

British Gas comments on the Proposed Allocation of Unidentified Gas Statement (AUGS) for 2019/20

21 January 2019

We appreciate this opportunity to provide feedback on the work being undertaken by the AUGS.

We provide comments on the following areas:

- Potential changes to the composition of sites in Product Class 2
- The relationship between the AUGS and the Shrinkage Model
- Impact of Failed Suppliers
- Interaction between Demand Estimation Methodology, UIG allocation, Reconciliation and UGR Smearing
- Comments on Proposed Theft Methodology
- Presence of Volume Converters (Section 5.4.2)

2019_6:

1. Potential changes to the composition of sites in Product Class 2

The AUGS's analysis considers the relative proportion of two sub-populations in PC2 when attributing the balancing factor – those that were previously non-mandatory DM, and those that were previously NDM. The ex-DM sites were noted to never have a reported theft, while the comparatively smaller subpopulation of ex-NDM sites attract more UIG based on having more theft reports and fewer volume converters.

The large decrease in the factors for PC2 this year provide a strong incentive for suppliers to move sites into PC2 - these will necessarily be former NDM sites. To the extent that this shift occurs, the relative sizes of the sub-populations will shift and the average UIG across PC2 should increase. We note the provision of a 36% increase in the aggregate AQ forecasts (table below). This feels low. The population is increasing from a relatively low base. Additionally, it would only take a small percentage (in terms of AQ) of sites to shift from PC4 for the growth in PC2 to be much higher.

We appreciate there is more art than science in this projection, however this point warrants more discussion before the AUG Statement is finalised.

Table: Aggregate AQ (GWh)

Product Class	August 2018	April 2020 Forecast	% Change
1	57,809	57,809	0%
2	14,751	20,114	36%
3	15,682	19,006	21%
4	423,656	433,089	2%
Total	511,898	530,018	4%

Source: Section 7.10 - Product Class Population and Aggregate AQ

Response:

We recognise that the new factors may create an incentive for sites to move into PC2 (subject to Point 4 below, which states that given the current negative level of UIG, the incentive is actually to move to PCs with high factors).

The Unidentified Gas analysis must use an evidence-based approach rather than any sort of “what-if” scenario that can’t be accurately quantified. As such, if changeover rates between Product Classes do alter over time there will always be an element of “catching up”: we will only be able to reflect this change in our figures when the effects of it enter the training data. Our estimate of a 36% increase is based on current trends observed in that data.

We appreciate that it is important to pick up these effects as quickly as possible, however, and we therefore request updates to the asset data on a regular basis and recalculate our figures based on the latest data available. We will request a fresh dataset immediately before the calculation of the final factors for 2019/20 and use this in the calculation of expected Product Class populations for this year.

If there has been any upturn in PC2 population at this point due to anticipation of smaller factors for the coming year this will be reflected in these calculations. We can only use actual data, however, and the most accurate approach is to ensure that it is as up-to-date as possible when the final factor calculation process takes place. It would not be appropriate for us to make any assumptions about what any such upturn might be in the future over and above this.

2019_7:

2. The relationship between the AUGÉ and the Shrinkage Model

The AUGÉ made a commitment to “present any comments or observations on the LDZ Shrinkage model through the annual consultation carried out by the DNOs”. The consultation closed on 20 December 2018 – can we have confirmation whether the AUGÉ made a representation?

The AUGÉ states in the issue log against Issue 24 (Shrinkage Error): “No further action required. Estimation of shrinkage is explicitly outside the scope of the AUGÉ as it is the responsibility of GTs who have a license condition to accurately calculate it.”

While we appreciate arguments that seek to avoid dual governance of shrinkage, and are not seeking for the AUGS to in any way fetter the GDNs in discharging their licence conditions, we note the comment in the GDNs Shrinkage and Leakage Model Review 2018 Final Report, that “we do recognise that the purchase of Shrinkage gas on a flat profile which reflects an average daily quantity does not reflect the actual amount of Shrinkage gas that is lost on a daily basis.”

While Shrinkage Model Error is excluded from the terms of reference set out by the Uniform Network Code Committee, this clear statement of the daily inaccuracy of a flat shrinkage profile suggests that there are questions related to Shrinkage that should be considered by the AUGS. For example, if shrinkage is under and over-represented by the Shrinkage Model on a seasonal basis, are loads that correlate with this seasonality being adversely impacted, and should there be some adjustment to the methodology to ameliorate this impact?

Response:

We can confirm that we did not make an official response to the Shrinkage and Leakage Model Review in 2018. This is because our comments on the model have already been supplied to the industry (“Review of GRG Study on Shrinkage”, 30/06/2017) and these have not changed. This document is available on the JoT website.

As a result of these comments, the transporters agreed to investigate MP leakage and PE permeation during 2018. Of these areas, the investigation into MP leakage rates is continuing, with Newcastle University having been commissioned to carry out an independent review in this area.

The result of the PE permeation review was that the gas transporters believe that this is already covered in the NLT leakage rates. DNV GL does not agree with this assertion, as stated in our original review document. We believe that the permeation rate through PE is too slow for this effect to be picked up in the NLT, given the timeframe of the tests and the accuracy of the measuring equipment. When considered over a longer period, such as a year, we believe that sufficient gas could permeate through PE pipes to make a difference to overall leakage from this source. This is documented clearly in our review, and code parties are welcome to continue to raise this issue with the gas transporters if they wish to.

We agree that the flat shrinkage profile could affect Unidentified Gas calculations. We would be happy to analyse this area for the 2020/21 AUGS but we would need authorisation from the industry to do so – i.e. confirmation that this does not contravene section 5.1.2 of the “Framework for the Appointment of an Allocation of Unidentified Gas Expert, June 2018”.

2019_8:

3. Impact of Failed Suppliers

In reference to Issue 53, we note Xoserve’s comment that failed suppliers will not contribute to permanent UG. We would also like some reassurance on the degree to which failed suppliers will distort the reconciliation process, for example by changing the market share calculations used in the UGR smearing calculation.

Response:

This was discussed at the UNC AUG sub-committee meeting on 15th Feb, where Xoserve again confirmed that no UIG will results from failed suppliers. In the event of a supplier failing, their whole portfolio is moved to another supplier. At no point do any of the customers become

shipperless. Xoserve advise that the UIG smearing process is unaffected by a Shipper failure, and that the party responsible for pre-failure costs, e.g. a receiver or administrator, will pay for the pre-failure UIG share, until 12 months have elapsed.

2019_9:

4. Interaction between Demand Estimation Methodology, UIG allocation, Reconciliation and UGR Smearing

Since the start of the current gas year, with the application of the new scaling factors for 2018/19 which effectively increase initial allocation by 7% for EUC band 1 sites, average national UIG has been -0.4%. This change from a positive to negative UIG levels at allocation may be having unintended impacts. For example, the now beneficial initial UIG is being allocated at the highest rate to EUC bands 2 and 3 in PC4, which aren't impacted by the new scaling factors. It is not clear whether this will even out through subsequent reconciliation and UGR smearing.

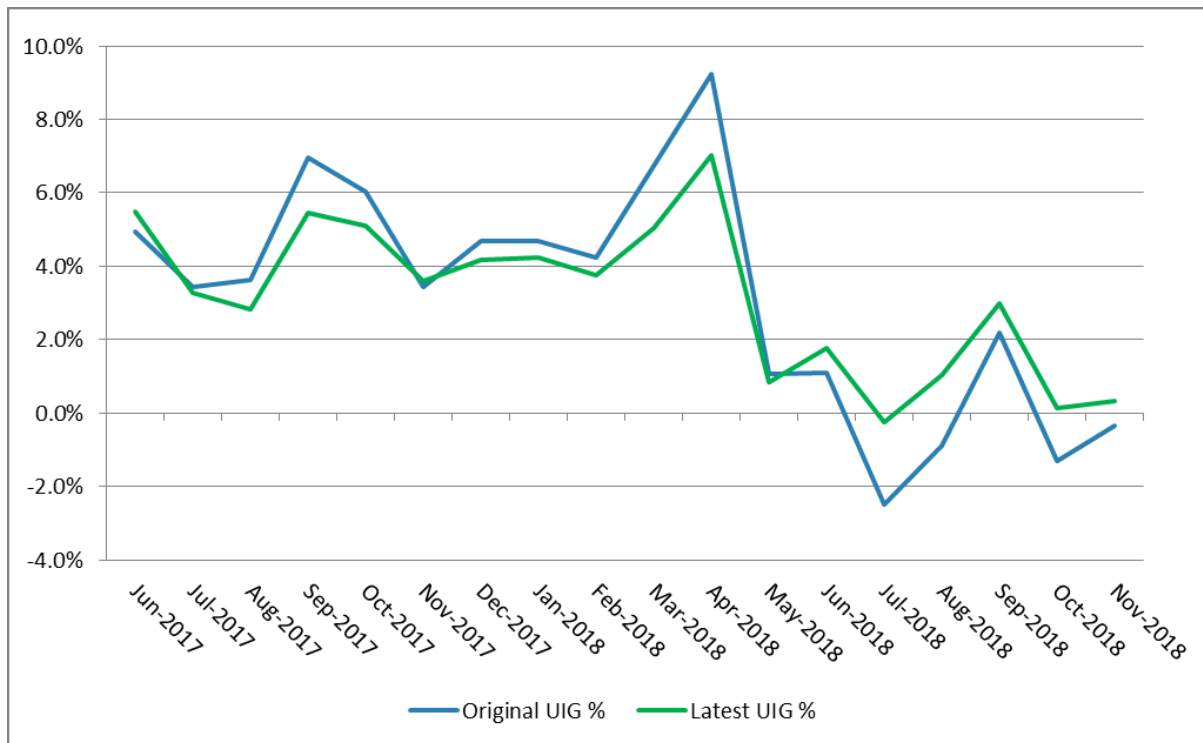
We would like the AUGÉ's views on the interaction between the UIG allocation table and the proposed demand estimation methodology for 2019/20, as well as any observations for the current gas year.

Response:

UIG is calculated as a small difference between two very large numbers (i.e. input to the system and output from the system) and is hence extremely volatile. Our experience from years of calculating Unidentified Gas figures is that when you assign it to individual years the figures for these years are very variable, and it is only across a number of years that the genuine prevailing level becomes apparent. As such, it is not unusual to have periods of time where the average value appears to be very large (such as the 4.6% average from 2017) or very small (such as the current level of -0.4%).

In this case, the difference between these two figures is a combination of this natural variation in the process and ongoing efforts to improve the accuracy of the initial calculated UIG. The CDSP has successfully addressed various data issues, such as the use of estimated reads for DM sites, which has resulted in an improvement in the initial UIG figure. In addition, ALP/DAF uplift factors were implemented on 01/10/2018, which have also been shown to reduce the value of initial UIG by approximately 2.5% on average.

Therefore, whilst the effects of these changes will endure, and result in initial UIG values that are consistently lower than the 2017 average of 4.6%, the remaining difference (which is due to natural variation) will continue to operate in an unpredictable manner. As such, we do not believe that UIG will continue to operate at a value as low as -0.4% indefinitely, although initial UIG is likely to continue to run at this level at times. The following graph, produced by the CDSP, shows a number of interesting features:



- The 2017-early 2018 level of 4.6% can be clearly seen, along with the current level where original UIG has been negative on average since June 2018.
- Where UIG is high, reconciliation is bringing the value down, whilst where it is low, reconciliation is raising it back above 0%. This shows that the old initial UIG of 4.6% is an over-estimate and the new initial UIG of -0.4% is an under-estimate.
- As far as the AUG Expert’s analysis of Unidentified Gas is concerned, it is the green line - the current best estimate of UIG(f) – that is important. The current level of this is above zero and hence any incentive to keep sites in a high-UIG Product Class applies only to initial UIG and is lost over time.
- There is a clear step change in the level of original UIG around May 2018, which cannot be completely explained by weather effects or the ALP/DAF uplift factors. Whilst it is understood that low temperatures tend to lead to high levels of initial UIG and high temperatures lead to low (and potentially negative) levels, the time periods covered by the two distinct levels in the graph include a wide range of average temperatures. The “high” period covers a full year, whilst the “low” period runs from the summer heatwave right through to cold weather in November.
- Whilst weather remains a factor that influences original UIG, we conclude that there is therefore another factor that has also impacted on these values. We believe that the step change is likely to be due to successful measures taken by the CDSP to increase the accuracy of calculated UIG.
- As stated above, the current best estimate of final UIG (the green line on the chart) is above zero. Original UIG is an under-estimate of this, however, and has been running at an average of -0.4%: the figure only returns to its expected above-zero value when reconciliations are taken into account. If the current level of UIG continues (i.e. the new level is indeed the result of improvements made by the CDSP) and the nature of original UIG results in the kind of initial under-estimate that has consistently occurred for the last 6 months, this pattern may continue. If this is the case, it may be prudent to investigate options for improving the original UIG calculation to prevent it being negative and creating an initial UIG credit rather than debit.

- Whilst it is recognised that the current UIG levels result in an initial benefit, this situation is reversed when reconciliation occurs and the true level of UIG is revealed. Therefore, any initial UIG credit based on original UIG values is only temporary and should not result in deliberate uptake of Product Classes that attract more UIG. It can be argued that this situation creates a disincentive for suppliers to read meters and allow allocations (and hence original UIG) to remain in place. Meter read frequency requirements are specifically stated in the UNC, however, and any such strategy would put a supplier outside the rules and mean they were failing to fulfil their obligations.

2019_10:

5. Comments on Proposed Theft Methodology

We feel it is not appropriate for the AUGGE to be undertaking any theft related assessment or analysis in isolation, without it being considered as part of the wider industry approach to theft. The AUGGE's approach needs to be complimentary to other theft-related industry activities, obligations and incentives, and should be aligned with Ofgem's early thinking regarding an industry-wide "theft strategy".

In terms of specific comments on the Theft Methodology:

- As the data to be analysed by the AUGGE includes Assessed Losses, we would like to highlight that large numbers of tampered pre-payment meters will result in no assessed loss because the nature of the tamper is to disarm the prepayment module rather than to prevent the recording of usage. Consequently, the Domestic Credit meter sub-population is more likely to be responsible for UIG than the Domestic Prepayment meter population, and the AUGGE should account for this in their theft methodology.
- We are not convinced that TRAS data will reliably indicate relative levels of theft between classes/bands. While TRAS does cover I&C sites, it is acknowledged that the outliers produced for Commercial sites are significantly less than those for residential sites due to how address data, amongst other things, is held.

Finally, we would like to offer the AUGGE the opportunity of a briefing with our Revenue Protection Unit to discuss the factors influencing theft detection and revenue protection performance. We would also be happy to discuss the relative performance of suppliers, as demonstrated by the Gas Theft Detection Incentive Scheme Year 1 results.

Response:

- We agree that ETMs have a major role in theft, and that the theft calculations should continue to evolve in line with this. Our preliminary analysis immediately showed that 78% of confirmed thefts were from this type of meter, which is an early benefit of having this line-by-line information and additional fields.
- The vast majority of ETMs are PC4 01B, and hence the Assessed Loss figures for this category will reflect the combination of losses that can be recovered and those that cannot. We do recognise, however, that extrapolation of theft to the forecast year will be more accurate if ETMs are considered separately and the proportion of theft that arises from this population is linked directly to the ETM population rather than the overall EUC/Product Class split. This is the approach we already use for Smart and Traditional meters, based on BEIS data for Smart Meter populations and installation rates. The extension of this method to cover ETMs requires additional data (as we cannot use BEIS as a data source in this case) and an update

to the methodology and hence we will not be able to incorporate this in the 2019/20 factor calculations. It will, however, be included for the 2020/21 analysis.

- The new line-by-line theft data shows that for ETMs, assessed losses are entered for 71% of confirmed thefts. This is consistent with the equivalent figures for Smart Meters and traditional credit meters. This suggests that the current method of estimating losses from these figures is as appropriate for ETMs as for other meter types, and the major benefit from including ETMs as a separate case in the analysis is accurate tracking of the population to the forecast year and the associated level of theft from this population as described above.
- It is accepted that the potential inconsistencies in how company names and addresses are recorded mean that address matching is less accurate for non-domestic sites, and hence TRAS will return fewer qualified outliers. This is not an issue for the 2019/20 figures because the TRAS outlier data was not made available to the AUG, and so the new theft method has had to be applied without it. We will assess what enhancements can be made to the new method for the 2020/21 analysis to address this issue.
- We appreciate the offer of a briefing with the Revenue Protection Unit and agree that this would be helpful in guiding further enhancements to the theft method. The AUG Sub-committee has confirmed that they have no issue with this affecting our independence and we hope to arrange a visit during April 2019 following completion of this year's AUG process.

2019_11:

6. Presence of Volume Converters (Section 5.4.2)

We note AUG's concerns about the veracity of the data on the penetration of volume converters provided by CDSP. In addition, we find it unusual to have seemingly meaningful values provided (in Table 4) for the currently vacant class/band combinations PC2-4 EUC 9, especially given that data should be a current snapshot.

	PC1	PC2	PC3	PC4
01B	100.00	0.52	0.00	0.00
02B	100.00	0.00	0.01	0.00
03B	100.00	0.00	0.04	0.19
04B	100.00	39.84	1.94	5.96
05B	100.00	82.46	18.50	32.97
06B	100.00	93.20	30.34	59.55
07B	100.00	96.08	69.71	75.53
08B	100.00	94.04	76.06	84.13
09B	100.00	92.45	100.00	75.91

Table 4: Percentage of Energy from Meters with Volume Conversion Devices

Response:

The CDSP has now provided data regarding volume converters which is more consistent with expectations (see table below). In terms of the meaningful values in PC2-4 EUC 9, it should be noted that this table shows the % of AQ with volume converters. A high number does not therefore suggest a large number of sites or large AQ, simply that a high proportion have volume converters.

An updated snapshot of PC populations has now been provided by the CDSP. There are currently 4 MPRs in PC2 EUC09B, 1 MPR in PC3 EUC09B and 15 MPRs in PC4 EUC 09B.

	PC1	PC2	PC3	PC4
01B	100.00	100.00	0.02	0.00
02B	100.00	100.00	0.08	0.15
03B	100.00	100.00	0.15	0.86
04B	100.00	100.00	2.33	6.79
05B	100.00	100.00	20.64	31.74
06B	100.00	100.00	29.14	57.99
07B	100.00	100.00	64.65	75.45
08B	100.00	100.00	77.68	80.79
09B	99.86	100.00	100.00	88.06
Overall	99.87%	100.00%	12.85%	6.51%