**UIG Task Force**

**13.1.1 NDM Algorithm Uplift Factors for 2018/19**

**V2 Updated June 2019**

# Summary of Findings

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| **Findings Status** | **Closed** |

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| **Area & Ref #** | Accuracy of NDM Algorithm (Including EUC Definitions) - Uplift Factors (Ref#13.1.1) |
| **UIG Hypothesis** | All NDM sites in Class 3 and 4 are assigned gas using a standard algorithm, on the basis of their assigned End User Category. The outputs from the Spring 2018 Demand Estimation process will be "uplifted" prior to use in the NDM Algorithm for Gas Year 2018/19, as described in version 1.2 onwards of the Demand Estimation Methodology document (UNC Related Document: https://www.gasgovernance.co.uk/tpddocs). <br><br> These uplift factors were designed to reduce the day-on-day volatility of UIG, but should also reduce the daily base level of UIG. |
| **Data Tree References** | UIG, Gas Day, WAALP |

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| **UIG Impact Peak Volatility %** | **2% to 4% reduction** |
| **UIG Impact Annual Average %** | **2.6%** |
| **Confidence in Percentages** | **Medium** |

| Findings | Approach to analysis |
|---|---|
| Separate factors have been developed for each LDZ: Separate winter and summer Uplift factors are applied to ALPs in EUC01B only, and factors are applied to DAFs in all EUCs (single value for each LDZ). <br><br> We simulated the impact of the uplift factors on a historical period using the prevailing ALPs and DAFs plus Uplift Factors. The actual outcomes are heavily dependent on actual weather and the ALPs and DAFs in use at the time – these are updated each Gas Year. The simulation showed that UIG would have been 2.5% national average for that period instead of the actual 5.1% which was seen. High UIG days would have been reduced by around 2% to 4%. <br><br> We have updated the analysis for the first 6 months of Gas Year 2018-19, comparing actual Allocation using the Uplift Factors to Simulated Allocation using ALPS and DAFs with no uplift factors applied. Since October 2018 UIG has been negative overall, suggesting that the Uplift Factors could be increasing NDM Allocation too much. The impact on UIG is consistent with the historic simulation analysis, in that the peak UIG reduction is around 4.5% of throughput and the average daily UIG reduction is 2.6% of throughput. <br><br> Due to the weather dependency on these results, the confidence level remains **Medium** | For each LDZ modelled the levels of daily gas allocation and UIG that would have been seen for the period 1 June 2017 to 31 May 2018 if the uplift factors had been applied. This is based on the actual data for those days, e.g. LDZ total, DM energy, NDM AQs and actual weather <br><br> Uplift factors will apply to the ALP (Annual Load Profile) and DAF (Daily Adjustment Factor). <br><br> Updated June 2019 comparing actual 2018-19 Allocation against simulated UIG with the Uplift Factors removed. |

# Supporting Evidence (1/3)

**Actual v Simulated Daily National UIG – %**

Graph shown here plots the first 6 months of Gas Year 2018-19 and plots the original national UIG daily % against simulated UIG daily % if the uplift factors were not applied applied to the prevailing ALPs and DAFs.

Actual overall UIG for the period is -0.78% of throughput. The simulation shows us that total UIG would actually have been 1.95% over the period without using the uplift factors, so the total change to UIG over the period is a 2.73% reduction.



Comparison of Actual UIG Using NDM Uplift Factors and Simulated UIG calculated using no Uplift Factors, October '18 to March '19
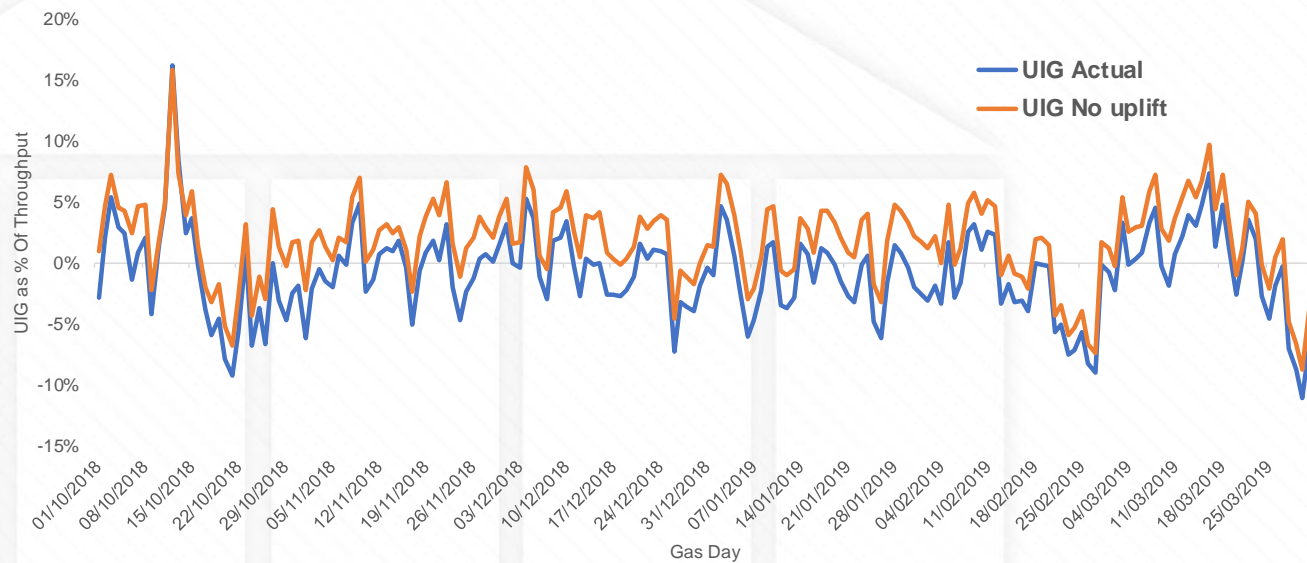
# Supporting Evidence (2/3)

**Actual v Simulated Daily National UIG – %**

**Graph shown here plots the 12 months following Project Nexus implementation and plots the original national UIG daily % against simulated UIG daily % if the uplift factors had applied to the prevailing ALPs and DAFs in use at that time (Gas Year 16/17 and 17/18).**

**Note: this was based on actual data, e.g. weather, AQs etc. but with 2018/19 Uplift Factors applied.**

**This does not take account of any changes in the ALPs and DAFs from Gas Year 17/18 to 18/19 as part of normal Demand Estimation processes.**



Legend: Original UIG %    Revised UIG % - with uplifts
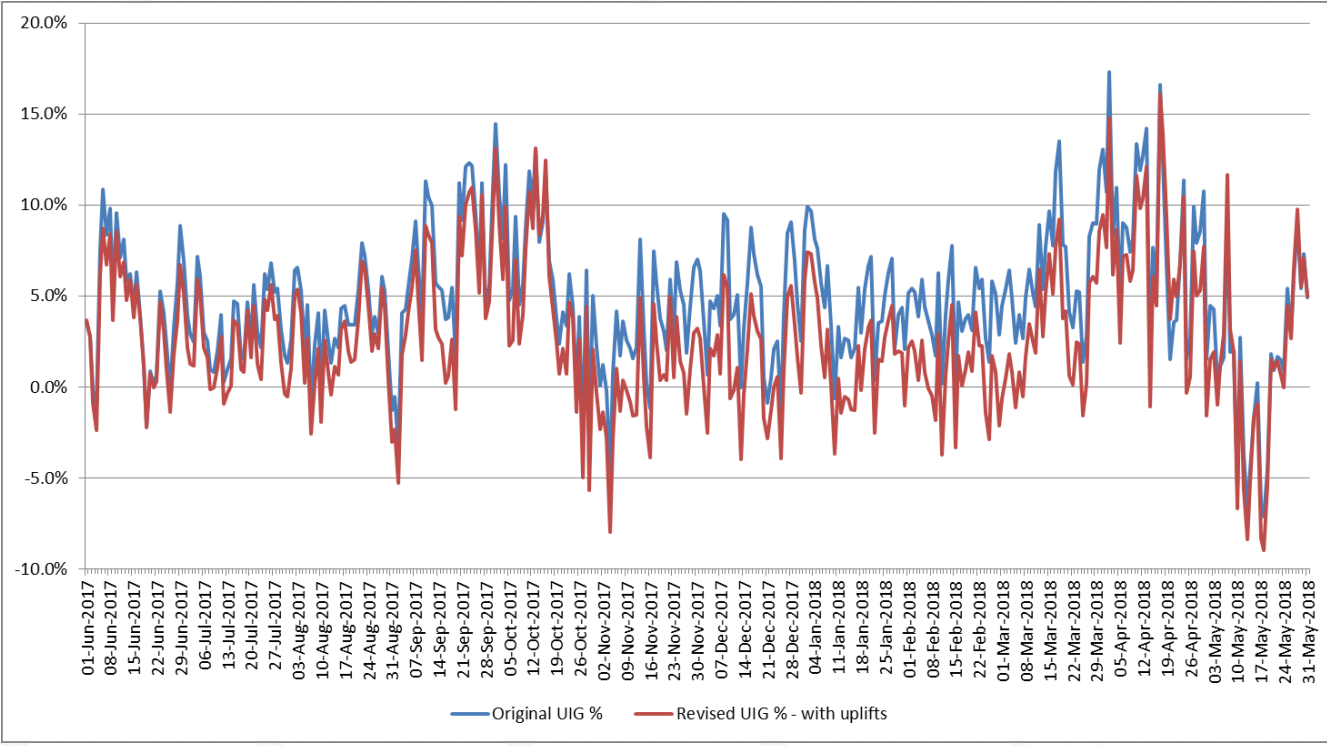
# Supporting Evidence (3/3)

**Actual v Simulated National UIG by month – kWh**

**Graph shown here plots the 12 months following Project Nexus implementation and plots the original national UIG against simulated UIG if the uplift factors had applied to the prevailing ALPs and DAFs in use at that time (Gas Year 16/17 and 17/18), grouped by the original billing months**

**Note: this was based on actual data, e.g. weather, AQs etc. but with 2018/19 Uplift Factors applied.**

**This does not take account of any changes in the ALPs and DAFs from Gas Year 17/18 to 18/19 as part of normal Demand Estimation processes.**