

SLIDO – Interaction Tool

Gas Operational Forum – June 2017

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Gas Operational Forum



22nd June 2017 10:30AM

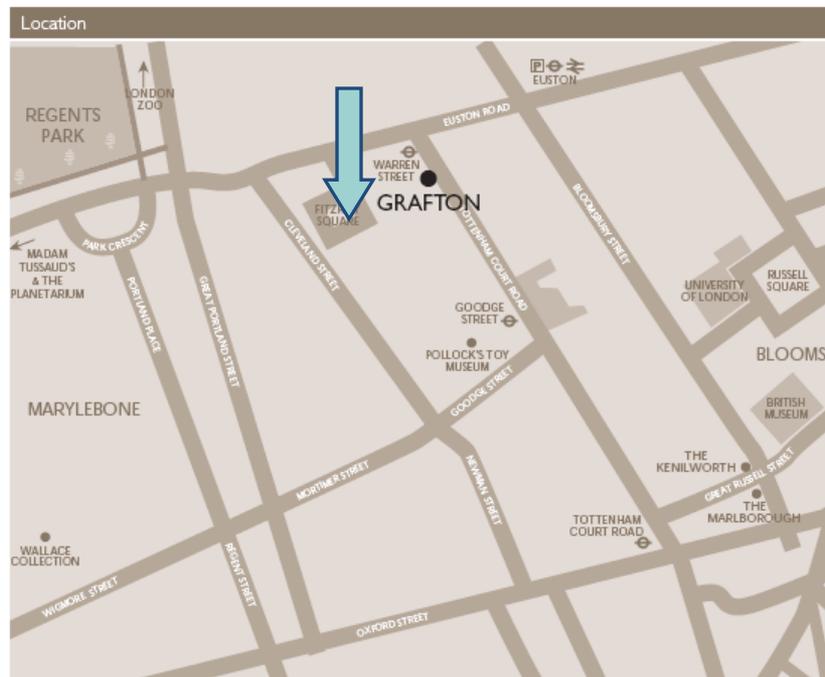
Radisson Blu Hotel, 130 Tottenham Court Road, London

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



Agenda

- 10:30 - **Winter Review** - *Highlights of the winter review document published on 1st June 2017*
- 10:45 - **Operational Overview** – *Supply Breakdown & Demand Breakdown*
- 11:00 - **Project Nexus Update** - *Update on Project Nexus since 'Go Live'*
- 11:15 - **Voice of the Customer on Xoserve Helpline** - *National Grid are keen to understand the customer experience with regards to the calls made to Xoserve helpline related to Gemini issues.*
- 11:45 - **Working Lunch**
- 11:55 - **ICE Endex** - *An update on OCM Market (Volume & Trades per month)*
- 12:05 - **UNC Modifications** – *A brief update from the latest Transmission Workgroup*
- 12:10 - **Change Programme** – *provide the latest update on EU Phase 4a, GB Remit & MIPI performance*
- 12:25 - **Shallow Incentive Review** - *Specifically related to Greenhouse Gas Emissions, Demand Forecast D-2 to D-5, Maintenance, Operating Margins & Additional Demand Forecasting*
- 12:40 - **Gas System Pressures** - *Recap on what affects pressure, how does information flow between different parties within the industry, what information is available from National Grid & what further information is being explored to help with pressure issues.*
- 13:00 - **Gas Quality Information** - *An update following the feedback from last year's information provision consultation (for NG to publish real time gas quality)*
- 13:30 – **AOB** - *2017 Winter Webinar feedback & an update from NG.com project*

Winter Review and Consultation 2017



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Karen Thompson

Gas Demand was Higher than Winter 15/16 & our Forecast

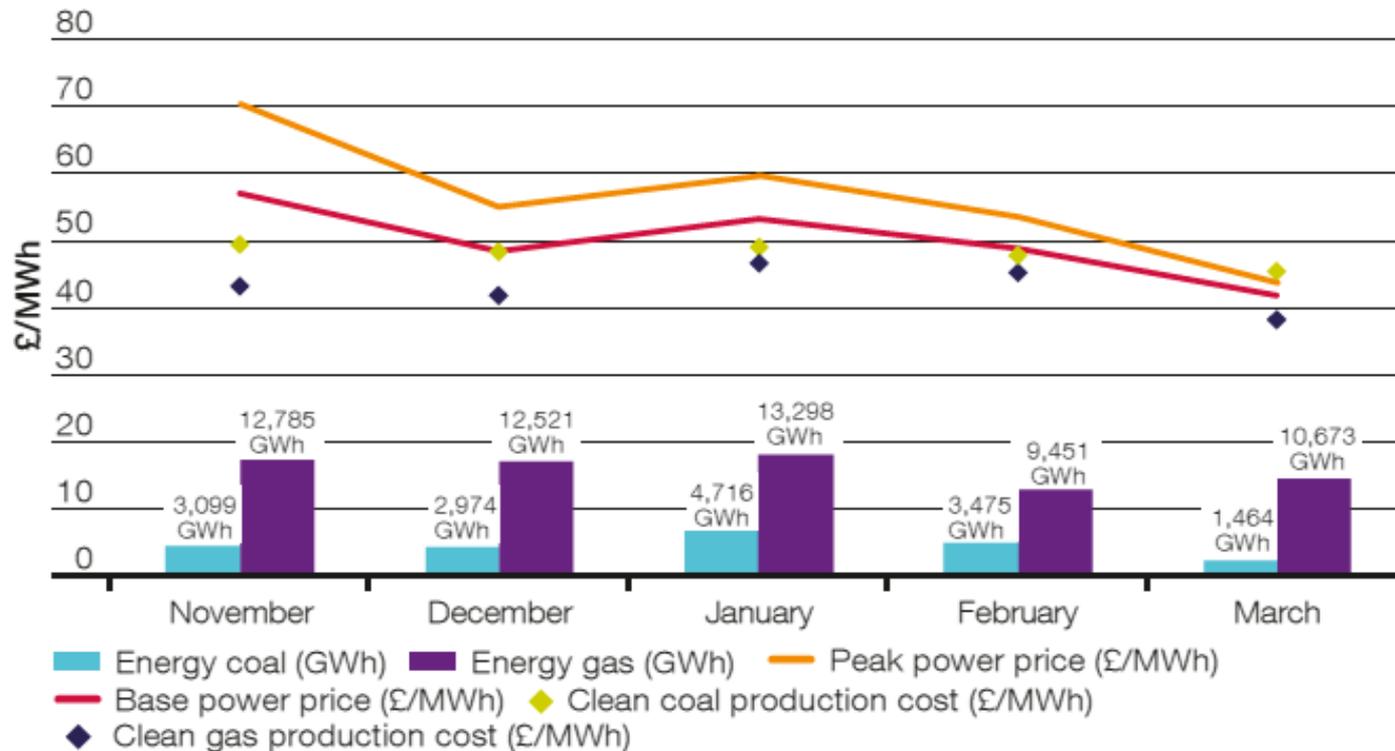
Demand forecasts and outcome for winter 2016/17

Demand in bcm	2015/16 weather corrected demand	2016/17 forecast	2016/17 weather corrected demand	2016/17 actual demand
NDM	29.6	29.5	29.7	29.3
DM + Industrial	4.7	5.0	5.0	5.0
Ireland	2.6	1.4	1.6	1.6
Total for electricity generation	10.4	11.1	13.8	13.8
Total demand	47.4	47.1	50.3	49.9
IUK export	2.7	0.8	0.8	0.8
Storage injection	1.2	1.2	1.8	1.8
GB Total	51.3	49.1	52.9	52.5

Gas demand was higher than winter 2015/16, and our forecast

Gas Fired Generation was more Profitable than Coal for most of the Winter

Estimate of the average cost of production from coal and gas each month over winter 2016/17, against the market price of electricity and the energy produced



Gas Fired Generation Grew as Coal Declined

Winter 2016/17 energy contribution, assumed and actual breakdown rates of generation plant

Power station type	Energy contribution	Assumed breakdown rate	Actual breakdown rate
Nuclear	21%	11%	5%
Hydro generation	1%	10%	9%
Coal + biomass	12% + 5%	13%	5%
Pumped storage	1%	2%	4%
OCGT	0%	4%	3%
CCGT	45%	11%	6%

- 45% of all electricity generation was from gas-fired plant, compared to just 34% for winter 2015/16
- Coal fired generation capacity has fallen by 5GW since winter 2015/16. As a result of this and fuel prices, coal's contribution to total generation dropped from 20% to 12%

Sufficient Gas was Available to Meet Demand

Gas supplies for winter 2016/17 and previous years

	2014/15		2015/16		2016/17	
	bcm	%	bcm	%	bcm	%
UKCS	16	33	18	36	20	38
Norway	18	38	18	36	22	42
Continent	4	8	3	6	5	10
LNG	5	10	6	13	2	4
Storage	5	10	4	8	3	6
Total	48		49		52	

Operational challenges winter 2016/17

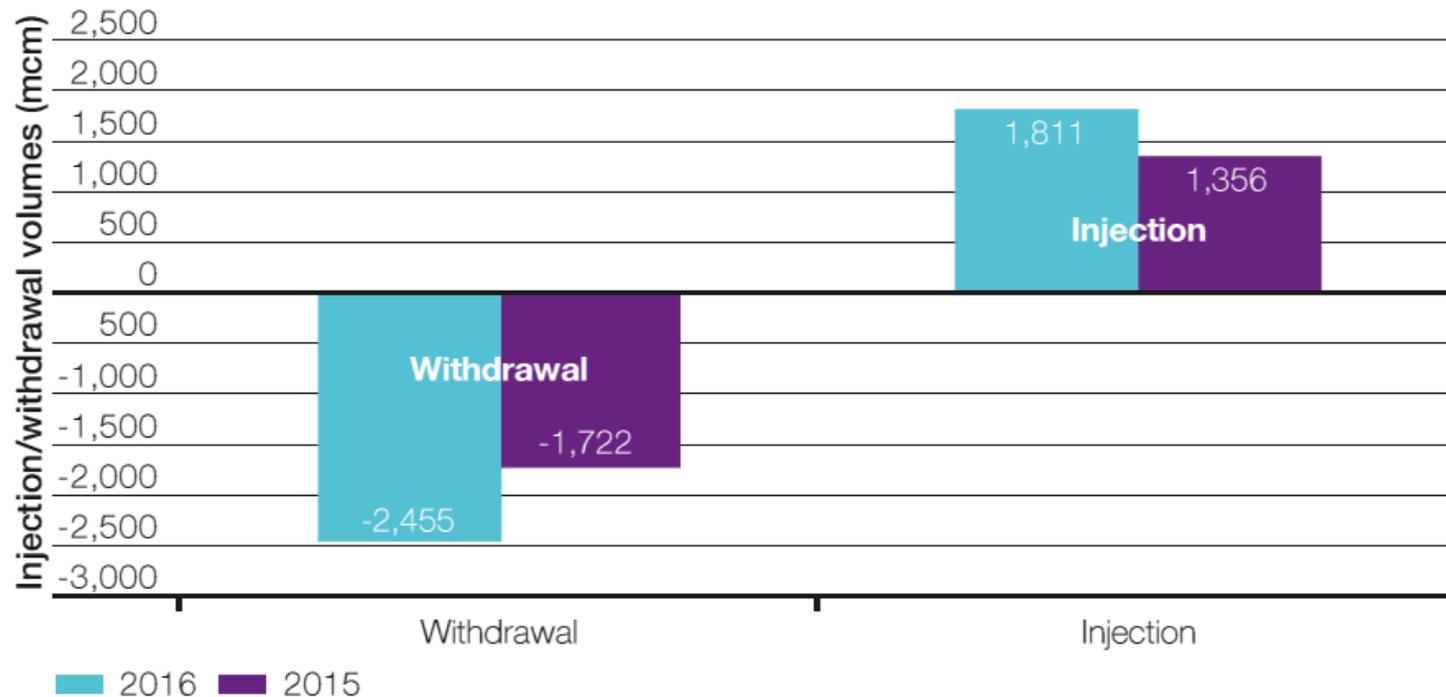


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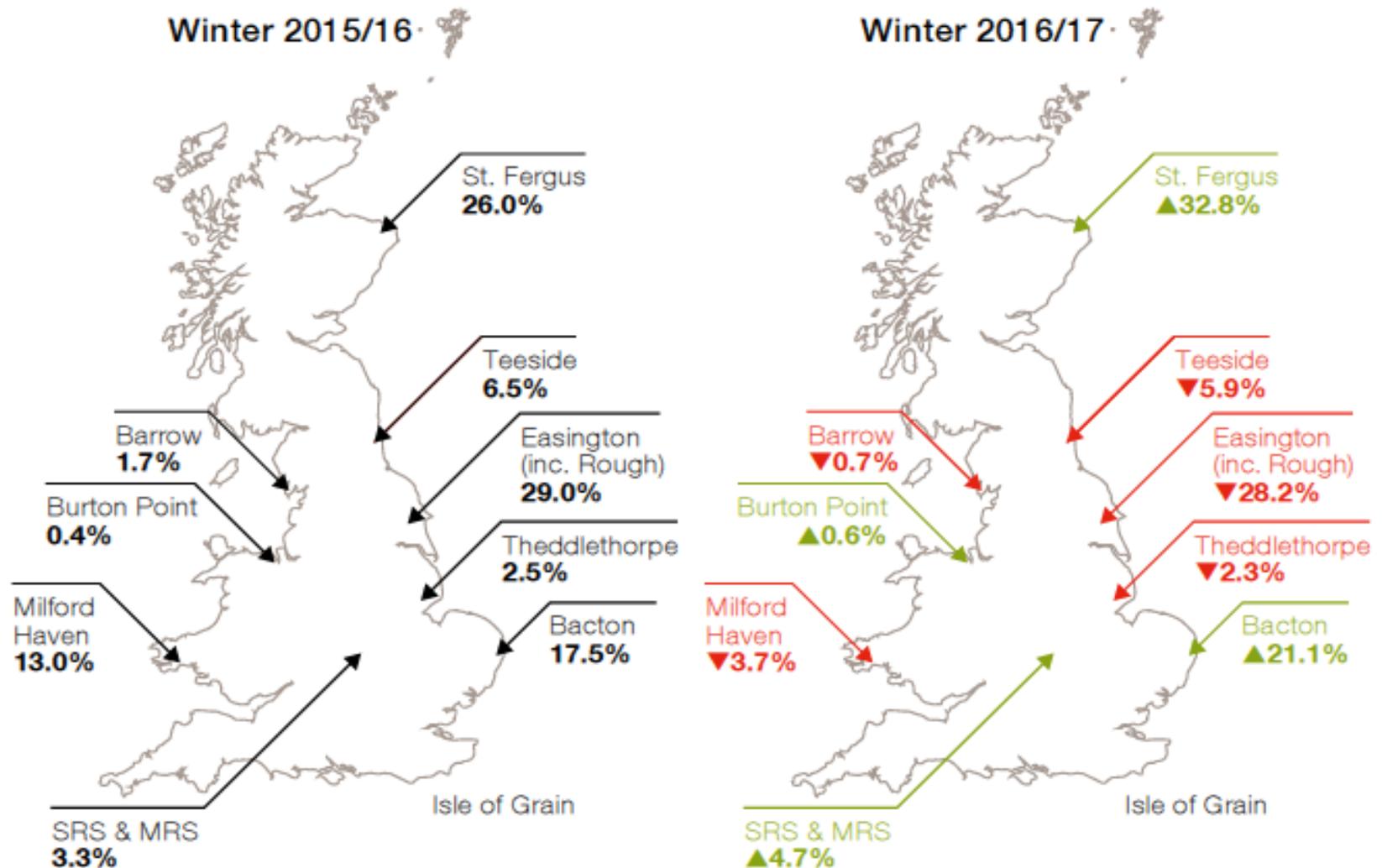
The Gas Network Needed to be more Agile and Dynamic

- As already explored gas for electricity generation was higher this year. It was also more dynamic.
- Also medium range storage experienced increased cycling of injection and withdrawal

Medium-range storage injections and withdrawal volumes

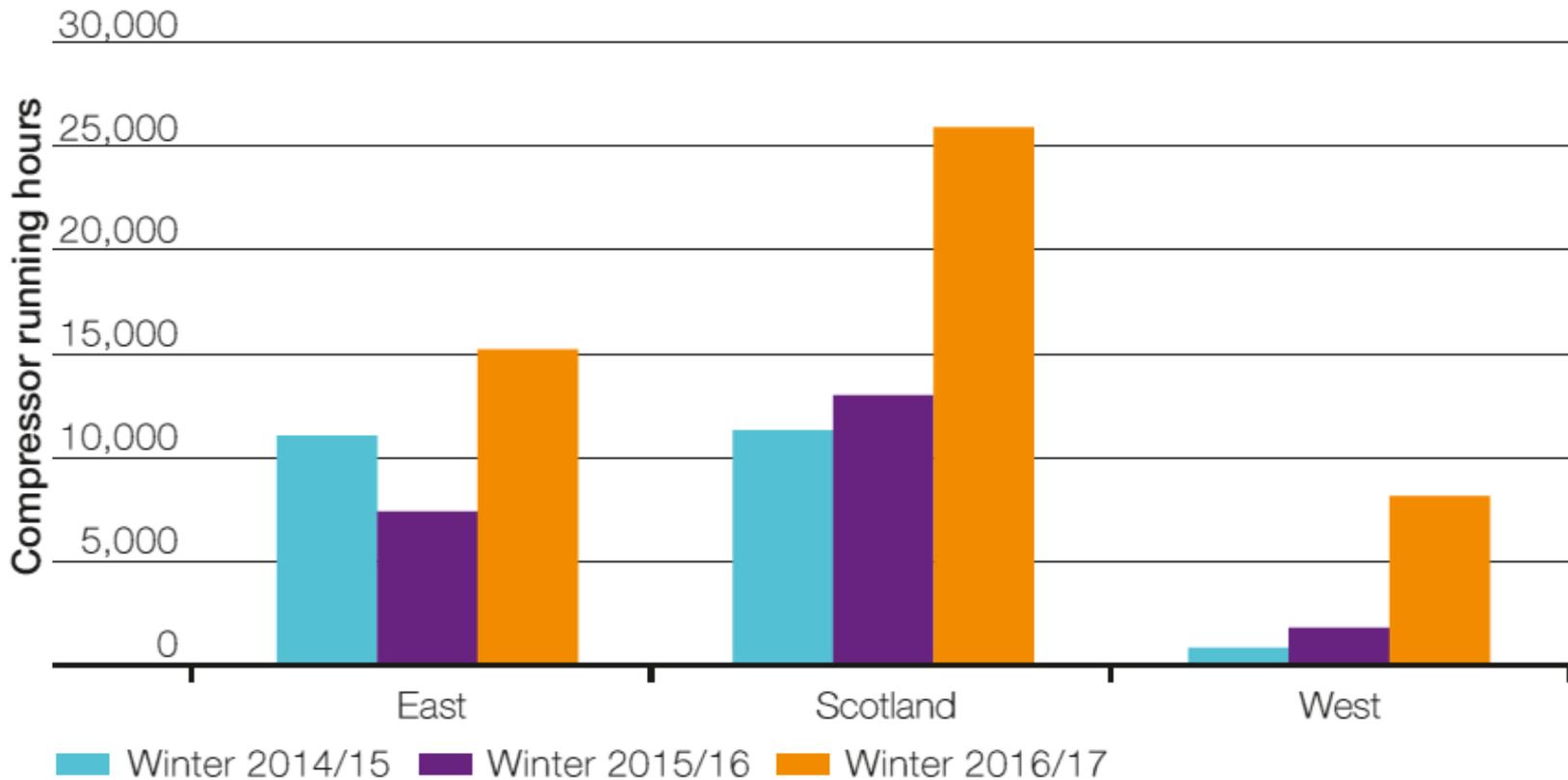


There were Higher Concentrations of Gas in the North and East of GB



Compressor Running Hours Increased

Compressor running hours for winter 2014/15 to winter 2016/17



A look ahead to Winter 2017/18



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The Outlook for this Winter

- Based on our preliminary analysis, we expect that there will be sufficient gas available this winter to meet demand
- GB's gas demand is expected to be met from a wide range of supply sources.

Preliminary view of supplies for winter 2017/18 (mcm/d)

	2016/17		2017/18	
	Observed Range	350 + Range	Forecast range	Cold day
UKCS	89–132	100–130	70–118	107
Norway	67–134	115–134	60–136	125
BBL	0–45	14–45	0–20	20
IUK	0–51	5–45	0–74	45
LNG	5–32	5–21	5–100	50
Storage	0–88	40–8	0–132	
Total NSS				347

Key SO Publications in 2017 & 2018



Network Options Assessment

January 2017

The options available to meet reinforcement requirements on the electricity system.



Summer Outlook Report

April 2017

Our view of the gas and electricity systems for the summer ahead.



Electricity Ten Year Statement

November 2017

The likely future transmission requirements on the electricity system.



Gas Ten Year Statement

November 2017

How we will plan and operate the gas network, with a ten-year view.



System Needs and Product Strategy

June 2017

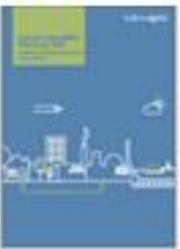
Our view of future electricity system needs and potential improvements to balancing services markets.



Future Energy Scenarios

July 2017

A range of plausible and credible pathways for the future of energy from today out to 2050.



Future Operability Planning

November/December 2017

How the changing energy landscape will impact the operability of the gas system.



System Operability Framework

How the changing energy landscape will impact the operability of the electricity system.



Winter Outlook Report

October 2017

Our view of the gas and electricity systems for the winter ahead.

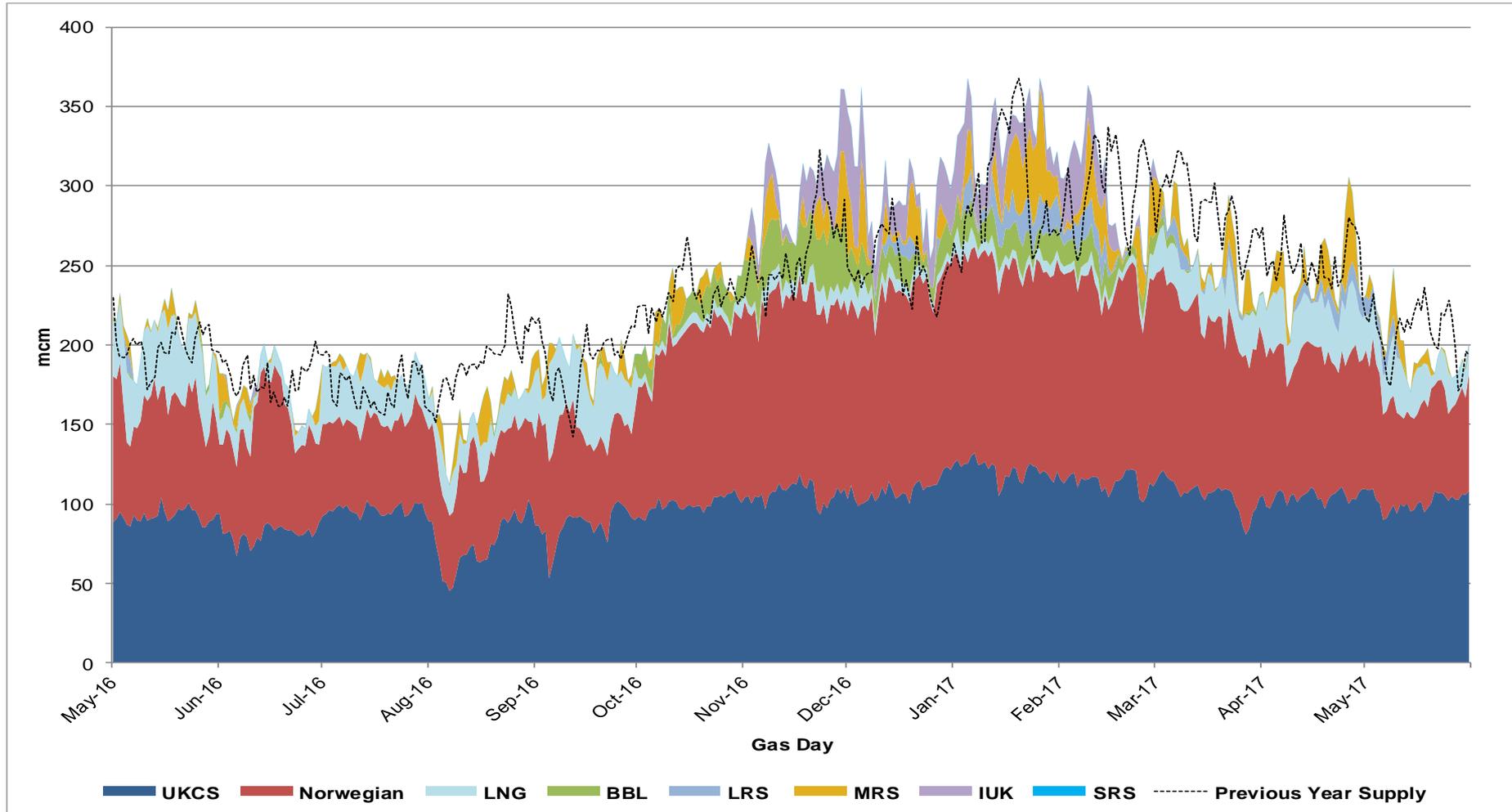
Operational Overview



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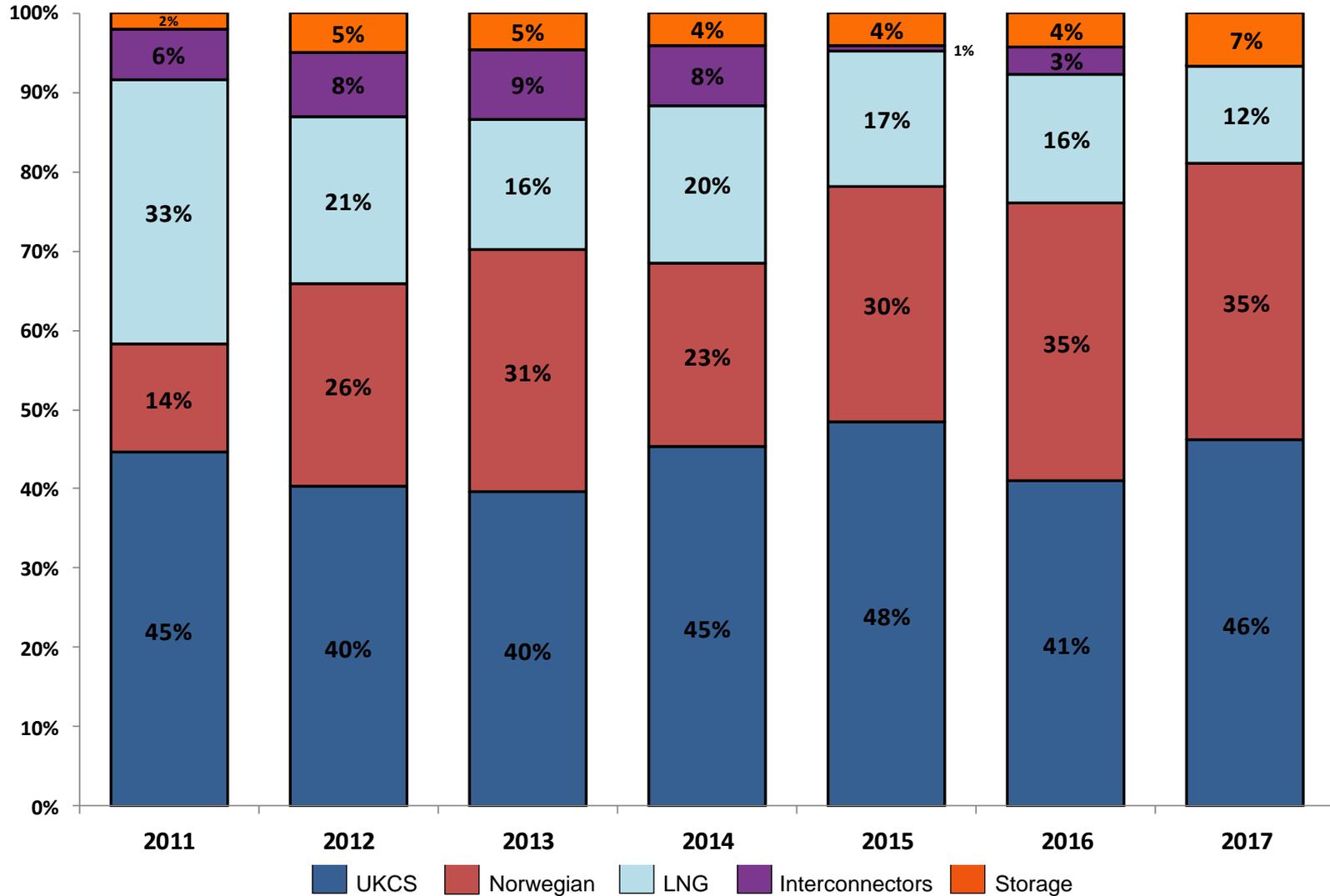
Gas Supply Breakdown

1st May 2016 to 31st May 2017 vs Previous Year



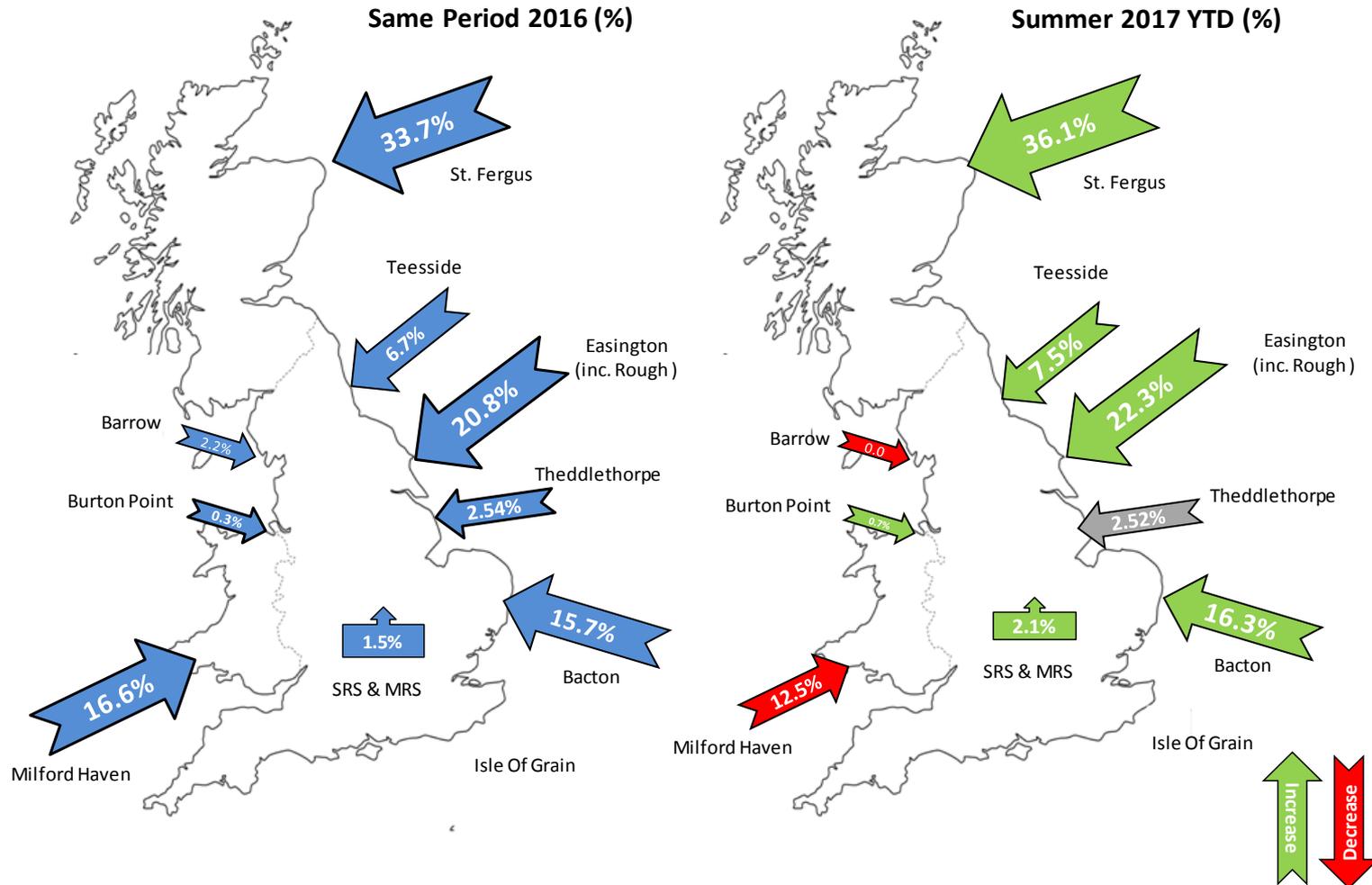
Gas Supply Breakdown

1st April 2017 to 31st May 2017 vs same period over the previous 6 years



Gas Supply Map

1st April 2017 to 31st May 2017 vs Same Period Last Year

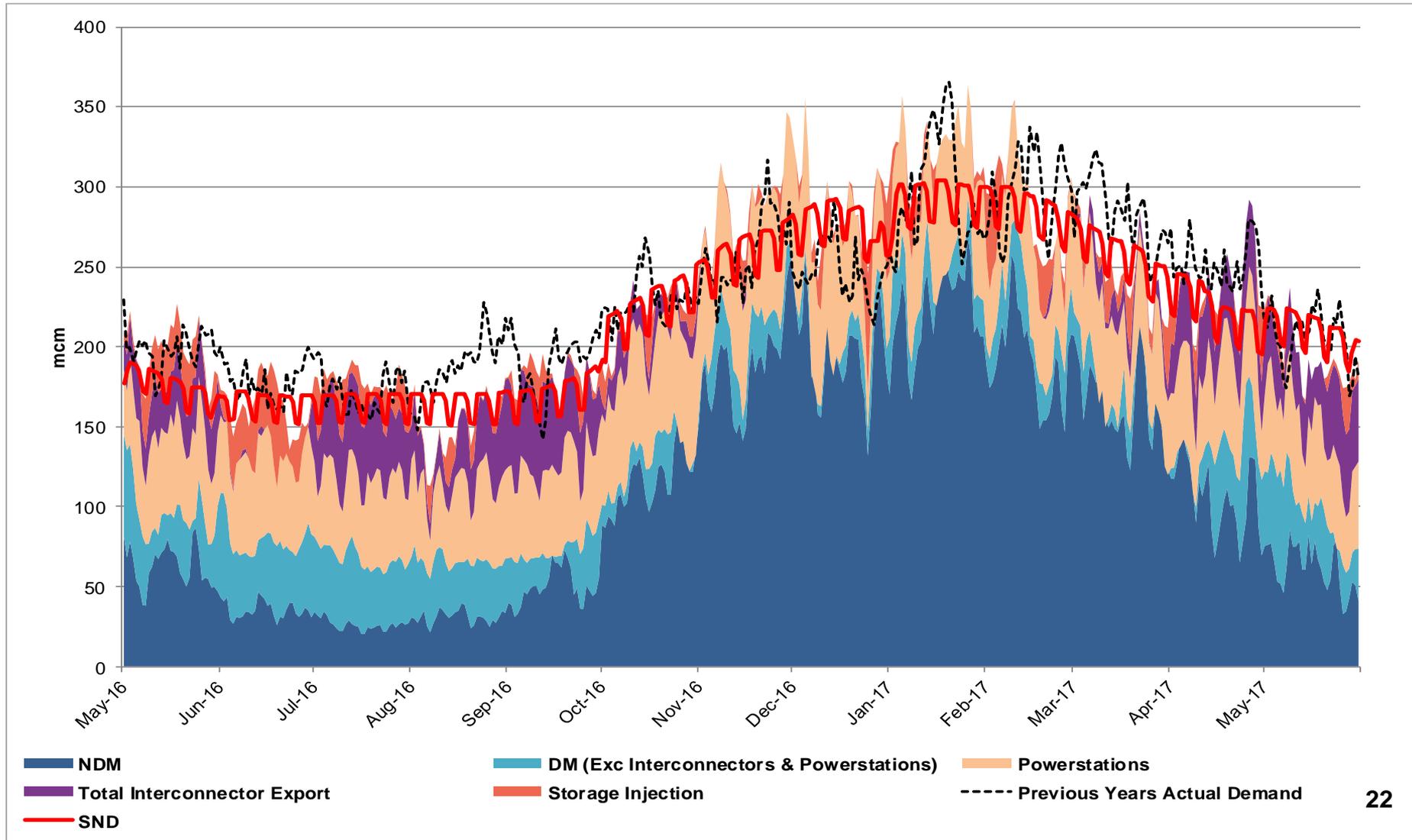


NTS Supply Summer (mcm): 1st April 2017 to 31st May 2017

Entry	Min	Max	Avg	Summer Actual Range Apr 2016 - Sep 2016	Comments												
 UKCS	90.0	110.7	103.0	45- 107	<ul style="list-style-type: none"> Bacton Terminal (exc Interconnectors) has increased from an average flow of 28mcm/d in Apr & May 2016 compared to 35mcm/d in Apr & May 2017 due to the new field Cygnus flowing into Bacton Amoco from the start of December 2016. LNG average flow 27mcm/d in Apr & May 17 compared to 38mcm/d in Apr & May 16; this relates to increased competition in the LNG market. Interconnector average Imports <1mcm/d in Apr & May 17 compared to 8mcm/d in Apr & May 16; BBL imported during April 16, but not April 17. Barrow Terminal has been on outage since mid February. 												
 NORWAY est*	54.6	101.8	78.0	44 - 111													
 INTERCONNECTORS BBL	0.0	2.5	0.1	0 - 23													
 INTERCONNECTORS IUK	0.0	0.0	0.0	0 - 5													
 LNG	7.2	43.7	27.1	5 - 62													
 STORAGE WITHDRAWAL	0.0	68.8	14.9	0 - 39	<table border="1"> <thead> <tr> <th>Entry</th> <th>Min</th> <th>Max</th> <th>Avg</th> </tr> </thead> <tbody> <tr> <td>Actual Supply</td> <td>170</td> <td>306</td> <td>223</td> </tr> <tr> <td>Actual Supply Exc. Storage</td> <td>170</td> <td>241</td> <td>208</td> </tr> </tbody> </table>	Entry	Min	Max	Avg	Actual Supply	170	306	223	Actual Supply Exc. Storage	170	241	208
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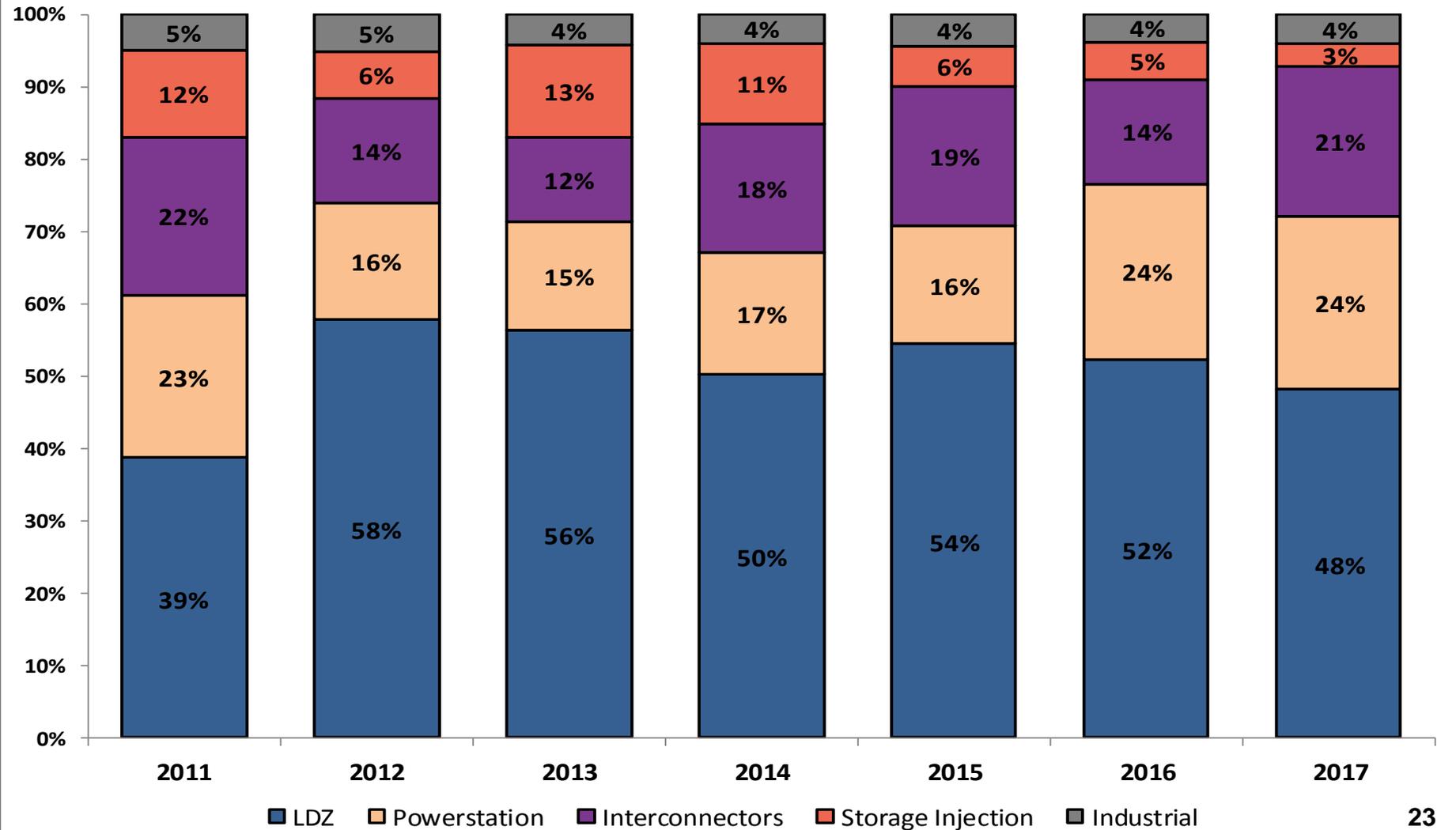
Gas Demand Breakdown

1st May 2016 to 31st May 2017 vs Previous Year



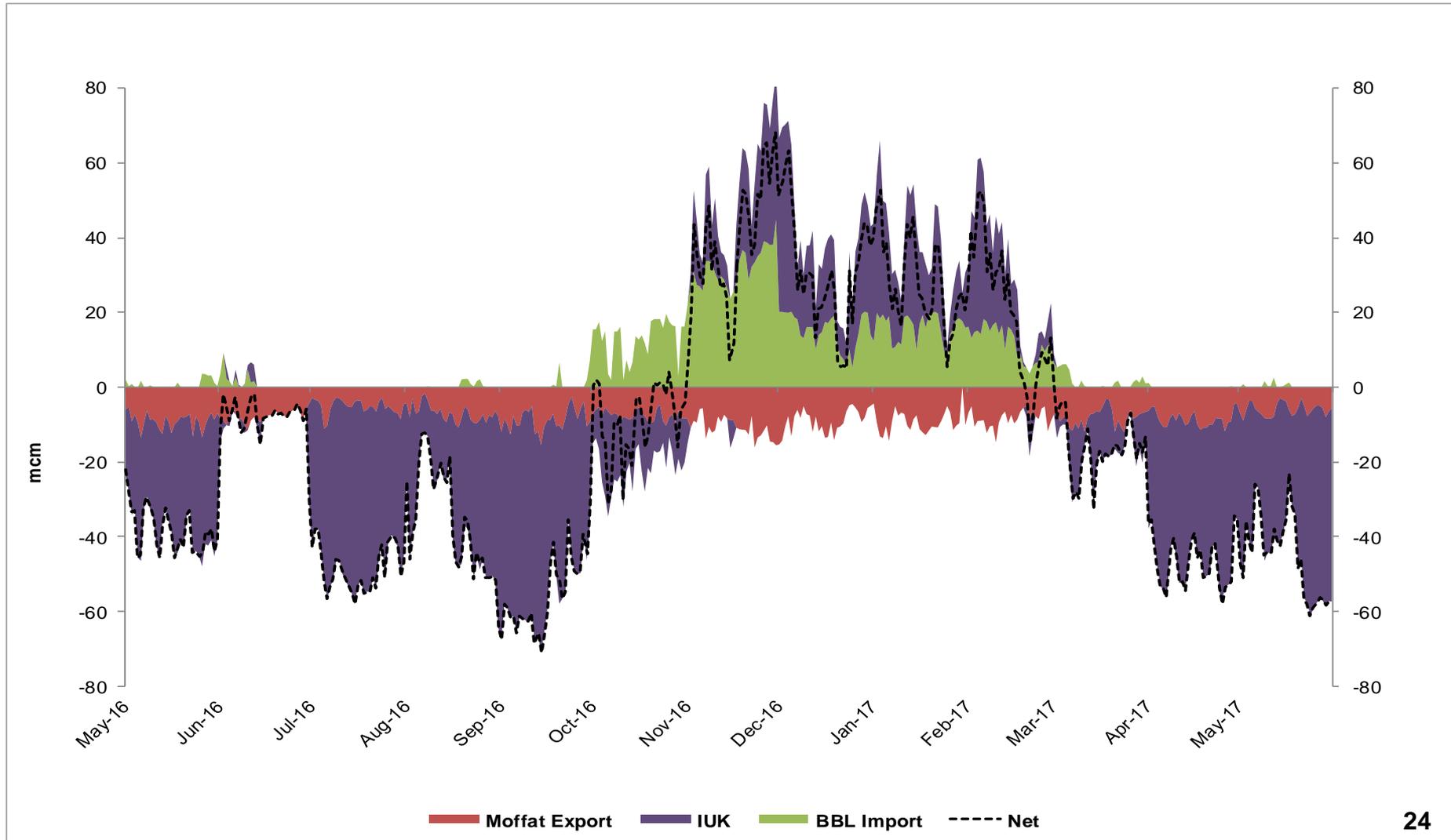
Gas Demand Breakdown

1st April 2017 to 31st May 2017 vs same period over the previous 6 years



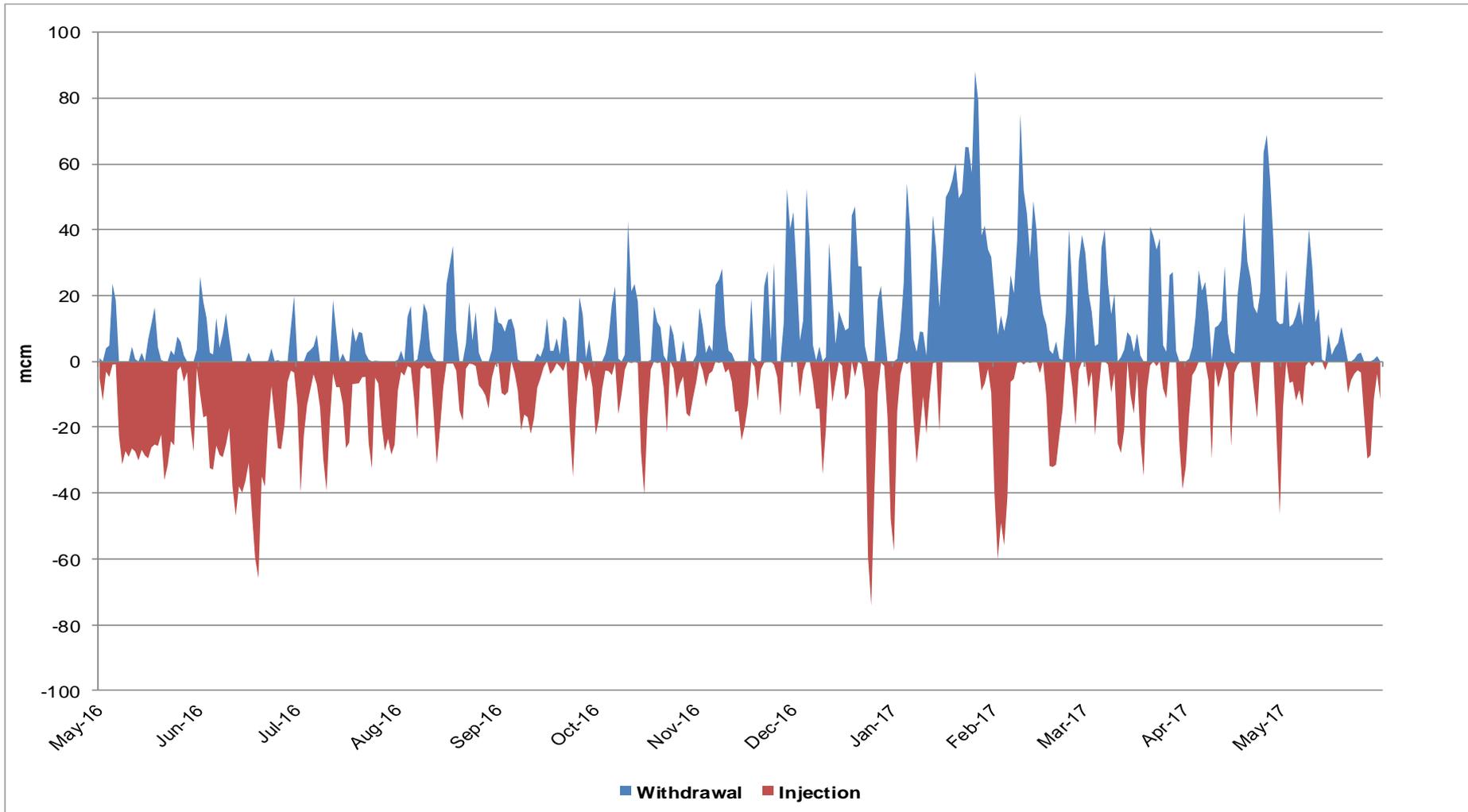
Gas Supply / Demand Interconnectors

1st May 2016 to 31st May 2017



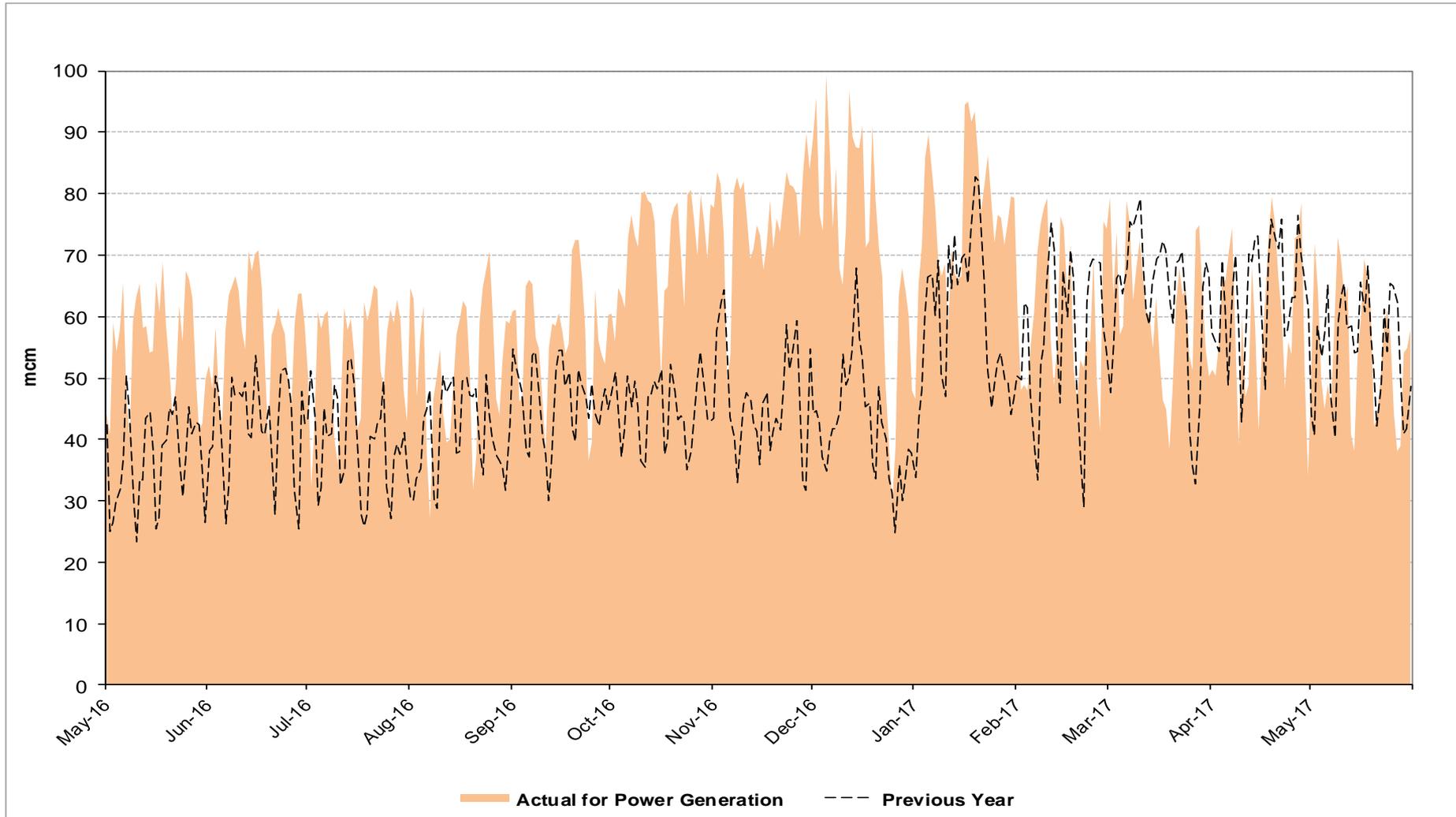
Gas Supply / Demand Storage

1st May 2016 to 31st May 2017



Gas Consumption for Power Generation

1st May 2016 to 31st May 2017 vs Same Period Last Year

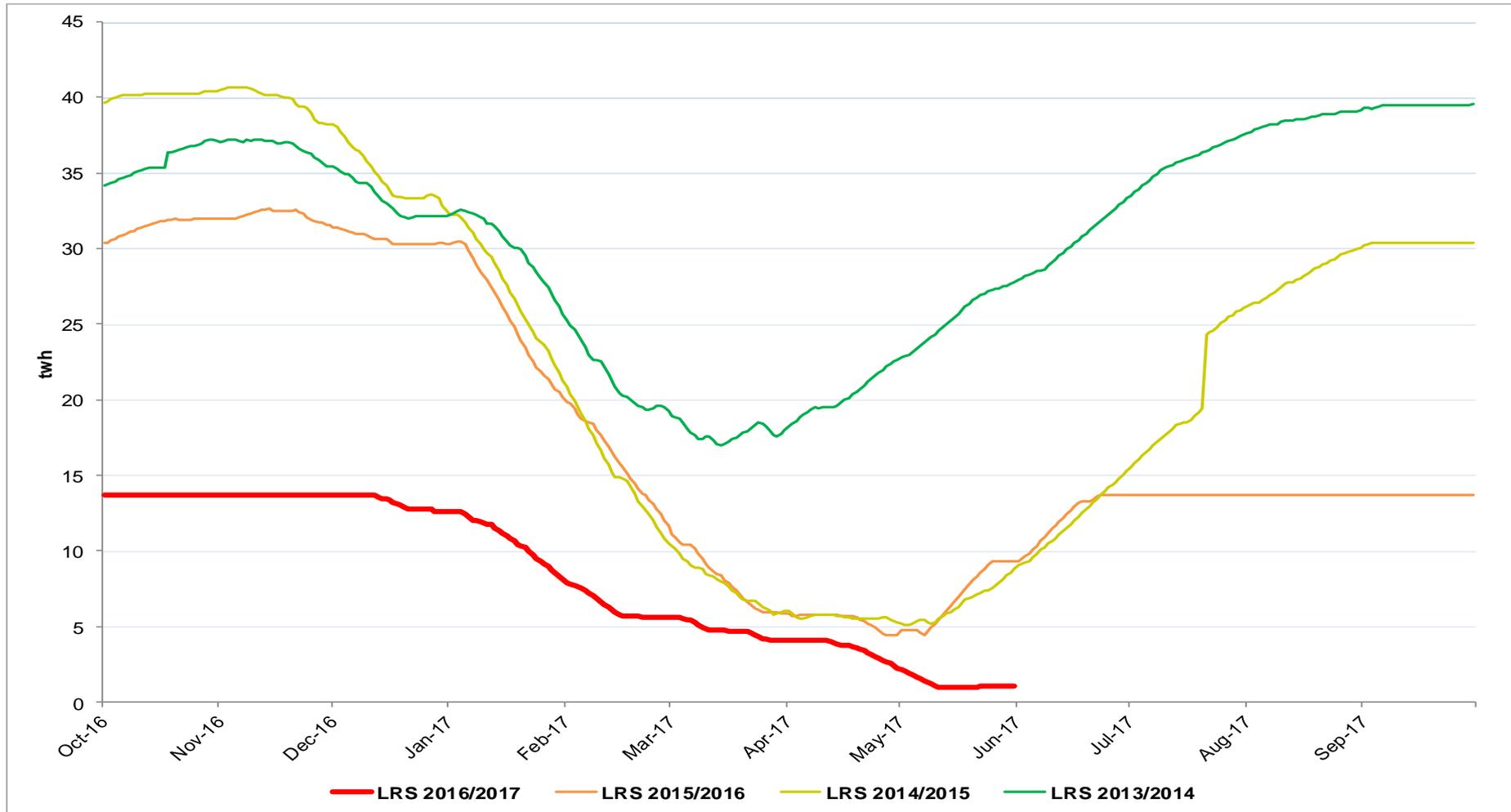


NTS Demand Summer (mcm): 1st April 2017 to 31st May 2017

Exit	Min	Max	Avg	Summer Outlook Range Apr 2017 - Sep 2017	Summer Actual Range Apr 2016 - Sep 2016	Comments															
LDZ	50.4	171.6	107.5	32 - 140 (NDM)	47- 183	<ul style="list-style-type: none"> IUK Exports during April and May 2017 are significantly larger than the same period last year (39mcm/d vs 23mcm/d). This is due to rough storage facility being unavailable. Storage Injection during April and May 2017 is lower than the same period last year (11.5mcm/d vs 19mcm/d); this is also due to the restriction at Rough. Max LDZ demand of 172 mcm is higher than expected due to an unusually cold day in April where total demand reached 306 mcm. 															
INTERCONNECTORS Ireland	2.9	11.8	7.3	7 - 9	2 - 16																
INDUSTRIAL	7.5	13.0	9.0	18 - 26 (DM + Ind)	6- 15 (DM + Ind)																
POWERSTATION	30.2	75.6	53.4	8 - 81	24 - 72																
STORAGE INJECTION	0.0	46.6	7.0	7 - 9	0 - 66																
INTERCONNECTORS IUK	18.4	54.4	38.9	0 - 46	0 - 56																
						<table border="1"> <thead> <tr> <th>Exit</th> <th>Min</th> <th>Max</th> <th>Avg</th> <th>2017 Summer Outlook Range</th> </tr> </thead> <tbody> <tr> <td>Demand exc. IUK & SI</td> <td>98.5</td> <td>262.1</td> <td>177.2</td> <td>76 - 241</td> </tr> <tr> <td>SND exc. IUK & SI</td> <td>123.7</td> <td>236.0</td> <td>181.3</td> <td></td> </tr> </tbody> </table>	Exit	Min	Max	Avg	2017 Summer Outlook Range	Demand exc. IUK & SI	98.5	262.1	177.2	76 - 241	SND exc. IUK & SI	123.7	236.0	181.3	
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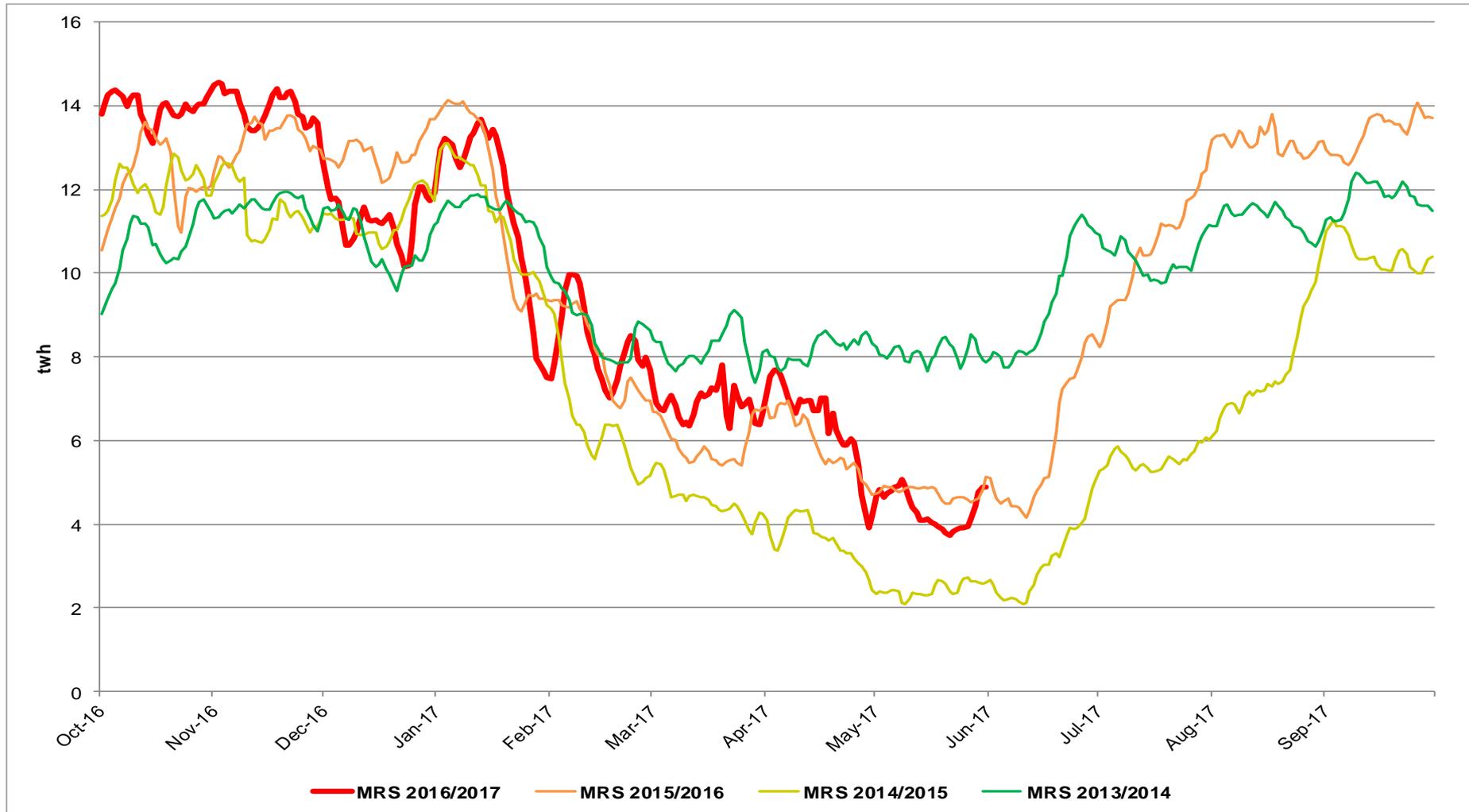
Storage Stocks: LRS

Position as at 31st May 2017



Storage Stocks: MRS

Position as at 31st May 2017



Capacity Neutrality: 1st April 2017 to 31st May 2017

Revenue / Costs	Apr 17 to May 17	Apr 16 to May 16	Comments
WDDSEC/DAI Entry Capacity Revenue	-£169,185	-£117,364	* Entry Capacity Overrun Revenue data not yet available for May 2017
Total Entry Constraint Management Operational Costs	£100,000	£0	
Entry Capacity Overrun Revenue	-£560,278*	-£189,936	
Non-Obligated Sales Revenue (Entry only)	-£646	-£169	
Revenue from Locational Sells and PRI Charges	£0	£0	
Net Revenue	-£630,109	-£307,469	

APX Market Prices (p/th)

Min / Max

	SAP	SMPB	SMPS
Apr 17 to May 17	36.2 - 44.4	37.3 - 45.6	34 - 43.3
Apr 16 to May 16	26.2 - 37.7	27.3 - 38.8	25.1 - 36.6

Net Balancing Costs

	Imbalance	Scheduling	OCM	Net
Apr 2017	£76,926 (CR)	£335,122 (CR)	£3,796,217 (CR)	£4,208,264 (CR)

Energy Balancing: 1st April 2017 to 31st May 2017

NGG Balancing Actions	Apr 17 to May 17	Apr 16 to May 16	Comments
Buy Actions	4 (20%)	2 (11%)	<ul style="list-style-type: none"> • Buys and sell actions in the first 2 months of FY 2017 are similar to the previous year with significantly more Sell actions than Buys seen in both years • There have been 16 Sell actions so far in Summer 2017 [Apr: 14, May: 2]. • There have been 4 Buy actions so far in Summer 2017 [Apr: 2, May: 2].
Sell Actions	16 (80%)	16 (89%)	
Buy Actions [Volume: Gwh]	96	39	
Sell Actions [Volume: Gwh]	-377	-294	
Number of Balancing Actions	20	18	
NGG set Default Marginal Prices [SMPB: Average %]	0%	0%	
NGG set Default Marginal Prices [SMPS: Average %]	2%	5%	

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TPG Dashboard

22/06/2017

Daily Service Performance

			Weekly RAG												* Ongoing Business process reporting will start from 6th June * Reporting period is D-1
Process	1st Run	Frequency	First Run	06-Jun	07-Jun	08-Jun	09-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	19-Jun	20-Jun	Executive Summary
SERVICE PERFORMANCE															
UKLP Core System (e.g. SAP IS-U, AMT, PO, BW, Online Services)	N/A	Daily	G	G	G	G	G	G	G	A	A	A	G	G	No further issues reported on portal performance. Xoserve is continuously engaging with the Industry participant who are experiencing the issues
Time to Fix / Resolve P1 <4 hrs	N/A	Daily	G	G	G	G	G	G	G	G	G	G	G	G	
Time to Fix / Resolve P2 <8hrs	N/A	Daily	G	G	G	G	G	G	G	G	G	G	G	G	
Time to Fix/Resolve P3 <12 hours	N/A	Daily	G	G	G	G	A	A	A	A	A	A	A	A	Further analysis taken place and improvements in place to ensure customers are advised of progress and resolution and when tickets have been closed Enhancements continues to be in place and progress monitored with the industry
Exception Resolution Performance	N/A	Daily	G	G	G	G	A	A	A	A	A	A	A	A	Meter read update exceptions created due missing daily meter reads. Fix in progress
Query Resolution Performance	N/A	Daily	G	G	G	G	G	G	G	A	A	A	A	A	Part of Incident Management process

			Weekly RAG												* Ongoing Business process reporting will start from 6th June * Reporting period is D-1
Process	1st Run	Frequency	First Run	06-Jun	07-Jun	08-Jun	09-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	19-Jun	20-Jun	Executive Summary
BUSINESS PROCESS PERFORMANCE: DAILY RUN PROCESSES															
DM Gas Nominations & NDM Demand Estimation processes	1st June	on dates	R	G	G	G	G	A	A	A	G	G	G	G	Monitoring still in place
Forecast Unidentified Gas processes	1st June	on dates	A	G	G	G	G	A	A	A	A	A	G	G	Individual organisations are being advised to reach out to Xoserve if they feel they have an issue . UIG is working ,however, Xoserve will continue to support individual organisations with their understanding of the issue. The UIG pack issued w/c 12Jun17 will be re-published for information.
DM Gas Allocations & NDM Demand Estimation processes	1st June	Daily	R	G	G	G	G	A	A	A	G	G	G	G	Monitoring still in place
Actual Unidentified Gas processes	1st June	Daily	A	G	G	G	G	A	A	A	A	A	G	G	Individual organisations are being advised to reach out to Xoserve if they feel they have an issue . UIG is working ,however, Xoserve will continue to support individual organisations with their understanding of the issue. The UIG pack issued w/c 12Jun17 will be re-published for information.
Daily Delta Portfolio File to iGT	1st June	Daily	G	G	G	G	G	G	A	A	A	A	A	A	Recognised the comments from previous TPG on producing multiple IDL files .Incident has been raised and currently being assessed. Daily communications are taking place with iGTs to manage their concerns

Daily Business Process Performance(2)

			Weekly RAG												* Ongoing Business process reporting will start from 6th June * Reporting period is D-1
Process	1st Run	Frequency	First Run	06-Jun	07-Jun	08-Jun	09-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	19-Jun	20-Jun	Executive Summary
BUSINESS PROCESS PERFORMANCE: DAILY RUN PROCESSES															
Processing of Class 4 meter readings	1st June	Daily	G	G	G	G	A	G	A	A	A	A	A	A	There are number of files in pending status to be processed. Xoserve is analysing the issue
SSMP Template	1st June	Daily													Not Received from industry
Supply Meter Point updates via IX files	1st June	Daily	G	G	G	A	A	A	A	G	G	G	G	G	
Estimation processes for Opening reads	1st June	Daily	G												Seen once during transition and worked as expected. The next opening reads expected on 22nd June
Processing of Class 3 meter readings	11th June	Daily													No Class 3 reads received on 20 th June

Daily Business Process Performance (3)

				Weekly RAG	* Ongoing Business process reporting will start from 6th June * Reporting period is D-1
Process	1st Run	Frequency	First Run	Executive Summary	
ADDITIONAL RIAG 1st RUN REQUESTS (ONE OFF)					
Data Enquiry Last Access Report	3rd July			First Run is on 3rd July	
Query Mgt Standards of Service Report	5th July			First Run is on 5th July	
Unique Sites (User Pay) Report	3rd and 4th July			First Run is on 3rd July	
PCD Process – Price Change Data	Oct-2017			The Next Price Change is in Oct 2017.	
BUSINESS PROCESS PERFORMANCE: NON -DAILY RUN PROCESSES FROM JUNE					
Issue AQ notification files	26th June	Monthly		First Run is on 26th June	
Issue Energy Balancing invoice	3 rd July	Monthly		First Run is on 3rd July	
Issue LDZ Capacity invoice	6 th July	Monthly		First Run is on 6th July	
Issue NTS Exit Capacity invoice	6 th July	Monthly		First Run is on 6th July	
Issue NTS Entry Capacity invoice	6 th July	Monthly		First Run is on 6th July	
Issue Commodity invoice	12 th July	Monthly		First Run is on 6th July	
Issue Amendment invoice	26 th July	Monthly		First Run is on 6th July	
Issue NTS Entry Commodity invoice	26 th July	Monthly		First Run is on 6th July	
Annual EUC updates	September	Annual		First Run is on Sept 2017 July	
Application of FYAQ	31 st March	Annual		First Run is on 31st Mar 2018	

Daily Business Process Performance Monitoring -Completed

Process	1st Run	Frequen cy	First Run	06-Jun	07-Jun	08-Jun	09-Jun	12- Jun	13- Jun	14- Jun	15- Jun	16- Jun	19- Jun
DM Estimation processes	1st June	Daily	G	G	G	G	G	G	B				
Issue of Class 1 DM Reads to Shipper	1st June	Daily	G	G	G	G	G	G	B				
Receipt & processing of Class 1 DM Reads	1st June	Daily	G	G	G	G	G	G	B				
Transfer of ownership processes	1st June	Daily	G	G	G	G	G	G	B				
Registration process (effective date of transfer)	1st June	Daily	G	G	G	G	G	G	B				
RGMA updates	1st June	Daily	G	G	G	G	G	G	B				
Registration of an iGT CSEP	1st June	Daily	G	G	G	G	G	G	B				
Registration of an iGT meter point	1st June	Daily	G	G	G	G	G	G	B				
Processing of Class changes	1st June	Daily	G	G	G	G	G	G	B				
Gas Safety Process	TBC	Daily	A	G	G	G	G	G	B				
Issue notification to Networks of invoice issue (SIF/SIR)	1st June	Monthly							B				
Registered User Portfolio Statement	9th June						B						
Daily Delta Portfolio File to GT	1st June	Daily	G	G	G	G	A	G	G	G	G	G	B

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UNC Distribution Work Group

Overview of Unidentified Gas Issues

22 June 2017

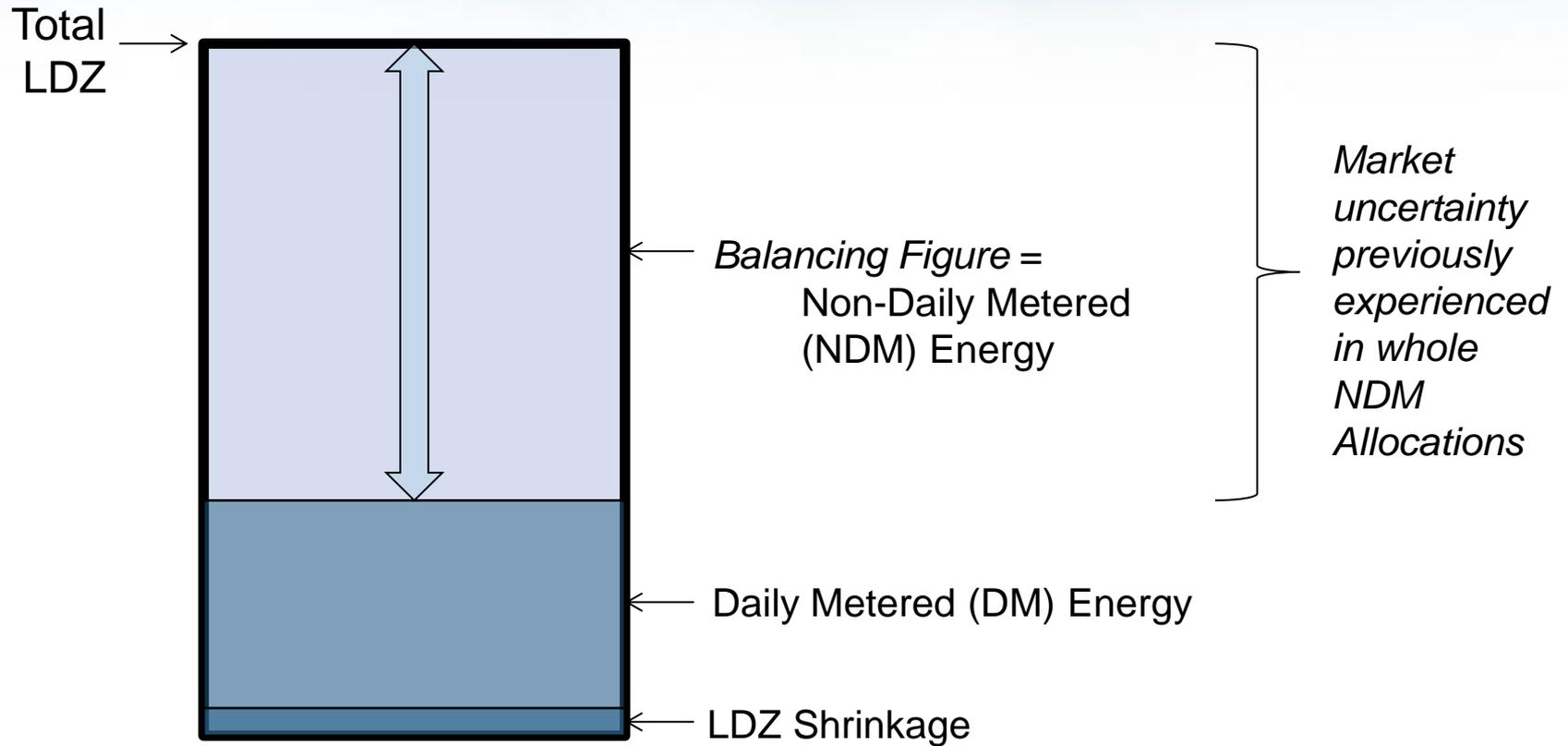
Objectives

- Provide Xoserve understanding of the issue(s) relating to Unidentified Gas (UIG)
- Compare previous and new approaches to Allocation for Non-Daily Metered (NDM) sites
- Explain known influences on UIG
- Review previous analysis of likely UIG levels
- Summarise discussions at June 14th Project Nexus Incident Review Group

Summary of Issues Experienced

- To date (15/06) nine Gas Days have closed out post-Nexus
- Shippers report the following concerns:
 - UIG proportion of Nominations changing noticeably between first and last run on Nominations
 - Noticeable difference in UIG between last run on Nominations and first run of Allocations
 - UIG proportion of Allocations changing noticeably between first and last run on Allocations (D+1 to D+5)
 - UIG as an unexpectedly large positive or negative proportion of LDZ total for some days/LDZs
- Known issues include a large number of DMs being allocated on estimates – due to site set-up inaccuracies

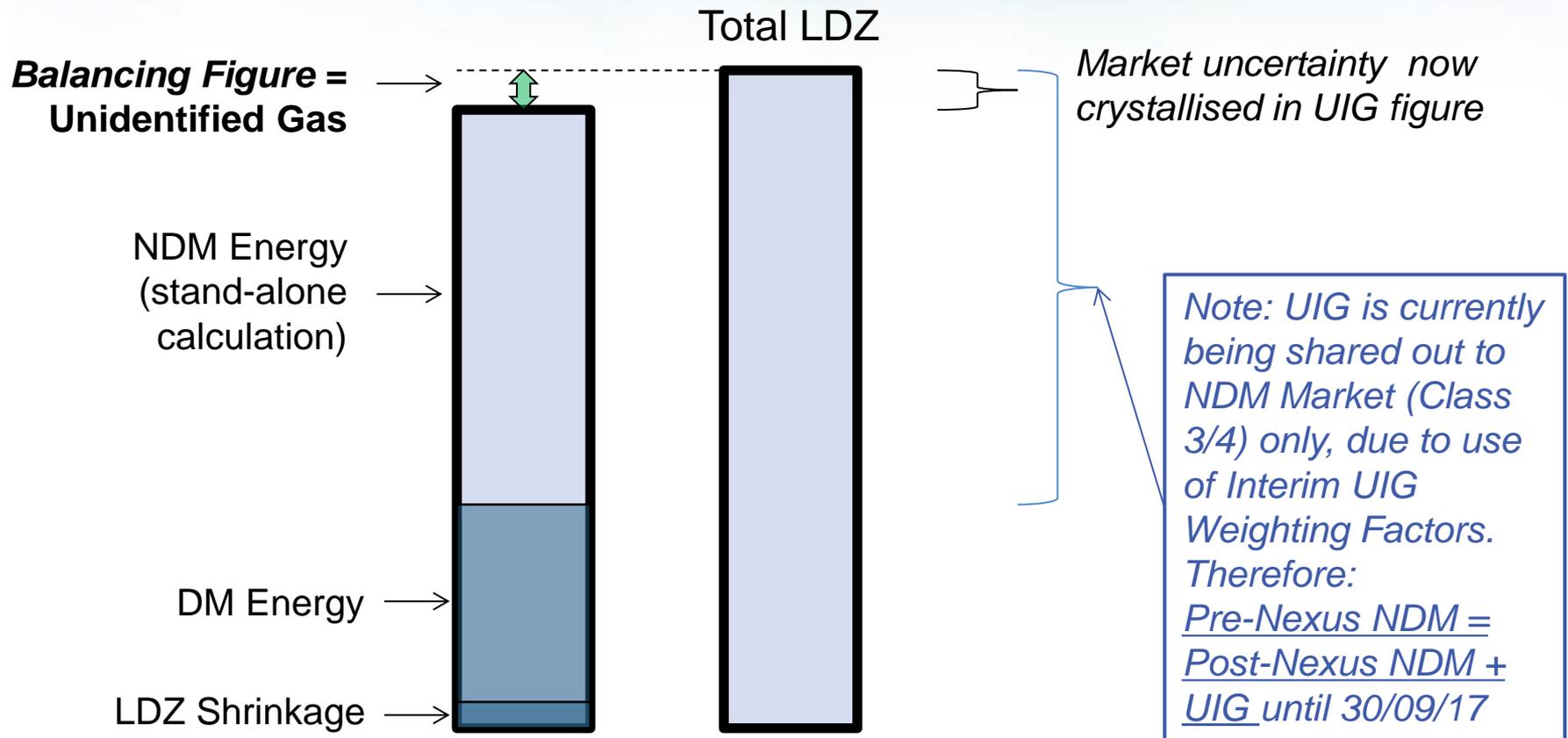
Gas Allocation Pre-Nexus



Notes

- Caution: not to scale
- Same formula used for Nominations and Allocations (with different data sources)

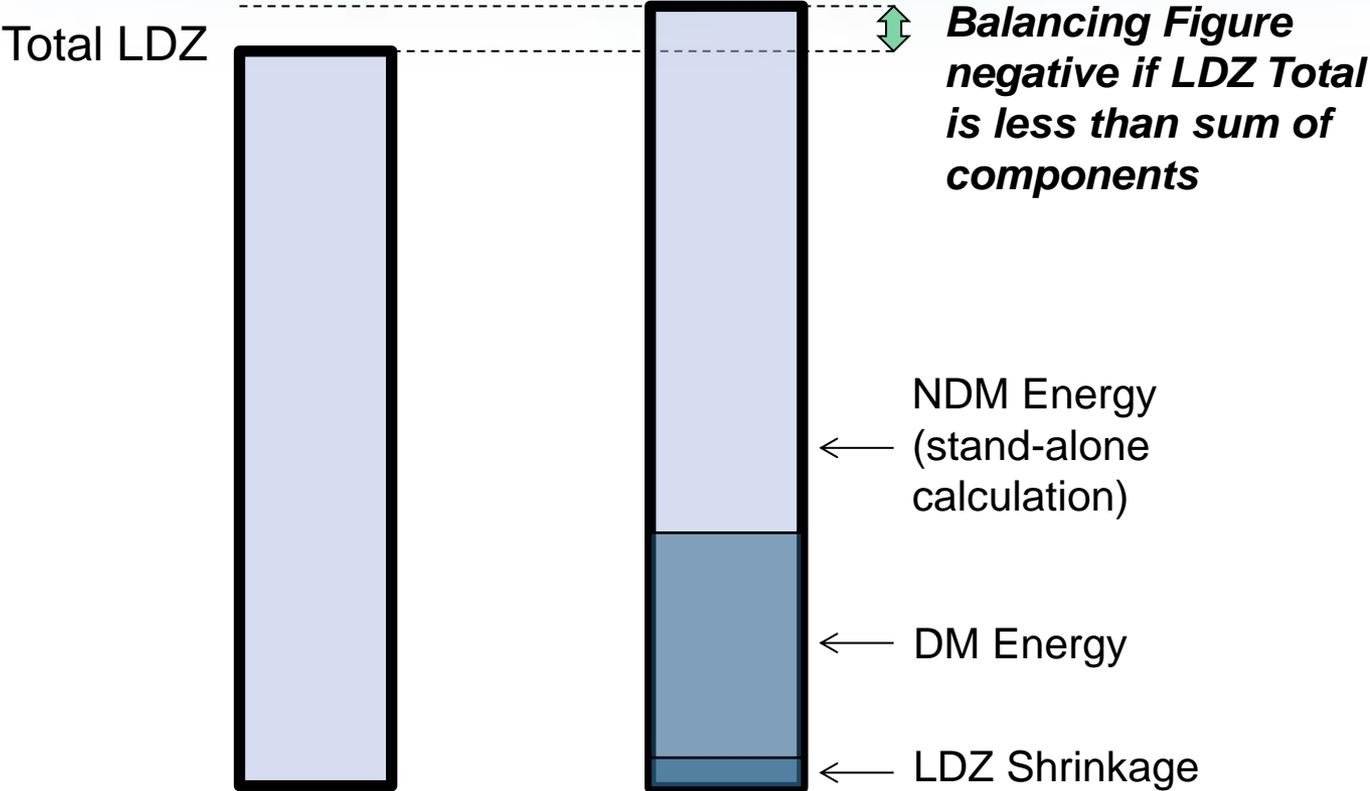
Gas Allocation Post-Nexus



Notes

- Caution: not to scale
- Same formula used for Nominations and Allocations (with different data sources)

Gas Allocation Post-Nexus – Negative UIG



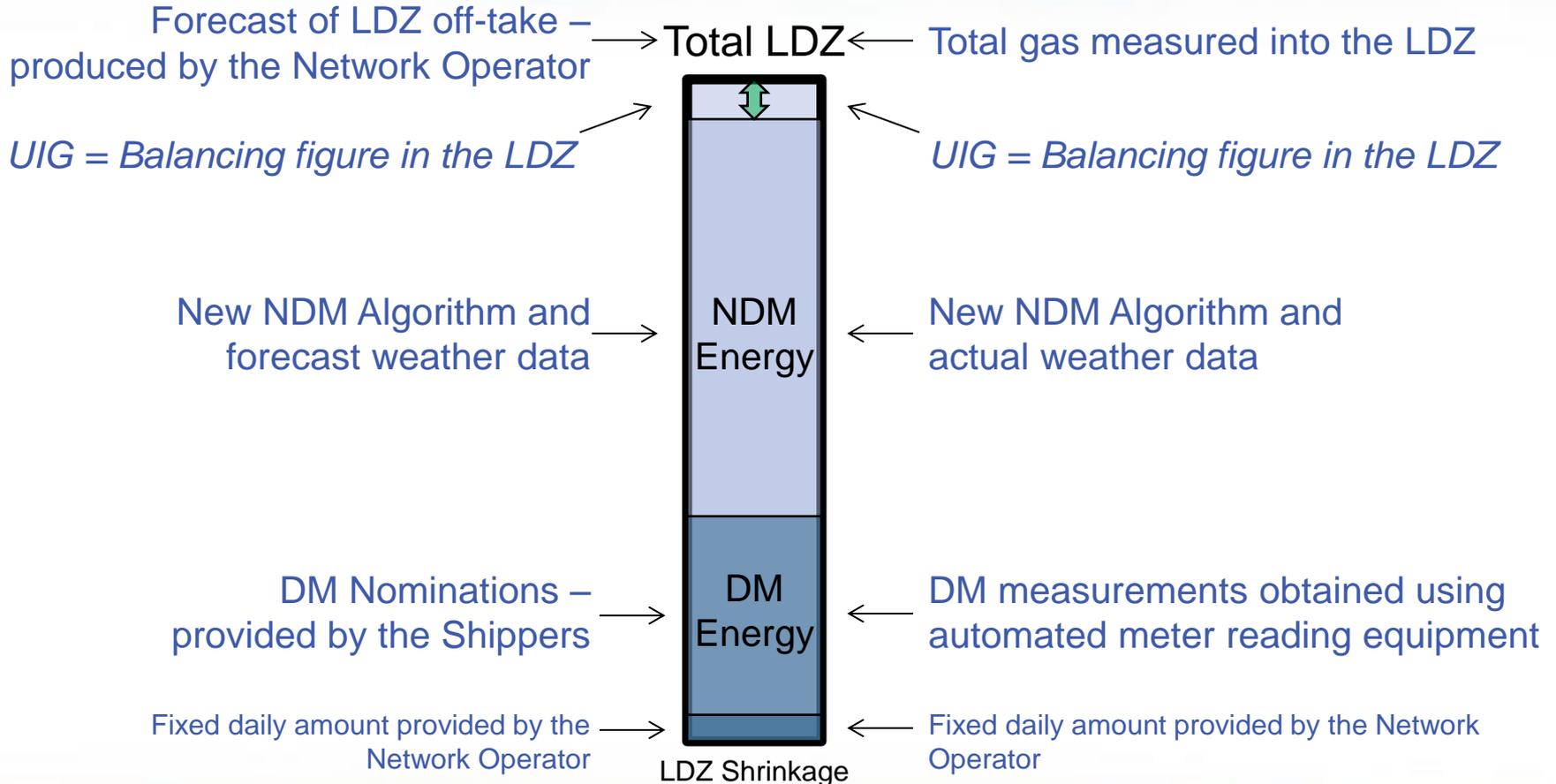
Notes

- Caution: not to scale
- Negative UIG is an interim accounting position until reconciled

Sources of Data

Nominations

Allocations

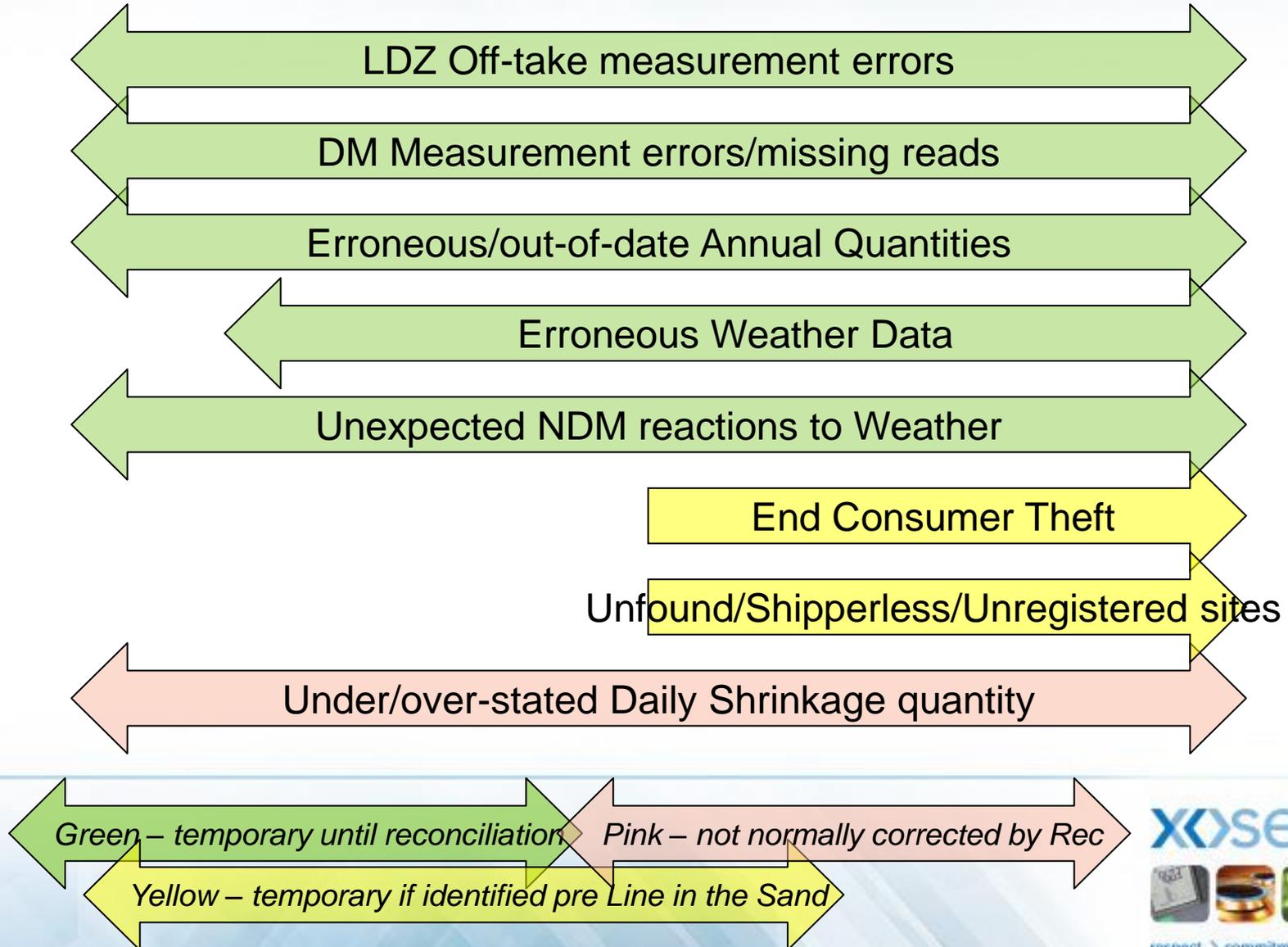


NDM Algorithm uses AQ (Annual Quantity) plus NDM Parameters (ALPs and DAFs) and Actual and Seasonal Normal Weather data

Known Causes of UIG in Allocations

Downward influence

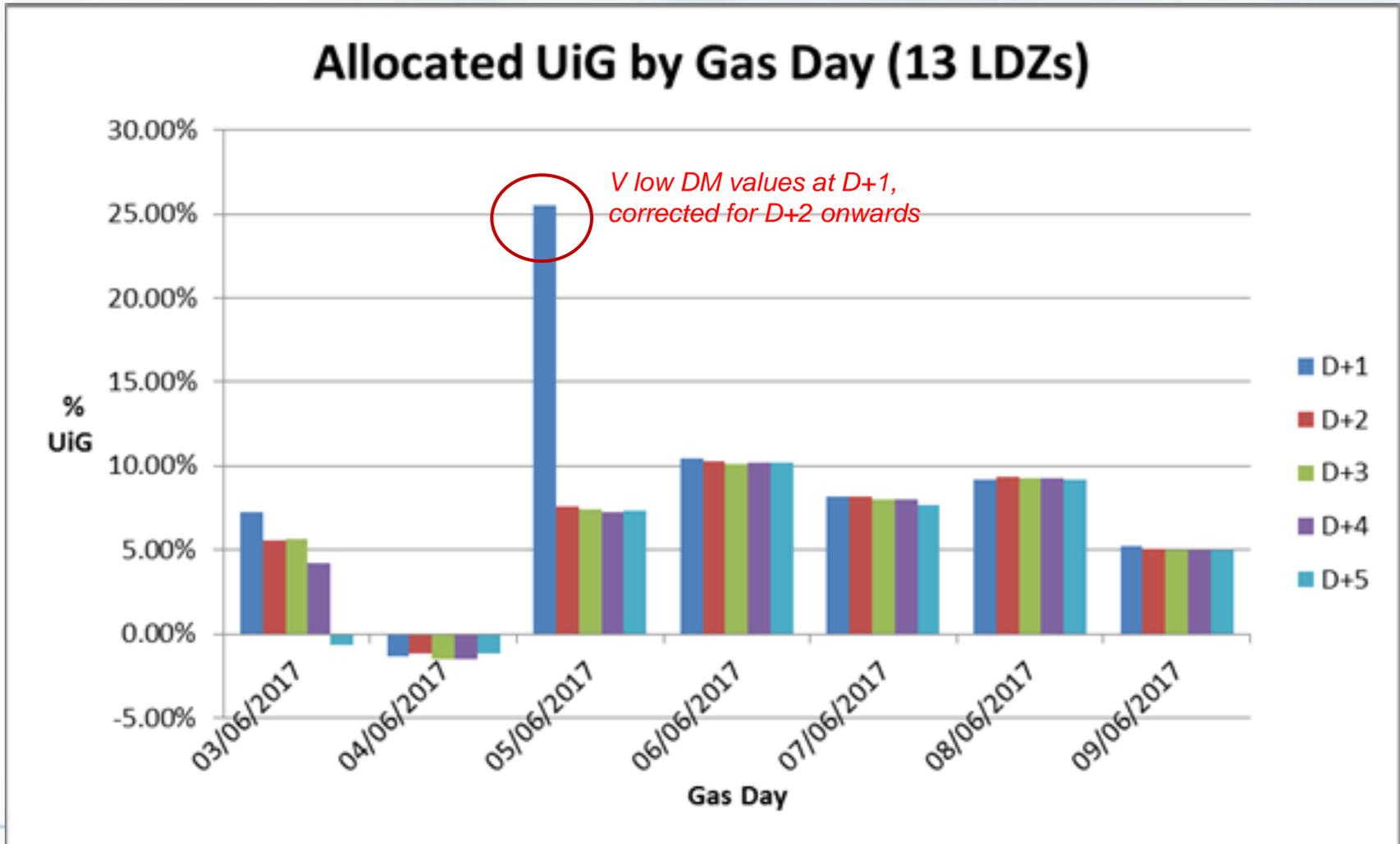
Upward influence



Summary of simulations of UIG – *estimates only*

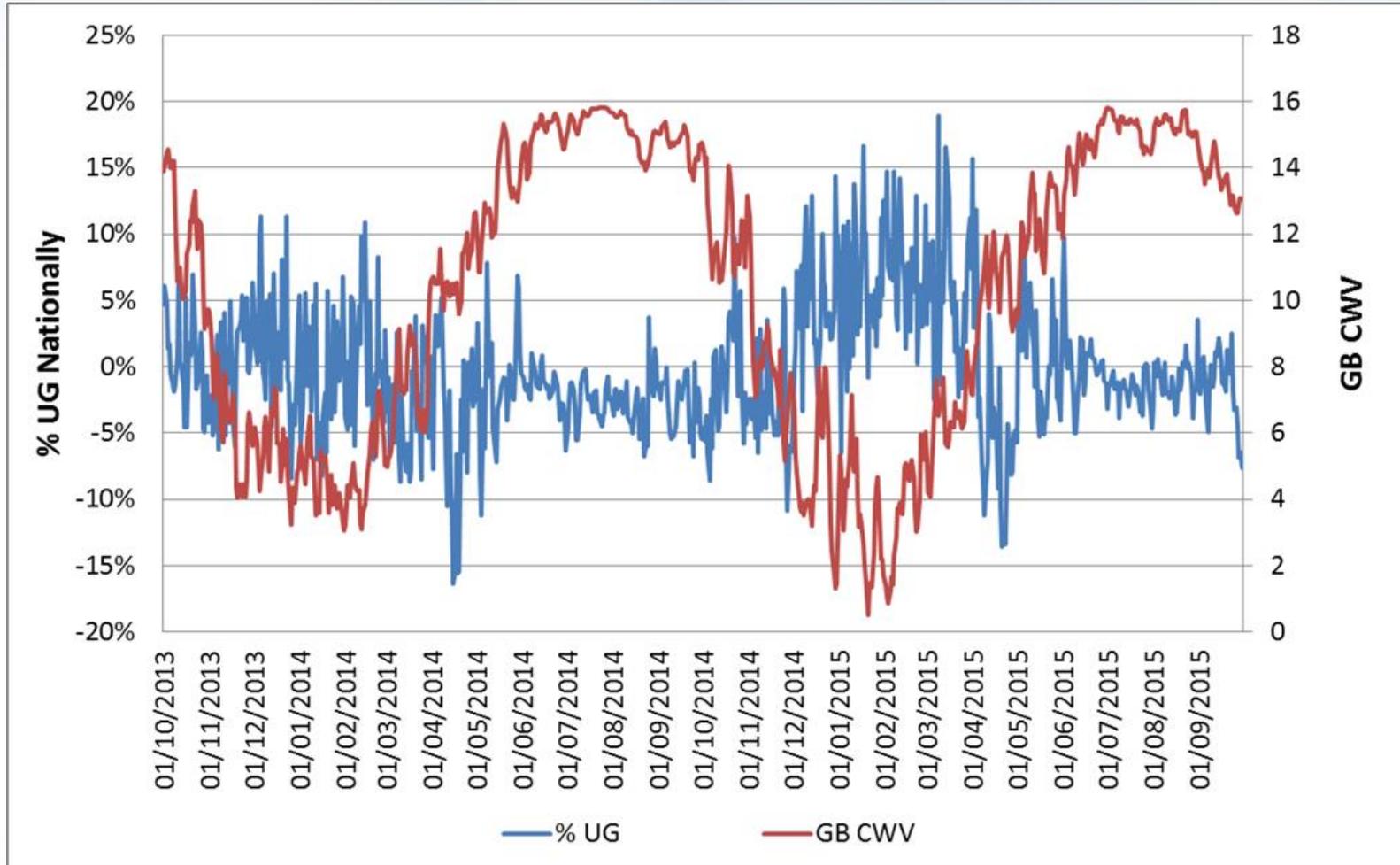
- Xoserve simulation: likely position at D+5
 - Used 4 years of historic actual data
 - Used prevailing AQ – no assessment of rolling AQ impacts
 - Suggested some LDZs had negative UIG overall
 - Updated 95% confidence interval:-12.35 to 11.77
 - Summary on Feb '17 DESC page
 - Daily simulated values on Xoserve secure sharepoint (Folder 18; subfolder “Demand Estimation Project Nexus”)
- Allocation of Unidentified Gas Expert has estimated permanent UIG at Line-in-the-Sand
 - Based on historic meter reads from Sites & Meters and known contributing issues
 - Analysis **suggests** permanent UIG of 1.3% of throughput – at Line in the Sand after all reconciliation has taken place – **also based on simulation**

National LDZ UIG – 3rd to 9th June



Graph to be updated prior to meeting for additional days

Graph of 3 years **simulated** D+5 UIG v Weather



CWV = Composite Weather Variable – daily

Summary of observations

- Key objective of Nexus regime was to make UIG more visible and raise the priority
- Nexus regime went live in early summer – simulation suggested UIG more likely to be negative
- Pre-Nexus NDM = Post-Nexus NDM + UIG *until 30/09/17*
- Most UIG components are resolved by meter point reconciliation and other BAU processes
- Still a very limited track record of UIG
- Xoserve monitoring UIG levels daily, resolving input data issues within D+5
- Ongoing use of estimates for many DM sites is a major cause of uncertainty – affects c 20% of the market in AQ terms

Summary of discussions at IRG

- Project Nexus Incident Review Group met 14 June
- Preceding slides were main focus of discussion
- Some Shippers experiencing very large volatility day on day and between different runs for same gas day
- Other Shippers felt that it was still very early and that UIG was not running at unexpected levels based on analysis presented at DESC
- Xoserve highlighted specific issues for Gas Day 11th and 12th, under investigation
 - Post-meeting note – AQ issues were corrected June 14th, NDM Allocation and UIG re-run June 15th
- Shippers reported seeing D-7 DM estimates returning zeros

Agreed next steps from IRG

- Update at Distribution Workgroup, as per agenda item
- Xoserve actions:
 - Xoserve investigating Shipper reports of DM D-7 estimates returning zeros
 - Xoserve reviewing list of DM sites not able to load actuals to identify patterns/Shipper-specific hotspots
 - Xoserve to continue to monitor daily UIG figures pre-close-out and investigate/resolve anomalies
 - Xoserve to review level of UIG within Nominations process and track trends if possible
- Shippers to raise tickets where they believe that D-7 estimation is not working as intended
 - If last actual read gave zero consumption this would roll forward as D-7 until next actual loads – not an error

xserve



respect > commitment > teamwork

Xoserve Service Desk

Xoserve Service Desk – What do we do?

- Provide a Service Desk to support Xoserve Services 24 x7x365 days a year
 - Log Incidents and Service Requests from internal and external users through phone calls or emails
 - Route tickets to technical teams for triage, investigation and resolution
 - Perform password reset and User ID creation for some Xoserve systems
 - Liaise, update and pass tickets between other service desks such as National Grid and DCC
 - Are the first point of Contacts for Major Incidents, providing escalation and notification for out of hours teams
 - Provide latest status of tickets when requested by users
-



Service Desk – How can You help?

- Service desk require some key clear details such as:
 - Clear description of issue / Contact details / Shipper short code & organisation name / Business impacts, etc.
- If the issue is related with file or screen incidents, Service desk will request for screenshots or error messages.
- Service desk is a catch and dispatch team. They are unable to resolve technical issues.
- Once incident is logged, for any additional information, the resolver groups will be contacting the users directly.
- For minor issues use email for requesting support

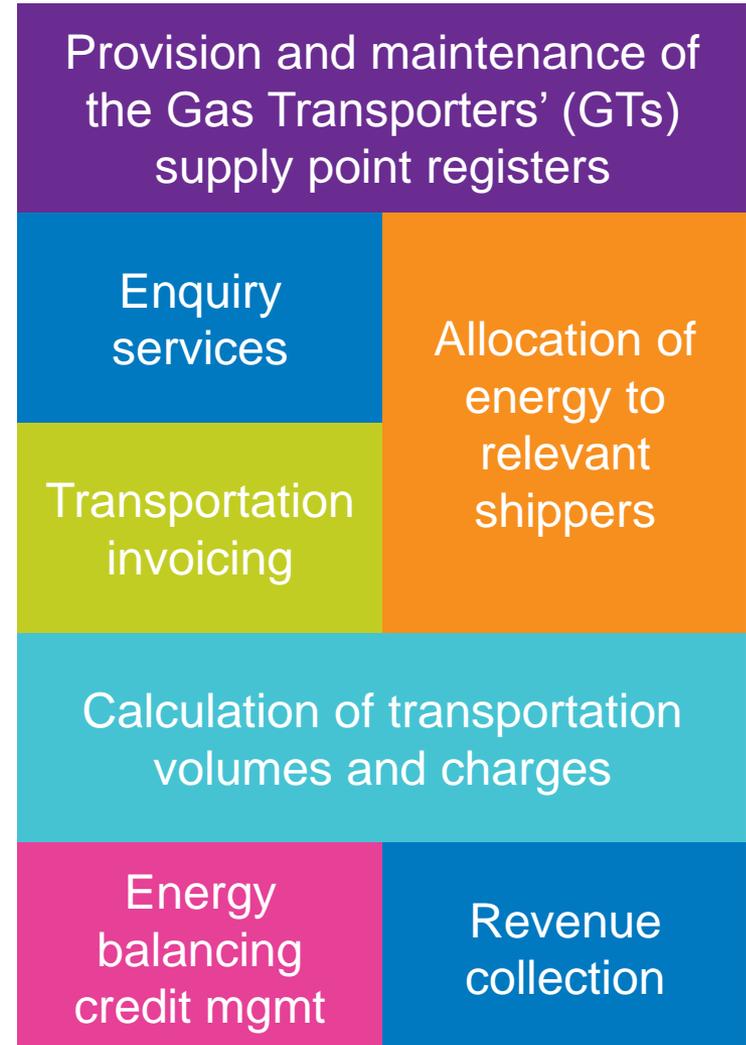
Voice of the Customer on Xoserve Helpdesk



Operational Forum – June 2017
Dave Turpin & Angharad Williams

Xoserve & National Grid

- Xoserve provides a fully integrated suite of services. Some of these performed on behalf of Transmission
- The shareholders of Xoserve are the Transporters
- Xoserve acts as the CDSP (Central Data Services Provider) appointed by Transporters
- Therefore, important to Xoserve and National Grid Gas that Gemini Helpdesk/Service desk meets customer expectations



Contact Us

- We appreciate the feedback received today and would welcome any further thoughts
- We would also be grateful if you could discuss the service provided by the Xoserve Helpdesk with your colleagues and send any feedback to:
 - Angharad Williams (Gas Markets Development, Commercial Analyst);
angharad.williams@nationalgrid.com

Working Lunch



Remember to use
SLIDO - Your feedback
is really important to
us!

slido



OCM MARKET UPDATE

NGG OPS FORUM

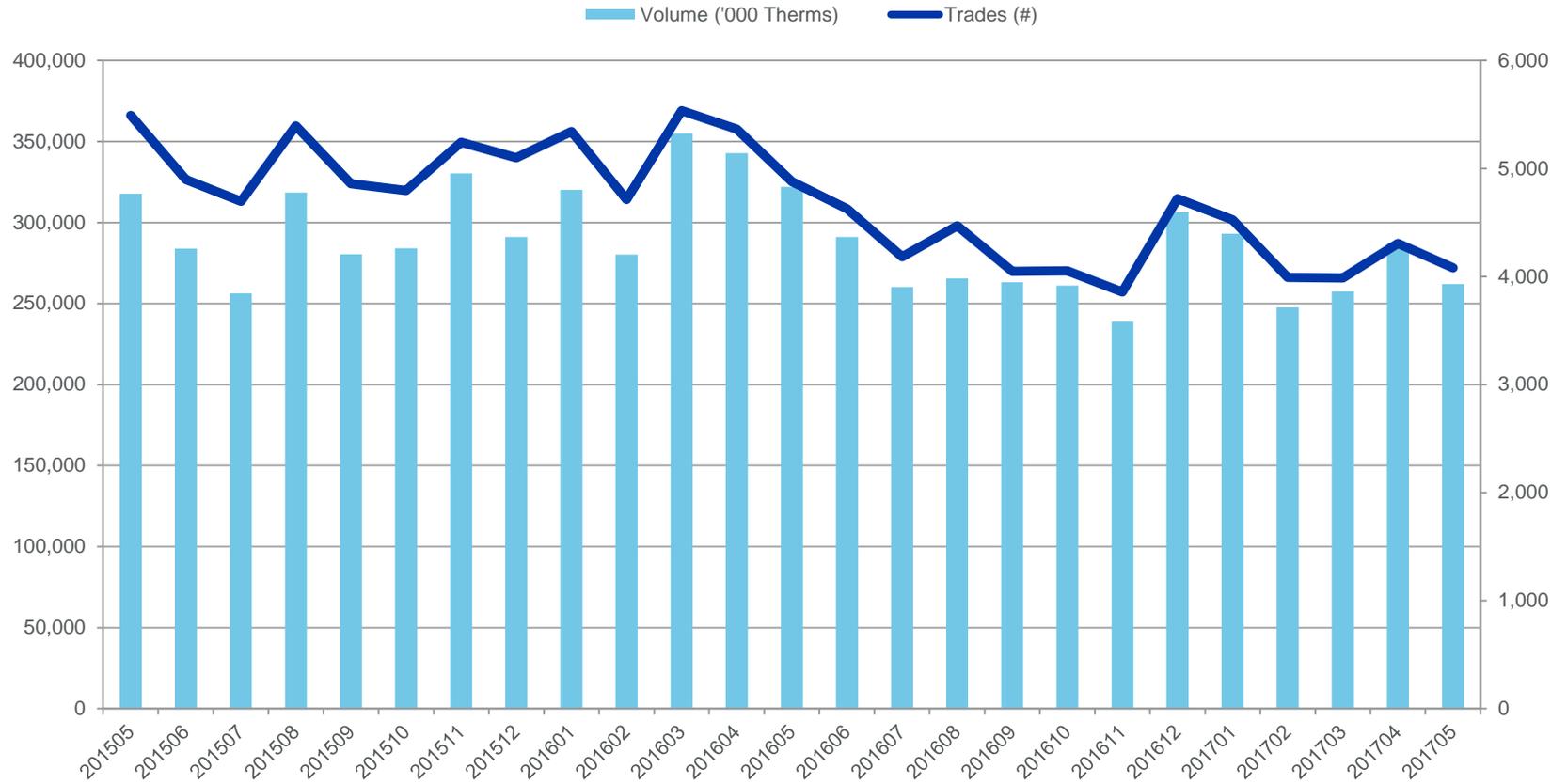
JUNE 22, 2017

CONTENT

- OCM Market Update
- OCM Developments
- AOB

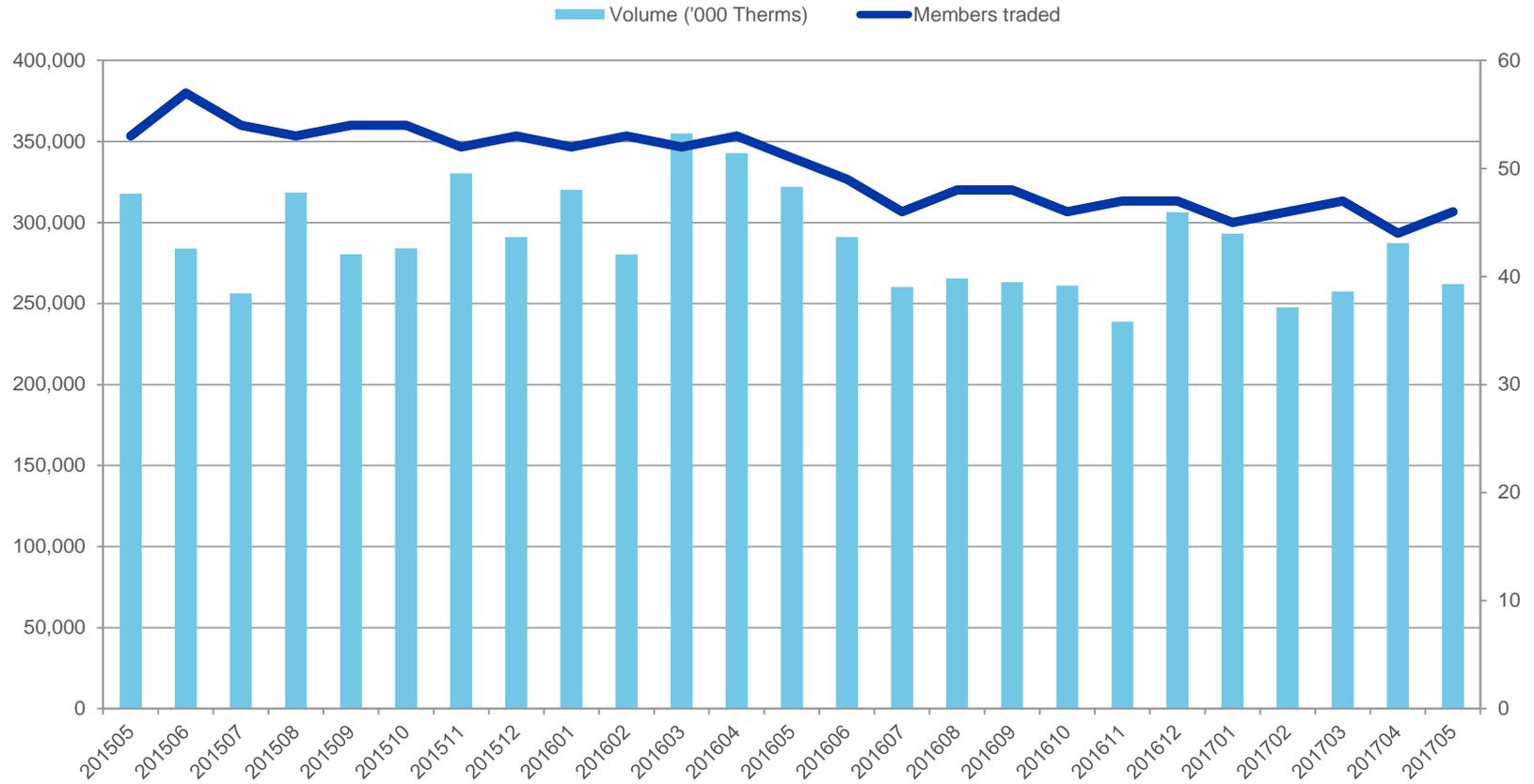
VOLUME AND TRADES PER MONTH

LAST 24 MONTHS



VOLUME AND ACTIVE MEMBERS

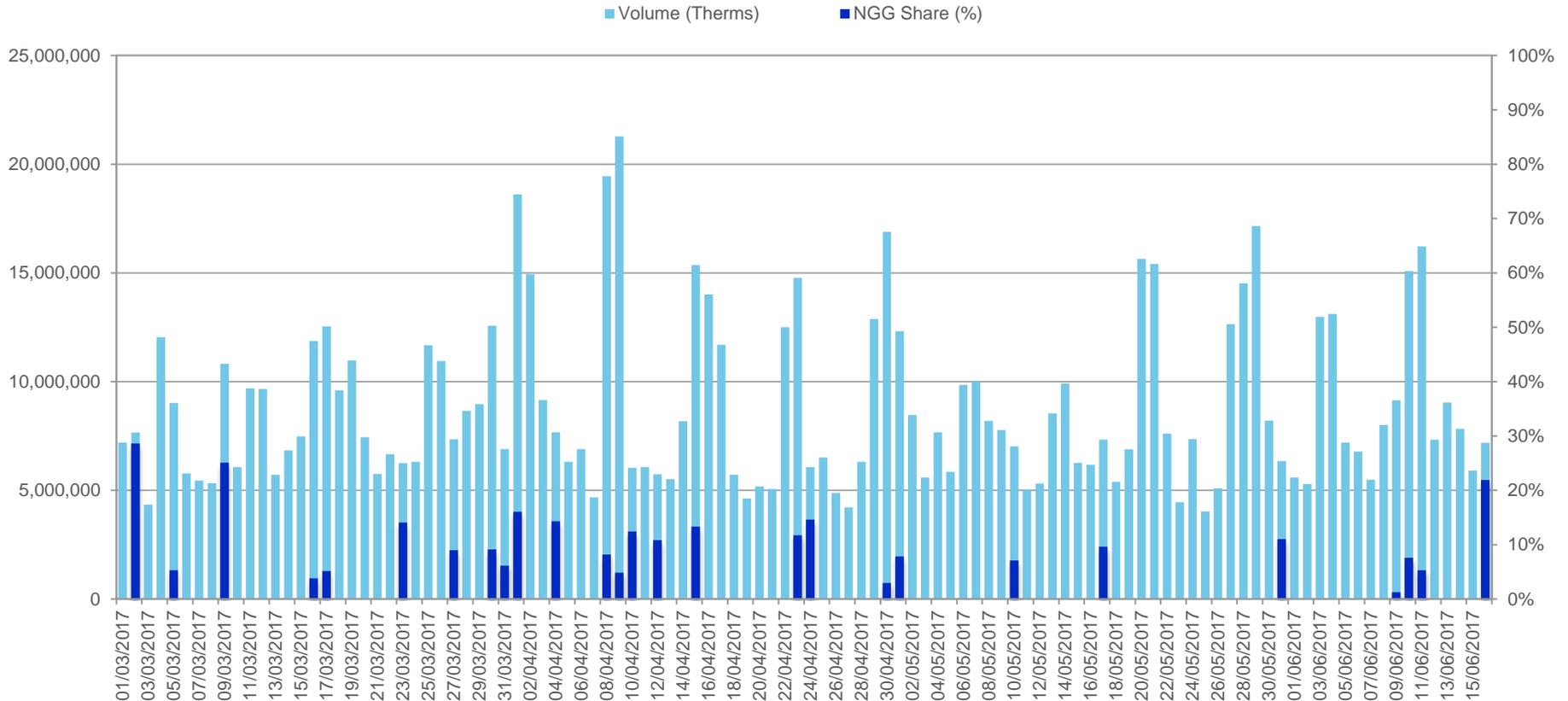
LAST 24 MONTHS



VOLUME AND NGG SHARE PER DAY

LAST 3 MONTHS

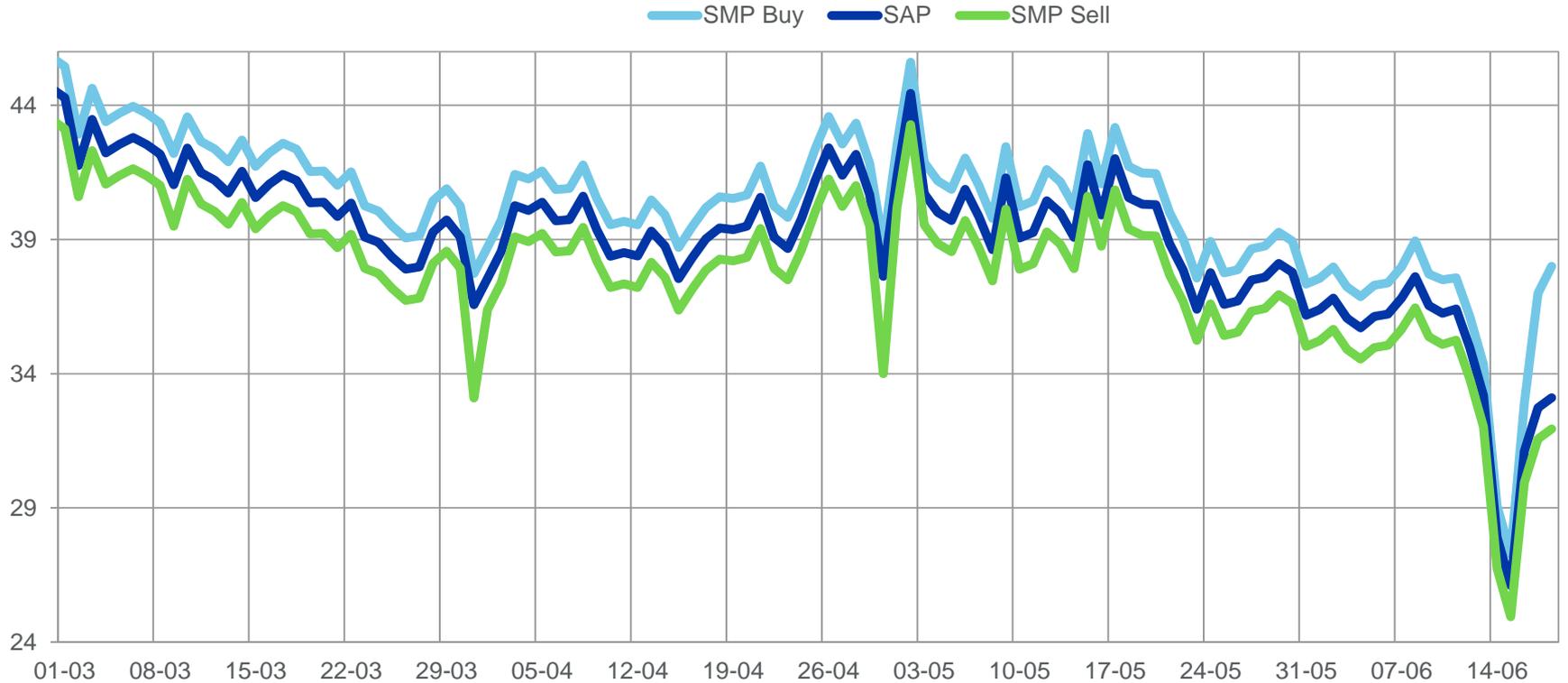
	HIGHEST	LOWEST	AVERAGE
Volume	21,277,000 (09 Apr)	4,032,000 (25 May)	8,919,568
NGG Share	28.6% (02 Mar)		3%



SAP/SMP PRICES

LAST 3 MONTHS

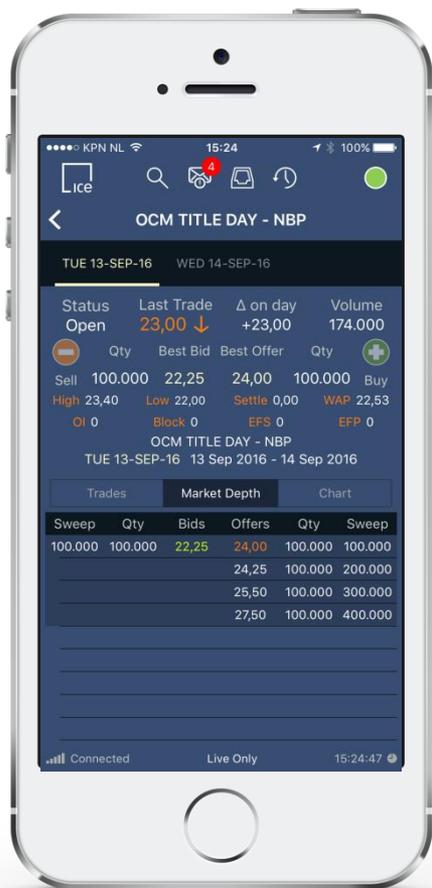
	SMP BUY	SAP	SMP SELL
Highest	45.61 p/th (02 May)	44.44p/th (02 May)	43.28 p/th (02 May Jan)
Lowest	27.27 p/th (15 Jun)	26.11p/th (15 Jun)	24.94 p/th (15 Jun)



FEES

p/therm	Trading	Clearing	Total
Within Hours (Mon-Fri 08:00-18:00)	0.001	0.002	0.003
Out of Hours (Mon-Fri 18:00-08:00, Sat, Sun)	0.003	0.006	0.009
Membership Fee: £15,000 per annum			

Volume related fee programmes available



ICE mobile offers flexible and secure options to deliver the real-time functionality of WebICE directly to your mobile device. WebICE users can choose from three distinct level of access:

View-only: Users can view market prices, news, and alerts on ICE mobile

View/Cancel Orders: Users can view their WebICE Orders and Fills or cancel their WebICE orders using ICE mobile

Trading: Full trading capability featuring powerful security features to control access to mobile functionality via user permissions and account settings

Available for iOS, Android and Blackberry

For more information, please visit theice.com/mobile

AOB

- Release of new ICE Trading Platform release (13.300) on June 26
 - Support for MIFID regulatory requirements
 - Compliance key and associated values support on orders/trades.
 - Short Code application for registering new attributes.
 - Pre-trade transparency - non-executable quotes.
 - Strategy processing uniformity and enhancements.
 - Brand new GUI (ICE Identifier Admin) for customers to enter MIFID related static data.
 - ICE Admin enhancements for market admin to manage strategy market generation.
 - Release Notes can be found in the trader dashboard
 - <https://www.theice.com/dashboards/TraderDashboard.shtml?>
 - The UK OCM Gas Spot market is not in scope for MiFID II and the new release of the ICE Trading Platform does not contain any changes related to the UK OCM Gas Spot Market

THANK YOU

JASON PEGLEY

ICE Futures Europe

Head of Utility Markets

Tel. +44-(0)20-70 65 77 43

Email Jason.Pegley@theice.com

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UNC Modifications/Topics from Transmission Work Group



Operational Forum – June 2017
Karen Thompson

UNC Modification 0607S

- Mod 0607S proposes to increase the CO₂ limit at the NSMP NTS entry point at St Fergus from 4% to 5.5%
- National Grid NTS has completed its asset integrity studies; high level conclusions are:
 - Admission of high CO₂ gas into the NTS would result in pipeline corrosion only if material quantities of water are also present
 - Compression facilities at St Fergus should not be impacted, provided total inerts (ie. CO₂ plus nitrogen) remain below 7%
 - National Grid NTS has therefore requested that this additional limit also be included in the Modification
- National Grid NTS and NSMP are currently considering how a higher CO₂ limit might be time-limited based on a need for use
- Further information may be found at:
<http://www.gasgovernance.co.uk/0607>

UNC Modification 0605S

- Mod 0605S proposes to permit National Grid NTS to utilise to a wider range of Operating Margins gas procurement and disposal trading mechanisms in addition to tender processes
- The main issue arising in the Workgroup has been the treatment of any additional costs caused by a trading error by National Grid NTS
- National Grid NTS is currently working on additional rules for this Modification that will protect shippers commercially in the event of such errors
- The Workgroup agreed to seek an extension from the Mod Panel until July 20th 2017 to complete business rules and legal text to accommodate this expanded scope

Contact Us

- If you have any further questions, or would like to discuss this in more detail – please contact:
- Mod 0600S - Angharad Williams:
angharad.williams@nationalgrid.com
- Mod 0607S – Phil Hobbins:
philip.hobbins@nationalgrid.com

Change Programme



Operational Forum – June 2017
Karen Thompson

GB REMIT



Operational Forum – June 2017
Karen Thompson

GB Remit - Overview

- National Grid host a free portal for GB that users are welcome to use for UMM and this portal facilitates UMM
- Site has been live since 29/12/2016 and to date there have been no outages or loss of service
 - Changes from go live, having listened to our customers:
 - Multi Editing Capability within a company has been added and **now live**
 - XML Uploading of UMM has been added and **now live**
 - Changes to UMM Display (Table and CVS Export) still in build stage and go live date yet to be finalised
- The Project phase has now closed
- National Grid would like to thank parties who supported testing throughout the Project Lifecycle
- If you do not have an account set up or have any issues with this process please contact the mail account below
- Contact mail box.remit@nationalgrid.com

GB Remit – Changes to UMM Display (Future Development)

- **Changes to UMM Display on the NG REMIT Site**
 - Current site displays UMMs as a feed, posted in descending date order.
 - We have had requests that allow UMMs to instead be viewed in a table format.
 - As well as viewing the data in this format, we will also enable the ability to export the selected data as a CSV File
 - We will provide a fifth “filter” to the top of the interface that allows the user to select how they want to view the data, feed or table
 - Feed: Simply show the current front end interface, Table: This will allow “Export to CSV”
- Delivery date yet to be finalised and will be seeking support for testing
- Contact mail box.remit@nationalgrid.com

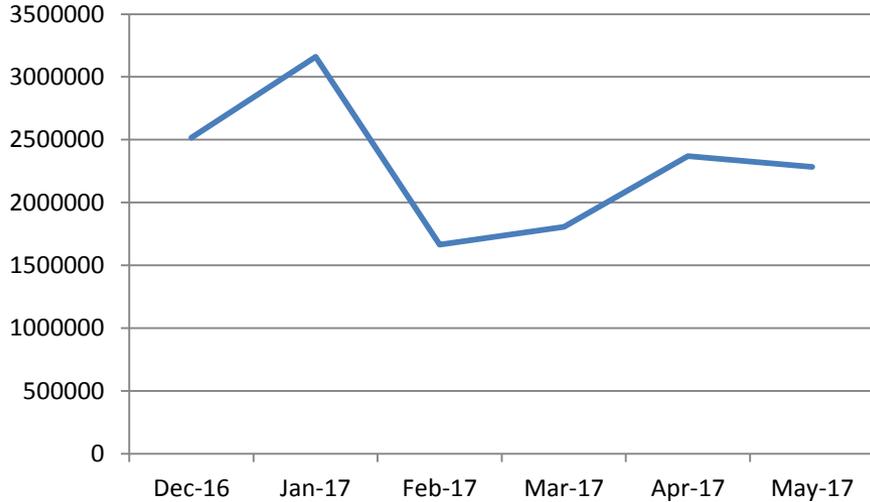
MIPI Statistics



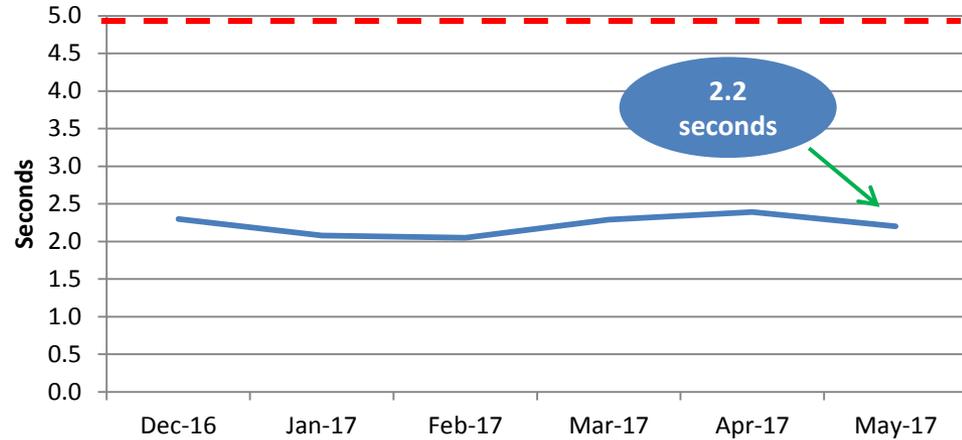
Operational Forum – June 2017
Karen Thompson

IS Service Management – MIPI Performance – May 2017

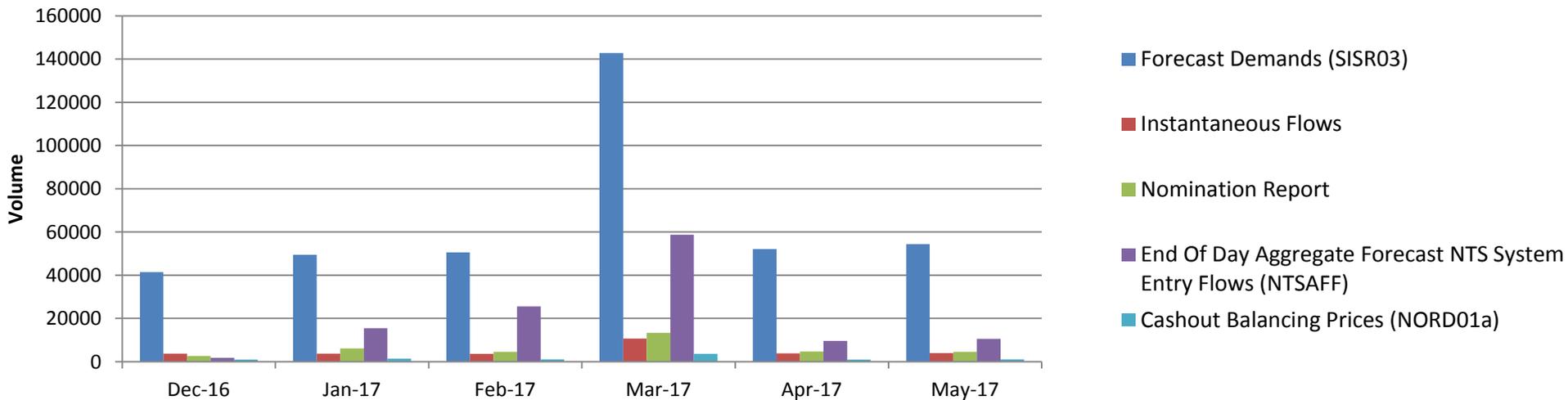
Average Hits Per Month Dec 16 – May 17



MIPI Load Speeds



TOP 5 – Popular Reports



EU Gas Regulatory Change Programme



EU Change 2017 – CAM, Incremental & Transparency

Scope

The National Grid EU Phase 4a project is delivering the following changes:

- **EU CAM Code - Incremental Capacity demand, assessment and allocation Process (IP PARCA)**
(by Q4 2017)
- **EU CAM Code Amendments**
(13th August 2017)
- **Negative Implied Flow Rates – Bacton IPs only**
(13th August 2017)
- **Transparency data publication**
(2nd December 2017)

Shipper Information

Minimal system and process impact to shippers:

- **Gemini Change**
 - Four auctions for IP Quarterly Capacity replaces 1 auction
 - IP Annual Yearly Auction is moving from March to July
 - 2 new reports will be available to view
 - Some operational systems improvements
 - Negative Implied Flow Rate nomination functionality (Bacton IPs only)
- **Interface changes with PDWS**
 - Additional Transparency Data
- **Process Change**
 - CAM Incremental – Market Demand Assessment window is now closed with no expressions of interest received

Negative Implied Flow Rates (NIFR)

- National Grid are making system changes to allow Shippers the flexibility to place a Nomination that breaches the NIFR rule at Bacton IPs
- The process for requesting an NIFR Nomination at Bacton IPs will be very similar to the existing process for requesting a GB NIFR Nomination
- National Grid will endeavour to complete any NIFR requests that are submitted in a timely manner, whilst balancing other priorities in the Control room.
- Due to the IP Matching Process NIFR functionality is being implemented in Gemini for Bacton IP only.
- National Grid is going to arrange a Webinar for Users in July/Aug so that the updated process and system solution can be explained in further detail.
- Please contact Jen Randall if you are interested in taking part:
jennifer.randall@nationalgrid.com

August 13th Implementation

- **Gemini Implementation is scheduled for Sunday 13th August**
- **After further analysis it has been confirmed that an extended Gemini outage is NOT required**
- **All the implementation activities will now take place in the planned Gemini Maintenance Window (03:00-05:00)**
- **If you experience any system issues please use the existing Xoserve Gemini Service Desk contact number**
- **Please contact the NG EU Gas Regulatory Change team via email for any other issues relating to these changes**



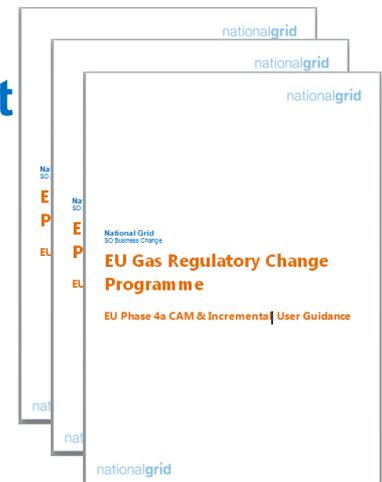
Next Steps

We will continue to communicate with the industry through in the following channels:

- ❑ Gas Ops Forum
- ❑ Transmission Workgroup
- ❑ EU Gas Regulatory Change E-Mail Distribution List
- Gemini Screen Pack has been circulated to UK Link Committee and to contacts on the NG distribution list
- User Guidance will be developed and circulated prior to go live
- Reminder regarding NIFR Webinar will be circulated



box.gasops.businesssc@nationalgrid.com



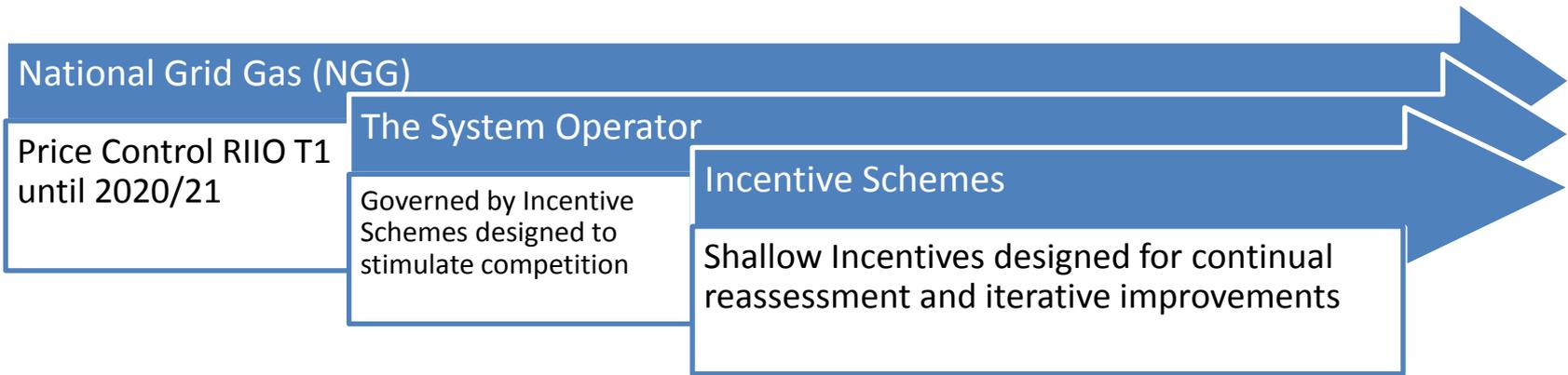
Shallow Incentive Review



Deadline for Responses: 30 June 2017

Operational Forum – June 2017
Joshua Bates

Executive Summary



2014/15 Reassessment

Greenhouse Gas Emissions	Demand Forecasting D-2 to D-5	Maintenance
Extended in 2014	Extended in 2014	Modified in 2014

The Next review is this year for implementation in 2017/18
We would like to hear your views

Overview

Shallow Incentive Review

Greenhouse Gas Emissions

Not fit for purpose

Demand Forecasting D-2 to D-5

No change

Maintenance

Alignment of further works

Also for your consideration

Operating Margins

Sharing risk & reward

Additional Demand Forecasting

Facilitating a market

Greenhouse Gas Emissions

Position

Currently the GHG incentive mechanism includes performance measures that are outside the control of National Grid and its processes.

As the incentive schemes are designed to drive the right behaviours and provide an incentive to optimise processes, we firmly believe that the GHG incentive performance metrics should be modified at this review.

Why Compressors Vent

Venting within National Grid control ~65% ~2,334 tonnes

Planned Vents
~36%

Starter Vents
~2%

Start Up Purge
Vents
~13%

Fuel Gas Vents
~0.1%

ESD Vents
~14%

Venting outside National Grid control ~35% ~1,256 tonnes

Static Seal Leakage
~21%

Dynamic Seal
Leakage
~14%

April 16 – March 17 we vented 3,590 tonnes of Gas

Greenhouse Gas Emissions

Remain focussed on compressor emissions

Remove two types of venting that are out of National Grid Control

Adjust targets to a baseline set by OFGEM (against UK flow patterns and market drivers)

3 Year Scheme (as is standard practice with shallow incentives)

Symmetrical
+/-£1m

Performance calculated on an annual basis

Q. Do you support our proposed amendments to the scheme?

Demand Forecasting D-2 to D-5

Position

Continue to forecast D-2 to D-5 as is, using current mechanism cap and collar targets, the targets remain challenging due to increased supply and demand volatility.

There are no proposed amendments to this incentive

Q. What do you use the forecast for and how often do you use the forecast?

Q. Does the forecast provide a benefit to your organisation?

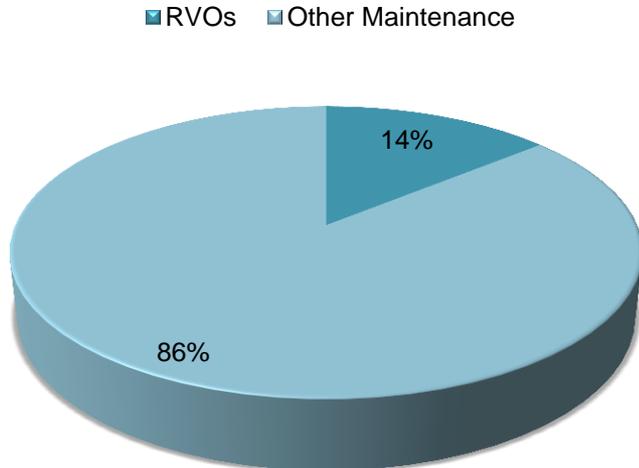
Q. How would you feel if this incentive was to end, meaning we would no longer forecast D-2 to D-5?

Maintenance

Position

National Grid are incentivised to align Remote Valve Operations (RVOs) to other external works in order to reduce the disruption to customers.

National Grid are in a position to incorporate other maintenance works within the incentive



In 2017/18

RVOs will account for 38 maintenance days

243 maintenance days are required for other maintenance activities

These 243 maintenance days are estimated to be worth £24m to the customer

Maintenance

Change of Days Scheme

Continued in current format

Use of days scheme

Alignment of (RVO) to be continued in current format.

Alignment of additional maintenance activities to be included.

Q. Would the proposed changes to the scheme maintain and/or enhance value for your company?

Q. Do you support our proposed changes?

Operating Margins

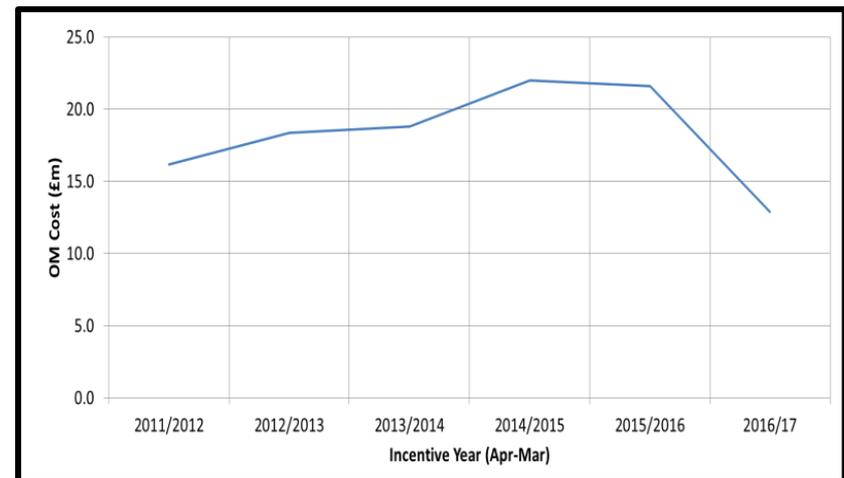
Background

In order to maintain system pressures in the gas network, National Grid may need to utilise Operating Margins gas.

The cost of procuring Operating Margins is passed on to customers. Therefore, Ofgem incentivise National Grid to minimise the costs incurred by customers. Over the past 15 years the incentive has either been financial or reputational.

Currently the incentive is reputational, because, when it was reviewed in 2012, both National Grid and Ofgem felt that there was too much uncertainty over costs to develop a fair incentive. National Grid and Ofgem intended to later review whether it should return to a financial incentive .

As can be seen from the graph, operating costs increased from 2012/13, but since 2015/16, they have been reduced by around 40%.



Operating Margins

Proposed amendments

We are reviewing whether reintroducing a financial incentive would help deliver further customer value.

Rational for the amendment

The cost savings since 2015/16 have been achieved as a result of a number of factors, most importantly the stimulation of a more competitive market through industry engagement to attract new service providers. National Grid has invested resource to put in place a team to deliver this cost saving.

We believe that returning to a financial incentive, whereby National Grid has a stake in both the risks and the rewards of any cost changes, will help ensure that Operating Margins continues to receive the appropriate level of focus in National Grid – at the very least to maintain the new lower cost level, and to also drive for incremental savings which will be increasingly difficult to deliver

Q. Do you agree with the principle that National Grid should share in both the financial risk and reward with customers in order to drive efficient procurement of operating margins?

Further Demand Forecasting

Position

If there is significant customer demand there is scope to provide additional demand forecasting and more publication times:

8 weeks ahead

13 days ahead

10 days ahead

Any other timeframes that you think useful

Q. Would you value an additional forecast? If so, what timeframe(s)?

Q. Do you agree with the principle that National Grid should be remunerated for any additional forecasts through an incentive mechanism?

Contact Details

Matthew Kleanthous

Principal Commercial Developer

matthew.kleanthous@nationalgrid.com

07866 786 514

- Shallow incentive review lead
- Maintenance incentive
- Demand forecasting D-2 to D-5

Joshua Bates

Commercial Developer

joshua.bates@nationalgrid.com

07790 941 158

- Shallow incentive review support
- Greenhouse gas emissions
- Shallow incentive review & new incentives stakeholder engagement coordinator

Sally Thatcher

Principal Commercial Developer

sally.thatcher@nationalgrid.com

01926 655 655

- Operating Margins
- Demand forecasting D-5 to D-10
- New opportunities portfolio lead

Gas System Pressures



Operational Forum – June 2017
Sally Thatcher & Vinny Thiara

Outline of today's session

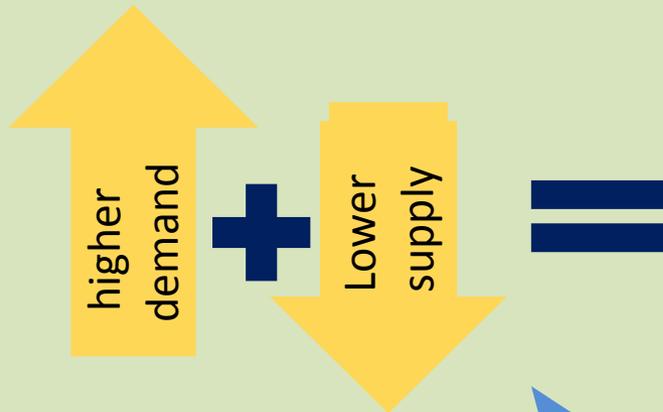
1. Recap summary of what affects NTS pressure
2. What has changed recently
3. What information is available from National Grid
4. What further information is being explored to help with pressure issues

We would welcome further feedback on how pressure issues impact customers and assistance in developing ways to help customers– if you'd like to input, speak to us after the forum or contact:

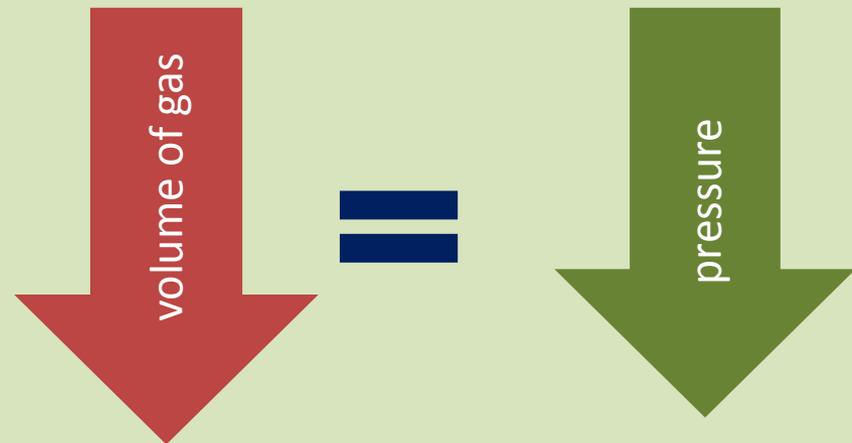
Sally.thatcher@nationalgrid.com (01926 655655)

Pressure levels are primarily affected by the volume of gas within the network

Higher demand and lower supply will lead to a reduced volume of gas within the NTS

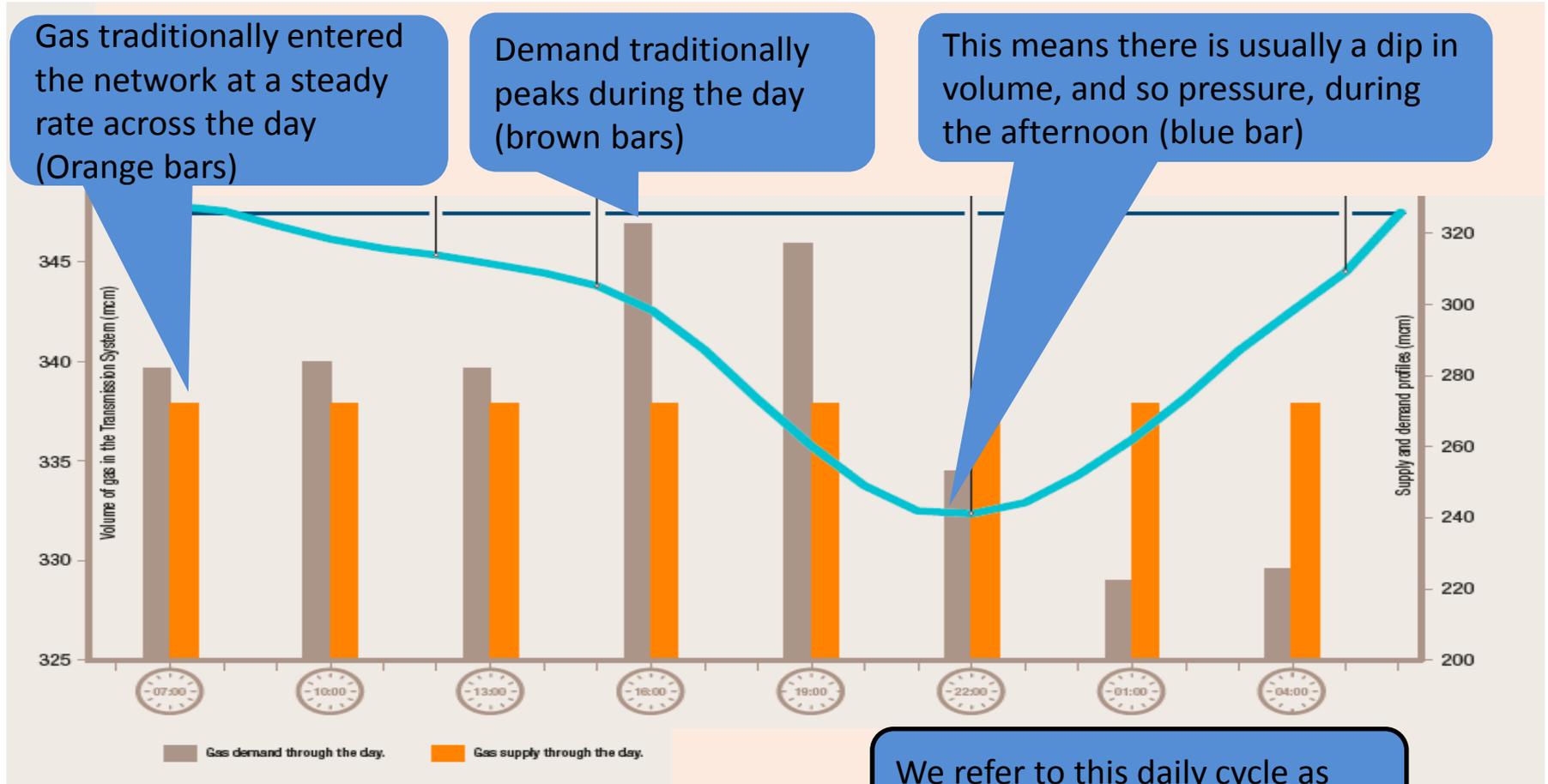


A reduced volume of gas will in turn reduce pressures (and vice versa).



The volume of gas in the network is therefore dictated by shippers, terminals, storage, interconnectors and demand.

Volumes of gas changes throughout the gas day – and therefore so do pressures



We refer to this daily cycle as 'within day linepack swing'

National Grid aims to keep pressures consistent across the network, and must ensure minimum and maximum pressures aren't breached

Some key matters we take into consideration are:

We have to pay particular regard to minimum and maximum pressures

Fluctuations are magnified for smaller pipelines and lower pressures, such as at the extremities of the network.

Large entry and exit points can significantly impact pressures in the local area, particularly where large changes are made quickly

e.g. storage sites

Locations close to compressors will see bigger pressure changes when those compressors change

Changes in one part of the network can lead to consequences for sites on the other side of the country

...and gas is slow to respond to changes!

We try to achieve this at minimum cost to customers, and must be non-discriminatory

The information we use to plan our operations comes from the industry



05:00

Commercial Nominations on Gemini tell us how much gas will flow.

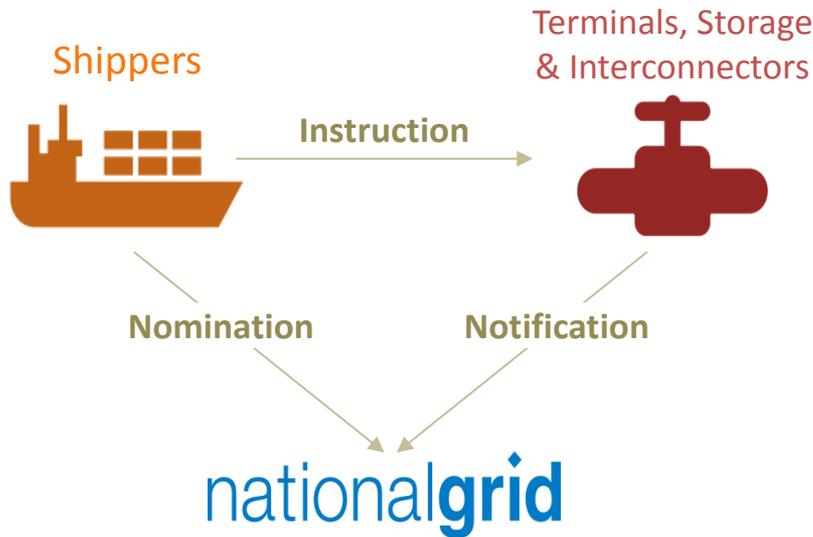
Physical Notifications from each site provide us with the profile of when that gas will flow.



Rest of day

Shippers continue to provide revised Nominations throughout the day.

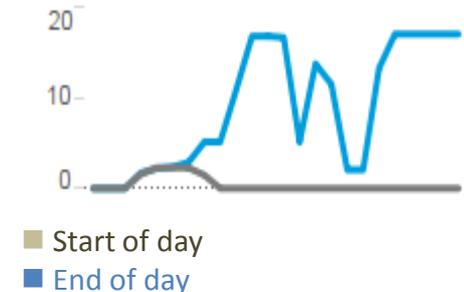
Terminals, Storage & Interconnectors adjust their plans and provide revised Notifications.



Around **1,600** Notifications received daily

Around **180** daily reconfigurations of the NTS

Revised Notifications can significantly change the profile of the gas flow that we have to manage:



At the start of the gas day we can plan operations pro-actively.

Throughout the day we need to react and adjust according to revised notifications.

What has changed recently to lead to increased pressure concerns?

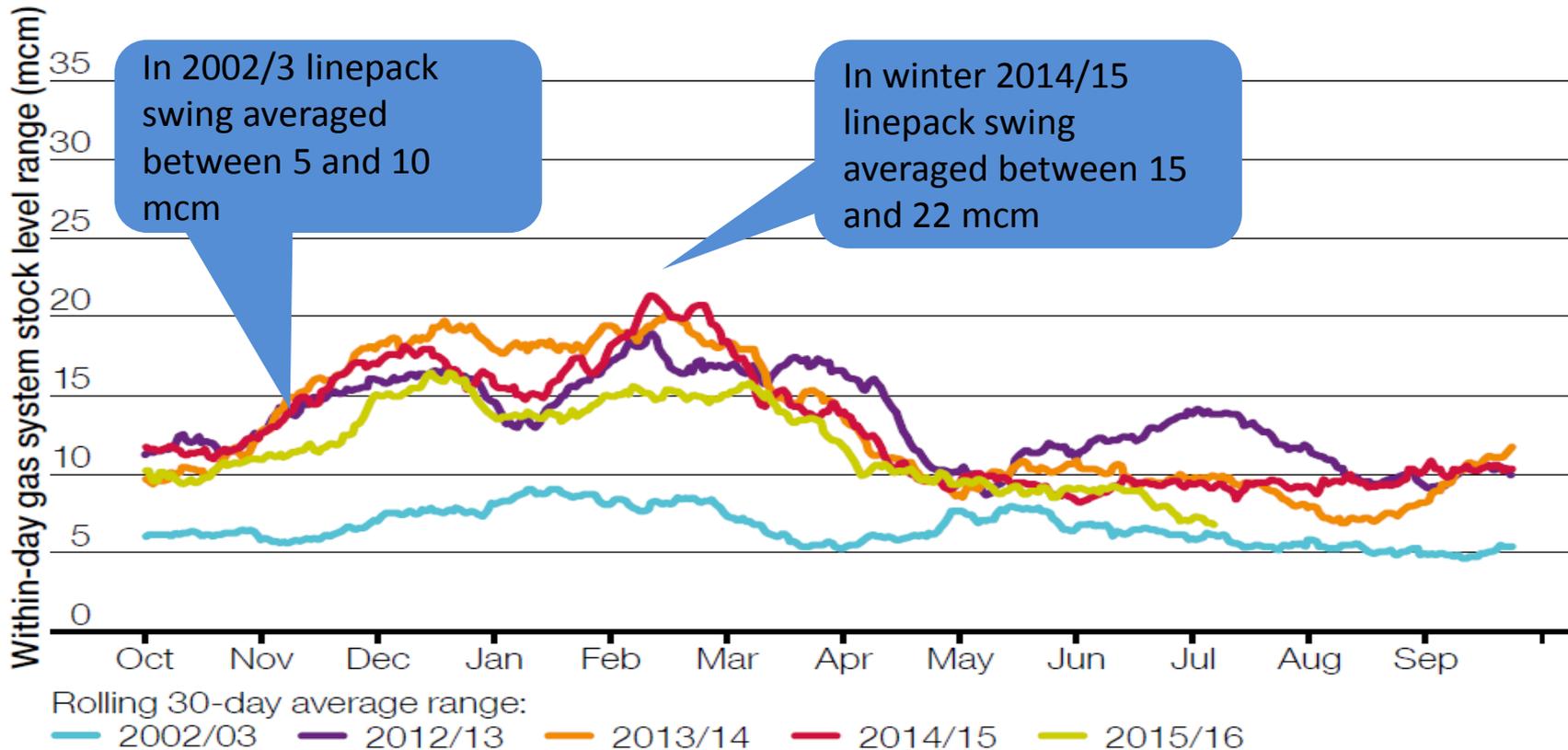
We are seeing changes in shippers and sites behaviour, which impacts NTS pressure:

- **Increasing within day linepack swing:** notable trend towards later reconciliations of daily balancing which depletes gas system stocks. Stocks changes can be up to three times the level seen a decade ago. This volatility has a significant affect on pressures. The graph below compares the within-day gas system stock level changes seen in 2002/03 to those seen in 2015/16.
- **Increasing customer need for flexibility:** Direct connect customers want to be able to take large quantities of gas off, and bring gas on, more quickly at shorter notice.
- **Reduced predictability of supply patterns:** Supply patterns are much less predictable, increasing operational challenges (e.g. scheduling of maintenance).

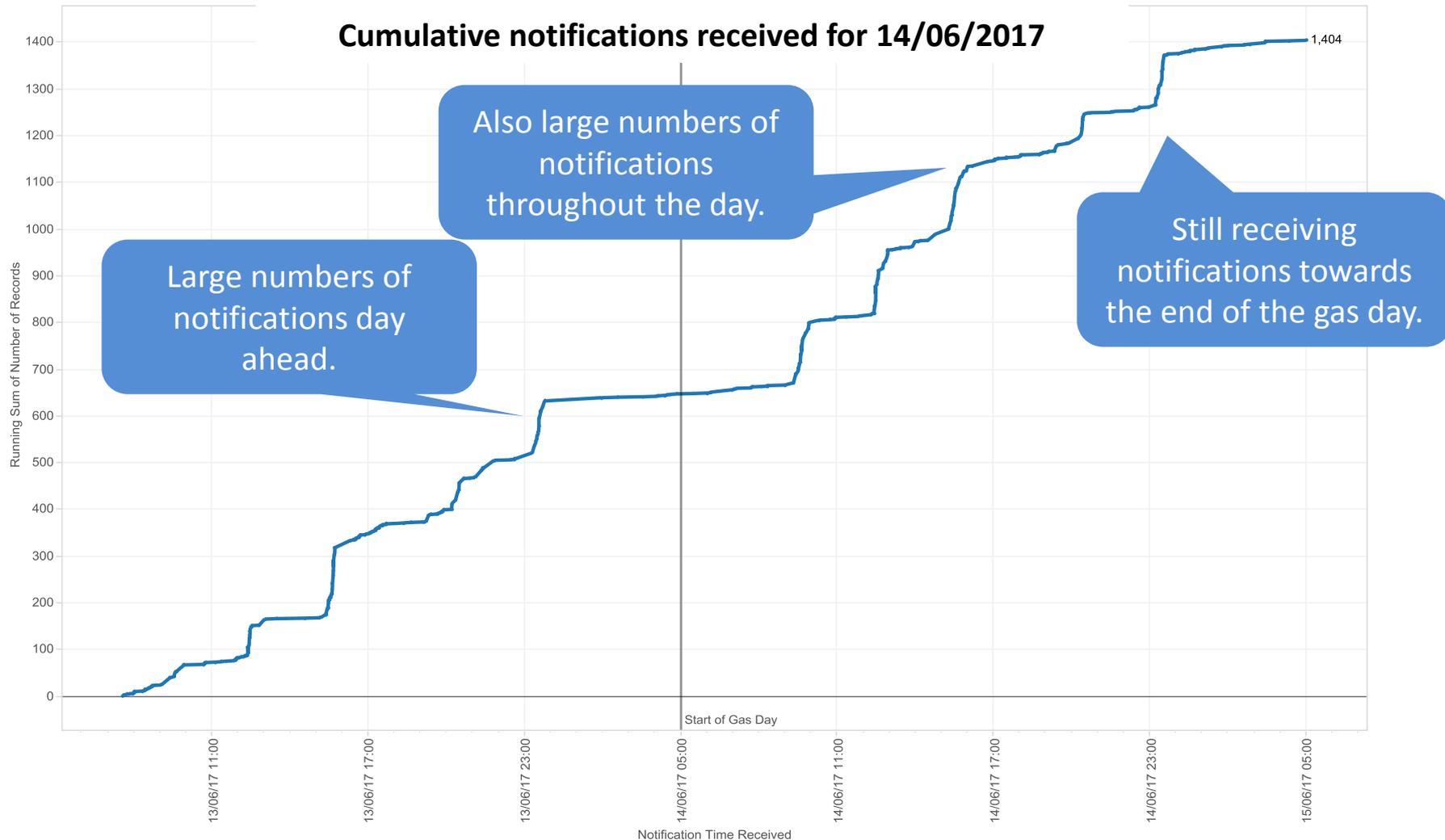
The following slides
give examples of these
changes....

What has changed recently: increased within day linepack swings

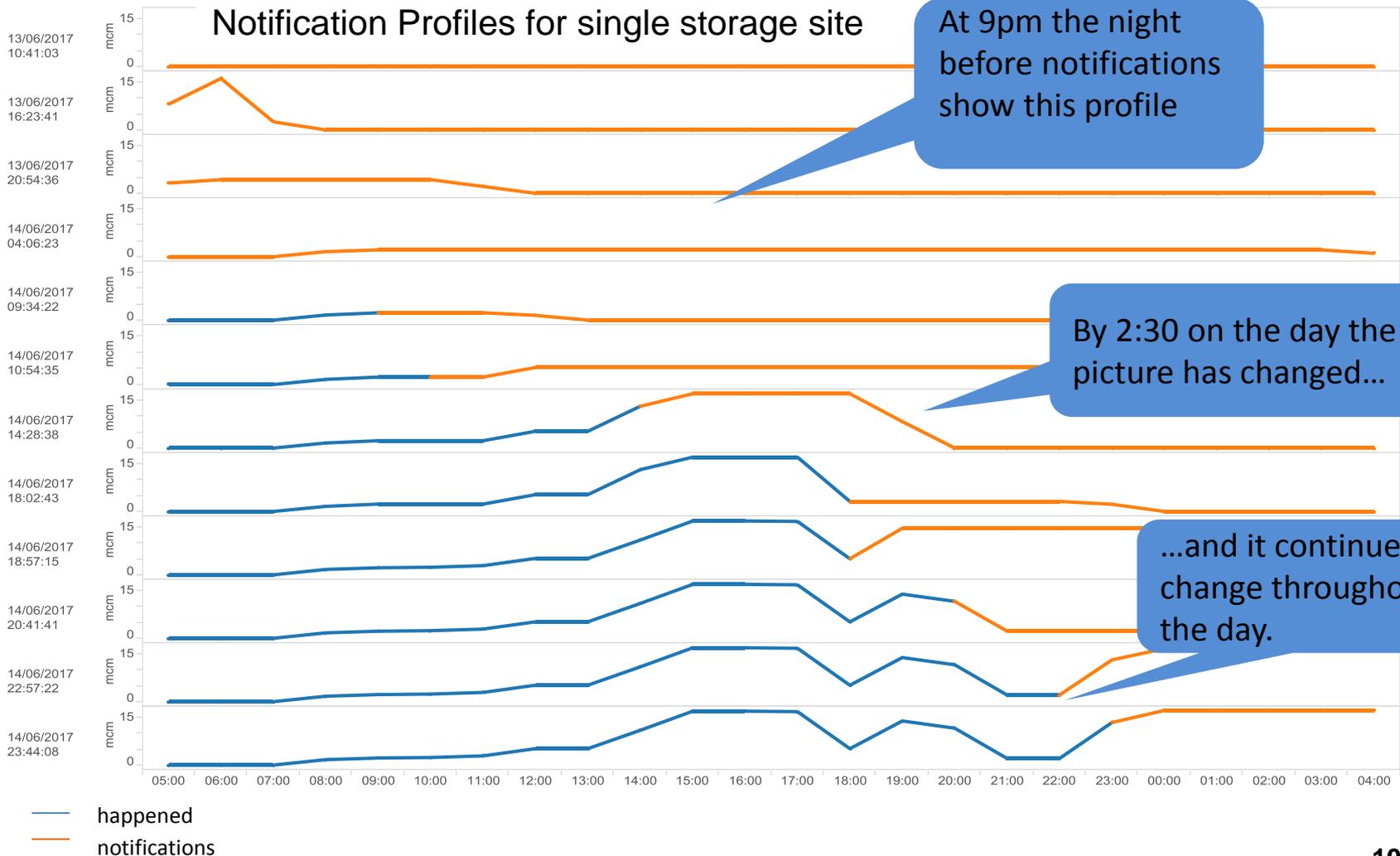
Figure 2.3
Rolling 30-day average range of NTS gas system stock levels



What has changed recently: increasing need for customer flexibility

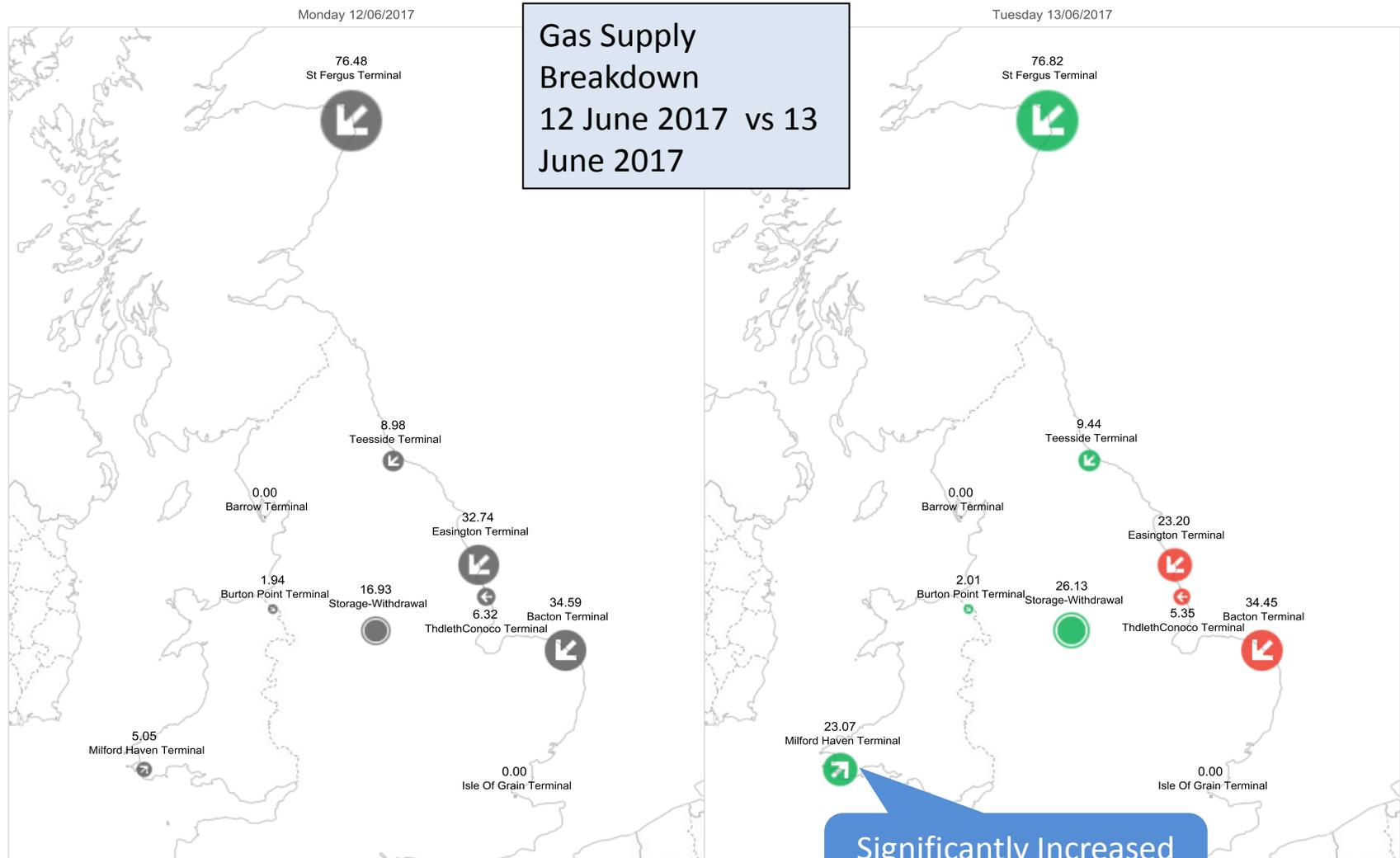


What has changed recently: increasing need for customer flexibility



What has changed recently:

Reduced predictability of supply patterns

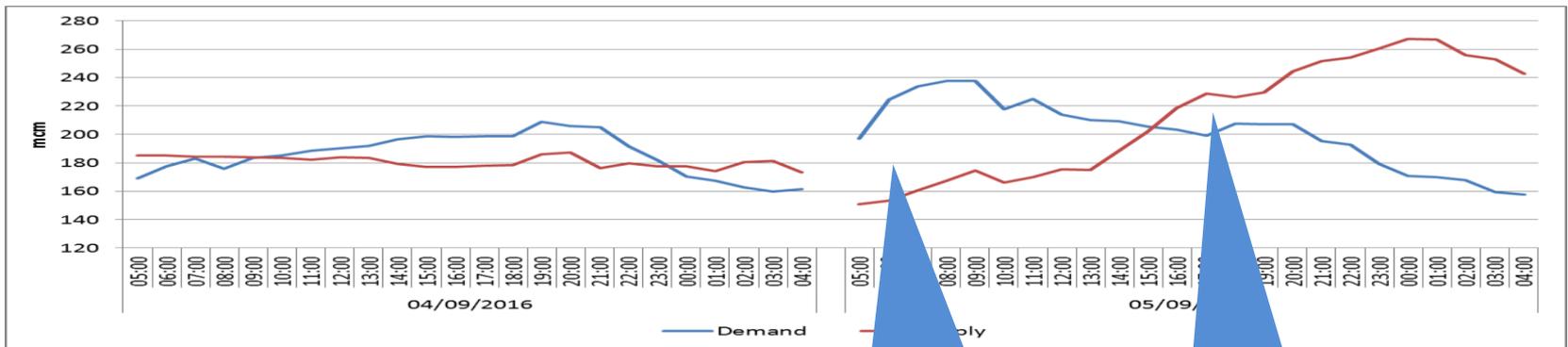
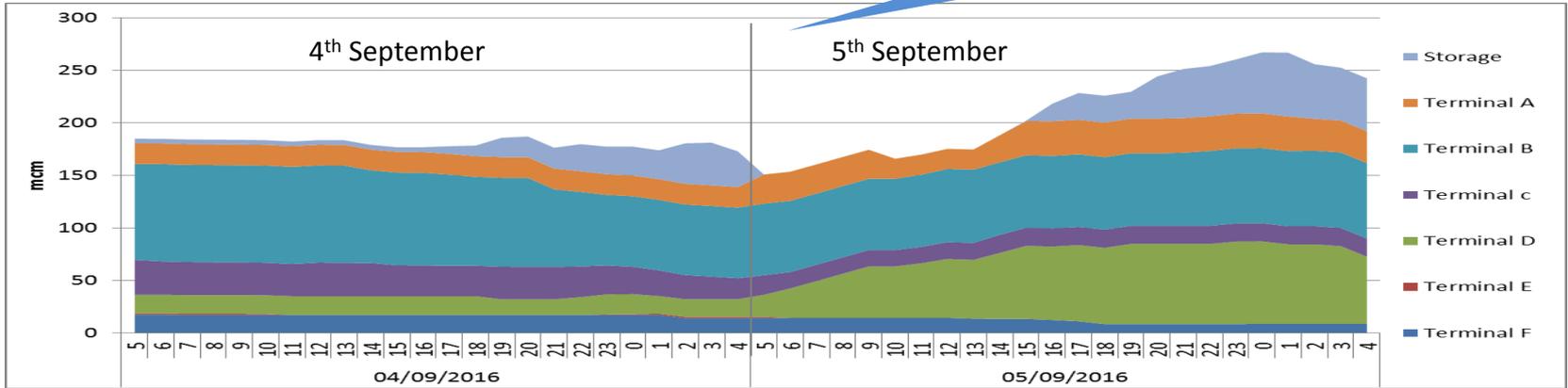


What has changed recently:

Reduced predictability of supply patterns

Very different supply patterns between days

Example day



Low pressures experienced here due to low supply

Supply increases but causes locational pressure issues

What information is available via National Grid to help customers?

National Grid Information

[Annual maintenance plans](#)

Customer specific maintenance discussions

NEW: GNCC high level information pack

Key market Information

[Prevailing View](#)

[Storage and LNG operator information](#)

GB REMIT central collection & publication service

[Instantaneous flows into the NTS](#)

System status information

NEW: Linepack swing information

Notices

[Margins notice](#)

[Gas deficit warning notice](#)

Click boxes for link to relevant website pages

Market Information Provision Initiative (MIPI) – Prevailing View

Prevailing View

[MIPI Winter Webinar](#)

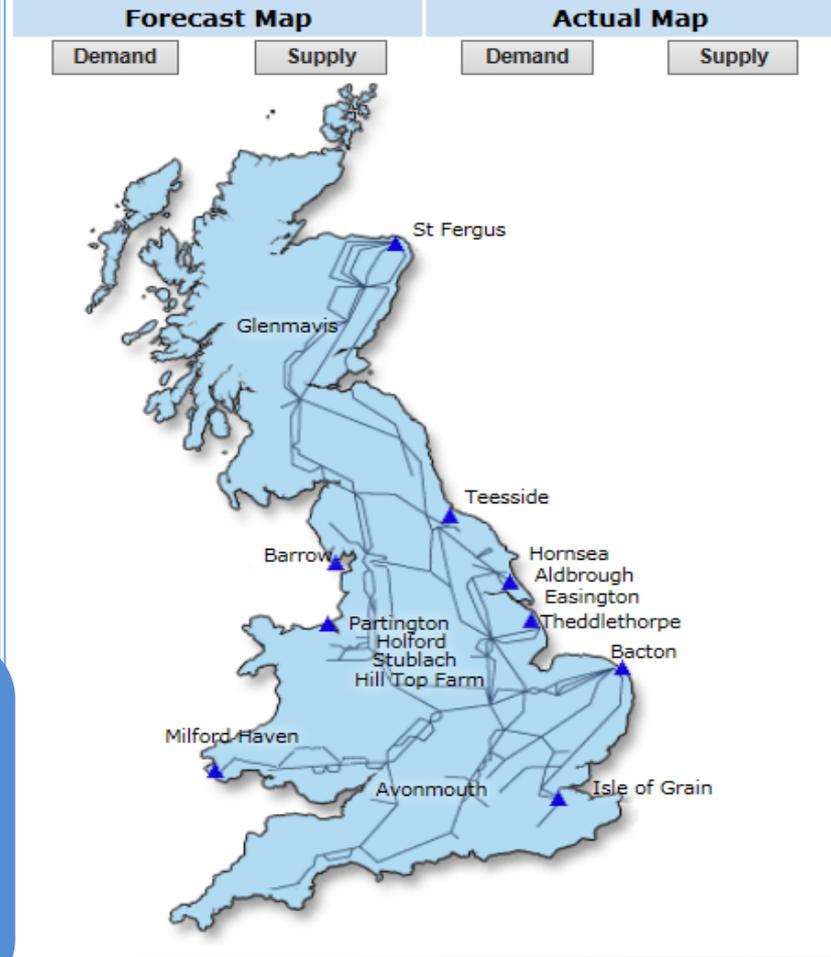
Current Gas Day: Monday, 19/06/2017 | [Help](#) | [Print](#) |

Welcome to National Grid

System Status		
	Today 19/06/2017	Tomorrow 20/06/2017
GDW	NONE	NONE
MN Trigger	159.00	429.00
Forecast Graph		
Demand (mscm)		
Forecast Demand	165.7 (15:05)	162.0 (13:02)
Seasonal Normal Demand	202.0	201.0
Supply (mscm)		
Forecast Flow	159.2 (15:00)	
Physical Flow	158.5 (15:00)	
Linepack (mscm)		
PCLP	328.5 (15:05)	

[Long Term Demand](#)
[System Entry Point Flow Data](#)

Gives high level information on the overall network, including supply and demand forecasts which can help indicate potential linepack changes.



465 mscm

Actual		
Demand (mscm) Graph 18/06/2017		
Actual Demand		139
Seasonal Normal Demand		111
Actual CWV		16
CWV Seasonal Normal		15
Supply (mscm) Graph 17/06/2017		
Beach including Norway		140
LNG Imports		5
Interconnectors		1
Storage		10
Linepack (mscm) Graph 19/06/2017		
Opening		335.0
EOD Export Physical Flows (mscm) 18/06/2017		
Bacton		0
Moffat		8
Storage Stock Levels (GWh) Graph		
	18/06/2017	19/06/2017
Short	0	0
Medium	6,159	
Long	1,080	
Actual Storage Stock (GWh) Graph		
Aggregate LNG Importation Stock (GWh) Graph		
	17/06/2017	18/06/2017
	5,352	5,265
Price Graph 18/06/2017		

GRMS – Instantaneous flows into the NTS

Instantaneous Flows into the NTS Current Gas Day : Monday, 19-Jun-2017

All data presented on the MIPI and GMRS applications are in GB standard reference conditions. National Grid may receive data for the Interconnectors Bacton BBL and Bacton IUK (only) in EU reference condition units. However, these will be converted before being published. Conversion factors are provided in the 'Help' menu on Prevailing View.

		Instantaneous Flows (mcm/day)					
System Entry Name		16:00	16:02	16:04	16:06	16:08	16:10
Zone Supply	ALDBROUGH	0.00	0.00	0.00	0.00	0.00	0.00
	AVONMOUTH	↓ 0.00	↓ 0.00	↓ 0.00	↓ 0.00	↓ 0.00	↓ 0.00
	BACTON BBL	0.00	0.01	0.01	0.01	0.01	0.01
Entry Zone Graphs	BACTON IC	0.00	0.00	0.00	0.00	0.00	0.00
	BACTON PERENCO	↓ 10.61	↓ 10.59	↓ 10.63	↓ 10.68	↓ 10.63	↓ 10.63
	BACTON SEAL	14.14	14.13	14.23	14.25	14.25	14.16
	BACTON SHELL	4.72	4.72	4.72	4.72	4.72	4.72
User Defined Download	BARROW SOUTH	↓ 0.00	↓ 0.00	↓ 0.00	↓ 0.00	↓ 0.00	↓ 0.00
	DYNEVOR ARMS	↓ 0.00	↓ 0.00	↓ 0.00	↓ 0.00	↓ 0.00	↓ 0.00
	EASINGTON DIMLINGTON	6.94	6.94	6.94	6.94	6.94	6.94
	EASINGTON LANGELED	17.32	17.22	17.39	17.15	17.30	17.30
	EASINGTON ROUGH	0.00	0.00	0.00	0.00	0.00	0.00

Tells you how much gas is entering the network at each point.

Can give closely located sites an indication of potential pressure levels.

MIPI – Storage and LNG Operator Information

Available [here](#):

Information published on behalf of Storage and LNG Operators under EU regulation EC 715/2009.

Published by day for the past year. Historic data is also available on the site.

Composite Weather Variable and Seasonal Normal Demand for a rolling 5 year period is also available.

Gives historic information on what storage and LNG sites did each day.

Could help customers understand why pressure changes in their area occurred.

	A	B	C	D	E	F	G	H	I
1	Gasday	Operator Type	Site Name	Opening Stock	Inflow	Outflow	Available Capacity	Injectability	Deliverability
2	18-Jun-2017	LNG	Isle Of Grain	2589063233	0	29375410	3783133989	N/A	N/A
3	18-Jun-2017	LNG	South Hook	1574559250	0	55697221	3645440750	N/A	N/A
4	18-Jun-2017	LNG	Dragon	1101172591	0	1659760	850827409	N/A	N/A
5	18-Jun-2017	STORAGE	Rough	1079584797	0	320556	32837696662	0	455000000
6	18-Jun-2017	STORAGE	Aldbrough	1448586244	17843468	0	671627499	311600000	342300000
7	18-Jun-2017	STORAGE	Holford	569370842	77896834	0	1779032542	238333344	238333344
8	18-Jun-2017	STORAGE	Hill Top	1761034	0	1029441	347444548	22800000	22800000
9	18-Jun-2017	STORAGE	Stublach	696916391	141986870	0	-243527702	158000000	210000000
10	18-Jun-2017	STORAGE	Humbly Grove	1836549325	89213333	0	1298410675	91000000	79000000
11	18-Jun-2017	STORAGE	Hornsea	638640243	20548725	0	1984752516	30000000	130000000
12	18-Jun-2017	STORAGE	Holehouse Farm	402272285	0	0	-27272285	0	0
13	18-Jun-2017	STORAGE	Avonmouth	0	0	0	0	0	0

We will also make available national level linepack swing information



Gas Day 09/06/17

National forecast physical linepack swing at lowest point in gas day

Opening
Linepack

331.4

06:00



319.5

12:00



320.1

18:00



318.7

Aggregate physical instantaneous supply and demand

Time	11:00	11:02	11:04	11:06	11:08	11:10
Supply	189.08	189.18	187.96	188.62	188.21	187.89
Demand	198.41	198.77	199.25	199.24	199.30	198.60

Highlights potential national level within day linepack swing.

High swing could indicate pressure changes.

There are **two key caveats** with this:

- National level linepack swing won't tell customers exactly what will happen to pressure in their area.
- Based on customer notifications – subsequent customer changes to those notifications will change the level of swing.

What else are we exploring in order to assist with pressure issues

linepack swing notifications at a zonal level

Customers have asked for an indication of their local pressures. Two key concerns are:

- In some circumstances this could reveal commercially sensitive information - for example, a big change in pressure could indicate that a storage site is planning to inject or withdraw at a particular time.
- The more localised the report, the less accurate it will be and the more it will be affected by ongoing operational decisions and changing customer behaviour.

Instantaneous data

We could make instantaneous pressure data available if customers have a use for this.

Enhanced pressure services

National Grid can potentially provide Enhanced Pressure Service. Costs are passed back to the specific customer. However, this is only suitable in certain places, and costs may be unappealing.

Reviewing maintenance information

Maintenance information is already provided to affected customers but we're reviewing whether information could be provided more widely.

Longer-term framework changes

If pressure issues continue to cause concerns, longer-term framework changes may be required. We would welcome your feedback on this matter, particular to feed in to upcoming RIIO T2 (National Grid's funding regime) considerations.

Any other suggestions customers would like us to explore?

We would welcome assistance in developing these ideas – if you'd like to input, speak to us after the forum or contact Sally Thatcher@

Sally.thatcher@nationalgrid.com

01926 655655

Gas Quality Information Provision



Background

- Last year NG ran a “Information Provision Consultation” on both the balancing and the gas quality data we provide.
- This was driven by obligations in both the EU Gas Balancing Network Code and the EU Interoperability Network Code.
- Received 3 responses to the consultation from RWE, EDF Energy and Energy UK.
- Responses requested NG to publish real time gas quality data.

Drivers

“UNC Modifications which have sought to introduce changes to gas quality parameters – need for greater understanding of the gas composition at NTS entry and exit points in order to assess the impact on plant and equipment of fluctuating gas quality. Timely provision of this data would enable operators to proactively manage any changes to equipment and plant that may be required as a result of variations to gas quality entering sites.”

“Real time gas quality information as being delivered to the NTS. This would enable operators at offtakes with sensitive offtakes to develop an understanding of the entry flow relationships with the gas quality of gas delivered at its offtake point. The data should be stored and accessible, daily data does not provide sufficient granularity to support analysis.

This will support analysis and understanding of changing gas quality parameters and supply pattern and support informed debate over gas quality issues in the future...”

“We need information in real time and fit appropriate measurement equipment to get live data in order to tune combustion. Getting average daily data or even predictions of the next days data would not be any use”.

What do we mean by Real Time Gas Quality Information?

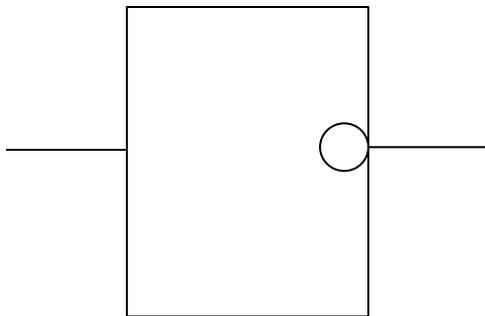
- Below is the list of gas quality parameters NG collect and could potentially publish. We typically measure each of these parameters every 2-5 minutes.
 - Hydrogen Sulphide
 - Total Sulphur
 - Oxygen
 - Hydrocarbon Dewpoint
 - Water Dewpoint
 - Wobbe Number
 - Incomplete combustion factor
 - Sooting Index
- NG already collects this data from upstream parties. There would be no additional equipment needed at entry points in order to capture this data and therefore no additional hardware costs to terminal operators.
- NG would however require explicit permission in order to publish sub-terminal data externally.

Sites

Single Supplier Entry Points

(Upstream parties' data)

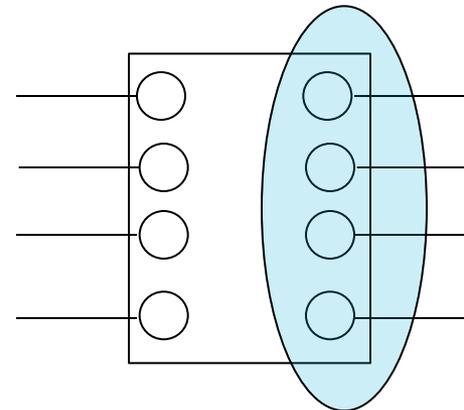
- Barrow
- Theddlethorpe
- Isle of Grain
- Burton Point



Multiple Supplier Entry Points

(NG's data)

- St Fergus
- Bacton
- Teesside
- Easington
- Milford Haven



Oil & Gas UK Forum

- 26th April attended the Oil & Gas UK Forum to talk to members about the possibility of publishing real time gas quality data, particularly that data which belongs to upstream parties.
- Attendees:
 - ENI
 - ConocoPhillips
 - Apache
 - BP
 - Shell
 - ExxonMobil
 - Statoil

Oil & Gas UK Members Feedback

- Members had a number of concerns about NG publishing terminal specific gas quality data
 - Confidentiality clauses within processing and allocation agreements between the terminal operators and upstream parties would require amendment
 - NTS entry gas quality information would not be a true reflection of the gas quality offtaken at the majority of NTS direct connects due to co-mingling of supplies within the NTS
 - Terminal operators are obliged to ensure that gas delivered onto the NTS is within the defined gas quality specification range
 - Unclear on what the driver is for requesting this information. What specific issue could be resolved by the publication of real time gas quality information?

NG Thoughts

- National Grid recognises the concerns expressed by some market participants associated with gas quality variation and is keen to explore potential solutions
- We have identified the following issues
 - Entry gas qualities may not be reliable indicators of exit gas qualities, potentially even for sites located directly downstream of an NTS entry point
 - Confidentiality provisions between NG and terminal operators, even at multiple supplier entry points
 - Effects of any data errors / mis-measurements.
 - Effects of maintenance of gas quality measurement equipment
 - Recovery of implementation costs – targeted or socialised?

Exercise

- On your tables we would like you to discuss and capture on the sheets provided;
 - Would you like to receive NTS entry gas quality information?
 - If so, which parameters and with what frequency?
 - What benefits would you receive from this information?
 - If National Grid were to provide gas quality information, should the implementation costs be targeted or socialised?

Next Steps

- Take away your feedback given and continue discussions with you by way of an industry working group, through Transmission Workgroup and future Gas Operational Forums
- If you would like to be part of the industry working group on this please contact Jennifer Randall on jennifer.randall@nationalgrid.com

AOB



Operational Forum – June 2017
Vinny Thiara

Winter Webinars 2017

Finding a better way

REMIT



Gas Pressures



Emergency Exercise



Locational Trades



What we covered last winter in 2016

- **MIPI – Guided Tour**
- **Constraint Management**
- **Emergency Planning**
- **Demand Side Response**

Box.operationalliaison@nationalgrid.com

Network Emergency Co-ordinator (NEC) Emergency Exercise 2017 “Exercise Yield”

This year’s Network Emergency Co-ordinator (NEC) emergency exercise, Exercise Yield, will take place on 4th and 5th October 2017.

- Further information can be obtained through
 - Industry email sent on 2nd of June
 - A Webinar is to be arranged for end of August, please find previous years [here](#).
 - Further industry Briefing Note (to be published start of August)
 - Visiting the website www.nationalgrid.com/NEC
 - Contacting the Gas Emergency Planning Team at National Grid at gasops.emergencyplanning@nationalgrid.com.

New National Grid Website — Volunteers Required

Finding a better way

National Grid are due to launch a re-designed website.

As part of this, a BETA version will be available to users. In response, the Project are looking for volunteers from the industry, to test the new websites functionality, speed and user experience.

If you wish to become a volunteer, please contact the Operational Liaison Team at:

Box.operationalliaison@nationalgrid.com



NCOG - Customer Satisfaction Survey

Finding a better way

Which Survey?

- Within NCOG we have different surveys for each area for example:
- Operational Forum Survey
- GNCC Survey
- Liaison Visit Survey
- Energy Balancing Survey
- Maintenance Survey
- Capacity Survey

WHO?

Explain

- On behalf of National Grid – Gas Transmission a company called 'Explain' will be in contact to receive feedback specifically to Operational Forum.

28%
response rate in 2016/17

66
Customers interviewed in 2016/17



£10
donated to charity (for each completed survey)

10 Mins
of your time for feedback

What we need from you.....

Please provide your most up to date contact information (predominantly telephone numbers as well as email addresses).

WHY?

Your Opinion Matters

- Your participation and comments are really valuable to us.
- We will use your feedback to put in place action plans across the business and improve the way we work.

How?

Telephone Survey

- Surveys are predominantly carried out over the phone.
- Online surveys will also be available.
- It will take approximately 10 minutes to complete.

Future Operational Forum Dates 2017

Finding a better way

Month	Date
September	21 st September 2017
October	19 th October 2017
November	23 rd November 2017

See you at the next Gas Ops Forum – Thursday 21st September 2017

For any queries please contact the
Operational Liaison Team:

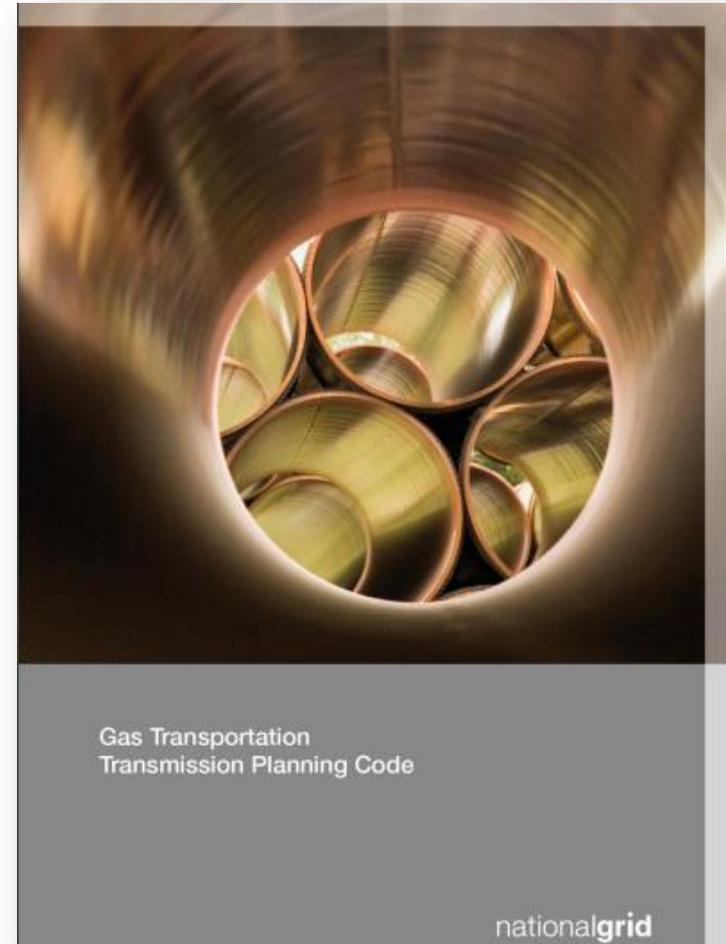
Box.operationalliaison@nationalgrid.com

Appendix



Transmission Planning Code – Gas Planning & Operating Standard Project

- To deliver further clarification around our existing Pipeline Security Standard & further align our planning and operational approaches to ensure suitability for future network operation.
- Through this, develop a clearer set of rules, that we can articulate externally, under which we plan and operate the network



Transmission Planning Code – Gas Planning & Operating Standard Project

- TPC consultation – 17th July
 - 30 day consultation
 - Updated to reflect the changes to our planning processes following GPOS
 - We would like your views on our proposals
- Webinars
 - To be held at the end of July
 - Including worked examples explaining details of how planning and future investment may be affected
- For further details contact:
ntsinvestment@nationalgrid.com

