



AUG Sub-Committee

2024-2025  
Introductory  
Meeting

23<sup>rd</sup> June 2023



ELECTRICITY | GAS | INDUSTRY EXPERTS

1. (Re)introduction to the AUGGE Team
2. Overview of our proposed approach and overarching methodology for the Gas Year 2024/2025
3. Results of our initial assessment (prioritization) of potential UIG contributors
4. A view of the proposed focus areas for this year and next steps
5. Summary of current Advisory Service activity (PAC interface) (plus reminder of Innovation Service)

# Welcome: AUGE key contacts



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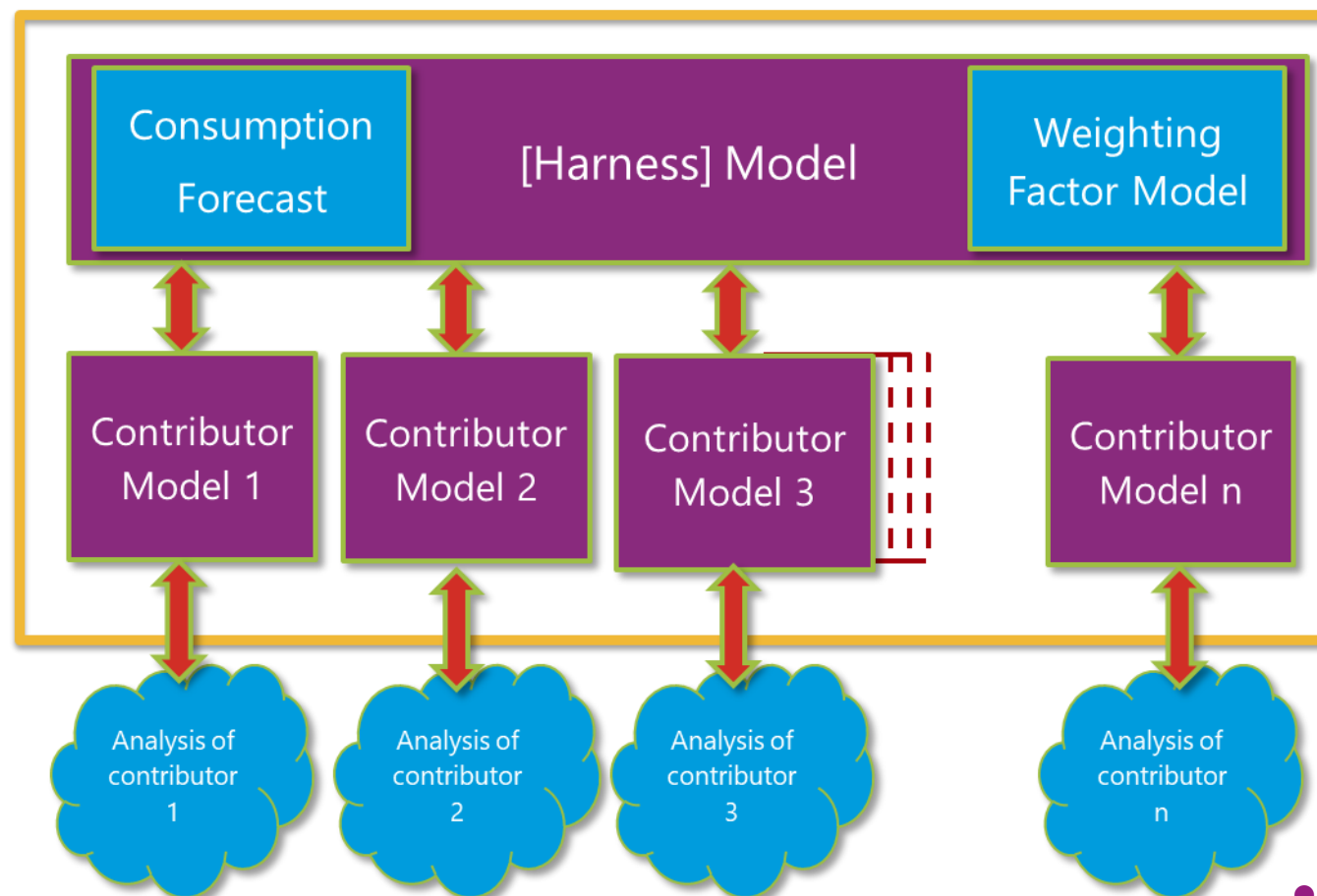
# Approach



- ▶ Open, transparent and collaborative
- ▶ Impartial and balanced in our judgement
- ▶ Applying expert gas industry knowledge
- ▶ Dialogue with industry participants throughout the process

- ▶ “Polluter Pays”, “Line in the Sand” and “Bottom-Up Determination” remain key principles and continue to underpin our methodology
- ▶ Polluter Pays – We interpret “fair and equitable” to mean that UIG should be allocated (to Matrix Positions) in the same proportions as it is created
- ▶ Line in the Sand – We will only consider UIG that will exist at the Line in the Sand (the final Settlement position) and not UIG that exists temporarily prior to this
- ▶ Bottom-Up Determination – We will quantify UIG for each identified contributor and add these together, rather than estimating overall UIG and apportioning it or using it as a means for differencing purposes

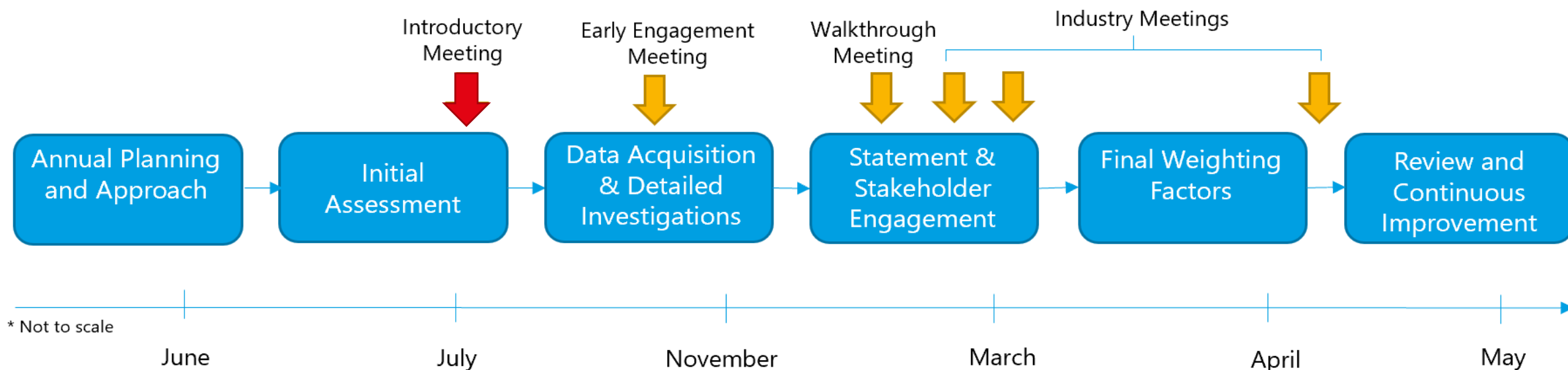
- ▶ The existing model will continue to be used for this AUG Year:
  - ▶ A contributor-based model comprising of an overarching harness model, linked to the separate contributor sub-models
  - ▶ The Weighting Factors are calculated within the harness model



- ▶ A consumption forecast is an integral part of our model and is used in the calculation of certain contributors
- ▶ We will calculate a national forecast for the Target Year based on historical AQ values for each Matrix Position
- ▶ This is then split into individual LDZ forecasts
- ▶ There is a full review planned for this year on what history for each matrix position is appropriate to use to help shape our future forecast now we have a full 6 years since Nexus go-live
- ▶ To validate our bottom-up approach, we will continue to compare the sum of the UIG calculated for the contributors with current observed values, as per previous years



# Delivery Timeline



# Initial Assessment



- ▶ The Initial Assessment is a process for considering which contributors to UIG may warrant:
  - ▶ investigation for inclusion in our calculations
  - ▶ improvements in existing calculation or allocation methodology
- ▶ Potential contributors are identified by the AUGE, by the industry or by any other third party
- ▶ We assess ALL existing and potential contributors on the basis that refinements to existing contributors may give more 'bang for buck' than new investigations
- ▶ The top scoring contributors are taken forward to investigation stage. If no methodology exists, a full investigation will take place. If a methodology already exists, we investigate ways to refine all or part of the existing methodology
- ▶ For existing contributors not subject to investigation, methodologies will be carried over from last year to estimate the UIG using up to date datasets
- ▶ Any potential contributor that is not selected for investigation will remain on the list to be re-evaluated in subsequent years

**There is value in identifying more UIG**

## 1. Potential scale of the contributor

Higher potential UIG level gives rise to a higher ranking in our assessment.

**There is value in investigating the unknown**

## 2. Level of our prior knowledge

The scoring mechanism prioritises issues where we have more limited prior knowledge (and so greater potential to improve outcomes by investigating)

## 3. Quality of data previously available

Combined with scope to improve, this prioritises areas where data was previously poor but now may be better.

**There is value in improving less robust methodologies**

## 4. Strength of existing methodology

High confidence in our current methodology suggest our time might be better used elsewhere, ranking the topic down. Areas with low confidence in the methodology, or where no methodology exists will achieve a higher ranking.

**There is value in focussing on areas with new insight and data**

## 5. Scope to improve

To what extent can we envisage a credible way to improve the methodology from its current state? Could it be done in a timely, cost-effective manner with the resources and expertise that we have? The greater the scope to improve our approach, the higher the scoring.

Contributor ID	Contributor
<b>010</b>	<b>Theft of Gas (total theft)</b>
011	Theft of Gas (roll out)
012	Theft Of Gas (last read)
<b>020</b>	<b>Unregistered</b>
<b>025</b>	<b>Shipperless</b>
<b>040</b>	<b>Consumption Meter Errors - Inherent Bias</b>
041	Consumption Meter Errors - Faulty Meter
042	Consumption Meter Errors - Extremes of Use
050	Meter Errors at LDZ input
<b>060</b>	<b>IGT Shrinkage</b>
<b>070</b>	<b>Average Pressure Assumption</b>
<b>080</b>	<b>Average Temperature Assumption</b>
<b>090</b>	<b>No meter read at the line in the sand</b>
<b>100</b>	<b>Incorrect Correction Factors</b>
110	CV Shrinkage
120	Meter Exchanges
130	Consumption Adjustments (incorrect)
131	Consumption Adjustments (incomplete)
140	Meters with Bypass Fitted
150	Meterless Sites
<b>160</b>	<b>Isolated Sites</b>
170	Incorrect Meter Technical details on UK Link
180	Unfound Unidentified Gas Contributors
190	Issues with Xoserve system
<b>200</b>	<b>Dead Sites</b>
210	Shrinkage Error

- ▶ 26 contributors were identified for Initial Assessment
- ▶ Contributors in bold have existing methodologies that impacted last year's output

Contributor ID	Contributor	Score
010	<b>Theft of Gas (total theft)</b>	45
090	<b>No meter read at the line in the sand</b>	40
131	Consumption Adjustments (incomplete)	36
180	Unfound Unidentified Gas Contributors	35
150	Meterless Sites	22
080	<b>Average Temperature Assumption</b>	21
011	Theft of Gas (roll out)	18
210	Shrinkage Error	18
041	Consumption Meter Errors - Faulty Meter	16
042	Consumption Meter Errors - Extremes of Use	16
070	<b>Average Pressure Assumption</b>	16
160	<b>Isolated Sites</b>	16
200	<b>Dead Sites</b>	16
012	Theft Of Gas (last read)	13
120	Meter Exchanges	13
130	Consumption Adjustments (incorrect)	13
170	Incorrect Meter Technical details on UK Link	13
060	<b>IGT Shrinkage</b>	12
040	<b>Consumption Meter Errors - Inherent Bias</b>	11
110	CV Shrinkage	9
100	<b>Incorrect Correction Factors</b>	8
190	Issues with Xoserve system	7
050	Meter Errors at LDZ input	3
140	Meters with Bypass Fitted	3
020	<b>Unregistered</b>	3
025	<b>Shipperless</b>	3

- ▶ The output from this evaluation informs our early thinking on focus areas for the coming AUG year.
- ▶ We consider potential approaches at a high-level and request and interrogate available data (or a limited cut of it)

# Focus areas



## New investigation

- ▶ **180** – Unfound UIG contributor

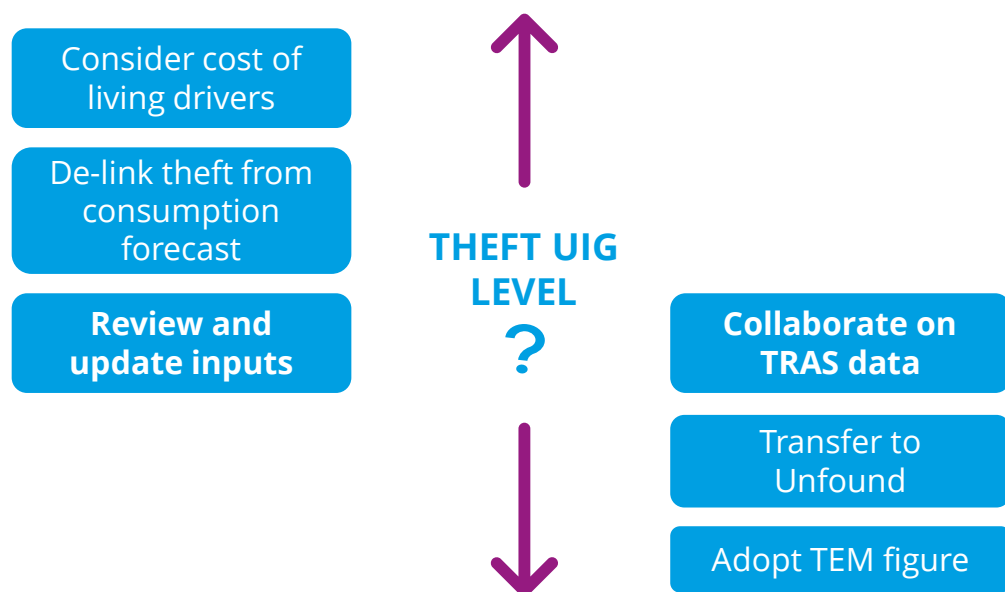
## Refinement investigations

- ▶ **010** - Theft of Gas (Total)
- ▶ **090** – No Read at the Line in the Sand



The proportion of calculated UIG attributed to theft is growing, even though the absolute value has fallen along with consumption patterns.

RECCo's Theft Estimation Methodology predicts a much lower amount of annual theft.

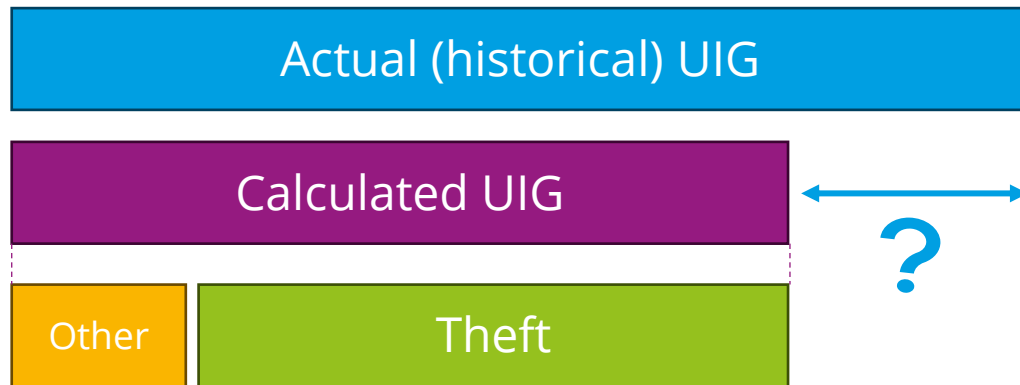


Theft UIG options and potential impacts

- ▶ Do we see a justifiable alternative or update to our existing methodology?
- ▶ Is there anything in TEM which could and should be applied to our methodology:
  - ▶ Assumptions?
  - ▶ Data sets?
  - ▶ Methodology?
- ▶ What is the cost-of-living impact?
- ▶ Is there a link to Unfound?

# Unfound – early considerations

The difference between calculated (forecast) UIG and actual (historical) UIG has grown.



- ▶ What might explain the delta?
- ▶ Why is the delta getting bigger?
- ▶ **Can we achieve a more equitable allocation by including Unfound UIG in our methodology?**

## CONCEPTUAL

## SPECIFIC

- ▶ Focus on principles and fair allocation
- ▶ Consider alternative measures for Unfound
- ▶ Consider role of/crossover with theft
- ▶ Study trends and drivers for delta
- ▶ Technical study to size components
- ▶ Potential new UIG contributor

The No Read contributor has become overly-complex after several iterations

- ▶ **In situations where the Line in the Sand passes for a period of time before a valid subsequent read is accepted into Settlement, UIG is created. This is the difference between the allocated energy determined from AQs over this period of time and the actual energy used.**
- ▶ Methodology has been subject to annual iteration. Looking backwards and forwards at the same time has required the combination of a confusing variety of data inputs and sub-methodologies
- ▶ Starting from scratch removes confusion and potential undesirable outcomes
- ▶ New approach will not be revolutionary but more tidying up and providing clarity
- ▶ Focus is on an annual calculation of the UIG created from the most recent change in the Line of the Sand (April 2023) and applying that to the target year's AQ

# Next steps

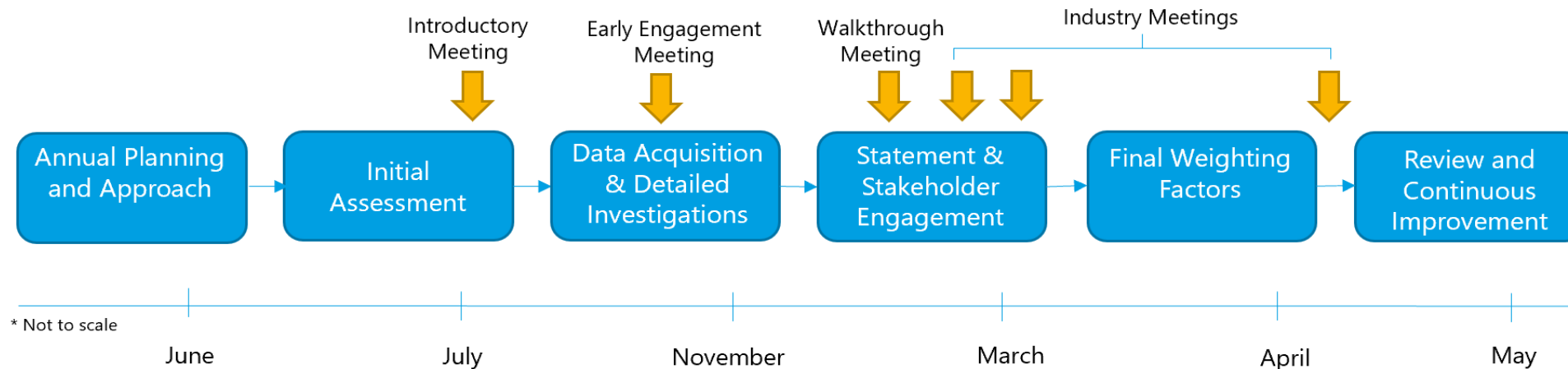
Contributor	Dataset
Theft	Shipper Theft Data
Theft	TRAS Outcome File Data
Theft	Current AMR Snapshot
Theft	Historical AMR Report
Theft	Telemetered Sites Report
Theft	Smart Meter Data
Theft	Retail Theft Data
Theft	Embedded AMR
Theft	Accepted Reads
Theft	Rejected Reads
Theft	Read Frequency
Unregistered and Shipperless	Snapshot Files (including MPR details)
Shipperless	Gas Safety Regulations visit data
Shipperless	Connection Details for Shipperless Sites
Shipperless	Shipperless AQ report
Unregistered	Connection Details for Orphaned Sites
Unregistered	Unregistered AQ report
Consumption Meter Errors - Inherent Bias	Meter Type and Age report
Consumption Meter Errors - Inherent Bias	Annual in-service Testing
Consumption Meter Errors - Faulty Meter	Faulty Meter Portfolio
Meter Errors at LDZ input	Measurement Error Register
IGT Shrinkage	Main Length
IGT Shrinkage	Leakage Rates
IGT Shrinkage	IGT Sites
Average Pressure Assumption	Sites with Volume Conversion Equipment Fitted
Average Temperature Assumption	Meter Location
No read at the line in the sand	Sites with No Reads after April 2020
No read at the line in the sand	AQ Corrections
No read at the line in the sand	Read Rejections
No read at the line in the sand	Reconciliation
No read at the line in the sand	Additional Reconciliation Information
Incorrect Correction Factors	Site Details
General Industry Information	AQ Change Report
General Industry Information	Throughput
General Industry Information	Daily Allocation Factor
General Industry Information	Offline Adjustments
Meters with a By-Pass Fitted	Meter By-Pass Portfolio
Isolated Sites	Isolated Sites Portfolio
Isolated Sites	Accepted Reads
Isolated Sites	Rejected Reads
Isolated Sites	Connection Details for Isolated Sites
Dead Sites	Dead Sites Portfolio
Dead Sites	Rejected Reads

- The Prioritised Data Request will be submitted to Correla imminently
- 44 datasets in total including a handful for parties other than CDSP
- Correla will deliver in priority order over the coming weeks
- Requests to other industry parties (e.g. DESNZ, RECCo) will be sent when appropriate

## Items rolled forward from previous Sub Committees

22/1b	We will consider the practicalities of a further level of top-down validation of our outputs.	Open
22/2b	As part of our annual assessment for the Gas Year 2023-2024, we will investigate additional ways to validate the Isolated Sites data for inclusion in future AUG Statements.	Open
22/2c	We will assess whether additional data is available to improve the accuracy of AQ assumptions for Isolated Sites.	Open
22/4a	We will assess the scaling up of our UIG estimate under contributor '180 – Unfound UIG Contributors', after discussion with interested Shippers.	Open

- ▶ Initial analysis from our investigations will be shared with the industry at the Early Engagement meeting on **29 September 2023**
- ▶ Engagement with stakeholders will continue throughout. We can be contacted at [auge@engage-consulting.co.uk](mailto:auge@engage-consulting.co.uk)



# Advisory Service





- ▶ Our Advisory Service is designed to provide stakeholders, including relevant industry groups, with expert advice from the AUGE
- ▶ We can use this service to provide additional analysis of other areas which do not fall under the Core Service or the Innovation Service
- ▶ Maximum 18 days per year June to May

## PAC interface

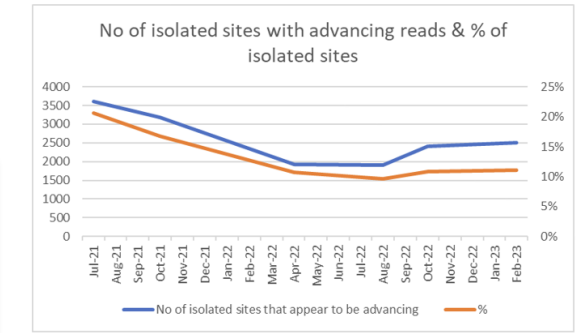
- ▶ Last AUGE year, we established a regular formal insights exchange to the Performance Assurance Committee.
- ▶ We are attending the PAC meetings twice a year as a regular touchpoint, bringing each time an updated view of potential performance assurance issues identified through our work as AUGE.
- ▶ Estimate 5 days' effort per year

### AUG PAC Issues Log (4)

AUGE Issue	PAC Risk	AUGE Investigation	Topic	Description	Impact (GWh) 2022-23	Impact (GWh) 2023-24	Other Metrics 22-23	Other Metrics 23-24
AUGE16	Site Classification	Prepayment Sites	Prepayment Sites	The number of prepayment meters recorded on UK Link is lower than the number in operation	Not Calculated	Not Calculated		
AUGE17	Site Classification	Number of Commercial sites	Number of Commercial sites	There are a number of non-domestic sites registered as domestic in EUC bands 1 and 2	Not Calculated	Not Calculated		
AUGE18	Site Classification	Number of sites with AMR fitted	Number of sites with AMR fitted	The number of sites with AMR recorded on UK link is lower than the number fitted	Not Calculated	Not Calculated		
AUGE19	Dead Sites	Advancing Dead Sites	Advancing Dead Sites	Dead sites have meter reads which show that the site is consuming therefore creating UIG	Not Calculated	19		1.4k MPRNs from pop. 6.6k MPRNs

## AUGE 11: Isolated Sites

Isolated sites were being addressed but focus appears to have diminished



## AUGE 16: Prepayment Numbers

Large numbers of (smart?) gas prepayment meters are not identified in CDSP data

Data from CDSP (May 2023)	Industry estimates* (Dec 2022)
▶ Class 3: 0.62m	▶ Smart: 1.31m
▶ Class 4: 1.63m	▶ Non-Smart: 1.81m
▶ Total: 1.69m	▶ Total: 3.13m

\*Engage consolidation of various sources/validation: DESNZ, USwitch, DCC



# Appendix

- ▶ Our Innovation Service is designed to allow for the development of better methods of UIG allocation which fall outside our existing Terms of Reference
- ▶ Maximum 35 days per year June to May

# Identified Innovations – Recap

Innovation ID	Innovation Name
<b>AI1</b>	LDZ Specific Factors
<b>AI2</b>	Different Factors for the EUC WAR bands
<b>AI3</b>	Different Factors for Allocation and Reconciliation (transient UIG)
<b>AI4</b>	Seasonal Factors
<b>AI5</b>	Fixed and Floating Weighting Factors
<b>AI6</b>	Dynamic Weighting Factors linked to the throughput
<b>AI7</b>	Temperature and pressure actuals feeding into the Weighting Factors
<b>AI8</b>	Recalculate the UIG and Weighting Factors at the Line in the Sand
<b>AI9</b>	Changing the residual reconciliation redistribution process (UGR)
<b>AI10</b>	Re-reconciling the whole month
<b>AI11</b>	Factors linked to performance assurance measures
<b>AI12</b>	Factors specific to Shippers
<b>AI13</b>	Investigation into the temperature of gas in the meter
<b>AI14</b>	Investigation into the accuracy (bias) of all types of meter

Innovation ID	Innovation Name
<b>AI13</b>	Investigation into the temperature of gas in the meter
<b>AI14</b>	Investigation into the accuracy (bias) of all types of meter
<b>AI15</b>	Leakage investigation of IGT sites
<b>AI16</b>	Audit of the Correction Factors
<b>AI17</b>	Weighting Factors used to Incentivise
<b>AI18</b>	All meters must have volume conversion equipment fitted
<b>AI19</b>	Optimum meter capacity
<b>AI21</b>	Direct reporting ability
<b>AI22</b>	Split EUC bands 1 and 9
<b>AI23</b>	Portfolio Optimisation effects
<b>AI24</b>	Additional central reporting
<b>AI25</b>	In service testing for LDZ offtake meters
<b>AI27</b>	Dimension relating to the last accepted read

# Identified Innovations Top 5

ID	Innovation Name	Innovation Description
AI10	<b>LDZ Specific Factors</b>	LDZs have varying levels of UIG. They also have different proportions of domestic and commercial properties. The current method of having national Factors could lead to UIG being allocated to the incorrect party. The investigation would determine whether LDZ specific Weighting Factors would apportion UIG more equitably.
AI90	<b>Changing the residual reconciliation redistribution process (UGR)</b>	Currently, the market rules split the residual reconciliation energy pot for each reconciliation run equally between the previous 12 months. These volumes are then allocated to Shippers based on their energy position following direct reconciliations. An investigation would be carried out to see if this is the most equitable mechanism to distribute residual UIG or whether there is a more appropriate mechanism.

# Identified Innovations Top 5

ID	Innovation Name	Innovation Description
<b>AI16</b>	Audit of the Correction Factors	Site specific Correction Factors are used to take account of the altitude of a site, the average temperature assumption of the gas and inlet pressure of the gas. We have identified a small number of Correction Factors which are lower than the regulations allow and a larger number that have been set to the standard Correction Factor. However, there is currently no mechanism to identify any other erroneous Correction Factors. The investigation would assess the value of carrying out a one off audit of all Correction Factors.
<b>AI13</b>	Investigation into the temperature of gas in the meter	The temperature studies that are used for the temperature contributor are almost 20 years old and the details of the conditions of the study are limited. The investigation would determine the benefits of organising a study into the temperature of gas under different conditions including, air temperature, meter location and service material type.
<b>AI14</b>	Investigation into the accuracy (bias) of all types of meter	We have been provided with in service testing of domestic sized meters. This has identified that there is an inherent bias with them. The investigation would determine if there is any inherent bias for other types of meters and if there are any impacts caused by the meter manufacturer, the year of manufacture and how long the meter has been in service.



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