

Modification proposal:	<b>Uniform Network Code (UNC) 331: Demand Estimation Section H Changes to Processes and Responsibilities (UNC331)</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:	7 December 2011	Implementation Date:	To be confirmed by the Joint Office

## Background to the modification proposal

Demand estimation processes in the gas industry are used to derive the algorithms and parameters that form the basis of the calculation of the aggregate amount of gas used, on a daily basis, by different groups of customers and different areas of Great Britain.

Gas flows daily through the transmission and distribution system to approximately 22 million supply points. The system needs to be balanced<sup>3</sup> on a daily basis, but the majority of the meters in these supply points are not read daily. To facilitate system balancing, the gas is allocated to the non-daily metered (NDM)<sup>4</sup> market using the gas industry demand estimation processes. These processes are outlined in Transportation Principal Document Section H of the Uniform Network Code (UNC)<sup>5</sup>. Demand estimates for the NDM market are used by Gas Transporters (GTs) to estimate the daily demand for gas, and allocate demand to shippers<sup>6</sup>.

The demand models are defined separately by each GT and reference variables such as weather and day of the week. The algorithms and parameters are reviewed on an annual basis. This review takes into account differences in levels of usage and customer behaviour, as a result of changes in weather, time of year, geographical location and customer type. The current methodology for demand estimation, and subsequent allocation of gas throughput, has been largely unchanged since the start of domestic competition in 1996.

## The modification proposal

Modification UNC331 was raised by E-On (the proposer) on 8 September 2010. It responds to what the proposer considers to be a mismatch between the current code obligations in terms of demand estimation processes, which rest with GTs, and the impacts of these processes, which are borne by shippers. The proposer also notes that the current demand estimation process is ineffective, as it usually centres on faults in the profiles that are identified, but not corrected due to timing<sup>7</sup>.

### *The proposal: Creation of an Expert Group*

UNC331 proposes to amend UNC Section H to form a cross-industry group, referred to as the Expert Group, to take responsibility for the technical analysis and support for the

<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.

<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> For the system to be balanced, the differences between daily gas consumption (the amount of gas exiting the system) and daily gas inputs (the amount of gas being introduced in the system) must be kept within specific safety parameters.

<sup>4</sup> NDM Supply Points are sites where there is no daily meter read equipment installed for settlement purposes. The demand models will be developed for each type of customer (or profile), referred to as an End User Category (EUC), and for each area of the gas distribution network, referred to as Local Distribution Zones (LDZ).

<sup>5</sup> Available at <http://www.gasgovernance.co.uk/TPD>.

<sup>6</sup> In particular, they are used for determining NDM Supply Point capacities, NDM nominations and daily offtakes, and NDM Supply Point Annual Quantities (AQs, an estimate of a site's annual consumption of gas).

<sup>7</sup> In particular, the proposer considers that the current timescales, explicitly stated in the UNC, represent a constraint to the analysis and make the consultation process ineffective.

work areas covered in Section H. Both GTs and shippers would be represented on the Expert Group<sup>8</sup>. This would enable the responsibility for demand estimation, currently sitting solely with GTs, to be more equitably distributed between GTs and shippers<sup>9</sup>. In amending the UNC, the proposal would also remove the technical details<sup>10</sup>, currently specified in Section H, that constrain the analysis. This would allow the detailed analysis to be undertaken under a more flexible framework, and enable profiles to represent the changing patterns of demand, so as to provide more accurate allocation.

### *The role of the Expert Group*

The role of the Expert Group would be to conduct, oversee and direct the detailed analysis and methodologies required for demand estimation purposes under the UNC. In particular, the Expert Group responsibilities would include:

- Undertaking profile analysis and reviewing profiles
- Defining samples and statistical techniques
- Reviewing the Seasonal Normal Demand and Composite Weather Variable<sup>11</sup>
- Reviewing demand model methodologies on a regular basis
- Providing transparency, such that analysis is published for consultation, and that parties are able to replicate the analysis
- Defining decision criteria and overseeing any decisions arising during the analysis

### *Governance arrangements for the Expert Group*

UNC Section H provides for the UNC Committee (UNCC)<sup>12</sup> or any relevant sub-committee to consider a number of matters relating to demand estimation. The UNCC has established the Demand Estimation Sub-Committee (DESC), which meets as necessary to fulfil the functions set out in Section H.

If UNC331 is implemented, the proposer would request the UNCC to create the Expert Group as a new sub-committee. The Expert Group would be a sub-committee of DESC, with the responsibility to recommend the demand estimation methodologies required under Section H. These would be passed to DESC for approval. Under the proposed terms of reference<sup>13</sup>, recommendations from the Expert Group would be reached by a simple majority of members present. Where a recommendation can not be reached the Expert Group would pass the matter to DESC to be resolved<sup>14</sup>. The quorum for the Expert Group meetings would be at least three members or their alternates, of which at least two should be shippers and one a GT.

### *Potential costs and benefits*

The proposal concludes that operating the Expert Group with cross-industry input into the analysis should be manageable within current budgets. It suggests that the general provisions of UNC Section H would require no additional funding and would not be User Pays<sup>15</sup>. Any analysis over and above the standard levels of GTs' resource covered under

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<sup>8</sup> Under the proposed terms of reference for the Expert Group, the members would be those appointed by shippers, and one representative from each GT.

<sup>9</sup> Shippers would therefore be able to make available the meteorology and forecast experts that they have in their organisations. This would allow shippers to be actively involved in a process that may have significant impacts on them.

<sup>10</sup> These include the specific details around the consultation process, but also some of the specific details around the methodologies to derive the demand models (eg references to specific data to be used will be removed).

<sup>11</sup> The Composite Weather Variable captures the combined effect on demand of the components of weather (including actual temperature, seasonal normal temperature and windchill). The Seasonal Normal Demand for a given day represents the demand for gas that would be estimated to occur under normal weather conditions for that day.

<sup>12</sup> The role of the UNCC is to review any matters concerned with the implementation of the UNC, and to fulfil any role as directed in the UNC. The UNCC may establish sub-committees to fulfil its different roles, and it may also decide to close down any sub-committee it has created.

<sup>13</sup> UNC331 includes proposed terms of reference for the Expert Group, and amended terms of reference for DESC.

<sup>14</sup> If DESC is also unable to reach a decision, the matter would be escalated to the UNCC.

<sup>15</sup> These are the services paid for directly by the users of the services, instead of being funded by GTs.

current UNC provision would be raised as User Pays on an ad hoc basis<sup>16</sup>. Any further analysis required to be undertaken by xoserve would be considered as ad hoc additional services (under service line 7 in the Agency Charging Statement<sup>17</sup>).

The proposer expects the benefits from improvements to allocation to be considerable, and that there would be a net benefit to any upfront costs faced by the industry in resourcing the Expert Group. According to one example presented by the proposer, the differential of prices used for reconciliation<sup>18</sup> from September 2008 to January 2009 was up to 23 pence per therm. Analysis provided in the Final Modification Report (FMR) indicated that if 0.2% of the volume of gas is reallocated, this would mean a redistribution within the industry of nearly £8m for that month.

### **UNC Panel<sup>19</sup> recommendation**

At the Modification Panel meeting held on 15 September 2011, eight out of a possible eleven votes were cast in favour of implementation of the proposal. The UNC Panel therefore recommended the implementation of the modification proposal.

### **The Authority's decision**

The Authority has considered the issues raised by the modification proposal and the FMR dated 29 November 2011. The Authority has also considered and taken into account responses to the UNC's consultation on the modification proposal. The Authority has concluded that:

1. implementation of the modification proposal will better facilitate the achievement of the relevant objectives of the UNC<sup>20</sup>; and
2. directing that the modification be made is consistent with the Authority's principal objective and statutory duties<sup>21</sup>.

### **Reasons for Authority decision**

We have assessed the proposed modification against the UNC Relevant Objectives. We consider this proposal will further objectives (d) and (f) and is neutral with regards to the other Relevant Objectives.

One respondent noted that the Gas Balancing Alerts (GBAs)<sup>22</sup> and Gas Deficit Emergencies (GDEs)<sup>23</sup> processes are driven by demand estimations. It considered that, at the limit, more accurate estimation could prevent the need to declare for GBAs or GDEs, and therefore UNC331 would also further relevant objective (a), the efficient operation of the pipeline system.

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<sup>16</sup> UNC331 proposes for all costs over and above standard levels of costs to be recovered in their entirety from NDM shippers. One respondent noted however that if this proposal were deemed to have a beneficial impact on the operation of the system, then they would expect GTs to fund between 25-50% of the incremental costs.

<sup>17</sup> The objective of the Agency Charging Statement, as contained in paragraph 11 of standard special licence condition A15 of the licence is as follows: "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."

<sup>18</sup> Prices used in the reconciliation process are referred to in the UNC as the System Average Price (SAP).

<sup>19</sup> The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules.

<sup>20</sup> As set out in Standard Special Condition A11(1) of the Gas Transporters Licence:

<http://epr.ofgem.gov.uk/index.php?pk=folder590301>

<sup>21</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>22</sup> A GBA indicates to the market that there is the potential for gas demand to exceed supply. National Grid, in its capacity as the transmission system operator, will declare a GBA when the forecasted demand for the following day is above a specified trigger level (equivalent to the total supplies available and the amount of gas in storage facilities).

<sup>23</sup> A GDE happens when there's not enough gas to meet demand and maintain a safe level of pressure in the gas system. A GDE will lead to large business users being told by the system operator to turn off gas-using equipment.

We agree that increasing demand estimation accuracy could lead to better information being made available for GBA and GDE processes. However, we note that declaring GBAs or GDEs is generally associated with sudden, and as such unanticipated events, which could have a significant impact on either the demand or supply of gas<sup>24</sup>. We therefore consider that the increase in accuracy of demand estimations is likely to be more relevant to objectives (d) and (f), and that UNC331 is neutral in relation to objective (a).

***Standard Special Condition A11.1 (d): the securing of effective competition between relevant Shippers, between relevant Suppliers, and between Distribution Network Operators and relevant Shippers***

The proposer argues that the allocation and reconciliation processes involve significant risks to shippers. It notes that implementation of the modification would lead to increased accuracy of demand estimation, which is fundamental to minimise these risks. The proposer and all consultation respondents to UNC331 considered that the increased involvement of shippers, through the Expert Group, would lead to more accurate demand estimation. They added that this would improve the accuracy of cost allocation in the market with consequential benefits to competition between shippers.

We consider that the methodologies derived by the Expert Group should be no less predictable than the methodologies derived under the current process. We agree that increased involvement by industry experts should lead to a more robust demand estimation process, such that estimated demand is closer to actual demand. This would reduce the risk faced by shippers through reconciliations when actual demand is known, and support more accurate cost allocation. By improving cost allocation, implementation of UNC331 would have a beneficial impact on competition by exposing shippers more fully to the costs that they have incurred. We therefore consider that implementation of this proposal will better facilitate relevant objective (d).

***Standard Special Condition A11.1 (f): so far as is consistent with subparagraphs (a) to (e), the promotion of efficiency in the implementation and administration of the network code and/or the uniform network code***

UNC331 seeks to improve the processes outlined in Section H, and to streamline them to enable more appropriate analysis. Some respondents considered that the proposal could improve the verification of profiles. They added that this may result in improvements to allocation between market sectors through a fair, transparent and non-discriminatory set of profiles. These respondents argued that this would remove a source of contention that has resulted in a number of modifications in the past. One respondent considered that implementation would improve the efficient administration of the code, by reducing the need for further incremental changes.

We consider that this proposal is likely to promote a more inclusive and transparent process for the development of methodologies and analysis under Section H of the UNC. We consider that the revision of the demand estimation process may promote a more effective consultation process, and alleviate the current constraints identified by the industry. This is likely to improve efficiency in the implementation and administration of the UNC. We consider therefore that implementation of UNC331 will better facilitate objective (f).

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<sup>24</sup> For example, in January 2010 National Grid issued a GBA to inform the gas market about the drop in expected supplies, caused by a drop in supplies due to temporary technical problems in Norwegian gas fields.

## **Further issues**

### *Implementation date and legal text*

The proposer and some respondents suggested that the modification would need to be implemented before the end of 2011 to allow sufficient time to set up the Expert Group and enable input into the Spring 2012 analysis.

We are concerned that the legal text may lead to different interpretations about the responsibilities of DESC and the Expert Group, and could therefore be potentially confusing<sup>25</sup>. We raised this issue with the proposer and the UNC Panel, and asked for further consideration to be given to any risks arising from potential confusion with the UNC331 legal text. The proposer considered that the terms of reference would provide sufficient clarity about the responsibilities of each sub-committee. To rectify any potential source of confusion we would urge the UNCC and DESC to ensure that the terms of reference for both sub-committees provide clarity about responsibilities of each sub-committee. We would also recommend that the terms of reference are made publicly available. If, once implemented, there remains a risk of confusion arising from the legal text, notwithstanding any clarification made to the terms of reference, we would urge the industry to consider addressing it by raising a modification to further clarify the specific responsibilities of DESC and the Expert Group.

### *Review of the arrangements*

One respondent to the UNC331 consultation noted that some shippers are better placed than others to provide expertise to the demand estimation process, and that it would expect the regulator to scrutinise the outputs from this revised process. Another respondent considered it to be a risk that the Expert Group, DESC and UNCC may not be able to reach an agreement on the change in the proposals. This respondent notes that the default position in this situation would be that there is no change to the current industry profiles. The same respondent would also support a post implementation review of the effectiveness of the proposed measures, one year after they are implemented.

We agree that a post-implementation review of the proposals would allow an assessment of whether the new arrangements are fit for purpose. We consider also that this review would be an effective way of scrutinising the outputs of the Expert Group. We note that, in implementing this review framework, the parameters for evaluating the Expert Group and the criteria for success should be defined at the outset.

## **Decision notice**

The Authority directs that modification proposal UNC331: 'Demand Estimation Section H Changes to Processes and Responsibilities' be made.

**Colin Sausman**  
**Partner, Smarter Markets**

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

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<sup>25</sup> Under this proposal, Section H of the UNC refers to both DESC and the Expert Group using the same reference, the "relevant Sub-Committee". We raised this issue with the proposer and a new version of the legal text was drafted. The UNC Panel considered that an explicit reference to the Expert Group under Section H would not fully reflect the intent of the proposal. The final version of the FMR submitted to Ofgem therefore did not include changes to the original version of the legal text.