

The Joint Office, Gas Transporters,  
shippers and other interested parties

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Dear Colleague

Following the approval of the Allocation of Unidentified Gas (AUG) Methodology (the "AUG Statement") at the May Uniform Network Code Committee (UNCC), this letter contains the final Unidentified Gas (UIG) weighting factors for Gas Year 2017/18 as they have currently been calculated.

In order to further understand the levels of Shrinkage Error, DNV GL engaged two experts from within DNV GL but outside the AUG Expert process to independently scrutinise the GRG Shrinkage Error document and the Gas Distribution Networks' response to it, and to report on their findings. These experts were Rosemary McAll (leakage expert) and Chris O'Connor (PE expert). Rosemary McAll carried out the analysis of the two reports, whilst Chris O'Connor provided expert input regarding PE permeability.

Their full analysis is shown in the accompanying document "Review of GRG Study on Shrinkage". Summarised conclusions are as follows:

1. Shrinkage from CSEPs is not currently taken account of in the Shrinkage and Leakage Model (SLM) and hence should be accounted for in the UIG calculations.
2. Leakage from Medium Pressure (MP) mains is included in the SLM but the leakage rates are assumed to be the same as for Low Pressure (LP) networks. This assumption is likely to be invalid and will have an impact on estimates of Shrinkage for MP mains.
3. Permeation of gas through PE pipelines is not included in the SLM and this may have an impact on its estimates of Shrinkage.
4. Other conclusions drawn by Imperial College are either not valid or will have no material impact on Shrinkage.
5. Consideration should be given to carrying out further leakage tests on PE and Medium Pressure mains in order to enhance the accuracy of the SLM.

As per item 1. above, the final table of UIG weighting factors includes a 3.5% allowance for CSEP Shrinkage that has previously been presented to the industry.

As a result of items 2 and 3 above, DNV GL has carried out a sensitivity analysis and concluded that Shrinkage (excluding CSEPs) is currently under-estimated, but by a much lower amount than the 20% proposed by Imperial College, primarily due to our rejection of some of their conclusions.

The AUG Methodology was approved by the UNCC in May and cannot now be changed. As per the AUG Expert process, the UIG factors must be calculated using the approved methodology. It is the AUG Expert's understanding that introducing a calculation of shrinkage error would constitute a change to the methodology and should be subject to full industry review. Given that no alternative value is available at this time (the Imperial College estimate of 20% has been shown to be unreliable), the final table of UIG weighting factors has been calculated assuming zero shrinkage error (except CSEP shrinkage).

Based on this, the final UIG weighting Factors for Gas Year 2017/18 are as follows:

Supply Meter Point Classification	Product 1	Product 2	Product 3	Product 4
EUC Band 1	0.018	5.239	5.243	11.194
EUC Band 2	0.018	5.160	5.150	11.573
EUC Band 3	0.018	5.316	5.311	11.452
EUC Band 4	0.018	5.494	5.505	5.425
EUC Band 5	0.018	5.482	5.513	5.918
EUC Band 6	0.018	5.069	5.114	5.423
EUC Band 7	0.018	4.041	4.089	3.950
EUC Band 8	0.018	2.187	2.219	1.853
EUC Band 9	0.018	0.018	0.018	0.018

Whilst the AUG Expert has calculated these factors as accurately as possible within the constraints of the current methodology and terms of reference, they do recognise that there is an element of shrinkage error which should be assessed and included within these factors. It is recommended that the industry take the opportunity to ensure that the issues of leakage from MP mains and permeation through PE pipes are further assessed and addressed as soon as possible.

Sincerely  
for DNV GL

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