

Modification proposal:	Uniform Network Code (UNC) 432: Project Nexus – Gas Demand Estimation, Allocation, Settlement and Reconciliation reform (UNC 432)		
Decision:	The Authority ¹ directs that UNC 432 be made ²		
Target audience:	The Joint Office, Parties to the UNC and other interested parties		
Date of publication:	21 February 2014	Implementation Date:	1 October 2015

Background to the modification proposal

The need for the Gas transporters (GTs) to replace their aging UK Link systems was first identified and funding provided as part of the 2008-2013 Gas Distribution Price Control Review (GDPCR). Our GDPCR Final Proposals³ stated that:

“the replacement of UK Link towards the end of the price control period provides a cost effective opportunity for the industry to rationalise and put in place revised systems that are fit for purpose. It is expected that Xoserve will be consulting with industry during 2008 on the potential scope and design for the new systems. This will provide opportunities to consider future user driven developments, such as changes required due to smart metering. There may also be opportunities for IGTs to consider their existing systems and where appropriate utilise a common industry platform”.

At that time it was envisaged that the new systems would be introduced before the end of that GDPCR period in 2013.

The process to identify and develop the industry requirements that go beyond a straightforward like for like replacement of existing systems has been undertaken as Project Nexus. Xoserve, acting on behalf of the GTs, has undertaken a number of consultations since 2008 and refined the industry’s requirements into a series of Project Nexus Business Requirements Definitions (BRDs) documents⁴. The BRDs have in turn informed the development of modification proposals to the UNC and other documents necessary to reflect the technical solutions being proposed.

Whilst Project Nexus participants were keen to exploit any opportunities the enhanced IT systems could offer for the services already within scope of the UNC, there was an appetite for additional services along the two main themes of:

- data management implications and opportunities arising from smart metering;
- the incorporation of independent Gas Transporter (iGT) Supply Point Administration services.

The modification proposal

UNC432 is one of a suite of current UNC modification proposals related to Project Nexus that also includes UNC434⁵, UNC440⁶, UNC467⁷ and UNC473⁸. Project Nexus aims to

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

³ See: ‘[Gas Distribution Price Control Review Final Proposals](#)’ Ofgem ref: 285/07

⁴ See www.gasgovernance.co.uk/nexus

⁵ UNC434: ‘Project Nexus – Retrospective Adjustment’

ensure that the rebuild of UK Link systems and associated data processes that underpin much of the competitive gas market meet the current and anticipated business requirements of participants in that market:

- enhanced system capacity will allow for the increasing volume and granularity of consumption data captured by smart meters, in turn providing for accurate allocation of costs to the appropriate parties;
- elimination of a number of existing processes that have evolved in order to work around the constraints imposed by, or reconcile the inaccuracies of, existing systems. This will deliver substantial administrative efficiencies;
- rebuilt central systems which will incorporate the independent GTs who currently sit outside of the UK Link framework. This will deliver efficiencies for iGTs and the Shippers who often must duplicate their efforts when dealing with differing arrangements between networks.

UNC432 focuses on improvements to the accurate allocation and subsequent billing of energy. It includes the following elements:

1) Settlement

Currently the basis on which energy is allocated, reconciled and subsequently settled for a supply point is prescribed by UNC, based upon its consumption levels. Under UNC432 this would largely be a matter for Shipper choice, with four settlement products on offer. The key exception to this is that sites consuming above per year would remain mandatorily Daily Metered (DM), as provided under settlement Product 1. In summary, the products are:

- Product 1 – DM. Time critical, with reads required by 10am. This is mandatory for supply points with an AQ above 58.6MWh only
- Product 2 – ‘DM-lite’, submission of reads is not time critical and can be submitted at any time of day. Available to any supply point.
- Product 3 – daily readings submitted in batches. Available to any supply point.
- Product 4 – periodic meter readings, with existing standards for read submission and timing. Available to any supply point.

2) Individual Meter Point Reconciliation

Currently, only Larger Supply Points (LSPs) consuming more than 73,200kWh per year are reconciled on an individual basis. Smaller Supply Points (SSPs) below this threshold are reconciled on an aggregated basis, through Reconciliation by Difference (RbD). Under UNC432, all supply points would be individually reconciled, abolishing RbD.

Any unidentified gas usage for a given day would be subject to an industry-wide scaling adjustment. No changes are proposed to the current reconciliation principles and calculations, they would simply be extended to SSPs.

3) Annual Quantity (AQ)

⁶ UNC440: ‘Project Nexus – iGT Single Service Provision’

⁷ UNC467: ‘Project Nexus - iGT Single Service Provision; data preparation’

⁸ UNC473: ‘Project Nexus – Allocation of Unidentified Gas’

AQs would be recalculated on a monthly rather than annual basis, subject to a valid meter read having been received. However the reference period for the calculation of AQs would be extended from 6 months to 9 months.

4) Supply Point Register (SPR)

Whilst it is envisaged that an increasing number of meter reads will be obtained and communicated by smart meters, the actual register of the meter remains the *prima facie* evidence of quantity of gas consumed. The UNC currently contains obligations for check reads to be undertaken at daily metered (DM) supply points in order to ensure that any drift between the data logger and the meter register is identified and appropriately reconciled.

UNC432 would extend this principle, requiring shippers to procure a Check Read for any supply point where metering equipment is fitted that transmits a meter read derived from pulses from the meter. The SPR will be expanded to record and enable monitoring of this activity being undertaken.

Further changes to the scope of the SPR will improve the management data relating to priority and vulnerable customers.

5) Demand Estimation

Demand at non-daily metered (NDM) is currently determined based on a number of algorithms. This would also be the case for Products 3 and 4, though the algorithms themselves are expected to be updated to reflect changes in the supply point population.

6) Invoicing

Although existing invoicing structures would remain, all supporting information would be itemised at an individual supply point level, wherever possible. The number of ad hoc invoices would be reduced and systemised.

UNC Panel⁹ recommendation

At its meeting of 16 January 2014 the UNC Panel voted unanimously to recommend the implementation of UNC432.

The Authority's decision

The Authority has considered its statutory duties and functions in reaching its decision. The Authority has considered the issues raised by the modification proposal and the Final Modification Report (FMR) dated 17 January 2014. The Authority has also considered and taken into account the responses to the Joint Office's consultation on the modification proposals which are attached to the FMR¹⁰. The Authority has concluded that:

⁹ The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules.

¹⁰ UNC modification proposals, modification reports and representations can be viewed on the Joint Office of Gas Transporters website at www.gasgovernance.com

1. Implementation of UNC432 will better facilitate the achievement of the relevant objectives of the UNC¹¹; and
2. Directing that the UNC432 be made is consistent with the Authority's principal objective and statutory duties¹².

Reasons for the Authority's decision

We note that the responses to the Joint Office consultation overwhelmingly supported the implementation of UNC432. Of the seventeen responses received, thirteen supported the implementation of UNC432, with a further three offering qualified support. The remaining respondent maintained a neutral position.

We agree with the proposer and the UNC Panel that UNC432 should be assessed against UNC relevant objectives a), d) and f). We consider that it would have a neutral or no impact against the other objectives.

Implementation costs

UNC432 represents the main element of the Project Nexus proposals and would account for the greatest part of the estimated implementation costs. In keeping with normal modification procedures Xoserve has provided an individual costs estimate for each proposal, with UNC432 estimated to cost around £18m if implemented on a stand alone basis.

However, Xoserve has also confirmed that there would be significant cost savings from implementing the modifications as a package, with the aggregate costs being in the region of £20m. As noted in the FMR, the baseline cost of a like for like replacement of the existing UK Link system without incorporating the Project Nexus business requirements is not known. Only one tendering exercise has been undertaken and that included the Project Nexus proposals as an integral part of the replacement systems. It is also acknowledged within the FMR that, notwithstanding the perceived concerns over Gemini¹³ systems (see below), the replacement of UK Link on an economic and efficient basis has been funded. No costs are being recovered through the User Pays funding mechanism.

The cost benefit assessment appended to the FMR suggests that there would be direct quantitative benefits from UNC432 of around £2.9m per year. We understand that this is a conservative estimate based on responses to Xoserve's consultation on the business case. It is also pertinent that UNC432 is the keystone to a package of modifications estimated to deliver quantitative benefits of at least £11m per year.

We recognise the difficulty in quantifying the benefits of this proposal, particularly as much may depend on the degree of take up of each of the settlement products, ie the benefits in terms of increased accuracy of cost allocation may be commensurate with the number of supply points migrating up from Products 4 through to Product 3 and above.

¹¹ As set out in Standard Special Condition A11(1) of the Gas Transporters Licence, see: <https://epr.ofgem.gov.uk/Content/Documents/Standard%20Special%20Condition%20-%20PART%20A%20Consolidated%20-%20Current%20Version.pdf>

¹² 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.

¹³ Gemini is the IT system through which energy balancing and system entry and exit capacity booking activities are undertaken.

Gemini

National Grid NTS (NG NTS) was the only respondent that did not express support UNC432, instead maintaining a neutral position. In addition to sharing the concerns of other respondents over the challenging change programme discussed below, NG NTS considered that the TPCR4 and RIIO-T1¹⁴ allowances for Gemini change costs did not include any specific or incremental sums for delivering Project Nexus reforms.

Whilst we note NG NTS' concern that there appears to be little certainty over the scale of these impacts, the inter-relationship between UK Link changes and Gemini systems has long been known. Our current view is that the RIIO-T1 price control provided sufficient funding for the requested change costs in the price control allowance. We further consider that whilst making these consequential changes at the same time as those required for EU Network Code compliance may add to the perception of risk, it should also provide opportunity for cost savings.

Relevant objective (a): the efficient and economic operation of the pipe-line system;

We agree with the UNC Panel and those respondents who suggested that more accurate AQs will lead to a more accurate supply point offtake quantity (SOQ) values, which is one of the determinants for applicable transportation charges. UNC432 should therefore lead to more cost reflective transportation charges.

We also consider that accurate knowledge of the SOQ is essential to efficient and economic planning of the pipeline system. More timely and accurate revisions to SOQs resulting from changes in consumption at existing supply points will better inform future investment decisions. For instance, knowledge of reducing SOQs may mean that reinforcement costs could be avoided elsewhere in the network. We therefore agree that UNC432 should further facilitate the achievement of UNC relevant objective (a).

Relevant objective (d): the securing of effective competition between relevant gas shippers and suppliers

Meter reading

The accuracy of settlements is heavily dependent upon the submission of frequent and accurate meter readings. However, UNC arrangements have, to an extent, been dictated by the capacity of prevailing systems to handle those reads. For instance, the UNC currently states that SSP meter reads must be at least 63 days apart, anything submitted sooner than this is considered invalid and rejected.

While the capacity of central systems was strictly limited, this was a practical measure to ensure that the available capacity could accommodate meter reads from the maximum numbers of supply points, rather than be exhausted processing reads from relatively few Automatic Meter Read (AMR) devices, etc. However, as technology develops we do not consider that such systems constraints should continue to be an issue or determine industry arrangements.

We welcome the potential under UNC432 for all supply points to be individually reconciled and for the AQ to be recalculated each month. However, we note the continuing

¹⁴ www.ofgem.gov.uk/network-regulation-%E2%80%93-riio-model/riio-t1-price-control

restriction on meter read submission for Product 4, albeit now allowing one read to be submitted every 25 days for an SSP, or every 14 days for an LSP. Product 3 does not have any restrictions on read submissions, though they must be submitted in batches on either a weekly, fortnightly or monthly basis.

Whilst we recognise that there will be diminishing returns from more frequent reads in terms of their impact on settlement accuracy, we have not seen sufficient evidence of the extent to which these restrictions are necessary, or economically efficient. We are also concerned that these restrictions may create costs elsewhere, i.e. if shippers need to be selective over which reads to submit and/or administer rejections.

We consider that the question of unnecessary restrictions on read frequency is an area that should be further explored, particularly to the extent some of the benefits of Project Nexus may be contingent upon the level of take up for Product 1 to 3. However, we do not yet know what, if any, charges might apply to these products over and above Product 4 or what the likely level of take up for each of the four products will be.

We note the intention of the Performance Assurance workgroup to procure an assessment of the impact meter reads and other performance measures have on settlement accuracy and to put a value on that impact. Such analysis should inform the setting of appropriate standards, and potentially any related incentives mechanism.

Unidentified gas

Several respondents raised concerns regarding the removal of RbD and the distributional effects this may have, particularly upon the LSP sector, given the proposed industry wide smearing factor for unidentified gas. It was noted that whilst the ability to individually reconcile SSPs should bring them into line with the LSP sector, the number of installed smart meters remains relatively low. Although the roll out of smart meters is accelerating, demand allocation for such sites will be reliant upon estimates based on relatively infrequent meter reads for a number of years. The respondents were concerned that this, combined with the single smearing factor, could increase the allocation of unidentified gas costs to the LSP sector and amount to a retrograde step.

We share the concern that the use of a single scaling factor would offer a less accurate means of allocating unidentified gas than is currently offered by the Allocation of Unidentified Gas Expert (AUGE). We also consider the aim should be to reduce unidentified gas, not simply target its allocation, and a universal scaling factor would seem to dilute any existing incentives to do so.

However, we do not consider that these concerns are of themselves sufficient to outweigh the benefits of implementing UNC432 and warrant its rejection, particularly as work in this area is ongoing. For instance, UNC473¹⁵ has now been raised, which seeks to retain the AUGE and its role in determining the extent to which unidentified gas is shared between market sectors. We also note that the focus of the Performance Assurance workgroup is on the risks to accurate settlements. Once those risks are better understood and valued, the intention is to create appropriate incentives for shippers to mitigate those risks, or face targeted costs commensurate with their failure to do so.

¹⁵ UNC473: 'Project nexus – Allocation of unidentified gas'

UNC483¹⁶ has recently been raised in order to facilitate the development of such a regime.

Without prejudice to the further development of these or other modifications and any decisions the Authority may take on them, we consider that they demonstrate **there is opportunity for arrangements to be further refined in the 18 months before Project Nexus is scheduled to come into effect**, where such refinements do not entail material changes to the systems design. We do not consider that changing the value of an already embedded scaling factor should constitute a material change.

A further refinement of these proposals may bring the gas arrangements for dealing with unidentified energy into line with those for electricity. The use of a scaling factor to apportion costs of any unidentified gas within a Local Distribution Zone is similar to the Grid Supply Point (GSP)¹⁷ Group Correction to attribute electricity losses under the Balancing and Settlement Code. However, the GSP Group Correction is weighted in order to attribute energy losses where they are assumed to have occurred. We consider that such weighting could appropriately be adopted under the UNC, whether it is by sector as currently, by settlement product, or even on an individual shipper basis according to some measure of their relative performance.

For the reasons set out above, we consider that the implementation of UNC432 will lead to increased accuracy in the allocation of energy and to a lesser extent transportation costs. This will ensure that cost savings can be achieved by efficient shippers and suppliers, giving them a competitive advantage relative to less efficient operators. We therefore consider that the implementation of UNC432 will further facilitate the achievement of UNC relevant objective (d).

Relevant objective (f): the promotion of efficiency in the implementation and administration of the UNC

We note that the implementation of UNC432 will replace a number of existing industry procedures. An obvious example is the removal of the annual AQ Review process, through which around 8 million revisions were submitted to Xoserve in 2013, with a similar number in 2012. This is a resource intensive process for both shippers and Xoserve. While the changes to AQ calculation will generate a greater number of revisions each year, this will be done automatically and should require no further intervention.

Respondents who highlighted the efficiency gains arising from UNC432 also cited the 'Mod 640' process. This process, introduced by NG Network Code modification 640 in 2004, provides for the end of year reconciliation for supply points which have crossed the threshold from being a SSP to a LSP. In 2011/12 this required the reconciliation of £25.5m in energy charges and a further £0.5m of transportation charges. UNC432 abolishes the need for this process, removing not only the administrative burden, but the cash flow implications and associated perception of risk from such large scale and potentially unforeseen reconciliations.

Although UNC432 will in some cases introduce new administrative burdens such as the requirement to procure checks reads, we consider that the net effect will be more efficient industry arrangements. We therefore agree with the UNC Panel and those respondents who considered that UNC432 will further facilitate UNC relevant objective f).

¹⁶ UNC484: 'Performance Assurance Framework Incentive Regime'

¹⁷ Grid Supply Point Group Correction – see: www.elexon.co.uk/wp-content/uploads/2013/11/gsp_group_correction_v3.0_cgi.pdf

Timing

Several respondents raised concerns over the congested industry change programme for late 2015. It was noted that in addition to Project Nexus, other changes scheduled to take place around this time include:

- convergence with EU Network Codes¹⁸;
- Data Communication Company (DCC) go-live for smart metering;
- change of supplier reforms.

We recognise that this is a challenging set of deliverables for the industry and for Xoserve in particular. However, to date we have seen no evidence to suggest that these deliverables cannot all be met, or of the nature and likelihood of risks associated with pursuing them in tandem.

The FMR and accompanying legal text for UNC432 specify 1 October 2015 for its implementation. Recognising the benefits of this modification, and the original intention for UK Link systems to be replaced by 2013, we expect industry to manage the above pressures and maintain this timeline.

Decision notice

In accordance with Standard Special Condition A11 of the Gas Transporters' Licence, the Authority hereby directs that modification proposal UNC 432: '*Project Nexus – Gas Demand Estimation, Allocation, Settlement and Reconciliation reform*' be made.

Rob Church
Associate Partner, Smart Metering and Smarter Markets

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

¹⁸ Including UNC461: 'Changing the UNC Gas Day to align with the Gas Day in EU Network Codes'