

Modification proposal:	Uniform Network Code (UNC): Extension of DM service to enable Consumer Demand Side Management (UNC 088)		
Decision:	The Authority ¹ has decided to reject this proposal		
Target audience:	The Joint Office, Parties to the UNC and other interested parties		
Date of publication:	27 July 2007	Implementation Date:	N/A

Background to the modification proposal

At present the UNC restricts the frequency of meter readings that can be submitted to xoserve, to no more than:

- in the case of a Monthly Read Meter, every 7 Days;
- in the case of a Larger Annual Read Meter, every 14 Days ;
- in the case of a Smaller Annual Read Meter, every 63 Days.

These limitations were put in place by UNC modification proposal 0693 'Revision of the NDM 'More Frequent Reading' provisions' (August 2004). Modification proposal 0693 which was raised by Transco (as was) in response to fears that the increasing use of Advanced Meter Reading (AMR) technology would result in the settlement systems being overwhelmed with meter reading data.

The limits established by Modification proposal 0693 also restrict shippers to submitting no more than one read a week for any Non Daily Metered (NDM) site, irrespective of how many reads are collected. Thus, shippers are unable to submit meter reads for NDM sites on a daily basis and therefore unable to use AMR technology for settlement purposes. Instead, any settlement and reconciliation that occurs for NDM sites is based on consumption which is apportioned by utilising the demand profile of the applicable End User Category (EUC)².

The modification proposal

The intention of UNC Modification Proposal 0088 ('the proposal') is to modify the UNC to enable shippers, instead of Gas Transporters (GTs), to manage the daily submission of meter reads from NDM sites, with AMR technology, which would be termed DM(AMR) sites, to the Transporter agent (xoserve). The proposal would require shippers to submit at least two consecutive reads every calendar month for at least 90% of the DM(AMR) meters for which it is responsible. Shippers would also be required to use best endeavours to submit meter reads on a daily basis.

UNC Panel recommendation³

At the UNC Modification Panel meeting held on 21 June 2007, of the 8 Voting Members present who were capable of casting 9 votes, 2 votes were cast in favour of implementing this proposal. Therefore, the Panel **did not recommend implementation** of this proposal.

¹ The terms 'the Authority', 'Ofgem' and 'we' are used interchangeably in this document. Ofgem is the Office of the Gas and Electricity Markets Authority.

² For the purposes of demand estimation, each NDM Supply Point Component is assigned to an End User Category (EUC) for which a Demand Model is created. Further details can be found in section H of the UNC document, which can be viewed on the Joint Office of Gas Transporters website at www.gasgovernance.com

³ The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules.

The Authority's decision

The Authority has considered the issues raised by the proposal and the Final Modification Report (FMR) dated 21 June 2007. The Authority has considered and taken into account the responses to the Joint Office's (JO) consultation on the proposal which are attached to the FMR⁴.

In principle Ofgem strongly supports measures that encourage innovation in metering. Better metering has a crucial role to play in improving the accuracy of settlement, the consumption information customers receive and the ability of the demand side to participate more actively in the market. This proposal has elements which are fully consistent with encouraging this development. However, some aspects of the proposal have been not sufficiently explained and justified (compared to alternative measures that could be taken) and in other areas important information, against which the proposal could be judged, is missing.

The Authority considered that it does not have sufficient information to decide that implementation of the modification proposal will better facilitate the achievement of the relevant objectives of the UNC⁵.

The Authority has not concluded that implementation of the modification proposal will better facilitate the achievement of the relevant objectives of the UNC⁶, and therefore **does not direct that it be implemented.**

Reasons for the Authority's decision

We consider that the proposal potentially impacts on the facilitation of relevant objectives (a), (c), (d) and (f) of the UNC, and have set out our consideration of the proposal against each of those objectives below, and why we consider that we do not have sufficient information to conclude that the Proposal would better facilitate the achievement of these objectives.

A11(a) the efficient and economic operation of the pipe-line system;

In the discussion below we consider the arguments relating to the potential benefits of this proposal, the issues raised by responses to the JO consultation and the basis for the proposed minimum meter reading frequency.

Potential benefits

The Proposer and responses to the JO consultation highlighted two main benefits that could potentially better facilitate this objective: enhanced information provision and increased demand-side response. These are discussed further below.

Enhanced Information provision

The Proposer argues that, if implemented, the proposal would provide shippers with the ability to submit extra meter reads to xoserve that would provide GTs and the System Operator (SO) with more accurate information on a DM(AMR) site's consumption.

⁴ UNC modification proposals, modification reports and representations can be viewed on the Joint Office of Gas Transporters website at www.gasgovernance.com

⁵ As set out in Standard Special Condition A11(1) of the Gas Transporters Licence, see: http://epr.ofgem.gov.uk/document_fetch.php?documentid=6547

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A number of respondents considered that the provision of this information to xoserve would provide shippers with an opportunity and incentives to better manage their imbalance positions. Also, the SO would have more accurate information on system demand, which would enable it to make more informed balancing decisions. These respondents, as well as the Proposer, believe this would in turn facilitate the efficient and economic operation of both the National Transmission System (NTS) and Distribution Network (DN) pipe-line systems.

We recognise that the use of AMR technology of the type envisaged in this proposal could deliver benefits by providing improved information for shippers, GTs and the SO. However the proposal entails costs (for further information on costs please see objective (f)). The proposal also does not provide conclusive or sufficient information on the number of sites that are likely to elect to be DM(AMR). This means we are unable to assess whether the benefit would justify the costs associated with implementing this proposal (although we note that the *potential* benefits to customers from more smart metering are large and we would expect benefits to far exceed implementation costs for many measures of this kind).

Increased demand-side response

The Proposer, as well as a number of respondents, argue that the ability of DM(AMR) sites to reduce consumption in response to tight gas supply and demand margins could reduce demand on the system. This could lead to a reduced role for the Residual Balancer, as well as help enhance security of supply. Although a few respondents stated that they did not consider that DM(AMR) sites would reduce their load or 'turn-off' on high priced days.

We agree with respondents who highlighted that the Proposal does not contain sufficient information regarding the potential level of demand side response that DM(AMR) sites could provide. This again stems from the fact that the proposal does not contain sufficient information and analysis regarding the number and type of sites that are likely to elect as DM(AMR) and hence provide demand-side response. It is therefore not possible to assess whether the benefits of additional demand-side response as a result of implementing this proposal are greater than the estimated costs of implementation.

In addition to the potential benefits listed above, responses to the JO consultation also highlighted a number of issues associated with this proposal that may have adverse impact on this objective. These are discussed below.

Potential issues

Although a few respondents considered that reducing the size of NDM profiles could result in more accurate site-by-site reconciliation and more cost-reflective charging, a number of respondents were concerned that, if a large number of NDM sites elected to be DM(AMR), this could have adverse consequences for the accuracy of EUC profiles for the remaining NDM sites. It was highlighted that a possible reduction in the accuracy of these profiles could potentially impact on the ability of Distribution Networks (DN) to profile demand consumption by Local Distribution Zones (LDZ) and hence on the accuracy of demand allocations to other NDM sites within LDZ's. A few respondents also suggested that the degradation of EUC profiles could affect the load factors⁷ of remaining NDM sites. As load factors contribute to the calculation of capacity charges⁸ they consider this could also affect User capacity charges for NDM sites.

⁷ This is the ratio of the average daily load and the peak daily load expressed as a percentage.

⁸ A set charge by the local [Distribution Network Operator \(DNO\)](#) for investment and maintenance of the electricity network, based on the [Agreed Capacity](#) of a property.

Ofgem agrees that, the implementation of the proposal may result in the need to update profiles more frequently, resulting in additional costs. However, in itself, this is not a sound reason for rejecting the proposal. We would expect existing profiles to be updated to reflect new circumstances and more accurate information. The profiles are there to serve the settlement system and must evolve to meet customer needs. So we do not attach much weight to these concerns.

Proposed minimum meter reading frequency

As stated above, the proposal would require shippers to submit at least two consecutive reads every calendar month for at least 90% of the DM(AMR) sites they are responsible for. Shippers would also be required to use best endeavours to submit meter reads on a daily basis.

We consider that the proposal has not explained why two reads in a calendar month is an appropriate standard to set for DM(AMR) sites, particularly since the type of meter technology envisaged by this proposal could generate substantially more frequent meter read data. Furthermore, a 'best endeavours' requirement to submit daily reads is unlikely to have any impact on shipper behaviour. It is therefore unclear why the frequency standard proposed is appropriate, particularly given the opportunity to commit to a standard based on the capabilities of AMR, assuming reasonably reliable and consistent performance by the new technology.

Conclusion

Overall, we note the potential benefits of a proposal of this nature include enabling shippers to use AMR technology to provide more accurate and enhanced information to GTs and the SO. It may also enable shippers to manage better their imbalance positions which should facilitate demand response at times of system stress and more cost-reflective charging. However, the proposal does not justify the minimum standard for submitting meter reads and does not provide sufficient information on these issues to enable us to determine that it better facilitates this objective.

A11(c), the efficient discharge of the licensee's obligations under this licence;

GTs are required to develop their systems to ensure that all firm customers are supplied except where demand is greater than that expected once in every 20 years ('1 in 20'). The Proposer argued this proposal would facilitate an increase in the number of daily meter readings submitted and potentially promote a higher level of demand-side response when this is required to balance the system. It was considered that this may lead to a lower peak demand forecast, which in turn, might, facilitate efficient investment by GTs. However, a few respondents highlighted that the current methodology used by National Grid to forecast '1 in 20' peak demand uses a model based on the historical weather/demand relationship. The characteristics of this model mean that any potential impact on '1 in 20' peak demand forecasts is unlikely to materialise in the short term.

As noted above, we do not think that the potential take-up of the DM(AMR) service has been adequately assessed. This lack of information does not make it possible for Ofgem to conclude the degree to which this proposal would lead to the provision of sufficient information to affect the calculation of demand forecasts. In this regard, neither is it possible for us to conclude that the proposal could facilitate efficient investment by GTs.

It was also noted in the JO consultation that changes in NDM load profiles, in addition to the possible variance in consumption patterns of DM(AMR) sites, may require GTs to

develop alternative models to forecast total and regional market demand. Ofgem agrees the proposal may necessitate changes to the way in which total and regional market demand is modelled. However, we consider that the provision of more accurate DM(AMR) consumption information could also, arguably, enable GTs to adapt their modelling methodologies to improve their accuracy.

However, in the absence of more information, including information on the potential take-up of the DM(AMR) service, it is difficult to conclude whether these changes would have a beneficial or adverse effect on the methodologies used for demand forecasting.

Overall, we do not consider that it has been proven that this proposal better facilitates this objective.

A11(d) the securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers;

The Proposer and responses to the JO consultation highlighted three main benefits that could potentially better facilitate this objective: improved billing and settlement; the scope to offer more flexible customer contracts; and the opportunity to avoid the costs of the elective DM market. These are discussed further below.

Improved billing and settlement

The Proposer considers that the UNC discourages suppliers from linking demand variations for DM(AMR) customers to billed energy. This is because the benefits of variations in daily consumption cannot be taken into account in daily settlement unless that site is an elective DM site⁹. We agree with those respondents who considered that DM(AMR) sites would benefit from the ability to improve the link between billing and settlement. In turn, this may promote competition between and amongst suppliers and shippers.

However, whilst we consider that these benefits could potentially be realised, we consider that the proposal contains insufficient information both on the uptake of the DM(AMR) service and the potential impact on users of the system that do not elect to use this service. Therefore, we are unable to examine how this proposal impacts on competition in other areas of the NDM and DM market.

Flexible customer contracts

The Proposer considers that enabling DM(AMR) sites to submit daily meter reads would facilitate the provision of more flexible contracts to the market. They argue that shippers and suppliers will be able to use meter read information to ensure charges more accurately reflect costs. It is suggested that this would assist in encouraging competition between shippers and suppliers. It was also suggested that the proposal would facilitate the introduction of, and competition in, contracts for DM(AMR) customers that enable them to respond to price signals.

Whilst we are supportive of increasing the range and volume of products available to customers, this proposal has not sufficiently demonstrated that shippers and suppliers

⁹ A site can be classified as Daily Read if the supply point has an AQ greater than 2 million therms; the meter point in question has an AQ greater than 75,000 therms; and if it is an NTS supply point. Further information can be found in the UNC document on the Joint Office of Gas Transporters website at www.gasgovernance.com

are restricted by the current arrangements as to the type and volume of contracts they can offer to this group of customers¹⁰.

Avoiding the costs of the elective DM market

The information provided by one respondent suggested that the current cost to customers of electing to be a DM site is £600 to install the appropriate daily read equipment as well as operational costs of £800 per annum. It is argued that this proposal would enable DM(AMR) sites to avoid some of these costs.

However, no conclusive information has been provided with regard to the savings customers could make as a result of being a DM(AMR) site in comparison with being a DM site. In addition, analysis has not been undertaken to understand the extent to which the costs and the perceived complexity of becoming an elective DM site can and do create a barrier to customers electing to be Daily Read. Furthermore, there has been no analysis of whether there are alternative ways of addressing the complexity and cost of the DM regime.

Conclusion

Overall, we do not consider that this proposal provides sufficient information on these issues to enable us to determine that it better facilitates this objective.

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

Costs of implementation

A high level impact assessment provided in the proposal estimates that the costs of changing UK Link systems in order to implement this proposal lie in the range £240,000-£400,000. However, these costs only reflect externally commissioned development costs and do not include all of the costs associated with changes to systems and processes operated by xoserve. It was estimated by xoserve that these additional costs are in the range £50,000 to £100,000, based on the assumption that current UK-Link volume capacity will not be exceeded. It is also clear from the high level impact assessment that there are a number of supporting systems that could be impacted by this proposal. The costs of changes to these systems have also not been fully assessed.

We agree with respondents who thought that the proposal required a more detailed assessment of the potential costs to xoserve systems and to supporting systems and Users. However, the scale of these impacts has not been conclusively assessed, or costed. We are particularly concerned that there is insufficient information regarding any potential costs incurred by Users of these system who may not choose to use the DM(AMR) service.

Finally, inconclusive information is available regarding the likely uptake of the new regime. Significantly increased costs may arise if a large number of Users choose to partake in this service.

¹⁰ These are customers with supply meter points that have an AQ above 25,000 therms.

Alternatives

The proposal notes that it may be possible to deliver some of the benefits which are anticipated from this proposal outside the UNC should shippers and suppliers wish to offer such services. Alternative ways for delivering these benefits have not been assessed in the proposal and, as a consequence, there is a risk that this proposal could add an extra and unnecessary layer of complexity to the current regime.

Conclusion

Given the potential savings to customers from this sort of measure, the anticipated implementation costs do not appear excessive. However, we would need evidence that these cost estimates were robust and further information on the potential take-up of DM(AMR) services to adequately consider the merits of the proposal against this objective. In the absence of this information, it is not proven that this proposal facilitates this objective.

Areas for further industry review

Ofgem strongly supports measures to encourage better metering for customers and believes a range of benefits can flow to customers and shippers. These include better quality billing, promotion of energy efficiency and, of particular relevance to this proposal, the potential to allow customers to be able to respond to market signals. In this regard Ofgem is encouraged that industry players appear to be interested in taking this forward by examining the potential barriers in the UNC to deliver these benefits to customers and wider industry.

This proposal has elements which would encourage more use of smart metering. However, aspects of the proposal lack justification and in other areas, important information, against which the proposal can be judged, is missing. This is disappointing given the length of time that the proposal has been under industry development. Although we support the broad intent of the proposal we do not believe that the proposal provides sufficient information on the issues set out above to enable us to determine that it better facilitates objectives (a), (c), (d) and (f) of the UNC.

Specifically, the proposal does not provide a justification for the proposed minimum meter reading frequencies given the capabilities of AMR; contains insufficient information on the potential uptake of the DM(AMR) regime; provides an inadequate assessment of the costs and benefits of the proposal; and contains an inadequate assessment of potential impacts on xoserve, supporting systems and other users and has not adequately considered alternative ways of addressing the costs and complexity of electing to be DM. We will give further consideration to these matters and will discuss our observations on potential improvements to the assessment of and reporting on modification proposals with interested parties, including xoserve and the Joint Office.

The proposal has highlighted wider industry issues that we consider would benefit from further examination. These relate to the incentives and charges which are generated by the current DM regime and the capability of xoserve (and supporting systems) to manage an increasing number of meter reads, particularly in the light of the steps towards more widespread roll-out of smart meters.

One of the respondents to the JO consultation indicated that the costs associated with electing as a DM site are £800 per annum, as well as £600 towards installation of daily read equipment. We consider that a greater examination of these costs is required, especially in the light of recent innovations in smart metering technology. It is important

that DM services are provided in a cost-effective manner. But it is also crucial to consider, in light of increasing concerns about energy consumption, whether the costs and complexity of participating in the DM market, as highlighted above, send appropriate signals to market participants to settle more frequently.

We are keen to ensure that settlement systems are able to cope in an environment with smarter metering, recognising that the greater use of data from smart meters for the purposes of settlement will potentially impact on xoserve systems. We are particularly concerned that there may be constraints on the number of meter reads xoserve systems can manage and process.

We plan to initiate discussions with GT's and xoserve to better understand DM costs and the current and future ability of their systems to cope with an increased number of meters reads. We would also like to urge industry to examine this issue in more detail.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Philip Davies', with a long horizontal flourish extending to the right.

Philip Davies
Director, GB Markets

Signed on behalf of the Authority and authorised for that purpose.