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**xserve**



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# Unidentified Gas

Summary of Investigations

Version: 6 July 2017

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# Background

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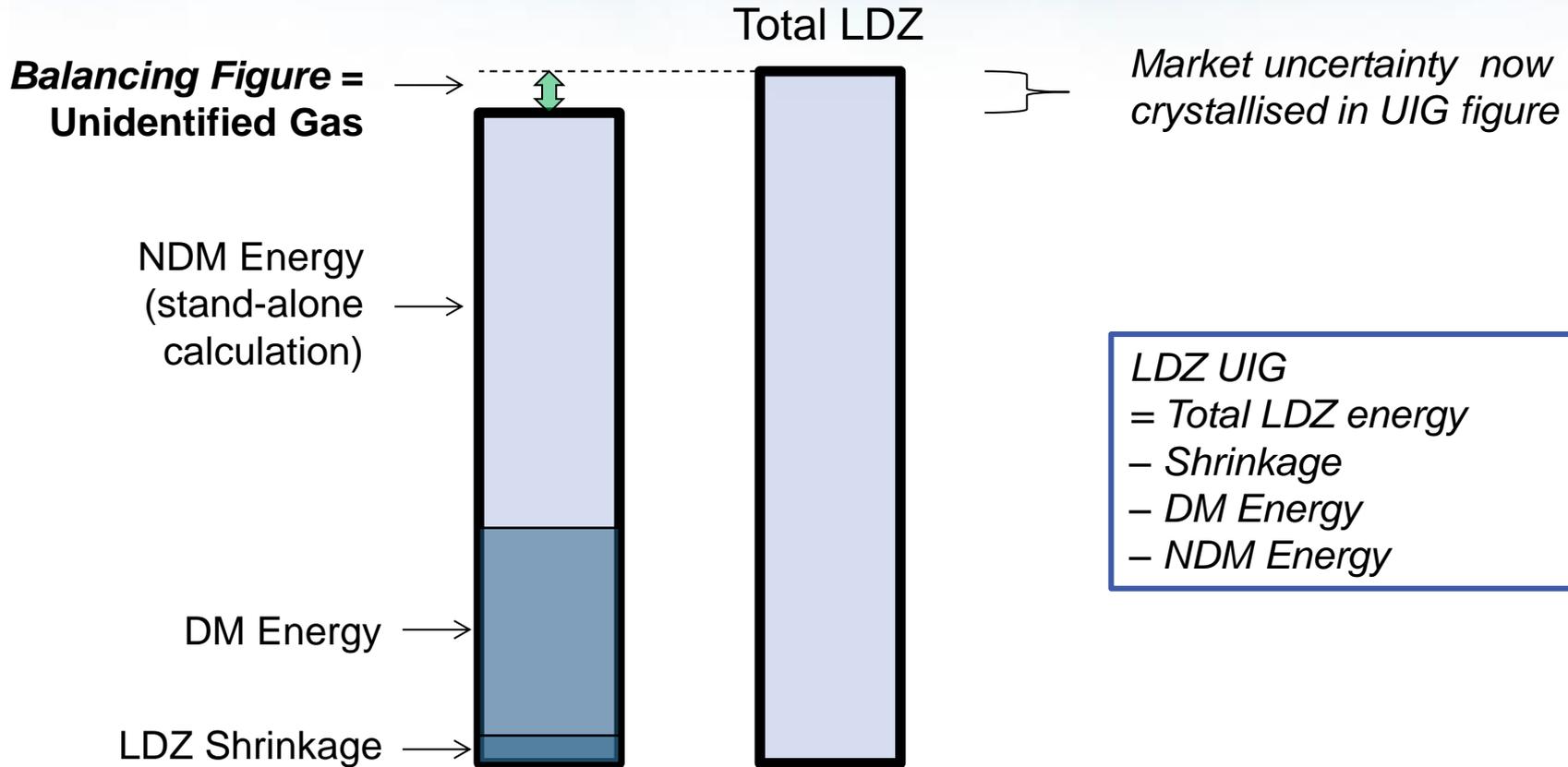
- Since Project Nexus Implementation, Unidentified (UIG) Gas has been a significant area of concern
- Xoserve has worked closely with individual Shippers to understand their issues and to try to identify and mitigate major causes of fluctuation, volatility and variability
- Following slides summarise the work done and outcomes, split by key data input areas
- **Work to date has focussed on D+1 to D+5 levels of UIG**

# Abbreviations on these slides:

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- ALP: Annual Load Profile (parameter used in daily NDM Allocation)
- AQ: Annual Quantity
- AUGE: Allocation of Unidentified Gas Expert
- CWV: Composite Weather Variable
- D+1: Day following the Gas Day
- DAF: Daily Adjustment Factor (parameter used in daily NDM Allocation)
- DM: Daily Metered
- EUC: End User Category (subdivision of sites, based on LDZ and AQ)
- LDZ: Local Distribution Zone
- LSP: Larger Supply Point (AQ > 73,200 kWh)
- NDM: Non-Daily Metered
- SSP: Smaller Supply Point (i.e. not LSP)
- TPG: Transition Progress Group (a Project Nexus forum)
- UIG: Unidentified Gas

# Background: Gas Allocation Post-Nexus



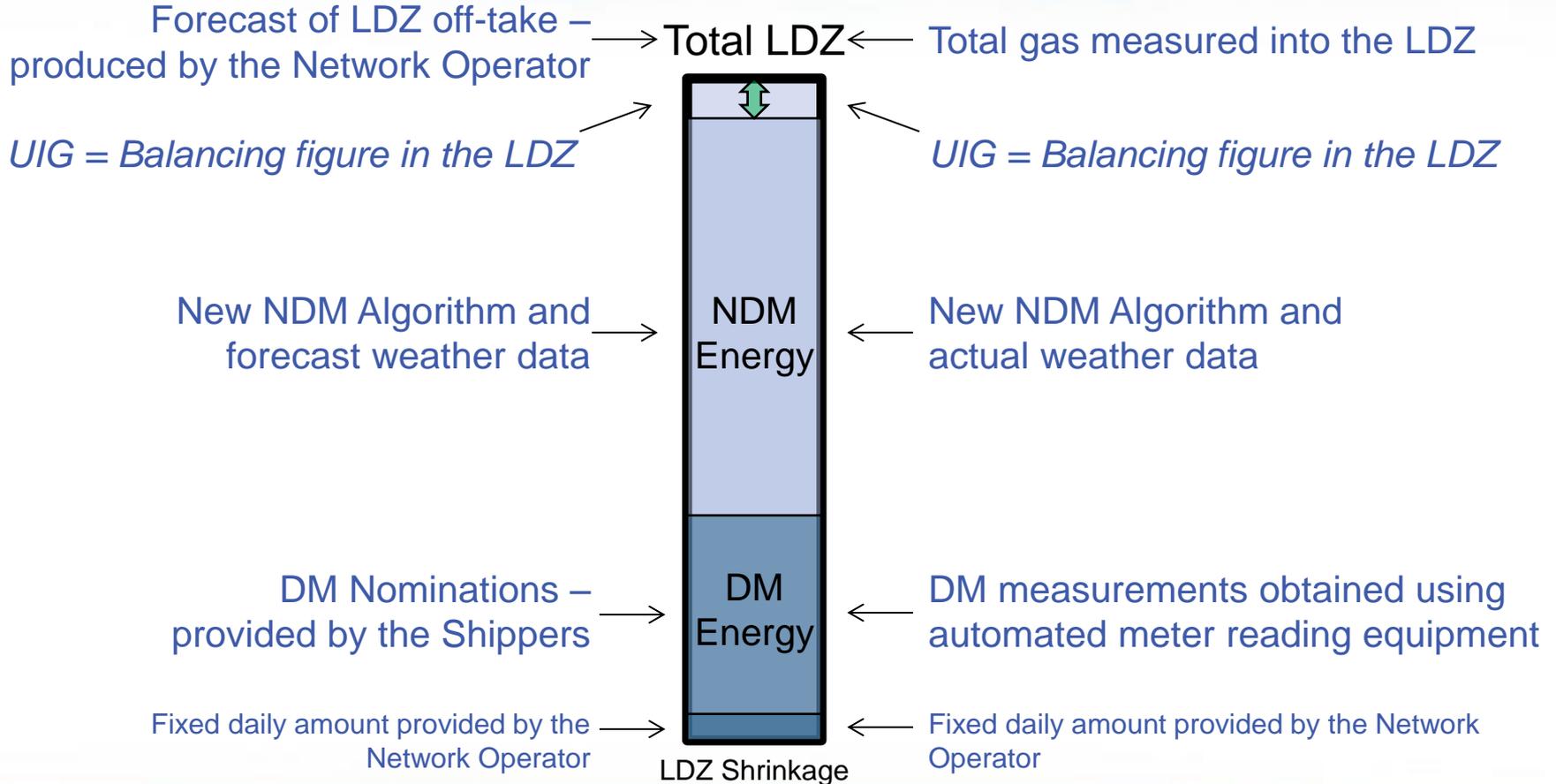
## Notes

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

# Background: Sources of Data

## Nominations

## Allocations



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

# Summary of Investigations by Data Item

Key component	Observations	Work undertaken
Total LDZ input quantity	<i>There is no change to the daily forecasting or measurement processes as a result of Project Nexus implementation.</i>	National Grid continue to monitor daily input quantities at LDZ level.
DM consumption	<i>Key risk area due to propensity for day-on-day variation in consumption</i> As at 30 June, almost 20% of DMs (in AQ terms) are still having their actual reads rejected due to meter asset data discrepancies	Profile raised via daily TPG calls and other Project Nexus forums, also Distribution Workgroup. Discussed at Performance Assurance Committee, Xoserve initiative to offer additional support to resolve data issues.
NDM Allocation	New algorithm now uses actual weather and different weather sensitivity factors – results in different mix of allocation across End User Categories	Total pre- and post-Go Live AQ was reconciled. Algorithm parameters in Gemini checked and validated. Weather data tracked through to CWV and into Gemini daily..
Shrinkage	No change in process or quantities	
Unidentified Gas calculation	Key change affecting LSP sites: UIG was formerly a fixed c. 1% levy billed in arrears, LSP sites now share the daily UIG risk with the SSP market	Daily calculations proved at macro LDZ and individual Shipper level. 3 gas days in June analysed by EUC – demonstrates impact of new algorithm across different EUCs, LDZs and weather.

# Outputs from the analysis

- Background to the analysis and overview of the DM issue – published for June UNC Distribution Workgroup meeting:
  - <https://www.gasgovernance.co.uk/dist/220617>
  - Item “Overview of Unidentified Gas Issues”
- Materials published on Xoserve secure sharepoint site, e.g.
  - Simulation of Allocation at LDZ/EUC level for sample of Gas Days
  - Summary of UIG by LDZ and Gas Day since Project Nexus Go-Live
  - Summary of CWV, Seasonal Normal CWV and WCF for all LDZs for June 2017
  - <http://www.xoserve.com/index.php/our-systems/extranet-secured-sites/>
  - (Folder18. NDM Profiling and Capacity Estimation Algorithms / Demand Estimation Project Nexus)
  - (See also Document Index in the same folder)

# Commentary on levels of UIG

- June's LDZ UIG was 4.9% of total June LDZ throughput
- Max national value for a day was +10.9%, min was -2.13%
- Wide variation between Gas Days and LDZs
- Subsequent meter point reconciliation amends the UIG position
  - UIG correction flows back on Amendment invoice
  - Shared out in same proportions as original allocations, but updated to latest Shipper positions of allocations/measurements
- AUGE's previous assessment (published in 2015) suggested UIG of c. 1% of throughput after all reconciliations
  - This level is post-reconciliation – i.e. at Line in The Sand – 3 to 4 years
  - AUGE has not assessed UIG at D+5 Close-out – unlikely to be 1%

# Next steps for the analysis

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- Xoserve providing enhanced support to resolution of DM read rejection issues
- Performance Assurance Committee request for information issued to all Shippers with DM sites affected by read rejection issue
- Xoserve monitoring LDZ UIG levels from D+1 to D+5 and investigating unusual values in input data
- Xoserve liaising with data providers including National Grid NTS and Distribution Networks to track data flows and investigate unusual items
- Ongoing updates provided to TPG (Transition Progress Group)

# Further background material

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- [UKLink Programme Information Library](http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/uk-link-programme-workstream-updates/uk-link-information-library/)
  - <http://www.xoserve.com/index.php/our-change-programme/uk-link-programme/uk-link-programme-workstream-updates/uk-link-information-library/>
  - Links to useful information including
    - Unidentified Gas presentations, including MHub package
    - FAQs on Demand Estimation and Unidentified Gas
  - Email query facility within the information library