



Final LDZ Shrinkage Proposals for Formula Year 2014/15

**Scotia Gas Networks
March 2014**

This page is intentionally blank

Final LDZ Shrinkage Proposals for Formula Year 2014/15

Table of contents

Item No.	Item	Page No.
1	Purpose of Proposal.....	2
2	Summary of Proposal.....	2
3	Development of Final Proposal	4
3.1	Leakage.....	4
3.2	Operational Usage (also known as Own Use Gas).....	5
3.3	Theft of Gas.....	5
4	Scotia Gas Networks Opinion	5
5	Extent to which the Proposal would better facilitate the relevant objectives	6
6	The implications for Scotia Gas Networks of implementing the Proposal	6
7	The implications of implementing this Proposal for Users	6
8	Analysis of any advantages or disadvantages of implementation of the Proposal	7
9	User Representations.....	7
10	Programme of works required as a consequence of implementing the Proposal.....	7
11	Proposed implementation timetable (including timetable for any necessary information systems changes)	7
12	Recommendation concerning the implementation of the Proposal	7
13	Scotia Gas Networks Proposal.....	7

Final LDZ Shrinkage Factors Proposal for Formula Year 2014/15

1 Purpose of Proposal

The purpose of this paper is to present our final proposed LDZ Shrinkage Quantities for the Formula Year 2014/15 as required under Section N 3.1.7 of the Uniform Network Code.

The Scotia Gas Networks Final Proposals for Formula Year 2014/15 has been produced in line with the new shrinkage arrangements in the revised gas transporter licences (covering the period 1 April 2008 to 31 March 2015) and the UNC, which was aligned to the licence conditions by the approval of UNC Modification Proposal 0203V.

The most significant change in the Shrinkage process is that Shrinkage quantities rather than Shrinkage factors are to be estimated for each Formula Year - as Shrinkage has been deemed not to be linked to throughput.

An additional UNC Modification Proposal 0225 has recently been approved by Ofgem which further aligned the UNC process to the new Licence Conditions in respect of the timing of shrinkage calculations. The Mod moved the Shrinkage process from Gas Year to Formula Year to ensure consistency with the Shrinkage Revenue Incentive in the Gas Transporter Licences.

It should also be noted that in this paper the Scottish Independent Networks of Thurso, Wick, Campbeltown, Oban and Stranraer have their shrinkage quantities detailed separately. This is because, for the purposes of the UNC and in line with section A paragraph 1.7.4 (a), each Scottish Network is treated as a separate LDZ.

2 Summary of Proposal

Due to the approval of UNC Modification Proposal 0203V Shrinkage quantities, rather than Shrinkage Factors, are to be estimated for each Formula Year. Thus, as Shrinkage has been deemed not to be linked to throughput, Shrinkage is to be procured as a fixed daily LDZ Shrinkage Quantity throughout the Formula Year.

Leakage Model Modification

In February 2012, National Grid proposed a modification to the leakage model to better reflect the impact of low pressure service replacement. The original leakage model contained service population assumptions dating back to the early 1990s and there was no mechanism built in for updating these assumptions to reflect actual service replacement. In 2008, the leakage model was updated to enable the impact of replacement of metallic services to be included; however, this modification did not correct for historic service replacement and did not capture the impact of service leakage reduction associated with transferring plastic services from the old metallic main to the new plastic main. The leakage model modification proposed in

February 2012 sought to address both of these issues. SGN also went to consultation in March 2012. The outcome of the consultation was that, although there was general agreement that the proposed modification would provide a more accurate assessment of service leakage, this is awaiting approval from Ofgem.

Although it is anticipated that the proposed modification will be approved and implemented during 2014 there has currently been no direction by Ofgem to adopt this model for use.

The Shrinkage Proposals quoted in this report have been derived using the current approved leakage model and are consistent with those published in SGN's Initial Proposals published on 31 December 2013. As has been done the past two years, SGN intends to review these figures in July 2014 taking account of 2013/14 actual shrinkage and any changes resulting from the implementation of the Service Modification and, if necessary, adjust the 2014/15 forecast Shrinkage Proposals.

Please note that the impact of the proposed Service Modification which has not been included in these proposals indicates a further reduction across SGN of approximately 12.8 GWh for 2014/15.

We propose to apply the yearly Shrinkage Quantities outlined in table 1 below for the Formula Year 2014/15, effective from 06:00 hrs on 1st April 2014.

LDZ	14/15 Yearly Leakage (GWh)	14/15 Yearly Own Use Gas (GWh)	14/15 Yearly Theft of Gas (GWh)	14/15 Yearly Shrinkage (GWh)
Scotland	214.02	5.82	10.30	230.14
Thurso	0.24	0.006	0.01	0.26
Wick	0.28	0.005	0.01	0.29
Campbeltown	0.24	0.004	0.01	0.25
Oban	0.40	0.004	0.01	0.41
Stranraer	0.30	0.017	0.03	0.35
South East	327.29	6.74	11.94	345.97
Southern	223.27	4.39	7.77	235.43

Table 1. Proposed Shrinkage quantity values for Formula Year 2014/15

The resultant daily shrinkage quantities are shown in table 2 for information;

	Proposed Shrinkage Quantities 2014/15 (GWh)	Resultant Fixed Daily Shrinkage Quantities 2014/15 (kWh)
LDZ		
Scotland	230.14	630,514
Thurso	0.26	704
Wick	0.29	796
Campbeltown	0.25	698
Oban	0.41	1,114
Stranraer	0.35	960
South East	345.97	947,874
Southern	235.43	645,026

Table 2. Resultant daily Shrinkage Quantity values for Formula Year 2014/15

3 Development of Final Proposal

Scotia Gas Networks (SGN) 'LDZ Shrinkage Initial Proposals for Formula Year 2014/15' were issued in January 2014.

The LDZ Shrinkage quantities reflect the losses associated with leakage, theft of gas and gas used in the operation of the system. A brief description of each of these elements is outlined below, with further detail contained within the Initial Proposal document.

3.1 Leakage

Leakage from the distribution system accounts for the majority of overall leakage within an LDZ and is attributable to gas leakage from mains and services. The leakage estimate has been derived from leakage rates obtained from the 2002/03 National Leakage Test programme (carried out by Transco) combined with the following network¹ specific information;

- forecasted mains replacement up to the end of March 2015;
- the annual average system pressure in each network forecasted over Formula Year 1415;
- the measured concentration of Monoethylene Glycol (MEG) joint treatment chemical in the gas

In addition, leakage and operational venting may occur from Above Ground Installations (AGIs). During 2003, Transco completed a survey of these sites.

¹ Network in this context relates to physical interconnected pipe systems, not Scotia Gas Networks administrative structure.

Leakage, in terms of cubic metres of gas, is converted into energy by use of the flow-weighted average CVs (measured in MJ / m³) that are detailed within the Initial Proposals.

3.2 Operational Usage (also known as Own Use Gas)

Own Use Gas (OUG), under the new UNC shrinkage regime, is now treated as a consolidated quantity which is estimated by applying an OUG factor to forecasted demand for the Formula Year.

The OUG factor Scotia Gas Networks proposes to use is the national average of 0.0113% which was determined by Advantica in 2002 and was verified by subsequent research in 2006 – the results of this research being presented to the Shrinkage Forum on Thursday 22nd June 2006.

This research stated that pre-heater efficiencies lie between 53-69%. This implies that the national factor calculated by their model is overstated, as this is based on a lower efficiency of 50%. However Scotia Gas Networks has used this national factor of 0.0113% to determine its estimated 2014/15 OUG quantities – which are shown in table 1, on page 3.

3.3 Theft of Gas

As with Own Use Gas – Theft of Gas (TOG), under the new UNC regime, is now treated as a consolidated quantity which is estimated by applying a TOG factor to forecasted demand for the Formula Year.

The split of actual theft that transporter and shippers are responsible for varies year on year and recent history indicates much lower levels of Transporter theft than the 2007 statistics.

Therefore we do not propose, at this time, to recommend varying our Theft of Gas split from the current national agreement - that GDNs assume responsibility for Theft of Gas equal to 0.02% of LDZ Consumption.

The TOG factor of 0.02% has been used to determine SGN's estimated 2014/15 TOG quantities which are shown in table 1 (on page 3).

SGN recognise that the quantification of the level of theft and proportion attributable to Transporters remains under review – both in the Shrinkage Gas Forum and Theft of Gas Forum.

4 Scotia Gas Networks Opinion

We believe that the proposed Shrinkage Quantities are consistent with the objective of using the best available information to estimate the LDZ Shrinkage for the period from 1 April 2014 to 31 March 2015.

5 Extent to which the Proposal would better facilitate the relevant objectives

The proposal provides SGN's best forecast of the level of LDZ Shrinkage Quantities for the Formula Year 2014/15. The proposal is based on robust methodologies, the best information available and takes cognisance of the feedback received from Users.

This proposal is intended to further the efficient and economic operation of the system through more appropriate cost targeting and also facilitates the comparison of Transporter performance.

6 The implications for Scotia Gas Networks of implementing the Proposal

Including:

a) Implications for the operation of the System:

SGN is unaware of any such implications that would result from implementing this proposal.

b) Development, capital cost and operating cost implications:

SGN is proposing a change to the LDZ Shrinkage Quantities which will correspond to a reduction in operating costs, assuming gas prices remain at their current levels.

c) Extent to which it is appropriate for Scotia Gas Networks to recover the costs, and proposal for the most appropriate method for Scotia Gas Networks to recover the costs:

Recovery of costs for shrinkage gas forms part of SGN's allowed revenue. The principles behind the recovery of shrinkage costs are set out in Ofgem's Final Proposals for the current five year price control period.

d) Analysis of the consequences (if any) this proposal would have on price regulation:

The proposal is consistent with the establishment and operation of Distribution Network specific transportation charging formula.

The implementation of this proposal offers the prospect of real savings for consumers through the operation of the principle of comparative regulation.

7 The implications of implementing this Proposal for Users

This proposal improves the equitability and accuracy of cost targeting for Users.

8 Analysis of any advantages or disadvantages of implementation of the Proposal

Advantages: Better reflective of the actual system usage and losses with improved cost targeting.

Disadvantages: SGN is not aware of any disadvantages.

9 User Representations

Users have had the opportunity to comment upon our proposals during Shrinkage Forum meetings and in writing. We have received one representation from a shipper in relation to our 2014/15 proposals, where a response was provided.

10 Programme of works required as a consequence of implementing the Proposal

Gemini has been updated in line with the Modification Proposal 203V – which revised the UNC to take account of the new shrinkage arrangements in the revised gas transporter licences (covering the period 1 April 2008 to 31 March 2015). The only required change now is to enter the proposed daily Shrinkage Quantities into Gemini.

11 Proposed implementation timetable (including timetable for any necessary information systems changes)

Under Network Code Section N 3.1.8., Users have until the 15 March 2014 to request that Ofgem issue a Condition 7 (4) disapproval of this proposal.

If the disapproval is not given, then the LDZ daily Shrinkage Quantities detailed in table 2, on page 3 of this proposal, will be implemented at the start of the Formula Day on 1 April 2014.

12 Recommendation concerning the implementation of the Proposal

We recommend that the proposed LDZ daily Shrinkage Quantities will be implemented with effect from 06:00 hrs on 1 April 2014.

13 Scotia Gas Networks Proposal

This report contains our proposal for the LDZ daily Shrinkage Quantities for the Formula Year 2014/15. In summary, we propose that the LDZ Shrinkage Quantities should be set at the levels indicated in table 2, on page 3 of these proposals.