

Ndidi Njoku,
Industry Codes Manager
Office of Gas and Electricity Markets
9 Millbank
London
SW1P 3GE
ndidi.njoku@ofgem.gov.uk

Simon Howe
Gas Network Codes Manager
Oak House
Worcester
Phone 01905 340720
E-Mail Simon.Howe@npower.com

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Review of Reconciliation by Difference (RbD)

Dear Ndidi,

Thank you for giving us the opportunity to respond to the consultation on RbD. I believe it is most important that the industry should understand why this method of charging was developed as well as considering if it is the most appropriate way of continuing to invoice Shippers.

From a philosophical view point, the inability to validate invoices is unsupportable and the payee is entitled to have sufficient information to ensure that the charge is correct. The Sarbanes Oxley law makes it important for companies that are listed in the US can demonstrate that due diligence has been followed in their financial matters. However from a practical point of view parties need to be able to balance the cost of validating the invoice against the cost of paying an incorrect invoice. The RbD process is a cheap system to operate and has done a reasonably satisfactory job within the limitations of the system and available data.

Unfortunately it seems we are entering a world of much higher energy prices and whilst it is impossible to predict with any degree of certainty it is most likely that prices will not revert to the level that existed a couple of years ago. As a result of these increased pressures Shippers will want to ensure that inefficiencies in the system are no longer masked through a simplistic apportioning process.

In order to manage our businesses efficiently as well as preventing any discrimination against a particular sector, we need to understand where and how our costs are derived. It has been known for sometime that not all gas offtaken is metered. With rising energy prices it has become more important to understand the extent of "lost" consumption, which in the RbD system is smeared across all Residential shippers. It does not seem that natural justice is served by burdening a single sector of the market with these losses whilst other areas escape.

The whole industry needs to understand the extent of these hidden costs. If it transpires that these losses are minimal then it might be that Shippers would be content with the status quo. However, analysis of our own portfolio suggests that the problem is of a size that warrants further investigation. Only The Transporters hold all the data, so in order to ensure impartiality an independent party should be commissioned to perform this analysis. If this study backs up our findings, then a subsequent consultation should consider what system could replace the current process and investigate what the likely costs would be.

npower

Oak House
Bridgwater Road
Worcester WR4 9FP

T +44 (0)1905/34 05 21
F +44 (0)1905/34 04 88
I www.npower.com

Registered office:
Npower Limited
Windmill Hill Business
Park
Whitehill Way
Swindon
Wiltshire SN5 6PB

Registered in England
and Wales no. 3653277

We have provided some additional commentary and responses to the questions raised in the consultation and this is in the attached document. I am happy for this document to be placed in the public domain.

We hope that these comments are helpful and would be happy to discuss these matters further.

Yours sincerely

Simon Howe
Gas Network Codes Manager

Review of Reconciliation by Difference (RbD)

Ofgem consultation: Npower Response

12 May 2006.

The RbD process

The pros and cons surrounding the introduction of the RbD are a matter for history. It uses the simple theory that all the gas, with the exception of Shrinkage gas, is consumed by the end users of the Shippers and that Transporters should recover all their Transportation costs. Exactly who pays the costs is immaterial and provided that the Transporters can demonstrate that each Shipper is charged appropriately then it appears that they consider their job done.

The RbD process was an inexpensive system to develop and is to operate in that it is only required to reconcile a small percentage (about 5%)¹ of all the NDM meter points. Despite this small percentage the above threshold meter points actually account for the majority of the gas consumed within an LDZ².

The RbD process only reapportions the Commodity charge and the energy associated with the consumption. It does not impact the Capacity charge. Over the years there have been a number of consultations that have considered the question of cost reflective charging. There is currently a split of 50/50 between Capacity and Commodity. Should a more cost reflective proportion be introduced it will greatly increase the percentage of the Capacity charge. It has been suggested that this could be even as high as 99/1 for the Capacity / Commodity ratio. If there was a move to this sort of arrangement then the value of the Commodity reapportionment in the Reconciliation invoice would be negligible and only the energy would be of any consequence.

The Capacity costs are apportioned to each shipper according to their percentage share by AQ of the whole SSP market. Charges are raised on a daily basis within an LDZ and then aggregated to produce a monthly invoice. The Shipper has 12 days from receipt of the invoice to pay the Transporter.

The inability of shippers to reconcile their Transportation costs to user's consumption at customer level is a serious flaw in the process. Whilst some of the Suppliers maybe prepared to accept that their size of their customer base is too large to warrant the exercise, to deny a Supplier the opportunity to validate their invoices is untenable. The inability of Shippers and by inference Suppliers to control their costs could ultimately detrimentally impact the end consumer.

Shippers have the opportunity to have the meter point AQs adjusted on an annual basis to more correctly reflect the likely consumption in the next Gas Year³ based on meter reads in the current and previous Gas Years. This process is known as the AQ Review. The aggregate AQ of a Shipper's portfolio in comparison to other Shippers determines that Shipper's share of the costs. It is for this reason that Shippers generally want to ensure that no other Shipper is manipulating the Review process in order to unfairly bring down their share of the market. Should any shipper succeed in doing so, it will have part of its Transportation costs paid by the other Shippers, thereby gaining an unfair advantage.

¹ xoserve would be in a position to provide exact percentages

² Again xoserve can provide a figure but this may vary from LDZ to LDZ

³ The Gas year is From 1 Oct to 30 Sep

Arguments that have been raised about the difficulties of handling the quantities of data required for a full reconciliation of all meter points are undermined by the processes within the electricity market. There are about 27.5 million meter points in the Electricity market compared to about 22 million in the gas market. Whilst there may be faults with the Electricity Settlement process, it demonstrates that such large amounts of data can be handled. Indeed, IT systems have become more capable of managing large data requirements over the 8 years since RbD was introduced

The amount of gas that enters an LDZ is metered at the LDZ NTS offtake point and ought to be precisely known. However, there have been instances where the problems with data inputs such as pressure and temperature correction factors or incorrect calibration have been discovered which have led to significant adjustments in later years. This lack of uncertainty about the shipper's costs is adding to pressure on suppliers which is further exacerbated by the current volatility in wholesale gas prices. Suppliers are unable to recover any of these costs from their customers for the periods concerned.

One of the flaws with the RbD process is that a certain amount of gas whose consumption is not recorded on meters is smeared across the domestic shippers according to their percentage of the whole below threshold market. What concerns us is that this amount of unrecorded gas has never been established.

The only way to determine this amount of gas is to perform a full reconciliation of all meter points. This would be a major exercise if carried out for the whole country. However, if it was carried out for just one or two LDZs then we would have an indication of the scale of the issue. The reconciliation would have to use data that was at least 2 years old in order to capture as many meter reads as possible.

The amount of gas that is consumed within an LDZ is attributable to:

1. Shrinkage
2. Real Consumption(Both Daily Metered and Non Daily Metered)
3. Changes to linepack
4. Theft of Gas upstream of the Emergency control valve
5. Theft of Gas downstream of the Emergency control valve
6. Late registered Sites
7. Unregistered Sites
8. Unrecorded bypass
9. Other reasons.

The first three can be measured from meter reads or deduced from industry data, whilst the rest can only be guessed at. Various attempts have been made to estimate the extent of theft but none have been convincing. In fact Transporters have only a Licence obligation to investigate theft but to not to detect it. As indicated earlier the extent of some of these "offtakes" is unknown and the RbD process does nothing to rectify this problem.

Transco as was and now xoserve have through the RbD Sub Group sought to provide some analysis of RbD data. Their method of estimating the daily

consumption of SSPs based on a sample of actual meter reads⁴ spread both geographically and by consumer profile has produced results which required further investigation.

In all cases the raw data showed that there was more actual consumption than would be expected from extrapolating from the sample data. These imbalances ranged in size from 13 TWh in North Thames to 2.55 TWh in the Northern LDZ. Some of the variances were explainable, for instance there was no allowance for Theft of Gas, Threshold Crossers, LDZ postcode discrepancies, Temperature and Pressure corrections etc. After making allowances for these adjustments the range of discrepancies dropped to -0.16 TWh in the Northern (the only one below the line) and 10.74TWh in North Thames. The aggregate difference after all known and calculated adjustments is 40.72 TWh which represents gas that Transporters have charged for which their model would suggest they should not have.

xoserve have always issued a “health warning” about the statistical nature of this work and claim that 1% margin of error is not unreasonable. It would be more reassuring if there had a greater number of LDZs below the line, as it is 11 out of 12 LDZs⁵ have greater gas through put than the model would predict.

We believe that British Gas have recently decided that they are no longer going to provide this panel data, which will undermine Shipper confidence that xoserve can demonstrate the integrity of the process. Unless xoserve put in place alternative arrangements to collect data, the work to explain away the outstanding 41 TWh of over charged energy and Transportation costs will cease which we think is unacceptable.

There was a project within Transco whose progress was reported to subgroup, but this was halted due the pressures of the sale of the Distribution Networks. Project Delta was investigating the incidence of addresses in the North Thames LDZ on the Sites and Meters database against Ordinance Survey maps. Initial investigations suggested that there were over 1 million sites which were on the maps but not on the database; this was reduced to about 77,000 when CSEPs, and other factors were taken into consideration. Although the work was suspended it is likely that a number of the 77,000 will be shown not to be gas consumers. Nevertheless, coupled with anecdotal evidence of consumers never having been registered, it does suggest that nationally there could be a fairly large number of unregistered sites. It would be informative if this work were completed even if it were to dispel any myths.

RbD Audit Subcommittee

The RbD Audit Subcommittee is a sub committee of the Uniform Network Code committee. The scope of the audit is very precisely described in the UNC and essentially is to ensure that processes and methods used to calculate the RbD invoices are in accordance with those rules. The audit does not cover the quality, accuracy or completeness of the data used in the calculations. Since data quality is the responsibility of the Shippers and Transporters, xoserve is in the invidious position of having to accept it at face value. So we have the somewhat bizarre situation that we can be reassured that the calculations used to produce the RbD

⁴ Provided by British Gas

⁵ Wales North and Wales South are considered to be a single LDZ due the small sample size in Wales North distorting the results.

invoice are correct, but we do not know if the data used in those calculations is or is not accurate. Transporters are unconcerned with who pays what as long as they recover their income and can demonstrate that they have followed correct procedure.

It is far from clear what real benefit the annual audit delivers. The auditor has for the most part delivered a clean bill of health on the process for a number of years. Unless xoserve replace the current processes and control with new ones it is likely that the Auditor will continue to approve the RbD process. The fact that Shippers have not raised any mods to change this process is not because they are necessarily satisfied with it, but more that they recognise the quality of the data is outside the control of xoserve.

AQs

AQs are an estimation of the expected consumption of a meter point based on historic meter reading data. There is growing concern that the quality of meter asset data is slowly deteriorating as an indirect consequence of RGMA. The management of the RGMA project with Shippers and Transporters separately interpreting the requirements and then implementing solutions which were not entirely consistent was unfortunate.

As a consequence of this situation the guardian of the information xoserve is not responsible for the quality of the data it holds. Shippers have quite correctly a duty to ensure that the data they submit is accurate. However, due to the inherent weaknesses as previously described the reliability of the data is almost certainly declining. If a Shipper submits incorrect data to xoserve that event may have several consequences.

- Incorrect AQ calculation at the next review
- In correct AQ at Change of Supplier
- Inappropriate allocation of cost.

The incorrect AQ will impact the share of transportation costs, which on an individual basis may not be that large. The main impact will be in the Change of Supplier process. The registration process will cause the incoming Shipper to take on the new customer with an inaccurate AQ. As they will have no meter read history the incoming Supplier will be unable to challenge the AQ, and it is most likely that they will be invoicing their customer incorrectly. The since current systems do not permit retrospective correction of meter asset data the incoming shipper is faced with two choices, either wait for the next AQ Review or having to incur unnecessary time and expense to amend the data so that the AQ is corrected.

AQ Governance and the Review process

The AQ Review process has always been viewed with a great deal of mistrust. The knowledge that by gaming the AQs a Shipper will pass some its costs onto a competitor have left the industry suspicious of inappropriate action by other Shippers. Rumours have often circulated that a Shipper has cheated, despite efforts by shippers and transporters to tighten the UNC process, and the lack of transparency over the governance of the process has not helped to dispel these rumours. A positive step will be a Mod (if implemented) that will place a requirement on xoserve to publish data about all Shipper activity during the AQ Review, but until then the process is reliant on Ofgem investigating possible cases on UNC non compliance which may constitute licence breach.

A feature of the AQ Review process that needs exploring is that the apparent anomaly between AQs above the threshold and those below it. For LSPs, when the deemed consumption, as derived from the AQ, is reconciled against actual meter reads, the result generally tends to reduce the consumption. It must follow that the original AQs are overstated. Since the same algorithms are used to calculate LSPs as well as SSPs it seems only logical to assume that similarly overstated AQs are produced for SSPs.

The RbD process shifts the Actual Vs deemed consumption difference from LSPs to SSPs. If the whole system is to balance it implies that the SSP AQs are understated. So it is difficult to understand how the same process can produce such diametrically opposite results either side of an arbitrary point such as the threshold between domestic and I & C customers. Logically it is more likely that the SSP AQs are equally overstated.

We have performed some analysis of our own portfolio which due to the sensitivity of this information is contained in a separate confidential document. Only xoserve have the data to produce national statistics showing the extent of each month's adjustment of actual consumption as deduced from meter readings against the deemed consumption based on the AQ. If our numbers are matched by other shippers it suggests there is a major problem with the AQ process, which then undermines the RbD process.

The AQ Review process compresses into a short period within the gas year a complete re-forecasting of expected consumption for the following year based on data from meter reads from quite often the previous year. Those meters which do not have meter reads that fall into predetermined time periods are not eligible for recalculation and are rolled forward unchanged.⁶

Every year a number of AQs are produced that defy expectation. Ordinary domestic properties have an AQ in the hundreds of thousands and sometimes in the millions of KWh instead of the normal tens of thousands. Because the rules surrounding challenges are strict, it is often difficult to get the AQ corrected. Even when the AQ has been corrected only some of the erroneous costs incurred are refunded. A shipper does not get back any overcharge for Capacity costs. Under the current pricing structure this can be expensive, but the situation would become even worse if as seems likely there is a move towards more cost reflective charging.

There will always need to be some mechanism for converting predictive consumption into actual consumption, but it far from clear that the present method is appropriate. Alternatives such as a continual updating upon receipt of a meter read need to be subjected to a detailed cost benefit analysis. Only then can an objective decision be reached. It is likely that this would be part of a similar process for the future of the RbD process.

Shrinkage

LDZ Shrinkage is the amount of gas that Transporters provide into the system to cover losses through leakage, theft of gas, own use gas and incidental escapes of gas. It is calculated as a percentage of gas of the total offtake from the NTS/LDZ interfaces. It is assessed in the summer for the start of the year on 1st October. There is a Shrinkage Forum under the control of the Joint Office which meets about three times a year but progress in resolving issues is tortuous and in the control of the

⁶ 2005 was an exception due to the introduction of new weather correction data. All other years this obey this rule.

Transporters. Ofgem have the right to disallow the proposals if they feel that the amount proposed by the Transporters is inappropriate.

The rates of leakage were established as a result of Industry wide tests carried earlier this decade. The rate varies with the nature of the pipe, the pressure applied in the system and the length of pipe, if Mono Ethylene Glycol (MEG) is used and other local factors. The old cast iron pipes had much greater rates of leakage than the new polyethylene replacement pipes so the rate has dropped over the years. At this time we don't not believe it is necessary to replicate the test as they were fairly exhaustive. The calculation of leakage is a simple mathematical calculation, though this process is not audited, which is a weakness in control.

Theft of Gas

Theft of gas is a problem for the whole industry but in terms of shrinkage Transporters are only responsible for that gas offtaken upstream of the Emergency Control Valve, as defined in Standard Licence Condition 7 paragraph 11. In this licence condition there is no requirement on Transporters to proactively detect cases of theft, only to react when notified of an actual or potential event. There is a somewhat paradoxical situation in that Transporters are not required to detect theft, so very little is discovered so there is an inference that there is hardly any theft upstream of the ECV. Transporters last year reduced this portion of Shrinkage allowance, against the opinions of some of the Shippers, on the basis that they had found only very little.

Own Use Gas

Transporters use gas for a number of purposes in the transportation of the gas through the system. The principal uses are preheating the gas before pressure reductions and periodic venting.

When gas goes through a pressure drop it experiences a well known phenomenon of cooling, the extent of cooling depends upon the pressure drop. In order to prevent damage to infrastructure and water vapour in the gas condensing, the gas needs to be heated. This is done by passing the gas pipes through heated water baths. The heater units of these water baths range in size from domestic central heating units to very large 3 MW units.

Shippers have expressed concern that very few of these heaters are metered, and Transporters rely upon theoretical consumption calculations based on a small sample to determine how much gas has been used. At a recent Industry Forum Transporters admitted that they could not readily provide information as to the numbers and nominal annual consumption of these heaters. Shippers have continued to express the opinion that all offtake point should be metered, but some Shippers might be willing to consider allowing the smallest water heaters to be exempt on the grounds of cost efficiency.

A study done by Advantica Stoner published in May 2002 was used to support amount of Own Use Gas that Transco allowed for in their Shrinkage proposals. However, only 34% of LDZ sites had suitable data and there was significant regional incompleteness. In fact East Anglia, North West and Scotland had no data at all, whilst North Thames, Wales and the South West supplied a disproportionately large share of the data.

There is also concern about the efficiency of these water heaters as Transporters have based their theoretical consumptions figures based on tests carried out on a handful of installations in the early 1980s. Advantica Stoner's report comments on the "extremely large size of uncertainty associated with the heater efficiencies".

Given the incompleteness of the statistical data and the report's authors own misgivings about the efficiency of the water heaters we believe that too much

credence has been given to this report. Metering would remove any doubts. It should also be noted that this process is not audited.

Incidental escapes of gas

An additional factor in the Shrinkage calculation is the incidental escapes of gas. These are unplanned outages such as in construction, road repairs or accidental damage to mains⁷. The total deemed quantity of escaped gas in any one year is part of the calculation of Shrinkage allowance for the following year. Historically this has not been a significant amount compared to the amount of gas lost through leakage. However, there is no transparency in this process and it is not audited.

Costs

The financial implication of Shrinkage may not have been too significant when the cost of gas was around 0.5 pence per KWh but now the costs have risen significantly⁸ there needs to be much greater attention to the overall cost.

The increase in gas costs and the lack of transparency in the whole Shrinkage process is a cause for concern, particularly as it appears to be having an increasing influence on the volatility of transportation charges.

Advanced Metering Technology

The basic concept behind most domestic meters has not changed in over 100 years⁹, though improvements in technology have increased the accuracy of the meters. Larger I & C meters have changed significantly over the last 50 years and rely upon the rate of flow and the pressure of the gas to infer the quantities measured. It is unlikely that the basic domestic meter will change much in the manner of measurement but we are likely to see major improvements in the recording and reporting of the gas consumption over the coming years.

The advent of low cost computer chips and mobile telecommunications has created an environment in which major leaps in data management are possible. A problem though is that there is a stock of meters which still have many years of functional life. To exchange these meters with new advanced meters will result in replacement of a large number of obsolete meters before the end of their useful life.

Additionally, the industry will have to be able to support these new types of meter at the same time otherwise Suppliers who incur the cost of installing the new meters may find them being replaced by an incoming Supplier who is not able to support them leaving them with a stranded asset.

The RbD process has meant that Transporters have not needed to have meter reads for SSPs for the invoicing of the charges. The only reason for Shippers to submit SSP meter reads to the Transporter is to maintain the accuracy of their AQS.

Whilst providing the end customer with more immediate consumption may be of interest, the real benefit of Advanced Metering technology will be for the Supplier to be able to obtain meter reads in a much more controlled manner. The use of mobile phone technology will enable the data collector to be more certain of when a meter read is obtained. However, not to put the improved flow of metering data to the greatest possible use will jeopardise any timetable for its introduction.

⁷ All Gas escapes over 7325 KWh are RIDDOR reportable.

⁸ SAP for the Winter Nov 05 Mar 06 was just over 2.0pence per KWh

⁹ The first dry meter was invented in 1820.

Energy Efficiency

Whilst not directly related to RbD this is more to do with the manner and frequency of updating AQs. The argument is that if a Shipper introduces energy efficiency products to a household then the AQ of the meter point should be reduced. Without meter readings to support a reduction it does not seem right that an arbitrary reduction should be granted. There may be calls to have AQs increased when the domestic arrangements within a household (eg if the birth of the first child means that there is 24 hour occupation of a property, whereas previously both adults were at work). It is not practical to be selective and this question has more to do with reform of the AQ process rather than questioning the validity of the RbD process.

Questions

1. Given the original rationale and benefits of RbD, do you consider it remains valid under the current GB Gas arrangements?

- RbD was introduced as a simple solution for the allocation of costs to an industry coming to terms with the first stages of domestic competition. RbD had to be introduced at the 11th hour due to weakness discovered in Transco's systems. As a consequence it allowed Shippers and Suppliers the opportunity to concentrate on obtaining market share without having to create a number of complex systems. Apart from the incumbent Gas supplier British Gas all other suppliers were new to the market and did not have any historic processes. This was in marked contrast to the opening of the electricity market where the Public Electricity Suppliers were ex CEGB and inherited ECMS as a starting system.
- The market has matured and the share of customers has stabilised, Shippers and Suppliers have been able to improve their internal processes and systems. So the need for an uncomplicated system is no longer valid.
- The Electricity market has demonstrated that systems and processes can handle quantities of data that might be produced if RbD was replaced by individual meter point reconciliation.
- RbD has served its purpose and unless a thorough cost benefit analysis clearly demonstrates that the costs of developing a replacement system outweigh the benefits it should be replaced. The timetable for introducing its replacement could be linked to developments in metering

2. Are the costs and benefits of the RbD process transparent to the industry, and if not what how can transparency be improved?

- Shippers have little direct costs to bear in the running of the RbD system, it is xoserve that have the majority of the costs.
- Only xoserve hold a complete view of the data, so Shippers have an almost impossible task in trying to establish if the charges levied are reasonable
- Attempts have been made to at least verify the number of MPRNs charged for on any one day, but these have not proved satisfactory due to issues of timing and customer churn.

- The basic premise of the RbD system is that there is no transparency in the allocation of the charges, and whilst there may be possible improvements they are unlikely to create any real improvement in usefulness of the data.

3. Do the various RbD related industry work groups provide sufficient governance and transparency of the RbD arrangements?

- The RbD sub group offers Transporters an opportunity to demonstrate that the RbD process is working reasonably well.
- It appears that more gas has passed through the system than their model suggests should have.
- Unfortunately, the result of several years work in comparing the deemed amount of gas consumed against the metered amount of gas has failed to satisfactorily close the gap between them.
- It has identified a number of possible causes as to reason for the gap, but even allowing for these there is still a significant difference outstanding.

4. Is there sufficient transparency of the data or the information xoserve provides to the Industry?

- Due to the nature of the process it is not possible to allow participants to see all the data. Only that data which is pertinent to their portfolio is visible to the Shipper. Not only does this comply with the data protection measures but it is unlikely that Shippers would want detailed information about their customers available to the open market.
- xoserve have to tread a fine line between providing information which is useful to the shipper without giving too much away. Generally they manage this reasonably well.

5. Is the scope of the current RbD Audit appropriate?

- The RbD Audit has investigated whether the procedures and controls employed by the Transporter to calculate the RbD values are in accordance with the rules as described in the UNC.
- The Auditor was changed in the last couple of years so the processes have been scrutinised by more than one organisation.
- We believe that the Audit has always been passed.
- It does not cover the quality, accuracy or completeness of the data used in the calculations.
- Since these characteristics of the data are to a certain extent outside the control of xoserve it would be unfair to hold them responsible.
- However we have the somewhat bizarre situation that we can be reassured that the calculations used to produce the RbD invoice are appropriate, but we do not know if the data used in those calculations is or is not correct.
- Transporters are unconcerned with who pays what as long as they recover their income and can demonstrate that they have followed correct procedure.

6. Are there sufficient incentives on all parties to limit the size of RbD?

- The approval of Mod 637, which saw the introduction of financial incentives upon shippers to clear User Suppressed Reconciliation Values, more

commonly known as Filter Failures, has helped RbD shippers collectively by significantly reducing the backlog of filter failures..

- The financial incentives are recycled back to the RbD community via the RbD process.
- Analysis of previous behaviour did not show any bias towards clearance of Filter Failures, except for a general resolving the oldest first.
- The rate of clearance should continue to be monitored to identify at an early stage if Shippers are not complying with UNC rules. Should this be the case then consideration could be given to reviewing the level of incentives.

7. Do you consider there is sufficient transparency in the operation and accuracy of industry processes such as the AQ review and shrinkage calculations?

- It has long been suspected that some Shippers have used this process to deliberately obtain a total AQ for their portfolio less than it should be, through the careful selection and partial submission of data.
- Historically only Ofgem and Transco (now xoserve) have had sight of statistical information which may throw light on any inappropriate Shipper behaviour.
- A modification to situation is currently underdevelopment which if approved may assuage Shippers concerns about possible gaming, but until that time speculation will continue.
- Shrinkage is assessed in the summer for the start of the year on 1st October.
- There is a Shrinkage Forum under the control of the Joint Office which meets about 3 times a year but progress in resolving issues is tortuous and in the control of the Transporters.
- The rates of leakage were established in Industry wide tests carried earlier this decade. The calculation of leakage is a simple mathematical calculation.
- Advantica Stoner produced a report on Own Use Gas in May 2002.
- The validity of this report is weakened by the incompleteness of the statistical data and the authors own misgivings about the efficiency of the water heaters.
- Own Use Gas should be metered, as with any other offtake from the system.
- None of the Shrinkage processes and calculations are audited which introduces an inherent weakness.

8. Do you consider the existing governance arrangements around these processes to be appropriate?

- There are detailed rules defined in the UNC as to how the AQ Review should be carried out.
- However, in the AQ Review for 2005 some of the rules regarding the earliest dates that meter readings could be used were over ridden. A change in the weather correction data was cited as the reason for this. It is not disputed that this change was the cause of xoserve's inability to use the full range of data, and that it only affected just under 500,000 meter points. Nevertheless, it is symptomatic of the Transporters ability to be selective about how the rules should be applied.
- Shippers are often resource constrained during the AQ Review due to the timetable coinciding with the annual holiday season.
- xoserve prepare reports on Shipper behaviour during and after the whole process for the benefit of Ofgem. That Ofgem have never publicly commented upon these findings leaves the report's effectiveness open to question.

- There is no audit of the process by an external party, and perhaps if this were done then greater comfort could be gained by Shippers that the process was being carried out correctly and even-handedly.
- None of the processes and calculations carried out in the calculation and application of Shrinkage are audited.
- Transporters do not have meters attached to offtake points for many water heaters, which does not fit well with the rest of the market rules.

9. Do you consider there are there appropriate incentives in place on relevant parties to ensure the timeliness and accuracy of these processes?

- Correct AQs are the basis for not only more accurate Transportation and energy costs but also better information with which to invoice their customers.
- The incentive on Transporters is to demonstrate that their processes do not discriminate against individual shippers.
- For Shrinkage, the incentive is only on the Transporter in that the lower the Shrinkage allowance the less gas they need to procure. The fact that they control the data and calculations means that Shippers have little ability to challenge the results
- In the past Shippers have not placed Shrinkage high on their priority list but it was interesting to note that last year 2 Shippers raised albeit unsuccessful challenges to the Allowance.
- The advent of significantly higher gas prices will undoubtedly focus more attention onto this topic.

10. Do you consider that the timing and scope of the AQ Review is appropriate?

- It is not clear why the AQ Review process has to be carried out during the relatively short period in the summer. It creates a bottleneck of activity for both Shippers and xoserve. Meter reads are collected throughout the year, but the AQ Review rules exclude a large number of these reads from the first pass calculations.
- AQs could be recalculated upon the receipt of a meter read throughout the year. There might be a need to restrict the number of changes and extent of changes to a minimum before the change would be applied. Such an ability to maintain accurate AQs that would reflect current rather than historic consumption would be an extra incentive on Shippers to supply accurate reads more frequently.
- More frequent updates should help the Transporters produce more accurate demand forecasts enabling Transporters and Shippers to manage the system more efficiently.
- The introduction of Automated or Smart Metering in a more timely manner would facilitate the management of obtaining meter reads in a predetermined pattern. So for example Meters could have a semi annual slot when their readings could be used to update the AQ.

11. What would the likely costs and benefits be of introducing Meter Point Reconciliation to all supply points?

- Each Shipper will have developed their own systems to manage their settlement processes, so the costs will vary dependent upon the characteristics of the individual system. It is not possible to assess what

costs other Shippers would incur collectively and difficult at this stage for us to comment or what it would cost to adapt our systems.

- xoserve are the only organisation that could judge the amount of work required to update their system.
- The benefits of reconciling all transportation charges against meter reads are
 - o domestic Shippers will be able to compare their costs against the sales.
 - o the amount of unallocated gas can be established, and be apportioned across customers rather than a single sector.
 - o this may identify a number of weaknesses in the current arrangements which have been hitherto masked.

12. What conditions would need to be satisfied in order for individual Meter Point reconciliation to be practicable, and to what timescale?

- The main condition that needs to be satisfied for Individual Meter Point reconciliation is to establish if the results from a cost benefits analysis provide sufficient incentive for the industry to undertake such a project.
- Subsequently, there are 2 principle requirements to enable this to happen, a system or systems capable of handling the quantities of data and the regular supply of good quality data from all meters across the country.
- The Electricity market handles about 27.5 million meters whilst the gas market has less than 22 million meters. Lessons can be learnt from the electricity model.
- The supply of good quality data will be problematic to achieve if the current meter provision and meter reading arrangements are continued. Despite Suppliers best efforts the quantity of good quality data being provided to the Transporters is unlikely to enable Individual Meter Point reconciliation to be carried out with the degree of accuracy required.
- The accelerated introduction of smart metering across the country would not just benefit consumers in their energy management but would provide the regular supply of data that Individual Meter Point reconciliation needs to function effectively.

13. Would it be feasible for shippers to choose whether their supply point should be individually reconciled or processed through RbD?

- The quantity of unknown consumption is smeared across the RbD Shippers according to their percentage share of the AQ of the whole domestic market.
- If Shippers were allowed to choose to have individual meter points reconciled then those Shippers who did not elect to follow this route would pay for the misallocated consumption that previously had been charged to the others.
- It would not efficient for xoserve to have run more than one system for any length of time.

Appendix 1: Glossary

AQ: The Annual Quantity of consumption in KWh. It is an estimate of the likely consumption of a meter point based on historic consumption data.

LMAC: LDZ Mis-Allocated Consumption, That consumption which takes place within an LDZ which is not accounted for by Shrinkage, or metered consumption.

LDZ : Local distribution Zone

KWh: Kilo Watt hour basic unit of gas energy

MWh: Mega Watt hour, 1000 KWh

GWh: Giga Watt hour, 1000 MWh

TWh: Tera Watt hour, 1000 GWh

RbD: Reconciliation by Difference, a means of allocating transportation costs to Shippers according to the percentage size of their portfolio.

NDM: Non Daily metered, meters that are not read on a daily basis.

LSP: Large Supply Point, a supply point with an AQ greater than 73,200 KWh. Often referred to as an I & C Supply point.

SSP: Small Supply Point, a supply point with an AQ below the 73,200 threshold and often referred to as a domestic meter point.

CSEP: Connected System Entry Points, a common term that refers to an IGT system within an LDZ

IGT: Independent Gas Transporter

NTS: National Transmission System

RGMA: Review of Gas Metering Arrangements