

Modification Report
Amendment to the base period used to define Seasonal Normal weather
Modification Reference Number 0218
Version 3.0

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

Seasonal normal weather provides a view of expected or most likely, daily weather values. This allows the industry to form a view of whether demand has increased/decreased due to changes in base load or due to short term weather impacts.

The expected average (normal) weather conditions are used to create the SNCWV (Seasonal Normal Composite Weather Variable) values which underpin the demand allocation process. In addition SNCWV is used to correct AQ values to seasonal normal allowing them to be used as a proxy for future demand despite them being based on historical consumption. SNCWV is used to provide a view of SND that Networks use as the basis for long term planning.

As the level of seasonal normal has such a wide ranging impact on demand allocation, planning and charging mechanisms it is important that the values are updated to reflect current weather conditions.

Code currently allows for updates on a maximum five year cycle, with allowance for more frequent changes if Transporters feel unusual weather experience justifies.

Current UNC rules require the seasonal normal basis to be “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” (UNC TPD H1.5.2).

Where historical weather is reasonably free from trends and is expected to be a good representation of future patterns this is a sensible basis. However, recent history has seen concern about changing weather patterns and discussion around global warming converge into an accepted view that climate is changing. This being the case a seasonal normal based on historical weather is likely to be unrepresentative of future weather, even allowing for year on year variability around the norm.

Over the past two years the majority of major suppliers and at least one Transporter have been involved with a Met Office/Hadley centre study into weather impacts for the utility industry (EP2). This study has recently concluded, providing those involved with a set of hourly temperatures and wind speeds from the Met Office decadal model. These values are a good fit to recent historical actual weather and provide forecast values through to 2018. The Met Office and the Hadley Centre are accepted as world experts in weather forecasting and global warming impacts, allowing us to place weight on their findings of expected temperature changes over the future decade. However, we are not seeking to restrict the Transporters to which data or suppliers to use –

merely to extend their ability to derive the seasonal normal on a more appropriate basis.

This modification seeks to amend H1.5.2 to remove the requirement to base seasonal normal on purely historical data where use of forecast data would provide benefit. While a reasonable length of years is important to remove year on year variability, a trend change into the future makes it important to have the opportunity to reflect future changes.

Use of forecast data is defined in UNC TPD H5.1.1 and this definition is expected to be sufficient to be extended to cover future periods past day ahead.

Using forecast information, such as that produced by the Met Office in their recent study, would allow a period of part historical and part forecast data to provide the seasonal normal base. As a trend change can be problematic to reflect in a seasonal normal we propose retaining the review period of 5 years. This would allow a set of seasonal normal values to be derived from a combination of forecasts and historical data, fixed for a number of years, then revised upwards to match the new warmer expected levels.

For the avoidance of doubt this proposal does not seek to mandate use by Transporters of the Seasonal Normal defined through section H for their ten-year planning defined within section O. Historically different seasonal bases have been used for allocation and planning purposes and although we believe that a review of 1 in 20 derivations by the industry would be useful this proposal is not looking to impact this area.

Suggested Text

Suggested text is left to the Transporter, however the proposer believes amendments are due to H1.5.2 (to define the seasonal normal) and H5.1.1 (to refer to forecasts and providers).

2 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 Distribution (NGD) believes this Proposal does little in practice to improve the modelling undertaken by Transporters. This is because peak flows are more important to Transporters than annual flows.

National Grid NTS (NG 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 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 will have no direct impact on the efficiency of physical pipeline operations.

Scotia Gas Networks (SGN) highlight that when Transporters plan gas pipeline networks they must adhere to licence conditions which stipulate the pipe-line system being capable of providing the required pressure at 1 in 20 year demand conditions. Therefore it would neither be efficient or economic to operate the pipe-line system relying on AQ values, whether it is perceived the AQ values in themselves were more accurate as a result of using forecast weather data.

Standard Special Condition A11.1 (b): so far as is consistent with subparagraph (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 subparagraphs (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 this relevant objective.

Standard Special Condition A11.1 (d): so far as is consistent with subparagraphs (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 seasonal normal values will feed into the calculation of AQt 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.

NGD believes that there is a significant risk that the energy could be allocated more inaccurately if the forecasts were proven to be less reliable than the current methodology.

NG NTS does not agree that the Proposal will necessarily better facilitate this objective, as the accuracy of AQt of NDM supply points are as much dependent on the accuracy of the two meter reads used to determine the actual consumption over a period and also the duration between the two chosen meter reads, as it is on determination of the Seasonal Normal Composite Weather Variable (SNCWV). Therefore, NDM demand attribution (NDM allocation)

may not be as beneficially improved as suggested. They also believe the proposed amendment to H5.1.1 would inappropriately target costs to National Grid NTS instead of to those parties that have the licence obligation to produce the SNCWV.

Standard Special Condition A11.1 (e): so far as is consistent with subparagraphs (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 subparagraphs (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.

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

SGN do not believe the utilisation of forecast weather data would necessarily result in a more accurate seasonal normal demand value, they in turn do not believe a more accurate peak day demand value would result. The calculation of a peak day demand value which is less representative of peak day conditions, would result in the pipe-line system's development not adhering to licence conditions and potentially, at worst, resulting in the inability of the system to cope in a peak day scenario. Therefore they do not accept this Modification Proposal in its current format would improve security of supply but could have the potential to deplete the integrity of the pipe-line system to meet peak day conditions.

4 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 should provide the opportunity for it to be reflective of a wider set of meteorological data so improving operation of the system.

NG NTS believes that further costs will be incurred in future if the Network Operator users choose to use forecast data as the Hadley/Met office study will require updating of the data on a regular basis i.e. every 5 years.

b) Development and capital cost and operating cost implications:

The review is already scheduled so there are no cost implications to this specific Modification. It is recognised that should the Transporters decide to

use the output from the recent Met Office study there would be no cost implications for those not already party to the information but there would be cost implications if the Transporters used other sources of data.

EDF Energy acknowledges that this Proposal introduces the option for the GTs to utilise other data sources, and there may be a cost associated with this. However EDF Energy challenged that the GTs would only use other data sources if they were more accurate.

Scotia Gas Networks notes that the Proposer believes there are no operating costs associated with implementation of this modification. However subsequent provision of data by these organisations or other organisations not involved in the initial research, may in the future attract substantial cost.

NGD notes that the project board for the Hadley Centre/Met Office study has on this occasion agreed to release information to xoserve for analysis at no cost. Costs would however result from the additional analysis/modelling that would be required and should a different information provider be chosen it is possible that further costs may be incurred. No investigations have taken place at this stage to address securing the supply of forecast data into the future. This could be a challenge as the current data is only available until 2018.

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 proposed.

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

No such consequence is anticipated.

5 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

There is not expected to be any additional contractual risk on the Transporters from this Modification as it is allowing a more appropriate base period to be selected during a current code required process.

6 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.

7 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)

EDF Energy believe by improving the initial allocation, Shippers should benefit from reduced costs and also reduced RbD forecasting costs as final allocation should be closer to our D+5 allocation forecast.

NG NTS wish to note that there are costs involved when dealing with potential future weather station changes as the DNO Users would need to commission the provider to do a short duration (and therefore potentially costly) study to derive forecast data for any new station.

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.

8 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.

9 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.

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

Advantages

- Extend Transporters ability to derive the seasonal normal on a more appropriate basis.
- Potentially, reduces risk that allocation of charges between Shippers be influenced by weather changes rather than demand changes.
- Potentially ensures energy is allocated more accurately on the original commodity invoice and minimise movement of energy between market sectors through reconciliation.

Disadvantages

National Grid believes there are cost implications of approximately £80,000 per data request.

EDF Energy believes there is a disadvantage of not stipulating the use of the most accurate model for the next 5 year period.

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

Representations were received from the following parties:

| Organisation | Position |
|------------------------------|-----------------|
| EDF Energy | Supports |
| British Gas | Supports |
| E.ON UK | Supports |
| National Grid Distribution | Not in Support |
| National Grid NTS | Not in Support |
| Northern Gas Networks | Not in Support |
| RWE Npower | Supports |
| Scotia Gas Networks | Not in Support |
| Scottish and Southern Energy | Supports |
| Statoil (UK) Ltd | Supports |

Whilst SGN accept that the provision of accurate demand allocation profiles for Shippers is important to reduce the amount of energy channelled through reconciliation, they do not believe sufficient analysis has been carried out to take account of other factors that can affect demand apart from a change in temperature and therefore the potential impact on the peak day.

SGN accepts that the Proposer has introduced a non mandatory use of the forecast data to allow Transporters to continue with the use historical data for calculation of a seasonal normal demand. However, SGN considers that introducing a dual process to calculate the SNCWV for AQ correction and demand allocation would introduce confusion and uncertainty into the industry and increase pressure on Transporters to plan pipe-line networks based on this data, in turn potentially leading to an under statement of peak demand figures. SGN considers that any potential reduction in the certainty around the calculation of peak day figures would undermine the entire pipe-line planning process.

NGD also expressed concern over the optional use of forecast data, as this would place the onus on DNOs to procure and model such data, alongside historical data, and then take a view on whether to use the forecasts. The Proposal would introduce further subjectivity into code leaving the discretion and justification of introducing forecast data to the DNOs. This could lead to increased costs and more discussion over the final base level. A clear direction on how the basis is calculated would be preferable to avoid unnecessary analysis and procurement costs.

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

Implementation is not required to enable each Transporter to facilitate compliance with safety or other legislation.

13 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.

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

No programme for works has been identified.

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

It is recommended that implementation be during 2008 or as soon as feasible in 2009 to fit in with the scheduled review.

16 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.

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

At the Modification 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 implementing this Modification Proposal. Therefore the Panel did not recommend implementation of this Proposal.

18 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.

19 Text

Uniform Network Code - Transportation Principal Document

Section H – Demand Estimation and Demand Forecasting

Replace paragraph 1.5.2 with the following new paragraph 1.5.2:

“1.5.2 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 (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 the Transporters; and
- (b) where the Transporters so determine, in the current year and one or more subsequent years, derived from forecasts by the Meteorological Office or other reputable meteorological services provider.

For and on behalf of the Relevant Gas Transporters:

Tim Davis
Chief Executive, Joint Office of Gas Transporters