

Modification proposal:	<b>Uniform Network Code (UNC) 224: Facilitating the use of AMR in the Daily Metered Elective Regime (UNC224)</b>		
Decision:	The Authority <sup>1</sup> directs that this proposal be made <sup>2</sup>		
Target audience:	The Joint Office, Parties to the UNC and other interested parties		
Date of publication:	28 August 2009	Implementation Date:	To be confirmed by the Joint Office

## Background to the modification proposal

The charges that apply to individual shippers for using the gas transportation network are based on shippers' daily energy input and offtake volumes in each Local Distribution Zone (LDZ). In order to support the derivation of these daily energy volumes, meters that can be read on a daily basis are installed at input points and large offtake points on the LDZs<sup>3</sup>. Some of these meters are read continuously while others - with data-loggers<sup>4</sup> - are read on demand. Meters with data-loggers at the offtake points provide Gas Transporters' (GTs) with the volume of gas consumed each day, therefore supply points with such meters are called Daily Metered (DM) sites. There are approximately 2,000 DM sites.

As it has not been practical or economic to install these specific devices at all 22 million supply points across GB, most sites still use meters that are read at monthly, six-monthly or even longer intervals. They are called Non-Daily Metered (NDM) sites. There are approximately 400,000 NDM sites in the non-domestic market.

Currently, larger NDM sites can voluntarily nominate to become part of the DM regime. These sites are known as DM Voluntary (DMV). This allows these sites to take advantage of the numerous benefits of having metered consumption collected on a daily basis as opposed to on either monthly, six-monthly or even longer term basis. Under the UNC, such a nomination requires that the NDM meter point is subject to DM service provision by the local GT. The move to DM requires the installation of data-logger equipment and is accompanied by associated installation and rental charges. These charges, in addition to the daily read provision charges, are approximately £800 per year. This has been cited by some Parties as a barrier to participation in the DM service by NDM sites.

### *Supply Licence Obligation*

On 6 April 2009, the government implemented a new supply licence condition which places an obligation on suppliers to ensure that where they newly install or replace a meter at premises with an annual consumption over 732,000kWh, the meter should be an advanced meter<sup>5</sup>. The licence condition also states that, subject to certain qualifications, gas supplied after 6 April 2014 should not be provided other than through

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

<sup>2</sup> This document is notice of the reasons for this decision as required by section 38A of the Gas Act 1986.

<sup>3</sup> Meters installed at the LDZ input points provide reads continuously and allow the total quantity of gas flowing into an LDZ from the National Transmission System (NTS) to be measured on a daily basis. Meters installed at the large off-take points allow the total quantity of gas consumed by the largest gas customers to be measured on demand, on a daily basis. Taking into account shrinkage volumes and any storage injections/withdrawals, the difference between the LDZ input volume and the daily metered offtake volumes is allocated to shippers' remaining non-daily metered customers for use in balancing and settlement.

<sup>4</sup> A data-logger is an electronic device that automatically records, stores and transmits meter readings (such transmission usually being via PSTN lines). It is a means of recording periodic consumption information to satisfy the Daily Read Equipment requirements of the UNC.

<sup>5</sup> The advanced meter, either on its own or with an ancillary device, must be capable of storing measured gas consumption data for multiple time periods (at least hourly), and of providing remote access to such data by the supplier.

an advanced meter. This licence condition affects approximately 40,000 large business sites.

The Government's objective to roll-out advanced metering in the business sector means that sites previously metered on an NDM basis now have the capability to be settled on a DM basis, without requiring the GT daily read service and installation of data-logger equipment. However, at present, the UNC does not provide a process for sites with Automated Meter Reading (AMR) equipment<sup>6</sup> to operate in a manner akin to the DM regime, without directly becoming part of the DM regime.

#### *Modification Proposal UNC088*

In July 2007, Ofgem rejected the implementation of UNC088 "*Extension of DM service to enable Consumer Demand Side Management*". This proposal sought to modify the UNC to enable shippers rather than GTs to manage the daily submission of meter reads from NDM sites with AMR technology to xoserve. While Ofgem expressed its strong support for measures which seek to encourage better innovation in metering, we considered that certain aspects of the proposal lacked justification and in other areas, important information against which the proposal could be judged, were missing. Ofgem concluded that it did not have sufficient information to decide that implementation would better facilitate the achievement of the relevant UNC objectives<sup>7</sup>.

#### **The modification proposal**

UNC224 proposes to allow shippers to elect, on a voluntary basis, eligible supply points with AMR devices installed to become DM Elective (DME). In nominating a site as DME, shippers opt out of the NDM profiling process and instead submit daily meter reads to the relevant GT for use in balancing and settlement. By using AMR technology to submit daily reads, shippers would avoid the need to install data-logger equipment and would not be required to use and pay for the accompanying DM service provision.

It is proposed that roll-out of the DME regime will occur in three phases across an 18 month period. This is to facilitate a steady uptake across the eligible population, allowing xoserve to address any operational issues in a controlled manner. The roll-out will proceed as follows:

- meter points in End User Category (EUC)<sup>8</sup> bands 6-8 will be eligible to participate from the commencement of Stage 1 (12 months duration);
- meter points in EUC band 5 will be eligible to participate from the commencement of Stage 2 (6 months duration); and
- meter points in EUC band 4 will be eligible to participate from the commencement of Stage 3 (open ended).

Due to concerns over the number of DME meter points that could be handled operationally by xoserve, a cap on participation has also been proposed which limits take-up to 25,000 meter points initially.

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<sup>6</sup> Advanced metering is metering that provides Automated Meter Reading (AMR). The terms "advanced metering" and "AMR equipment" are used interchangeably in this letter.

<sup>7</sup> To view Ofgem's decision on UNC088 see: [www.gasgovernance.co.uk](http://www.gasgovernance.co.uk)

<sup>8</sup> For NDM supply points, the peak daily load is estimated using a set of End User Categories (EUCs). Each NDM supply point is allocated to an EUC. Each LDZ determines its associated load factor. These EUCs depend upon the annual quantity (AQ) of the supply point and, in the case of monthly read sites, the ratio of winter to annual consumption where available.

## Users Pays

UNC224 has been proposed and accepted by the Panel as a User Pays proposal and, as such, is subject to the User-Pays Arrangements<sup>9</sup>. The new DME regime is defined as a code service meaning that charges will be defined under, and published in, the Agency Charging Statement (ACS)<sup>10</sup>. It has been proposed that the allocation of costs will be 100% to shippers and 0% to transporters. The proposed charges to shippers will comprise of fixed charges, operational charges, transactional charges and incentive charges:

- *Fixed charges* reflecting the system development costs incurred by the Transporter agency (xoserve) will be targeted at all shippers with sites eligible to participate in the DME regime. These will be applied on the date of implementation and prices will be banded to reflect the phased roll-out approach.
- *Operational and transaction charges* will be targeted only on those sites that choose to participate in the DME regime. They will apply daily and be billed monthly.
- *Incentive charges* will also be charged only to those sites that choose to participate in the DME regime and only in the event that a shipper fails to provide a reading in the prescribed manner.

Based on a detailed cost estimate for the development costs, the indicative base cost will be £11 per meter point based on the number of all eligible meter points. A detailed cost assessment for the operational costs was not provided by xoserve. However, the Rough Order of Magnitude (ROM) costs previously identified indicate that total annual operational costs are likely to be in the range of £155k to £378k.

We would note that a formal Detailed Cost Assessment<sup>11</sup> (DCA) has not been provided to accompany the proposal and therefore final prices to be included within the ACS have not been determined. Xoserve has indicated its intention to build the system first in order to derive the final costs and determine final prices.

### *Provision of Estimated Demand Information*

In order to understand better the viability of the proposal and to increase the transparency of the cost calculations, the review group considered that it was necessary to estimate demand for the service. Shippers submitted figures in confidence to Ofgem who created an aggregate demand level calculation and presented this in analysis to the UNC224 review group.

We received demand information from 12 shippers potentially interested in using the service. A further shipper responded, noting they had no intention of using the service. The analysis concluded that approximately 4,600 sites (one third of the 12 shippers total eligible sites) would be interested in nominating to become DME if the cost of the service was in the range of £25-£99 per site. A summary of the results is set out in table 1 below:

Table 1: Demand Analysis

<b>Cost per site</b>	<b>£25-£99</b>	<b>£100-£200</b>	<b>£201-£400</b>	<b>£401-£600</b>
Indicated demand (# of sites)	4,600	3,000	1,900	900

<sup>9</sup> To view UNC213V "Introduction of User Pays Governance Arrangements into the UNC" see: [www.gasgovernance.co.uk](http://www.gasgovernance.co.uk)

<sup>10</sup> To view the ACS see: [www.gasgovernance.co.uk](http://www.gasgovernance.co.uk)

<sup>11</sup> The DCA is intended to provide detailed change information on systems and processes, firm costs associated with the changes required to implement the proposal and firm timescales required to make system and process changes.

## UNC Panel<sup>12</sup> recommendation

At the Modification Panel meeting held on 18 June, of the 10 Voting Members present, capable of casting 10 votes, 7 votes were cast in favour of implementing this Modification proposal. Therefore, the Panel recommended implementation of this proposal.

## The Authority's decision

The Authority has considered the issues raised by the modification proposal and the Final Modification Report (FMR) dated 24 July 2009. The Authority has considered and taken into account the responses to the Joint Office's consultation on the modification proposal which are attached to the FMR<sup>13</sup>. The Authority has concluded that:

1. implementation of the modification proposal will better facilitate the achievement of the relevant objectives of the UNC<sup>14</sup>; and
2. directing that the modification be made is consistent with the Authority's principal objective and statutory duties<sup>15</sup>.

## Reasons for the Authority's decision

We consider that UNC224 impacts on the facilitation of relevant objectives (a) and (d) most significantly. Therefore, we have set out our consideration of the proposal against relevant objectives (a) and (d), below.

We acknowledge that a number of respondents also considered UNC224 would be detrimental to relevant objective (c)<sup>16</sup>. This is because they considered the proposal was not cost reflective and therefore not consistent with licence obligations to charge on a cost reflective basis. We have addressed this point in our consideration of the proposed cost methodology, under relevant objective (d) below.

The proposer also considered that UNC224 would better facilitate relevant objective (f)<sup>17</sup> as the proposed DME regime would align with the mandated roll-out of AMR as required by the new supply licence obligations. While we consider that UNC224 provides an industry process by which the benefits of advanced metering can be realised within the balancing and settlement regime, we do not consider that this point is particularly relevant to the promotion of efficiency and administration of the UNC. We therefore do not consider that the proposal is likely to have an impact on relevant objective (f).

## ***Relevant objective (a) the efficient and economic operation of the pipeline system;***

### *Enhanced Information Provision*

The proposer considered that UNC224 would increase the level of information available to GTs relating to locational daily gas flows on their networks. It was also of the view that the submission of daily reads to xoserve would improve the ability of GTs to use this

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<sup>12</sup> The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules

<sup>13</sup> UNC modification proposals, modification reports and representations can be viewed on the Joint Office of Gas Transporters website at [www.gasgovernance.com](http://www.gasgovernance.com)

<sup>14</sup> 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](http://epr.ofgem.gov.uk/document_fetch.php?documentid=6547)

<sup>15</sup> The Authority's statutory duties are wider than matters which the Panel must take into consideration and are detailed mainly in the Gas Act 1986.

<sup>16</sup> Relevant objective (c), the efficient discharge of the licensee's obligations under this licence.

<sup>17</sup> Relevant objective (f), the promotion of efficiency in the implementation and administration of the network code and/or the uniform network code.

information for load forecasting, particularly in respect of improved granularity of data. Further, the proposer considered that UNC224 would enable a mechanism by which GTs could validate that cessation of flows by DME supply points had been enacted in an emergency. These views were supported by a number of respondents in favour of the proposal who considered that, for these reasons, UNC224 would better facilitate the efficient and economic operation of the NTS and DN pipe-line systems.

However, a number of respondents who did not offer their support for implementation of the proposal were dubious about the magnitude of the suggested benefits. One of these respondents considered that the information available to GTs would only increase if a user joining the DME regime modified their behaviour away from the current NDM profile. This respondent considered that the extent to which behaviour could be modified was not clear. Another of these respondents explained that GTs receive information from various points on the network on a daily basis and therefore any additional information provided by UNC224 would be unlikely to provide any significant benefit to the way GTs operate the network. These respondents did not believe that UNC224 would better facilitate the achievement of relevant objective (a).

It is our view that the additional daily gas flow information provided to GTs through the implementation of UNC224 could potentially improve GTs planning and operational activities where a GT chooses to utilize this information. The additional information that is likely to be made available under this modification is also likely to be of a higher degree of granularity than before, further enhancing the planning process. We acknowledge the point that GT's already receive daily information on various points across the network. However, we would not wish to preclude any GT from taking advantage of the additional information provided by the new generation of metering technology for use in system management, where they believe there is benefit in doing so. We believe this also holds true in the context of additional information flowing to GTs to help manage an emergency situation.

#### *Increased demand side response*

The proposer also considered that UNC224 would increase the likelihood of available demand side response. This is because the DME regime would allow any reduction in consumption by customers in response to price, to be measured on a daily basis. One respondent opposed to this proposal disagreed, noting that they did not believe that implementation of this proposal would allow for greater demand side response.

We have seen no evidence to suggest that DME sites would not reduce their consumption in response to price, particularly where there is financial benefit in doing so. By providing some level of demand side response and thereby reducing demand on the system, UNC224 has the potential to help reduce the role of the residual balancer as well as help to enhance security of supply. Improved price signals and the resulting increased demand side response would also help to mitigate the potential for gas emergencies in the event of a serious gas shortage.

With that said, we do recognise that this will primarily depend on whether suppliers offer flexible and innovative contracts to DME customers such that they can receive the benefit of any demand side response. Further, we also recognise that the magnitude of this effect will depend on the extent of participation of sites in the DME regime. Given the indicated likely take-up of 4,600 sites, we consider that the potential for increased demand side response resulting from the implementation of this proposal will, at a minimum, have a small positive impact on the efficient and economic operation of the pipe-line system.

### *NDM profiling*

It was noted in the modification report that two disadvantages of the proposal related to impacts on NDM demand modelling. First, it was recognised by the proposer that implementation of the proposal would likely lead to a reduction in the number of eligible supply points available for NDM demand modelling. Several respondents were concerned that this reduction could make NDM demand modelling more difficult leading to greater inaccuracies in managing NDM demand. Second, the proposer also recognised that implementation of the proposal could lead to an increase in the costs of managing the NDM pool if current NDM sample sites nominate to become DME and modelling equipment needed to be removed and installed at alternative sites.

We understand that the creation of a new settlement regime may necessitate changes in existing NDM demand modelling processes and procedures, requiring GT's to alter existing methods and models to forecast total and regional market demand. We also acknowledge that this may, in some instances, result in additional costs to GTs. However, as noted in our UNC088 decision letter, we would expect GT's to update existing profiles to reflect new circumstances and more accurate information. Further, we would reiterate that the NDM demand profiles are there to service the settlement system and must evolve to meet requirements in a dynamic market. We also consider that any increased costs associated with NDM profiling will be, to some extent, offset by the benefits associated with more accurate gas allocations that can be achieved through AMR and the associated reduction in cross subsidies through RbD.

### *Conclusion*

For the reasons set out above, we consider that UNC224 will likely better facilitate the efficient and economic operation of the pipe-line system.

**Relevant objective (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;**

### *Contract offerings*

The proposer and a number of respondents in favour of the proposal considered that the proposal would better facilitate effective competition between shippers and between suppliers by potentially increasing commercial incentives to extend the range of contracts available to customers and by extending the market for demand side response.

Four respondents who did not offer support to the proposal considered that implementation would not better facilitate competition. While two of these respondents recognised that the introduction of a DME regime may create an incentive to extend the range of products on offer, one considered that such an incentive would only be created if the proposal were cross subsidised by market participants not wishing to join the regime; the other believed that the benefits to shippers and suppliers from offering an increased contract range were not transparent over and above what was available in the NDM market.

We consider that the submission of daily meter reads from AMR devices for use in settlement should encourage the provision of more flexible and innovative contracts to the market, for example, contracts which enable customers to respond to price signals. We do however recognise that the magnitude of this effect will depend largely on the extent of participation in the DME regime.

One respondent opposed to the proposal considered that nominating a site as DME would create a subsector of the market (DME sector) that the majority of shippers would not be interested in quoting. Because of this, this respondent considered that the creation of a DME regime would be detrimental to competition. We disagree with this view. First, we have seen no evidence to suggest that shippers would not be interested in participating in this area of the market – indeed our demand analysis and responses to the UNC224 clearly indicate otherwise. Further, in the context of the Government’s new supply licence condition, we see no reason why shippers would choose not to quote for business, particularly where the commercial benefits from participating in this market are likely to increase over the next few years.

#### *Improved billing and settlement*

Several respondents in favour of implementation considered that the proposal would reduce reconciliation risk facing those suppliers who chose to move into the DME regime, thereby better facilitating competition. UNC224 effectively links demand variations to billed energy such that the benefits of consumption variations can be taken into account in settlement. We agree with the proposer that this will enable shippers to manage their own risks in terms of volume and price, thereby promoting competition between and amongst shippers and suppliers. Further, we consider that the use of advanced metering in balancing and settlement should promote more accurate allocations of gas, reducing the potential for cross subsidies through the RbD process and therefore also promoting competition.

#### *Cap on participation*

Several respondents opposed to implementation of the proposal expressed concern that capping the level of available DME nominations to 25,000 sites would, once reached, create a barrier to entry for new supply points, or new market entrants, wishing to enter this market. This respondent considered that new entrants would then be forced to settle on NDM profiles or alternatively, elect into the DM Voluntary market at a higher cost.

We recognise that there are system limitations but do not consider this is justification alone for rejecting the proposal, especially in the context of the indicated take-up. Following the demand analysis presented by Ofgem, 4,600 sites expressed interest in potentially nominating as DME. To date we have seen no evidence to suggest that the 25,000 limit is likely to be met. However, as this is a User Pays offering from which xoserve is able to earn additional revenue, we would anticipate that if DME take-up approaches the 25,000 limit xoserve will consider whether this constraint should remain, whether it is no longer needed and whether additional investment is required in order to expand the service.

#### *Cost methodology*

We do not agree with those respondents who considered that the proposed allocation of development costs is inappropriate. As noted previously, the government’s new supply licence condition requires that sites with an annual consumption over 732,000kWh be supplied through an advanced meter by 6 April 2014, i.e. all eligible supply points to whom the development costs of this proposal will be targeted are required to have AMR technology by 6 April 2014. We consider that all eligible supply points are, in effect, potential beneficiaries of this service. Spreading the development costs across all potential beneficiaries will ensure that those sites that choose to participate in the DME regime now will not otherwise be required to bear the full development costs upfront which other users would subsequently obtain the benefit of at a later date. By spreading the costs across all eligible sites, inter-temporal cross-subsidies will be avoided and a non-discriminatory approach ensured.

In addition, we would highlight that the charges for the DME service will be reflective of the costs of this change imposed upon xoserve. That some users may choose not to benefit from the DME service does not impact the development costs of this proposal. Therefore, we do not agree with those respondents who considered that UNC224 does not better facilitate objective (c) as we do not consider that the proposed cost allocation would contravene GTs Standard Special Conditions A15 and A5.

Finally, we would point out that members of the review group were initially presented with four possible cost allocation options. While we are aware that one party presented an alternate methodology during the review group discussions, the group as a whole chose to progress UNC224 on the basis of the proposers preferred cost apportionment methodology. We also note that an alternate way of funding was not raised as an alternative proposal.

### *Conclusion*

For the reasons set out above, we consider that UNC224 will likely better facilitate effective competition between shippers and between suppliers.

### ***Other issues***

#### *Reconciliation by Difference (RbD) avoidance*

One respondent who opposed implementation of this proposal was of the view that the main incentive for using the DME service would be to avoid costs which, in its opinion, would look likely to be applied through other modifications to large NDM supply points set out below. This respondent considered that avoiding these potential costs could provide an incentive for shippers to move elements of their portfolio of meter points into the DM sector thereby avoiding any future charges on their large supply point portfolios through RbD.

We acknowledge this concern but do not believe it would be appropriate to comment in the context of the suite of RbD proposals (UNC 194 and 194A, UNC228 and 228A and UNC229) going through the modification process at present. Ofgem is shortly to publish IA on these RbD modification proposals where we will take into account the impact of our approval of UNC224. However, it is worth noting that UNC224 is the successor to UNC088, which was raised ahead of these RbD proposals. Therefore we are not convinced that RbD avoidance is likely to be a possible driver behind the proposal.

#### *Final Costs*

We welcome the provision of a detailed cost estimate for development costs within the FMR. However, we are disappointed that a similar detailed cost estimate for operational costs was not provided. While we appreciate that it is difficult to know final costs until a project is complete, we consider that provision of a definitive estimate with a much smaller range of variance than the ROM would be more helpful in determining the costs and benefits of the proposal. It is our view that once the necessary DME system changes are complete, where final development and operational costs differ significantly from the ROM costs, an explanation should be provided by xoserve for any deviation.

#### *Implementation Timescales*

We understand that UNC224 is intended to provide an interim solution ahead of any changes to UK Link and its associated systems under the banner of Project Nexus and that Project Nexus is currently working towards implementation in 2013. With that in mind, we believe it is important that smaller, incremental improvements to existing



systems and processes such as UNC224 are not lost where they prove cost effective and particularly when there are benefits to be realised prior to Project Nexus going live. In addition, we would expect xoserve to consider the Government's new supply licence obligation and the subsequent roll-out of advanced metering in the large business sector by 6 April 2014, in the context of Project Nexus.

We also understand from the FMR that a detailed programme of work needs to be developed and presented to the UK Link committee in order for UNC224 to be implemented. We also understand that it is anticipated that the required changes could be incorporated into the February 2010 UK Link release. In order for the full benefits of the DME service to be realised ahead of Project Nexus, we would encourage xoserve to develop its work programme as soon as possible in order to proceed with implementation on the basis of meeting the February 2010 UK Link release.

### **Decision notice**

In accordance with Standard Special Condition A11 of the Gas Transporters Licence, the Authority, hereby directs that modification proposal UNC224: *Facilitating the use of AMR in the Daily Metered Elective Regime* be implemented.

### **ACS decision**

We have considered the changes to the ACS which have been proposed to facilitate the implementation of UNC224. We note that the proposed changes would ensure that the charges fall to the potential beneficiaries of the DME service. Although not all shippers have indicated their intention to make use of the service, they are at liberty to do so and in particular have the opportunity to respond to consumer requests even if they do not actively promote the service. We therefore consider the proposed cost allocation method to be reasonable and consistent with the relevant objectives of the ACS<sup>18</sup>. We have therefore decided not to veto this modification to the Agency Charging Statement.

**Ian Marlee**

**Director, Trading Arrangements**

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

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<sup>18</sup> The relevant objectives of agency charging statement, as contained in paragraph 11 of standard special licence condition A15 of the licence are that:

The charges for user pays services should, as far as reasonably practicable, reflect the costs of providing the service. In setting the charges for the user pays services the licensee, together with the other relevant gas transporters, shall not unduly discriminate between or unduly prefer any person or class or classes of persons.