Modification Report
Facilitating the use of forecast data in the UNC
Modification Reference Number 0254
Version 4.0

This Modification Report is made pursuant to Rule 9.3.1 of the Modification Rules and follows the format required under Rule 9.4.

1 The Modification Proposal

Uniform Network Code Modification Proposal 0218 "Amendment to the base period to define Seasonal Normal Weather" introduced the concept that both historical and forecast data could be used by the Transporters when developing their view of Seasonal Normal Weather – as required under UNC TPD Section H 1.4.2 (available at: http://www.gasgovernance.com/NR/rdonlyres/912CA091-492C-462B-9CE6-BD3411F6E099/33202/02_09_TPDH.pdf) The intent of UNC Modification Proposal 0218 was to allow the Transporters the option of using forecast data when developing their view of Seasonal Normal Weather however it was not prescriptive and allowed the Transporters to use other methodologies if they wished.

However through discussions with Transporters and xoserve at DESC it has become clear that there are issues with the current text of the UNC that may prevent the use of EP2 data. This proposal aims to modify the UNC so that forecast data and in particular EP2 data, can be used by the Transporters when developing their view of Seasonal Normal Weather. The aim is to allow the Transporters to use the Hadley Centre data for developing the "seasonal normal value", in line with DESC recommendations for 2010, but not restricting the Transporters to this methodology in future years.

Hadley Centre/Met Office EP2 Data

Currently the Transporters, through xoserve, produce a "seasonal normal value" of the CWV. This value is produced by using the smoothed average of 17 years of historical data for a particular day. This produces a view of the "seasonal normal value" for individual days. This is then applied to produce the "seasonal normal value" for future years – 2005 to 2010. EP2 data produces the exactly the same results in that it produces a "seasonal normal value" for future years. The only difference is that rather than producing a static view of weather for a period of years it produces a specific view for each year.

This reflects the fact that since 2004 the industry's understanding of climate change and its implications have grown. The Hadley Centre and Met Office formed a project with Shippers, Suppliers, Generators and Transmission owners to look at the impact that climate change would have called the EP2 Project. The high-level aim of this project was to recognise that the climate was changing and so historic data by itself may no longer represent a good proxy for future climate. One of the workstreams to come out of the EP2 project was an updated view of Seasonal Normal Weather. Like the current arrangements the model produces a forecast of Seasonal Normal Weather. However this

forecast is produced using 15 years of actual historic data and 15 years of forecast data[1].

Modification Proposal

It is proposed that UNC Section H is modified so that the Transporters can use forecast data. To assist this the following changes are proposed:

1. **A new paragraph is added so that the Transporters are required to review the Seasonal Normal Value every 5 years, or more frequently on the basis of unusual new weather.**

   This will improve clarity in the UNC of how frequently the Seasonal Normal Value should be updated and be consistent with the arrangements for reviewing the Composite Weather Variable.

2. **Remove the requirement that the data used in developing the Seasonal Normal Value is no more than 6 years old.**

   The methodology used to develop EP2 data uses actual historic data up to 2007. Therefore with the current wording of Section H 1.5.2 a review would be forced for 2013 and not 2015 as intended. Further it is our understanding that the current 6 year rule was implemented to force a review of the Seasonal Normal Value every 5 years. This is now being addressed by point one above and so is redundant.

3. **Amend the UNC so that the seasonal normal value is derived from weather records maintained by a reputable provider.**

   The EP2 data is maintained by the Met Office and not the Transporters. This requirement therefore appears overly restrictive on data sources and should be amended so that weather records maintained by a reputable provider are acceptable. It is also worth noting that the historic data used in developing the forecast is the same data as that held by the Transporters.

4. **Amend the UNC so that the Gas Transporters can develop the Seasonal Normal View based on either historical data only OR using a combination of both historic and forecast data OR using forecast data only.**

   Currently the UNC is worded so that the Seasonal Normal View is developed based on historical weather records held by the Transporters AND a forecast were the Transporters determine. There is therefore a view that this is incompatible with the use of only EP2 data. It is therefore proposed that the UNC is modified so that it is compatible with other data sources such as EP2 data.

5. **Delete the reference in H 1.5.2 (b) to: "in the current year and one or more subsequent years".**

   At the DESC meeting on 11 May 2009 xoserve proposed that this clause was deleted as they believed that it was ambiguous/redundant. It is therefore proposed that it is removed.

[1] Note the actual split between historic data and forecast data will vary depending on the year being forecast.

6. **Amend the UNC so that data is smoothed only if required.**

Currently the UNC is worded so that the seasonal normal value is the smoothed average of the values for a day. However one of the benefits of EP2 data is that it does not need smoothing. If only historic data is used then this may need smoothing if the data series is relatively short and so exposed to any recent fluctuations. There may also be a requirement to smooth the output of forecast data in the future, depending on the model adopted. It is therefore proposed that the UNC is modified so that the smoothed average is only applied to data if required.

Suggested Text

Insert new paragraph in H 1.5:

> Every 5 years, commencing 2015, the Transporters will, after consultation with the Uniform Network Code Committee or any relevant Sub-committee, review and where appropriate revise (with effect from the start of a Gas Year) the "**seasonal normal value"** of the Composite Weather Variable for an LDZ that is determined on the basis of new weather experience; provided that the Transporters may (after such consultation) revise such formula at more frequent intervals where the Transporters determine it to be appropriate on the basis of unusual new weather experience in any shorter period.

Amend H 1.5.2:

> Where the Transporters so determine 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, which may need to be smoothed, (derived from the formula prevailing in accordance with paragraph 1.4 for that year) for that Day:
>
> (a) 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 a reputable provider ~~the Transporters,~~ or
>
> (b) ~~where the Transporters so determine, in the current year and one or more subsequent years,~~ in a significant number of consecutive previous years derived from weather records maintained by a reputable provider and ~~derived~~ from forecasts by the Meteorological Office or other reputable meteorological services provider or
>
> (c) derived from forecasts by the Meteorological Office or other reputable meteorological services provider.

2 User Pays

a) Classification of the Proposal as User Pays or not and justification for classification

Not User Pays

This Proposal is not creating any additional costs on xoserve's processes or

systems. There are therefore no costs to recover and so this is not a User Pays Proposal.

b) Identification of Users, proposed split of the recovery between Gas Transporters and Users for User Pays costs and justification

Not applicable

c) Proposed charge(s) for application of Users Pays charges to Shippers

Not applicable

d) Proposed charge for inclusion in ACS – to be completed upon receipt of cost estimate from xoserve

Not applicable

3 Extent to which implementation of the proposed modification would better facilitate the relevant objectives

Standard Special Condition A11.1 (a): the efficient and economic operation of the pipe-line system to which this licence relates;

AQ forms the building block of many of the planning and system security activities of Transporters. As such improving the accuracy of AQs through the appropriate weather correction will improve the opportunity for Transporters to operate the pipe-line system in an efficient and economic manner.

National Grid NTS considers that implementation of this Proposal will not better facilitate this objective. National Grid NTS disagrees that AQs form the building block of system security activities. Long term demand forecasting for system planning is carried out on the basis of assessments of connected load[2] which are determined by weather correction of actual demand (not based on supply point AQs held on the system). Therefore, improving the accuracy of NDM supply point AQs cannot be expected to have a direct impact on the efficiency of physical pipeline operations.

National Grid Distribution (NGD) made the following observations in relation to comments put forward in the draft modification report in relation to SSC A11.1 (a) *'the efficient and economic operation of the pipe-line system...*' The proposer considers improving the accuracy of the AQs through appropriate weather correction will improve the opportunity for Transporters to operate the pipe-line system in an efficient and economic manner. NGD would like to re-iterate the comments it put forward in representation to modification proposal 0218, that whilst this may be true to a limited extent, peak flows are more important to Transporters than annual flows when analysing the relationship

[2] Further details of National Grid's long term gas demand forecasting methodology including explanations of key terms such as connected load may be found at:

http://www.nationalgrid.com/uk/Gas/OperationalInfo/operationaldocuments/Gas+Demand+and+Supply+Forecasting+Methodology/

between peak and annual flows and carrying out modelling, NGD takes into account a significant amount of other information (e.g. real pressure measurements), so that network models as far as is possible reflect experienced conditions.

Scotia Gas Networks considers implementation of this proposal would not further this relevant objective as Transporters plan their gas pipeline networks such that the pipeline system is capable of supplying the Firm Demand at 1 in 20 year conditions and hence must ensure that economic investment in the pipe-line system takes this into account. Calculation of peak 1 in 20 year demand figures should not solely be derived from the AQ as the relationship between AQs and peak 1 in 20 demand figures is not linear, in that where an AQ decreases the peak 1 in 20 year demand figure does not necessarily decrease by the same rate. Although implementation of this proposal may provide more reflective AQs, Scotia Gas Networks consider they would not necessarily be more accurate.

Standard Special Condition A11.1 (b): so far as is consistent with sub-paragraph (a), the coordinated, efficient and economic operation of

(i) the combined pipe-line system, and/ or

(ii) the pipe-line system of one or more other relevant gas transporters;

Implementation would not be expected to better facilitate this relevant objective.

Standard Special Condition A11.1 (c): so far as is consistent with sub-paragraphs (a) and (b), the efficient discharge of the licensee's obligations under this licence;

Through more accurate allocations of demand, implementation may provide the opportunity to improve cost reflectivity of charging and therefore be expected to better facilitate Standard Licence Condition A5.5.

National Grid NTS agree that implementation of this proposal may lead to more accurate allocations of demand and may provide the opportunity to improve cost reflectivity of charging if the accuracy of NDM AQs held on industry systems is improved and therefore this proposal may under those circumstances better facilitate Standard Licence Condition A5.5.

However, a seasonal normal basis that is more reflective of climate trends will not in itself deliver more accurate NDM supply point AQs. For example if meter reads do not come through to enable an AQ to be revised, a new seasonal normal basis alone will be of no effect. A significant proportion of all NDM meter point AQs are not revised in the annual review and this is arguably a greater influencing factor. Also, errors in the meter reads themselves may have a greater impact than a choice between a forecast or historically based seasonal normal basis.

Standard Special Condition A11.1 (d): so far as is consistent with sub-paragraphs (a) to (c) 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;

Potential improvement in the accuracy of the seasonal normal values will feed into the calculation of AQs and hence to the allocation process. This would ensure that energy was allocated more accurately on the original commodity invoice and minimise movement of energy between market sectors through reconciliation. This could be expected to facilitate competition between relevant Shippers, minimise uncertainty for new entrants and increase revenue certainty for DNOs.

In addition this Proposal seeks to bring clarity to the UNC and remove redundant clauses. This could therefore be seen to reduce complexity within the UNC. If UNC complexity is a barrier to entry, then this proposal will reduce this barrier. This could therefore be seen to benefit competition by reducing a barrier to entry and reducing the regulatory burden and complexity on smaller Shippers.

Standard Special Condition A11.1 (e): so far as is consistent with sub-paragraphs (a) to (d), the provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards… are satisfied as respects the availability of gas to their domestic customers;

Implementation would not be expected to better facilitate this relevant objective.

Standard Special Condition A11.1 (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;

In addition, as reviewing the seasonal normal is a code requirement, an enabling modification allowing analysis to consider high impact changes could be considered as enabling the efficiency of administration of code.

This Proposal also brings clarity to the UNC. This can therefore also be seen as facilitating efficiency in the implementation of the UNC.

4 The implications of implementing the Modification Proposal on security of supply, operation of the Total System and industry fragmentation

No implications on security of supply, operation of the Total System or industry fragmentation are expected.

5 The implications for Transporters and each Transporter of implementing the Modification Proposal, including:

a) Implications for operation of the System:

A review of seasonal normal is already scheduled; this Modification Proposal should provide the opportunity for it to be reflective of a wider set of

meteorological data so improving operation of the system.

b) Development and capital cost and operating cost implications:

None. The data derived from the EP2 model is being provided to the Gas Transporters free of charge and so there are no costs in procuring this data. Going forward the Met office have identified that maximum costs for running this model will be £50,000. It should be noted that the gas Transporters will only be exposed to these costs if no other Shipper, Supplier, Generator or Transmission Owner requires an update to the model. We believe that this is unlikely and so any future costs are limited.

The letter from the Met Office identifying these costs is available on the Joint office website at: http://www.gasgovernance.com/NR/rdonlyres/FE620FD5-06D2-4838-BC2C-E1D83659BCB4/33138/EP2_WP8_update_schedule.pdf

National Grid NTS note that the proposer considers it is unlikely that Transporters will be exposed to any costs, however if this did become the case then they consider any additional costs should be met by all parties who have a licence obligation to provide SNCWV.

National Grid NTS observe that new paragraph H1.5 is being added so that Transporters are required to review the Seasonal Normal Value every 5 years, or more frequently on the basis of unusual new weather. Whilst National Grid NTS support this, they consider the draft legal text does not include the October 2010 review. They consider the common intent to be that these revised arrangements should apply to the review that will be implemented on 01 October 2010 as well as future 5 yearly (or exceptionally more frequent) reviews. As this is suggested legal text they would expect this would be addressed in the production of the final legal text.

c) Extent to which it is appropriate to recover the costs, and proposal for the most appropriate way to recover the costs:

No additional cost recovery is required.

d) Analysis of the consequences (if any) this proposal would have on price regulation:

Not applicable.

6 The consequence of implementing the Modification Proposal on the level of contractual risk of each Transporter under the Code as modified by the Modification Proposal

The UNC is preventing the Transporters from adopting EP2 data, despite this being the favoured data source of all Shippers. Implementation of this proposal will therefore remove this risk.

7 The high level indication of the areas of the UK Link System likely to be affected, together with the development implications and other implications for the UK Link Systems and related computer systems of

each Transporter and Users

There are no implications to systems for any Transporter or User over and above the Seasonal Normal Composite Weather Variable changes already scheduled.

8 The implications of implementing the Modification Proposal for Users, including administrative and operational costs and level of contractual risk

Administrative and operational implications (including impact upon manual processes and procedures)

No such implications have been identified.

Development and capital cost and operating cost implications

By increasing certainty of initial charges, implementation would potentially improve cost allocation amongst Users which would affect their operating costs.

Consequence for the level of contractual risk of Users

As the choice of base period directly influences AQ values, any improvement in the accuracy relative to future climate reduces risk that allocation of charges between Shippers be influenced by weather changes rather than demand changes. It might also reduce Users' exposure to differences between SMP and SAP on the Day.

9 The implications of implementing the Modification Proposal for Terminal Operators, Consumers, Connected System Operators, Suppliers, producers and, any Non Code Party

No impact above the already scheduled SNCWV changes.

10 Consequences on the legislative and regulatory obligations and contractual relationships of each Transporter and each User and Non Code Party of implementing the Modification Proposal

No such consequences have been identified.

11 Analysis of any advantages or disadvantages of implementation of the Modification Proposal

Advantages

- Meets DESC requirements to facilitate the use of EP2 data, developed by recognised world experts.
- Potentially ensures that gas and electricity definitions of Seasonal Normal Weather are aligned.
- Provides clarity to the UNC

Disadvantages

None identified

12 Summary of representations received (to the extent that the import of those representations are not reflected elsewhere in the Modification Report)

Organisation	Response
British Gas	Supports
Corona Energy	Supports
EDF Energy	Supports
EON UK	Supports
GDF Suez	Supports
National Grid Distribution	Supports
National Grid NTS	Supports
Northern Gas Networks	Supports
RWE npower	Supports
Scotia Gas Networks	Supports
Scottish and Southern Energy	Supports
Scottish Power	Supports
Statoil UK	Supports

In summary, of the 13 representations received, 13 supported implementation.

13 The extent to which the implementation is required to enable each Transporter to facilitate compliance with safety or other legislation

Implementation would not be expected to impact on each Transporter's safety case.

14 The extent to which the implementation is required having regard to any proposed change in the methodology established under paragraph 5 of Condition A4 or the statement furnished by each Transporter under paragraph 1 of Condition 4 of the Transporter's Licence

Implementation is not required having regard to any proposed change in the

methodology established under paragraph 5 of Condition A4 or the statement furnished by each Transporter under paragraph 1 of Condition 4 of the Transporter's Licence.

15 Programme for works required as a consequence of implementing the Modification Proposal

No programme of works would be required as a consequence of implementing the Modification Proposal.

16 Proposed implementation timetable (including timetable for any necessary information systems changes and detailing any potentially retrospective impacts)

This Proposal should be implemented in time to allow xoserve, on behalf of the Transporters, to utilise alternative data with effect from 1 October 2009.

17 Implications of implementing this Modification Proposal upon existing Code Standards of Service

No implications of implementing this Modification Proposal upon existing Code Standards of Service have been identified.

18 Recommendation regarding implementation of this Modification Proposal and the number of votes of the Modification Panel

At the Modification Panel meeting held on 16 July 2009, of the 9 Voting Members present, capable of casting 10 votes, 10 votes were cast in favour of implementing this Modification Proposal. Therefore the Panel recommended implementation of this Proposal.

19 Transporter's Proposal

This Modification Report contains the Transporter's proposal to modify the Code and the Transporter now seeks direction from the Gas and Electricity Markets Authority in accordance with this report.

20 Text

TPD Section H

Amend paragraph 1.5.2 to read as follows:

"The "**seasonal normal value**" of the Composite Weather Variable for an LDZ for a Day in any year is the average of the values of the variable, smoothed as required, (derived from the formula prevailing in accordance with paragraph 1.4 for that year) for that Day:

(a) in a significant number of consecutive previous years, derived from weather records maintained by the Transporters, the Meteorological Office or other reputable meteorological services provider, or

(b) in a significant number of consecutive previous years, derived from weather records maintained by the Transporters, the Meteorological

Office or other reputable meteorological services provider, and from forecasts by the Meteorological Office or other reputable meteorological services provider; or

(c) derived from forecasts by the Meteorological Office or other reputable meteorological services provider."

Add new paragraph 1.5.4 to read as follows:

"Every 5 years, commencing 2010, the Transporters will, after consultation with the Uniform Network Code Committee or any relevant Sub-committee, review and where appropriate revise (with effect from the start of a Gas Year) the seasonal normal value of the Composite Weather Variable for an LDZ on the basis of new weather experience; provided that the Transporters may (after such consultation) revise such value at more frequent intervals where the Transporters determine it to be appropriate on the basis of unusual new weather experience in any shorter period."

Tim Davis

Chief Executive, Joint Office of Gas Transporters