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**xserve**



respect > commitment > teamwork

# **UNC Distribution Work Group**

Overview of Unidentified Gas Issues

22 June 2017

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# Objectives

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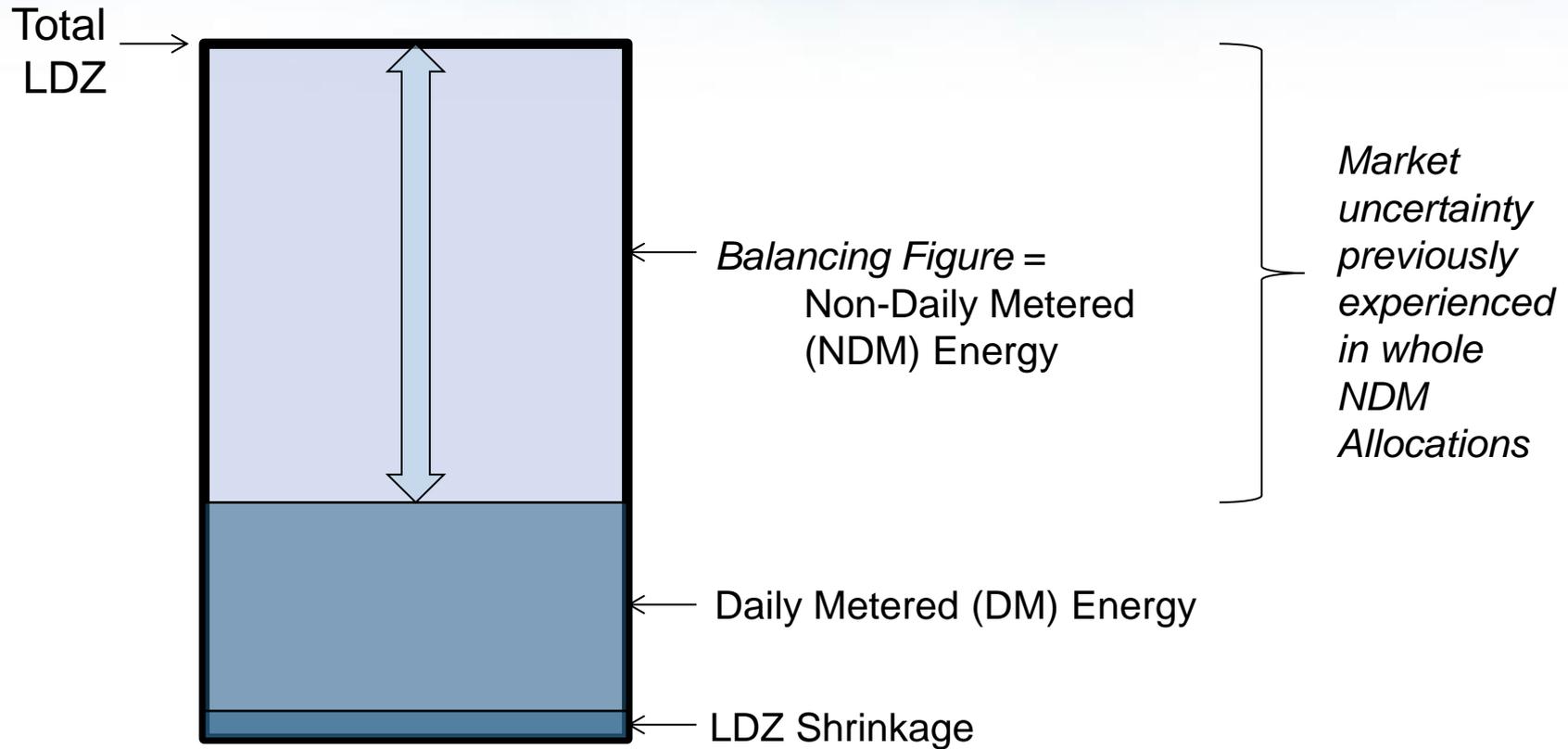
- Provide Xoserve understanding of the issue(s) relating to Unidentified Gas (UIG)
- Compare previous and new approaches to Allocation for Non-Daily Metered (NDM) sites
- Explain known influences on UIG
- Review previous analysis of likely UIG levels
- Summarise discussions at June 14<sup>th</sup> Project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

# Summary of Issues Experienced

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- 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

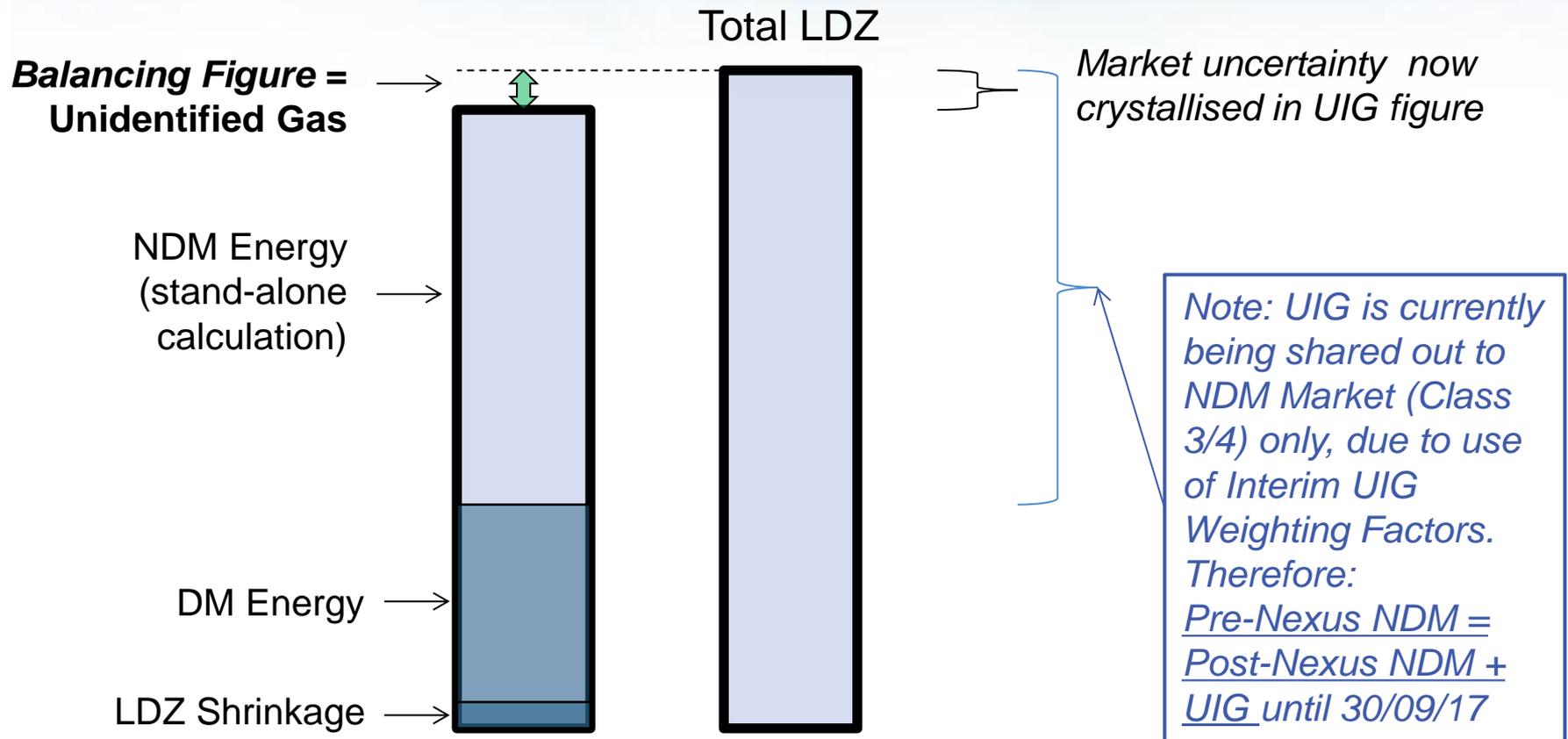
# Gas Allocation Pre-Nexus



## Notes

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

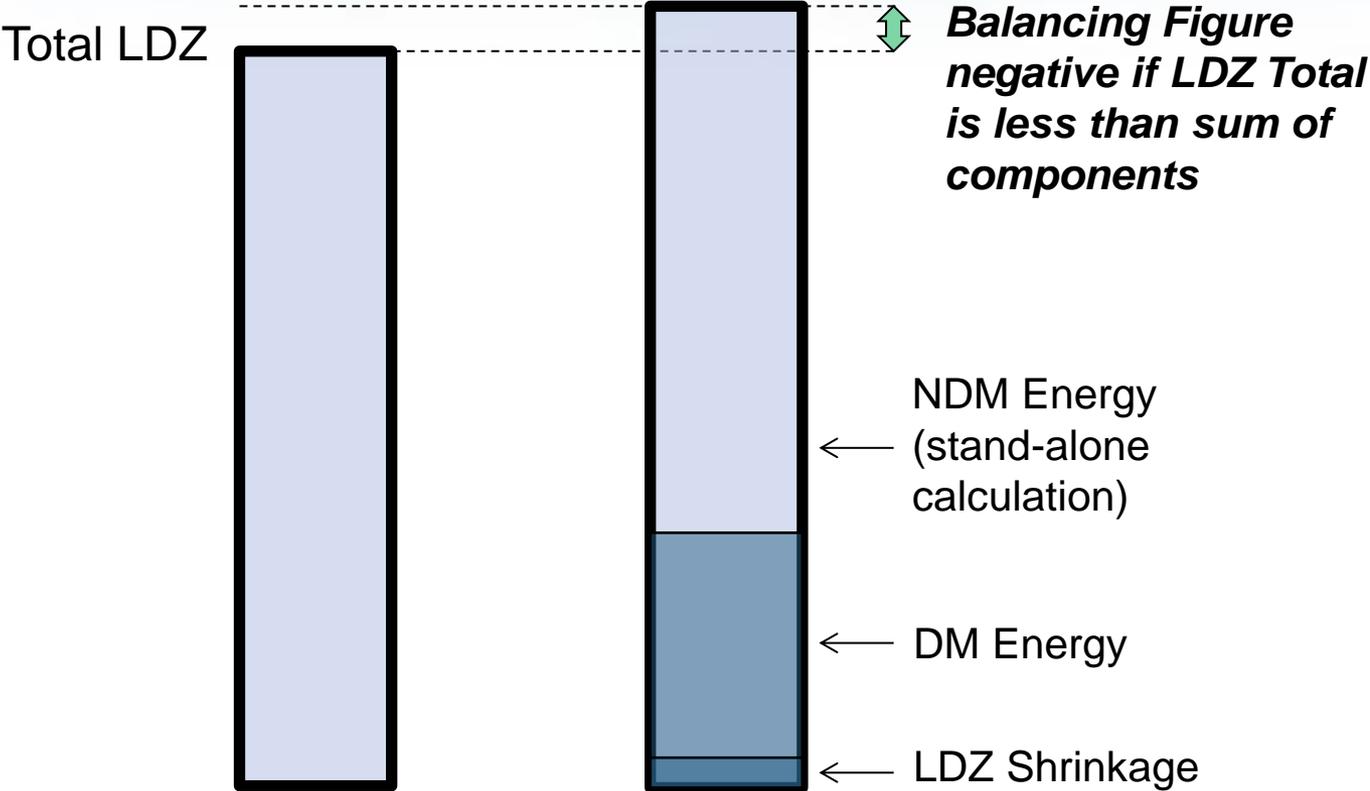
# Gas Allocation Post-Nexus



## 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

Forecast of LDZ off-take –  
produced by the Network Operator

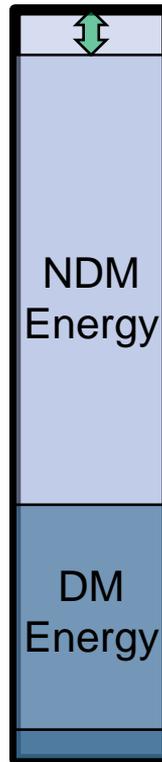
*UIG = Balancing figure in the LDZ*

New NDM Algorithm and  
forecast weather data

DM Nominations –  
provided by the Shippers

Fixed daily amount provided by the  
Network Operator

Total LDZ



LDZ Shrinkage

## Allocations

Total gas measured into the LDZ

*UIG = Balancing figure in the LDZ*

New NDM Algorithm and  
actual weather data

DM measurements obtained using  
automated meter reading equipment

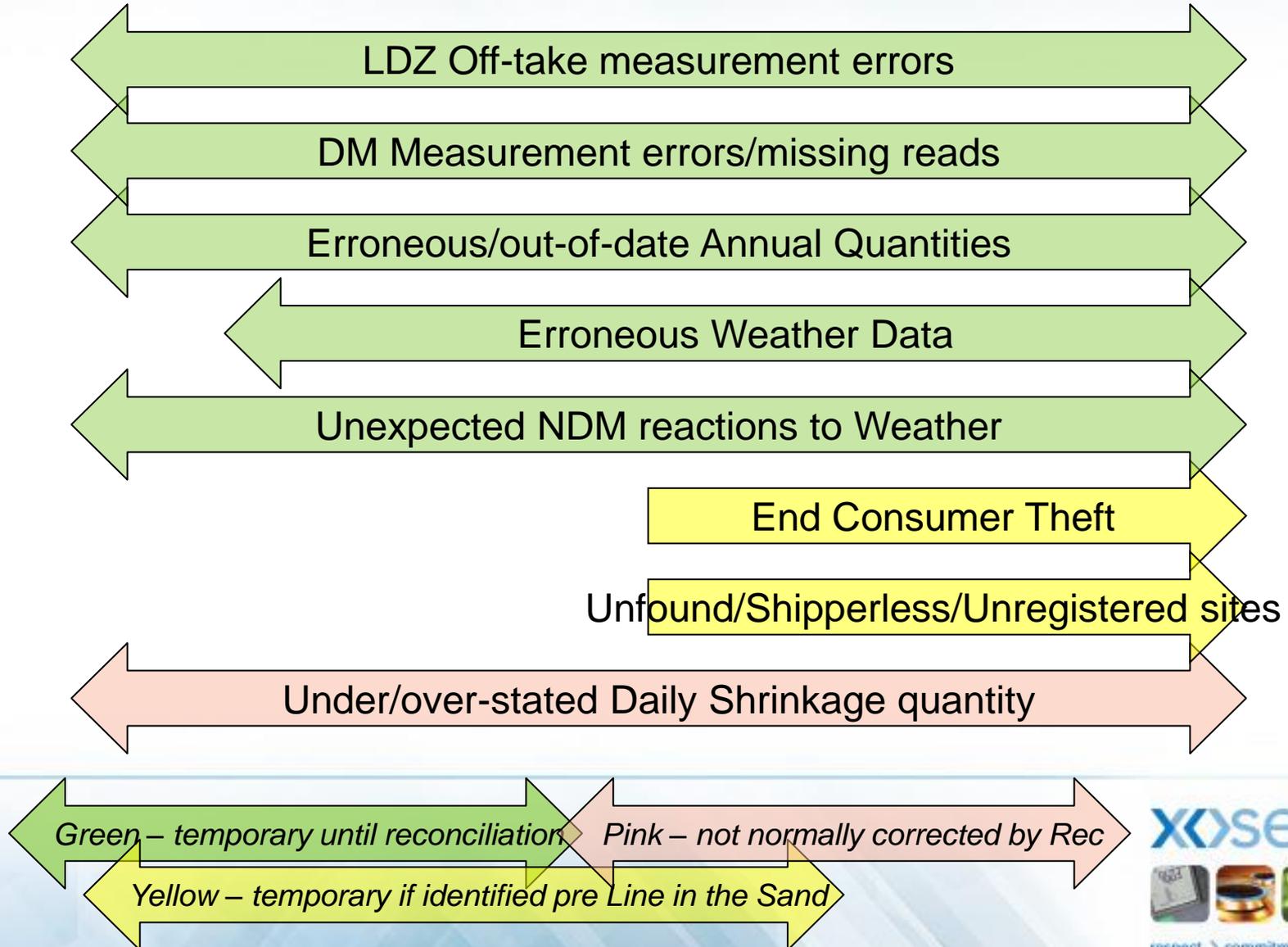
Fixed daily amount provided by the Network  
Operator

*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*

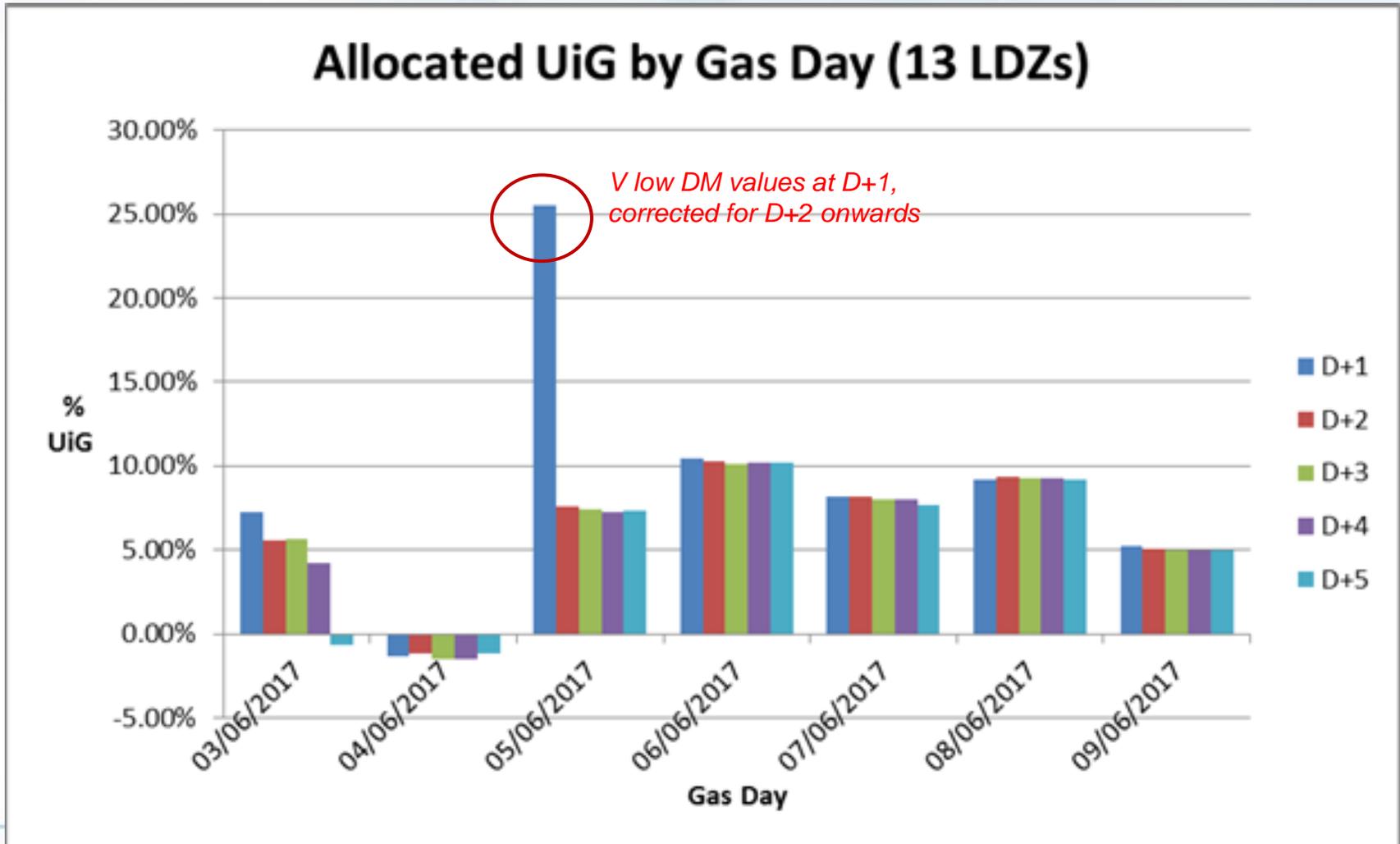
*Upward influence*



# Summary of simulations of UIG – *estimates only*

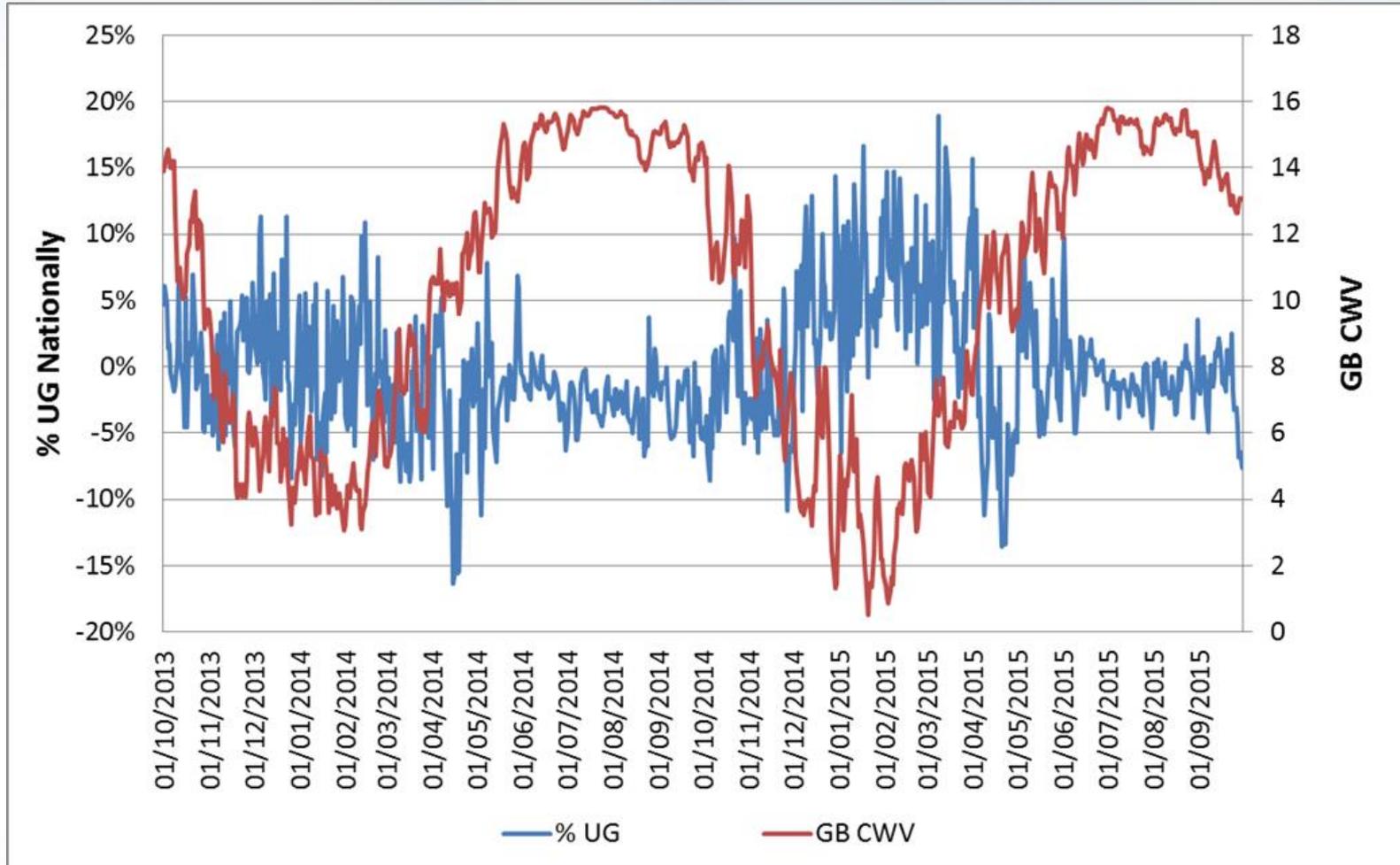
- Xoserve simulation: likely position at D+5
  - Used 4 years of historic actual data
  - Used prevailing AQ – no assessment of rolling AQ impacts
  - Suggested some LDZs had negative UIG overall
  - Updated 95% confidence interval:-12.35 to 11.77
  - Summary on Feb '17 DESC page
  - Daily simulated 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 – 3<sup>rd</sup> to 9<sup>th</sup> 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

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- 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

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- 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 11<sup>th</sup> and 12<sup>th</sup>, under investigation
  - Post-meeting note – AQ issues were corrected June 14<sup>th</sup>, NDM Allocation and UIG re-run June 15<sup>th</sup>
- Shippers reported seeing D-7 DM estimates returning zeros

# Agreed next steps from IRG

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- 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