AUGE Response to Queries Arising From 2nd Draft 2012 AUGS for 2013/14 Consultation

Queries From	ICoSS on behalf of Corona Energy ENI Gazprom Energy GDF Suez Energy UK Statoil UK Total Gas & Power Wingas UK
Date Received	1st March 2013
Date of Response	12th March 2013

Comment:
From Section 2, p6
"The proposed utilisation and aggregation of meter read and consumption data from all LDZs is a welcome development as it means, in principle, that individual components of the LDZ can be accurately quantified and deducted from the overall LDZ load, to give a truer picture of the quantity of UG. However we note that the data used for the second draft AUGS 2012 remains incomplete, as it for example includes data from only 10 of the 13 LDZs. Without provisional results it is not possible to fully understand the materiality of the changes being proposed."

Response:
Whilst the AUGS published on 17th December contained results for 10 out of 13 LDZs the data made available to the industry during the review process contained consumption calculations and top level UG estimates for all 13 LDZs. Had we waited for all 13 LDZs we would not have been able to publish the AUGS until January 2013.

At this stage of the review it is the methodology that is being reviewed not the figures that it produces (although it is very difficult to do one without the other).

Going forward, we will not publish ANY figures until the interim AUG table is published by the Transporters on 1st November. There will be an opportunity to scrutinise the figures at that time including the data used to generate them, but not before.

Comment:
From section 3.1 p6,7
"In the final 2011 AUGS section 4.4 the AUGE noted the need for "*data of excellent quality*" and stated "*...the potential for missing and/or erroneous information...is high, and due to the volumes of data involved, these would be hard to detect. Data issues of this nature would damage the integrity of the estimates...*" (see Annex 1).
Based on its tests, the conclusion of Phidex is that the data being used by the AUGE ***is sufficiently poor to be unfit for purpose***, and that better quality datasets (to provide *inter alia* more accurate LSP metered consumptions) that have already been through a number of validation processes could be provided by Xoserve to the AUGE.

Phidex notes: "*The AUGE themselves state in a number of sections above that there are significant errors in the raw data provided. Corrections to the metered volumes do not include corrections to the meter reads available and that (see p36 of AUGS) processing data to obtain an accurate view of all corrections would be a significant undertaking.*Phidex then goes on to say: "*Whilst Phidex agrees with the sentiment that the undertaking would be considerable, we firmly see it as being feasible if a true reflection of actual metered volume is the intended outcome*" and concludes "*applying algorithms to highlight and invalidate these erroneous charge lines and the subsequent use of estimated amounts leads to significant scope for error within the process and subsequently a final invalid UG amount charged out to the industry.*" Phidex concludes: *"In the view of Phidex, the data used to calculate metered energy was not the same data as used by Xoserve to charge LSPs for metered consumption... If incorrect charges are raised then there are at least 3 further levels of validation, common in the supply chain. Firstly the shipper's billing engine is very unlikely to pass such large and obvious metered errors in the form of invoices. This is the role of the billing analyst and settlements teams within a shipper's organisation. The customers themselves are particularly good at identifying billing errors, especially if it is an overcharge. Here invoice queries and disputes would identify the anomaly. Finally there are a number of capable external consultancies which specialise in identifying errors in metered volumes and are tasked with resolving these through the well established query mechanism available; ConQuest and Xoserve's Contact Management Service. In conclusion there are better data sets available other than the ones provided to the AUGE which would deliver more accurate LSP metered values."* Such datasets seem to be available to the AUGE from Xoserve and ICoSS would seek further detail as to why they cannot be used."

Response:
When the AUGE requested data from Xoserve we understood that in addition to meter reads, consumptions calculated from those meter reads are available which we also requested. For the LSP market sector, the metered consumptions can be updated by Shippers over time. However, when these corrections are applied the meter reading does not get updated as well. Both Xoserve and respondents from the consultation of the interim report recommended the use of meter consumptions in preference to raw meter reads, particularly for the LSP sector.

We have raised this issue with Xoserve and they have confirmed that the data provided to the AUGE is the latest available including metered volume corrections that the Shippers have provided.

In our methodology we use the metered consumptions as provided to Xoserve by the Shippers. Xoserve highlighted that they also rely on Shippers providing correct and timely updates to this data since this drives various processes in the Gas Industry including things like the AQ review process.

Xoserve have also provided an initial filtering of the data by removing duplicated lines and providing the latest reads/consumptions for a given day. In their view the data provided to us is, to a certain extent, now better than what was extracted from their core systems.

Despite this, during our analysis we have found clear errors in the metered consumption data, which for LSPs means a metered consumption can be rejected and replaced with a value based on the population average for that EUC group.

In such cases, we could look at the meter reads to see if that gives a better answer, but the fact that the Shipper has chosen to provide a correction implies that there was something wrong with the meter reads in the first place.

Meter read units and correction factors for the LSP meters would need to be applied (which we do have data for). However, Xoserve have highlighted that these are unreliable and if used should be used with caution (hence we use the corrected meter consumptions instead and if this fails validation we switch to a replacement value based on the average of the EUC Group). Furthermore as the meter reads are not updated, the AUGE cannot tell whether the meter reads are necessarily any better.

During the derivation of the methodology we did at one stage look at calculating LSP consumptions using meter reads directly (as for SSP). However, issues with Meter Read Units and T/P corrections coupled with the understanding that metered consumptions that had been corrected by Shippers were more reliable resulted in the method currently proposed.

Going forward, for meters that fail the LSP metered consumption validation, we will examine the potential of using meter readings / meter read units / T&P factors to calculate the consumption to reduce the number of rejections, but it does rely on the assumption that the meter read units, T/P correction factors and the meter reads are suitably reliable – which for a subset of the meters they will be and for another subset they will not.

For SSPs we calculate consumption direct from the meter reads as often the metered consumptions are erroneous due to meter round the clock issues amongst others (this leads to spurious large positive or negative values if not dealt with).

In an ideal world we should be able to obtain the metered consumptions from Xoserve and just aggregate them up assuming they have been fully validated beforehand. In practice this is clearly not the case given some of the data issues that come through. Therefore we have no option but to provide a further round of validation to choose the most appropriate data which is within the AUGE Guidelines for us to do. This reduces the risk of erroneous data being used in the aggregate consumption calculations.

Therefore if Shippers believe that there are errors in the Xoserve data set and that they have a better calculated metered consumption then these should be submitted to Xoserve as soon as possible so that the consumptions held by Shippers / Xoserve and thus the AUGE are consistent. We would also recommend the Meter Read Units and T&P correction factors are corrected wherever possible to improve the quality of this data.

It is not feasible to investigate every single issue on a meter by meter basis, nor is it our role to fix all the data issues within the gas industry – we have to work with what we are given.

Whilst it is not the role of the AUGE to address data issues within the industry we could list MPR's that have issues (metered consumption issues, incorrect round the clock indications, inconsistent units etc) and send to Xoserve who can then pass on to Shippers for the opportunity to correct.

In summary, we believe the data set we have, despite some of the issues that come with it **is fit for purpose** once our validation steps have been applied to remove erroneous values. Having applied validation, the sample is still sufficiently large to enable accurate scaling up to

the full population. It is also worth noting that the same source of data fed the previous RbD based methodology and the same data is used for a variety of business processes in the gas industry, the difference is that we can now see the detail of what is going on behind the data that is being used which provides us with a valuable insight to the problem at hand.

There is potential for improvement, the key source of which is the raw data used in the first place.

Comment:
Section 3.2 p7-8
Phidex performed four tests on the AUGE's data to test its validity and quality.
Test 1

Phidex set up a test is to identify where an LSP has failed consumption validation due to the total metered volume provided being incorrect, and the deemed consumption applied to the meter because of that error is also inaccurate and therefore contributing to incorrect UG figures. Phidex took a sample of LSP Meter points, examined the validation failures and the outcome of the subsequent estimation methodology.

In one specific case (MPR 13975686), Phidex found that the deemed consumption for this site over the 3 years by the AUGE – which is the average of the EUC band for that LDZ – would deem an average consumption of c136,000 kWh to b applied (total 408,000 kWh), where Phidex calculated the quantity over the 3 years to be 2,773,000 kWh.

Using a prototype report Phidex found a total of 761 similar MPRs which could be affected and lead to a material misstatement of UG within the NO LDZ. This is likely to be a significant source of error and so needs to be examined in far greater detail before its full impact can be known.

Response:
As noted in the response to the previous issue, the AUGE was lead to believe that the metered volumes were more reliable than the meter reads as they are corrected. However there are cases such as the one highlighted here where the meter reads are in fact more accurate.

In this particular case the calculation fails and the average consumption for 02B is used based on the best estimate of AQ. Here this proves to be an underestimate but the method is based on the assumption that it will both under and over-estimate leading to the correct average figure overall.

There are indeed examples where the reverse is the case. For example, for the meter point below, in 2009 we use the "fake" rollover affected metered volumes and get a consumption of 18,882,574kWh. This is rejected as greater than 5*2,408,062 (AQ) and so is replaced with the 05B average of 3,389,271kWh. However the reads themselves appear to be correct and would place the site in EUC Group 01B. In this example we are overestimating consumption by ~3GWh leading to an underestimate of UG.

As highlighted in the previous response to the data quality issue, provision of corrected metered volumes by the Shippers would reduce the occurrence and impact of these examples.

	MPR_ID	METER READ DATE	IMP IND	METER READ VAL	METERED VOL	ROUND THE CLOCK IND	AQ	METER READ FREQ	SSP LSP	EUC	LDZ	READ TYPE CODE	BAD READ
1	1740999	31/12/2009	N	253212	1148874	1	2408062	M	LSP	05B	EA	K	N
2	1740999	30/06/2010	N	253620	1030550	1	2408062	M	LSP	05B	EA	K	N
3	1740999	31/08/2010	N	254232	1030760	1	2408062	M	LSP	05B	EA	K	N
4	1740999	24/12/2010	N	254232	1030130	1	2298498	M	LSP	05B	EA	K	N
5	1740999	30/06/2011	N	287932	34715	0	2298498	M	LSP	05B	EA	K	N
6	1740999	17/01/2012	N	288458	542	0	10769	M	SSP	01B	EA	F	N
7	1740999	29/02/2012	N	294224	5897	0	10769	M	SSP	01B	EA	U	N
8	1740999	24/04/2012	N	294270	47	0	10769	M	SSP	01B	EA	U	N
9	1740999	28/05/2012	N	294285	15	0	10769	M	SSP	01B	EA	U	N
10	1740999	25/06/2012	N	294518	238	0	10769	M	SSP	01B	EA	U	N
11	1740999	12/07/2012	N	294531	13	0	10769	6	SSP	01B	EA	I	N

The AUGE will examine the use of meter reads as a backup to using metered volumes for LSPs where the calculation fails (as described in the previous item response). Note that using the meter reads to calculate consumption also relies on accurate meter read units and T&P correction factors, so even if the reads themselves are accurate there is still room for significant error.

Comment:
Test 2

Phidex examined cases where the AUGE had reclassified EUC categories based on the site failing the consumption calculation according to its AQ. This is to ensure that for sites failing the consumption test, then are assigned an appropriate default consumption based on their EUC band. Phidex found that 384 sites had been banded down and only 27 banded up (most of which were from EUC 01B to EUC 02B i.e. from SSP to LSP sector).

A downward shift in AQ, if incorrect, would reduce the attributed consumed volume to the site and therefore erroneously increase the UG. Although an upward shift would have the reverse effect, this is done in few cases and almost exclusively in the very low consuming EUC bands so it will not offset the potential effect of the downward shifted sites, resulting in a potential skew of results.
Phidex estimate the resulting total downward shift in metered volume for the LSP sector is in the order of a Terawatt of usage in the single LDZ (albeit Phidex note this very high value is to indicate the significance of the activity, not to suggest this as an actual statement of an error). This is based on the numbers of MPRs which failed validation in the NO LDZ and which resulted in a downgrade of the EUC band. There were 158 MPRs downgraded to EUC Band 02 for 2009. This represents a total of 240 million kWh being taken from the original metered quantities. Some of these may be correct in being downgraded, but the Phidex analysis has shown many are invalid.

If the total amount downgraded in NO alone is over 1 TWh this could be multiplied by 10 to cover all LDZs. It is likely that the majority of these reclassifications are valid as the meter point is part of a much larger supply point and if treated on its own then it should be downgraded. The exposure to the industry might therefore be just one tenth of this value, but that is still a Terawatt incorrectly added to the UG total. For a more accurate figure, we recommend full analysis of this anomaly type by the AUGE is required.

Response:
During the analysis and development of the methodology the AUGE identified mismatches between EUC groups and their AQ for a subset of meter points. This was queried with Xoserve and identified as sites belonging to a Multi-Metered Supply Points (MMSPs).

For example, a supply point may have an EUC group of 05B consisting of 4 child meters, one of which is 05B, the other three 02B.

If during the validation of metered consumption process any of the 02B meters fail, this is scaled up using an average for the EUC group. In this particular example, it would be incorrect to scale up an 02B site based on the 05B average since we would over estimate the consumption. This in effect would be an incorrect ‘upgrade’ of the EUC band for the meter and erroneously reduce Unidentified Gas.

In Phidex's analysis they estimate for NO LDZ that this could amount to 1TWh which if scaled up to 13 LDZs would result in a reduction of UG of ~13TWh – this would result in a significantly negative total for UG. We note that the possibility of MMSPs is acknowledged (which it is in this case) and the potential error much less than highlighted in their analysis.

However, there is the possibility that singleton meter points could have a mismatched EUC group. We have queried the possibility of this with Xoserve, and their view is that for singleton sites the EUC Group should match the AQ since one is directly derived from the other. Nonetheless, the AUGE will request supply point / meter point mapping data for known MMSPs from Xoserve to verify that all meter points with a mismatched EUC Group/AQ do indeed form part of an MMSP. If not the extent of the mismatch will be assessed and addressed in the next AUGS.

Comment:
From 3.2 p 8,9

Test 3
Phidex has identified possible inconsistencies in the dataset and of apparent manual intervention in the methodology applied by the AUGE.
On p89 the text next to POSITIVE_VOLUME references "possible correction after meter rollover". It could be inferred that a correction has occurred after identifying an incorrect index roll-over. Further information is required to validate this.
In the case of MPR 13975325 Phidex is led to assume that the situation of "positive volume calculated after possibly correcting for meter index rollover" must have occurred here i.e. an erroneous large value has been identified, analysed and discarded from the calculation manually. Phidex manually calculated the consumption for the period to be circa 100,000 kWh, but the AUGE calculated volume to be in the order of 1,000 kWh (i.e. 100 times lower than expected).
The result of this is that the FY_MR_CON value of approximately 1,000 kWh is used instead of the actual quantity of 100,000 kWh, providing further evidence of an erroneous addition to the UG values.
The AUGE needs to provide the estimated values used in the case of failed validation sites, thereby explicitly illustrating how the total Metered Volume value is derived for the LDZ. This would reduce the ambiguity in the numbers and enable thorough validation of the methodology used.

Test 4
For MPR 13976581 Phidex note that calculated consumption has occurred without validation failure for all three years, meaning that according to the methodology the calculated quantity taken from the meter reads will be used to determine the energy consumed at this site. The site has been marked down from an EUC of 04 into 01 due to the domestic AQ; this appears to be correct, but irrelevant if the validation checks pass.
The meter reads used to create the FY_MR_CON values total of 1,805 kWh for the 3 year period. This would be consumption allocated to this MPR in the final UG calculations.

However using reads and assets available to correctly calculate the consumption over the 3 year period, Phidex calculated the consumption should be 183,826 kWh; this is in line with the metered volume (measured in single cubic feet) but 100 times more than the values displayed in the AUGS supporting data for this MPR.

Only a small sample of the potential numbers of MPRs affected by the above issue could be analysed by Phidex, therefore the following figures require validation by manual analysis and should be used as a guide to the potential significance of the error.

A report that sought to identify SSP MPRs in the dataset displaying a similar trend was run to gain an understanding on the significance of the calculation flaw discovered. An exception list with many hundreds of sites in the NO LDZ region alone were identified as having similar calculation errors. This would deliver a total of over 40 million kWh of Metered Gas which may have been omitted from the overall volume of metered gas computed for this LDZ for just the year 2010. Across all 13 LDZs that would equate to approximately half a terawatt of omitted energy.

Response:
The issues identified in test 3 and 4 have a common root cause and this response covers both. Having investigated the particular examples mentioned in tests 3 and 4 the AUGE has determined that the reason for the difference in consumption estimate between the AUGE and Phidex in both cases is related to the use of meter read units. Under certain specific conditions the meter units were not being used. The relevant part of the algorithm is quoted below from the 2nd draft 2012 AUGS Appendix C:

9. *Apply either Rule A or Rule B according to the EUC of the site:*
    A. *If the site is 01B then calculate the volume consumed between the two chosen meter readings. If this gives a negative volume then check if the meter index has rolled over. Based on the number of digits in the first read infer the size of the meter and calculate its maximum possible value. If the start read was >75% of this then calculate the volume on the assumption it rolled over. If this new value is >25% of the max then it was assume a bad reading and reject the meter.*
    B. *Otherwise sum the metered volumes between the two chosen meter readings. If there are any negative volumes in the range, set the sum to -1.*

10. *If the volume calculated is positive look up whether the meter is/was metric or imperial.*

11. *Apply either Rule A or Rule B according to the EUC of the site:*
    A. *If the site is 01B look up the read units. Combine this with the default correction factor (1.022640) and metric/imperial conversion factor to get a final volume.*
    B. *Otherwise just look up the appropriate metric/imperial factor*

The EUC Group used in step 9 to choose between rules A and B is the EUC Group provided by Xoserve as part of the AQ record chosen in step 3 of the algorithm. In the case that rule A is applied this EUC Group is updated to match the EUC Group from Xoserve associated with the end meter reading. (The intention was to use the most representative category). In step 11 if the associated EUC Group has been changed from 01B to a higher band, rule B will be chosen and the units and T&P correction factor will not be applied to the difference in meter reads. In the case where the units are not 1 which leads to an underestimate of consumption as illustrated by the examples in tests 3 and 4.

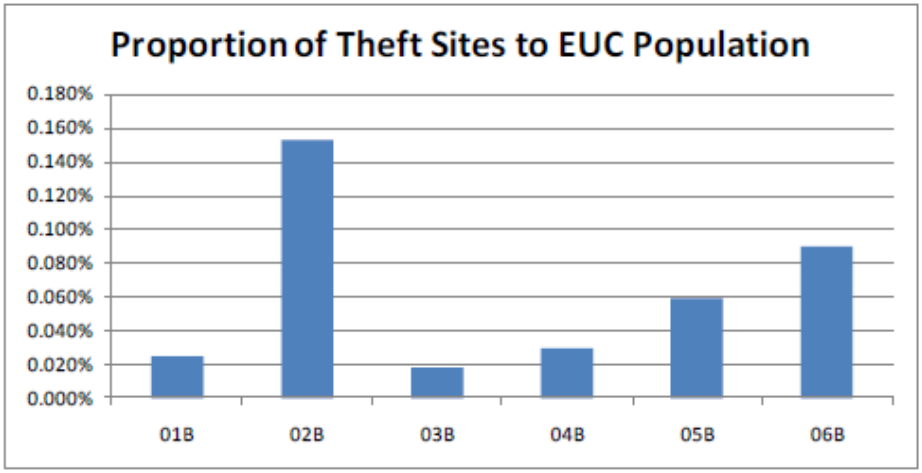
The next draft AUGS will incorporate an update to the process to handle this situation.

Whilst it is a relatively straightforward issue to address it will require a re-run of consumption calculations to update the total Unidentified Gas figures.

Comment
Section 3.3 p11
Analysis of throughput method
We consider these to be in fact two such significant assumptions that they should be justified by some evidence. The two independent assumptions are:

1. that the rate of theft i.e. the number of theft sites as a proportion of the total sites in each sector is the same; and
2. that the volume stolen for each theft is proportional to the average AQ of each sector.

Qualitative arguments suggest that undetected theft is more likely to occur within the SSP sector. The assumptions do not take account of the commercial drivers regarding theft detection. Margins are slimmer in the LSP sector and this provides an incentive to higher detection rates, and the greater prevalence of accurate readings from the LSP sector leads to fewer opportunities for undetected theft. There is a fixed cost to detecting each theft, so the materiality benefit of finding larger theft sites is greater, and commercially this would steer theft detection resources towards the higher consumption sites in the LSP sector. Without taking commercial drivers into account we are at a loss to explain the shape of detected theft by EUC group (based on Table 17 of the second draft AUGS):



As the AUGE notes, the proportion of sites with detected theft is so small per unit of population at the larger consumption EUCs that these are going to show material shifts in percentage theft owing to a single detected site e.g. the percentage for EUC 06B is derived owing to a single site being identified; given the number of sites in the population for EUC 06B there would be no possible percentage value for EUC 06B between 0.085% and zero. Similarly EUC 05B contains only 2 theft sites, so it is clear that an additional theft site in this EUC group would make its theft site rate almost identical to that for 06B, and one less theft site would give it a rate almost identical to 04B. The small population size and low incidence rate of detected theft thus makes these results statistically insignificant.

More importantly, the volume of theft gas per identified site appears remarkably consistent and independent of site AQ for the LSP groups (02B-06B). According to the 2011 AUGS data for theft, when volumes of theft gas are categorised by EUC the average theft volume per site is in the range 50-90 MWh for groups 02B to 05B (and only 11 MWh for 06B although this average is formed from only two sample points). For 01B the average theft per site is nearly 24 MWh, but this is 0.95 x the average Adjusted AQ; for 02B the average theft per site of nearly 74 MWh is only 0.58 x the average Adjusted AQ and for larger consuming groups the AQ multiplier is commensurately lower.

Response:
The data used for the figures quoted comes from data in a spreadsheet published during the preparation of one of the early drafts of the 2011 AUGS. This data and any analysis and results arising from it should be treated with caution as both the methodology and data used have moved on significantly. Key points regarding this dataset are

1) The AQs in this data set are 'current AQs' (2011 in this case) and not necessarily representative of the level of consumption during the period of theft. The most recent data sets have meter AQ history so we can look at what the AQ was before, during and after theft occurred.

2) Scaling up the theft to calculate an adjusted AQ was identified as being incorrect. If a site is thieving for a period of, say 6 months, and we scale the theft up to what it would have stolen over a 12 month period (had it not been detected), then adding this to the AQ potentially double accounts for the theft. This results in erroneously higher AQs. In fact the spreadsheet in question shows a theft split based on volume of detected thefts with LSPs accounting for 25% of detected theft by volume in this way.

3) This analysis used durations of theft based on year of detection so annual theft rates were very much dependent on efforts to detect theft. Later analysis (covered in the TOG Sector split calculations from 14/12/2011 also available on UK-Link) took this a stage further and examined theft on the basis of when it occurred rather than detected.

4) The issue of theft in unregistered sites will be present in this data and this issue is addressed in the most recent data set. A list of unregistered theft affected sites can be found in the AUGS, Appendix J.

The low number of thefts in the detected theft set at higher EUC Groups highlight the issue of the small sample of detected thefts that makes it very difficult to draw conclusions concerning the behaviour of the wider population of undetected thefts.

Following further assessments of theft in 2012, we concluded that data related to theft detections was not suitable to derive theft split and we would express caution regarding any conclusions derived from this data set.

Comment:
Section 3.3 o11
This data undermines the thesis that theft gas may be assumed to be proportional to throughput. On the contrary it suggests thefts of large volumes from a single site do not take place (possibly because such behaviour would be easily spotted) and

instead theft of broadly similar volume per site takes place at many sites around the network independent of their site AQ. The time duration of each theft is again on average similar across all EUC groups, and in the range 1.1-1.5 years (group 06B at 0.5 years has only two sample points so cannot be considered statistically valid).

EUC	01B	02B	03B	04B	05B	06B
Average Theft Duration (years)	1.5	1.3	1.1	1.4	1.1	0.5
Average Theft Volume (MWh)	22.7	73.9	83.9	51.3	87.1	11.8
Average Adjusted AQ (MWh)	23.7	127.8	463.6	1134.2	7273.3	18498.0
Theft Volume / AQ	0.96	0.58	0.18	0.05	0.01	0.00

Although we note the drawbacks with the Consumption + Theft method, and the undeniable attraction of the simplicity of the Throughput method, the AUGE's own data clearly does not support the unadjusted Throughput method of allocation.

Response:
As described in the AUGS the period of theft and estimated amount of theft are both subject to error and inferences from this data set should be treated with caution. The figures quoted are based on a small percentage of the population of theft affected meters (an EUC Group subset of the detected theft meters which in turn is a subset of the population of theft affected meters).

When quoting the average period of theft note that the figures in the database are based on the thefts in a formula year so any comparisons need to account for the fact that thefts are multi-year. i.e. care is required when comparing the theft detection record (which has a start/end date and estimate of theft) and the theft results which apportion this to the year in which the theft occurred.

Note also the comments to the previous issue regarding calculation of adjusted AQ and use of the 2011 data published on UK-link. We intend to examine the points raised using our more recent database which includes AQ histories, meter reads/consumptions etc and will report findings and conclusions in the next draft AUGS.

The AUGE is also aware that there will be a number of counter arguments to the proposed methodology which could include the following

1. The high rate of theft per unit AQ in the SSP sector may be the result of a skewed sample i.e. it may be difficult to identify small theft quantities in the SSP sector so only meters registering no consumption or very low levels of consumption are identified
2. The proposed methodology 'cherry picks' which parts of the theft dataset to use based on qualitative arguments i.e. it uses the average theft rate per unit AQ but then assumes that the proportion of sites thieving is the same between sectors whilst the data shows this not to be the case

Comment
3.3 p 11-12
Alternative Approach to theft calculation

We would suggest instead that a single theft figure per LSP theft site is adopted of (say) 74 MWh (based on the average of groups 02B-05B above) and a figure of 23 MWh is adopted per theft site in group 01B.

In the interests of simplicity, and notwithstanding its belief as stated last year and restated above that commercial drivers would lead to lower theft rates and higher theft detection rates in the LSP sector, we acknowledge it is also reasonable to assume that human behaviour is consistent across all EUC groups.

Taking this assumption therefore the proportion of sites in each EUC group that are theft sites is the same and it becomes possible to solve for this proportion relatively easily using the formula:

Total Theft Gas (MWh) = % of theft sites x (Total # SSP sites x 23MWh + Total # NDM LSP sites x 74MWh)

This retains some of the drawbacks of the Consumption + Theft method, in that it continues to rely to an extent on correct classification of sites into SSP and LSP, and it could provide perverse incentives over time for shippers to seek out and report sites with low theft rates as a means of demonstrating the average theft per site for SSP or LSP sites used above is too large.

However it does not make any assumption about the rate of detected compared with undetected theft in each sector as, like the Throughput method, it assumes the same overall rate of theft in each sector. Also we believe that the role of the AUGE is to find the method of allocation for theft gas which most reasonably fits the facts and not to provide behavioural incentives. The data used by the AUGE was not collected with the aim of allocating theft gas, therefore it may be reasonably assumed to be an unbiased sample and reflect true behaviour over a number of years (the sample provided by the AUGE was of over 4,500 sites over 4 years).

Conclusion

Notwithstanding its suggestion above, we do have concerns with the conclusion of the AUGE following the statistical test for the forecast proportion theft based on throughput for the LSP sector in 2012/13 of 23.2% compared with the average result from the Consumption + Theft method of 21.5%. Would a similar conclusion have been reached in 2007, with the Throughput proportion at 27.9% and the Consumption + Theft method providing 19.2%? The closeness of the percentages appears to us to be coincidental rather than statistically meaningful, particularly given the data which the AUGE has chosen to include and/or ignore, and this seems to further undermine the conclusion that the simple Throughput method can be used to allocate theft gas with confidence.

The methodology proposes re-classifying sites from SSP to LSP where the level of theft detected in the current year is greater than 73,200kWh. Under the proposed Throughput methodology these sites would be assigned to the LSP split. We remain concerned at this element of the methodology. The values given were initially presented in GWh and subsequently understood to be in MWh – an overstatement of 1000 times. We note that Appendix K contains the list of newly-classified LSP meter points, and that the AUGE has indicated the step change of 8-12% in the LSP theft split difference as a result.

We would comment that the above proposed approach for theft allocation should not result in such a significant shift in percentage allocation based on the reallocation of theft sites from SSP to LSP. This further reinforces the proposal outlined above as a robust approach to theft allocation between SSP and LSP sectors.

Response:

The AUGE welcomes suggestions for dealing with this tricky aspect of UG split.
As described in the earlier responses to issues with theft we understand the data used in the arguments above are based on data published as part of the 2011 AUGS, specifically the Theft Data Analysis spreadsheet from 15/11/2011 and we have highlighted a variety of issues with this data source and how it is interpreted

It is possible, depending on what assumptions one chooses, to use the detected theft data set to create a theft split anywhere in the range 10%-30% and each method has its own issues which we have investigated / discussed at length.

Therefore we are very wary of any analysis / proposition that rely on detected theft data having highlighted its significant shortcomings and these will still be applicable in this instance.

With regards the point concerning the 2007 throughput theft split method vs. the 2007 consumption+theft theft split method and choice of method going forward:

1) If it had been back in 2007, we would not only have been looking at 2007 results but previous years running up to 2007 as well.

2) The issues with the theft data would be the same so the level of variation that this creates would still be an issue.

3) There would have been potential errors as described in the Interim Report and most recent AUGS. For example, if we had decided that unregistered sites that steal gas were to be included in the consumption+theft split we would have been comparing something like 30% against 27.9%.

Given the underlying issues with the data and potential for 'manipulation' of the theft split we concluded that any method that relies on theft data is unreliable. In the absence of any better quality data throughput is the simplest and fairest method. Rather than just present the throughput method without analysis we assessed how different it was. To look at this another way, if there was no detected theft data available, how would one split theft across the market sectors?

Overall, the fundamental issue is that we believe the detected theft data to be sufficiently unreliable that it should not now be used for splitting theft.

However, we will review the alternative method suggested, but we will do so using our more recent data sets that have additional information associated with them. We will report our findings in the next AUGS.

With regards the point raised:

"The methodology proposes re-classifying sites from SSP to LSP where the level of theft detected in the current year is greater than 73,200kWh. Under the proposed Throughput methodology these sites would be assigned to the LSP split. We remain concerned at this element of the methodology. The values given were initially presented in GWh and subsequently understood to be in MWh – an overstatement of 1000 times. We note that Appendix K contains the list of newly-classified LSP meter

points, and that the AUGE has indicated the step change of 8-12% in the LSP theft split difference as a result."

The metered + unmetered consumption analysis did indeed employ an override for meters where theft detected exceeded 73,200kWh and this did result in a step change in the LSP theft split of 8-12% as a result. With regards the typo in the original interim report, this was corrected and did not affect the results of the analysis. This is quite clear from the data provided to the industry during consultation.

However what is not correct is the assumption that the proposed methodology based on throughput also reclassifies SSPs to LSP. The split based on throughput uses data from the ODR report, not from our consumption calculations that are used for total Unidentified Gas. We do not reclassify meters from SSP to LSP when calculating the split in this way and this is another reason why this approach is superior to the metered + unmetered consumption approach as it removes the debate about which sector a meter should be in. The reclassification of sites from SSP to LSP in this way would of course rely on the detected theft data which we have already concluded is not fit for this purpose.

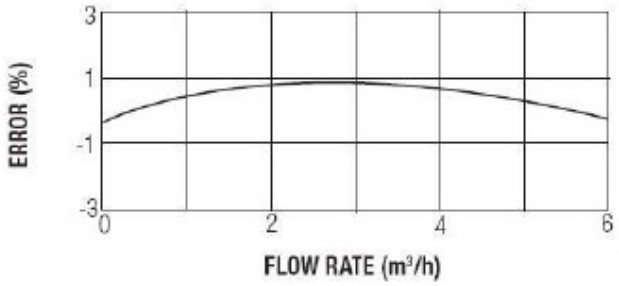
Comment

We note that the focus of the AUGE for the 2012 AUGS has been on theft allocation and the element of Unidentified Gas which may arise from meter inaccuracy is deemed second order. However this does not take into consideration that smaller meters are likely to be less accurate in their measurement tolerance. This is because the commercial justification for accuracy at relatively low consumptions does not financially justify such significant investment in metering technology or maintenance. Therefore, there is potential structural bias in the metered consumption based on meter reads dependent on the degree of swing and flow characteristics of meters at low consumption sites.

According to Government data, around 25% of domestic meters sent for testing each year fail to meet the regulatory tolerance or otherwise fail to deliver consistent readings1. It is noted that the meters sent for testing are a very small sample of installed meters, so this figure cannot necessarily be used to read across to the accuracy of all installed meters, since by definition meters removed for testing are likely to be those where a dispute exists.

Diaphragm meters have an inherent error curve over their measurement range. Given the typical swing between winter and summer of a low consuming site, We question whether there is a structural error in meter reads i.e. if a meter under records actual consumption at higher flows, and higher flows predominate in terms of their share of total consumption across a year, then there may be a bias for SSP sites to understate their true consumption based on meter reads. The error may be assumed to be less at LSP sites owing to tighter tolerances on larger meters (driven by the larger financial/commercial impact of correct measurement) and the typically lower swing exhibited at higher AQ sites.

Error and Pressure Loss Curves



Source: GE/Dresser Specification sheet for residential NP 12/110 Gas Meter
We believe more investigation should be done in this area to confirm whether or not there is a material element of Unidentified Gas arising here.

Response:

We have read the report referenced and note that of the sample tested the majority were found to be working correctly. However, this is (as acknowledged in the response) not a random sample. It is a (very small) sample of meters that are being tested because of some sort of dispute (most likely the customer complaining of an over read). Therefore it would be inappropriate to draw too many conclusions from this regarding the rest of the population.

With regards the suggestion that more should be done to confirm whether or not there is a material element of UG arising, if the industry wants to commission a national meter survey similar to that conducted many years ago we would be interested in the results. However, it is not our responsibility to undertake such analysis as part of the AUGE process.

GL Noble Denton do have a metering team that has conducted national meter surveys in the past and I am sure they would welcome the opportunity to carry out a similar survey given the population of meters will have moved on with the meter replacement programme. To carry out such a survey is a significant undertaking as it requires a random sample of a suitable size to cover sufficient classes of meter (e.g. age of meter, type, model, level of consumption, capacity etc), co-operation of the customers and the physical testing of the meter itself with properly calibrated equipment.

Comment:

4.2 p13-14
The AUGS 2012 states (p47) that shipperless and unregistered sites are to be treated as shrinkage, and therefore the theft from these sites do not form part of UG but instead form part of Transporter-responsible theft. We support the proposal to keep these sites out of the UG equation and expect that such sites are incorporated into revised shrinkage estimates. Furthermore we note that the current information used by the AUGE, unlike the information used to determine UG as a whole, aggregates sites up to Supply Point level. For consistency, the quantification of the allocation of UG gas due to shipperless and unregistered sites should be conducted in the same was as for UG as a whole – by using a single meter point relationship.

Response:

There seems to be three different points here. One concerning unregistered / shipperless sites in the detected theft data, secondly regarding aggregation of sites up to Supply Point level and thirdly the recommendation that shipperless and unregistered sites should be treated using a single meter point relationship.

In the analysis of theft data for 2012 as described in the interim report and restated in the latest AUGS, thefts associated with shipperless and unregistered sites are excluded from the analysis that used the detected theft data.

With regards current information aggregating data up to supply point level – we're not sure to what aspect of the methodology this refers (theft, total consumption or shipperless/unregistered sites?).

Shipperless and Unregistered site snapshots consist of aggregations of AQ by LDZ and by type of unregistered site/shipperless site. Where data is flagged for further review by Xoserve it is provided at MPR level which we think is what the question is asking.

Orphaned sites, GSR passed to Shipper, Orphaned sites with opening meter reads etc are all at MPR level.

Comment:

4.2 p13-14
In addition we agree with the AUGE that several UNC modifications (specifically 0410/0410A, 0424, 0425) will impact Unidentified Gas values. Though we appreciate that there is no certainty that these modifications will be implemented, with the exception of 0424, all will be either be implemented or rejected by the time that the finalised AUGS will be implemented. As all of these modifications will have a material impact on shipperless and unregistered site volumes their impact needs to be fully evaluated in time for the finalised AUGS.

Response:

We do monitor the progress of modifications through the industry processes and are aware of several modifications that will or could impact the methodology in some way. At the moment, until they have been approved we do not carry out any analysis of them – indeed the appropriate data may not be available to do so.

Some modifications contain a variety of options such that the solution could be one of several proposed changes. It may not be practical, cost effective or appropriate to analyse every single combination of modification outcomes before the modification has been implemented.

As AUGE, to date we have not responded to consultations of the various modifications as it could be construed as favouring one sector over another. However, we are concerned that some modifications make various assumptions about what the AUGE will do or won't do once the modification has been approved. Indeed in some cases, data may not even be captured to enable us to estimate the impact reliably which could render the implementation of the modification useless.

We would therefore take this opportunity to ask any proposers of modifications that have an impact on the AUGE to consult us during its development to ensure that the resulting modification can achieve its aims and that data required to implement the modification will be available.

Comment:

4.3 p14
We agrees with the view of the AUGE (p27) that the information deficit from iGT CSEPS remains a material source of uncertainty in the estimates making up UG and that this could be avoided by iGTs providing the same meter read and consumption data as the rest of the industry (or alternatively having a meter at each CSEP to determine the total amount of gas going to each independent connected system. Considering the significant bias towards SSPs some form of correction reflecting this should be factored into losses arising from such networks
The shrinkage due to iGTs should also be estimated. As we have highlighted earlier, the likely total is not inconsiderable, due to the number of sites supplied by iGTs (well over 1million supply points). We believe that all components of the shrinkage methodology applied to the DNs also needs to be applied to the iGT network, including own use gas, theft and leakage, though we acknowledge that owing to the more modern characteristics of these networks shrinkage rates will be lower. The easiest mechanism to do this, and one we advocate, is to apply an uplift to current UG volumes assigned to iGTs. Considering the significant bias towards SSPs some form of correction reflecting this should be factored into losses arising from such networks

Response:
This issue falls under Shrinkage Error and as described in previous AUGS's should be raised with the Shrinkage Forum. If they are able to provide an estimate of shrinkage for iGT CSEPS then this can be incorporated into the process.

AUGE Summary of responses

1) We believe the meter reads and consumptions, despite some of the obvious issues that we have had to contend with, are fit for purpose (and indeed are the same data that fed the previous RbD based methodology albeit we were less exposed to the details).

2) Test 1 demonstrates an example where the consumption is under estimated. We have identified an example where it is over estimated. Further analysis of the extent of this will be carried out to specifically look at the subset of LSPs that fail the consumption calculation. However, we recommend Shippers ensure the source data provided to Xoserve is correct as this will minimise the occurrence and impact of these issues.

3) We believe the Test 2 issue is not material as this relates to MMSPs although we will obtain data from Xoserve to confirm that all sites assumed to be part of an MMSP are indeed part of an MMSP. We will confirm findings in the next draft AUGS and if there are exceptions to address we will propose an appropriate solution.

4) We believe Test 3 / 4 results will require an adjustment to the way we handle this subset of meters and this will be incorporated into the next AUGS. It will require a re-calculation of all meter consumptions to capture the occurrence of these.

5) We will examine the proposed alternative theft method using the most recent data set that we have, however we are wary of any analysis that relies on the detected theft data. We will report our findings in the next draft AUGS. See also response to representation from British Gas regarding the formula used to derive the theft split.

6) With regards meter errors, as described in previous AUGS we do not believe there is an overall bias in the meter population but if the industry carries out a detailed survey we would consider those findings accordingly.

7) Other than the bi-monthly snapshots which are provided at an LDZ aggregate AQ level, all other data items when investigated are treated at MPR level for shipperless/unregistered sites.

8) With regards iGT CSEP shrinkage we conclude that this issue should be raised with the Shrinkage Forum. Any results coming from the shrinkage forum could be incorporated going forward.

Queries From	Dong Energy
Date Received	1st March 2013
Date of Response	12th March 2013

Comment:
The Report establishes a number of fundamental issues relating to the poor quality of the data used, concluding that such data is not fit for purpose and that considerable further work is required to deliver the acceptable accuracy necessary for the methodology to work.

Response:
Please see response to the ICoSS issue regarding data not being fit for purpose.

Comment:

The analysis further shows that the methodology relating to gas theft significantly overestimates the proportion allocated to Large Supply points. As a result, the Report recommends (amongst other things) that the approaches used for data selection and processing and the methodology relating to gas theft should be carefully reconsidered.

Response:
Please see response to the ICoSS issue regarding theft split.

Comment:

The above leads to the conclusion that the current AUGS is not yet ready for implementation and requires further detailed review to address the key issues highlighted in the Report. In order to address these issues appropriately, we consider it essential to follow the appropriate AUGE timetable (as provided under the AUGE Guidelines currently in force) which should provide sufficient time to the review and revise the AUGS.

It is our genuine concern however that a condensed timetable would hamper industry efforts to confidently achieve a stable and reliable methodology which provides for an objective, fair and thoroughly considered allocation of the costs of unidentified gas across the industry. We look forward to supporting the AUGE in the process of achieving this goal.

Response:

The proposed consumption methodology has now been reviewed twice and there have been extensive investigations in the use of theft data resulting in the proposed throughput split method.

As things stand at the time of writing, the AUGS will be updated and prepared for publication on 1st May as the 2013 AUGS for 2014/15. It will be largely based on the document that you have reviewed and will include updates as appropriate following consultation and the introduction of new modifications that have been approved. This will then go out for a further round of consultation as per AUGE Guidelines with the aim of getting the methodology approved in good

time for production of interim AUG figures later this year. There will then be a period when the industry will have the opportunity to challenge/query the results produced before they are adopted by the industry. This should provide adequate time for all code parties to review and plan for the introduction of the AUG table for 2014/15.

We look forward to your continued support in achieving this.

Queries From	Energy UK
Date Received	1st March 2013
Date of Response	12th March 2013

Comment:

Energy UK notes that the AUGE has described the new consumption-based methodology as an improvement over that used for the previous year in terms of the accuracy of the estimation of Unidentified Gas (UG) and allocation to market sectors, and that it provides improved stability of the estimates going forward. In doing so the AUGE makes reference to the fact that this method of calculating UG is simpler and more intuitive. It also utilises meter-read data for all available sites and can be used to calculate all sources of UG, specifically Smaller Supply Point (SSP)-assigned UG.

The AUGE also acknowledges that the previous "Reconciliation by Difference" (RbD) method only calculated LSP-assigned UG. The AUGE has stated that the RbD method is therefore is not suitable since the AUGE has ascertained that there is considerable SSP-assigned UG. The RbD method is reliant on long-term data trends that have not manifested.

The AUGE has also confirmed that the consumption-based method is statistically more accurate when directly compared to the RbD bias method; the former utilises a larger data sample.

We therefore would support the AUGE's development of the consumption-based methodology and believe that it should be adopted as soon as practicable. Given that the AUGE states that the RbD method is no longer suitable for purpose, we agree that it should be replaced.

Energy UK agrees with the AUGE's recommendations as to the treatment of theft. We recognise that high quality data does not exist due to the nature of theft and that detected theft data may well contain bias.

Response:

The AUGE acknowledges Energy UK's support of the methodology and look forward to continued support during the preparation of the coming years AUGS.

Queries From	RWEnpower
Date Received	1st March 2013
Date of Response	12th March 2013

Comment:
RWEnpower is supportive of the AUGE's independent assessment that the consumption based method of estimating unidentified gas is more accurate and should be adopted by the Industry.

Analysis has shown that the RbD method used previously is inaccurate and it is our belief that this has caused residential customers to be exposed to incorrectly allocated costs historically. In the absence of this analysis and detail this may have been appropriate however it is imperative that this cross subsidy is eradicated at the earliest opportunity by implementing the more accurate and independently assessed, consumption based methodology.

We appreciate that there is not a perfect methodology for allocating such volumes as theft. The only way to allocate this correctly is to those identified as directly responsible for theft which is a difficult protracted process. There are additional industry initiatives ongoing to address this. We have no doubt that these will deliver results however it is currently a cost to operate in the market that should be apportioned equitably across the market participants based on the most accurate methodology available, as it is in other industry sectors where similar issues exist.

RWEnpower is fully committed to providing the best outcome for our customers who will be required to bear the costs associated with unidentified gas through no particular fault of their own. We do not believe that any particular customer group should subsidise another therefore welcome this more statistically accurate calculation.

Throughout this process we need to remain mindful that the UNC put in place an independent expert body to assess Unidentified Gas and provide relevant data and analysis within the limitations of what is available. When further data is available it should be used and applied correctly without prejudice. To repeatedly question the validity of decisions or statements from an independent body on whom there are no commercial impacts, without conclusive evidence or data is counter productive. This only serves to introduce unnecessary hesitancy in decision making and increase the difficulty in achieving the required timescales.

In summary RWEnpower supports the new methodology and we hope our comments are beneficial and assist your decision making process.

Response:
The AUGE acknowledges RWEnpowers's support of the methodology and look forward to continued support during the preparation of the coming years AUGS.

Queries From	Scottishpower
Date Received	1st March 2013
Date of Response	12th March 2013

Comment:
ScottishPower firmly support the work of the AUGE in developing a detailed consumption based methodology based on meter reads and metered volume and the enhancements to the unidentified gas calculation for theft. We have considered the principles adopted by the AUGE in developing this Methodology and support the approach applied.

It is clear from communications received from the AUGE (letter dated 23/11/12) that the consumption based AUG Methodology is in their view a more robust Methodology intended to replace the RbD Bias AUG Methodology, which applied in the previous AUG Year.

The AUGE publicly described the consumption based Methodology which is currently out for consultation with the Industry thus "The AUGE believes the proposed methodology provides an improvement over the 2011 methodology for the previous year in terms of the accuracy of the estimation of Unidentified Gas and allocation to market sectors, and provides improved stability of the estimates going forward". The Industry has been fully engaged with the AUGE and understand the AUGE rational for preparing a consumption based AUG Methodology. At an early stage, it was communicated by the AUGE that the consumption based Methodology would produce a more accurate calculation of unidentified gas and contribution to each market sector.

When Mod 229 was implemented Ofgem stated "The introduction of the AUGE is intended to enable an appropriate methodology to be developed, using the best evidence available to determine which market sector is likely to have contributed to Unidentified Gas and how these costs should be apportioned". Therefore the AUG Methodology should not be considered in terms of which market sector is viewed to "win or lose" from its implementation but based on its merit of appropriateness and suitability in calculating the level and contributory factors of unidentified gas. ScottishPower is of the view that if the AUGE determines that the consumption based Methodology improves the accurately of the calculation of unidentified gas and the contribution that each market sector makes to this value that the Methodology should be implemented at the earliest opportunity.

Energy UK has developed a collective response to the 2nd draft of the AUG Statement for 2013/14. We support the intention of this approach and the work undertaken by Energy UK to collate the views and suggestions of its members.

Response
The AUGE acknowledges Scottishpower's support of the methodology and look forward to continued support during the preparation of the coming years AUGS.

Queries From	SSE Energy Supply Ltd
Date Received	1st March 2013
Date of Response	12th March 2013

Comment

Energy UK is providing a response to the consultation on the Unidentified Allocation of Gas Statement 2013/14 on behalf of its members. As a member, SSE fully supports the view provided in this response and there are no further points that we wish to make at this time, other than we would like to reiterate the view that the consumption based methodology of calculating unidentified gas should be developed and implemented as soon as practicable.

Response

The AUGE acknowledges SSE's support of the methodology and look forward to continued support during the preparation of the coming years AUGS

Queries From	British Gas plc
Date Received	1st March 2013
Date of Response	12th March 2013

Comment:
Consumption-based methodology

British Gas (BG) welcomes the recent work undertaken by the AUGE and the move to the consumption-based method of Unidentified Gas (UG) calculation. We are however disappointed that the AUGE did not publish their statement as per the stated timeline. BG believes that this delay is in part caused by the AUGE investigating issues that are potentially out of scope and dedicating critical time and effort outside their core delivery items. It is our opinion that the AUGE need to concentrate their time and resources on delivering the core requirements of the job. It was not necessary to see the output from every LDZ to determine whether the methodology (which is the same in each instance) is suitable or not. In addition, the AUGE has previously stated that shrinkage is out-of-scope and therefore we would expect that the AUGE do not attempt to address perceived concerns regarding CSEP shrinkage. This issue must be addressed within the appropriate industry forum in the first instance.

Response:
We are also disappointed regarding the delays that occurred during the preparation of the methodology in 2012. With regards the number of LDZs examined to determine whether the methodology was suitable or not, we agree that not all LDZs needed to be examined; indeed at the time of publication we had only processed data for 10 of the 13 LDZs. However, in our experience of gas demand forecasting over many years we know that what works well in one LDZ doesn't always work elsewhere as some LDZ have 'features' different to others or issues can be magnified in one LDZ compared to another. We initially examined one LDZ so that any data issues could be addressed before obtaining other data sets (and thus reduce the need for re-work on multiple LDZs). Given some of the problems obtaining data we did expect at one point to prepare the AUGS based on 5-6 LDZ's which we believed would have provided sufficient confidence that the consumption methodology was robust enough to proceed. As it turns out we did receive further data over and above this in time to run through the process and include the results in the AUGS. The remaining LDZs were processed automatically whilst we progressed with other areas of the AUGS.

Regarding iGT CSEP shrinkage please refer to our response to ICoSS regarding the handling of this as we agree that it should be raised with the Shrinkage Forum.

Comment:
We believe that the consumption-based methodology is the most accurate method of calculating UG and critically is able to calculate SSP-assigned UG; an area not covered by the previous RbD-Bias method. We acknowledge that the AUGE has stated that this is both more intuitive and statistically more accurate. We believe that there is no merit to any argument that the RbD-bias method generates a better outcome than the consumption-based method. The AUGE has shown this not to be the case on numerous occasions and therefore we feel that the AUGE do not need to address this matter again.

We have seen that SSP-assigned UG is a significant component part of total UG. Recent AQ review outcomes further highlight the importance of calculating SSP-assigned UG; so much so that the RbD-bias method is no longer fit-for-purpose.

Response:
We acknowledge the response regarding the consumption method over the RbD method and it is our intention to proceed with the consumption method. We are aware of adjustments that we will need to make to the way the consumptions are calculated following comments from ICoSS (see response to test 3&4 in the ICoSS response section) however, this does not affect the underlying consumption based methodology.

Comment:

Scaling-up
BG believes however, that through the scaling-up process the AUGE may be attributing consumption to non-consuming sites as such reducing the overall quantity of calculated UG. For example, sites with no meter read data have a higher propensity to be vacant and as such be non-consuming. Additionally during the recent industry session it was pointed out that some sites have sub meters and that potentially the AUGE is attributing EUC-average consumption to sub meters in error. We believe that the AUGE needs to adjust their output to take account of issues in this area. This is potentially a contributing factor (along with data immaturity) causing negative UG values for the most recent year of calculation. The AUGE is required to scale-up significantly more due to the lack of available data and therefore the outcome is more prone to over-attributing consumption. This is an issue we feel that the AUGE can address during the next formula year.

Response:
With regards Multi Metered Supply Points please see response to the ICoSS issue (test 2). Where a sub meter belongs to a different EUC Group compared to the overall supply point we do not use the overall supply group based EUC average as this would result in an over estimate of consumption and an under estimate of UG. To ensure this is the case we will obtain data from Xoserve for known multiple meter supply points to confirm that there are no singletons being adjusted incorrectly.

With regards vacant sites this is an issue we will raise with Xoserve to see if there is any information available that we could use to distinguish between sites that are not providing reads because they are vacant and those that are not providing reads but should be included in the consumptions total.

Theft Allocation
BG additionally welcomes the adoption of the throughput method for the allocation of theft. This is the only sensible method to allocate the balancing number. Arguments looking to exclude subsets of accounts based on perceived lower propensity to steal must be rebuffed. Theft must be allocated either only to those sites that steal or in the absence of perfect data to enable this then to all sites in-line with their consumption proportion. It is interesting to note that the argument to exclude sub-sets of accounts was demonstrated using the NHS as an example. BG notes that the NHS is one of a number of institutions that in many cases has a legal bypass in place and as such would actually likely have a higher than average propensity to pass unmetered and therefore unidentified gas.

The AUGE has investigated the exclusion of sites from the allocation of theft due to meter read frequency and also at EUC level. The AUGE has concluded that meter read frequency does not impact theft and that there is not sufficient data to support the removal of EUC bands. It is our belief that these investigations have partially led to a delay in the publication of the 2nd draft AUGS that has resulted in a knowingly incorrect outcome 'rolling-over'. BG believes that the AUGE has sensibly decided to allocate theft via throughput and therefore these investigations are essentially redundant. If the AUGE intends to investigate potential exclusions further then BG would request that they investigate every single site (including all SSPs) or none at all, thus ensuring a fair and even-handed approach.

Response:
We acknowledge your views with regards theft data and theft split. We have received an alternative suggested method which we will examine (please see response to ICoSS re:theft split). However, as things stand we believe the most appropriate method of splitting theft is by throughput.

The investigation of exclusion of sites from the allocation of theft due to meter read frequency / EUC level did not, however, contribute to the delay in the publication of the AUGS. The analysis for this investigation was straightforward as the data was readily available and this was carried out quite soon after the industry meeting in September whilst waiting for consumption data sets.

Extrapolated LSP Proportion of Throughput
BG believe that the AUGE must explain in detail how the proposed LSP proportion is calculated and extrapolated since recent reversals in AQ review outcomes suggest that the 'straight-line' extrapolation will not hold true. As such we do not think that it is suitable to simply state that the trend will be reviewed. For transparency, we believe that the AUGE should publish in advance the equation utilised to extrapolate LSP proportion of throughput since we need assurance that this can increase should the circumstances require it. Clearly a straight-line extrapolation cannot be sustainable since over time this would lead to a negative LSP throughput - which is impossible.

Response:
We agree that the extrapolation as currently provided would not be able to continue indefinitely on the same trend and at some point the portion of LSP throughput will decrease more slowly, increase or stabilise. We believed it would be sufficient to review over time as we update the data sets and observe changing trends. However, this is something that we can look at as part of the preparation of the next AUGS, which will have the benefit of more up to date data to work with. Our aim will be the preparation of a process/equation that has longevity under a variety of potential circumstances.

Comment:

Conclusion
BG broadly welcomes the much improved methodology presented by the AUGE. It addresses our main concerns with the RbD-bias methodology. There are some specific areas where we feel the methodology and output could be improved and suggest that these are considered during the next formula year.

Moving forward we would request that the AUGE more closely observes their key in-scope deliverables and ensures that all milestones are achieved as per the timeframes indicated in the guidelines.

Response:

With regards timescales/deliverables and the AUGE timelines – this is something that we are very much mindful of for the coming year given the issues that arose from the delays last year. The AUGE Guidelines do require some improvements as there are a number of inconsistencies and this is something we will be raising with the industry to try and improve the situation to avoid some of the problems from last year recurring.

With a large/complex problem to solve the AUGE Guidelines provide very little time between publications to obtain data / analyse and consult especially if you run into data issues – which ultimately underpin the AUGS. We know that Xoserve are putting in place improved ways of obtaining the consumption data that we will need going forward and so this should reduce the risk of delays. We also intend to set out timelines such that we have more contingency time between completing an AUGS and its publication and preparing interim and final AUG tables and their publication.