

CODE MODIFICATION PROPOSAL No 0194A
Framework for correct apportionment of LSP unidentified gas
Version 1.0

Date: 18/09/2008

Proposed Implementation Date:

Urgency: Non Urgent

1 The Modification Proposal

a) Nature and Purpose of this Proposal

Introduction

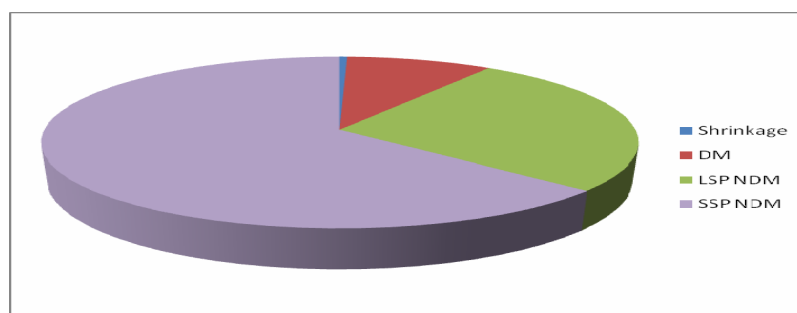
This modification proposal seeks to establish a framework for the identification of causes of unidentified gas, identifying the extent to which differing market sectors contribute to this error, and the allocation of this error to the relevant sectors. For the avoidance of doubt the term “unidentified gas” or energy refers to gas which is supplied to the GB gas network, but whose use cannot be accounted for after all known reconciliations. This is sometimes referred to as unallocated gas or energy. An example of this is gas which is stolen from the network.

The energy allocation regime

The current market arrangements for the GB gas market work on the principle of daily balancing. Only the total amount of gas consumed by the GB as a whole along with the consumption of Daily Metered (DM) sites is known with a reasonable degree of certainty during the initial balancing period. Daily gas consumption for the majority of sites is estimated through a combination of algorithms and site categorisation, based on historical consumption patterns and Annual Quantities.

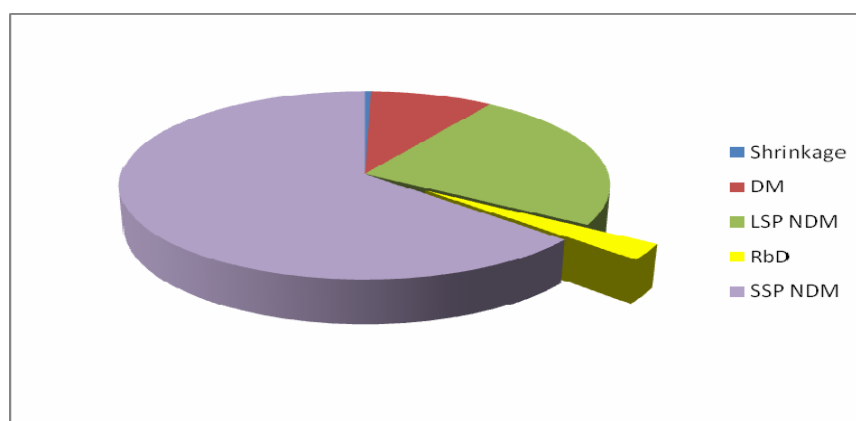
Initially the determination of gas consumption for any given day for Non-daily Metered (NDM) sites is calculated by subtracting DM and transporter losses (Shrinkage) from total GB consumption. This NDM consumption is split between Large Supply Point (LSP) and Small Supply Point (SSP) NDM customers. These sectors are also often referred to as I&C and Domestic respectively.

Initial Allocation of GB Gas Consumption (not to scale)



The initial LSP and SSP NDM consumptions are estimated via behaviour modelling. When a meter reading for a LSP NDM site is obtained, the estimated consumption is corrected and the LSP shipper is credited/debited in accordance with the difference between the estimated and measured consumption. In the case of an underestimation by the transporters of the contribution from the LSP sector, this will create a transfer of energy to the LSP market from the SSP market. Conversely in the case of an overestimation by the transporters of the contribution from the LSP sector, this will create a transfer of energy from the LSP market to the SSP market. This correction volume is termed RbD volume. The underlying principle of RbD is that this re-allocation of gas or energy between the two market sectors occurs irrespective of the amounts involved or the direction of the re-allocation.

Variation of Allocation of GB Gas Consumption through the RbD process. (not to scale)



History of RbD

Subsequent to competition being fully introduced to the Small Supply Point market in 1998, it was decided to allocate the daily changes in the overall Small Supply Point sector by market share, rather than by individual meter point reconciliation. This process, Reconciliation by Difference (RbD), was seen as a cost-efficient mechanism when compared to individual meter point reconciliation. The considerable system costs that would have been incurred by the transporter in developing, maintaining and operating such systems were seen to be unwarranted. Shippers also avoided significant costs through the resolution of issues inherent in an individual meter point reconciliation process.

It was recognised that Small Supply Point consumers are relatively homogenous in both consumption levels and behaviour. This behaviour allowed the development of an aggregate process to adjust allocations in gas consumption. This process was endorsed by the Ofgem review of RbD in 2006¹.

The widely differing nature of gas consumption behaviour of LSP NDM sites justifies the continuation of individual meter point reconciliation for these consumers. In contrast to SSP consumers, LSP NDMs exhibit wide variations in

¹ http://www.ofgem.gov.uk/Licensing/IndCodes/Governance/Documents/1/13487-RbD_FinalV1.1.1.pdf

terms of size (annual and peak day), load factor and seasonal consumption habits (such as tourist attractions that open in summer or schools that close during holidays). This distinction is critical when considering extending the impact of the RbD process to market sectors other than SSP.

It is important to note that the current UNC process results in all unidentified energy being assumed to be SSP consumption via the RbD allocation process. Current UNC processes do not allocate unidentified gas to the LSP sector.

How significant the levels of unidentified gas are in each sector is, by definition, difficult to ascertain. The Development Work Group for Modification Proposal 0194 could not uncover any definitive evidence of LSP contributions to the overall RbD error; though a body of anecdotal evidence does exist indicating that some unidentified gas which would properly be allocated to the LSP market is being allocated to the SSP market.

Re-allocation of market error

Modification Proposals 0115/0115a attempted to allocate some of these measurement errors via RbD. Ofgem gave support to the general principle of spreading the costs of unidentified gas to all market players. In its Modification Proposal 0115 decision letter dated 24th October 2007 Ofgem stated that:

“we agree with the basic tenet of the proposals, that it is inappropriate for one sector of the gas market to bear all the costs of unallocated gas”

The decision letter went on to state that

“there are many issues which are currently contributing to the RbD charge, only some of which have been explored as part of these proposals and not all of these can necessarily be attributed to I&C shippers.”

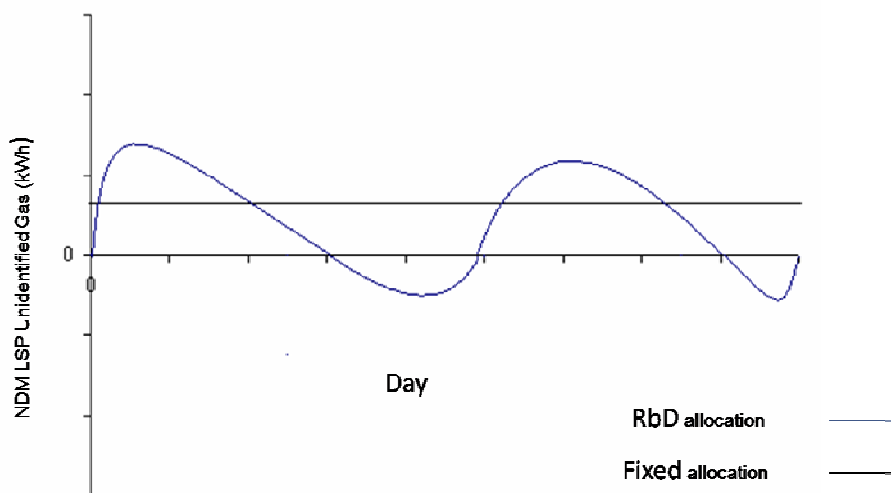
Use of RbD to reflect LSP unidentified gas

The Modification Proposal 0194 Development Work Group has considered the use of RbD to allocate such energy to the LSP market. Significant issues were identified in using this approach, which make it inappropriate. The RbD mechanism improves the initial estimation of gas consumption between SSP and LSP markets by allocating any change in the actual LSP allocation to the SSP sector by market share. At present a percentage of this RbD adjustment includes an element of unidentified gas. However, the majority of such movement between the LSP and SSP market is reflective of actual SSP consumption. The homogeneity of SSPs relative to LSPs makes it appropriate to use the RbD mechanism to allocate this consumption to the SSP market sector.

As the RbD mechanism's main purpose is to correct initial LSP allocation estimates, with actual data, any extension of this mechanism to the LSP market, as envisaged in Modification Proposal 0194, would almost certainly create a cross-subsidy between the SSP and LSP sectors. Using a proportion of RbD as the estimate of unidentified gas attributable to the LSP sector would also inappropriately assume that the unidentified gas

error varies as RbD varies. This would be illogical. Furthermore, in the event of a credit of additional energy to the LSP market, the LSP sector would receive a financial credit for the level of unidentified gas in its sector through RbD. Again, this would be illogical.

Comparison between use of RbD and a fixed allocation method to determine unidentified LSP gas(not to scale)



The Modification Proposal 0194 Development Work Group also considered the way in which transporters take into account theft and leakage as part of their network responsibilities. These losses (shrinkage) are currently estimated as discrete values based on analysis of network operations. In moving from a sliding percentage of total throughput to fixed volumes, Ofgem noted as part of its GDPCR consultation “*The evidence available shows that there is little correlation between shrinkage and throughput for the existing networks²*”. A fixed value was considered more appropriate.

We agree with Ofgem’s analysis and so propose that a methodology aimed at fairly and accurately allocating a volume of gas to the LSP NDM Sector should be based on that used for Shrinkage allocation.

Identification of Error

We believe that for these purposes the LSP market can be divided into two sectors, namely:

- NDM (Non Daily Metered)
- DM (Daily Metered – including Non-Mandatory DM)

While we have considered the use of sites equipped with AMR (Automated Meter Reading) as a separate category, it has been indicated

² <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=362&refer=Networks/GasDistr/GDPCR7-13>

by xoserve that the identification of NDM AMR sites would be very difficult as such sites are not explicitly identified within their systems at present. In the event of sizeable take-up of advanced metering in the market, then the methodology may be easily modified to reflect this.

The methodology will identify differing market activities that are contributing towards to the overall market error, namely:

- **Late confirmation, unregistered and orphaned sites.** It is our view that late confirmation LSP sites contribute nugatory levels of unidentified gas, as sites which are confirmed at some stage will have their estimated consumption corrected. We recognise that, in rare cases, late confirmation may occur where all of the energy may not be reconciled after the four year cut-off date. For Unregistered and orphaned sites, however, it is appropriate for the LSP sector to be allocated a suitable proportion.
- **Late Confirmation, unregistered and orphaned IGT.** We recognise that due to the greater propensity to new connections within IGT networks it is likely that these sites pose a more significant issue compared to DN sites and hence a separate value is appropriate.
- **NDM Shrinkage contribution.** Such shrinkage losses that are not accounted for by the transporters allowance. As DM sites are Daily Read and therefore don't use an estimation process such difference between the transporter allowance and the shrinkage losses should be confined to the NDM sector.
- **Theft and Unreported open meter by-pass valves.** The large majority of theft both alleged and proven is in the domestic sector. We do recognise that in the rare instance of theft at an LSP site, the volume of gas stolen per site tends to be greater than that at a SSP site and so consideration should be given to the level of such theft.

Outside of the late confirmation, unregistered and orphaned IGT charge, we have not made a distinction between IGT and DN sites, as we believe the issues that we have identified apply to all networks and there is no direct evidence that differentiation will enhance efficiency. In some cases, it is our view that this equal treatment is a benefit for the SSP market. For example, we believe that the majority of unregistered sites on IGT networks are SSPs.

It is envisaged that the values of these contributions to unallocated gas volumes should only be amended annually, using the same timetable as for the main announcement of LDZ transportation charges for the forthcoming year, as envisaged in the GT Licence which provides for a single annual change to these charges. This is to ensure that Shippers are able to include the impact of the envisaged allocation process as well as any change in transportation charges in their charges to their end-users. We would anticipate that the process for establishing the volume of gas to be allocated to the LSP sector would be similar to that for the transporters shrinkage calculations. For the LSP (NDM and DM) market sectors, these annualised volumes would then be apportioned monthly on the basis of total market

share, measured by volume. It is not appropriate to apportion costs by site, as the profile and consumption of LSP sites vary significantly. The prices to determine the final charge will be based on 30 day rolling SAP for the relevant month.

For the SSP market, the contribution of unidentified gas will be maintained as part of RbD. This mechanism remains a valid method of apportioning unallocated energy as SSP sites are relatively homogenous in consumption and behaviour.

By reducing the amount of gas accruing to RbD, the money accumulated from the LSP market would effectively be credited to SSP Users on the same proportional basis as RbD.

This Modification Proposal itself does not seek to determine the precise levels of unidentified gas that might properly be allocated to the LSP market. It is the Proposer's intent that independent industry analysis populates the matrix with values thus informing a revised and fairer apportionment of costs to various market sectors.

Our proposal

1. It is proposed that the UNC be modified to include provisions which provide for the allocation to the LSP sector of specific volumes of otherwise unidentified gas. We envisage that this could be achieved by adding an appendix to Section E, the "Large Supply Point unidentified gas allocation table", and cross referencing this Table as appropriate within the UNC. This table could then be used to allocate unidentified gas (which would otherwise fall to RbD) attributed to individual causes to the LSP sector. The initial table will show zero volumes allocated to the LSP sector, thereby maintaining the status quo but facilitating population of the table through implementation of further Modification Proposals.

It is envisaged that the table could be introduced in the following format:

Source of error (AQ)	Market Segment	
	LSP NDM (kWh)	LSP DM (kWh)
Late confirmation, unregistered and orphaned Sites	0	0
Late Confirmation, unregistered and orphaned Sites (IGT)	0	0
Shrinkage contribution	0	0
Theft and Unreported open meter by-pass valves	0	0

These causes are collectively referred to below as "NDM LSP unidentified gas"
NB. For the avoidance of doubt please note that this Proposal limits itself to

the consideration of energy charges and Transportation charges are excluded.

2. Any change to the size of each contribution of the NDM LSP unidentified gas, i.e. variation in the values in the table, shall be introduced through the implementation of a Modification Proposal. It is envisaged, but not considered to require any explicit UNC reference, that any proposal to vary the values in the table should be implemented in line with the same notice period and start date as for LDZ transportation charges, as specified in GT Licences.
3. AT M+1, the monthly NDM LSP Error Charge will be calculated for the relevant calendar month (“M”).
4. The calculation of the monthly NDM LSP unidentified gas cost shall be 1/12 of the overall NDM LSP unidentified gas (as specified in the proposed table) multiplied by the rolling average 30 day SAP starting on the 1st calendar day of month M.
5. At M+1 the NDM LSP unidentified gas costs will be levied on users as a proportion of their NDM LSP market share in month M. This market share will be derived from the site Aqs in the shipper’s ownership. For the avoidance of doubt this will include LSP Aqs for sites situated on LDZ CSEPs within the relevant shipper’s ownership. The transporters will raise debit invoices to all Shippers for their proportion of the unidentified gas. It is not envisaged that there will be any specific query process however standard invoice query rules would apply.
6. Provisions will be made for a reduction in RbD of the same value as the proposed debit invoices to the LSP sector. The reallocation of the accrued NSM LSP unidentified gas costs payments to the SSP Shippers will be made on the basis of their NDM SSP market share. Following feedback from xoserve it has been decided that this will be done following current RbD rules. It is therefore proposed that all refunds go into the one month RbD pot for calculating market share.

Comparisons with Modification Proposal 0194

Similar to Modification Proposal 0194 this Proposal limits itself to the reallocation of energy charges, such that Transportation charges are excluded.

A key concern with Modification Proposal 0194 is the linking of the SSP and LSP segments through the proposed extension of RbD. It would be difficult for LSP Shippers to contract in a way which mitigated the consequent risk of RbD exposure since its daily variance does not relate to the activities of the customer base.

It is the opinion of the Proposer and a number of members of the 0194 Development Work Group that there is no positive correlation between the size of the RbD energy allocation and the energy which should be applied to individual error categories. For example, it is wholly untenable that as the RbD volume varies there is a proportionate variation in the volume of Late Confirmed sites. As it is conceivable that RbD can provide a net credit to the LSP community, the use of RbD may also create the perverse outcome that LSP shippers are compensated for unidentified gas

This is further complicated by the fact that the sample data acquired by xoserve through the RbD Verification Process suggests that the level of the RbD “Remaining Balance” is not significant. In fact it is within the 95%

Confidence Level established through the Normal Distribution Sample Testing technique.

We believe that a methodology analogous to that developed by Ofgem for the current DN shrinkage process is simpler, cheaper and easier to apply than that put forward in Modification Proposal 0194, and better achieves the aims of the fair apportionment of unidentified gas. This alternate Modification Proposal does not extend RbD to the LSP market. The basis for this Modification Proposal is to allocate a fixed volume to the LSP sector for each of the error categories which best reflects the LSP Sector contribution to the error. This removes the anomaly proposed in Modification Proposal 0194 that error volumes move in parallel with RbD volumes.

b) Justification for Urgency and recommendation on the procedure and timetable to be followed (if applicable)

This modification has been raised as an alternate to Modification Proposal 0194 and so it should follow the same process.

c) Recommendation on whether this Proposal should proceed to the review procedures, the Development Phase, the Consultation Phase or be referred to a Workstream for discussion.

This Proposal has been raised as an alternate to Modification Proposal 0194 and so should be considered with that Proposal.

2 Extent to which implementation of this Modification Proposal would better facilitate the achievement (for the purposes of each Transporter's Licence) of the Relevant Objectives

A11.1 (f) So far as is consistent with sub-paragraphs (a) to (e), the promotion of efficiency in the implementation and administration of the network code and/or the uniform network code.

Our proposal introduces a framework that facilitates better informed decision taking with regard to the allocation between market sectors of unidentified gas. We believe that this Proposal achieves this objective with a far lower level of cost and complexity compared to Modification Proposal 0194.

3 The implications of implementing this Modification Proposal on security of supply, operation of the Total System and industry fragmentation

None identified

4 The implications for Transporters and each Transporter of implementing this Modification Proposal, including:

a) The implications for operation of the System:

The provision of a framework for determining the size of measurement errors will not have any implications on operation of the system.

- b) **The development and capital cost and operating cost implications:**
- None identified
- c) **Whether it is appropriate to recover all or any of the costs and, if so, a proposal for the most appropriate way for these costs to be recovered:**
- The costs of implementing this Modification Proposal do not require any special recovery outside of allowed revenue.
- d) **The consequence (if any) on the level of contractual risk of each Transporter under the Uniform Network Code of the Individual Network Codes proposed to be modified by this Modification Proposal**
- None identified
- 5 **The extent to which the implementation is required to enable each Transporter to facilitate compliance with a safety notice from the Health and Safety Executive pursuant to Standard Condition A11 (14) (Transporters Only)**
- None identified
- 6 **The development implications and other implications for the UK Link System of the Transporter, related computer systems of each Transporter and related computer systems of Users**
- None identified
- 7 **The implications for Users of implementing the Modification Proposal, including:**
- a) **The administrative and operational implications (including impact upon manual processes and procedures)**
- None identified
- b) **The development and capital cost and operating cost implications**
- None identified
- c) **The consequence (if any) on the level of contractual risk of Users under the Uniform Network Code of the Individual Network Codes proposed to be modified by this Modification Proposal**
- None identified
- 8 **The implications of the implementation for other relevant persons (including, but without limitation, Users, Connected System Operators, Consumers, Terminal Operators, Storage Operators, Suppliers and producers and, to the extent not so otherwise addressed, any Non-Code Party)**
- None identified

9 Consequences on the legislative and regulatory obligations and contractual relationships of the Transporters

None identified

10 Analysis of any advantages or disadvantages of implementation of the Modification Proposal not otherwise identified in paragraphs 2 to 9 above

Advantages

As this proposal seeks to provide a framework for the determination of unidentified gas values that the market must account for, neither itself nor Modification Proposal 0194 creates any immediate changes in gas allocation. It does have the following benefits however:

- This Proposal creates a clear and simple framework to allow consideration of the levels of unallocated gas to be allocated between LSP Shippers.
- The framework retains a level playing field between all shippers whether LSP NDM, LSP DM or SSP by ensuring there are no unintended cross subsidies.
- This Proposal provides a framework which can more accurately target costs at the LSP NDM sector, unlike Modification Proposal 0194 which assumes a linkage between RbD volumes and contributions to unidentified gas.
- This alternate Proposal avoids much of the complexity that is proposed by Modification Proposal 0194 and allows a greater range of solutions to be considered when determining appropriate values of unallocated gas to be apportioned to the LSP market.
- This Proposal maintains the separation between the LSP and SSP NDM markets, something which Modification Proposal 0194 would erode.

Disadvantages

None identified

11 Summary of representations received as a result of consultation by the Proposer (to the extent that the import of those representations are not represented in this proposal.

12 Detail of all other representations received and considered by the Proposer

13 Any other matter the Proposer considers needs to be addressed

14 Recommendations on the time scale for the implementation of the whole or any part of this Modification Proposal

Given that this proposal does not require in itself amendment to systems or processes we believe that it can be implemented immediately.

15 Comments on Suggested Text

16 Suggested Text

Code Concerned, sections and paragraphs

Uniform Network Code, Section E

Transportation Principal Document

Section(s)

Proposer's Representative

R Street (Corona Energy)

Proposer

R Street (Corona Energy)