

UNC Request Workgroup Report		At what stage is this document in the process?
<h1>UNC 0693R:</h1> <h2>Treatment of kWh error arising from statutory volume-energy conversion</h2>		<div style="display: flex; flex-direction: column; align-items: flex-start;"> <div style="border: 1px solid #ccc; border-radius: 5px; padding: 5px; margin-bottom: 5px; width: 100%;"> 01 Request </div> <div style="border: 1px solid #ccc; border-radius: 5px; padding: 5px; margin-bottom: 5px; width: 100%;"> 02 Workgroup Report </div> <div style="border: 1px solid #ccc; border-radius: 5px; padding: 5px; width: 100%;"> 03 Final Modification Report </div> </div>
<p>Purpose of Request:</p> <p>The Request is to review the treatment of the error in kWh that arises from statutory volume-to-energy conversion factors in order to mitigate the impact on gas settlement, reconciliation and Annual Quantities (AQs).</p>		
	The Workgroup recommends that the Panel consider the recommendations contained in this Request Workgroup Report.	
	High Impact: None	
	Medium Impact: Shippers, Transporters and CDSP	
	Low Impact: None	

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5 Recommendations	10	 mark.bellman@scottishpower.com
About this document:		 +44 (0) 7841 523648
This document is the Request Workgroup Report, (the Report), which will be presented to the panel on 17 December 2020.		Systems Provider: Xoserve
The Panel will consider the recommendation and agree whether this Request should be closed or referred back to the Workgroup for further review.		 UKLink@xoserve.com

1 Request

Why is the Request being made?

This Request is being proposed because the use of statutory volume-to-energy conversion factors, (also sometimes referred to as a “Correction Factor”), causes Unidentified Gas (UIG). The Request is to review and identify options to address the impacts on settlement accuracy, (including allocation, reconciliation and Annual Quantities – AQs), due to differences between actual temperature, altitude and pressure, compared to the assumed values in the statutory static factor.

The Issue

All sites with an AQ under 732,000kWh should have a single industry standard conversion factor specified in the Gas (Calculation of Thermal Energy) Regulations, (also referred to as a Correction Factor). The standard factor of 1.02264 accounts for an assumed average temperature, pressure and altitude. Larger sites have a site-specific factor that is based on various characteristics of the site, but which is nevertheless static over the year.

Warmer gas will have a greater metered volume than cooler gas, and gas at higher altitude will have a greater metered volume than gas at a low altitude. It should be noted that the Allocation of Unidentified Gas Expert, (AUGE), assesses the impact of altitude to be negligible compared to temperature.

The Xoserve Unidentified Gas, (UIG), Task Force (as established by UNC Modification 0658) has identified that the issue of using a standard conversion factor (logged as Issue 12.2 by the Task Force) has the potential to cause UIG each day, in general increasing UIG in colder weather and reducing it in warmer weather. This changes a shipper’s exposure to gas prices at different times of the year. In addition, and depending on the actual weather experienced, it is very unlikely that the impact will net out to zero across any given year for all shippers; this could result in AQs being incorrect, which would have a further impact on daily Non-Daily Metered. (NDM). Allocation and therefore UIG.

The Impacts

1. NDM Profiles

- NDM Profiles are based on reactions of the NDM Sample to weather
- Demand from the NDM Sample in End User Categories, (EUCs), 01 to 03 is calculated using a standard conversion factor – demand is understated when colder, overstated when warmer
- This in turn understates NDM Allocation in winter, overstates in summer
- This could be contributing to the general trend of positive UIG in winter and low/negative UIG in summer, (as seen in pre-Nexus simulations)

2. Meter Point Reconciliation

- When meter readings are received, cold weather demands are understated, warm weather demands are overstated because the same static conversion factor is applied to the metered volume.
- This will give an incorrect seasonal profile, especially for monthly read sites, as cold weather demands will be understated, and warm weather demands will be overstated
- UIG impacts from this kWh error in NDM Allocation for EUCs 01 to 03 will persist even after meter point reconciliation, especially for sites which are read monthly.

3. Annual Quantities

- Analysis suggested that the annual impact is non-zero and is a small positive contributor to Unidentified Gas
- This is highly dependent on the actual weather and other considerations such as meter location and rates of gas flow
- Any impacts on AQs would also flow into subsequent NDM Allocation

Discussions to date

This topic has been discussed twice at UNC UIG Workgroup, firstly at the UIG Task Force Recommendations Walkthrough on 28 January 2019, and also at the normal UIG Workgroup on 26 February. Whilst these two sessions were a useful opportunity to raise awareness of the topic, and to increase the level of understanding, attendees felt that there was too much complexity to deal with as part of a general Workgroup meeting, and also that there were no obvious quick solutions to the problem.

It was suggested that Panel be requested to establish a separate Workgroup to develop workable solutions to the problem.

Scope

The proposed scope of this review is to consider the impacts of the use of the statutory standard conversion factor on the three areas highlighted above, to identify options for the treatment of the error, and to weigh up the relative benefits and disadvantages of those solutions.

The Workgroup will use the work done by both the AUGÉ and the UIG Task Force, (as established by UNC Modification 0658), as a start point but will not be constrained by that analysis alone or the options already identified.

Impacts & Costs

Shippers and the CDSP are most likely to be impacted by any costs due to rule or process changes arising from any Modifications associated with this review.

Shippers could be impacted by changes in their gas settlement if a solution is implemented to allocate the UIG so that settlement better reflects underlying kWh consumption.

Recommendations

It is recommended that this topic is referred to a separate UNC Workgroup, to allow proper discussion of the topic and development of solution options.

Additional Information

Thermal Energy Regulations:

[The Gas \(Calculation of Thermal Energy\) Regulations 1996. \(the Thermal Energy Regulations\)](#)

Note: These Regulations were amended in 1997. 2002 and 2015

UIG Task Force, updated issue 12.2 summary:

[Introductory Presentation to UIG Task Force – early 2019](#)

UIG Task Force, options analysis:

[Long-list of 10 options identified by Task Force for consideration by Workgroup](#)

2 Impacts and Costs

Consideration of Wider Industry Impacts

None identified

Impacts

Impact on Central Systems and Process	
Central System/Process	Potential impact (Dependent on any proposed solutions)
UK Link	<ul style="list-style-type: none"> • Calculation of metered volumes and/or • Changes to Allocation processes to re-distribute any cross-subsidies and/or • Retrospective end-of-year settlement to re-distribute any cross-subsidies
Operational Processes	<ul style="list-style-type: none"> • TBC

Impact on Users	
Area of Users' business	Potential impact (Dependent on any proposed solutions)
Administrative and operational	<ul style="list-style-type: none"> • How Shippers calculate meter point consumptions
Development, capital and operating costs	<ul style="list-style-type: none"> • None
Contractual risks	<ul style="list-style-type: none"> • None
Legislative, regulatory and contractual obligations and relationships	<ul style="list-style-type: none"> • Could result in a change to secondary legislation (Thermal Energy Regulations)

Impact on Transporters	
Area of Transporters' business	Potential impact (Dependent on any proposed solutions)
System operation	<ul style="list-style-type: none"> • Could result in a change to the way that LDZ energy inputs are measured (one of the possible options)
Development, capital and operating costs	<ul style="list-style-type: none"> • None
Recovery of costs	<ul style="list-style-type: none"> • Could result in Distribution Network Operators including a charge for differences between standard and actual weather within their charges (one of the possible options)
Price regulation	<ul style="list-style-type: none"> • Unknown at present
Contractual risks	<ul style="list-style-type: none"> • Unknown at present
Legislative, regulatory and contractual obligations and relationships	<ul style="list-style-type: none"> • Could result in a change to secondary legislation (Thermal Energy Regulations)
Standards of service	<ul style="list-style-type: none"> • None

Impact on Code Administration	
Area of Code Administration	Potential impact
Modification Rules	<ul style="list-style-type: none"> None
UNC Committees	<ul style="list-style-type: none"> None
General administration	<ul style="list-style-type: none"> None
DSC Committees	<ul style="list-style-type: none"> None

Impact on Code	
Code section	Potential impact
	<ul style="list-style-type: none"> Section M (possibly) Others dependent on any proposed solutions

Impact on UNC Related Documents and Other Referenced Documents	
Related Document	Potential impact
Network Entry Agreement (TPD I1.3)	<ul style="list-style-type: none"> None
General	Potential Impact
Legal Text Guidance Document	<ul style="list-style-type: none"> None
UNC Modification Proposals – Guidance for Proposers	<ul style="list-style-type: none"> None
Self Governance Guidance	<ul style="list-style-type: none"> None
TPD	Potential Impact
Network Code Operations Reporting Manual (TPD V12)	<ul style="list-style-type: none"> None
UNC Data Dictionary	<ul style="list-style-type: none"> None
AQ Validation Rules (TPD V12)	<ul style="list-style-type: none"> None
AUGE Framework Document	<ul style="list-style-type: none"> Dependent on any proposed solutions
Customer Settlement Error Claims Process	<ul style="list-style-type: none"> None
Demand Estimation Methodology	<ul style="list-style-type: none"> Dependent on any proposed solutions
Energy Balancing Credit Rules (TPD X2.1)	<ul style="list-style-type: none"> None
Energy Settlement Performance Assurance Regime	<ul style="list-style-type: none"> None
Guidelines to optimise the use of AQ amendment system capacity	<ul style="list-style-type: none"> None
Guidelines for Sub-Deduct Arrangements	<ul style="list-style-type: none"> None

Impact on UNC Related Documents and Other Referenced Documents	
(Prime and Sub-deduct Meter Points)	
LDZ Shrinkage Adjustment Methodology	<ul style="list-style-type: none"> None
Performance Assurance Report Register	<ul style="list-style-type: none"> None
Shares Supply Meter Points Guide and Procedures	<ul style="list-style-type: none"> None
Shipper Communications in Incidents of CO Poisoning, Gas Fire/Explosions and Local Gas Supply Emergency	<ul style="list-style-type: none"> None
Standards of Service Query Management Operational Guidelines	<ul style="list-style-type: none"> None
Network Code Validation Rules	<ul style="list-style-type: none"> None
OAD	Potential Impact
Measurement Error Notification Guidelines (TPD V12)	<ul style="list-style-type: none"> None
EID	Potential Impact
Moffat Designated Arrangements	<ul style="list-style-type: none"> None
IGTAD	Potential Impact
	<ul style="list-style-type: none"> Dependent on any proposed solutions
DSC / CDSP	Potential Impact
Change Management Procedures	<ul style="list-style-type: none"> None
Contract Management Procedures	<ul style="list-style-type: none"> None
Credit Policy	<ul style="list-style-type: none"> None
Credit Rules	<ul style="list-style-type: none"> None
UK Link Manual	<ul style="list-style-type: none"> None

Impact on Core Industry Documents and other documents	
Document	Potential impact
Safety Case or other document under Gas Safety (Management) Regulations	<ul style="list-style-type: none"> None
Gas Transporter Licence	<ul style="list-style-type: none"> None

Other Impacts	
Item impacted	Potential impact
Security of Supply	<ul style="list-style-type: none"> • None
Operation of the Total System	<ul style="list-style-type: none"> • None
Industry fragmentation	<ul style="list-style-type: none"> • None
Terminal operators, consumers, connected system operators, suppliers, producers and other non code parties	<ul style="list-style-type: none"> • Dependent on any proposed solutions

3 Terms of Reference

Background

Topics for Discussion

- Understanding the objective
- Understanding the Thermal Energy Regulations
- Assessment of options to achieve objective
- Development of Solution (including business rules if appropriate)
- Assessment of potential impacts of the Request
- Assessment of implementation costs of any solution identified during the Request
- Assessment of legal text.

Outputs

Produce a Workgroup Report for submission to the Modification Panel, containing the assessment and recommendations of the Workgroup including a draft modification where appropriate.

Composition of Workgroup

The Workgroup is open to any party that wishes to attend or participate.

A Workgroup meeting will be quorate provided at least two Transporter and two User representatives are present.

Meeting Arrangements

Meetings will be administered by the Joint Office and conducted in accordance with the Code Administrators Code of Practice.

4 Workgroup Analysis

Using the long-list options developed by the UIG Task Force, the Request Workgroup analysed and further considered the options and, over the course of the Workgroup, has refined the list to form a short-list of five options.

Analysis of these five options can be found here;

[Short-list and Full Analysis of Options Paper \(v1.1\)](#)

In summary: The short-listed options were documented as follows:

- 4 (ii) Add a new LDZ level factor to the volume-to-energy conversion formula to account for the net difference in energy. The factor would be calculated daily using actual LDZ weather;
- 5: Amend the AUGÉ process to re-distribute UIG based on estimated impacts of conversion factors (forecast basis);
- 7: Introduce an LDZ level conversion factor (permanent/per year/per month);
- 10: Adjust LDZ daily gas inputs to use standard correction;
- 11: Adjust daily gas allocations and subsequent meter point reconciliations to take account of impact of actual weather on metered gas volumes.

Option 5 has already been implemented in the sense that the AUGÉ included an allowance for these errors in the UIG Weighting Factors for Gas Years 2019/20 and 2020/21. The current AUGÉ has stated that they will follow the same approach for Gas Year 2021/22.

One of the key considerations of the Workgroup is that any potential solution must not conflict with any requirement mandated by the Thermal Energy Regulations, insofar that quantities of energy used in the UNC settlement processes should be replicated by quantities used for retail invoicing.

Following analysis by the Workgroup, the view was that three of the options, (options 4ii, 7 and 11), could be considered as non-compliant with the requirement to complement the Thermal Energy Regulations, and hence it is recommended that these are not developed further.

The remaining option, (option 10), while it had the potential to introduce more equitable measurement principals across the networks, it was felt that down-grading the accuracy of LDZ input metering would, on balance, be a retrograde innovation.

Whereas discussions are very close to being completed, Workgroup agree that a 1-month extension is requested at the December 2020 UNC Panel.

5 Recommendations

Workgroup's Recommendation to Panel

The Workgroup invites the Panel to:

- Given the limited time between completing the Report at the final Workgroup on 14 December and December Panel, consider extending the Workgroup reporting date to the January 2021 UNC Panel.