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AUG UNCC Sub-Committee

Proposed AUGS Consultation Responses

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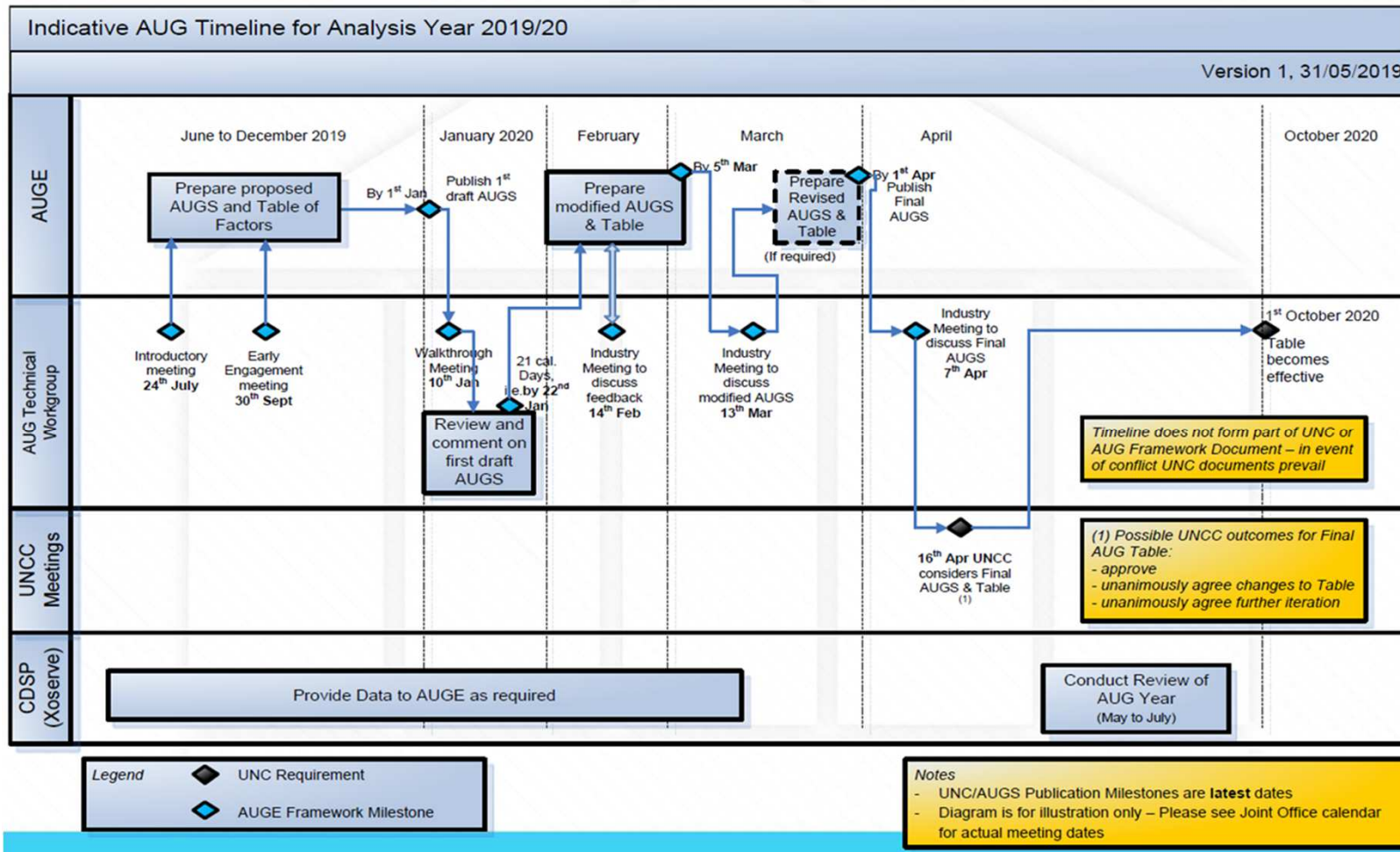
14 February 2020

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Agenda

- Meeting Purpose

- Summary of issues raised during consultation

- Detailed discussion of consultation issues

  – Describe & clarify issue

  – Provide feedback

- Data Update

- Next Steps

- AOB

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Meeting Purpose

- Review and provide feedback on consultation responses

Indicative AUG Timeline for Analysis Year 2019/20

Purpose of Meeting

- AUG Expert has proposed methodology

- Industry have provided feedback on proposed methodology

- Aims of today
  - AUG Expert to get clarifications/more details around issues raised
  - AUG Expert to provide initial thoughts on issues raised
  - Discuss and understand issues raised in more detail

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AUG Expert Framework

- "Code Parties may submit relevant topic areas for consideration by the AUG Expert during the consultation process. The submission must include a clear explanation of the topic, the reasons why this topic is relevant to the AUG Statement or AUG Table, any accompanying data or if relevant suggestions as to how the data may be obtained by the AUG Expert. Each topic area submitted by a Code Party will be published (including the details of the Code Party) to the industry as part of the AUG Expert's consultation response. However specific information provided and marked confidential will not be generally published."

- "The AUG Expert will publish a written response to the topic detailing whether it is in or out of the scope of work and the rationale to support this, whilst respecting the confidentiality of the original information."

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AUG Expert Framework

- "The AUG Expert will consider any responses made, and will provide feedback for discussion at a meeting of the AUG Technical Workgroup."

- "The AUG Expert will review the AUG Statement and Table in light of any comments (received in Steps 7 and 8), and will adjust the AUG Statement and Table where it believes appropriate. The proposed AUG Statement document, as modified by the AUG Expert in accordance with this Step, will be republished the Joint Office of Gas Transporters website."

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Summary Of Issues Raised

- Two responses received - British Gas & Energy UK

- Topic areas raised
  - Theft
  - Product Class 3 Migration
  - UIG Factor Smoothing
  - Changes to Factors
    - from Proposed AUGS
    - From 2019/20 to 2020/21

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Theft

- British Gas

> **Recommendations**
>
> - Outline how the theft methodology is likely to change to address newly identified sources of bias and indicate the impact on the allocation of the balancing factor for 2021/22.
>
> - Apply an uplift in the theft analysis to account for the differential in address matching success between residential and commercial sites.
>
> - The AUGE should obtain and analyse the anonymised results of the Gas Theft Detection Incentive Scheme.

- Full data including TRAS Outliers and ETTOS leads will be included if possible

- Suggestions from the industry for other sources of bias that may be investigated are welcomed

- Address matching uplift technique developed but not yet included in methodology due to lack of data

  - This will be included if data is supplied and analysis supports implementation

- Gas Theft Detection Incentive Scheme data is a subset of TRAS data used

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Theft

- British Gas

> **Recommendation**
>
> - *Please provide a summary of the explicit assumptions and derived values related to the difference in rates of theft detection between smart and non-smart sites.*

- No direct assumptions made about theft rates from any type of meter
  - All rates calculated using data from TRAS Outcome Files
- The only assumption relates to which sources of theft are unbiased
- All calculations available in spreadsheets on UK Link Secure Docs
- Rates calculated for each EUC/PC category (e.g. PC3 01B or PC4 01B) using latest TRAS data
  - All sites in that category assumed to have this rate
  - When a site changes category its theft rate will change
- Migration will change theft rates over time as the composition of each category changes

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Theft

- British Gas

An initial review of the AUGE's theft analysis relating to PC3 highlights some points of concern:

- the starting point for PC3 theft is based on a sample of five observations, suggesting a high degree of unreliability, which is then amplified significantly to reflect the mass migration to PC3;

- more than half of the observations of theft in PC3 EUC1 to date are from credit meters, which we believe should not be in PC3 in the first place; and

- average thefts in the analysis are higher for existing PC3 EUC1 supply points (23,311 kWh) than for PC4 EUC1 smart metered supply points (14,255 kWh) – given the mass migration is comprised of smart sites from PC4, we would expect an adjustment so the average theft volume assumptions for 2020/21 are more reflective of the PC4 volumes.

Recommendation

- *Consider revising the assumptions in the theft analysis related to PC3 EUC1.*

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Theft

- Calculations are based on leads from unbiased sources rather than confirmed thefts
  - Confirmed thefts have effects of bias built in and we are trying to remove this
  - There are 63 data points for PC3, upon which the calculations are based
- There is no requirement for sites in PC3 to have Smart Meters
  - Just rules about meter read submission
  - These rules are not being followed for a number of sites
  - It is likely that there are credit meter sites in PC3
- Calculated values for kWh per theft are based on small sample sizes in some cases
  - Confirmed thefts only
  - PC3/PC4 differences may be genuine or may be due to variability in the data
  - Additional data will lead to greater confidence in these estimates

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Theft

- Energy UK

> As detected theft patterns are heavily influenced by the investigation activity that each supplier chooses to carry out, Energy UK is concerned that the potential under-reporting of theft by some suppliers and heavy reliance on the Theft Risk Assessment Service (TRAS) of Qualified Outliers could be skewing UIG calculations and, therefore, increasing costs allocated to Product Class 4.
> We are requesting further transparency around the AUGE's assumptions made about theft and what feeds into its calculations of undetected theft. We would encourage the AUGE to request access to an anonymised breakdown of theft detection by shipper to be able to take into account outliers present in the data.

- It is vital to remove this type of bias from TRAS data

- The AUGE's theft method has been specifically designed to do this

  - Base data is from unbiased lead sources only

  - Output is theft pattern with Supplier bias removed

  - Method described in detail in Section 7.9 of the AUG Statement

- Data split by Shipper has been analysed and our conclusions agree with Energy UK

  - Removal of the *effects* of Shipper/Supplier differences are key

  - Quantification of the differences themselves is not required

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Theft

- Energy UK

The AUG Statement highlights that theft levels from Smart Meters and traditional meters are different and therefore data for each of these populations must be extrapolated individually to the forecast year. We understand that the AUGE is using data from the Department for Business, Energy and Industrial Strategy (BEIS) to best estimate Smart Meter populations. However, Energy UK is seeking further clarity on the assumptions made about the propensity for Smart customers to steal.

The AUG Statement asserts that, based on current data, there have been 523 confirmed thefts from Smart Meters out of a total of 12,644 confirmed thefts, however this was deemed non-statistically significant. Energy UK would like the AUGE to be explicit about when it would consider this data set to be statistically significant and included within the calculation. Energy UK would welcome additional transparency on how the AUGE extrapolated the figure for Smart Meter thefts that has been applied to derive the current AUGE table.

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Theft

- No direct assumptions made about theft rates from any type of meter
  - All rates calculated using data from TRAS Outcome Files
- The only assumption relates to which sources of theft are unbiased
- All calculations available in spreadsheets on UK Link Secure Docs
- Smart Meter and traditional meter populations are treated separately for two reasons:
  - Theft rates from the two are different
  - The populations of these meters are changing in different ways
- The 523 Smart Meter thefts have not been found to be insignificant and ignored in the analysis
  - They have been included in developing a relationship for all meter types
  - They are used to calculate Smart Meter theft rates
  - They are, however, currently insufficient for a Smart Meter specific relationship between length of theft and proportion detected to be calculated
  - This will be reassessed in future years and implemented as soon as practicable

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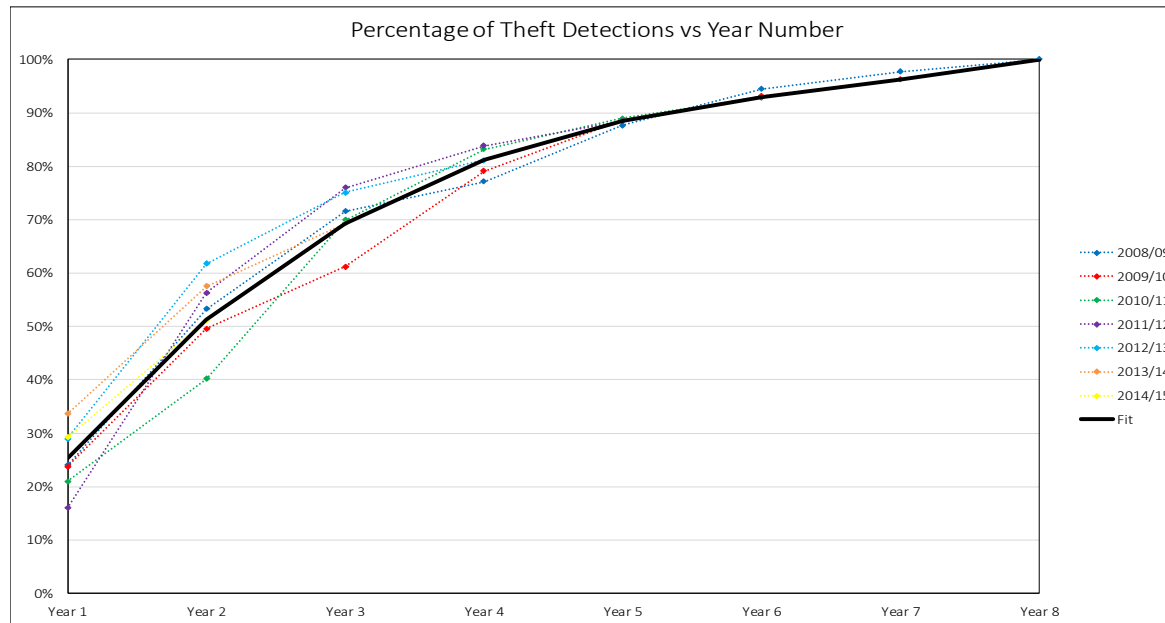
Theft

Percentage of Theft Detections by Year Number – All Meters

- Theft extrapolation method is the same for all types of meter
  - Current theft level related to current population
  - Population extrapolated to forecast year (using BEIS data for Smart Meters)
  - Theft level appropriate to forecast population calculated

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Product Class 3 Population

- British Gas

Where a supplier is active in revenue protection, there is the possibility that risk profiling insights could be used to support decisions about which supply points to migrate to PC3, as a "curation" effect.

While strategic decisions of this nature are unlikely to be uniform across suppliers, and will by nature be confidential, we nevertheless expect that future TRAS data will display a disparity in theft detection rates between otherwise identical smart-enabled sites in PC3 and PC4.

In addition, the increased access to data necessitated by the PC3 settlement processes introduces greater opportunities to detect anomalous data, which may well increase theft detection rates on smart meters in PC3, reducing undetected theft and feeding back into the ability to curate theft prone sites out of PC3.

Recommendation

- *We would be supportive of an effort to derive an initial estimate of the size of any curation effect, for example through a confidential poll asking migrating suppliers about their risk profiling intentions.*

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Product Class 3 Population

- There is no assumption of uniform rates for all Smart Meters for any element of the theft calculation
  - Hence there are different rates for Smart Meters in PC3 and PC4, for example
  - Advantage is that it picks up the effect described
  - Disadvantage is that some sample sizes are small
    - This will improve as more TRAS data is received
- The AUGE would be supportive of the type of poll suggested and would welcome additional data coming from it

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UIG Factor Smoothing

- British Gas

We note that smoothing is applied to the factors in the table along the EUC bands, and query why this is not also applied to some degree across Product Classes.

There is a strong practical argument that there should be less undetected theft from supply points as they move from PC4 to PC3 and start providing daily data to the CDSP, assuming the rules in the Product Class are being followed in terms of read submission (with any deviation from the rules being a matter for the Performance Assurance Committee). Counter to this the draft factors for EUC bands 5-7 are higher in PC3 than they are in PC4, and there is also an interesting anomaly in the draft AUG Statement where PC2 EUC 8 is lower than PC1. These discrepancies are difficult to practically justify.

Recommendation

- *The AUGE should ensure allocation factors don't increase as sites move from Product Class 4 to 3, from Product Class 3 to 2, and from Product Class 2 to 1.*

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UIG Factor Smoothing

- The purpose of factor smoothing is to remove excess variation between adjacent categories

    - It is not to ensure monotonic increase/decrease across EUCs or PCs

- It is logical for theft to increase from PC1 to PC4 but this is not necessarily the case for other causes of UIG

- The data shows that theft from AMR sites is extremely rare

    - Differences between the factors for high EUCs is due to other causes

- Volume conversion is major contributor to UIG factors in EUC 04B+

    - Use of Standard CF is the cause of higher UIG factors in PC3 than PC4 for some EUCs

    - Data driven i.e. larger total AQ for sites with std CF and no Volume Conversion in PC3 than PC4 for EUCs 06 & 07

    - Total UIG from Volume Conversion is small ~2.7GWh in PC3 for EUCs 06 & 07 in total

    - Mod681 may have impact on distribution of standard CFs

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Changes to UIG Factors

- British Gas

We welcome comments made by the AUGE on 10 January 2020 that there is no intention for significant changes to the factors in the final version of the statement.

We are supportive of updates that address "clear weaknesses" such as those outlined above, but significant updates other than corrections in response to industry representations should be avoided.

We should note that we are reviewing our rights to appeal under circumstances where:

- there is a failure to take into account consultation responses; or
- there are significant changes made to the final table that are not directly addressing a weakness identified in a consultation response.

Recommendation

- *Any significant changes to the factors for the final version should be limited to where a "clear weakness" identified through consultation has been addressed.*

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Changes to UIG Factors

- Energy UK

Firstly, we would like to question the significant variation between this year's AUG Table and that of 2019/20. We would welcome further clarification outlining the variations based on the information published in the Statement, as the source of such variations is not clear to our members.
Secondly, we noted the considerable differences between last year's final AUG Table that was produced and the version that had been consulted on. For this reason, we would encourage the Allocation of Unidentified Gas Expert (AUGE) to carry out a second short consultation period of five days during March should a similar occurrence happen with the 2020/21 Table. It appears that there is space within the laid-out timetable for further consultation which would allow for industry to input on the official version of the AUG Table.

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Changes to UIG Factors

- It is recognised that there was a significant change between the draft and final factors in the 2019/20 analysis. This was for two reasons:
  - The adoption of the new theft method, which was approved by the majority of the industry via the consultation process. It was not possible to implement this in time for the first draft of the AUGS due to the length of time it took to obtain authorisation to use TRAS data.
  - The start of the mass migration to PC3.
- No major methodology change planned for this year
- Some factor changes are to be expected, potentially due to
  - Address matching factors if these are implemented
  - Data updates/corrections

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Changes to UIG Factors

- The differences between the factor values for 2019/20 and those for 2020/21 are the result of three different issues:

  - The mass migration of sites from PC4 to PC3 has resulted in a significant shift in the population pattern, and hence also the pattern in which UIG is produced.

  - The factor calculations are more accurate this year due to the inclusion of Volume Conversion UIG as a directly calculated component.

  - 13m+ additional meter reads were supplied for this year's analysis

- Mass migration moves UIG from PC4 to PC3, particularly for EUC 01B

- Volume conversion moves UIG out of PC4 01B into adjacent categories

- The introduction of a second consultation period would require a change to the AUGE Framework

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Data Status – Outstanding Issues

- Offline Adjustments

  - Only provided by billing month

- Update to Product Class Populations

- IGT CSEPS

  - Suspect data for unregistered sites on known CSEPs

  - CSEP rejection process no longer managed by Xoserve

    - Data requested from IGTs

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Next Steps

- AUG Expert to prepare Modified AUGS & Table by 5 Mar
  - Table will be based on latest data where possible
- AUG Expert will re-publish consultation responses to include
  - any additional clarifications/feedback from today
  - AUG Expert's assessment of how each issue will be treated
- Data
  - Work with CDSP to obtain relevant data updates for inclusion in Modified AUGS

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Thank you

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