UNC Shrinkage Forum Minutes
Wednesday 08 June 2016
Consort House, 6 Homer Road, Solihull B91 3QQ

Attendees

Helen Cuin (Chair)	(HC)	Joint Office
Lorna Dupont (Secretary)	(KV)	Joint Office
Angela Love*	(AL)	ScottishPower
David Simpson	IDS)	Scotia Gas Networks
Edd Hunter*	(EH)	RWE npower
Ian Dunstan	(ID)	Wales & West Utilities
Ian Marshall	(IM)	Wales & West Utilities
Ian Patheyjohns	(IP)	DNV GL
Joanne Parker*	(JP)	Scotia Gas Networks
John Morrison*	(JM)	Northern Gas Networks
Mark Jones*	(MJ)	SSE
Matt Marshall	(MM)	National Grid Distribution
Quentin Bahlmann	(QB)	National Grid Distribution
Sarah Kimpton	(SKK)	DNV GL
Stuart Easterbrook*	(SE)	National Grid Distribution

**via teleconference*

Copies of all papers are available at: http://www.gasgovernance.co.uk/sf/080616

1. Introduction and Status Review

1.1. Approval of Minutes

Referring to page 3, AL requested an amendment to *Section 5.1 - Network Innovation Presentation - Opening up the Gas Market (provided by SGN*), second paragraph, as follows:

"AL enquired about the ~~NCG and SEN~~ marcogaz/Eurogas/EASEE-GAS trade bodies and highlighted that CEN/the European Union is looking at the relaxation of Gas Quality. JP explained that the UK has a different level of gas quality to the European Union specification and the European Union are looking to harmonise the levels. AL agreed with this, but wanted to understand what the GDNs are doing to contribute/understand developments and proposals."

The amendment was agreed. The minutes of the previous meeting (31 March 2016) were then approved, and will be revised and republished.

1.2. Actions

SF0201*: Energy UK Gas Retail Group Shrinkage Study findings* - GDNs to consider reassessment of iGT information and impacts for shrinkage/leakage estimates.
Update: It was agreed to close this action as it had been superseded by Actions SF0201b and SF0201c. **Closed**

SF0201b: AL to investigate iGT licence conditions and iGT code provisions for reporting iGT Shrinkage and Leakage**.**
Update: AL confirmed that the LDZ CSEP NExA contains provisions for determining Connected System Shrinkage (presently contained within Annex A Part 9). Under UNC Modification 0440 (Project Nexus – iGT Single Service Provision) it was not proposed that the relevant shrinkage provisions were built into the relevant provisions of the TPD, other than

identifying that this would be treated as unidentified gas. It was noted in a response to UNC Modification 0440 that EDF would welcome a review of the provisions, as the current arrangements were not being applied. The drafting of the iGTAD (C1.2.1) continues with the current drafting that is contained within the NExA.

IPL/QPL0020 was approved by Ofgem in 2006. In this document Ofgem said *"Under the bilateral CSEP NExA iGTs are required to provide on an annual basis timely estimates of shrinkage values to Large Transporters. These values are used to procure extra gas to cover the shortfall due to shrinkage. Any errors are reconciled through the RbD process."*

AL confirmed that iGTs should be providing shrinkage values.

AL hoped to provide a further update, which will be circulated ahead of the next meeting via email. **Carried forward**

SF0201c: GDNs to provide a view on what iGTs are obligated to provide in terms of iGT Shrinkage and Leakage through the NExA Agreements.
Update: See update at Action SF0201b, above. **Closed**

SF0203: *Energy UK Gas Retail Group Shrinkage Study findings* - GDNs to consider the key findings and engage with Energy UK offline to discuss various aspects with a view to developing a work plan, and report back to the next Shrinkage Forum meeting.
Update: IM reported that a meeting took place in London on 09 May 2016. A formal response from the GDNs will be provided to Energy UK and will be published on the Joint Office website for visibility**.** (When received, both the response and initial document from February's meeting will be published at: http://www.gasgovernance.co.uk/sf/miscpublications.) **Closed**

SF0301: *Interference Damage Modification* – National Grid Distribution (MM) to provide an update on how large interference damage incidents will be factored into the Interference Damage Model.
Update: This related to an enquiry from AL in relation to repair risk issues and the impact/scale of interference damage. MM has looked into the process and his initial understanding is that by its very nature, any large interference damage incident is dealt with at the time of occurrence. He is still confirming details (process, data, systems) and anticipates providing an update prior to the next meeting (to be circulated via email). **Carried forward**

2. CV Measurement Innovation Project Update - Sarah Kimpton (GL Noble Denton)

SE highlighted that new policies are being developed relating to biomethane and other 'green' gas connections. National Grid Distribution wanted to update the Shrinkage Forum on the work that is being undertaken to date, and potential future developments, and to consider how GDNs keep industry parties engaged and informed going forwards.

SK then gave a presentation, looking at both the challenges of the FWACV billing regime and the proposal for a 2017 NIC Project on Future Billing Reform.

Challenges of FWACV Billing

The project was reviewing the current regime, and looking to establish if there was a better method by which to bill customers in a more equitable way than at present, depending on the mix (CV content) of gas that a consumer received.

The issues were explained, supported by a number of illustrations, including how the FWACV Cap operates and how low CV gas is currently accommodated. The addition of propane to prevent a CV cap enabled FWACV billing to be restored and mimimises CV shrinkage, however the downside included an Renewable Heat Incentive (RHI) for propane costs, an increase in high carbon gas, and all consumers would pay more (cross subsidy issues). The project looked at the tipping point, i.e. when did the cost of propane equal the cost of a better solution and the cost of CVshrinkage gas, and other influences. An example theoretical illustration was provided to demonstrate where parties were receiving different mixes of gas depending on their location in an LDZ, together with a table of the average customer usage indicating how the

capped and actual CV can vary for the various inputs under the current regime, and the differing effects (increase/decrease) on consumer bills depending on location in the LDZ. AL pointed out that for every £10 a customer's bill goes up, it pushes circa 40,000 more customers into fuel poverty. SK asked if AL could confirm/provide the current fuel poverty statistics/sources as these could be important to take account of in the assessment of the effects (benefits/disadvantages) of any proposed changes to address the fundamental flaws of the current billing system; the aim was to avoid inadvertently increasing problems. It was noted the cap does not always offer protection. SK then responded to various questions.

Action SF0601: *Fuel Poverty Statistics (current)* - AL to confirm/provide statistical sources to DNV GL.

Moving on to describe the modelling, SK outlined the key assumptions and simplifications, and gave examples of 'winners' and 'losers'. The calculations made to establish when the cost of propane enrichment equals the cost of shrinkage gas were explained, and the preliminary conclusions reached in respect of over/under billing, the cost of GB shrinkage per year, and the cost of enrichment (noting that this was sensitive not only to the price of propane, but also politically sensitive). These were discussed. The reason for adding propane was to bring the CV up to the cap. The CV cap affects the NTS; this was not in the NTS's control but it has to buy gas to make it right. There is no CV limit (it is purely commercial) in the GS(M)Rs, only a Wobbe limit.

Proposal for 2017 NIC Project - Billing Reform Methodology

SK explained that Network modelling had been carried out to see what happens to the flow of low CV gases. Illustrations were provided to demonstrate the extent to which biomethane infiltrates a 'defined' network. It was noted that the extent of the penetration of low CV gas depends on demand/constancy of flow. Modelling was also done using postal zones as an analogy for a network (a relative reflection of the density of population), overlaying postcodes onto the network models and thereby achieving a more detailed granularity (obtained by deconstructing each postcode into its constituents - area/district/sector/unit). Example network maps were provided to illustrate the detailed effects of penetration, and these were discussed. There was an element of 'fuzziness' as to how gas might be allocated - it may have to be reduced down to the level of 'sector code' to be of any use, which would then have to be provided to Xoserve to act upon.

SK outlined the three potential solution scenarios: Bill on received CV (not currently achievable); more measurement points based on post codes; and creation of embedded charging zones. The benefits and issues associated with each scenario were listed and explained.

It was questioned if the potential future connections of 'green' gases other than biomethane may force a re-analysis each time; SK thought this was something that would be ongoing. DS observed that from an administrative point of view it could be come quite complicated; 'borders' could change quite frequently and this would add another layer of complexity to billing. Referring back to the example network penetration diagrams, DS commented that if a network was physically connected to a biomethane site the pressures can vary quite considerably and in reality it could give an even greater spread of biomethane. This was discussed.

It was suggested there should be a mechanism capable of being applied to all types of 'renewable' gases; it needs to be a flexible solution able to modify network modelling to cope/bill fairly depending on gas inputs/mixes.

Referring to the principle of 'polluter pays' (a view held by Ofgem) and the potential negative impacts of these mixed flows and increased financial costs to some customers, depending on their location, AL enquired what commercial arrangements were in place for the movement of this gas. She suggested taking a holistic view to better understand what the consequences might be.

Action SF0602: GDNs to confirm what the commercial arrangements are in place for the shipping of biomethane gas.

Gas quality was discussed. Should GS(M)Rs include CV limits? Which bodies should have an involvement/be engaged in this? IM believed that the scope of consideration of gas quality and any changes was more far reaching than the Shrinkage Forum's remit under UNC, and the Energy Network Association (ENA) may be able to support further industry enagement. It was noted that DECC was involved in gas quality reform at the EU (CEN standards) level.

SK confirmed that she had been in contact with Xoserve about the likely system changes required. Xoserve believed that the changes proposed (assigning CVs, more LDZs) would be feasible, but could not be contemplated until after Project Nexus had been implemented (extensions to the scope of that would not be supported at this stage).

Referring back to the calculations shown, QB asked if they were considering a worst case scenario? If a biomethane injection point was connected into a high CV zone would it not reduce the price difference? DS noted that feeding into an existing system will give some blending depending on demand and this is very difficult to model. SK observed it behaves differently in the NTS (very slow flow), and in networks it can go round and round in circles; a trial is needed to assess. Appropriate trial areas were discussed. SK confirmed the plan will be to undertake some measurement trials and conduct a consultation in parallel to engage the industry.

IP confirmed that 08 August 2016 was the submission date for the NIC proposals, adding that biogas was the 'here and now' but it needs to be broader in scope than this to take account of the future.

3. MEG Innovation Project (National Grid)

QB provided a presentation (MEG Strategy update) on the MEG (Ethylene glycol) Project and the strategy being adopted. QB explained that National Grid's aspiration was to achieve a saturation level of circa 55% by March 2021, to give consistent readings prior to the end of that Price Control period. The project includes maintenance and remedial work (the equipment has been in place many years and needs attention), improved sampling techniques, replacement of existing technology and TTP replacement. (TTP are a high end technology company who look at delivering technical project development.)

QB gave an overview of the background to the project, outlining the structure and progress of the completed phases. TTP's Touchspray Technology was described, how the unit was converted for use with MEG and trialled (droplet dynamics/saturation using touchspray technology; temperatures and absorptions, etc). Phases 1 and 2 were closed and progress reports published; a full close out report is due out at the end of July (Phase 3). In Phase 3 some site specific issues were identified (monitoring equipment); it is extremely difficult to get an online analyser to measure MEG. The Phase 3 remit has been completed and will be closed down.

The aims and status of Phases 4 and 5 were described; Phase 5 has not been approved in its current state. Final product deployment costs and risks had increased beyond the original target. The original aim remains in place but the strategy to achieve it has been restructured to take account of the reassessments and to utilise identified benefits. QB then described the restructured plan and its perceived benefits (repackage the Touchspray heads to replace the Norgren heads used on cold foggers, in order to deliver simple proportional control at a much reduced cost; increase in output, requiring low force gas pressure; and lower power demand). The heads were believed to be quite robust, and if all continues to perform well in the trials it was anticipated that full deployment of the technology could be overlapped. It was expected that the replanned project would be approved shortly.

Referring to TTP condition monitoring, QB observed that the objectives were not fully met under Phase 3. Inconsistent results were frequently obtained but for no discernible reasons; it was thought there may be various and different factors/anomalies affecting sampling at different sites. The Owlstone method had been selected to use in conjunction with the current (tube) method; this was transportable to sites for sampling activities. Sanction for the project was being sought, with an anticipated start in July.

QB then described the last element of the project, relating to TTP mechanical cold fogger nozzles. This had been initiated (to run in parallel with the other elements) and was currently under evaluation.

AL asked if this would be incorporated within the Leakage and Shrinkage projects. MM explained that if saturation was improved then this should also result in improvements in shrinkage and leakage reduction.

4. AGI Venting Project - Update

MM confirmed this was on track with the plan, and he expected to receive a report from DNV GL this month.

5. Interference Damage Modification - Update

MM confirmed that a consultation document had been issued on 27 May 2016, which closes out on 24 June 2016. The documentation has been published on behalf of all GDNs and is at: http://www.gasgovernance.co.uk/sf/modifications. Parties were encouraged to review and contact MM if there were any questions.

6. Annual Shrinkage and Leakage Model - Update

MM alluded to a request (made in one of the responses to the SLMR) for an overview of the approach taken to mains replacement, and asked those Shippers present for suggestions on what they might like to see included. AL asked what elements had been included in the past for mains replacement. MM indicated that he had an 'internal' presentation that he might be able to circulate, as a starting point to generate any questions.

7. Any Other Business

7.1. Terms of Reference

HC advised that, following an enquiry about the scope of business to be discussed at the Shrinkage Forum, it had been noted that the Shrinkage Forum does not have a formal Terms of Reference in place.

HC suggested that the GDNs consider what should be included in the scope/parameters of a Terms of Reference to ensure the Shrinkage Forum meets the requirements outlined in the UNC, and provide a proposed draft Terms of Reference for discussion at the next meeting.

Action SF0603: *Shrinkage Forum Terms of Reference* - GDNs to produce a draft proposal for review/discussion at the August meeting.

7.2. Network Innovation Project Update - Opening up the Gas Market

DS confirmed there was no further update at present. In the meantime, any questions should be directed to DS or JP.

7.3. Energy UK Gas Retail Group Shrinkage Study - Update

MM gave an update on the Boston trials, pointing out that most information was covered by non-disclosure agreements. It was not purely a National Grid initiative. Trials were continuing but accuracy regarding methane molecules was a key concern. It was being used to prioritise replacement and repairs, but frequently the methane molecules identified by the devices were turning out to be unrelated to natural gas leakage, and were caused by methane emissions from other sources. Not all methane comes from natural gas, and ways/tools to more precisely differentiate between the categories of methane molecules were being explored. At the moment the inability to distinguish between molecules was causing unnecessary diversions of resources into 'spurious' investigations of methane levels unrelated to gas, inevitably drawing attention away from fixing of active leaks.

7.4. Shrinkage and Leakage Report

IM confirmed the report will shortly be published; all responses would be welcomed.

7.5. Leakage Model Presentation

DS offered to provide to Shippers an updated high level overview of how the model works. Attention was directed to a previous presentation published on the Joint Office website (http://www.gasgovernance.co.uk/sf/miscpublications), and it was suggested that Shippers might review this and feed back on what level of detail would they find most appropriate.

DS also suggested that the GDNs would appreciate an overview of how Shrinkage affects Shippers to aid their understanding; AL indicated she would look at this.

Action SF0604: *How Shippers are affected by Shrinkage* - AL to provide an overview to GDNs.

7.6. MARCOGAZ

MM reported that he had spoken to D Salisbury at MARCOGAZ; National Grid has previously supplied information for its reports, but nothing recently. (MM will provide a link to the annual report that is published

(*Post Meeting link update: http://www.marcogaz.org/index.php/environment-health-a-safety.*)

8. Diary Planning

Further details of planned meetings are available at: www.gasgovernance.co.uk/Diary

It is anticipated that the next meeting will be held as a 'face-to-face' meeting, but this may revert to a teleconference, depending on extent of material provided in advance and/or confirmed attendance.

Meeting papers, action updates and any additional agenda items should be provided to the Joint Office by Thursday 18 August 2016.

Time/Date	Venue	Programme
10:30, Tuesday 30 August 2016	Consort House, 6 Homer Road , Solihull B91 3QQ *(may revert to a teleconference, depending on extent of material provided in advance and/or confirmed attendance)*	• AGI Venting Project Update • Medium Pressure Modification Update • Annual Shrinkage and Leakage Model Update • Low Carbon Gas Preheating (LCGP) Project Update • Interference Damage Modification • Shrinkage Smart Metering Report • Shrinkage Assessment and Adustment 2015/16 • Any Other Business ▪ Terms of Reference ▪ Network Innovation Presentation - Opening up the Gas Market (SGN) ▪ Energy UK Gas Retail Group Shrinkage Study - Update ▪ CV Measurement Innovation Project (National Grid and NGN)

		▪ MARCOGAZ Update
10:30, Tuesday 04 October 2016	Consort House, 6 Homer Road , Solihull B91 3QQ	• *AGI Venting Project Update* • *Medium Pressure Modification Update* • *Annual Shrinkage and Leakage Model Update* • *Low Carbon Gas Preheating (LCGP) Project Update* • *Other items to be confirmed*

Action Table (08 June 2016)

Action Ref	Meeting Date	Minute Ref	Action	Owner	Status Update
SF0201	04/02/16	6.3	*Energy UK Gas Retail Group Shrinkage Study findings* - GDNs to consider reassessment of iGT information and impacts for shrinkage/leakage estimates.	GDNs	**Closed**
SF0201b	31/03/16	1.2	AL to investigate iGT licence conditions and iGT code provisions for reporting iGT Shrinkage and Leakage.	Scottish Power (AL)	***Due 30 August 2016*** **Carried forward**
SF0201c	31/03/16	1.2	GDNs to provide a view on what iGTs are obligated to provide in terms of iGT Shrinkage and Leakage through the NExA Agreements.	GDNs	**Closed**
SF0203	04/02/16	6.3	*Energy UK Gas Retail Group Shrinkage Study findings* - GDNs to consider the key findings and engage with Energy UK offline to discuss various aspects with a view to developing a work plan, and report back to the next Shrinkage Forum meeting.	GDNs	**Closed**
SF0301	31/03/16	3.0	*Interference Damage Modification* – National Grid Distribution (MM) to provide an update on how large interference damage incidents will be factored into the Interference Damage Model.	National Grid Distribution (MM)	***Due 30 August 2016*** **Carried forward**
SF0601	08/06/16	2.0	*Fuel Poverty Statistics (current)* - AL to confirm/provide statistical sources to DNV GL.	ScottishPower (AL)	***As soon as possible***

Action Table (08 June 2016)					
Action Ref	**Meeting Date**	**Minute Ref**	**Action**	**Owner**	**Status Update**
					Pending
SF0602	08/06/16	2.0	GDNs to confirm what the commercial arrangements are in place for the shipping of biomethane gas.	GDNs	***Due 30 August 2016*** **Pending**
SF0603	08/06/16	7.1	*Shrinkage Forum Terms of Reference* - GDNs to produce a draft proposal for review/discussion at the August meeting.	GDNs	***Due 30 August 2016*** **Pending**
SF0604	08/06/16	7.5	*How Shippers are affected by Shrinkage* - AL to provide an overview to GDNs.	ScottishPower (AL)	***Due 30 August 2016*** **Pending**