

**Minutes of the Shrinkage Forum**  
**Tuesday 08 March 2011**  
**31 Homer Road, Solihull B91 3LT**

**Attendees**

Bob Fletcher (Chair)	(BF)	Joint Office of Gas Transporters
Lorna Dupont (Secretary)	(LD)	Joint Office of Gas Transporters
Alex Breen	(AB)	Northern Gas Networks
David Watson	(DW)	British Gas
Derek Wilkinson	(DW1)	Wales & West Utilities
Haren Thillainathan	(HT)	Northern Gas Networks
John Morrison	(JM)	Northern Gas Networks
Martyn Pallant	(MP)	Wales & West Utilities
Rawinder Basra	(RB)	Scotia Gas Networks
Rochelle Hudson	(RH)	British Gas
Roy Malin	(RM)	National Grid Distribution
Stefan Leedham*	(SL)	EDF Energy
Stuart Forrest	(SF)	Scotia Gas Networks

\* *via teleconference*

**1. Introduction and Status Review**

Meeting papers may be found at: <http://www.gasgovernance.co.uk/ShrinkageForum>

BF welcomed everyone to the meeting. It was noted that the last meeting had been held in March 2007.

**2. Review of Minutes and Actions from previous meeting**

**2.1 Review of Minutes**

The minutes from the LDZ Shrinkage Forum held on 08 March 2007 were accepted.

**2.2 Review of Actions Outstanding**

**SF012** - Transporters to collate available GSR Cut Off information for forum later this year. (*The Transporters advised that this information would be presented at the next Forum.*)

**Update:** Action agreed closed. **Action closed.**

**SF013** - Shrinkage to be included within the list of IGT issues being reviewed by Ofgem.

**Update:** Update provided. **Action closed.**

### 3. Incentive Regimes

RM gave a presentation outlining Shrinkage and the associated drivers for DNOs. There were two pertinent incentive regimes and RM explained in further detail the Shrinkage Incentive Special Condition E8 (direct impact on DN costs) and the Environmental Emissions Incentive Special Condition E9 (direct impact on DN revenue).

#### *Shrinkage Incentive Special Condition E8*

The target baseline was set by Ofgem for each year. The incentive was to reduce shrinkage volumes, with a performance target to try and procure shrinkage gas at the day-ahead gas price. No cap or collar was set, so there was a potential to make or lose. (Transmission does have a cap and collar.)

#### *Environmental Emissions Incentive Special Condition E9*

The incentive was to reduce leakage volumes. A new incentive this year was to improve environmental performance; performance was valued at the the social cost of carbon. A 10% cap and collar was imposed by Ofgem.

HT commented that leakage is 95% of shrinkage. RM stated that baselines for Own Use Gas (OUG) and Theft of Gas (TOG) were set out in the proposals. Shrinkage is now procured on a flat daily basis. It is slightly seasonal, but to nowhere near the same extent as overall demand, and Ofgem had not thought it worth having an overly complicated regime. Responding to questions from DW, RM confirmed that analysis had been done on this.

### 4. Leakage Model

RM gave a brief outline of the Leakage Model and explained the E9 obligations and modification process. The Leakage Model elements and main input parameters were illustrated with the aid of a pie chart.

Noting that the model did not appear to be published anywhere, DW asked if there were any restrictions to making it available for Shippers to view. He was conscious that there appeared to be very little information available at present and sight of this would enhance understanding. HT referred to the Price Control and that auditors' reports should be available on the Ofgem website. A weblink would be provided.

**Action SF0301: Leakage Model - Provide a weblink to appropriate auditors' reports on the Ofgem website.**

RM observed that Ofgem had initial concerns about the leakage model because they had not done any analysis. However, the DNOs could demonstrate use over the years since 1990. DW commented that given the passage of time the model may need to be reviewed and updated, however this was impossible for a Shipper to tell without seeing any information. It would be useful to have transparency of data to inform a proper participative debate, which has been historically and remains currently one sided because of the inaccessibility of information. RM responded that the leakage model was not just a spreadsheet, there was also a document that explained

assumptions, calculations, etc; he did not think that it was publicly available at present but would be happy to find out if it could be made more accessible.

HT said that the leakage tests had been done 10 years apart (1992 and 2002), and the second one had confirmed the modelling. RM added that the leakage test was a statistical sample of the whole of the network, ie 859 tests across the country. It was an extensive testing and very expensive to carry out, the method used being recognised as the best in the world for identifying leakage from mains systems.

The leakage models elements were described, and RM confirmed that no assumptions were made for any leakage on systems above Medium Pressure. DW asked if there was any assessment carried out of potential leakage at an incident. RM said that statistical principles would accommodate this, although there may be some incidents (PREs) which might have been expected to have been reported differently. If a main was repaired, this should actually reduce leakage as mains are deemed to be leaking. However, the priority is always to fix the escape, rather than measure the leak.

Interference damage is calculated and separately where the estimate volume exceeds 500kgs.

Referring to AGI leakage (holders, offtakes, governors) RM said that an extensive national survey was carried out in 2002/2003, to determine average leakage rates from these installations/equipment.

Referring to AGI venting (intentional), RM said this was an estimated in the leakage report. It could be considered to be OUG but under emissions it had an environmental impact. AB confirmed that deliberate venting could be performed for many different reasons relating to operation and maintenance of the equipment. Whilst recognising the minimal amount involved, DW queried the validity of continuing to use assumptions that dated from 1994.

DW questioned how the DNOs were able to demonstrate accurate calculation to Ofgem, in respect of their obligation. RM said that this was reviewed annually. Assumptions made in the leakage model may or may not be relevant but it was very hard to demonstrate that these should be different or change; generally only the parameter inputs changed. Any change to the methodology must go through external consultation (as in 2009).

DW summed up his immediate concerns as:

- Disparity of available information
- The consultation process fails to take serious account of representations
- Can the current process be said to truly work, if responses are hardly ever received as shippers do not feel included in the process.

RM pointed out that the end of year assessment is the real focus and it could be argued that the consultation should be on this end assessment. DW agreed with that view, and believed that the consultation process should be made more robust and accountable. The previous Independent Expert appointed had been Advantica. In May 2009 the leakage model modification tender process was carried out through the Energy Networks Association.

BF concluded that the consultation process was similar to that operated under Demand Estimation Sub Committee, whereby the Transporters *may* amend proposals but are not obligated to do so. When considering why historically there appeared to be so little interest in this area it was recognised that this might be due in part because the models are not fully comprehended and also the inability to challenge any calculations. It was conceded that the consultation process may benefit from wider industry involvement.

SL commented that EDF had been disappointed in the past when it was decided to cancel Shrinkage Forum meetings through lack of interest, and believed there was a need to discuss issues in open forum. EDF's current Operations Manager had previous long experience in this area and was keen to get involved. More information on what assumptions had been made, and the reasons why, would be very welcome.

RM observed that new laid mains do not leak, and this probably contributed to an over-estimation as the old mains get replaced. SL asked if any research/analysis was being done on subsidence and movement in respect of the plastic pipes; plastic was not malleable like iron and it was suggested that there may be a higher likelihood of leakage over time. AB commented that iron suffered more breakage; PE piping was more robust. Tests had been done and very minimal leakage in comparison with iron. There would have to be very substantial movement to fracture the joints.

SL believed that this meeting was providing a very useful perspective and appeared to offer an appropriate forum for the discussion of ideas and suggestions. He agreed with DW that more open access to data would help to elicit better/increased response from the industry. RM agreed that it would be valuable to continue the discussions and industry involvement would be welcomed. DW felt very positive about the DNOs' responses and believed this would contribute to a constructive environment in which to pursue discussions.

It was confirmed that Ofgem set targets following independent analysis.

Low Pressure leakage is where most can be done to improve the position. MonoEthylene Glycol (MEG) as a mains joint conditioner to help prevent leakage.

Assumptions are made for Medium Pressure leakage; incidents tend to be more easily detected as more persons are aware of the leak and will report it. However there was no way of establishing an idea of how long a leak might have been present in these cases.

Reductions can be achieved in AGI leakage by removing AGIs, for example by dismantling a gas holder.

DW asked if any information was available regarding the amount of equipment that required venting, as this may have changed over time, and was there any reason why the survey had not been refreshed since 2002. RM responded that no specific circumstances had arisen to conclude that it was now inaccurate, nor the converse; Only another survey might be able to confirm whether the position was changed in any way. AB added that the survey provide a small snapshot in what was the very long lifespan of an asset. DW pointed out that Shippers bore a significant of costs through RbD

and needed a better understanding that any such attributed costs were based on accurate and realistic data, and this might be questionable given that the base survey data was now 10 years old. RM believed the cost of performing another survey might well be in the region of £10 million, and commented that in the meantime there was a very good chance that leakage will continue to reduce. DW explained that he needed to be able to report to his Director and convince him that all costs/risks were based on accurate information. Risk costs money and if there was no visibility on accuracy it was extremely difficult for a Shipper to manage perceived, but potentially arguably unnecessary, risk. Margins of error could potentially be reduced and the enhanced ability to gauge and set more accurate tariffs for consumers would also be of benefit.

RM stated that the previous survey had been undertaken by Transco (prior to the creation of the individual Networks) and the industry was clearly in a different position now. AB added that it would be difficult to justify a third survey given the age of the assets, the perceived reliability of the previous survey, and given that there was no evidence to suggest that one should be necessary.

It might be possible to make available results of the last tests, but there may be concerns regarding the commercial sensitivity and intellectual property rights.

DW reiterated that it would be good to see the model structure, inputs and outputs.

Responding to questions on greatest demand and the increase in housebuilding in the South East, RM confirmed that customer demand was the greatest effect on system pressure, and SF gave some examples. AB added that models were rebuilt depending on demand every three years for managing the networks, and this feeds into the leakage models.

It was clear that a document describing the leakage model would be useful, and a list of the data items that feed into the process.

**Action SF0302: Leakage Model - Establish what input/output information is used (assumptions, theory, etc) and what information can be shared (with reasons for any exclusions) and consider making available to industry.**

## 5. Shrinkage Proposal Process

A timeline was presented and briefly explained.

RH pointed out that because of the extreme weather conditions not all the planned mains replacement for 2010/11 had been carried out and questioned how this might affect the modelling. RM responded that the modelling would reflect what had been able to be done.

RH then questioned what impact the identification of large measurement errors might have; RM was uncertain that there would be any impact and agreed to establish the position.

**Action SF0303: Establish whether the identification of large measurement errors might have an impact on the leakage models/shrinkage process.**

DW asked how leakage was accounted for on CSEPs and it was confirmed that this was not the responsibility of the DNOs, though it is not expected to be significant as these systems are relatively new.

## 6. Theft of Gas

DW referred to his representation and the challenges made to the assumptions on theft of gas. British Gas' own data supported a belief that upstream theft was a growing problem, and therefore led British Gas to question the figures/assumptions made by the DNOs.

No statistics appeared to be available of the numbers found/invoiced, or how the DNOs demonstrated that they complied with Licence Condition 7. How did the DNOs assess what degree of theft was out there, and what has been resolved upstream. HT responded that the high level information that he personally has had sight of accorded with the figures in the proposals. DW observed that he could only assume that the DNOs had data that could be used to demonstrate to Ofgem that they were in compliance, and Shippers would welcome some visibility in this area. DW confirmed that British Gas RPU Team were convinced that the figures were higher than 10%, but DW had no access to data that could confirm or refute views either way. There was a lack of transparency and therefore concerns around the magnitude of the issue of theft upstream. BF added that recent modifications had focused on the issue downstream of the meter, and E.ON UK were currently looking at development of a National Revenue Protection Service (NRPS) which may place requirements on transporters.

RB believed that some data was sourced from Xoserve, but there may be other sources that record the amount of theft found and what monies are recovered.

DW had two questions – Is the statement of 3% -10% accurate, and of what was this a percentage of? He pointed out that British Gas believed that circa £220 million of gas is stolen each year. Inputs to RbD could be quantified and the remainder could be treated as theft; the majority would be downstream of the ECV. A more accurate view could only be arrived at by understanding the assumptions and justification for the figures stated in the Shrinkage Proposals.

DN asked if data relating to amount of theft upstream of the ECV (ie frequency of theft, amount of gas stolen, amount of monies recovered, etc), how it is dealt with could be made available, and what is the impact on shrinkage.

**Action SF0304: Theft of Gas - Establish what data is available and what can be shared, and what is the impact on shrinkage.**

## **7. Any Other Business**

### **7.1 Performance Targets**

DW commented that if in the proposals the overall level of shrinkage means that a profit could be made by the DNOs, the expectation would be that this area would be subjected to a more intense level of scrutiny from an industry perspective. HR explained how this was currently controlled and was scrutinised by Ofgem throughout the process.

DW suggested that maybe Shippers do not have sufficient visibility of any outputs/reports either via Ofgem or the DNOs, and would welcome some tangible comfort that the process was fit for purpose. SF observed that investments made by, and risks borne by, the DNOs have driven many improvements and pointed out that there was always an element of uncertainty in this area. DW acknowledged this.

DW then asked had the DNOs missed any of their targets at any point. RM responded that performance against targets information was available within the Shrinkage Assessments on the Joint Office website. DW thanked RM for the information and would look later.

RB pointed out that performance against target could only be seriously assessed once the starting point or baseline was known.

## **8. Diary Planning**

The next Shrinkage Forum meeting will take place on Tuesday 03 May 2011 at 31 Homer Road, Solihull B91 3LT, starting at 10:30.

**Action Log: Shrinkage Forum – 08 March 2011**

<b>Action Ref</b>	<b>Meeting Date(s)</b>	<b>Minute Ref</b>	<b>Action</b>	<b>Owner*</b>	<b>Status Update</b>
SF012	22/06/06	1.3	Collate GSR Cut Off information for forum later this year.	All Transporters	<b>Closed</b>
SF013	22/06/06	2.3	Ensure that shrinkage is included within the list of IGT issues being reviewed by Ofgem and provide an update to the next meeting.	Ofgem (PD)	<b>Closed</b>
SF0301	08/03/11	4.0	Leakage Model - Provide a weblink to appropriate auditors' reports on the Ofgem website.	Northern Gas Networks (HT)	
SF0302	08/03/11	4.0	Leakage Models - Establish what input information is used, and what can be shared (with reasons for any exclusions) and consider making available to industry.	Individual DNOs (RM, HT, SF, MP)	
SF0303	08/03/11	5.0	Establish whether the identification of large measurement errors might have an impact on the leakage models/shrinkage process.	National Grid Distribution (RM)	
SF0304	08/03/11	6.0	Theft of Gas - Establish what data is available and what can be shared, and what is the impact on shrinkage.	Individual DNOs (RM, HT, SF, MP)	