

Dear Customers and Industry Colleagues,

Last autumn I stood up a dedicated team in response to industry wide concerns about the volatility of UIG and we went on to support our customers to develop a number of urgent UNC Modifications which have been under review by Ofgem. Since the modifications were submitted, we stood down the dedicated team, but we have continued to challenge ourselves to support our customers effectively in tackling the underlying causes of UIG.

However, we are now nearly a year into the new allocation process and as the absolute level and volatility of UIG remains a significant customer challenge, I would like to stand up a dedicated team full time again. I would additionally like to bring in specialist data science and machine learning expertise in order to approach the challenge with a transformational versus an incremental mind-set. At a high level, what I would like to be able to provide customers is:

- **Cause and effect:** For each UIG peak and trough, I would like to be able to explain exactly what is driving the movement. Today we have a good idea of the root causes of volatility, but this is not the same thing as being able to show direct cause and effect. My hope is that armed with this level of specificity, we will be able to collectively drive greater understanding, visibility and control of UIG across the industry.
- **Improve UIG model accuracy:** The model that calculates UIG and allocates it to customers is just a model, which means at its heart - because we don't read every meter in the UK every day - it is based on guess work. However in a world of driverless cars, I believe we should be able to improve the predictive accuracy of our model. We need to increase the diversity of thought in our team looking at UIG, and I would therefore like to bring in new data science and machine learning skills to challenge our existing ways of looking at the problem.
- **Personalised action plans (per customer):** Armed with the specific causes of volatility at any point in time, we should be able to develop specific actions plans for all customers who may be unknowingly contributing to UIG; and do this in such a way that is helpful and supportive but with increased pace of impact. To do this effectively, we need to put in place the capacity, capability and drive to turn plans into reality.

It is hard to make promises and target specific outcomes at this stage, but I would be prepared to do so, once we have increased our analytical capacity and capability, which must be step one. With this in mind, we are speaking to companies and individuals who may be able to support this work, with a view to understand whether there will be an incremental cost to our customers, which we will need customers support to incur. We are finalising detailed proposals ready to present to the appropriate committees in July.

In addition to this more forward looking update, please find attached a detailed briefing on the status of existing activity.

Thank you for your ongoing support.

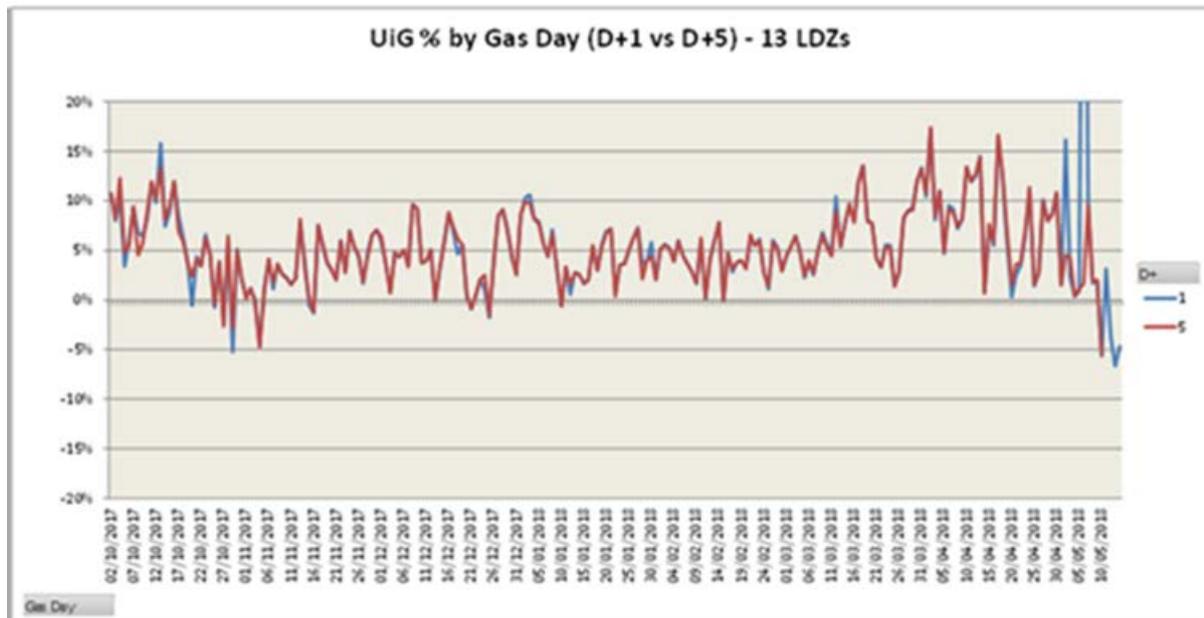
UIG Mod Status

A number of urgent Modifications (0642, 0642A and 0643) were raised in late 2017, which aimed to introduce a fixed daily proportion of UIG, to make the levels smoother and easier to predict. We supported the Industry with analysis and information and all of those Mods are now with Ofgem for a decision. In the April UNC Mod Panel meeting, Ofgem stated that they are unable to make a decision on these modifications without information on the benefits of

each. They are considering issuing an impact assessment for 28 day consultation to seek further information to justify implementing one of these modifications.

UIG Levels since go live

The graph of UIG as a percentage of national LDZ throughput shows that the level and volatility has not reduced since the implementation of the new allocation processes. Following a relatively steady period from November to February, there have been a number of recent spikes. While we have continued to investigate the specific causes of particular behaviour (e.g. extreme weather) we are still yet to find a consistent model which can predict and explain UIG.



Xoserve continues to support the resolution of Daily Metered Consumption Adjustments, and the latest stats can be found here:

<https://www.xoserve.com/index.php/unidentified-gas-uig/>

Possible causes of UIG and areas for continued focus

The areas of focus below emerged from last year's UIG investigations, and have been the source of our focus since – we have split these into what we think are higher and lower impact groups:

Higher impact:

- DM measurement errors – all of the original migration errors have now been resolved. However, 60 sites are still awaiting consumption adjustments; once these are provided these will correct historic UIG positions via the Amendment invoice.
- LDZ offtake errors – the performance of regular audits of offtake meters, then reporting and correct these will ensure this is removed from UIG
- Inaccurate AQs – Xoserve has worked with the industry to identify and correct erroneous AQs of 1 and to improve the AQ calculations to maximise the number of calculations each month. The impact of AQs on UIG can be minimised by timely meter read submissions by Shippers to keep AQs up to date, and to ensure that Meter Point Reconciliation takes place promptly
- Consumer theft – this requires proactive investigation of potential consumer theft and prompt, accurate reporting of kWh values to Xoserve so that this is removed from UIG

- Inappropriate End User category (NDM) – Xoserve has raised the issue of poor read history on larger sites, leading to them being in the wrong EUC. This drives less accurate allocation and hence more volatility in UIG. This has been escalated via the Performance Assurance Committee; Shippers can use the AQ Amendment process to update the EUC

Lower Impact:

- Shipperless/ Unregistered sites – this is managed by the Shipperless/ Unregistered sites forum and requires prompt of registration of Shipperless/Unregistered sites so that this is removed from UIG
- Erroneous weather data – Xoserve tracks the daily weather received from its service provider into UK Link to ensure that it is correct
- Unexpected reactions to weather – the Demand Estimation Sub-Committee’s role is to manage and review the success of the NDM Algorithm; it is developing additional NDM End User Categories to improve forecasting and allocation accuracy. Shippers can assist by providing more daily sample data for use in Demand Estimation and model verification to Xoserve
- Shrinkage errors – Shrinkage is overseen by the Shrinkage Forum and is a very small proportion of throughput so has a minimal impact on UIG
- CSEP/LDZ mapping errors – Xoserve has investigated this with the large GTs and IGTs and not found any material issues

Additional areas of exploration

- Attempting to identify micro and macro causes of UIG, using all the daily UIG information to date, plus external data sources, including a broader set of weather data items
- Analysing the reconciliation data to date, to try to predict the impact of unreconciled sites and periods, to estimate the ultimate level of UIG and the time to reach that level
- Reviewing the outcome of the NDM Algorithm against reconciliation data and actual daily consumption data, to make recommendations for improvement
- Reviewing NDM Meter Read Submission to identify areas of poor performance and root cause of failures, and work with industry parties to address those causes (timely, accurate meter read submission will deliver up-to-date AQs and speed up the reconciliation process, thus getting the industry to ‘final’ UIG quicker)
- Leading specific investigations into known causes to try to better quantify their impacts, e.g. Shipperless/Unregistered/Unfound sites and Theft of Gas

How can you stay informed going forward?

We provide regular updates via our [website](#). Please note we will look to revisit the regularity and style of our updates on UIG, once we are clear on the extent to which we are able to increase our capacity and capability following committee reviews in July.

Kind regards,

Sian

Chief Executive Officer

