Modification proposal:	**Uniform Network Code (UNC) 218: Amendment to the base period used to define Seasonal Normal Weather (UNC218)**		
Decision:	The Authority[1] directs that this proposal be made[2]		
Target audience:	The Joint Office, Parties to the UNC and other interested parties		
Date of publication:	19 December 2008	Implementation Date:	To be confirmed by the Joint Office

Background to the modification proposal

Gas Transporters (GTs) use Demand Models to estimate the **daily demands** for Local Distribution Zones (LDZs), End User Categories (EUCs) and for LDZ Aggregate Non Daily Metered (NDM) Points. The Demand Models are defined separately by each GT and reference certain variables such as weather and day of the week. One such variable is the *Composite Weather Variable (CWV)*.

The CWV is derived from a formula established by each of the GTs. Its purpose is to estimate the combined effect on demand of various weather factors i.e. actual temperature, seasonal normal temperature, wind-chill etc. GTs are obliged by the UNC to review, and where appropriate revise, the formula used to establish the CWV for an LDZ every five years (and at more frequent intervals if appropriate). The review is conducted on the basis of additional weather data. The next review is due in 2010.

In order to estimate the daily **seasonal normal demand** (SND) for an LDZ, an EUC or for LDZ Aggregate NDM Points, the *Seasonal Normal value of the CWV (SNCWV)* is incorporated into the applicable Demand Model. SNCWV values are calculated on the basis of the smoothed averages of the CWV values for a day, across an established historical period[3]. Currently this period, or "basis", is the 17 years from October 1987 to September 2004.

The UNC requirement to have a seasonal normal basis smoothed over a period "up to and including a year not more than six years prior to the year in question" effectively triggers a review of the basis after five years. This is done in line with the UNC requirement to review the CWV formulas every five years. As noted above, the next review is due in 2010. The revised seasonal normal basis will be implemented from 2010 to 2015 (pending any interim review).

Where historical weather is relatively free from short-term exceptional weather patterns and is expected to be a good basis for future weather, a historical seasonal normal basis seems sensible. However, where weather patterns are changing such that historical weather is no longer considered to be a good proxy for future weather, a historical seasonal normal basis may no longer be appropriate. At present, the UNC obliges Transporters to base SNCWV purely on historical data.

It is important that SNCWV values reflect current weather conditions given their impact across a range of industry processes. More accurate SNCWV values allow GTs to better forecast SND which feeds into a number of industry processes including NDM demand

[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] UNC Section H1.5.2: "The "seasonal normal value" of the Composite Weather Variable for an LDZ for a Day in any year is the smoothed average of the values of the variable…for that Day in a significant number of consecutive previous years, up to and including a year not more than 6 years prior to the year in question, derived from weather records maintained by the Transporters".

allocation[4], the calculation of Annual Quantities (AQs)[5], and GTs' longer term demand forecasts (as set out in GTs' annual Ten Year Statements)[6].

Modification Proposal

UNC218 proposes to amend Section H1.5.2 of the UNC to remove the requirement to base SNCWV purely on historical data. It is an enabling modification allowing GTs the option to use forecast data in tandem with historical data to produce SNCWV values, where this is considered to provide benefit.

To clarify, this proposal does not seek to require GTs to use the seasonal normal basis as defined under Section H (Demand Estimation and Demand Forecasting) in their estimates of SND for long-term planning purposes as defined under Section O (System Planning) of the UNC[7]. Further, this proposal does not seek to restrict GTs in their choice of forecast data or data source. Rather, it seeks only to extend the range of data that is available to GTs. Notwithstanding that, the FMR does make reference to the recent Met Office/Hadley Centre study into weather impacts for the utility industry. It notes that this study provides a set of values that would allow a period of part historical and part forecast data to be used in the derivation of an appropriate seasonal normal basis[8] [9].

UNC218 also proposes to retain the five year review period to ensure that any new basis would be fixed for a number of years and where appropriate revised in line with any changes in expectations regarding weather.

The Proposer considers that UNC218 is likely to further relevant objectives (a), (c), (d) and (f) as set out in Standard Special Condition A11 (1) of the Gas Transporters Licence[10].

UNC Panel[11] recommendation

At the Modification Panel (the "Panel") meeting held on 16 October 2008, of the 10 Voting Members present capable of casting 10 votes, 5 votes were cast in favour of implementation of the proposal. Therefore the Panel recommended that the proposal not be implemented.

The Authority's decision

The Authority has considered the issues raised by the modification proposal and the Final Modification Report (FMR) dated 04 December 2008. The Authority has considered and

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[4] For further details on the NDM demand allocation formula, see UNC Section H. For details on the NDM nominations process, see UNC Section C.
[5] For further details on the formula used to derive a Supply Point's Annual Quantity, see UNC Section H and Section G.
[6] For further details on GT's long term forecasting requirements, see UNC Section O.
[7] There is no requirement to have the same historical seasonal normal basis for use in allocation (NDM profiling) and planning (demand forecasting).
[8] A number of Shippers and GTs were involved in the recent Met Office/Hadley Centre study which concluded with the provision of a set of hourly temperatures and wind speeds from the Met Office Decadal model. The proposer is of the view that these are a good fit to recent historical actual weather and provide forecast values through to 2018.
[9] In its response, the Proposer stated that: "The input from the experts at the Met Office and Hadley Centre was invaluable in providing data that could *now be made available to the industry for use in National Systems*" (emphasis added).
[10] For detailed views from the Proposer and Respondents, see: www.gasgovernance.com
[11] The UNC Panel is established and constituted from time to time pursuant to and in accordance with the UNC Modification Rules.

taken into account the responses to the Joint Office's consultation on the modification proposal which are attached to the FMR[12]. The Authority has concluded that:

1. implementation of the modification proposal will better facilitate the achievement of the relevant objectives of the UNC[13]; and
2. directing that the modification be made is consistent with the Authority's principal objective and statutory duties[14].

Reasons for the Authority's decision

The Authority considers that UNC218 impacts on the facilitation of relevant objectives (a), (c), (d) and (f) of the UNC most significantly. We have set out below why we believe UNC218 would better enable the achievement of these objectives.

We note that the Joint Office received ten responses to its consultation on UNC218 of which five were supportive, four were opposed and one, after having originally opposed the proposal, amended its view to neutral after further clarification from the Proposer on the intent of the proposal.

Relevant Objective (a) - the efficient and economic operation of the pipe-line system

Some respondents who were supportive of UNC218 considered that improvements in the accuracy of AQs would provide GTs with a clearer picture of the energy needed to be transported through the pipe-line network. This, they argued, would allow them to operate the system in a more economic and efficient manner. However, one respondent who did not support the proposal considered that improved AQs would do little to improve the demand modelling undertaken by GTs as AQs were only one of a significant number of parameters which are taken into account. This respondent argued that improvements in AQs would only help the economic and efficient operation of the pipeline system to a limited extent.

As indicated in the FMR, it is not the intention of this proposal to require GTs to use the seasonal normal values as defined through Section H of the UNC for operational and planning purposes as defined through Section O of the UNC. To this end, we think that the potential impact of improved SNCWV on GTs' long term system planning is less relevant in the consideration of the merits of this modification.

However, in terms of the day-to-day physical operation of the pipeline system, we believe that more accurate SNCWV values may afford Shippers an opportunity to better understand demand fundamentals, thus creating an opportunity for more informed purchasing decisions. We believe this may be particularly relevant to those smaller Shippers who do not have access to sophisticated forecasting models and so rely on the GTs' own forecasts of demand for their purchasing decisions. This may help to assist National Grid NTS in its role as the residual balancer.

To the extent that UNC218 facilitates the use of forecast data in the derivation of a better view of SND, we considered that implementation of this proposal will at a minimum, marginally further facilitate the efficient and economic operation of the pipe-line system.

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

[13] 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

[14] 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.

Relevant Objective (c) - so far as is consistent with sub-paragraphs (a) and (b), the efficient discharge of the licensee's obligations under its licence

A number of respondents in favour of implementing UNC218 considered that a more accurate view of SNCWV could result in a more accurate initial allocation of demand, leading to more accurate NDM commodity charges on the original commodity invoice. One respondent opposed to implementation considered that any improvements in the cost reflectivity of charging due to more accurate demand allocations would rely on the premise that forecasts, and thus the initial allocations, would be more accurate.

In response to this view we note that this modification does not mandate the use of forecast data by GTs, rather provides them with the option of using it in tandem with historical data, where it provides a more appropriate seasonal normal basis. In allowing GTs access to a fuller range of information in order to be able to assess the most appropriate SNCWV values, we believe UNC218 will allow for improvements in cost reflective charging and is therefore consistent with the charging principles in Standard Special Conditions A4[15] and A5[16] of the Gas Transporters licence.

Relevant Objective (d) - so far as is consistent with sub-paragraphs (a) to (c) the securing of effective competition between relevant shippers, suppliers and DNs

One respondent in favour of the proposal noted that Shippers are incentivised to purchase gas at market prices and balance their positions against the relevant GT's demand forecast. This is because any imbalance will be cashed-out at the System Marginal Price (SMP). Shippers' allocations are finalised at D+5 and any differences between the final allocation and initial allocation will be corrected through the Reconciliation by Difference (RbD) process. At this point, any differences are cashed-out at SAP. Divergence between the GT's demand forecasts (which provide the basis for initial allocations) and actual demand (which provides the basis for final allocations) means that Shippers face a level of risk where System Average Price (SAP) differs from market prices, and this can be difficult to manage. This respondent considered that improving the accuracy of initial allocations, and consequently the amount of RbD correction, should help to reduce this risk.

A number of other respondents supportive of UNC218 were also of the view that improvements in the initial allocation of energy would lead to reduced movement of energy between sectors via reconciliation. They believed this would facilitate competition between shippers, minimise uncertainty for new entrants and increase revenue certainty for GTs.

We agree with these views and consider that implementation will allow GTs to analyse a broader range of potential base periods in order to choose which is the most appropriate to derive the SNCWV values. We believe this will allow for improvements in AQ calculations and reduce the misallocation of energy, and hence costs, across the industry. We therefore consider UNC218 will better facilitate the achievement of relevant objective (d).

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

Several respondents in favour of UNC218 considered that, given the review of the seasonal normal basis is a requirement of the UNC, an amendment that allows for

[15] http://epr.ofgem.gov.uk/document_fetch.php?documentid=6540
[16] http://epr.ofgem.gov.uk/document_fetch.php?documentid=8783

analysis which considers high impact changes relating to weather could be considered as enabling the efficiency of code administration.

In terms of improving initial allocations by correctly allocating energy early on in the process, thus reducing the size of RbD, there may be administrative efficiencies as a result of this proposal. To this extent, we consider that the proposal will marginally further facilitate relevant objective (f).

Other issues

We note the concerns of some respondents opposed to the modification that there has been limited analysis presented to quantify the benefits of utilising forecast data in the calculation of SNCWV, in terms of improvements in AQs and subsequent allocations. We consider that it would have been helpful if such analysis could have been presented to market participants to consider during the consultation. However, we understand that changes to weather patterns and the effect on the energy industry is not a new issue and that discussions (which have included various streams of analysis) have taken place through several UNC workgroups, through regular meetings of the Demand Estimation Sub-Committee (DESC) and, more recently, through the Met Office/Hadley Centre study.

We also note that industry parties monitor the seasonal normal basis at a minimum every five years, to ensure that it is the most accurate and reflective basis. We understand that the GTs, supported by DESC, have the ability to undertake analysis at more frequent intervals where additional weather data becomes available to ensure the current basis remains the most appropriate. As an enabling modification, UNC218 allows GTs to consider a greater range of information in its analysis. To this end, we do not believe that the lack of quantification of the benefits presented in the FMR detracts from the principle of the proposal.

Further, we understand that the costs to operate this modification are minimal (zero in the instance that forecast data is not procured for use in practice) and believe that concerns that UNC218 is of marginal benefit should be seen in this context.

We acknowledge the concern of one respondent who considered that the proposal should mandate GTs to use the Met Office/Hadley Centre information. The respondent was of the view that this information was the best and most accurate available at present. Further, a small number of respondents expressed concern that the optional nature of UNC218 may introduce bias into the allocation models of different GTs. While we note both of these views, we nevertheless consider that this is not the modification that has been presented to us. If there are Shipper concerns on the consistency and use of data, these may be addressed through either DESC or, if agreement cannot be reached in that forum, through future modification proposals.

Decision notice

In accordance with Standard Special Condition A11 of the Gas Transporters Licence, the Authority, hereby directs that modification proposal UNC218: 'Amendment to the base period used to define Seasonal Normal Weather', be made.

Ian Marlee
Director, Trading Arrangements

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