

Representation

Draft Modification Report

0473 0473A – Project Nexus – Allocation of Unidentified Gas

Consultation close out date: 13 November 2014
Respond to: enquiries@gasgovernance.co.uk
Organisation: British Gas
Representative: Graham Wood
Date of Representation: 13 November 2014

Do you support or oppose implementation?

0473 - Oppose

0473A - Support

If either 0473 or 0473A were to be implemented, which would be your preference?

Prefer 0473A

Please summarise (in one paragraph) the key reason(s) for your support/opposition.

Project Nexus introduces the accurate measurement of Unidentified Gas (UG) and for the first time it is possible to isolate UG from un-reconciled gas ('settlement error'). Xoserve data shows that after 2 years, the measurement of UG will be >99% accurate. This removes the historic presumption that 'settlement error' is a source of UG and should therefore sit with the SSP sector (since they currently do not reconcile). Nexus also introduces a fair UG allocation methodology which is the result of rigorous industry consultation and scrutiny. The industry should not move away from the fair allocation methodology of Project Nexus unless there is compelling evidence to do so.

0473

We do not support 0473. Whilst we support the intention to appoint an Expert, we believe that the time allowed for the Expert to complete its analysis and produce any statement is insufficient, that the output will not be robust and that there will be an unacceptable level of volatility in the result. Arbitrarily setting UG allocation factors to zero to Product Classes 1 and 2 during transition has no evidential basis and will introduce a 'safe-haven' for a select number of sites to optionally avoid their fair allocation of UG charges. Since speed of settlement has no impact at all on UG levels – it simply speeds up the accurate measurement of it – the effect of this methodology is to allocate the same market UG total to a smaller number of customers. This will disproportionately increase the cost base of some users whilst unfairly reducing the costs for others. This approach is regressive and does not help to secure effective competition between relevant shippers or suppliers and will prevent effective competition from bearing down on prices. 0473 transition arrangements are so detrimental to the Relevant Objective d) that they negate any positive impact of the introduction of an Expert.

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0473A

We support 0473A as we support the intention to determine the appropriate allocation of UG and the appointment of an Expert to do this. It is our view that having an Expert dedicated to the analysis of UG will lead to the identification and removal of further sources. However, this is dependent on all parties being equally incentivised to do this. 0473A allows sufficient time and matured data to enable the Expert to determine the requirement for and nature of any intervention. During transition 0473A allocates known-source UG to the sector from which it originates. All residual UG; which has no identifiable source and cannot be reliably allocated to sector is allocated via the Nexus mechanism. 0473A provides a mechanism for the identification and removal of sources of UG and ensures that all parties are appropriately and proportionally incentivised to do so, furthering the Relevant Objective d) Securing of effective competition between relevant Shippers and Suppliers.

Modification Panel Members have indicated that it would be particularly helpful if the following questions could be addressed in responses:

Q1: Please provide as much information and analysis to support your response, particularly any justification for why any particular class should, or should not, attract unidentified gas costs.

Unidentified Gas (UG) is gas that has been used but not registered as consumed at any individual site once the initial allocation has been corrected to a meter read. UG costs are massive; the current Allocation of Unidentified Gas Expert (AUGE) latest estimate of the value is £123m in a seasonally normal year. Many estimates are much higher than this; British Gas estimate that UG costs are more like £300m annually based on actual data from our portfolio.

Project Nexus (0432) for the very first time, introduces an allocation of UG that is fair by default, since it allocates UG by throughput. Defining this process has been the result of rigorous industry consultation and scrutiny.

Why is this important?

Allocating UG equitably is important to ensure that all parties are appropriately and proportionally incentivised to remove UG sources. Cost-reflectivity underpins effective competition.

The industry should not move away from the fair allocation methodology of 0432 unless there is compelling evidence to do so.

Introducing an Expert

We support the intention of both modifications to determine the appropriate allocation of UG and to appoint an Expert to do this. It is our view that having an Expert dedicated to the analysis of UG will lead to the identification and removal of further sources of UG, provided that all parties are equally incentivised to do this.

Data Availability

It is important to allow an Expert sufficient time and to make available the appropriate amount of mature data to create the best opportunity to deliver an accurate and robust outcome. 0473 mandates the newly appointed Expert to produce its first Draft AUG Statement by 1st February – just four months after the Project Nexus Implementation Date and its final version by April 30th – seven months after Project Nexus Implementation Date. The time allowed is

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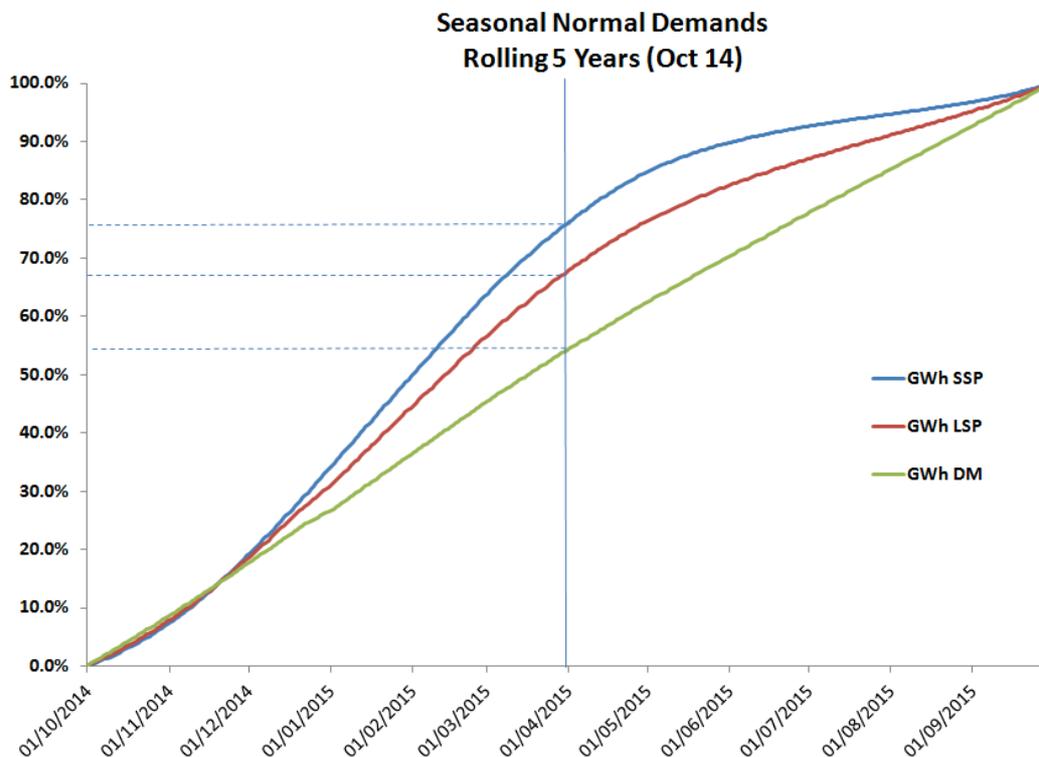
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insufficient, the output will not be robust and that there will be an unacceptable level of volatility in the result.

The chart below shows the seasonal normal demand for different groupings of End User Categories. It can be seen that the 6 months from October represent very different proportions of total annual consumption for different customers. Additionally, customers have very different consumption sensitivity to temperature variations. Under the terms of 0473 the Expert cannot reasonably be expected to accurately predict the second half of the year to complete a full seasonal picture.

Xoserve produce reconciliation reports on the 25th of each month for the previous month. Therefore as at April 30th there will be 6 complete months of data available. The period of data availability under 0473 (October 1st – March 31st) prior to the Final version of the AUG Statement represents very different proportions of total demand for different customer groups:

- 75.9% of total annual seasonal normal demand for Smaller Supply Points (SSP)
- 67.7% of total annual seasonal normal demand for Larger Supply Points (LSP)
- 54.2% of total annual seasonal normal demand for Daily Metered (DM)



Source: <http://www2.nationalgrid.com/uk/Industry-information/gas-transmission-operational-data/supplementary-reports/>

0473A establishes a 'measurement window' of 12 months. This ensures that the Expert has available to them a complete year of data (including full seasonal demand) generated under the new Nexus arrangements. The Expert can then make a reasonable determination as to whether the UG allocation mechanism introduced by 0432 is appropriate or whether intervention is required. 0473 pre-supposes that intervention is required despite there being no available data. It is our belief that it is not possible to reliably assess the accuracy of a mechanism when you cannot observe the effects directly.

0473A allows the Expert (should they determine intervention is required) an appropriate data-set to determine the requirement for and nature of any intervention.

Data Maturity

The effect of the implementation of 0432 will be that, for the first time, it will be possible to isolate Unidentified Gas from un-reconciled gas because all sites will reconcile. This removes the historic presumption that UG costs should sit within the SSP sector (since they do not currently reconcile). The real quantity of Unidentified Gas will be visible for the first time. The accuracy of the UG measurement is dependent upon the market reconciliation performance levels. Existing Xoserve data (see below table) demonstrates that after 2 years the measurement of UG will be >99% accurate.

Xoserve Data Cleaning - MPRNs without a read for:				
	>4 Years	3-4 Years	2-3 Years	>2 Years
SSP	57,358	47,625	158,042	263,025
LSP	197	213	797	1,207
MPRNs with 1 or more reads, as a share of MPRNs:				
SSP	99.73%	99.78%	99.26%	98.77%
LSP	99.93%	99.93%	99.72%	99.58%
MPRNs with one or more reads, as a share of AQ, using average SSP and LSP AQs:				
SSP	99.85%	99.88%	99.59%	99.31%
LSP	99.99%	99.98%	99.94%	99.91%

At 1 year the measurement of market UG will have accuracy in excess of 90%. This is based on DM and LSP reconciliation data and AQ recalculation rates for SSP and LSP sites. This reinforces the need for the 'measurement window' introduced by 0473A to ensure that the Expert has a complete data set that has matured to provide a high degree of confidence in the output.

The additional data and functionality of Nexus combined with a number of current initiatives will improve read performance levels in advance of Project Nexus Implementation Date. This will make the measurement of UG quicker and more accurate. These factors are:

1. Performance Assurance Framework MOD483/506/509
2. Nexus Data Cleansing Activity
3. Additional incentive of SSP reconciliation functionality
4. Inclusion of CSEP data
5. Smart meter roll out

Q2: We welcome views on the attribution of unidentified gas costs under these modifications to NTS direct-connected sites.

We believe that the email issued to Modification Panel members by the Joint Office of Gas Transporters dated 20th October 2014, entitled 'October 2015 UNC Modification Panel - Modification Proposals 0473/0473A', provided clarification that NTS direct-connected sites are not impacted by either modification proposal. A relevant extract from this email has been added below.

'Since NTS sites will not be assigned to an LDZ if they are connected from the NTS (even if they sit physically adjacent to LDZ sites), they will not count towards LDZ offtake and cannot be assigned any LDZ UG. NTS

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UG is a completely different process, where NTS bear the costs. Although NTS and LDZ sites will both be Class 1, the reference to LDZ differentiates these sites into 2 sub-sets.'

Are there any new or additional issues that you believe should be recorded in the Modification Report?

The Allocation of Unidentified Gas Expert (AUGE) latest output (source: *2014 Allocation of Unidentified Gas Interim Table for 2015/16*) includes an allocation of UG to all sectors, including DM.

Under 0473 transition it is not possible to attribute any UG charges to sites in these categories regardless of the source. No Product Class should be shielded from UG that is created from factors such as LDZ measurement errors, shrinkage estimate errors, leakage and any other unknown source.

Relevant Objectives:

How would implementation of this modification impact the relevant objectives?

0473

- There is insufficient time allowed for the Expert to produce its first methodology, the methodology will be based on immature data and will lead to a volatile result. A fluctuating UG cost allocation is not beneficial to effective competition.
- Transition arrangements are so detrimental to the Relevant Objective d) Securing of effective competition that they negate any positive impact of the introduction of an Expert.
- Creating a 'safe haven' to optionally avoid UG costs will distort effective competition and prevent effective competition from bearing down on prices.
- The propensity to generate UG is not linked to the speed of reconciliation; there is no basis at all for a disproportional allocation of UG from unknown sources. Linking the allocation of UG charge to reconciliation speed is inappropriate and regressive.
- Product Class 2 and Product Class 3 differ only in the speed with which daily reads are submitted to industry for daily settlement. Despite this, 0473 transition allocates zero UG to sites within Product Class 2 and factors of 1.17 or 1.28 to sites within Product Class 3.
- The latest output from the existing AUGE allocates UG to all sites, including DM.

0473A

- 0473A allows sufficient time and matured data to enable the Expert to determine the requirement for and nature of any intervention. This will lead to a more accurate and stable output.
- Having an Expert dedicated to the analysis of UG will lead to the identification and removal of further sources and 0473A ensures that all parties are equally incentivised to do this.
- 0473A during transition allocates UG equitably, this is important to ensure that all parties are appropriately and proportionally

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incentivised to remove UG sources. Cost-reflectivity underpins effective competition.

- 0473A transition allocates known-source UG to the sector from which it originates. Known-source Unidentified Gas ceases to be unidentified by definition. Where data exists (from the existing AUGÉ) to reliably identify the source, measure the quantity and robustly allocate to a sector 0473A transition does so. This supports effective competition.
- All residual UG; which has no identifiable source and cannot be reliably allocated to sector is allocated via the 0432 mechanism - since no compelling evidence exists to move away from this fair allocation methodology.

It is our view that having an Expert dedicated to the analysis of UG will lead to the identification and removal of further sources of UG furthering the Relevant Objective d) Securing of effective competition. However, this is dependent on all parties being equally incentivised to do this. The transition arrangements of 0473A ensure an equitable allocation of UG charges. Allocating UG equitably is important to ensure that all parties are appropriately and proportionally incentivised to remove UG sources. Cost-reflectivity underpins effective competition.

0473 transition arrangements are so detrimental to the Relevant Objective d) Securing of effective competition that they negate any positive impact of the introduction of an Expert.

0473 Transition

MOD 473 introduces the following allocation factor table to be used during the 18 month transition period.

Supply Meter Point Classification	Allocation Factor (by EUC Band)	
	EUC Band 1	EUC Band 2-9
Class 1	0	0
Class 2	0	0
Class 3	1.17	1.28
Class 4	1.17	1.28

This table arbitrarily sets the UG allocation to all sites within Product Classes 1 and 2 to be zero. The EUC Factors in Product Classes 3 and 4 are an attempt to force-fit the current AUGÉ output (designed to correct Reconciliation by Difference - RbD) into a settlement regime in which RbD has been replaced by full reconciliation. The existing AUGÉ allocation methodology is therefore no longer relevant.

The AUGÉ Output is not applicable to Project Nexus

The Allocation of Unidentified Gas Expert (AUGÉ) was introduced (MOD229) in an attempt to remedy the inherent unfairness of the Reconciliation by Difference (RbD) of actual (metered) and deemed (estimated) measurements of gas. RbD was introduced in 1998 as a cost-effective alternative to individual meter point reconciliation for each SSP customer. Project Nexus introduces individual meter point reconciliation to the SSP sector and therefore, by definition, removes RbD and consequently the need for the existing AUGÉ. This means that the existing output from the AUGÉ process is not applicable to the arrangements post Project Nexus and

that any attempt to apply the AUGÉ output would yield an inappropriate result.

The only element of the existing AUGÉ output that remains applicable post Nexus implementation is the 'Directly Measured Components'. The Directly Measured Components are, in effect, where UG has been 'solved' – the cause has been identified and can be attributed.

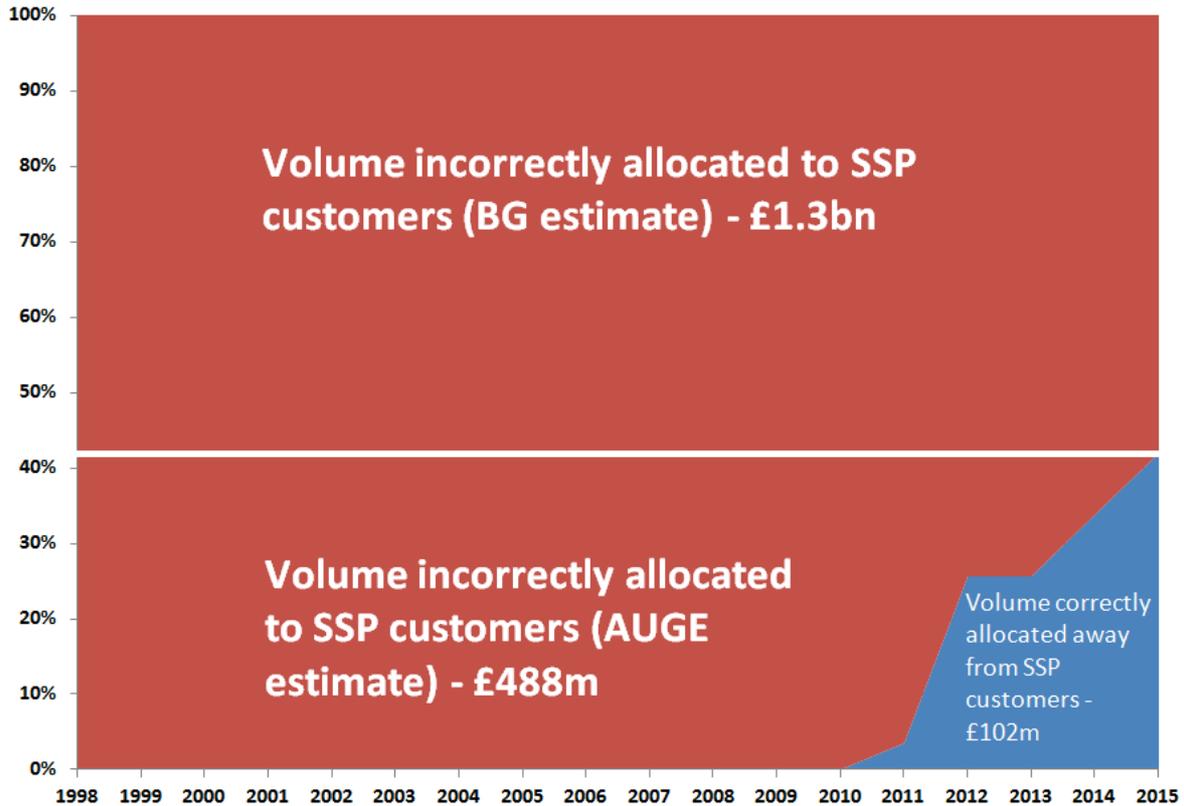
So far the AUGÉ has been able to identify £32.8m (Source: *2014 Allocation of Unidentified Gas Interim Table for 2015/16*) of UG that should be allocated away from the SSP sector each year. Given that our estimate of UG is c£300m annually this represents just 11% of the total. This leaves 89% of UG charges allocated to a sector that represents just c60% of consumption.

Table 3 Unidentified Gas Rates 2015/16

Unidentified Gas source	Aggregate Estimated cost of Unidentified Gas/£M	Unidentified Gas Costs/£M		
		Larger DM SPCs	Larger NDM SPCs	Smaller SPCs
iGT CSEPs	5.85	0.00	0.00	5.85
Shipperless/Unregistered	4.99	0.10	3.57	1.32
- Shipper Activity	0.00	0.00	0.00	0.00
- Orphaned	0.32	0.10	0.18	0.04
- Unregistered <12 Months	0.51	0.00	0.39	0.12
- Shipperless PTS	0.23	0.00	0.16	0.07
- Shipperless SSrP	3.79	0.00	2.76	1.03
- Shipperless <12 Months	0.15	0.00	0.08	0.06
Meter Errors	0.43	0.00	0.43	0.00
Balancing Factor (Theft + Other)	111.74	0.00	28.69	83.05
Total (inc Independents)	123.02	0.10	32.70	90.22

Therefore, based on the Expert's view, since inception, the RbD mechanism has over-charged the predominantly domestic SSP customers by approximately £488m to date. Taking the total quantity of UG at British Gas's increased estimate of c£300m, this would indicate a historic over-charge to the SSP sector of more than £1.3bn.

Allocation of Non-SSP Originating Unidentified Gas



0473 transition is not fit-for-purpose. The methodology it attempts to replicate was designed for a different purpose within a different settlement regime. Setting this issue aside, the transition arrangements within 0473 do not represent a faithful reproduction of the methodology (even assuming it was applicable to the Nexus settlement regime) for the following reasons:

1. The AUGE output is an estimated forecast based on seasonal normal conditions. UG will be actually measured in Nexus and will fluctuate with demand which is affected by inevitable variation to seasonal normal conditions.
2. The attempt to replicate the existing AUGE methodology in the 0473 transition table has no mathematical integrity. The AUGE output is a mixture of fixed and variable allocation proportions to each sector, based on an estimated total quantity. 0473 combines these into a single proportion per sector. Critically, when the actual measured UG total changes from the AUGE estimate, these proportions become inaccurate and UG will not be allocated in line with AUGE's intentions.
3. DM, LSP and SSP sectors do not directly align to Nexus Product Classes.
4. Product Class in Nexus can be determined by Shipper choice.
5. The AUGE's latest output includes an allocation to all sectors, including DM, yet 0473 transition arrangements arbitrarily allocate zero to Product Classes 1 and 2.
6. Connected System Exit Point (CSEP) data is available for the first time in Nexus and does not exist in the AUGE output. The AUGE has had to assume consumption for CSEPs rather than actually measure it. It is very likely that the actual consumption will differ from the AUGE estimate.

7. The scope of the existing AUGÉ excludes key contributing UG factors (e.g. shrinkage estimate error). Therefore known causes of UG are not considered when determining the output.

Additionally the existing AUGÉ scope does not include ‘fairness’ as a determining principle. This can be seen from their consultation response to Frontier Economics recommendation that theft should be smeared across all sectors/shippers.

Extract from “Allocation of Unidentified Gas, September 2011 – Frontier Economics”:

“[The] most practical, option in this case is to socialise fully the costs [of theft] across sectors. While this will not, by itself, result in an efficient outcome, it will be fairer and more practical than the alternative of allocating within sectors. We consider this approach against our three criteria:

- **Efficiency:** *Implemented by itself this option is not likely to be efficient. Once the costs of theft are socialised, no individual shipper will be able to capture the full benefits of an investment in theft detection – rather it will be smeared across all customers. This will tend to encourage underinvestment in theft detection practices. This underinvestment in theft detection will, in turn, tend to lead to higher levels of theft overall;*
- **Fairness:** *This option is likely to be fair as no customer is unduly discriminated against purely because of the volume of gas they consume. The contrary position of smearing across sectors in some proportion – or all being borne by the SSP sector (as is the case at the moment) seems, to us, inherently unfair. Even if the incidence of gas theft is higher amongst smaller customers (and there is no evidence, on a per kWh basis, that this is the case), we can see no legitimate reason why a small customer that is not stealing gas should bear a higher proportion of the cost of theft than a large customer not stealing gas (or vice versa). In our view, such an approach would be highly regressive.*
- **Practicality:** *This option is also likely to be practical as the total costs of theft can be split by throughput.*

In passing, we note that theft detection has characteristics that make it akin to a public good as it is not possible to exclude the benefits of theft detection to all customers. This is a classic example of “market failure” and, without further intervention, is likely to lead to an under-provision of theft detection services. Our view is that the current approach in which all of the costs of theft fall on the SSP sector, as well as being iniquitous and regressive, is highly inefficient as any individual shipper does not have sufficient incentive to invest in theft detection. This will lead to an overall increase in the level of theft to the detriment of society.

Typically, such market failures are addressed by some form of centralised intervention or by, in some way, changing the way in which benefits of the public good are allocated to ensure the incentives to deliver such goods are improved. We understand that the gas industry is currently considering a range of options to address this issue and, given the clear problem that we have identified with the current regime, believe that this would be potentially very beneficial to both the industry and society more widely.”

Source: <http://www.gasgovernance.co.uk/sites/default/files/REP-PhaseII-final%20version%20v8%200%20-%20STC.PDF>

AUGE response:

“Frontier Economics discuss the various options of allocating UG by Shipper, by sector and across all sectors/shippers against criteria of Efficiency, Fairness and Practicality.

However, the AUGE is requested to estimate UG and attribute between supply points based on their contribution to the overall volume of unidentified gas.”

Source: <http://www.gasgovernance.co.uk/sites/default/files/Response%20to%20Frontier%20Economics%2014112011.pdf>

Creating a ‘Safe Haven’

0473 transition effectively creates a ‘safe haven’ for all sites in Product Classes 1 and 2. Under 0473 it is not possible to attribute any UG charges to sites in these categories regardless of the source. No Product Class should be shielded from UG that is created from factors such as LDZ measurement errors, shrinkage estimate errors, leakage, open bypass valves and any other unknown source. This creates a ‘risk-free’ environment to a select numbers of sites in a volatile industry. The entire market risk is then borne wholly by sites in Product Classes 3 and 4 (which will tend to be domestic consumers and small businesses). Since the **speed of settlement has no impact at all on overall UG levels – it simply speeds up the accurate measurement of it** - the effect of this methodology is to allocate the same UG total over a smaller number of customers, disproportionately increasing the cost base for some users whilst unfairly reducing costs for others. This does not help to secure effective competition between relevant shippers or suppliers.

Since Product Class 2 is available for users to ‘opt in’ this effectively creates an opportunity for users to ‘opt out’ of their fair share of UG charges. However, this ‘opportunity’ is not currently available to all users and is therefore restrictive.

Product Class 2 and Product Class 3 differ only in the speed with which daily reads are submitted to industry for daily settlement – **their propensity to generate UG is identical**. Despite this 0473 transition allocates zero UG to sites within Product Class 2 and factors of 1.17 or 1.28 to sites within Product Class 3. There appears to be no evidence-based justification for this anomaly or any attempt to explain how the creation of this ‘safe-haven’ furthers the Relevant Objectives. The ability to opt into a Product Class that avoids UG charges will distort a market-led allocation of cost. It will also prevent effective competition bearing down on prices.

0473A Transition

Allocating UG equitably is important to ensure that all parties are appropriately and proportionally incentivised to remove UG sources. Cost-reflectivity underpins effective competition.

The industry should not move away from the fair allocation methodology of 0432 unless there is compelling evidence to do so.

0473A transition allocates known-source UG to the sector from which it originates. Known-source Unidentified Gas ceases to be unidentified by definition. Where data exists (from the existing AUGE) to reliably identify the source, measure the quantity and robustly allocate to a sector 0473A transition does so.

All residual UG; which has no identifiable source and cannot be reliably allocated to sector is allocated via the 0432 mechanism - since no

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compelling evidence exists to move away from this fair allocation methodology.

Impacts and Costs:

What analysis, development and ongoing costs would you face if this modification were implemented?

0473A requires an additional offline transaction to be built into UK Link.

We do not anticipate any specific development or implementation costs associated with the approval of either modification. However, we do have a concern that the transitional arrangements for 0473 does not provide Shippers with any degree of certainty over the allocation of UG costs during this transitional period. This could result in large degrees of uncertainty and the potential for price volatility, something which the industry has previously agreed as being unwelcome and not conducive to competition.

Implementation:

What lead-time would you wish to see prior to this modification being implemented, and why?

The appointment of the new Expert, under either proposal, should be undertaken in readiness for Project Nexus Implementation Date. We believe that there is adequate time for the procurement process to be completed and an Expert appointed ahead of the Project Nexus Implementation Date of 1st October 2015.

Legal Text:

Are you satisfied that the legal text and the proposed ACS (see www.gasgovernance.co.uk/proposedACS) will deliver the intent of the modification?

0473A - We are satisfied that the proposed Legal Text for 0473A will deliver the intent of the modification proposal. Following engagement with Xoserve during the development of the legal text associated with the transitional arrangements, we are satisfied that these arrangements can be implemented.

0473 – Upon detailed review, we do not believe that the proposed legal text for 0473 is complete, with a number of elements that require further review and revision. Below we outline our detailed comments on the 0473 legal text as currently drafted.

- 9.1.1 (a) – references (i) to (vi) are not sequential (v) is missing.
- 9.1.3 – Reference made to AUG Document and there are subsequent similar references throughout the legal text – is this a separate defined term or should this be stated as AUGE Document? (Which is the defined term as detailed within 9.1.1 (a))?
- 9.4.1 (c) – AUG Methodology – unsure what this methodology is, it requires a specific definition if this is to be a defined term within the legal text.
- Annex E1 – the table being inserted does not align with the table detailed within the 0473 Business Rules and therefore does not accurately represent the proposal. This is a fundamental issue which requires amendment.
- TD PART IIC – Transitional Rules. The text makes reference to paragraph 9.3 of the AUGE Document; however there is no 9.3 within this document.

Is there anything further you wish to be taken into account?

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Please provide any additional comments, supporting analysis, or other information that that you believe should be taken into account or you wish to emphasise.

We note that differing approaches have been taken towards the governance of transition arrangements within the two proposals.

0473A places the transition arrangements, via the legal text, within the main body of the UNC (Section E). Whereas 0473 locates these arrangements within the AUGE Document guidelines; an ancillary document.

By including the transition arrangements within the UNC, 0473A protects the arrangements as designed. As 0473 places the arrangements within an ancillary document to the UNC, the transition arrangements can be amended by UNCC approval, without Authority approval.

The differing transition arrangements are fundamental to each proposal and therefore we believe it is essential that these arrangements are protected, such that should any future amendment of these arrangements be sought, that such amendment would require a UNC modification proposal to be progressed and ultimately approved by The Authority. This is important as any amendment to approved transition arrangements has the opportunity to fundamentally change to original intentions of the proposal and its output.