at Peterborough (3hrs). This was successfully completed.

Failback to Primary Site

- As recommended by Oracle the cluster on the primary site at Kettering was rebuilt with node1 & node2 and tested successfully
- A Gemini change was reviewed with NG and scheduled for 11th February to failback from DR site to the primary site at Kettering. The activity required a total Gemini outage of 4 hours, (2hrs within maintenance window) and 2hrs extended, in case of rollback.
- Gemini failback completed successfully on 11th February and Gemini is fully operational
- Collaboration continues with Oracle to find the route cause
- Additional monitoring to be added on 4th March to assist in early identification of auction failures for communication to the industry

Gemini B2B / GNI Issue – 3rd February

- GNI had raised an incident, highlighting a screen error when submitting EU Nominations (DELRES file) on 3rd February 2018 from 17:32 to 23:32 (except 19:32). This has occurred on occasion since this date.

- Gemini Team have confirmed that the files have been successfully processed, and GNI have confirmed receipt of the response files.

- We have identified a trend when this occurs, specifically when two files are generated from GNI at the same time (e.g. Within Day & Day Ahead).

- There is no impact to Shippers specifically for this issue, as the files from GNI were loaded into Gemini.

- Other TSOs remain unaffected (due to the use of different protocols)

xoserve

Actions

- Xoserve teams are collaboratively analysing all available logs to highlight why the issue specifically occurs for GNI TSO, and where two files are submitted at exactly the same time.

- Investigate feasibility of testing and replicating the scenario in a test environment.

- Follow up discussions continue with GNI to aid overall investigation.

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Customer Requested Topic - UIG

Operational Forum – February 2018
Dave Turpin

UIG Modifications Update

Gas Ops forum

UIG Modifications

0642 (Urgent) - Changes to settlement regime to address Unidentified Gas issues	0642A (Urgent) - Changes to settlement regime to address Unidentified Gas issues
Key points: • Utilises pre-Nexus nomination and allocation process for NDM meters • Introduces a fixed UIG cost – currently set at 1.1%, to which the weighting factors will be applied for 2017/18, to be set by the AUGE in subsequent years • Introduces a concept of ‘settlement error’ whereby the remaining UIG costs are smeared across NDM meters which are unreconciled **Implications:** • System impacts to Gemini and UK Link • Changes to reconciliation and file formats **Implementation:** • The proposer has specified an implementation date of 1st April 2018 within the modification • Minimum lead time of 6 months for a system solution (excluding market trials) **Key dates:** • UIG workgroup 30th January • Consultation 1st February – 8th February • Panel decision – 15th February • Ofgem decision late February	**Key points:** • Introduces a fixed UIG element – currently set at 2.5% • A Balancing Factor which acts as a leveler to any additional volume which the fixed % does not sweep up or, if the Fixed UIG is too large, it balances things out • Removes the AUGE process, the fixed UIG percentage will be determined by DESC **Implications:** • System impacts to Gemini and UK Link **Implementation:** • No implementation date specified however 30th September in line with the new Gas Year is ideal • Minimum lead time of 6 months for a system solution (excluding market trials) **Key dates:** • UIG workgroup 30th January • Consultation 1st February – 8th February • Panel decision – 15th February • Ofgem decision late February

UIG Modifications

0643 (Urgent) - Changes to settlement regime to address Unidentified Gas issues including retrospective correction	0644 - Improvements to nomination and reconciliation through the introduction of new EUC bands and improvements in the CWV
Key points: • Utilises pre-Nexus nomination and allocation process for NDM meters. • Introduces a fixed UIG cost – currently set at 1.1%, to which the weighting factors will be applied for 2017/18, to be set by the AUGE in subsequent years. • Introduces a concept of 'settlement error' whereby the remaining UIG costs are smeared across NDM and DM meters which are unreconciled • Includes retrospective charging back to 1st June 2017 **Implications:** • System impacts to Gemini and UK Link • Changes to reconciliation and file formats **Implementation:** • Minimum lead time of 6 months for a system solution (excluding market trials) **Key dates:** • UIG workgroup 30th January • Consultation 1st February – 8th February • Panel decision – 15th February • Ofgem decision late February	**Key points:** • Seeks to split the End User Categories (EUC) EUC01B and EUC02B into three and grouping by prepayment, market sector code of industrial and commercial and finally all remaining meter point reference numbers. • Seeks to amend the Composite Weather Variable (CWV) to include more than just wind speeds and temperature plus the creation of parameters to flex the Weather Correction Factor (WCF) and/or Daily Adjustment Factors (DAF) where they reach defined tolerances. **Implications:** • System impacts to UK Link, substantial impacts to reporting **Implementation:** • Ideally in line with a Gas Year **Key dates:** • UIG workgroup 30th January • Consultation 19th April 2018 • Panel decision 17th May 2018

Key Points

- There is a UIG dedicated UNC workgroup which is considering all the UIG modifications
- 0642 and 0643 are granted urgent status by Ofgem– 0642A is following an urgent timeline despite not having urgent status, 0644 is not urgent
- The changes are not being considered for release until approved, the industry will approve a release date through the Change Management Committee. The aspirations are for an implementation before the next gas year however due to the scale of impact to systems and processes this may not be feasible.

Customer Requested Topic – MIPI/Rough

Operational Forum – February 2018
Karen Thompson

Rough Storage Classification Update

- Currently the Rough sub terminal is allocated to the original Rough storage ID, this is only a temporary solution.
- We have been working with our IS business partners to understand the magnitude of change required to make changes to our internal/external systems.
- The delivery date for this change is planned for June 2018. This change has needed to take into account the pre-planned activities in progress and cost.

MIPI Reports – Rough storage to terminal data

Daily Summary Report

Pre Day-Within Day Report

- Aggregate Physical NTS system Entry Flow
- D2 to D-5 NTS Demand Forecast Report
- Forecast Composite Weather Variables
- Forecast Demands
- Nomination Report
- System Status Information
- System Status Balance
- End of day aggregate forecast NTS system entry flow

After Day Report

- Gas Trading Report
- Storage and LNG Report
- Actual Offtake Flows
- NTS Commercial Entry End of Day
- Aggregate Allocation Report
- NTS Exit Flex Utilisation Report
- Demand Analysis LDZ DM & NDM
- NTS Linepack Report
- NTS Physical Entry End of Day
- NTS Shrinkage – Gas Procurement & Disposal
- Operational Summary
- Price Information History

After Day Report

- Use of Balancing Tools
- UK Wholesales Gas Market Liquidity
- Weather Correction Scaling Factors
- Actual Composite Weather Variables
- Storage LNF
- CV Report
- Actual Demands

Daily Balance

- Cashout Balancing Prices
- Daily Balance Report
- Daily Operation Information

Monthly Reports

- Aggregate Financial Position
- Storage withdrawals and injections allocations
- Total shrinkage figures report

Key

- All data available
- Rough Terminal data available but labelled incorrectly

Reports Impacted

Report	Impact
Daily Summary Report	Labels to the graphs require changing and removing Rough from the storage withdrawal chart.
Nomination Report	Data is correct however its is labelled Rough storage, Rough is included in the Storage entry aggregation.
NTS Commercial Entry End of Day	Data is correct however its is labelled Rough storage, Rough is included in the Storage entry aggregation. The aggregation of the storage withdrawal includes Rough.
Aggregate Allocation Report	Rough data is included in the Storage entry total.
NTS Physical Entry End of Day	Data is correct however its is labelled Rough storage and is included in the Storage withdrawal total.
Daily Balance Report	Rough Storage included in the allocation storage withdrawal and Nominations figures.
Storage withdrawals and injections allocations	Rough data is included in the total.

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Break



Customer Feedback Session
Future Compressor Investment on the NTS

Operational Forum – February 2018
Jon Dutton

Why do we have compressors?

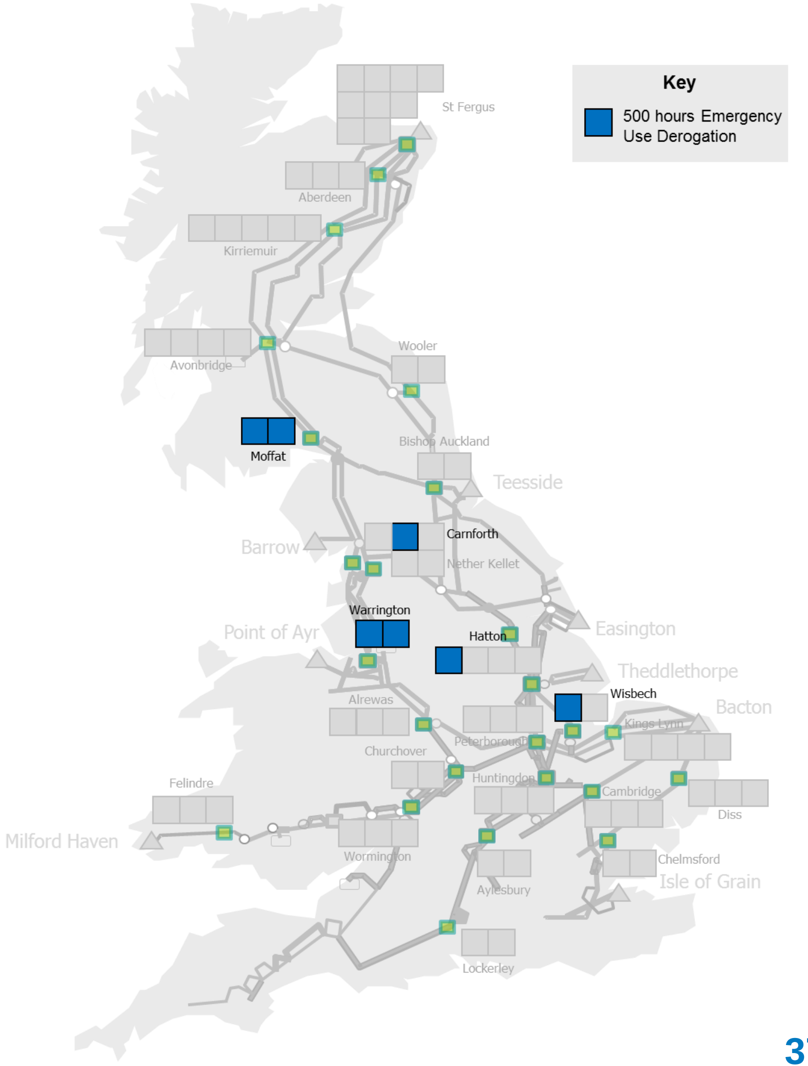
Shippers	National Grid
Shippers can bring gas in at any point on the network and take it off at any point Shippers are responsible for ensuring they put as much gas in as they take out – even if it’s in different parts of the country	Our role as the System Operator is to ensure we keep network pressures below safety limits whilst still delivering our contractual obligations The main way we do this is by operating our **compressors** to move gas around the network, from points of supply to points of demand

Emissions Legislation – Network Impact

The Industrial Emissions Directive (IED) consists of several parts:

Large Combustion Plant Directive

- 7 units limited to 500 hours per year **now**



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Emissions Legislation – Network Impact

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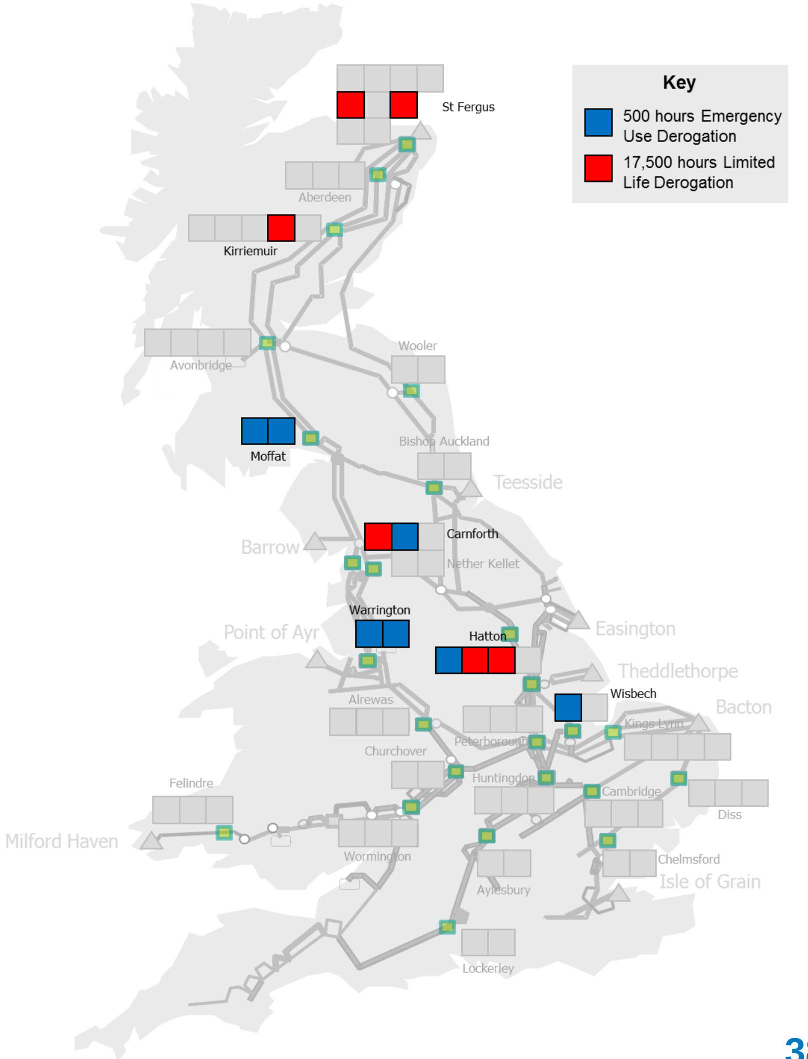
- 6 units not allowed to operate **from 2024**



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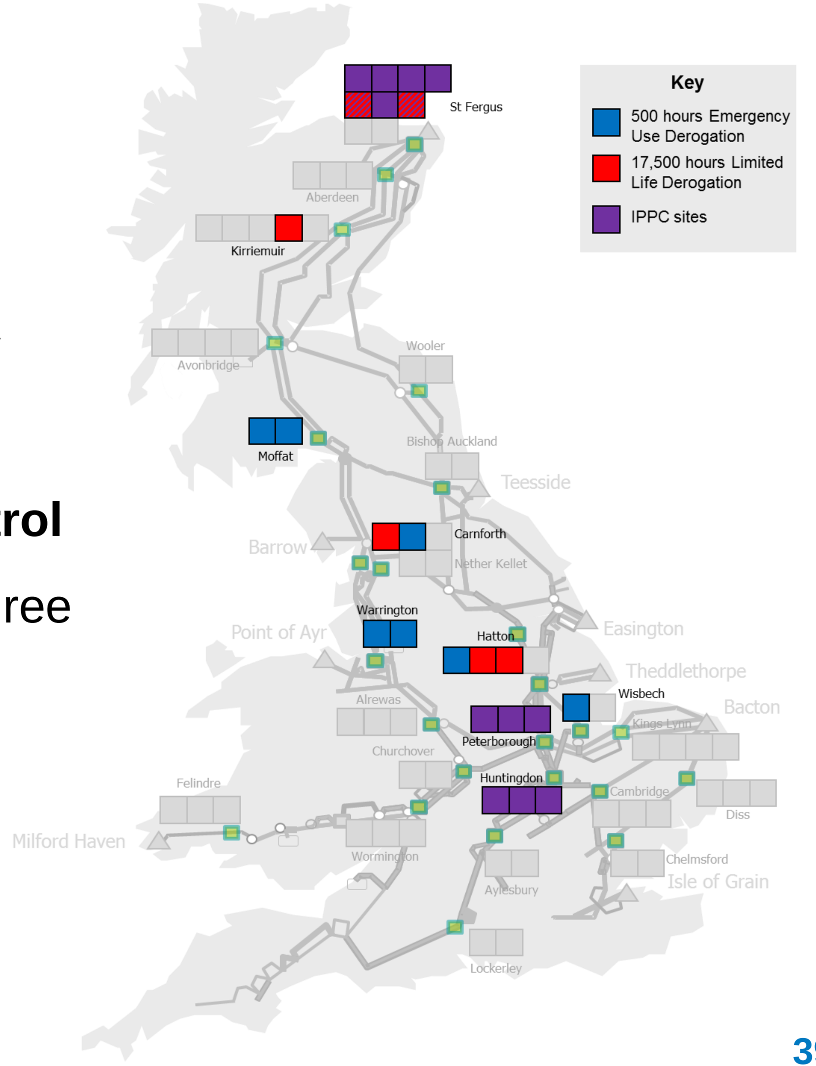
Integrated Pollution Prevention and Control

- We must reduce NOx emissions at our three most polluting sites



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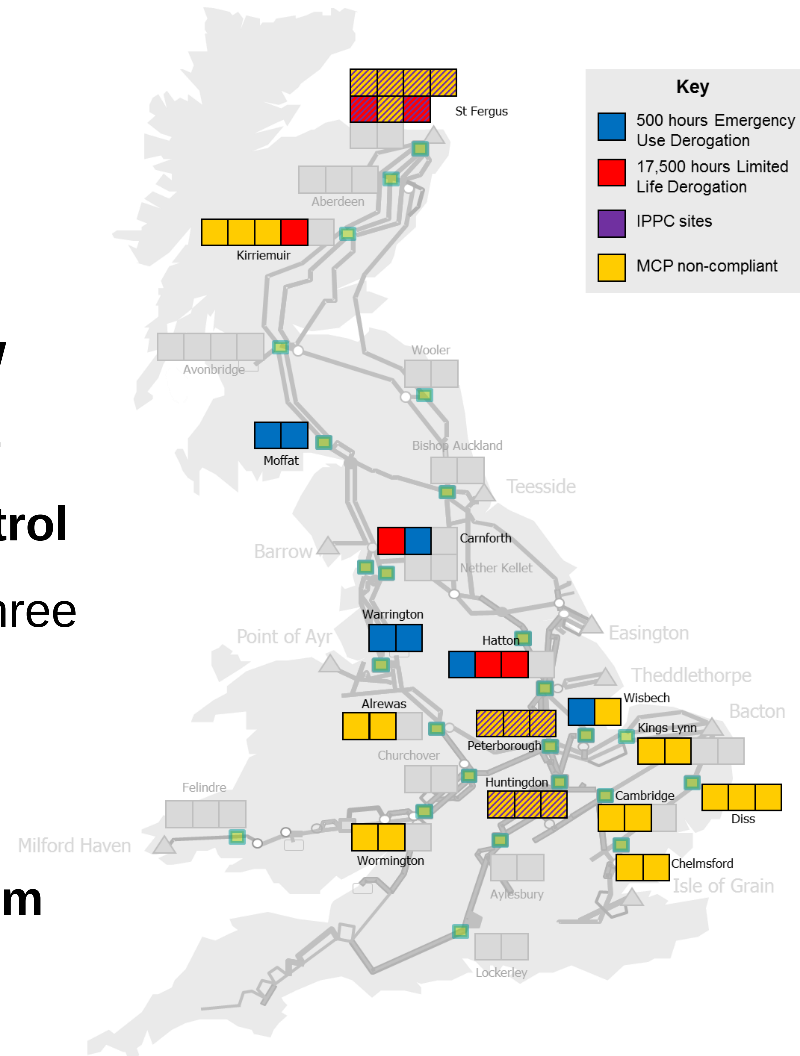
Integrated Pollution Prevention and Control

- We must reduce NOx emissions at our three most polluting sites

IED will be followed by the **Medium Combustion Plant Directive**

- 26 units limited to 500 hours per year **from 2030**



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National Grid's Response to IED

- We included proposals to address this legislation in our submissions to Ofgem for the current RIIO-T1 price control, and in a specific re-opener on this area in 2015
- These proposals were not accepted in full
- We have a further opportunity to submit revised proposals to Ofgem in May 2018
- We have developed an econometric Cost Benefit Analysis approach to support our decisions – this should help us choose the least cost option overall

Investment costs vs **Operating costs** vs **Commercial costs**

Commercial Costs

Investment costs vs Operating costs vs **Commercial costs**

- Commercial costs could be an alternative to investing in compressors
- For example: having a contract to turn up supply in the south, potentially coupled with turning down supply in the north
- We want to make sure we capture the costs of this appropriately
- What impact could this have on your operation?

IED Compressor Strategy
Operational Impacts

Group Members:

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What impact would a higher volume of turn up or turn down requests have on your operation?

Higher flow	**e.g. turn up contracts at terminals**	**e.g. turn up contracts at power stations or other offtakes**
Lower flow	**e.g. scaling back entry capacity at terminals**	**e.g. scaling back exit capacity at power stations or other offtakes**
	Entry	**Exit**

Next Steps

- Industry consultation due to be published in early March 2018.
- We are happy to meet with individuals or groups to discuss any aspect of our assumptions or our proposals in more detail
- Our proposals will be submitted to Ofgem at the end of May 2018.

Further Information

- Background information and previous publications are on our IED micro site here:
- http://talkingnetworkstx.com/ied-what-is-ied.aspx
- Or contact
  - Jon Dutton, jon.dutton@nationalgrid.com, 01926 655048
  - Or
  - box.nts.investment@nationalgrid.com

Signposting Topics of Interest

Operational Forum – February 2018

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Future Of Gas

Programme Update

Operational Forum – February 2018

Jennifer Randall

Future of Gas

nationalgrid

Programme Conclusion & Launch Event

The Future of Gas: Our vision
How gas can support a low carbon future

Nov 2016 - Programme launch ✓

Feb/Mar 2017 - Stakeholder events ✓

Jul 2017 - Programme update document ✓

Autumn 2017 - Further engagement events ✓

9th Mar 2018 – Launch event for customers and stakeholders (London)

Join the debate:
http://futureofgas.uk
#futureofgas

Draft Document Structure

1. Foreword from National Grid UK Executive Director Nicola Shaw
2. Our vision for the future of gas
3. Summary of the programme
4. What we have done since our Progress Report
5. Key themes to consider for the future of gas:
   i. Decarbonisation of heat, transport, industry
   ii. Whole energy system
   iii. Future networks and markets
   iv. Crucial role of CCUS
6. Industry innovation projects
7. Key findings

UNC Modification Update

Operational Forum – February 2018
Phil Hobbins

UNC Modification Proposal 0621

- UNC 0621 seeks to implement a new NTS Charging Methodology for use of the NTS
  - Key change is replacing the Long Run Marginal Cost (LRMC) principal used for charge setting with a Capacity Weighted Distance (CWD) model
  - A number of the proposed changes are required to comply with EU Regulation 2017/460 (‘EU Tariff Code’)
- Mod Solution is currently being developed in an industry Workgroup
- Workgroup is scheduled to conclude by May 2018 to be followed by a formal UNC consultation process
- Six alternative solutions to Mod 0621 have been raised to date (0621A, 0621B, 0621C, 0621D, 0621E and 0621F)
- New arrangements proposed to be in place for gas year Oct 2019 onwards

UNC Modifications

Modification Number	Modification Title	Proposer	Progress
621 A to F	Amendments to Gas Transmission Charging Regime	• 621 National Grid • 621A Storengy • 621B Scottish and Southern Energy • 621C Centrica • 621D Wales West Utilities • 621E Uniper Energy • 621F Interconnector UK	• Workgroup meetings held on a fortnightly basis • Due to return to Mod Panel in May
628S	Standard Design Connections: PARCA process	• National Grid	• Workgroup meetings planned for March and April • Due to return to Mod Panel in May
629S	Standard Design Connections: A2O connection process modification	• National Grid	• Workgroup meetings planned for March and April • Due to return to Mod Panel in May

UNC Modifications

Modification Number	Modification Title	Proposer	Progress
636 A and B	Updating the parameters for the NTS Optional Commodity Charge	• 636 Vermillion Energy • 636A Vitol • 636B Scottish and Southern Energy	• Workgroup meeting in February • Due to return to Mod Panel in March
645S	Amending the oxygen content limit in the Network Entry Agreement at South Hook LNG	• South Hook Gas	• Workgroup meeting in February • Due to return to Mod Panel in March
646R	Review of the Offtake Arrangements Document • How OAD affects all gas network operators; • How all GDNs engage with National Grid Gas (NGG) to manage NTS offtake arrangements; and • How most GDNs must engage with other GDNs to manage LDZ to LDZ offtakes	• Cadent Gas	• Workgroup meeting to be held on 8th March

Customer Feedback Required

Sustaining & Improving Gemini

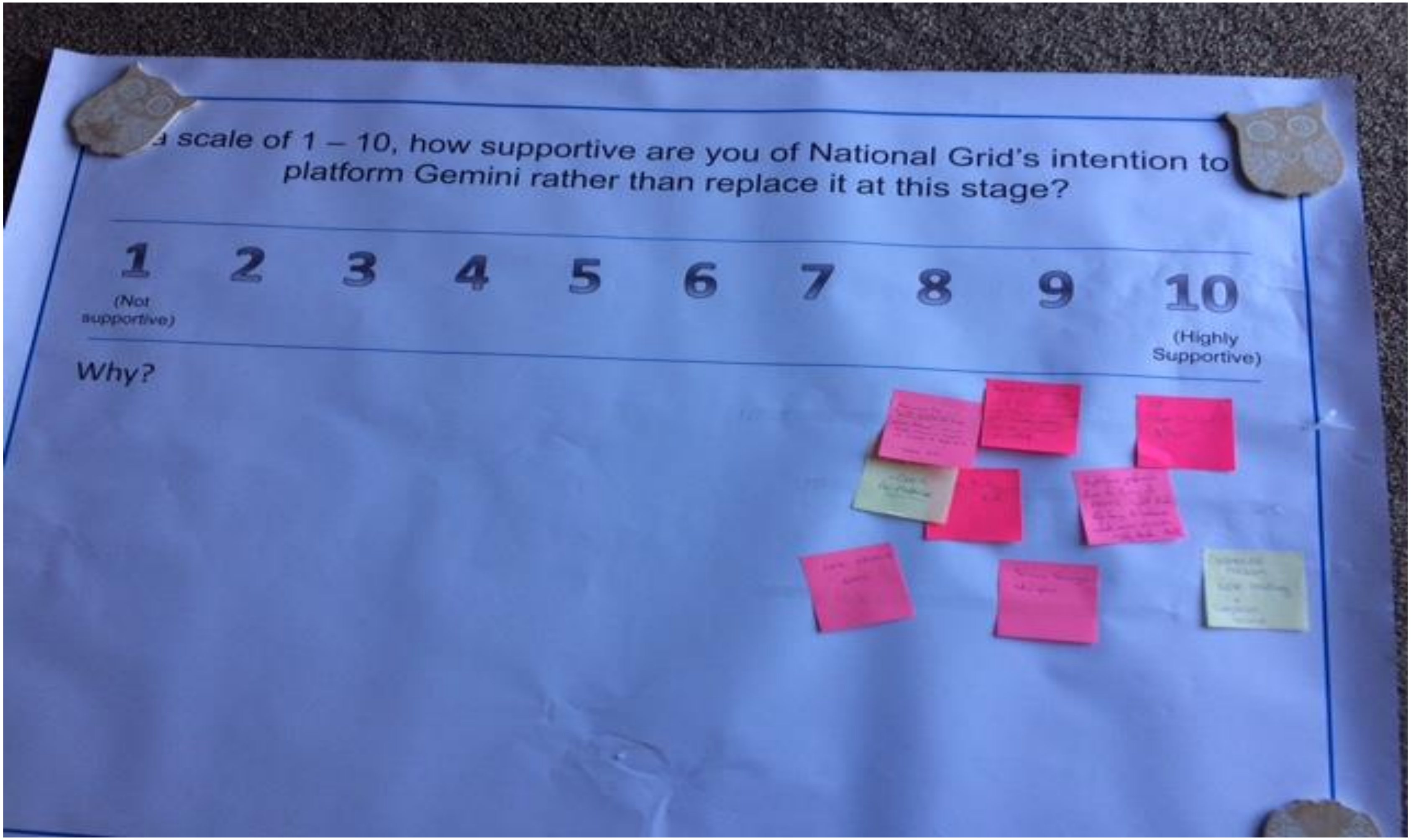
Operational Forum – February 2018

Phil Hobbins

Recap from November 2017 Forum

- We informed you that:
  - Gemini is currently operating on ageing hardware and infrastructure software, which brings increasing risks to its security, availability and resilience
  - We were minded to sustain Gemini via a re-platform activity rather than replace it
- The Forum supported this approach
- We therefore raised a change proposal in December 2017 and are continuing to work with Xoserve to mobilise this project

Recap



a scale of 1 – 10, how supportive are you of National Grid's intention to platform Gemini rather than replace it at this stage?
1 (Not supportive)
2
3
4
5
6
7
8
9
10 (Highly Supportive)
Why?

Recap

- We also asked you what 'pain points' you experience associated with Gemini
- We captured these and have discussed them with Xoserve
- The purpose of this session is to:
  - Confirm what your Gemini 'pain points' are
  - Provide a view about which of them might be resolvable by the re-platform activity and which would need a change to the Gemini application
  - Ask you to provide further information to enable us to consider how best to progress these issues

Which ‘pain points’ could the Gemini re-platform resolve?

No.	Pain Point	Further Information
1.	*“Overall speed, especially the login process”* *“Speed of the login process”*	1) What is meant by "overall speed"? 2) Are there particular examples? 3) When referring to the login process, do you mean right from launching the application and coming in via Citrix right up to the Gemini homepage with the Gemini and Gemini Exit buttons displayed? Or when you click on "Gemini" or "Exit" on the Gemini Homepage?
2.	“*Slow API request processing”*	1) Do you have examples of timings? 2) Where are you measuring from and to? 3) What query data is being submitted? 4) Is there any specific API and data condition?
3.	*“Accessing Gemini via Citrix is not ideal”.* *“Prefer a single login – bin Citrix”.* *“Two factor authentication is frustrating”*	Citrix is used as a secure gateway and we would need to consider what could replace it.

Which 'pain points' could the Gemini re-platform resolve?

No.	Pain Point	Further Information
4.	*"Usability – we use our own interface to avoid using it directly"* *"Purchased an interface as so user unfriendly"* *"We currently use an interface to upload into Gemini"*	1) To avoid using what? 2) What is being uploaded? 3) Is there any inclination towards stand-alone light weight web clients?
5.	*"Multi-browser support, e.g. Chrome"*	We are unsure what the issue behind this comment is. Shippers are able to use other internet browsers for their other applications as the Citrix gateway automatically launches Gemini in IE8.
6.	*"Review security settings – password resets could be requested by users, not just LSOs".*	This comment relates to a process outside of Gemini. Whilst it would therefore not be resolved as part of the re-platform activity itself, Xoserve could look at this further as part of operating the service. If this was to change it would mean a change to the UK Link Manual and to Xoserve processes.

Pain points that would require an application change - performance

No.	Pain Point
7.	“*Slow to load data ranges and view requires multiple pages rather than one long table*”
8.	“*Slow from screen to screen and locks out if close window*”
9.	*“In the ‘Entitlements’ screen, we would like to be able to select multiple locations (like you can in the ‘Bid Information’ and ‘All Active Bids’ screens). Selecting one location at a time currently is time consuming.”*

Pain points that would require an application change - usability

No.	Pain Point
10.	*"Ability to export data is restrictive – output report to Excel?"* *"Would like an option to easily download allocation data in an Excel friendly format*
11.	*"Too many sections and sub-sections with not the clearest labelling."*
12.	*"Entry and exit systems should be combined, allowing shippers to view entitlements, capacity bids and checking for constraints all in one system. Even if the systems aren't combined, a more consistent menu structure would be desirable."*
13.	*"In the 'create bids' section, we would like to be able to save favourites/template bids. This would allow shippers to create bids with the volumes they bid for regularly and just manually edit price/volume as and when."*

Pain points that would require an application change - functional

No.	Pain Point
14.	*“Quicker way to schedule and make trades. Currently we have to set up activity numbers then wait for NGG to run a scheduling batch. Also, if we haven’t posted for the same hour as the counterparty (but even if we agree the numbers) the trades get rejected (there doesn’t seem to be a good reason for this and it has cost us a lot of money in the past)” “What is the point of activity numbers and reverse activity numbers? It is quite a pain to set them up and then put them in internal systems etc.”*
15.	*“Nominations take too long and are manual” “Renominations screens are manual with no copy and paste option” Most people have to purchase or create systems that interface with Gemini as it’s impossible to remember the activity numbers that you need to nominate against.”*
16.	*“Easier way to do Negative Implied Flow Rates”.*
17.	*“Poor scheduling at IPs leads to ‘adjustment invoice’”.*
18.	*“More functionality in the allocations screens. Reports and analysis, what may be most useful is a scheduling report/screen identifying allocations which exceed the 3% and 5% tolerances, this could help solve discrepancies sooner, avoiding reconciliations.*

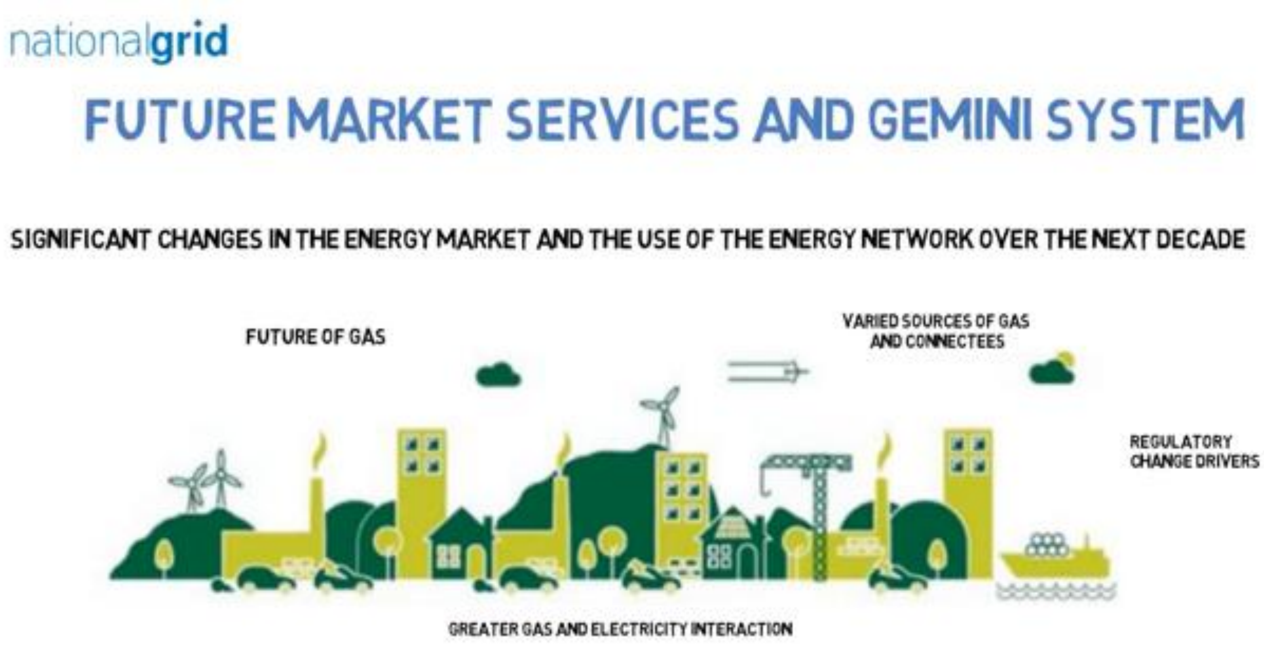
Next Steps

- Our initial focus will be on pain points numbered 1-6
- Please discuss the questions in relation to these items within your companies and reply to our Survey Monkey (to be issued by e-mail by Friday 2nd March 2018) by Friday 23rd March 2018
- We will provide an update on the re-platform project and on the pain points to the next Operational Forum in April 2018

Future Market Services & Gemini System

Operational Forum – February 2018
Jennifer Randall

Overview - Video



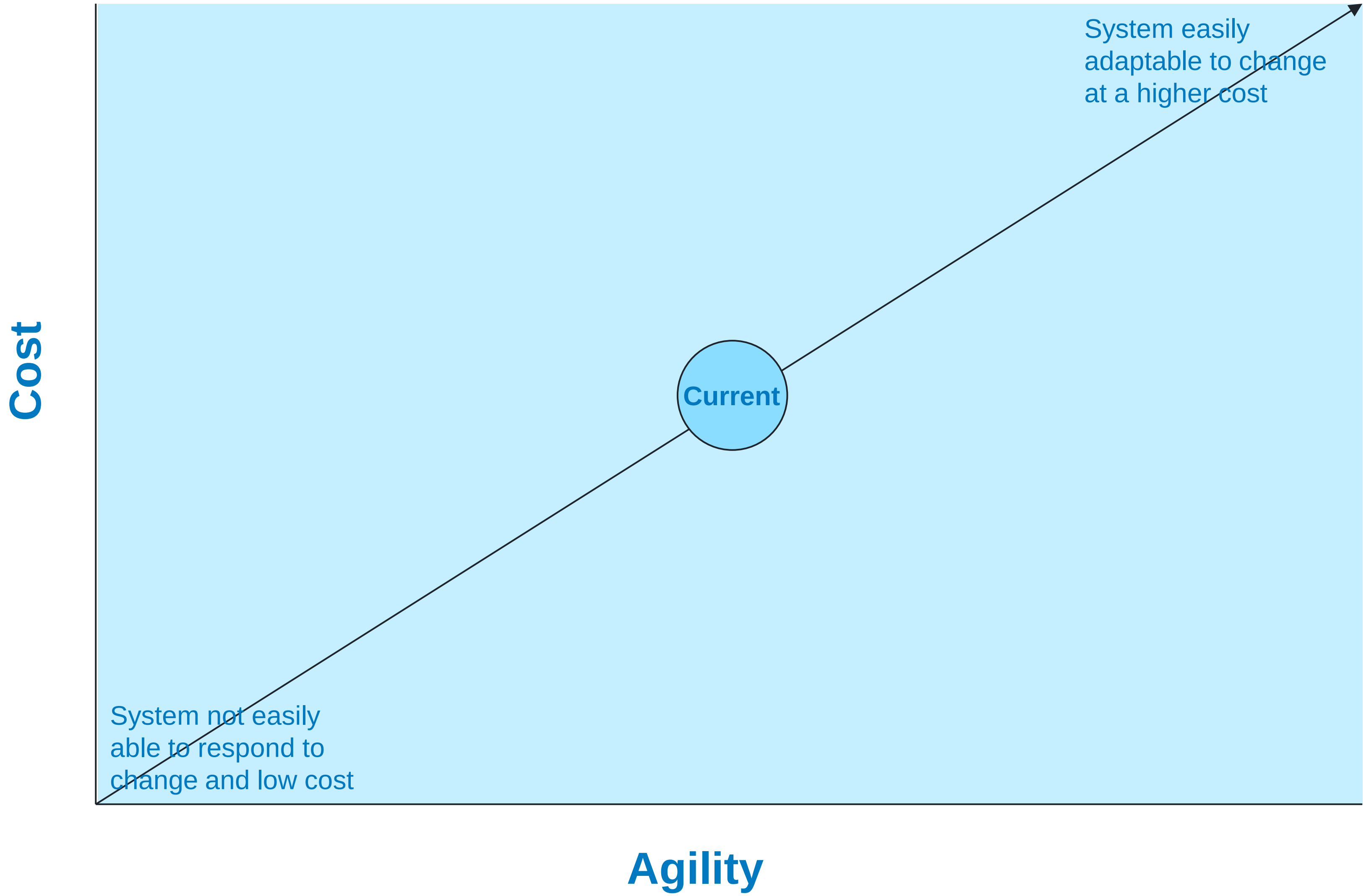
https://www.youtube.com/watch?v=nKn-wl6erT8

nationalgrid

Future Market Services - Surveymonkey

- We want to test the services we have obligations to deliver with you to ensure they continue to deliver value for money, both now and in the future. We want to understand from you which market services you;
  - value
  - require improvement
  - don't use
  - new
- We will be sending out a Survey Monkey to gain your feedback on these services.
- We would like to work collaboratively with you throughout the options development phase which will involve some detailed discussions. Availability through the Survey Monkey to indicate if you would be willing to be involved in a focus group on this.

Cost Vs Agility of the Gemini system to respond to commercial change



AOB

Upcoming Agenda Items 2018

- Feedback and action plans from Customer Satisfaction survey feedback.
- Further REMIT clarity.
- Constraint management and energy balancing game.
- CLoCC.
- Shrinkage.
- Summer Outlook messages.
- Gemini re-platforming.
- Information provision – how and what do you require to run your business effectively.

Should you wish to raise a topic for discussion please email:
Box.OperationalLiaison@nationalgrid.com

Please note 29 June forum is at Warwick!

121 Query Surgery

Operational Forum – February 2018

Karen Thompson, Josh Bates, Mike Wassell.

Appendix
Overview slides for Future Market Services

Changes in the Energy Market

- Set to be significant changes in the energy market and the use of the energy network over the next decade.
  - 2020’s will be a time of key investigations,
  - Greater interaction between gas and electricity system operation
  - More varied sources of gas and types of contectees
  - Regulatory change drivers

- Need to ensure that the market services which are delivered are sustainable, reliable and affordable and are in line with consumer’s needs.

Project Aims

1. To ensure that the right services, which customers and stakeholders value, are well defined, transparent, reliable and are delivered in a cost efficient way

2. To establish from customers and stakeholder their expectations of the Gemini system over the forthcoming years, and its adaptability to change

Market Services

Services procured from Xoserve

- Invoicing for Transportation & Energy Balancing
- Gemini Services
- Energy Balancing Credit & Neutrality
- Shipper 'lifecycle'

Automated via Gemini

- NDM Demand Attribution
- NDM Allocation Process
- Nominations Matching at Interconnection Points

Delivered directly by National Grid

- NTS Shrinkage Provider
- Allocation agent at multi-shipper NTS exit points
- Flow Weighted Average CV Process
- Meter Assurance and Energy Balancing Invoice Reconciliations

Gemini System

- NG owns the Gemini system and Xoserve manage it on our behalf

- The longer term future of the Gemini system will be dependant on two elements;
  1. It's technical capability and the obsolescence of its infrastructure
  2. What the future commercial change horizon looks like and the impact it has on the requirements of the Gemini system

Stakeholder Engagement

- Through this project we want your feedback
  - Test the services we have obligations to deliver with you to ensure they continue to deliver value for money, now and in the future
  - Hear your views on what on what the commercial change horizon may look like, to establish the future requirements of the Gemini system and its ability to accommodate this commercial change
- Cycle of listening, co-creation and validation

Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept

Listen
Information gathering. Building on feedback received to date

Co-create
Work together to develop options based on feedback received in the Listen stage

Validate
Agree and prioritise options

- If you have any feedback on the project, its scope or plan to progress then please let us know

Jennifer.Randall@Nationalgrid.com

nationalgrid

Ice slides.

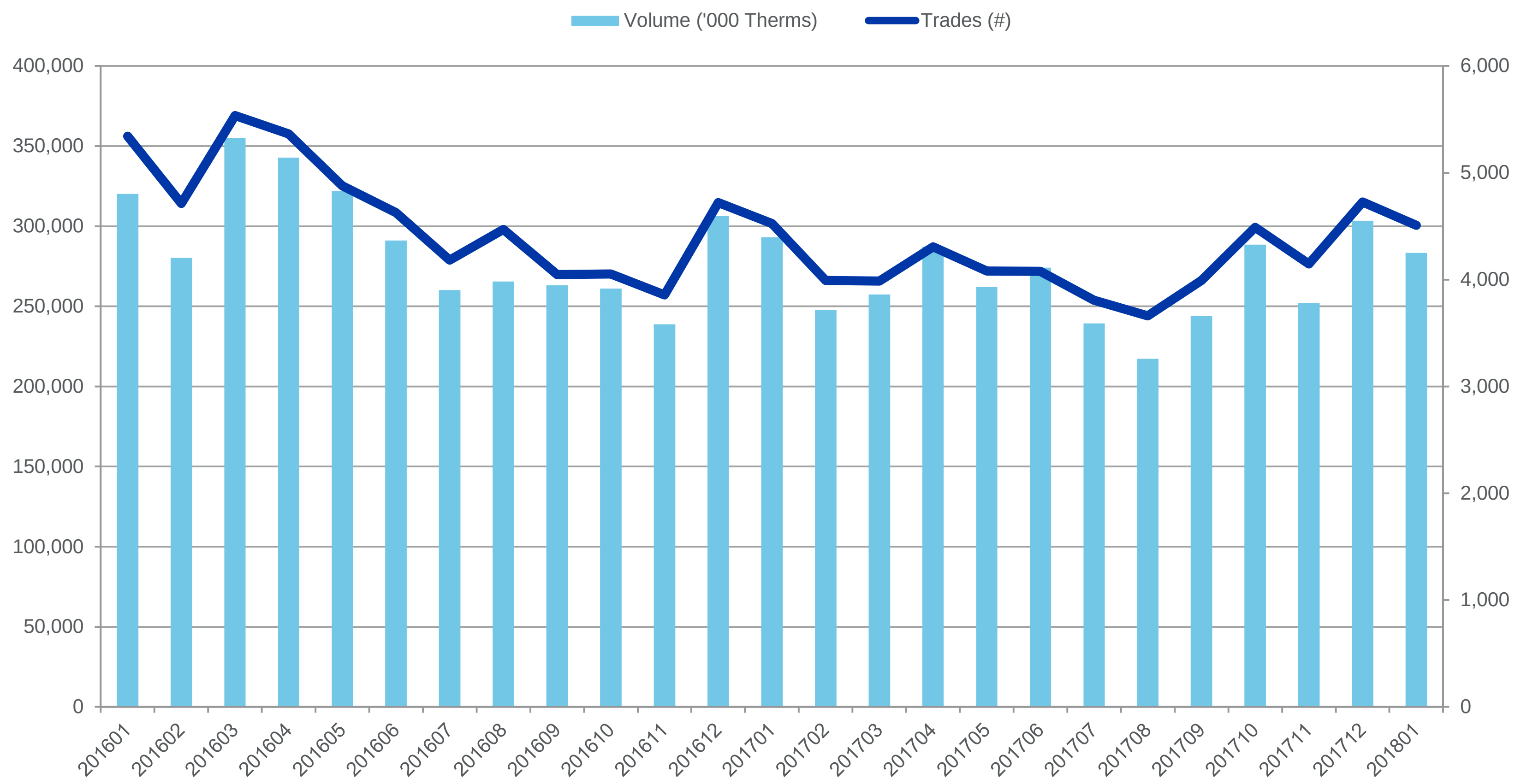
OCM MARKET UPDATE

NGG OPS FORUM

FEB 2018

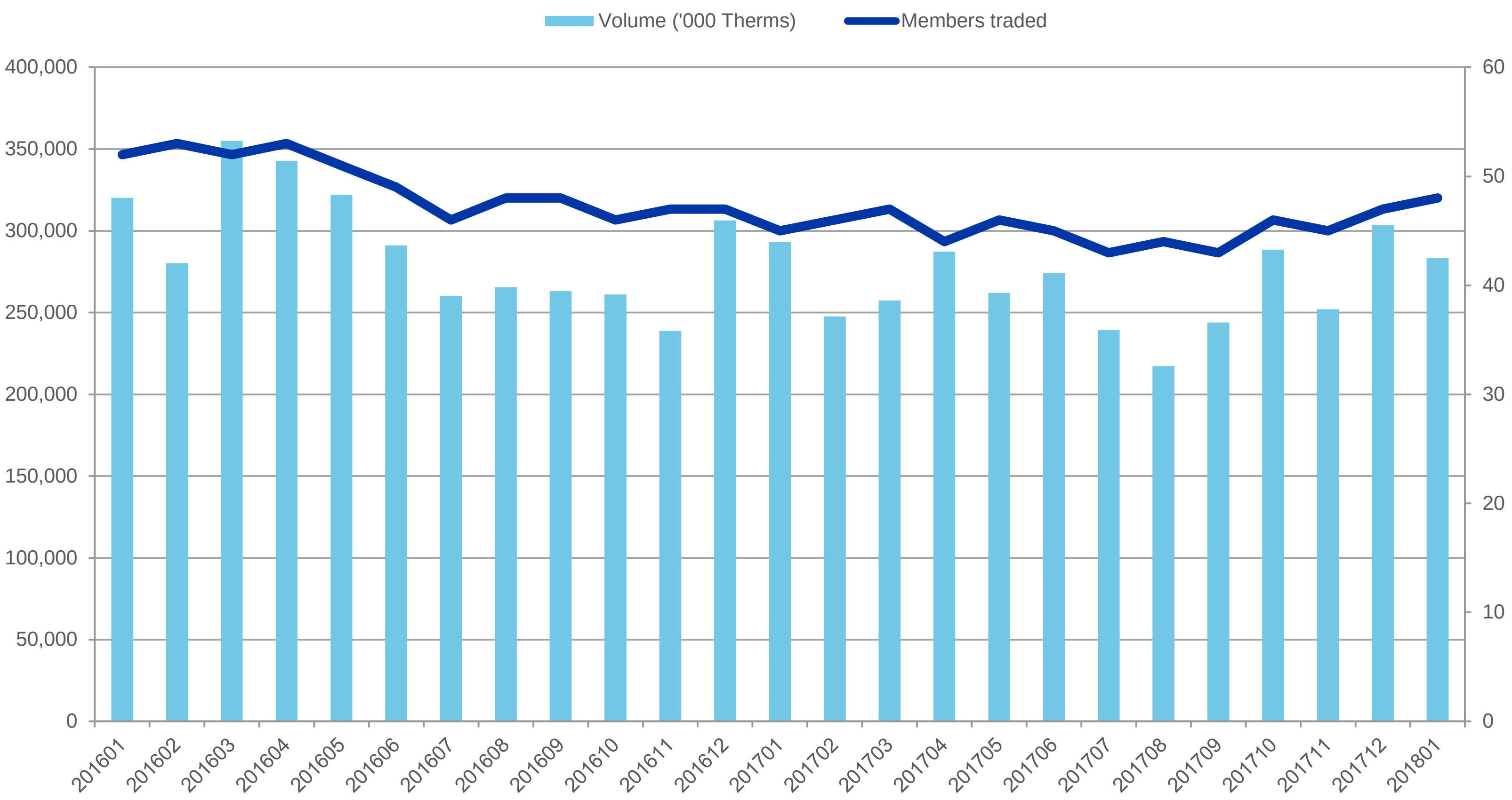
VOLUME AND TRADES PER MONTH

LAST 24 MONTHS



VOLUME AND ACTIVE MEMBERS

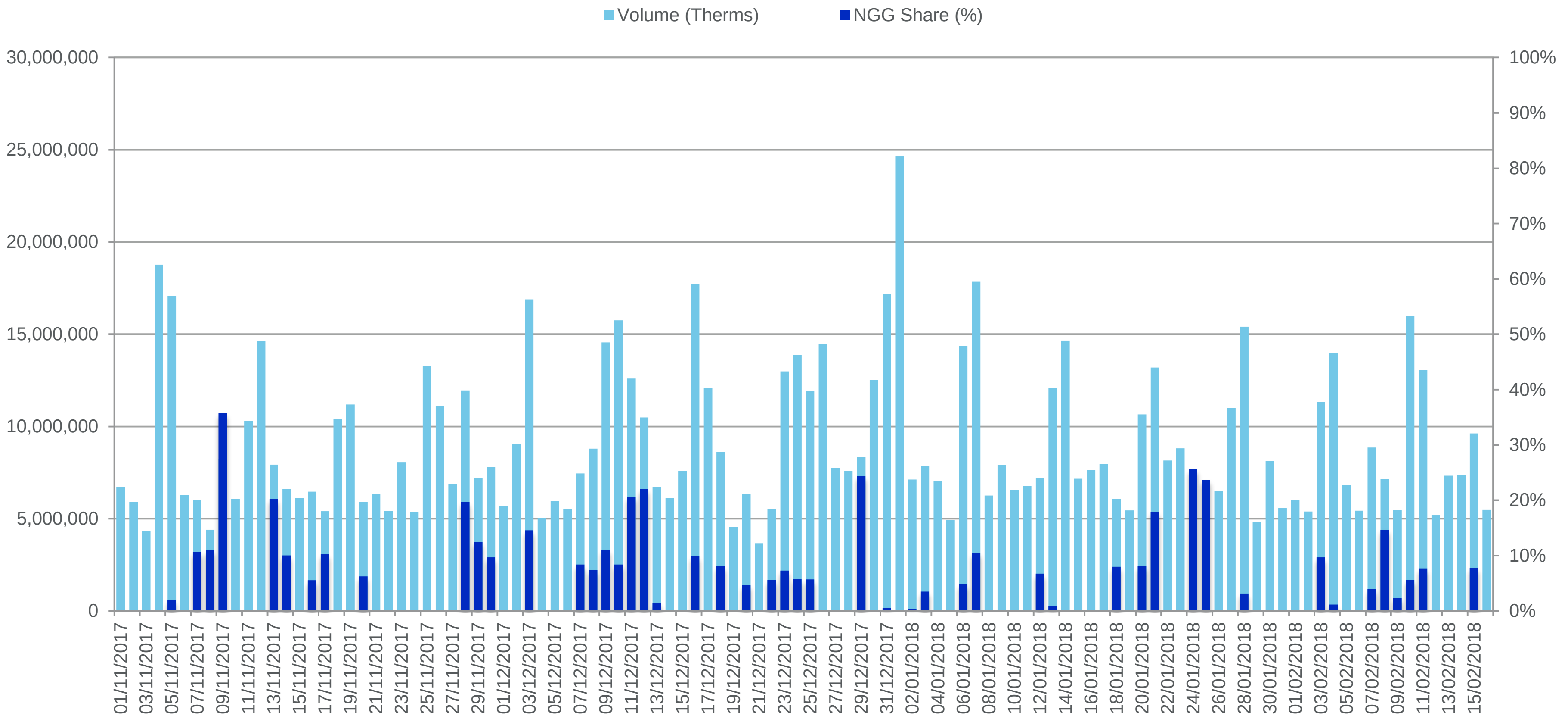
LAST 24 MONTHS



VOLUME AND NGG SHARE PER DAY

LAST 3 MONTHS

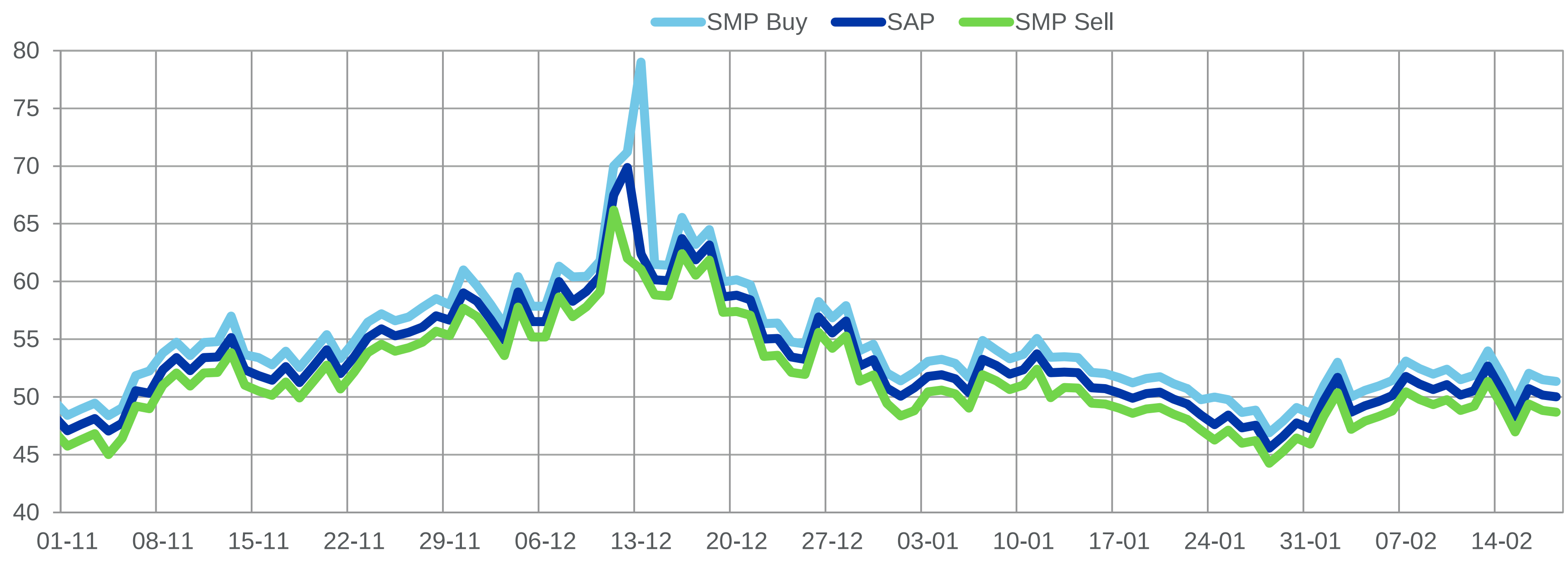
	HIGHEST	LOWEST	AVERAGE
Volume	24,640,000 (1 Jan)	3,673,000 (21 Dec)	9,013,222
NGG Share	35.7% (9 Nov)		4.8%

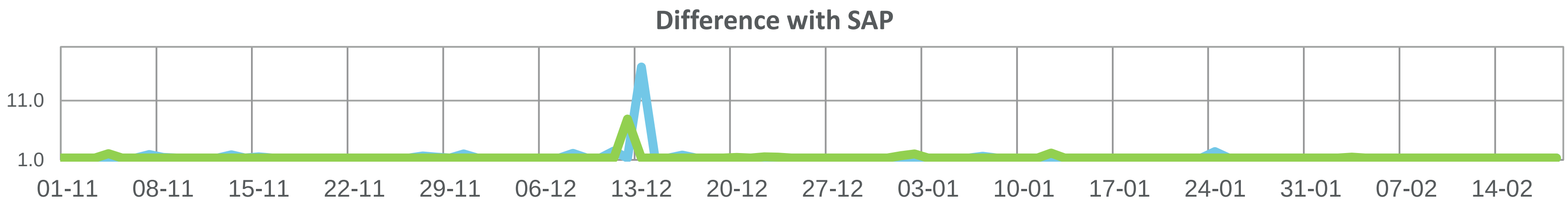


SAP/SMP PRICES

LAST 3 MONTHS

	SMP BUY	SAP	SMP SELL
Highest	79 p/th (13 Dec)	69.88/th (12 Dec)	66.17 p/th (11 Dec)
Lowest	46.89p/th (28 Jan)	45.57p/th (28 Jan)	44.24 p/th (28 Jan)





THANK YOU

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