

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

Queries From	Energy UK
Date Received	28 th September 2012
Date of Response	XX October 2012

Comment:

We wish to clarify as to whether the AUGE has taken into account the existence of known Local Distribution Zone (LDZ) off-take error measurements when deriving the total LDZ allocation. A single large known off-take measurement error (estimated to be 3,223GWh) is currently under investigation in the SC LDZ, for example. These measurement errors distort the allocation total; typically under-measuring actual throughput. In the interests of accuracy we would request that the AUGE take account of all significant measurement errors when deriving the total allocation for any given LDZ, should they not already do so.

Response:

It is acknowledged that offtake meter errors will affect the UG estimate and the AUGE has developed the process for including these in calculations. These corrections were not included in the pilot study due to the fact that additional data is required regarding meter errors over and above what has currently been supplied to the AUGE.

This data has been requested from Xoserve and will be incorporated into the analysis when it is received.

Comment:

We would recommend that the 'Best Estimate' figure is derived by summing the total UG measured in all three years and representing this as a percentage of the total allocation in all three years. Currently a simple average of three percentages is taken. We acknowledge that any potential variation in outcome may be small but feel that the proposed approach has more mathematical integrity.

Response:

This minor amendment will be incorporated into the calculation of the final UG figures should the new method be approved by the industry.

Comment:

We would request that the AUGE ensures any process of 'scaling up' for sites with no applicable meter-read data does not attribute consumption to non-consuming sites. Vacant sites, for example, will often not have meter-read data since access to read the meter is restricted. The portion of the population with no meter-read data may well contain more instances of vacant sites by definition. There may well be other reasons for a lack of available meter-read data that the AUGE may need to take account of in order to produce the best estimate.

Response:

There are a number of circumstances under which sites may not be taking gas for all or part of a given gas year, but would still be part of the scaling up process, as follows.

1. New/Lost meters

These meters will have a relatively high probability of failing the consumption calculation due to insufficient meter reads over the formula year. Early versions of the consumption calculation scaled these up as full-year loads, but the code has since been modified to ensure that these meters make a pro-rata contribution to the scaling up process based on the ALP for the part of the year in which they were active.

2. AQ=1

It is proposed that the methodology be updated to exclude meters from the scaling up process if the consumption calculation fails and the meter currently has AQ=1.

3. Identical meter reads

In the case of identical meter reads, the consumption will be calculated as zero (correctly). However, the AQ validation rule will flag this as an invalid consumption as it is less than $0.2 \times \text{AQ}$, which it will be even if the AQ=1). To overcome this issue and reduce the sensitivity of the validation based on this rule at low consumption values, the rule will be updated such that the difference between the consumption and AQ must also be greater than 100kWh before the meter is removed from the sample.

Comment:

We do not accept that the observed LSP percentage of throughput necessarily represents a trend. The period over which the data is taken has been significantly impacted by economic downturn. As we exit such a period it is likely that the (largely commercial) LSP sector increases production and it is reasonable to assume that this will have an effect on proportion of throughput.

AQs for SSP sites decreased by a greater proportion than LSP sites during the 2011 AQ review, additionally the outcome of the 2012 AQ review could be made available to the AUGE by Xoserve. This could provide further evidence that this 'trend' may well not continue. By factoring in a continuation of this perceived 'trend' the AUGE has introduced an unnecessary potential source of error. The AUGE confirmed that any error in the actual LSP proportion of throughput versus the assumed level would not be retrospectively corrected.

Notwithstanding the above observation, the proposed forecasted decline in LSP proportional consumption of throughput seems excessive in 2012 (even assuming a 'trend'). The observed proportion reductions in each year are:

2008 1.19%

2009 0.56%

2010 0.57%

2011 0.80%

Firstly, these results do not imply a 'consistent set of LSP percentages'. Secondly, the proposed reduction of 1.51% in 2012 is significantly out of line with these observed data points. The average reduction over these years is 0.78% and the more statistically relevant latter three years is 0.64%. We would therefore request that if the AUGE persists with this assumed 'trend'

then the forecasted reduction in LSP proportion of throughput for 2012 ought reasonably to be within the boundaries of these two numbers.

In addition, we would request that the AUGE publishes a clear methodology to be utilised to perform this forecast of future LSP proportion of throughput. As such, industry participants can then have confidence that should this 'trend' reverse, then the forecast for future LSP proportion of throughput would necessarily increase.

Any under-measurement of UG or under-allocation to the LSP sector by default prolongs the unfairness of cost allocation faced by the (mostly domestic) SSP sector.

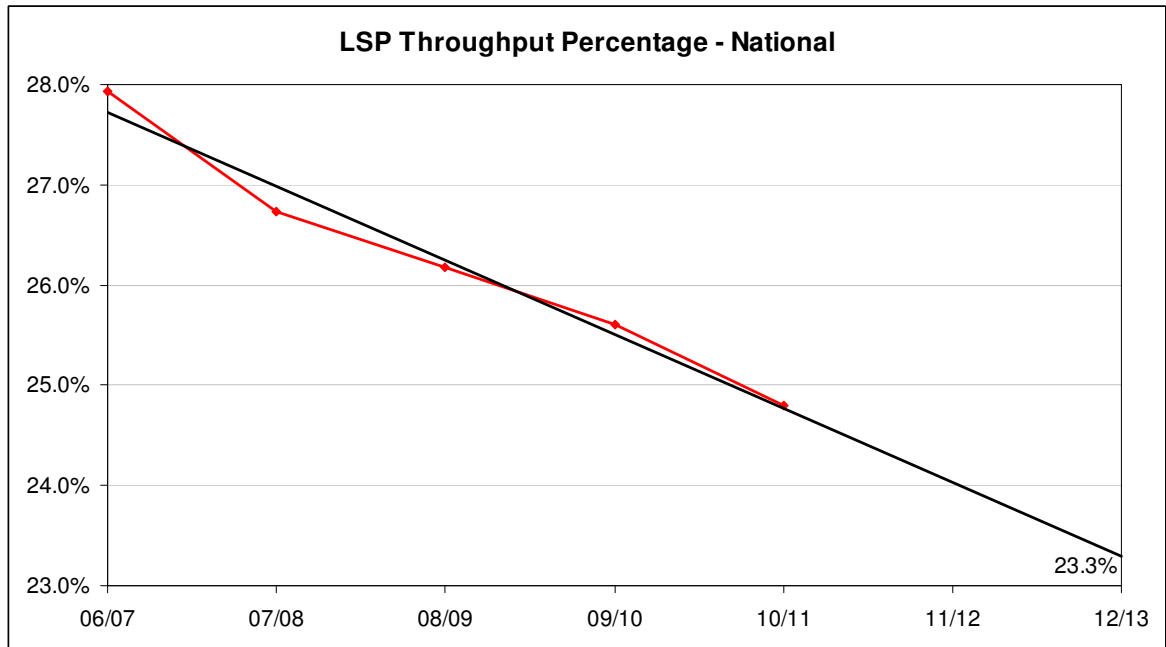
Response:

The data used to derive the trend in SSP/LSP market share runs from April 2006 to March 2011. As such it covers periods of strong growth in the UK economy (2006-07), the recession of 2008-09 and the current partial recovery where the economy has remained relatively stable. Throughout all of these different periods with contrasting economic background conditions, the trend in LSP market share has remained consistent. Therefore, the AUGE believes it is reasonable to extrapolate this trend to give the best estimate figure for the end of the 2012/13 financial year.

Use of the word "consistent" as highlighted by Energy UK refers to the fact that the LSP percentage drops from every observed year to the next. Hence the percentage is consistently dropping for the time period analysed.

In addition, the trend is clear and consistent as shown in the following graph, with a small amount of variation around the fitted line as present in any naturally-occurring process. The level of variation is visually very small even when the y-axis of the graph is curtailed at 23%, and the model Coefficient of Variation is only 0.76%. This indicates how little variation there is around the fit.

The final figure presented in the Interim Report is a 2-year extrapolation of the fitted line, representing an average drop of approximately 0.75% per year, which is entirely consistent with the data. It is necessary to extrapolate for two years because the data runs to 2010/11 and we wish to estimate the figure for the end of 2012/13 going into 2013/14.



The method used is therefore not complex and the analysis will be updated with newly available data for each instance of the AUGS. Therefore should there be any change in the trend it will be picked up and accounted for in calculations.

Queries From	Gazprom Energy
Date Received	28 th September 2012
Date of Response	XX October 2012

Comment:

While we welcome the AUGE's recognition that the existing approach may be subject to potential manipulation by parties targeting a particular area of their business and thus potentially exaggerating theft in this area we do not see that inappropriate behaviour by a party should be a valid reason for a change of approach. Instead we would see the AUGE taking into account such behaviour and reporting its concerns to Ofgem.

Response:

The AUGE has identified only the *potential* for theft results to be affected by Shippers concentrating detection efforts in certain market sectors. We do not suggest and have not implied that any Shippers would wilfully act in this manner. It remains, however, an important point that the potential for such influence over the results does exist.

The AUGE's recommendation of Alternative Method 4 (the throughput method) in the Interim Report is based on a number of considerations, as described in Section 3.6 of the report. The potential influence described above is one of these factors but is not a key one. The most important factors taken into account in the recommendation are the following:

- The disincentive that the other methods create for all Shippers to detect theft.
- The heavy dependency on the accuracy of Shippers' estimates of theft duration and value.
- The continued use of AQs, a technique that has been disputed by Shippers, in the 50% of cases where meter reads are not available/reliable.

In addition to these major considerations, a number of further factors were considered. As described, the potential for Shippers to influence the output is one of these, and all are described in Section 3.6 of the Interim Report.

Therefore it can be seen that the recommendation to change method is not based on the criterion suggested in the comment, but on a much wider analysis of the theft estimate.

Comment:

It is critical that the underlying calculations are fully understood by the industry and the resulting outputs are accepted to be an accurate estimation of downstream gas losses. At present we have concerns that the AUGE process does not fully achieve this. GE are concerned that the AUGE process does not seem to be stabilizing and is instead seeking to radically alter its methodology each time the process is undertaken leading to an unpredictable outcome.

The latest proposals are proposing to effectively start again from scratch regarding theft calculation and determining the total of Unidentified Gas in the market. The result of this is unpredictable annual swings in the estimation of the proportion of Unidentified Gas attributable to each market sector. And yet by its nature, the total volume of Unidentified Gas in the market is relatively constant. We believe these variations in calculating Unidentified Gas are undermining the credibility of the whole process.

Response:

It was stated throughout the 2011 AUGS for 2012/13 that the calculation processes were approximate but were the best existing at the time due to data availability issues. The key data item in question was the meter read dataset, and it was stated that when this was available it could lead to potential changes in the UG calculation. It was also stated that if the quality of data was sufficient, these calculation changes would lead to improvements in the estimate of UG.

The following statement is taken from Section 4.4 of the 2011 AUGS for 2012/13:

“Despite these reservations, the AUGE recognises that this method may produce better results than the current proposed algorithms if SSP and NDM LSP load or meter read data can be retrieved reliably for all loads and is of a high quality throughout. In addition, the AUGE has carried out sensitivity analysis of worked UG allocation scenarios, and these have shown that small quantities of LSP UG may be assigned to the SSP market during the allocation process, and the currently available data does not allow these to be estimated. Use of both SSP and LSP actual meter reads may allow an estimate of this quantity to be made. Enquiries have therefore been made with Xoserve concerning the availability and supply of this data, and a response is awaited. When information from Xoserve has been supplied, it will be assessed by the AUGE and a decision taken as to the best calculation method to use for future years.”

This document, including the commitment to reviewing the methods, was accepted by the industry. The AUGE is therefore obligated to carry out the review described and publish the results, which are those contained in the Interim Report. The AUGE's conclusion, based on an analysis of EA LDZ, is that the new method is appropriate and more accurate than the approximate one used in the 2011 AUGS for 2012/13.

It should be noted that for the pilot LDZ, the total UG figure arising from the new analysis was similar to that from the previous method (803GWh as opposed to 841GWh). Whilst this is a single instance and hence cannot be assessed statistically, the similarity of these results suggests that the method used in the 2011 AUGS for 2012/13 provided an accurate approximation and that the introduction of the new method based on consumption data will not create a step change in the UG estimate. This consistency creates more confidence in both methods.

It is acknowledged that the split of theft by market sector has changed substantially between the previous and new methods. In last year's analysis, the theft split method was based on pre-theft AQ and was limited to classifying a site to one market sector for the entire period of theft. During the analysis and consultations in 2011, British Gas proposed the use of annualised theft (Sector Theft Apportionment V1.0 14/11/11). However, there were many records containing short periods of modest theft levels, which once scaled up to annualised levels and aggregated with the current AQs in the theft records resulted in an extremely large and incorrect level of LSP sector split. It was also unclear from the AQ data whether the AQs during the period of theft had been affected by theft or not which compounded the issue particularly for those sites that had AQs rolling over, for example. The AUGE therefore rejected this proposal and the method that went forward was based on pre-theft AQ.

This was further discussed and clarified at the May 2012 UNCC meeting and the AUGE undertook to obtain consumption data to evaluate market sector classifications during the theft

period by aggregating metered plus unmetered consumption. This is described in Section 3.4 of the Interim Report. The use of consumption data meant that AQ could be estimated during periods of theft rather than rely on pre or post theft AQ and avoided AQ rollover issues. This is particularly important for sites with very long periods of theft as the sector classification is now more relevant to the demand at the time. In addition, each site could be examined and classified on a year by year basis. It was also possible to split the estimate of theft that occurred within a given formula year (adjusted for seasonality). Note that the theft is not scaled up to an annualised figure – it is simply unmetered consumption which once aggregated with the metered consumption provides a figure that we can then use to derive an AQ and set market sector.

With additional data and the migration of the method from a spreadsheet to a database the AUGÉ was able to classify market sector by formula year and calculate a better estimate for theft (seasonally adjusted).

The AUGÉ also undertook to review whether any sites that were classified as SSP had theft estimate in a year in excess of 73,200kWh, as these should be classed as LSP. During this analysis such sites were identified and classified accordingly. The combined result of all of the calculation enhancements described above is the observed higher LSP percentage.

If the old theft methodology was to be retained it would still need to be enhanced in order to correctly classify sites that are listed as SSP but have an annual theft figure of over 73,200kWh. It should be noted that if this enhanced old method was applied to the latest theft data, the resulting LSP theft percentage split would actually be higher than that produced using the proposed throughput method.

The AUGÉ nevertheless understands concerns regarding the variability of the theft split. It remains the case, however, that the original method carries a much greater risk of variability than the throughput method. For example, the issue over the inclusion or not of unregistered sites (with respect to the large theft record identified earlier in the year) would affect the theft split by 10 percentage points based on the old method, whilst depending what assumptions are made the final theft split range is as wide as 10% to 35%. There is therefore a risk that if the old method is retained the theft split in future years could vary widely, which is undesirable.

Comment:

We are also concerned that at present there is simply not enough information being provided in each iteration of the AUGÉ Statement to allow Shippers to truly understand how the values are derived. While the information that is provided is very high level and is difficult if not impossible to verify. Added to this we have also had instances where incorrect information has been provided to the industry (evidenced by the reissuing of this report). Clearly the lack of transparency prevents Shipper from ruling out the possibility of further errors existing in the calculations, as well as preventing an understanding of the methodologies used while errors in published tables of a magnitude of 1,000 times damages credibility.

This lack of information and relatively short timeframe for review, particularly in light of the change of approach means GE are not in a position to provide a detailed response to this consultation. Instead we wish to make it clear that we are not convinced by the proposed new process for either determining overall UG in the market or the new theft methodology.

Response:

The AUGÉ has always endeavoured to ensure that full data and calculations are made available to the industry so that every element of the UG analysis can be scrutinised in detail. All data and calculations were provided via UK Link for the 2011 AUGS for 2012/13.

Given that the new analysis is based on raw meter read data, it may not be possible to publish this directly. Therefore, at this stage, a summarised version of the total UG calculation, where consumptions have been calculated from the meter reads and aggregated to EUC level, has been provided to accompany the Interim Report and is available on UK Link. It is recognised that at this point in time the theft calculation background data is not available for Shippers. This is due to the fact that the entire Theft calculation is based on raw meter read data and is carried out in an Oracle database. In order to supply meaningful information to the Shippers regarding this analysis, it would be necessary to supply the entire database, which again includes the raw meter read data. The AUGÉ is currently awaiting clarification from Xoserve with regard to the provision of consumption data even with dummy MPR references. As and when this issue is positively resolved, the Theft dataset will be made available.

It should be noted that the AUGÉ did not provide tables containing figures that were 1000 times out from their intended value. The issue referred to was a typo in the table heading, where MWh were erroneously labelled as GWh. Whilst this has the effect of applying a factor of 1000 to the figures, the typo was corrected immediately on discovery and an amended report issued.

Comment:

The former is relying on a single LDZ (EA) to demonstrate that the new process is in line with the previous methodology. As noted in the meeting on the 17th the choice of EA was solely based on the ability of Xoserve to provide data. It has therefore not been proven that this LDZ is a suitable proxy for the whole market and so believe that the new process should not be used unless its validity for the whole market can be demonstrated. It was also unclear to what extent comparable quality data could be provided for the other LDZ's and in what timeframe.

Response:

The industry requested at this meeting that the AUGÉ supply results for all LDZs before a decision about acceptance of the new methodology was made. The AUGÉ is currently working with Xoserve to ensure that the data in question is of the required quality. The AUGÉ started to receive new LDZ data sets in the week commencing 17th September. However, there were some issues identified with the data received which required resolution by Xoserve.

At this time we do not expect to have received consumption data from all 13 LDZs until late November. This presents a potential problem in publishing the 2nd draft AUGS, and then providing sufficient time for consultation, approval and publishing of final figures by 1st February 2013.

It may be possible to prepare an AUGS based on the results of a larger subset of the LDZs (but not necessarily the full set of 13) in order to meet the required timescales, provided the results were reliable. This is something we will consider as and when additional data becomes available.

At the time of publication of these responses data for WS LDZ has been received, an updated set for EA LDZ is expected to arrive on 18th October and NW LDZ by the end of the same week.

As a contingency we are planning to prepare an AUGS based on last years method using updated data, which we would put forward if the consumption method analysis cannot be completed in time due to data supply delays.

Comment:

For Theft it seems counter-intuitive that the actual level of LSP theft in the market is three times what is currently reported. We question whether the information provided by Shippers when making these reports should be used to inflate AQ consumption where the calculation has failed – the process proposed seems to be skewed assigning sites to be LSP.

As we do not agree with the methodology we also question the proposal to use throughput as a mechanism for determining theft, which seems to purely based on the current split being close to the results of the revised theft calculations.

Response:

It is unfortunate that the data available for the 2011 AUGS for 2012/13 returned an artificially low percentage figure for the LSP market. As explained in previous responses, the jump to a new estimate of 21.5% (based on Alternative Method 1) follows the analysis using consumption data and is ultimately less reliant on AQs. All changes made to the methods are enhancements that ensure the resultant LSP percentage is more accurate. Given the same data (an enhanced version of) the original method would have returned an LSP percentage of 23.4% for 2013/14, nearly 2% higher than Alternative Method 1.

The AUGS share Gazprom's concerns about the accuracy of the theft estimates and the impact of AQ use for 50% of theft records. These concerns are stated in above responses and in Section 3.6 of the Interim Report, and are factors taken into account in the AUGS's recommendation of the throughput method. As stated above, there are many reasons for this recommendation, and one minor factor taken into account was the consistency of the results from the two methods. The full set of criteria used can be found in above responses and in Section 3.6 of the Interim Report.

Comment:

We also question the assumption, highlighted in the report as a major assumption, that theft in the non domestic sector is consistent across the market. Unlike the SSP sector which is defined as from 0-2,500 Therms the LSP sector is from 2,500 – 2,000,000 Therms and encompasses a enormous range of businesses from small SME sites e.g. takeaway restaurants to large Industrial and Commercial users e.g. Combined Heat & Power (CHP) Plants.

The approach also fails to recognise the data granularity and monitoring which arises from the Monthly Read obligation (10,000 Therms and above), the Advanced Meter Obligation (25,000 Therms and above), Daily Metered Elective services and the wholesale roll out of Automated Meter Reading (AMR) in the non domestic sector.

Response:

It is recognised that the simple assumption that the split of theft by market sector follows the split of throughput by market sector is fundamental to the throughput method. It is a broad assumption, but available data backs it up. In particular, Alternative Method 1, which entails a full analysis of detected theft (i.e. one that involves assigning the market sector to each individual instance of detected theft over a considerable period of time and using the theft estimates to calculate aggregate theft by market sector), returns a result that has no statistically significant difference from the throughput method. Given that detected theft represents the most detailed Theft data available, this provides the strongest evidence we can get that the assumption of the throughput method is reasonable.

When looking at the more detailed level of different categories of LSP site (split by meter read frequency or EUC, for example) it may be true that the incidence of theft does not follow the same pattern as throughput.

The AUGÉ has requested EUC group and meter read frequency information for each theft-affected site to assess the levels of theft at the more frequently metered sites. Further requests for information from the Shippers may follow as it is understood that the meter read frequency data Xoserve has may be different to (and less frequent than) the level recorded by Shippers.

The AUGÉ believes that DMEs should be classed as DMs in which case their consumption would need to be excluded from the throughput method.

Queries From	Corona Energy
Date Received	28 th September 2012
Date of Response	XX October 2012

Comment:

It is imperative that the AUGE operates this process in a transparent manner so that consumers, suppliers and shippers can be confident that they are contributing the correct amount towards unallocated energy. This means that the underlying methodologies and calculations should be understood, allowing the resulting outputs to be accepted to be as an accurate estimation of downstream gas losses. At present we have concerns that the information published by the AUGE has failed to achieve this.

Firstly there is simply not enough information being provided in each iteration of the AUGE Statement to allow Shippers to truly understand how the values are derived. We understand that it is sometimes difficult to publish data as it may be confidential in nature. Where this is the case we would still expect the AUGE to be publishing the data which is not confidential.

We are aware that this issue was raised last year during the previous AUGE process and that this resulted in the AUGE publishing more data. It is unclear, therefore, why this issue has occurred again this year?

The little information that has been provided is very high level and is difficult to verify. We have also had instances where incorrect information has been provided and his lack of transparency prevents Shipper from ruling out the possibility of further errors existing in the calculations, as well as preventing an understanding of the methodologies used.

Response:

The AUGE has always endeavoured to ensure that full data and calculations are made available to the industry so that every element of the UG analysis can be scrutinised in detail. All data and calculations were provided via UK Link for the 2011 AUGS for 2012/13.

Given that the new analysis is based on raw meter read data, it may not be possible to publish this directly. Therefore, at this stage, a summarised version of the total UG calculation, where consumptions have been calculated from the meter reads and aggregated to EUC level, has been provided to accompany the Interim Report and is available on UK Link. It is recognised that at this point in time the theft calculation background data is not available for Shippers. This is due to the fact that the entire consumption and theft calculation is based on raw meter read data and carried out in an Oracle database. In order to supply meaningful information to the Shippers regarding this analysis, it would be necessary to supply the entire database, which again includes the raw meter read data. The AUGE is currently awaiting clarification from Xoserve with regard to the provision of consumption data even with dummy MPR references. As and when this issue is positively resolved, the Theft dataset will be made available.

Comment:

This lack of information and relatively short timeframe for review means we are not in a position to provide a detailed response to this consultation. Instead we wish to make the comment that we are unconvinced by the proposed new process for either determining overall UG in the

market or the new theft methodology. The former is relying on a single LDZ to demonstrate that the new process is in line with the previous methodology. It has not been proven that this LDZ is a suitable proxy for the whole market and so believe that the new process should not be used unless its validity for the whole market can be demonstrated.

Response:

The industry requested at the meeting held on 17/09/2012 that the AUGE supply results for all LDZs before a decision about acceptance of the new methodology was made. The AUGE is currently working with Xoserve to ensure that the data in question is of the required quality. Please also refer to the previous response outlining the potential timescale issues that have arisen.

Comment:

For the latter, it seems counter-intuitive that the actual level of LSP theft in the market is three times what is currently reported. We question whether the information provided by Shippers when making these reports should be used to inflate AQ consumption where the calculation has failed – the process proposed seems to be skewed assigning sites to be LSP. As we do not agree with the methodology we also question the proposal to use throughput as a mechanism for determining theft, which seems to purely based on the current split being close to the results of the revised theft calculations.

Response:

See above response to similar comment from Gazprom Energy.

Comment:

Secondly we are concerned that the AUGE process is not being refined each year, but instead seeking to radically alter its methodology each time the process is undertaken. The latest proposals are proposing to effectively start again from scratch regarding theft calculation and determining the total of Unidentified Gas in the market. This almost appears to suggest that GLN's conclusions last year were substantially wrong.

The result of this approach is wild annual swings in the estimation of the proportion of Unidentified Gas attributable to each market sector. By its nature, the total volume of Unidentified Gas in the market is likely to be relatively constant. These variations in Unidentified Gas are therefore undermining the credibility of the AUGE process.

We would have hoped that the experience of last years statement would have meant that by now we could explain the AUGS to our consumers and be confident that the calculations were robust. Instead we are faced with telling our customers that these costs will double with little/no explanation of why/how and/or confidence that the calculations are correct.

Response:

See above response to similar comment from Gazprom Energy.

In addition, the old methodology is much more likely to suffer from swings in the estimation of theft split, and is highly dependent on the assumptions used and the variability of the theft data received. The proposed throughput-based approach addresses these issues.

The background to the revised theft split is explained in the Interim Report, and once we have confirmation that we can publish the entire data set including consumptions we will do so. This will enable all Shippers to see directly how the calculations are carried out and why the split has changed.

Comment:

We hope that the forthcoming AUGE statement will provide a clear and detailed explanation of the calculation activity undertaken by the AUGE that resulted in such a significant deviation from last year's values and a justification for the change in process. In addition detailed information on the process undertaken must be provided to allow the new methodology to be reviewed. In particular, considering the small number of sites involved, it would seem reasonable that detailed information is provided on each LSP threshold crosser.

Response:

As explained in previous responses, the AUGE is committed to providing Shippers with all data and calculations used in the UG analysis so that every element of the calculation can be properly scrutinised. The difficulty at this stage is that both the total UG calculation and the Theft analysis are now based on raw meter reads and carried out using SQL with the data held in an Oracle database. The sheer size of this database causes one issue with sharing the data, given that the current version is 9GB in size and this covers only one LDZ. In addition, the legal situation regarding the publication of raw meter reads (even in anonymised format) is unclear. The AUGE is working with Xoserve to resolve these issues and it is hoped that a positive conclusion can be reached, which would allow the requested data to be made available to all Shippers. This data would cover all sites and hence by definition include the LSP threshold crossers.

The change in process is more clear-cut: the 2011 AUGS for 2012/13 contained a commitment to assess the new approach and switch to it if it was concluded to be more accurate. The AUGE has carried out this analysis and made just this recommendation. For the pilot LDZ, however, there is no step change in total UG, as the figures from the old and the new methods are very similar (841GWh for the old method, 803GWh for the new method for EA LDZ). This indicates (albeit based on a single LDZ) that the old analysis was, whilst an approximation, an accurate one.

Please see previous responses regarding the change in the theft percentage split.

Queries From	Npower
Date Received	28 th September 2012
Date of Response	XX October 2012

Comment:

We believe that the new methodology will produce a more accurate and robust outcome. The data used to work out the analysis is more reflective and in line with expected calculations of Unidentified Gas, and would hope this method is agreed going forward. We are however concerned that no consideration appears to have been given as to the effect of Offtake meter errors.

Response:

It is acknowledged that offtake meter errors will affect the UG estimate and the AUGE has developed the process for including these in calculations. These corrections were not included in the pilot study due to the fact that additional data is required regarding meter errors over and above what has currently been supplied to the AUGE.

This data has been requested from Xoserve and will be incorporated into the analysis when it is received.

Comment:

As part of the consumption calculation in figure 1, step 6, if a meter has been replaced in between LB2 and UB1 provided a closing read on the removed meter and an opening read on the new meter were available, there would be no need to reject the meter read and this would assist in providing more accurate consumption data.

Using actual consumption data rather than AQ will provide reassurance to the accuracy of the calculations used.

Response:

The AUGE agrees that the most accurate estimate of total UG will be obtained by retaining as much (valid) consumption data as possible. To this end, algorithms have been included in the calculation module to cover a number of specific scenarios, including the one highlighted. These algorithms are designed to ensure that even in cases such as where the meter has changed, there is a rogue reading, or an unaccounted-for step change, etc, consumption data from the meter is still retained if this is possible and it is assessed as being valid. These algorithms will continue to evolve to ensure that the total UG calculation is as accurate as possible.

Comment:

We would also suggest, the AUGE looks into assisting its process for scaling up its activity for sites that have no meters, some of these will have been caused by vacant, unregistered and shipperless sites.

Response:

Sites with no meters are by definition unknown and cannot therefore be part of the scaling up process. These sites are either stealing gas or are unregistered/shipperless and will therefore be dealt with under the appropriate part of the methodology.

Comment:

We agree throughput is the fairest and most equitable methodology to allocate theft, however, we do not agree with the forecasted trends identified by the AUGÉ, we believe there are many more factors at play that are not necessarily enduring, such as the current economic downturn. Going forward this could introduce error in the process, creating a risk of under allocation to the Large Supply Point sector.

Response:

The data used to derive the trend in SSP/LSP market share runs from April 2006 to March 2011. As such it covers periods of strong growth in the UK economy (2006-07), the recession of 2008-09 and the current partial recovery where the economy has remained relatively stable. Throughout all of these different periods with contrasting economic background conditions, the trend in LSP market share has remained consistent. Therefore, the AUGÉ believes it is reasonable to extrapolate this trend for two future years to give the best estimate figure for the end of the 2012/13 financial year.

Having said this, it is also recognised that the trend may potentially change over time and hence this element of the analysis will be reanalysed every year for each successive AUGS. The continued existence of a trend will be assessed and the most appropriate method, based on the observed data, will be used to estimate the LSP market percentage for the required time period.

Based on the current figures and observed trend (which can be seen in responses to Energy UK comments above), the AUGÉ stands by its assessment of the current situation and extrapolation of the LSP market share figure.

Queries From	Total Gas and Power
Date Received	28 th September 2012
Date of Response	XX October 2012

Comment:

Unallocated Gas volumes are likely to remain similar from one year to the next and not exhibit the volatility that the AUGÉ's two methodologies have indicated. This volatility is extremely difficult for suppliers to manage and very difficult to explain to end-consumers, and especially that it is the change in methodology which has caused this and not something tangible that would be easier for customers to understand. TGP are extremely uncomfortable that the two methodologies could produce such different outcomes, which casts doubt over the credibility of the process that is being carried out and some of the underlying assumptions that the AUGÉ has based the new methodology upon.

Response:

As noted in above responses to other Shippers, the levels of total UG produced by the two methodologies for the pilot LDZ are very similar (841GWh for the old method and 803GWh for the new method for EA LDZ). This indicates (albeit based on a single LDZ) that the old analysis was, whilst an approximation, an accurate one, and provides the consistency that Total are looking for.

Please see previous responses to the change in theft split percentage.

Comment:

While we welcome the fixing of the split of theft across the SSP and LSP sectors and the removal of the disincentive on suppliers to identify theft we have a major concern regarding the assumptions made regarding the split. The concept that theft occurs in proportion to throughput and that this should be the basis of theft split between sectors is fundamentally flawed. It disregards the fact that the LSP sector contains a large volume of Gas supplied to the public sector and larger industrial and commercial users, it is difficult to envisage the personnel employed by such organisations being motivated to carry out theft of gas. Furthermore, a large proportion of the LSP sector has monthly meter reads which attract greater scrutiny from meter readers and networks through must read processes. The proposed treatment of theft also fails to take account of changes within the industry such as the roll out of

Automated Meter Reading (AMR) in the LSP sector with more and more LSP sites having such data loggers installed. This requires a site visit to carry out meter-work and thus further opportunity to detect theft. The presence of AMR allows suppliers to more closely monitor consumption and thus the ability to detect theft and tampers.

Therefore we believe that the assumption that theft should be split based on throughput therefore assigning 23% to the LSP sector hugely over inflates the volume of theft attributed to the LSP sector and TGP would ask the AUGÉ to revisit this assumption and methodology.

Response:

The AUGÉ accepts that the LSP sector is diverse and contains a wide variety of different types of site, some of which are unlikely to steal gas. The analysis described in the Interim Report deals at the aggregate SSP and LSP level, however, where LSP sites of all types are grouped

together. When dealing at this level, available data backs the AUGÉ's assertion that theft levels follow throughput. As described in previous responses, a full analysis of detected theft (i.e. one that involves assigning the market sector to each individual instance of detected theft over a considerable period of time and using the theft estimates to calculate aggregate theft by market sector) returns a result that has no statistically significant difference from the throughput method. Given that detected theft represents the most detailed Theft data available, this provides the strongest evidence we can get that the assumption of the throughput method is reasonable.

The fact that considerable numbers of LSP sites that steal gas can successfully prevent their meter being read is illustrated in Table 7 of the Interim Report, which shows the LSP market sector percentage split of Theft for two categories of site:

- Those where a consumption during the period of theft can be calculated from meter reads. This category is split approximately 87% SSP, 13% LSP.
- Those where no consumption could be calculated. This category is split approximately 73% SSP, 27% LSP.

The latter category represents those sites where either no meter reads were available or they were constant. It can be seen from the figures quoted above that this category is skewed towards LSP, with the percentage not only being much greater than that for those sites where a consumption could be calculated, but also greater than the split of the total population by throughput. Whilst these figures are calculated based on Alternative Method 1, the equivalents calculated using the old method (i.e. the method used in the 2011 AUGS for 2012/13) produce very similar results, showing that this phenomenon is not simply due to the choice of method.

This result illustrates the fact that a greater number of LSP sites that are stealing gas successfully prevent access to their meters, despite the fact that a large proportion are notionally on a monthly read schedule. Therefore it can be concluded that being on such a schedule does not necessarily act as a disincentive to steal gas and provides further confidence that the AUGÉ's suggested split of theft by throughput is reasonable.

The AUGÉ has, however, requested additional data from Xoserve with regard EUC group and meter read frequencies for theft affected sites to assess this in more detail. Further data may be requested from the Shippers as meter read frequency may be different from those held by Xoserve.

Comment:

We believe that using the output a single LDZ should at this stage be treated with caution. It may not be representative of the whole market and therefore the suitability of this revised methodology should not be endorsed until all the data has been analysed across all LDZs. We also believe that there is not enough detailed information being made available to support the revised methodology so the industry is not in a position to carry out the analysis to gain confidence in and verify the data.

Response:

See responses to similar comments from other Shippers. The AUGÉ has agreed to produce figures for all LDZs if possible before the issue is put to the industry to vote. Also, discussions are ongoing with Xoserve in order to clarify the legal situation before raw background data can be published.

Comment:

There was also an occasion where incorrect data was presented to the industry where volumes were overstated by a factor of 1000 which undermines confidence in some of the back ground data that is being used that is not visible to the industry. This incorrect information may also have been used to incorrectly validate other assumptions or data outputs but this is something that Suppliers are unable to validate.

Response:

The AUGÉ confirms that the data presented in the report was not used to validate any other assumptions. This data was the end product of the analysis and the issue was a typographical error in the table heading, where MWh were erroneously labelled as GWh. Whilst this had the effect of applying a factor of 1000 to the figures, the typo was corrected immediately on discovery and an amended report issued. Given that the error was in a table heading and not in the data itself, it cannot and did not propagate to any calculations.

Comment:

TGP also is concerned about the very large volume of data that will need to be provided by Xoserve to the AUGÉ and the impact on timelines and next iterations of the report. Suppliers must be given sufficient time to investigate and validate the next and final statements.

As a general point, there should be a sense check or reasonable test applied to the results that AUGÉ's statistical approach out-turns. For example the report implies that around 3% of all gas in the UK is attributed to theft, which intuitively seems high.

Response:

The AUGÉ accepts that a large volume of data is required to carry out the consumption-based calculations for all LDZs and have been working closely with Xoserve to monitor the timescales for the supply of this data. A full consultation period will follow the publication of any UG results and the Shippers will be given time to validate the calculations before any acceptance voting takes place. The supply of raw data for scrutiny by the Shippers is subject to the outcome of discussions with Xoserve regarding the legal position.

The figures in the Interim Report actually place the total UG percentage at approximately 1.7% of throughput for EA LDZ. The proportion of this relating to theft has not yet been calculated for the coming year, but if the pattern remains consistent with the 2011 AUGS for 2012/13, the theft percentage for this LDZ will be around 1.5%.

Across all LDZs, the total UG figure was 0.97% of throughput, with theft at 0.74% of throughput, in the 2011 AUGS for 2012/13. Given that the UG total calculated using the consumption technique for EA LDZ is consistent with the total calculated in the last AUGS, it is reasonable to assume that the percentages for the coming year, again calculated with the new method, will be similar. The opinion of the AUGÉ is that these levels of UG and theft are realistic.