

Modification proposal:	<b>Uniform Network Code (UNC) 330: Delivery of additional analysis and derivation of seasonal normal weather (UNC330)</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:	20 October 2011	Implementation Date:	To be confirmed by the Joint Office

## Background to the modification proposal

The output of weather stations located in different areas of Great Britain, which record daily weather data (temperatures and wind speed), is used by Gas Transporters (GTs) to determine gas demand profiles and estimates.

Under Section H of the Uniform Network Code (UNC)<sup>3</sup>, GTs are required to develop a gas demand model for each Gas Year<sup>4</sup>, which estimates daily gas demand quantities for the Non Daily Metered (NDM) sector<sup>5</sup>. One of the inputs into the demand model is weather data. In developing the gas demand model, GTs have to account for the combined effect on demand of the components of weather (including actual temperature, seasonal normal temperature and windchill), which is captured in a variable known as the Composite Weather Variable (CWV). The historical weather data-set obtained from weather stations is used to estimate the daily values of the CWV. GTs are required, at least every five years, to review the formula by which the CWV is determined on the basis of new weather data<sup>6</sup>.

The CWV is also used to calculate the Seasonal Normal Demand (SND)<sup>7</sup> estimates. In order to estimate the daily SND, the Seasonal Normal value of the CWV (SNCWV) is incorporated into the demand model. SNCWV values are calculated on the basis of the smoothed averages of the CWV values for a day<sup>8</sup>. The last review of the CWV was conducted in 2010 and the revised seasonal normal basis was implemented for the period from 2010 to 2015 (pending any interim review).

## The modification proposal

Modification UNC330 was raised by Scottish and Southern Energy (SSE) on 6 September 2010. It comprises two main features. Firstly, the delivery of a methodology for re-analysing historical data when weather stations are replaced. Secondly, the delivery of a methodology that will consider the impact of climate change in the review of the CWV. These are discussed in more detail below.

### *Weather station substitution methodology*

The gas industry currently uses a daily historical weather dataset to derive the

<sup>1</sup> The terms 'the Authority', 'Ofgem' and 'we' are used interchangeably in this document. Ofgem is the Office of 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> Available at <http://www.gasgovernance.co.uk/TPD>. We are aware of the potential impact of modification UNC331 (<http://www.gasgovernance.co.uk/0331>) on Section H of the UNC. UNC331 is currently being considered by the Authority.

<sup>4</sup> The gas year runs from the 1<sup>st</sup> October to 30<sup>th</sup> September.

<sup>5</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 defined 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>6</sup> GTs may revise the CWV in any shorter period on the basis of unusual new weather experience.

<sup>7</sup> The SND for a given day represents the demand for gas that would be estimated to occur under normal weather conditions for that day.

<sup>8</sup> Smoothing of the CWV is done in accordance with the demand model developed for each year. For a given day, it will be derived by averaging the CWV historic values for that day in a consecutive number of previous years, and also by averaging the CWV forecasted values for future years that may be available from forecasted weather data.

coefficients for the CWV. However, through time some weather stations used to record the weather data have been closed down. The historical data associated with these stations has been adjusted to conform to the characteristics of the replacement weather stations (usually sited nearby)<sup>9</sup>. The proposer considers that the methodology used to re-analyse historical data, and reconcile the weather dataset from closing and replacing weather stations, is not consistent each time that this occurs. They also note that there is no methodology published on how this process is undertaken.

UNC330 was raised to facilitate the development and delivery of a methodology that will be used to re-analyse historical data as further weather station closures occur. It also proposes that the methodology is published, with enough detail to allow replication by users, and for it and the resulting data (including any updates) to be made available to UNC signatories on request.

#### *Climate change methodology*

The proposer considers that using the historical weather data-set for seasonal normal analysis and to derive the CWV has been sufficient while there was no apparent warming trend. However, it considers that, with climate change, this methodology is no longer suitable, as historical weather data now requires prior adjustment to make the dataset consistent with current climate patterns. During the 2010 review of the demand model and CWV, which defined the current view of the SND estimates, the methodology (which was based exclusively on historical data) was modified and climate trends were used to adjust the data.

The proposer indicates that this ad hoc adjustment to the methodology, ie using the historical data-set together with the climate trends, is only a temporary solution and it does not have the confidence of many industry participants. UNC330 proposes therefore the development of an additional methodology that would effectively adjust each year of the historical data-set to a level consistent with climate change. The intention is that this methodology will provide a number of years of adjusted data that could be used as scenarios within the analysis for the purpose of updating the CWV, leading to outputs consistent with current climate patterns. Under UNC330, the methodology behind the analysis would be fully documented and the resulting historical data-sets made available to UNC signatories on request.

#### *Obligation to be introduced in the UNC*

Under UNC330, an obligation would be placed on GTs to cooperate with the Demand Estimation Sub-Committee (DESC)<sup>10</sup> to deliver these two methodologies. Under this obligation, GTs would be required to work with DESC to seek confirmation and approval of the scope of work specified in the relevant invitation to tender. As the outcomes from the two methodologies are currently unknown, the proposal does not require their adoption. However, the development of the methodologies could facilitate the use of a more robust and accurate data-set in estimating the CWV.

#### *Implementation costs and potential benefits*

The proposer has provided provisional estimates for the cost of developing the two methodologies. According to the proposer, the development of the weather station substitution methodology is expected to cost £20,000, while the climate change

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<sup>9</sup> See National Grid Transmission explanatory notes on the replacement of weather stations at <http://www.gasgovernance.co.uk/sites/default/files/Explanatory%20Notes%20on%20National%20Grid%20Weather%20History.pdf>

<sup>10</sup> DESC is the Sub-committee created by the UNC Committee (UNCC) for the purposes of assisting in its role with regards to demand estimation.

methodology is expected to cost £200,000<sup>11</sup>. These costs would be met 50% by Shippers (according to their customer market share in the NDM sector), and 50% by GTs.

The proposer has presented one example of energy allocation that highlights the level of risk to the industry of potential inaccuracies in the demand model. According to the proposer the differential of prices used for reconciliation<sup>12</sup> from September 2008 to January 2009 was up to 23 pence per therm. Analysis provided in the modification report 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>13</sup> recommendation**

At the Modification Panel meeting held on 21 July 2011, eight out of a possible ten 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 Final Modification Report (FMR) dated 16 September 2011. The Authority has also considered and taken into account the 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>14</sup>; and
2. directing that the modification to be made is consistent with the Authority's principal objective and statutory duties<sup>15</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.

### ***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 and the majority of respondents consider that UNC330 would ensure more accurate allocation of costs. They consider that implementation of this proposal would allow the development of alternative methodologies that could be used to assess and to improve the accuracy of energy allocation between NDM Shippers in the Smaller Supply Point (SSP) and Larger Supply Point (LSP) markets<sup>16</sup>.

The proposer additionally considers that implementation of UNC330 could reduce risks from errors in allocation resulting from the use of inaccurate profiles. This would reduce

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<sup>11</sup> This is based on an estimate from the Met Office, which has developed a similar methodology.

<sup>12</sup> Prices used in the reconciliation process are referred to in the UNC as the System Average Price (SAP).

<sup>13</sup> The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules.

<sup>14</sup> As set out in Standard Special Condition A11(1) of the Gas Transporters Licence, see:

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

<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> SSPs are sites with an Annual Quantity (AQ, an estimate of a site's annual consumption of gas) below 73.2MWh. Sites with an AQ above this threshold are LSPs.

SSP Shippers' exposure to the Reconciliation by Differences process, and LSP Shippers' exposure to reconciliation<sup>17</sup>.

We agree that the availability of alternative methodologies to derive the CWV and increase the robustness of the underlying data-sets could improve its accuracy, and therefore the accuracy of allocation of energy and transportation charges. This may result in greater certainty on costs, as there will be less subsequent adjustments once meter reads are submitted, and improved allocation of costs between the SSP and LSP markets. This may therefore facilitate a more cost-reflective allocation of charges, and we consider this may have a beneficial impact on competition by helping ensure that Shippers are exposed 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***

The proposer considers that, by providing additional methodologies, UNC330 will ensure that GTs are not constrained to a single methodology in deriving the CWV and therefore this proposal will promote efficient implementation and administration of the UNC.

One of the respondents is concerned that the current methodology for estimating the CWV coefficients was implemented despite unanimous disapproval from Shipper representatives at DESC. It adds that the methodology is not being reviewed despite this having been agreed as a condition to the withdrawal of objections from Shippers to the approval of the current methodology. Two respondents noted that, when Shippers attempted to implement a change to the CWV through the UNC, this required three modification proposals and prolonged discussions within DESC, that ended with a workaround solution, that was viewed only as a stop-gap measure by recognised experts. Both respondents considered that this was not efficient and that a process that facilitates transparency to derive the CWV would reduce the need for additional industry effort to resolve any issues.

We agree that this proposal may promote a clearer and more transparent process for the development of alternative methodologies aimed at improving accuracy of the CWV estimation. The proposal increases clarity regarding the way in which new information can be procured and subsequently reflected in the demand attribution processes. This is likely to be beneficial to efficiency in the implementation and administration of the UNC. In this sense, we consider that implementation of this proposal may help better facilitate relevant objective (f).

***Further issues***

One respondent considers that the proposal is unclear in a number of areas and would cause ambiguity if it was implemented in the current form. Their concerns include the lack of clarity on the criteria to be used by the voting parties for agreement on the scope of works specified in the invitation to tender, and also on the criteria to decide on the proposed methodology. They are also concerned that the legal text does not accurately reflect the wording of the proposal.

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<sup>17</sup> The demand model and the AQ are used to allocate the energy and transportation charges to Shippers. In the LSP market, Shippers have this initial position reconciled against their actual meter reads when they become available. There is no reconciliation process for individual sites in the SSP market. The aggregated increase or decrease in the LSP consumption volumes that results from the reconciliation process will flow to the SSP market, in a process known as Reconciliation by Differences.

We note that the FMR and the legal text indicate that GTs should work with DESC to seek confirmation and approval for both the scope of work specified in the relevant invitation to tender and for the completed work and proposed methodology. We consider that DESC is an appropriate forum to consider and resolve any ambiguity about the evaluation criteria for assessing the scope of work and the proposed methodologies. We agree with the view of another respondent that the legal text reflects the intent of the proposal, and note that parties are able to seek clarity on proposals or raise alternatives as part of the modification process.

### **ACS decision**

We have considered the changes to the Agency Charging Statement (ACS) that have been proposed to facilitate the implementation of UNC330. We note that the proposed changes provide only for an indicative cost for the services, at around £220,000. While this is not ideal, we note the constraints in providing more conclusive cost figures at this stage. If further information becomes known that parties consider will impact on the potential benefits of this proposal then we note that they may raise a further modification to address their concerns.

One respondent is concerned about what the actual costs to the industry would be, how these costs are to be apportioned, and over what time period. We note that the FMR indicates that costs would be apportioned 50% to GTs and 50% to Shippers, according to the number of customers in the NDM sector. The respondent notes that UNC330 does not identify any additional benefits to GTs brought about by the implementation of this proposal, and therefore it does not agree that GTs should fund 50% of the costs. Another respondent considers that the outputs from the new methodology may flow through to the GTs' planning processes, and therefore considers that the 50/50 funding split is a pragmatic way forward.

We consider that a 50/50 funding split is a reasonable approach and note that the availability of additional methodologies and sources of data that could result from implementing this modification have the potential to better inform the GTs' estimation process for the CWV. We therefore consider the proposed cost allocation method to be reasonable and consistent with the relevant objectives of the ACS<sup>18</sup>.

### **Decision notice**

The Authority directs that modification proposal UNC330: 'Delivery of additional analysis and derivation of seasonal normal weather' be made.

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

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

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<sup>18</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."