

URGENT Modification Report
Proposal to fix the national LDZ Shrinkage factor from 1 October 2001 pending validation
of the 1992 NLT leakage rates
Modification Reference Number 0492

Version 1.0

This Modification Report is made pursuant to Rule 9 of the Modification Rules and follows the format required under Rule 8.9.3.

Circumstances Making this Modification Proposal Urgent:

In accordance with Rule 9.1.2 Ofgem has agreed that this Modification Proposal should be treated as Urgent because it has a commercial impact upon both Transco and shippers. Furthermore Ofgem believed that the Modification Proposal if implemented would impact upon the volume of gas that Transco should procure on 1 October 2001.

Procedures Followed:

Transco agreed with Ofgem (and has followed) the following procedures for this Proposal:

Issued to Ofgem for decision of urgency	12 September 2001
Proposal agreed as urgent	13 September 2001
Proposal issued for consultation	13 September 2001
Close out for representations	20 September 2001
Final report to Ofgem	24 September 2001
Ofgem decision expected	25 September 2001

1. The Modification Proposal

The Modification Proposal was as follows:

"The national LDZ shrinkage factor should be reset from October 2001 to a fixed rate until such time as the leakage rates derived from the 1992 NLT can be validated by an appropriate exercise. Transco should design and progress this exercise, with appropriate input from the Ofgem Technical Directorate and Shippers. Once the exercise is completed, the new leakage rates should be implemented for the current gas supply year without any retrospective adjustments to prior gas years. The fixing of the leakage rates and limit of the retrospective application of the new rates are designed to provide Transco with the commercial incentive to carry out the work as soon as possible, if they are confident that the underlying level of leakage is lower than inherent in the fixed rate."

The following detail was included within the justification:

"The national LDZ shrinkage factor be fixed at 1% until such time that Transco carries out an exercise to validate the NLT leakage rates, with appropriate input from Ofgem Technical Directorate and Shippers on the design of that exercise.

No annual re-assessment and reconciliation process be undertaken as currently allowed for by Section N of Code until this validation is complete as this also relies on the same underlying model and leakage assumptions, and the issues with the existing rules for this process are resolved.

Transco to embody the impact of new leakage rates (be they higher or lower than the 1992 NLT estimates) when determined to the current gas year only ie no retrospective application beyond the start of the current year.

LDZ shrinkage rates be adjusted annually only for the latest available temperature data"

2. Transco's Opinion

Transco does not support implementation of this Modification Proposal.

The determination of LDZ Shrinkage Factors is based on the best available methodologies, applied on a consistent basis that have been developed from Transco's knowledge of the operation of its gas transportation system, using the best available data. As the proposer notes in the Modification Proposal, "Transco have undertaken greater consultation with Shippers on Shrinkage matters through the LDZ Shrinkage Forum in recent years and have provided additional information in a number of related areas.....". At the LDZ Shrinkage Forum, Transco has provided Users and Ofgem with a large amount of information on the methodologies applied for determination of LDZ Shrinkage Factors. This is an ongoing process to which Transco is committed. In addition, Transco received positive comments from Users during the consultation process about the level of information made available.

The Network Code contains provision to ensure that appropriate LDZ Shrinkage Factors are applied:

- Sections N3.1.4. and N3.1.7 require Transco to propose the LDZ Shrinkage Factors for the forthcoming Gas Year explaining the methodology by which the estimates were determined.
- Consultations of the proposal are undertaken with Users under Section N3.1.5.
- The Director can grant Condition 7(4) disapproval of Transco's proposal based upon the application of Users under Section N3.1.8.

These procedures specified in the Network Code provide an objective method for LDZ Shrinkage Factors to be determined. It is Transco's strong opinion that:

- The level for the national LDZ Shrinkage Factor of 1% that is proposed within this Modification Proposal, is arbitrary. It has no objective methodology, other than the suggestion that it would act as a form of incentive on Transco to carry out a leakage validation exercise.
- The process for the determination of LDZ Shrinkage Factors for the Gas Year 2001/2002, specified under the Network Code, has been followed and a parallel Network Code Modification Proposal that seeks to override this process is neither required nor appropriate.

Transco notes that the proposed arbitrary figure of 1% intends to implement a factor that is considerably higher than the national factor proposed by Transco for the Gas Year 2001/2002 (0.86%) and that applied for the Gas Year 2000/2001 (0.91%). Transco's opinion is that the Modification Proposal seeks to apply a financial penalty rather than a true incentive. Transco does not believe such an approach is consistent with the relevant objectives. In addition, Transco has already stated an intention to carry out a National Leakage Test (NLT) in 2002, provided this is supported by Users and that appropriate funding is allowed as part of the Periodic Review outcome. It is Transco's opinion, therefore, that implementation of this Modification Proposal is not required.

The proposer provides no evidence that the factors Transco has already proposed for 2001/2002 are biased either in favour or against particular Users or groups of Users. Whilst the proposer argues that any "error" is borne by Users that have domestic supply points (sometimes called "RbD shippers") Transco would wish to point out that the present position is symmetrical. An underestimate in the shrinkage factor could be regarded as leading to higher charges for RbD shippers but equally an overestimate leads to lower charges. Evidence that Transco submitted for its 2001/2002 Gas Year LDZ Shrinkage Factor proposal clearly indicates that a factor of 1% would lead to lower than justified charges for RbD shippers but would be of no benefit to Users that serve no domestic supply points.

The assertion that Transco had not validated the results of the 1992 leakage survey is not correct. As the proposer notes, the 1992 NLT was subject to independent verification by Warren Spring Laboratory and the University of Newcastle-upon-Tyne. The proposer also suggests that the 1992 NLT was undertaken in a very different commercial environment. It is Transco's opinion that the commercial environment had no impact on the results of the 1992 NLT and would have no impact on the physical test methodology applied in any future tests. In addition, Transco wishes to point out that Users have been provided via the LDZ Shrinkage Forum with sensitivity analyses of the application of the results from the 1992 NLT and the output of the associated National Leakage Reduction Monitoring Model (NLRMM). Transco still considers that the results of the 1992 NLT represent the best data available for the assessment of leakage and has no evidence that its validity has declined with the passage of time. The proposer has provided no evidence that better quality data, in terms of lower statistical uncertainty or more recent derivation, is available despite the fact that many gas distribution companies have to account for leakage. Notwithstanding its confidence in the leakage data used, Transco has, as already stated, shown a willingness to carry out a NLT in 2002. It is Transco's opinion that the results of the 1992 NLT should

continue to be used to assess leakage for the purposes of Network Code LDZ Shrinkage processes until such time as the results of the proposed 2002 NLT are available. This 2002 data is anticipated to be used for the LDZ Shrinkage Factor proposal for the Gas Year 2003/2004. Transco would like to point out that 2002 is the earliest date that Transco could undertake an NLT, given the considerable effort being applied to mains replacement. A NLT is a major task in itself and appropriate time-frames are required for planning, execution and analysis of results making the LDZ Shrinkage Factor proposal for Gas Year 2003/2004 the earliest realistic date for use of the results.

The proposer highlighted the disappointment of the shipper members of LDZ Shrinkage Forum that the notification of a major "data cleaning" exercise was after completion of the exercise with no opportunity to input into either its design or data quality. It should be noted that the driver for the asset data cleaning exercise was the enhancement of Transco's asset records and not the LDZ Shrinkage determination process. However, as a result of this exercise Transco now has greater confidence over the quality of data that can be used for the assessment of leakage. Indeed within the responses to Transco's initial proposals a User indicated that this was a commendable enhancement. Transco advised the LDZ Shrinkage Forum of the basis of the asset data enhancement exercise with an indication of the impact and has offered to provide Users with more information should it be required.

The proposer suggests that greater certainty about the level of leakage would lead to greater certainty about the levels of Theft of Gas (ToG) and then "drive action to address this major issue for the Industry." Transco has previously expressed concerns over the quality of information available to assess levels of ToG. Transco and Users have raised this issue at the LDZ Shrinkage Forum and as a result a Theft of Gas Forum has been established to address these issues. Transco fully supports this initiative. Transco does not consider it would be appropriate to effectively freeze LDZ Shrinkage Factors, including the ToG element. Any change in the assessed level of ToG as a result of recommendations made by the ToG forum would not therefore be applied until after the results of an NLT became available. Transco therefore consider that this does not facilitate operation of an efficient network.

In relation to the justification within this Modification Proposals Transco's position is:

- The national LDZ Shrinkage Factor should not be set at 1%.
- The present Network Code LDZ Shrinkage processes should continue, applying the best methodologies and data available.
- The results of the 1992 NLT should continue to be applied until such time as the results from the proposed 2002 NLT are available.

The proposer suggests that LDZ shrinkage rates should be adjusted annually only for the latest available temperature data. Transco wishes to state that its proposals for the Gas Year 2001/2002 already include adjustment based on the results of the 2001 Domestic Temperature Survey (DMTS) and the Internal/External Meter Location Survey.

3. Extent to which the proposed modification would better facilitate the relevant objectives

The proposer argues that implementation would give Transco "greater certainty of their costs through LDZ shrinkage and hence better economics signals as to where their resources should be employed."

This "certainty" justification would apply to any fixed national LDZ Shrinkage Factor, which could for example be that proposed by Transco for 2001/2002. Setting a factor at this level, which is Transco's best estimate and is the only one that has been objectively derived, would seem to combine the certainty requested by the proposer with the elements of fairness and equitability embodied in the present Network Code provisions. Transco itself has accepted the present level of uncertainty. Transco considers that the reference to economic signals implies that by re-validating the leakage rates as determined by the 1992 NLT, Transco would be able to better direct resource in terms of leakage reduction measures. Transco strongly disagrees with this implication. Transco undertakes a mains replacement programme as agreed with the Health and Safety Executive (HSE). The basis of this programme is risk and this methodology is agreed with the HSE. The results of any repeat NLT would not influence the mains replacement programme.

The proposer also believes that implementation would lead "to a better understanding of the levels of Theft of Gas and hence direct appropriate Shipper resources to address these hidden costs". In addition, the proposer argues that the present uncertainties act as potential barriers to entry to new domestic Shippers.

Transco is not aware that any uncertainties within the present process have proved to be barriers to entry to new domestic shippers. Transco considers that freezing the national LDZ Shrinkage Factor, including by implication the ToG factors, would not lead to a better understanding of the levels of ToG. In Transco's opinion the ability to adjust the ToG Factor promotes activities that improve the definition of the levels and their reduction. Transco restates that a ToG Forum has been established to enhance the processes associated with the determination of levels of ToG.

It should be noted that fixing a national LDZ Shrinkage Factor at a high level is inequitable in that it benefits only RbD shippers and not those Users with no domestic supply points. Even amongst RbD shippers, fixing the national Factor and only allowing for an annual temperature correction provides greater benefits to those in LDZs where actual shrinkage is decreasing at the highest rate due to replacement of mains. In addition, fixing the national Factor at a high level would benefit the LDZ Shrinkage provider.

Transco therefore concludes that fixing the national LDZ Shrinkage factor at 1% would not better facilitate the relevant objectives. The factor suggested by the proposer is an arbitrary one with no apparent basis for its calculation. This could be considered contrary to the operation of an economic and efficient system.

**4. The implications for Transco of implementing the Modification Proposal , including
a) implications for the operation of the System:**

Transco does not consider that there would be implications for the operation of the System as a consequence of implementing this Modification Proposal

b) development and capital cost and operating cost implications:

Transco does not consider that there will be and development and capital cost implications as a consequence of implementing this Modification Proposal. The operating cost implications would include purchase of additional shrinkage gas. Whilst the contract terms are covered by commercial confidentiality, it can be stated that additional purchase costs of several million pounds per annum for Transco would result.

c) extent to which it is appropriate for Transco to recover the costs, and proposal for the most appropriate way for Transco to recover the costs:

Transco would expect the projected level of shrinkage gas purchases to be included in any Periodic Review outcome and this would include the consequences of this Modification Proposal if implemented.

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

Implementation of this Modification Proposal would inevitably raise issues regarding the nature of incentive regimes within the regulatory structure. This arises from the fact that implementation of the Modification Proposal would be based on the delivery of only one item - revalidation of leakage tests and that the "incentive" would be asymmetric in nature.

5. The consequence of implementing the Modification Proposal on the level of contractual risk to Transco under the Network Code as modified by the Modification Proposal

This Modification Proposal if implemented would increase Transco's contractual risk as it would permit the suspension of a detailed consultation process agreed by the community with the imposition of an arbitrary shrinkage factor. This would be at a cost to Transco of several million pounds per annum, potentially without any prospect of Transco recovering that cost.

6. The development implications and other implications for computer systems of Transco and related computer systems of Users

If approved, revised LDZ specific Shrinkage Factors would need to be determined consistent with the 1% national factor. These factors would then need to be input into Transco systems.

7. The implications of implementing the Modification Proposal for Users

Users with domestic portfolios would benefit through the RbD adjustment process.

8. The implications of implementing the Modification Proposal for Terminal Operators, Consumers, Connected System Operators, Suppliers, producers and, any Non-Network Code Party

Transco would be required to procure additional shrinkage gas if this Modification Proposal were approved.

9. Consequences on the legislative and regulatory obligations and contractual relationships of Transco and each User and Non-Network Code Party of implementing the Modification Proposal

This Modification Proposal if approved would bring into question other consultation processes and open them up to similar challenge from an individual User by-passing recognised processes with an arbitrary result.

10. Analysis of any advantages or disadvantages of implementation of the Modification Proposal

The following advantages have been identified:

- The proposer considers that this Modification Proposal, if approved, would incentivise Transco to validate the 1992 NLT result
- The proposer considers that by validating leakage rates greater certainty of the level of leakage and of ToG would result.
- The proposer considers that the Modification Proposal, if approved, would lead to Transco having better economic signals as to where resources should be applied.

The following disadvantages have been identified:

- Unlike the present Network Code process for determining LDZ shrinkage factors, it would provide factors arbitrarily set at levels higher than the best estimates presently available. It also seeks to override an existing Network Code process that is subject to consultation with Users.
- It would provide an inequitable benefit, to Users in that such a benefit would depend on geographical location and type of Supply Points within their portfolios
- It would remove the present provisions of the Network Code by which changes in underground asset data and other elements which influence the shrinkage factor calculations, are reflected in the LDZ shrinkage factors proposed by Transco.

11. Summary of the Representations (to the extent that the import of those representations are not reflected elsewhere in the Modification Report)

Five representations were received from Users. Amerada Hess Gas Limited (Amerada), British Gas Trading (BGT), Innogy plc, and TXU Europe Energy Trading Ltd (TXU) all supported the Modification Proposal. The representation from Powergen UK plc (Powergen) offered "provisional support" for the Modification Proposal in that it agreed with the concept of fixing the national LDZ shrinkage factor but believed that it should remain at its present level.

The issues raised in the representations were as follows:

Accuracy of 1992 NLT and any future NLT

Powergen "agree that there was considerable statistical uncertainty in the results of the National Leakage Tests (NLT), so new trials are overdue" and in consequence that "It is important that material inaccuracies are removed, and RbD is seen to be working as well as possible". BGT implied that commissioning a further NLT survey will achieve "the more accurate apportionment of gas to users." Innogy stated that "it is important to use accurate and up to date information whenever possible ensure the correct allocation of costs between the various parties." TXU stressed that "it is important that the level of shrinkage is derived accurately". Amerada stated that "More robust data on which to base the leakage estimates for shrinkage provision will lead to improved visibility for the other estimated elements of the shrinkage calculation."

A view was also expressed on whether the NLT results represented the best available data. Amerada pointed out that "Whilst Transco has frequently asserted that this is the 'best available data' we would respond that it is the only available data. This should be remedied".

Transco's Response

Transco has indicated its willingness to undertake further National Leakage Tests in 2002 providing this is supported by Users and appropriate allowance is made in the Periodic Review outcome. Transco notes that neither in the Modification Proposal nor in any of the representations received, is the proposition that the 1992 NLT represents the "best available data" disputed and alternative data offered. In Transco's view the 1992 NLT data should continue to be used for LDZ Shrinkage calculations carried out under the Network Code until the results of any further NLTs are available.

Need for an Incentive on Transco

BGT was "strongly of the opinion that the implementation of this modification will provide the necessary incentive upon Transco" to commission a further NLT survey. TXU in reference to the prospect of a new NLT agreed that "this modification should provide Transco with the appropriate incentive to conduct the review as soon as possible if they believe that the true level of shrinkage is below that proposed in this modification". Innogy

believed that "Transco should now face financial incentives to review, validate and update the figures and thereby confirm or otherwise the continuing validity of the assumptions".

Transco's Response

Transco believes that the present provisions of the Network Code effectively incentivise Transco to reduce shrinkage and accurately obtain relevant data. Transco further notes that implementing a national LDZ Shrinkage Factor of 1% would impose a factor that is considerably higher than the national LDZ Shrinkage Factor proposed by Transco for the Gas Year 2001/2002 (0.86%) and that currently applied for the Gas Year 2000/2001 (0.91%). It is Transco's opinion that the impact of the Modification Proposal is to apply a financial penalty rather than a true incentive. Transco does not believe such an approach is consistent with the relevant objectives. In addition, Transco has already stated an intention to carry out a NLT in 2002, provided it is supported by Users and appropriate funding is allowed in the Periodic Review outcome.

Data Cleaning

Amerada expressed concern that Transco has undertaken a data cleansing exercise on TeAR "which has resulted in the update of in excess of 15,000 records, and the change if material on a number of pipes". It believed that "the apparent sensitivity is a matter of concern, as we consider, by inference that data used in previous calculations may have been flawed." It further refers to the lack of advice to shippers that this work was being undertaken until it was complete.

Transco's Response

Whilst Transco recognises the concern amongst Users, it reiterates the statement that the data cleansing exercise was undertaken to enhance the quality of its asset data. Whilst the work undertaken had an impact upon the data used to calculate the LDZ Shrinkage Factors it was not primarily carried out for calculation of these factors. Transco would not dispute the implication that if the improved data were available for previous Gas Years, a lower national LDZ Shrinkage Factor may have been proposed for these periods. However, it is inevitable that issues like this may occur when data improvement programmes are undertaken. It is important that these considerations do not inhibit Transco from carrying out such exercises that are ultimately beneficial.

Setting the Appropriate Factors

BGT referred to an assertion of Transco that the rate of leakage has reduced where there has been an increased use of PE pipe-work. It stated that "This may be the case but we do not believe that the shrinkage factor can be reduced arbitrarily." Amerada suggested that "Given the number of estimates in the overall process, we do not consider at this point that Shrinkage can be derived to the degree of accuracy implied by the use of two decimal places." Powergen whilst agreeing that the case for a lower shrinkage factor is not

sufficiently well made stated also that "neither is the case for a higher shrinkage factor and we would be happier with a standstill rather than the proposed increase"

Transco's Response

Transco believes that it is recognised by all parties that increased use of PE pipe-work reduces leakage and therefore the shrinkage factors should reflect this. Transco has not arbitrarily reduced shrinkage factors but has calculated them in accordance with an objective methodology as required under the Network Code and has consulted shippers and Ofgem on this methodology through the LDZ Shrinkage Forum. It believes that the use of two decimal places in the factors is required to adequately take account of physical differences between LDZs.

12. The extent to which the implementation is required to enable Transco to facilitate compliance with safety or other legislation

Transco is not aware of any such requirement

13. The extent to which the implementation is required having regard to any proposed change in the methodology established under Standard Condition 3(5) or the statement furnished by Transco under Standard Condition 3(1) of the Licence

Transco is not aware of any such requirement

14. Programme of works required as a consequence of implementing the Modification Proposal

Any changes to the LDZ Shrinkage Factors can be achieved without modification to Transco's systems. However, if the Modification Proposal were implemented, revised LDZ Shrinkage Factors would need to be determined and input into Transco's systems to become effective from 1 October 2001.

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

The Modification Proposal recommends an implementation date of 1 October 2001.

16. Recommendation concerning the implementation of the Modification Proposal

Transco recommends that this Modification Proposal be rejected

17. Restrictive Trade Practices Act

If implemented this proposal will constitute an amendment to the Network Code. Accordingly the proposal is subject to the Suspense Clause set out in the attached Annex.

18. Transco's Proposal

This Modification Report contains Transco's proposal not to modify the Network Code and Transco now seeks agreement from the Gas & Electricity Markets Authority in accordance with this report.

19. Text

Signed for and on behalf of Transco.

Signature:

Tim Davis
Manager, Network Code

Date:

Gas and Electricity Markets Authority Response:

In accordance with Condition 9 of the Standard Conditions of the Gas Transporters' Licences dated 21st February 1996 I hereby direct Transco that the above proposal (as contained in Modification Report Reference **0492**, version **1.0** dated **24/09/2001**) be made as a modification to the Network Code.

Signed for and on Behalf of the Gas and Electricity Markets Authority.

Signature:

The Network Code is hereby modified with effect from, in accordance with the proposal as set out in this Modification Report, version **1.0**.

Signature:

Process Manager - Network Code
Transco

Date:

Annex

1. Any provision contained in this Agreement or in any arrangement of which this Agreement forms part by virtue of which The Restrictive Trade Practices Act 1976 ("the RTPA"), had it not been repealed, would apply to this Agreement or such arrangement shall not come into effect:
 - (i) if a copy of the Agreement is not provided to the Gas and Electricity Markets Authority ("the Authority") within 28 days of the date on which the Agreement is made; or
 - (ii) if, within 28 days of the provision of the copy, the Authority gives notice in writing, to the party providing it, that he does not approve the Agreement because it does not satisfy the criterion specified in paragraphs 1(6) or 2(3) of the Schedule to The Restrictive Trade Practices (Gas Conveyance and Storage) Order 1996 ("the Order") as appropriate

provided that if the Authority does not so approve the Agreement then Clause 3 shall apply.
2. If the Authority does so approve this Agreement in accordance with the terms of the Order (whether such approval is actual or deemed by effluxion of time) any provision contained in this Agreement or in any arrangement of which this Agreement forms part by virtue of which the RTPA, had it not been repealed, would apply this Agreement or such arrangement shall come into full force and effect on the date of such approval.
3. If the Authority does not approve this Agreement in accordance with the terms of the Order the parties agree to use their best endeavours to discuss with Ofgem any provision (or provisions) contained in this Agreement by virtue of which the RTPA, had it not been repealed, would apply to this Agreement or any arrangement of which this Agreement forms part with a view to modifying such provision (or provisions) as may be necessary to ensure that the Authority would not exercise his right to give notice pursuant to paragraph 1(5)(d)(ii) or 2(2)(b)(ii) of the Order in respect of the Agreement as amended. Such modification having been made, the parties shall provide a copy of the Agreement as modified to the Authority pursuant to Clause 1(i) above for approval in accordance with the terms of the Order.
4. For the purposes of this Clause, "Agreement" includes a variation of or an amendment to an agreement to which any provision of paragraphs 1(1) to (4) in the Schedule to the Order applies.