

Thursday 27th September

Dear Customers and Industry Colleagues,

UIG Task Force Update

Following our commitment at the last DSC Contract Management meeting, we are now in a position to share an executive summary of our progress and findings to date from the Xoserve-led Unidentified Gas (UIG) Task Force.

Background

Since the implementation of Project Nexus in June 2017, gas shippers have experienced much higher than expected absolute levels and volatility of UIG. This is severely affecting their ability to predict demand and commercially manage their businesses from an immediate cash-flow perspective, because UIG is reconciled (corrected) over an extended and unknown future period. In July 2018 Ofgem approved the UNC Modification 0658 to drive a more centralised and focussed approach to the resolution of UIG, mandating Xoserve as the Central Data Service Provider to take on a leadership role on behalf of the industry.

I'm pleased to confirm that the first sprint of the UIG Task Force, which prioritised a diagnostic of the underlying volatility of UIG and understanding the shoulder months, has recently completed.

Sprint 1 Findings

In Sprint 1 the Task Force carried out a range of investigations, which have led us to identify several potential drivers of volatility of varying impact. Our most significant findings were that components of the NDM algorithm appear to be strongly correlated with UIG. These findings suggest that the UIG algorithm does not react quickly enough to significant day-on-day weather changes, and that holiday factors do not reflect real usage patterns. Additional modelling is now needed to further substantiate and quantify these findings. Conversely, the analysis confirmed that the weekend vs. weekday component of the algorithm has no correlation to UIG.

In Sprint 2 we will therefore continue the most promising current lines of investigation to validate early findings by the use of data across a wider date range. In addition to this, Sprint 2 will also incorporate new areas of investigations to quantify additional UIG causes; the accuracy of DM Nominations, the role of standard conversion factors and the NDM sample data set.

The table below provides more detail on the full scope of Sprint 1.

We are providing monthly updates at the DSC Change Management Committee. The Investigation Log on our [website](#) provides further detail on all Task Force activities. If you have any further questions or comments, please contact us uigtaskforce@xoserve.com.

Thanks

Ranjit

Ranjit Patel – **Chief Customer Officer**

Ranjit.Patel@xoserve.com | 0771 7854 091



Address: Xoserve Limited, Lansdowne Gate, 65 New Road, Solihull, B91 3DL

Company Website: <http://www.xoserve.com>



Sprint 1 Findings (Ref # relates to the UIG Investigation Log)

Area	UIG Hypothesis	Findings to date	UIG Impact Peak Volatility %	UIG Impact Annual Average %	Confidence in percentages	Confidence rationale	Further Action to increase confidence/root cause (None / Sprint 2 / Later Sprint)	Associated UNC Modifications
Composite Weather Variable (Log Ref #13.2)	Inadequacies in the Composite Weather Variable (CWV) formula are contributing to daily UIG	Day-on-Day Weather Changes <ul style="list-style-type: none"> UIG algorithm does not appear to react quickly enough to significant day on day weather changes UIG spikes often last across 2 to 3 days "Mini Beast from the East" gave a national UIG of c 13% 	8%	N/A	LOW	<ul style="list-style-type: none"> Only 12 months of post-Nexus data have been analysed Total UIG movements cannot be attributed to individual causes 	Sprint 2: <ul style="list-style-type: none"> Review appropriateness of the CWV formula to understand root cause and to establish if changes to the components are required. Later Sprint: <ul style="list-style-type: none"> Obtain additional weather data items from third parties for consideration of inclusion into CWV inputs If needed quantify and recommend changes to components. 	N/A
		CWV Formula <ul style="list-style-type: none"> UIG showed an average national 0.9% increase for each 1 degree reduction in CWV for the 12 months from Project Nexus go-live – this suggests that the CWV formula isn't working well enough 	4%	TBC	LOW	<ul style="list-style-type: none"> Still unclear whether the linkage to UIG is due to the CWV formula or the make-up of the NDM sample, or a combination of both 	<ul style="list-style-type: none"> If needed quantify and recommend changes to components. 	UNC Mod 0659 (use of extra weather data items)
Accuracy of NDM Algorithm (Log Ref #13.1)	Any difference between actual and allocated usage derived using the NDM Algorithm would contribute to UIG.	Holiday Factors Holiday Factors within the NDM algorithm are potentially underestimating usage on those days e.g. Easter & Christmas.	TBC	TBC	LOW	<ul style="list-style-type: none"> Holiday factors in EUC01 models, combined with cold weather appears to have contributed to a UIG spike of 17% on Easter Monday 	Sprint 2: <ul style="list-style-type: none"> Model 2-year dataset prior to Nexus to validate what proportion of 17% volatility can be attributed to holiday factors and establish if changes are required. 	N/A
		Weekend vs. Weekday Correlation No correlation was identified, suggesting that the weekend and weekday factors in the NDM model work correctly.	N/A	N/A	HIGH	<ul style="list-style-type: none"> No further investigation planned. 		N/A
Use of estimates 'v' actuals for DM Sites (Log Ref #1)	When estimates are used for DM Allocation in the absence of actual reads, any difference in consumption	"At risk AQ" of Class 1/2 sites with no reads for over 3 months is 3.1 bn kWh, c. 0.6% of total throughput.	+/-0.06%	N/A	LOW	<ul style="list-style-type: none"> Difference between actual and estimated consumption is not known on the day Estimate is based on a 10% daily error on the sites with no recent meter reads 	Customer Activity: <ul style="list-style-type: none"> Engage with individual customers to highlight the need to improve on the volume of actual reads at MPRN level to reduce the reliance on estimates. 	N/A



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	is a cause of UIG							
Accuracy/ out-of-date AQS for Class 3 & 4 sites (Log Ref #3.2)	The difference between the live AQ and a more accurate figure contributes to UIG each day.	In Class 4, 32bn kWh of NDM AQ (7%) is overdue for a meter reading (against the UNC obligation of one read every 1 or 12 months, depending on AQ and nature of meter reading equipment).	TBC	TBC	LOW	<ul style="list-style-type: none"> Correct AQS are not known until meter readings are loaded Could increase or decrease UIG 	Customer Activity: <ul style="list-style-type: none"> Engage with individual customers to highlight the need to improve on the volume of actual reads for sites where the AQ is out of date. Review AQ movements / trends since go-live of Nexus and numbers of rolled-over / corrected AQS to assess contribution to UIG. 	N/A
Low take-up of WAR Band EUCs (Log Ref #2)	If NDM sites in EUCs 3 and above are not assigned to one of 4 WAR Band EUCs, the difference between actual and allocated usage each day contributes to UIG.	28% of eligible sites do not have a WAR Band EUC as at 01/09/2018. Anonymised findings by Shipper have been published.	+0.7% extra UIG (winter) 0.34% less UIG (summer)	0.15%	MEDIUM	<ul style="list-style-type: none"> Estimate based on comparison of WAR Band EUC usage v default, using AQ of affected sites and assumption that national take-up of WAR Bands would match the ideal 20:30:30:20 split 	Customer Activity: <ul style="list-style-type: none"> Work with customers to ensure sites are moved to correct EUC/WAR band to reduce UIG volatility. 	UNC Mod 0652 (extra information to aid the take-up of WAR Bands)

Additional initiatives to be investigated within Sprint 2 (in addition to above).

Area	UIG Hypothesis	Areas of investigation Sprint 2	Associated UNC Modifications
DM Nomination Accuracy (Log Ref #9)	Inaccurate DM Nominations cause UIG in Nominations	Sprint 2 <ul style="list-style-type: none"> Review historic data on DM Nominations v Allocations patterns and trends, to assess materiality to gas buying decisions 	N/A
Standard conversion factor (Log Ref 12.2)	Using a standard figure throughout the year could understate winter usage and overstate summer usage.	Sprint 2 <ul style="list-style-type: none"> Conduct initial assessment of materiality to UIG 	N/A
Suitability of NDM Sample site data (Log Ref 13.3)	Any difference between actual NDM usage and allocation based on the sample is a cause of UIG	Sprint 2 <ul style="list-style-type: none"> Compare sample sites' allocation to actual consumption, especially on peak days, to assess suitability of the sample and/or the algorithm itself Later sprint <ul style="list-style-type: none"> Large scale tests of actual meter read data against NDM Algorithm 	UNC Mod 0654

