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Regarding Progress of Green Deal implementation project.

The Industrial and Commercial Shippers and Suppliers (ICoSS) group represents the major non-domestic independent industrial and commercial (I&C) gas suppliers in the GB energy market, outside of the big six.

Please find attached our response to the second draft of the Allocation of Unidentified Gas Expert statement, prepared by Waters Wye Associates.

Please get in touch if you wish to discuss any aspects of this response

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'G. Evans', with a stylized flourish at the end.

Gareth Evans
Chair, ICoSS Group

**Waters Wye
Associates**



**Review of Allocation of Unidentified
Gas Statement**

Version 1.0

25th October 201

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Background to Allocation of Unidentified Gas Expert (AUGE) process

The first attempt to quantify the value of Unidentified Gas was in September 2008 when British Gas raised UNC Modification 0228. This populated the Allocation of Unidentified Gas (AUGE) table, originally proposed in Modification 0194, which looked to allocate a percentage of RbD¹ to the Large Supply Point (LSP) Non-Daily Metered (NDM) and Daily Metered (DM) sectors. This was to compensate for Unidentified Gas originating from LSP NDM and DM customer, but assigned to the SSP NDM sector. An alternative, UNC Modification 0228A proposed to assign fixed energy values using a formula shown below:

$$\left[\begin{array}{c} \text{LSP Share of} \\ \text{NDM AQs} \\ \text{(2007/08)} \end{array} - \begin{array}{c} \text{LSP Share of} \\ \text{NDM AQs} \\ \text{(2008/07)} \end{array} \right] \times \begin{array}{c} \text{Total} \\ \text{NDM AQs} \\ \text{(2007/08)} \end{array}$$

Both of these process proposed a top-down approach where Unidentified Gas was assumed to be the difference between RbD volumes for the year and the overstatement of AQs for the LSP NDM sector. Both of these Modifications were rejected by Ofgem in June 2010.

ICoSS members commissioned TPA consulting to analyse the approach proposed by Modification 0228/0228A. This questioned the validity of the Top-down process and instead derived an LSP NDM and DM combined value of £60k – 4.9m using a bottom up process where the causes of each source of Unidentified Gas were quantified.

In addition an alternative process, to appoint a third party expert who would determine the scale of Unidentified Gas in a manner it sees fit was approved by Ofgem in June 2010. Under this process, Unidentified Gas charges were levied from 1 April 2012. An interim payment for 2011-12 of £2.75m from the LSP NDM sector was implemented by UNC Modification 0317, based on the findings of the TPA report. An alternative interim value of £121m, proposed by British Gas used the percentage shift in total LSP NDM sector demand as a result of the 2009 AQ review, subtracted from RbD, to derive the Unidentified Gas volume². This process was rejected by Ofgem in November 2010.

The first AUGE Statement (AUGS), published in May 2011 proposed using a bottom up approach, similar to that used by TPA consulting. No values were proposed. By contrast, the second version of the AUGS proposes to use a top-down approach, similar to that provided in Modification 0228, but attempting to correct the identified deficiencies in the UNC Modification 0228 methodology.

The materiality of these various proposals, as well as the methodology that has been used is summarised below:

Unidentified Gas Estimate source	Materiality (LSP)	Value*	Methodology
UNC Mod 0228	25.288% RbD	£74.5m	Top down process calculating Unidentified Gas by
UNC Mod 0228A	2,978.01 GWh		

¹ Strictly speaking the process proposed by Modification 0228 & 0228A was not to reallocate energy to the LSP NDM and DM sectors, but instead to levy a charge on those sectors for the misallocated gas, with Shippers charged in proportion.

² Modification 0327.

			difference.
TPA Report	-	£60k - £4.9m	Bottom up methodology assessing individual sources of Unidentified Gas.
UNC Mod 0317	-	£2.75m	Bottom up methodology (based on TPA Report).
UNC Mod 0327	-	£121m	Top down process calculating Unidentified Gas by difference.
AUGS 1st Edition	-	-	Bottom up methodology assessing individual sources of Unidentified Gas.
AUGS 2nd Edition	2,000 GWh	£50m	Top down process calculating Unidentified Gas by difference with corrected allocation.

* Using an assumed average SAP of 2.5 p/kWh, where appropriate.

Introduction

WWA were requested by ICoSS to review the second draft of the Allocation of Unidentified Gas Statement (AUGS).

1. AUGS process

In summary, the gas settlement process eventually allocates all Unidentified Gas to the Small Supply Point (SSP) NDM sector, via RbD. UNC Modification 0229 was developed to appoint an AUGS to ascertain the amount of Unidentified Gas that should be allocated to the LSP NDM and the DM sectors. The total amount of misallocated energy would be multiplied by the prevailing System Average Price (SAP) to determine the total value of Unidentified Gas. Shippers who supply LSP NDM and DM customer would then be charged in proportion of the energy they supply.

Both the workings of the AUGS, as well as the final Unidentified Gas values, are detailed in the AUGS, which is the subject of this review.

1.1 Features of the AUGS process

It is important to note the following features of the AUGS process:

- *Settlement is unaffected:* The process developed does not attempt to adjust energy volumes allocated between Shippers, it instead attempts to determine the scale of the problem and then undertake financial adjustments to compensate.
- *Process is prospective:* Charges will be levied from 1 April 2012, the intention being that those charges correct the misallocation for the period 2012-2013. Therefore the AUGS values are an estimate of the current year's Unidentified Gas using historic data, rather than attempting to correct cost allocation for historic Unidentified Gas.
- *Energy reconciliation can occur for up to 4-5 years.* At present Shippers can adjust energy allocated to LSP NDM and DM Supply Points back to 01 April 2007, so energy that can be classified as Unidentified Gas when undertaking the AUGS calculation for the year 2012-2013, may subsequently be allocated to a Supply Point and so no longer be Unidentified Gas.
- *Unidentified Gas costs for the LSP NDM and DM sector are not reconciled:* The AUGS process does not correct the volume of Unidentified Gas allocated to the LSP NDM and DM sectors in the AUGS once it is determined. Therefore any Unidentified Gas charges cannot be adjusted when levied.

Taken together, these features indicate that any output from the AUGS process will need to be based on a long-term view of the scale of Unidentified Gas, rather than attempting to create a snap shot for a single year, which is then updated. This is especially pertinent when determining whether the Unidentified Gas identified is a permanent loss or only temporary in nature.

2. AUGÉ Methodology

The AUGÉ methodology uses a “top down” methodology to determine the materiality of Unidentified Gas present in the settlement process. The methodology derives the amount of Unidentified Gas initially assigned to the LSP NDM and DM sector by subtracting the model bias caused by the initial over allocation to LSP NDM sites from the total RbD allocation. This is expressed in the following formula:

$$\text{Avg LSP UG} = \text{Avg RbD Bias} - \text{Avg Model Bias}$$

Source: GL Noble Denton

As stated by the AUGÉ, they have attempted to use the same process as Modification 0228, rejected by Ofgem, but have corrected the flaws in that methodology by using updated allocation parameters (AQ and WCF).

It should be noted that an alternative methodology has also been proposed:

$$\text{UG} = \text{LDZ Load}_{\text{ADJ}} - (\text{SSP}_{\text{ACT}} + \text{LSP}_{\text{ACT}})$$

Source: GL Noble Denton

This process was rejected as the AUGÉ believes there is insufficient data available to accurately determine SSP NDM consumption.

2.1 Analysis of Methodology

The following points can be made on the methodology used:

- *Limited dataset:* Owing to the limited amount of dataset held by Xoserve (up to 2007), then there is potential for the data set to be unrepresentative of general consumption patterns. It is difficult however to see how a more general set of data could be easily obtained in the time available for the work undertaken and the information used is an adequate proxy for actual consumption.
- *AQ accuracy:* The accuracy of AQs can be said to be variable, in particular owing to the large numbers of AQ sites that do not update on a rolling basis (as stated by the AUGÉ on 17 October 2011, only 76% of LSP sites updated their AQ for 2011). Though the AUGÉ could attempt to ascertain the reasons for the remaining sites not updating their AQ, it is more likely to give an accurate view of overall LSP consumption if the AQ total is derived from the sites that have been updated.
- *DM allocation:* There is no attempt to split out the model bias between the LSP NDM and DM sectors, and effectively the DM sector is assumed to not contribute to Unidentified Gas. Considering the relative accuracy of DM allocation processes compared to NDM, this is a reasonable assumption.
- *SSP allocation bias:* We note that the AUGÉ stated on the 17 October that the process does not attempt to determine the model bias that exists in the SSP sector. We agree with the statements made that the magnitude of this error will be negligible compared to the LSP model bias. Comparing base case and best cases (created using updated AQ and WCF) will remove allocation error from both SSP and LSP markets and combine it into the overall model bias value, so it is a moot point on scale of SSP allocation error.
- *Permanence of Unidentified Gas:* The methodology proposed seeks to create a series of annual views of the sources of Unidentified Gas. The settlement process run by Xoserve however, allows for corrections to occur back to 1 April 2007. Therefore, the methodology produces a snapshot annual view of Unidentified Gas

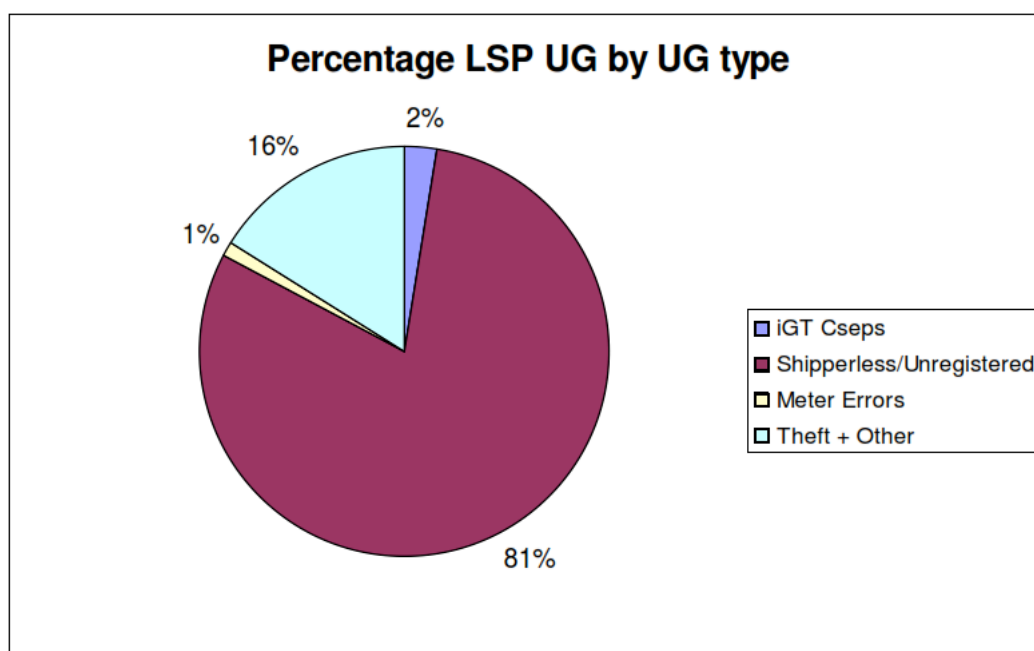
and does not take into account the tendency for Unidentified Gas to be identified and allocated at a later date.

In summary therefore, though the data used to support the analysis is limited and of variable quality, the methodology itself is generally sound. It currently does not differentiate between LSP NDM and DM sources of Unidentified Gas, or whether the Unidentified Gas identified is transient in nature, or represents a permanent loss to the network. The implications of this are examined in more detail in the next section.

3. Unidentified Gas Sources

The AUGS provided interim values in the AUGS, and this is to be welcomed as it gives an understanding of the scale of Unidentified Gas and also some idea of the main sources of loss. We understand from information provided by the AUGS that the information provided uses only a limited dataset, in particular the AQ information on sites that have been updated in the last AQ review, representing around ¾ of the actual model bias. If this is the case we would expect a significant uplift to the model error calculated and so a corresponding reduction in Unidentified Gas.

Looking at the values that have been provided, the vast majority of Unidentified Gas that is to be allocated to the LSP NDM and DM sectors comes from Shipperless/Unregistered Sites.



Source: GL Noble Denton

The sources of Unidentified Gas are examined in turn:

3.1 Meter Errors

Part of the contribution towards the total amount of Unidentified Gas is the systemic meter error bias that is present in LSP NDM meters. This was not present in the initial draft of the AUGS. The values that are attributed to it are nominal, but is primarily due to the fact there seems to be only an attempt to quantify the scale of the error to the LSP sector.

This is surprising considering that SSP NDM meters make up over 90% of the meters in the market. A reason given for excluding SSP NDM meter error is given in section 6.7, namely that the SSP meter error should not be taken into account as meter reads are not used in RbD. This is true, but the methodology derived uses SSP Aqs to determine the scale of model error. Any meter reading bias would affect the AQ calculation and so impact the value of the model bias calculated and ultimately impact on the materiality of Unidentified Gas. Therefore, for consistency some estimate of SSP bias needs to be included if LSP meter bias is to be assigned a share of Unidentified Gas.

3.2 Shipperless and Unregistered sites

This is the largest single component of Unidentified Gas for LSP sites (around 80% of the total). Because of its size, it has been sub-divided into six difference categories.

- *Shipper Activity*
- *Orphaned*
- *Unregistered <12 Months*
- *Shipperless Passed To Shipper*
- *Shipperless SSrP*
- *Shipperless <12 Months*

With all of these categories the majority or all of the Unidentified Gas that has been identified will be transient in nature. The UNC has specific provisions to allocate gas to individual customers when a Shipper/Unregistered site is addressed, by reconciling the site back to the date it was first connected, using an opening meter reading provided by the Shipper..

UNC TPD G3.7 requires Xoserve to backdate ownership of a site when it is re-established with a Shipper³. In addition UNC TPD G7 requires Xoserve to bill Shippers from when a meter is attached at a new site. For new sites, even in the event that the new site has taken gas from the network prior to the meter registration date, this is likely to be a matter of only a few days. Overall, therefore, the amount of gas that will permanently become Unidentified Gas is a comparatively small proportion of the whole and is due to exceptional issues at customer sites, not due to a systemic system issue. It is this volume of gas which should be allocated Unidentified Gas status.

3.3 Theft

The overall amount of Unidentified Gas ascribed to theft is significant and we note it is significantly higher than the total amount of energy that is currently subscribed to Gas Theft by the available figures. This, however, is reasonable as it is expected that some Gas Theft will go undetected for a considerable period of time.

The split between LSP and SSP theft should be based on reported theft, as there is no reason to suppose that the proportion of theft between the two markets would be different between detected Gas Theft and unknown Gas Theft. Therefore, the proposed split for the SSP sector 92.1% and LSP sector 7.9% is appropriate for Gas Theft as a whole

We would expect that all reported LSP theft should be treated as transient Unidentified Gas, as Xoserve is obliged to allocate any estimated stolen gas volumes to that site (for the volume which Shippers are obliged to report under Supply Licence condition 17.4) and so trigger a reconciliation, removing that gas from the SSP sector via RbD. For SSP NDM sites this information is not used to correct allocation and so all Gas Theft volumes in this sector should be treated as permanent Unidentified Gas.

³ Modification 0369, referenced in the AUGS, deals with a specific instance where the Shipper does not re-register the Supply Point and so does not have a deemed contract with the customer to recover its backdated costs. It does not alter the mechanism of applying those energy and transportation cost to the Shippers

3.4 iGT CSEPS

From the information provided in the AUGS, as well on the 17 October, it is evident that iGT CSEPs are a source of Unidentified Gas from projects that have not been fully configured with Xoserve. As the vast majority of iGT sites are domestic properties, then we would expect the majority of Unidentified Gas arising from this source to reside in the SSP NDM sector. The proposed apportionment currently sits in line with our general view.

Part 5 of the LDZ CSEP NExA clearly requires LSP sites in CSEPs to be reconciled when updated consumption information is received from the iGT, in line with the current limits in the central systems. This means that for LSP sites a large proportion of Unidentified Gas arising from this source will be transient in nature. By contrast SSP sites on CSEPs are not reconciled and so would always represent a permanent source of Unidentified Gas.

3.5 Shrinkage

We do have some sympathy with the AUGS's view that Shrinkage is handled in a separate area to the estimation of Unidentified Gas. We would agree that the Shrinkage process is likely to identify long-term discrepancies between estimated gas losses upstream of the meter and actual Shrinkage volumes, so the AUGS should not attempt to identify them. There is however a significant possibility that any discrepancies between the Shrinkage estimation and actual volumes will be a source of transient Unidentified Gas. The Shrinkage process should therefore be examined to identify its contribution as a source of short-term Unidentified Gas.

4. Conclusions

- The methodology developed by the AUGS is appropriate, when taking into account the lack of appropriate data to utilise a more robust methodology.
- The split between the LSP NDM and DM sectors needs to be defined.
- Consideration should be given to the SSP NDM metering bias as the model is dependent on SSP meter reads.
- A significant majority of the LSP NDM Unidentified Gas identified (in particular that attributed to Unregistered/Shipperless sites) is transient in nature and should be excluded from any final Unidentified Gas volumes By sector:
 - Some consideration should be given to the contribution Shrinkage error gives to transient Unidentified Gas volumes.
 - Detected Gas Theft for LSP NDM sites should also be excluded as Xoserve is obliged to reconcile reported LSP NDM theft volumes.
 - Similarly LSP NDM consumption should be treated as transient in the majority of cases for iGT CSEP errors.
 - Finally, the vast majority of the LSP NDM Unidentified Gas in the Shipperless/Unregistered sites should be treated as transient as clear processes exist to reconcile that energy back to the customer.