DNV·GL

Allocation of Unidentified Gas Expert

AUGS Feedback Review

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Agenda

- Introduction
- Issues Raised & AUG Expert Responses
 - ICoSS/Corona
 - British Gas
 - E.ON
- Outstanding Issues Raised at 9 Feb meeting
- Update on CSEP shrinkage
- New Modifications
- Proposed UIG Terminology
- What Next?

Introduction

- First draft AUG Statement
 - Published 1 Feb 2018
 - Presented 9 Feb 2018
- Query Process
 - 1 Feb to 14 March
 - AUG Expert responses published 10 April
- Aim
 - Present/discuss AUG Expert responses
 - Update industry on proposed changes to AUG Statement

- ICoSS/Corona
 - Detailed assessment of theft
 - UG from Product Class 2 (Former DMV/DME sites)
 - Additional AMR devices

AUG Expert Responses to ICoSS/Corona

- Detailed Theft Assessment
 - Theft Split
 - Smart Meter data limited
 - Detected theft vs Undetected theft
 - Additional data requested from TRAS
 - Detailed analysis for 2019/20 AUGS
- UG from PC2
 - AUG Table by EUC/Product Class
 - Factors represent 'average' for group
 - Need to monitor changes to PC2 population
- Additional AMR Devices
 - Latest information provided by ICoSS will be used

Key Issues Raised

- British Gas
 - DM consumption errors
 - Unrecorded gas from product class 1
 - Smart Meter theft levels
 - Clarity regarding Smart/AMR theft reduction features
 - Theft levels from Smart Meters
 - Smart Meter population assumptions
 - Shrinkage Error & other sources of uniformly allocable UG
 - Statistical Housekeeping

AUG Expert Responses to British Gas

- DM Consumption Errors
 - Xoserve confirmed that DM errors were experienced during Nexus transition
 - Unaware of any material historic issues not reconciled
- UG from PC1
 - Balancing factor is not all undetected theft
 - Best estimate of permanent non-theft elements is currently zero
 - Requested data from Xoserve on presence of bypass
- Smart Meter Theft Levels
 - Index tamper
 - BEIS statistics 20-33% reduction
 - Detailed theft analysis for 2019/20

AUG Expert Responses to British Gas

- Smart Meter Population Assumptions
 - Updates to methodology in revised AUGS for 2018/19
 - Use of mid-year estimate of population
 - Use of trend to estimate population quarterly
 - Additional data from small suppliers (provided by ICoSS)
 - Inclusion of pre-SMETS Smart Meters
- Uniformly allocatable UG
 - Methodology updated to include a term with value = 0 for 2018/19
- Statistical Housekeeping
 - Can be done but is an extension to our remit

- E.ON
 - Terminology
 - Refer to Xoserve as CDSP
 - Use of SSP/LSP
 - Confusing use of UG terminology
 - TRAS data vs SPAA Theft of Gas Report
 - Use of standard pressure/temperature correction (2 comments)
 - AMR installation compliance
 - Cubic smoothing of factors
 - Meter Read Spacing for consumption calculation
 - Balancing Factor
 - Incomplete theft reporting
 - Theft split by Domestic/I&C
 - AUG Expert independence

- Terminology
 - Update AUGS CDSP, UG/UIG & TRAS/SPAA
 - Use of SSP/LSP valid
- Standard Pressure & Temperature Correction Factors
 - Analysis
 - No impact on AUGS 2018/19
 - Further analysis for 2019/20
 - Consumption calculations utilise any non-standard CFs

- Correction Factor
 - Corrects volumes to a standard temperature (15C) and pressure (1013.25mbars)
 - Standard CF assumes T=12.2C and altitude=66m
 - 04B and above should have site specific pressure correction
 - >94% have non-standard correction factor (31,855 vs 1,984)
 - Temperature and volume converters
- Use of Standard CF
 - Affects total consumption calcs and therefore Total UG estimate
 - Ofgem commissioned study 2014
 - 0.238% (8.9GWh) underestimate of annual GB energy for 2011
 - Range -1.569% to +2.477%
 - Could affect EUC/product class split if errors not evenly distributed

- Further analysis can be carried out depending on data availability
 - Meter altitude
 - Meter location in premises
 - Converter details
 - Any other information available?

- AMR Installation Compliance
 - Is there any information available on the level of non-compliance?
- Cubic smoothing of factors
 - Don't expect step changes between most EUCs
 - Except 03/04 boundary due to AMR, WAR bands etc.
 - Smooths random error
 - Mitigates effects of small number of MPRs having undue impact where EUC/product class group is small

- Meter Read Spacing for Consumption Calculation
 - Minimum meter read separation has been increased to roughly pre-Nexus AQ calculation level (6 months) for consumption calculation, which is performed on pre-Nexus data
 - Balance between maximising successful calculations and the accuracy of them
 - Data provided to AUG Expert shows similar bias using 6 month or 9 month calculation -0.56% vs +0.55%
 - Danger of introducing a bias by using a replacement value

- 3.6% of successful consumption calcs use reads less than 9 months apart
- 99% of these are from EUC 01B
- Replacement value is EUC average consumption
- Consider alternative replacement values



- Balancing Factor
 - Balancing factor is not all undetected theft
 - Best estimate of permanent non-theft elements is currently zero
- Incomplete Theft Reporting
 - 2015/16, 67 out of 100 suppliers provided data
 - We believe we have the 'bulk' of the thefts reported
 - Further information requested from TRAS
 - Number of suppliers
 - For each supplier supply point count and/or throughput each year

- Theft Split by Domestic/I&C
 - SPAA Schedule 33 data split by Domestic/I&C
 - AUG methodology makes no assumption about market sector for detected theft
- AUG Expert Independence
 - Mod 0639R

Outstanding Issues Raised at 9 Feb meeting

- Significant figures in AUG Factors
 - AUG factors will be to the same precision as 2017/18 AUGS
 - AUG Expert will multiply factors up by 10 and report to 2dp
- Provide details of how much energy is 'scaled up' using consumption method and how this is split
- Confirm that AMR meters are included in Smart meter population data
 - Confirmed
- Check product class 3 population statistics
 - Data refresh requested from Xoserve

Outstanding Issues Raised at 9 Feb meeting

- Comment on which AUG Factors have changed and why
 - To be included in revised AUGS
- Provide walkthrough of how balancing factor splits are achieved
 - To be included in revised AUGS
- Amend meter population and AQ for class 1 to reflect Mod625
 - Updated population has been calculated
 - This will be used in revised AUG Statement for 2018/19

'Scaled Up' Energy in Consumption Calculation

- Average consumption calculation success rate over the 5 year period 2011 to 2015 is 87% (85% by energy).
- 87% of meters that have a failed consumption, fail for 1 or 2 years out of the 5 years.
- 01B consumption failures are nearly all due to a lack of suitable reads.
- Most 02B and above consumption failures are also due to a lack of suitable reads but read/volume quality is also a significant issue.

Update on CSEP Shrinkage

- New method has been developed
 - Data is being generated from Cadent network models
 - Calculations will be documented in the next draft of the AUGS
 - Factors will include this CSEP Shrinkage element
- The Shrinkage Forum are also looking into estimating CSEP Shrinkage
 - Monitoring output from this source

New Modifications

- Mod 0644 Improvements to nomination and reconciliation through the introduction of new EUC bands and improvements in the CWV
 - Will be an issue if implemented as AUG factors will be based on different EUC definitions
- Mod 0651 Replacement of the Retrospective Data Update provisions
- Mod 0652 Obligation to submit reads and data for winter consumption calculation (meters in EUC bands 3 - 8)
- Mod0654 Mandating the provision of NDM sample data

- Unidentified Gas or UG
 - Non-specific term referring to the concept of gas that has not been metered
- UIG
 - As defined in UNC Section H 2.6.1
 - Refers to settlement balancing figure calculated by CDSP on Day D
- UIG(f)
 - 'Final' UIG value
 - The value of UIG which would be calculated at 'line in the sand' i.e. all reconciliations have been applied
 - Permanent Unidentified Gas only
 - Errors due to consumption estimation (use of allocation algorithm) removed as the vast majority of meters should have been reconciled with actual meter reads
 - AUG factors are intended to correctly apportion UIG(f)

What Next?

- Questions/Feedback?
 - <u>AUGE.software@dnvgl.com</u>
- Revised AUG Statement by 30 April
 - Updated Table of Factors
 - Presentation 11 May 2018
- Approve AUG Statement
 - May UNCC Meeting
- Publish Final Table by 30 June 2018

Thank you

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'Scaled Up' Energy in Consumption Calculation

EUC	Calculated		Failed Calculation		CSEPs	
	Number of MPRN	Energy GWh	Number of MPRN	Energy GWh	Number of MPRN	Energy GWh
01B	18,557,181	264,586	2,823,851	39,939	1,552,594	18,711
02B	164,414	22,720	31,600	4,348	2,584	637
03B	39,769	17,990	7,107	3,215	777	358
04B	15,503	18,615	3,453	4,154	465	522
05B	3,765	12,996	925	3,191	148	549
06B	1,100	9,760	352	3,120	51	444
07B	326	6,558	140	2,832	24	390
08B	109	4,280	38	1,472	9	128
09B	8	581	2	130	7	389
Total	18,782,175	358,085	2,867,468	62,400	1,556,658	22,128

Number	% of failed		
of Years	MPRN by		
	number years		
1	65%		
2	22%		
3	8%		
4	3%		
5	2%		
Total	100%		