

Draft Modification Report
Delivery of additional analysis and derivation of Seasonal normal weather
Modification Reference Number 0330

Version 1.0

This Draft Modification Report is made pursuant to Rule 9.1 of the Modification Rules and follows the format required under Rule 9.4.

1 The Modification Proposal

Background

Derivation of a seasonal normal basis for use in industry profiles, allocation and AOs is a Transporter code requirement. Currently this requirement is met on a five-year basis using analysis undertaken by Transporters and presented to DESC to allow Shipper comment.

Over the past few years the Met Office and Hadley Centre have been working on a climate model that could analyse climate change over the next decade. The model was derived to be consistent with the Hadley Centre UKIP09 analysis that covers 2020 onwards and had involvement across the energy industry with a view to providing output that could be used to support industry processes. The output from this modelling process was made available to Transporters for use in their seasonal normal analysis, commonly referred to as EP2.

Previously seasonal normal analysis has concentrated on use of historical data as a base for deriving the future view of seasonal normal weather and while there was no apparent warming trend this has been sufficient. During the review that defined the current view of seasonal normal the original proposed methodology used a “new” concept arguing a breakpoint in behaviour was evident. However, both methodologies assume that historical data is sufficient to define future behaviour and provide no climatological foundation for the breakpoint identified.

The methodology proposed, and implemented, by the Transporters this time has been changed on a number of occasions, which is in itself a concern. Initially it was proposed to use a historical basis as in previous methodologies as it gave similar average levels to the EP2 output. When DESC argued that this missed the shape inherent in the EP2 analysis a revised approach was proposed. This used partial EP2 data but there was not widespread support from Shippers for this. The proposed basis was reviewed by the Met Office and a number of issues identified.

At a special DESC meeting the Transporters proposed an interim solution building on their latest methodology but using a partial implementation of the EP2 data through a compromise estimate methodology suggested by the Met Office. Whilst Shippers agreed to accept the proposal as a temporary solution pending correct analysis and revision over the next year there was recognition from all Shippers that the underpinning methodology was not suitable as an enduring solution. The proposed version for 2010 uses a mixed methodology that has inherent flaws and has been adjusted using a known approximation as a temporary fix. This does not provide the sound foundation that is required to provide assurance across the industry that

allocation, AQ and pricing are accurate and unbiased. EP2 provided a sound justifiable methodology based on an independent assessment of climate impact. While there are some adjustments to the output required for optimum use the base methodology provides a solid foundation for moving forward as an industry. To fully revise the methodology appropriately will require this additional work. During use of EP2 it has been recognised that to correctly reflect CWV variability the basic temperatures and wind speeds should be available for CWV calculation prior to any averaging taking place. This will require an update of the Met Office analysis. Given the use throughout the industry of any seasonal normal it is vital that the analysis is based on a sound methodology. However whilst there has been agreement within the industry that there is a benefit of undertaking this additional work, there have been issues around the funding of this work and how the outcome of this work would be implemented

The Proposal

The intent of this proposal is to facilitate the funding of this work, and ensure that it is subject to UNC Governance. For clarity this proposal will not force the adoption of this analysis, as it would appear premature to require the utilisation of work when the outcomes are not currently known. However, the additional analysis will ensure that the most robust and accurate data set for the derivation of seasonal normal weather is used. The proposer believes that the current UNC arrangements could facilitate implementation, or a further UNC Modification Proposal could be raised if appropriate.

It is proposed that the UNC is modified so that an obligation is placed on the Transporters to use best endeavours to deliver the additional analysis and outputs identified below.

Stage 1.

Currently a daily historical weather dataset (temperatures and wind speed) from 1927 to the current year for each LDZ has been compiled and is used by the gas industry to derive the coefficients for the composite weather variable (CWV). Periodically a weather station used to record actual data is closed down and the historical data associated with that station is adjusted to conform to the characteristics of a replacement weather station (usually sited nearby). The methodology used for the re-analysis of historical data is neither consistent nor published. A methodology needs to be agreed that will be used to re-analyse historical data as further station closures occur. The methodology needs to be published with enough detail to allow replication by users. The methodology and resulting database (including any updates) will be made available to all UNC signatories on demand This re-analysis could be carried out by any competent meteorological company at an estimated cost of £20,000. For the avoidance of doubt this exercise will need to be undertaken every time a weather station changes.

Stage 2.

The gas industry currently uses historical weather data to derive the coefficients for the composite weather variable (CWV). Until a few years ago, the database described

above was employed, however the drift in average temperature caused by climate change has meant that historical temperature data now requires prior adjustment to make historical data consistent with today's climate. An attempt at using climate trends to adjust the data has been employed but the method does not have the full confidence of many industry participants and the Met Office, when asked to comment, suggested it would constitute a stop-gap solution at best. The Met Office has since proposed a methodology that would effectively adjust each year of the historical dataset (as described in stage 1) to a level consistent with climate change. This would effectively provide over eighty years of adjusted data that could be used as 'scenarios'; it would thus feed directly into the analysis used to generate the CWV and be fully consistent with the current climate. This work would be based on the EP2 approach to climate adjustments and as a by-product, would update the existing climate averages used by industry participants. This methodology behind the analysis would be fully documented and the resulting historical datasets made available to UNC signatories on demand. A provisional estimate of the cost of this work, provided by the Met Office is £200,000.

To facilitate this work the Transporters will work with the Demand Estimation Sub-Committee and seek confirmation and approval of the scope of work specified in the relevant invitation to tender, and that the completed work and proposed methodology would also be subject to approval by the Demand Estimation Sub-Committee. This will be gained by simple majority vote of DESC members.

The work that the Transporters will be expected to deliver is:

- To develop a methodology that will be used to re-analyse historical data as further weather station closures occur. The methodology needs to be published with enough detail to allow replication by users. The methodology and resulting data (including any updates) will be made available to all UNC signatories on demand.
- To develop a methodology that would effectively adjust each year of the historical dataset (as described above) to a level consistent with climate change. The methodology behind the analysis would be fully documented and the resulting historical datasets made available to UNC signatories on demand.

2 User Pays

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

Currently, the obligation is on the Transporters to deliver this analysis as a code requirement.

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

A 50/50 split of cost amongst the NDM Shippers and Transporters based on cost sharing agreed at EP2 is proposed. The Shipper split is to be based on the NDM

shipper's customer numbers. The Transporters did not believe they would benefit from implementation and that application of the User Pays Guidance suggests that the Transporter share should be zero.

It is expected that the analysis identified in stage 1 could be carried out by any competent meteorological company at an estimated cost of £20,000.

A provisional estimate of the cost of the work to be conducted in stage 2 has been provided by the Met Office at £200,000.

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

Equal amount per registered NDM meter point on date of implementation of this proposal.

If the above calculation leads to a liability for less than £1,000 for any User, this will be set to zero and the remainder recalculated to ensure full cost recovery.

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

Charges applicable for inclusion in ACS to be confirmed.

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

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

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

Standard Special Condition A11.1 (b): *so far as is consistent with sub-paragraph (a), the (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;*

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

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;*

Implementation of this proposal would allow the development of alternative

methodologies that could be used to assess and, if concluded necessary, to improve the accuracy of energy allocation between NDM Shippers in the SSP and LSP markets. The availability of alternative methodologies will ensure that the most accurate energy allocation possible occurs to Shippers in the SSP and LSP market by D+5. The accurate allocation of costs by D+5 will benefit competition by ensuring that Shippers are exposed to the costs that they have incurred and so ensure that there is a limited cross subsidy between Shippers, even if this were to occur on a cash flow basis. Ensuring costs are accurately targeted is a fundamental requisite of a competitive market.

Further implementation of this proposal would also reduce SSP Shippers' exposure to RbD and LSP Shippers' exposure to reconciliation due to profile errors on allocation. These are both viewed as a risk to Shippers as they occur at SAP and Shippers are unable to manage or hedge this exposure. Removing a risk would also represent removing a barrier to entry and so also benefit competition. Based on a 0.2% volume correction allocation, the benefit would be around £8M per month across the industry. This is based on a calculation presented in a letter shippers sent to Ofgem in November 2009 "For example, reconciliation for 2009 to date has adjusted over 1TWh of the initial allocation for January 2009 from LSP to SSP markets. Given price changes between purchase could be large this is a high value risk. For example the differential between Sept 2008 purchase prices and Jan 2009 SAP used for reconciliation, only a 4 month difference, was up to 23pence per therm and this amounts to just under £8million on a 0.2% volume change for a single month. It can be seen from this that the risk to Shipper organisations can be significant"

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 (within the meaning of paragraph 4 of standard condition 32A (Security of Supply – Domestic Customers) of the standard conditions of Gas Suppliers' licences) 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.*

This proposal will provide an additional source of data to Transporters when deciding which methodology to use when deriving seasonal normal weather. This proposal will therefore ensure that the Transporters are not constrained to a single data set and methodology and so could be seen to facilitate this requirement by ensuring that the requirements in the UNC are efficiently met.

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 have been identified.

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

a) implications for operation of the System:

There are no implications for operation of the System.

b) development and capital cost and operating cost implications:

Potentially £220,000 for implementation of both stages across the industry, based on quotes from Weather data providers.

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

100% cost recovery through Code User Pays mechanisms to NDM Shippers and Transporters base on a 50/50 split. Transporters do not agree that they should bear a share of costs.

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

No consequences have been identified.

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

No such consequence is anticipated.

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

No changes to systems would be required as a result of implementation of this Proposal.

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)

If Shippers chose to support the work of DESC then this may represent an additional

operational cost to Shippers. However it is expected that this cost will only occur when the benefits outweigh the costs.

Development and capital cost and operating cost implications

Additional operational and development costs to NDM Shippers.

Consequence for the level of contractual risk of Users

This proposal may result in improved energy allocation by D+5 across the industry, thereby reducing contractual risk as certainty of costs is crystallised at an earlier stage.

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

Improved energy allocation at D+5 should benefit NDM customers.

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 consequences have been identified.

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

Advantages

- Ensures Transporters are actively involved in the processes envisaged in this Proposal
- Allows the adoption of a methodology agreed by Transporters and Shippers prior to the development of the seasonal normal value.
- As the current seasonal normal value was implemented under dispute, the Workgroup believe this modification will result in a seasonal normal value that is likely to be acceptable to all parties.

Disadvantages

- May require a further UNC Modification Proposal for implementation of any recommendations emerging as a result of implementing this Proposal.
- There is a risk that the resulting data does not influence or change the current seasonal normal value and therefore does not provide the benefits identified.

12 Summary of representations received (to the extent that the import of those

representations are not reflected elsewhere in the Modification Report)

*Written Representations are now sought in respect of this Draft Report. Consultation
End Date: 08 July 2011*

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

No such requirement has been identified.

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

No such requirement has been identified.

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

The Transporters would be required to establish a process to procure the information envisaged within this Proposal.

16 Proposed implementation timetable (including timetable for any necessary information systems changes)

This Proposal can be implemented immediately on direction from Ofgem. A potential service provider has indicated that the required analysis should take no longer than 12 months.

Advance notice of implementation is required to allow for the capture of meter point portfolio counts for each Shipper.

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

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

Transportation Principal Document

Section H

Insert the following new paragraphs 1.4.4 to 1.4.6

1.4.4 The Transporters shall:

- (i) provide a copy of the Weather Station Substitution Methodology to any User on request from that User;
- (ii) adjust, in accordance with the Weather Station Substitution Methodology, the historical data in relation to wind speeds and temperatures at weather stations which have ceased operation and have been replaced, for the purposes of the relevant Composite Weather Variable(s), by other weather stations; and
- (iii) provide such adjusted data to any User on request.

1.4.5 The Transporters shall provide to any User on request from that User:

- (i) a copy of the Climate Change Methodology; and
- (ii) the data in relation to wind speeds and temperatures at weather stations utilised by the Transporters for the purposes of any Composite Weather Variable as such data is adjusted from time to time pursuant to sub-paragraph 1.4.4(ii) and as adjusted in accordance with the Climate Change Methodology.

1.4.6 Nothing in paragraphs 1.4.4 and 1.4.5 shall oblige the Transporters to apply the Weather Station Substitution Methodology or Climate Change Methodology so as to revise any Composite Weather Variable.

Transition Document

Part IIC

Insert the following new paragraphs 11.5.3 to 11.5.9:

11.5.3 Subject to paragraph 11.5.7(i), the Transporters shall, acting as a Reasonable and Prudent Operator, procure the development by a reputable meteorological services company of a methodology suitable for the adjustment, for the purposes of Composite Weather Variables, of historical data in relation to wind speeds and temperatures at weather stations which cease operation and are replaced by other weather stations (in suitable locations) for the purposes of such formula (“the **Weather Station Substitution Methodology**”).

11.5.4 Section H1.4.4 shall not come into effect until such time (if any) as the Weather Station Substitution Methodology has been approved by the Demand Estimation Sub-Committee as referred to in paragraph 11.5.7(ii) and shall apply only in relation to weather stations which cease operation after **[insert: date of implementation of Modification Proposal 330]**.

11.5.5 Subject to paragraph 11.5.7(i) following the approval of the Weather Station Substitution Methodology by the Demand Estimation Sub-Committee as referred to in paragraph 11.5.7(ii), the Transporters shall, acting as a Reasonable and Prudent Operator, procure the development, by a reputable meteorological services company, of a methodology suitable for use in adjusting historical data in relation to wind speeds and temperatures at weather stations so that Composite Weather Variables (assuming the Composite Weather Variables were determined taking into account the Weather Station Substitution Methodology) take into account climate change trends (the “**Climate Change Methodology**”).

11.5.6 Section H1.4.5 shall not come into effect until such time (if any) as the Weather Station Substitution Methodology and Climate Change Methodology have been approved by the Demand Estimation Sub-Committee as referred to in paragraph 11.5.7(ii).

11.5.7 The Transporters shall not:

- (a) invite tenders for the development of the Weather Station Substitution Methodology or the Climate Change Methodology without the prior approval by the Demand Estimation Sub-Committee (on a simple

majority vote of the members of such Sub-Committee present at the relevant meeting of the Sub-Committee) of the scope of work specified in the relevant invitation to tender; or

(b) revise the formula by which the Composite Weather Variable for any LDZ is determined so as to incorporate either the Weather Station Substitution Methodology or the Climate Change Methodology without the approval of the relevant methodology by the Demand Estimation Sub-Committee (on a simple majority vote of the members of such Sub-Committee present at the relevant meeting of the Sub-Committee).

11.5.8 Nothing in paragraphs 11.5.3 and 11.5.5 shall oblige the Transporters to apply the Weather Station Substitution Methodology or Climate Change Methodology so as to revise any Composite Weather Variable.

Representations are now sought in respect of this Draft Report and prior to the Transporters finalising the Report.

For and on behalf of the Relevant Gas Transporters:

Tim Davis