

Modification Report
New Seasonal Demand Derivation and Associated AQ Impacts
Modification Reference Number 0739
Version 1.0

This Modification Report is made pursuant to Rule 7.3 of the Modification Rules and follows the format required under Rule 8.9.3.

1. The Modification Proposal

Modification of the Network Code is required to introduce a methodology whereby Transco is able to apply changes to the seasonal normal basis within the annual review of Annual Quantities (AQs). This would permit use of revised new basis Weather Annual Load Profiles (WALPs) in the AQ calculation. The new methodology would be applied to all AQs subjected to the AQ review process, including those not recalculated due to insufficient meter reads being available.

2. Transco's Opinion

It is Transco's opinion that this Modification Proposal should be implemented.

The AQ of a Non-Daily Metered (NDM) Supply Meter Point is defined within the Network Code to be the consumption at that Supply Meter Point under conditions of average weather in the course of a 365 day year.

Energy is allocated on a daily basis to every NDM Supply Point registered on Transco's UK-Link system. The process that manages the calculation is known as 'demand attribution'. The Composite Weather Variable (CWV) and the seasonal normal basis used within this process have an impact on charging across all Supply Points.

The Network Code requires that the definition of average weather is reviewed and if appropriate revised every five years. Average weather is also known as seasonal normal weather. The next revision to seasonal normal weather is due to take effect from 1st October 2005.

In consultation with the Network Code Demand Estimation Sub-Committee (DESC) analyses have been undertaken that have led to a new basis for seasonal normal weather appropriate to gas demand modelling being agreed by DESC. This new basis for seasonal normal weather takes into account recent experience of successive years of warmer weather, in the context of delivering a more appropriate basis to apply to gas demand modelling in general, and to Network Code NDM demand estimation in particular.

It is therefore necessary to ensure, as an essential part of the 2005 AQ review, that all NDM Supply Meter Point AQs that take effect from 1st October 2005 are correctly computed on the new basis for seasonal normal weather.

There is also a concurrent requirement to review the basis for seasonal normal weather. Any changes are reviewed and agreed by DESC. Although changes occurred five years ago (1st October 2000) they were of low magnitude. Changes identified by DESC and proposed for 2005 will have a significantly greater bearing on the calculations for seasonal normal weather.

Demand attribution bases the proportion of energy a Supply Point receives on its AQ. A standard review of AQs takes place annually and new values are implemented from 1st October each year. Revision of the seasonal normal weather basis should result in the annual seasonal normal demand being reduced. This in turn reduces AQ values for those Supply Meter Points where the AQ is recalculated, provided the AQ recalculation methodology takes into account the revision to the seasonal normal weather basis. The ensuing NDM End User Category (EUC) load factors would be lower leading to Supply Offtake Quantity (SOQ) values on aggregate which are retained at the same level. For Supply Points where the AQ were not recalculated, the SOQ would, in general, result in values greater than they should be.

In the event that the new basis WALPs fail to be applied to each NDM AQ during the 2005 review, this could lead to a misallocation of energy between market sectors and, within the Smaller Supply Point (SSP) market, between Users (where the market share would be impacted by the proportion of uncorrected AQs compared to the average). Due to this impact on AQs, it is recommended that as many Supply Meter Points as possible be amended by Transco for 1st October 2005. The AQ sub-group of the Supply Point & Billing Workstream concluded that it is necessary that revisions should take place for AQs not recalculated during the AQ review process (it is estimated that three million such meter points may not be recalculated due to lack of read information).

The proposed methodology (attached) uses recomputed historic WALPs, derived from new weather basis versions of the underlying NDM EUC models that applied to gas year 2004/05 (the last available gas year prior to the change), applied retrospectively to the gas years 2002/03 and 2003/04. Transco would calculate the historic WALPs using new weather basis versions of the underlying NDM EUC models that applied to gas year 2004/05 (the last available gas year prior to the change) applied retrospectively to the gas years 2002/03 and 2003/04 and also applied to the most recent gas year 2004/05. Each AQ would be revised using these recomputed new basis WALPs providing a consistent basis across all Supply Points. AQs for read periods before 2002/3 would be adjusted using factors (as there should be a small number of such AQs). No further adjustment would be required for any AQ not revised at subsequent AQ reviews. Those AQs which are not recalculated (those carried forward from the previous year due to lack of reads) would also be adjusted using factors based on the new weather basis versions of the underlying NDM EUC models.

This Proposal is optimal because the methodology uses underlying models that are strictly applicable to the EUC definitions that apply to Supply Meter Points just prior to this change (i.e. in gas year 2004/05). The resulting recomputed WALPs are thus more likely to be appropriate to those Supply Meter Points in recomputing their AQs. In particular,

there can be no issue with so called "Winter to Annual Ratio (WAR) band" EUCs, since the models would be those applicable to the most recent and (then) current WAR band definitions.

The Network Code does not presently specify the means of allowing for a change to the seasonal normal basis of weather in the annual review of AQs and therefore this modification is required to allow use of these revised new basis WALPs within the AQ calculation. It is also necessary for changes to the seasonal normal basis to be reflected where an AQ is not recalculated and the preceding years value is applied.

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

Any changes to seasonal normal weather will impact AQ calculations and may lead to an over-allocation of energy to the a Supply Meter Point in the event that the corresponding AQ is not recalculated accordingly. This Modification Proposal identifies a mechanism by which such changes may be achieved in an efficient manner.

If the event that the Proposal were not implemented, it would not be possible to reflect the planned changes to the seasonal normal basis of weather within the recalculated 2005 AQs, or those recalculated in subsequent years.

It is Transco's opinion that the measures described within this Modification Proposal meet Transco's GT Licence 'code relevant objective' of facilitating the efficient and economic operation by the licensee of its pipe-line system.

4. The implications for Transco of implementing the Modification Proposal , including
a) implications for the operation of the System:

No such implications have been identified.

b) development and capital cost and operating cost implications:

Minor implementation costs would be incurred by Transco (xoserve).

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

Transco does not propose any additional cost recovery.

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

No such consequences have been identified.

5. The consequence of implementing the Modification Proposal on the level of contractual risk to Transco under the Network Code as modified by the Modification Proposal

The level of Transco's contractual risk is not impacted by implementation of this Modification Proposal.

6. The development implications and other implications for computer systems of Transco and related computer systems of Users

Transco is not aware of the extent of any changes to Users' computer systems.

7. The implications of implementing the Modification Proposal for Users

At the January 2005 meeting of the Network Code Modification Panel, Transco was asked to comment on the potential impacts of the Proposal on the level of Transportation charges which may be levied to each User.

While it is not possible to undertake a precise analysis of the extent of changes to relevant charges prior to completion of the annual AQ review, Transco believes that three variables are of significance:

- revenue from throughput
- revenue from capacity
- other revenues dependent on charges directly related to AQ

Transco anticipates that it is reasonable to expect that changing AQs should not specifically change overall gas throughput or consumption. If the planned changes to AQs were implemented in a 'skewed' or inequitable manner, the throughput ascribed to some Users may be disproportionately higher or lower. However, the Proposal is intended to deliver an appropriate change and in Transco's view would not be expected to result in any such bias.

With reference to capacities, the change in AQs would amend (i.e. reduce) NDM EUC load factors ($\text{load factor} = (\text{AQ}/365)/\text{peak day consumption}$), and the overall aggregate NDM SOQs would not change. Hence, Transco believes revenue derived from such would also remain unchanged.

Transco has re-analysed the EUC models in place for 2004/05 on the new basis, and for the consumption bands 01, 02, 03 and 04 (i.e. 0-73.2 MWh pa, 73.2-293 MWh pa, 293-732 MWh pa and 732-2196 MWh pa - which together make up 93% of all NDM load) Transco has identified that in aggregate for each band, NDM SOQs change by 0.1%, 0.2%, -0.1% and 0.1% respectively. Allowing for small modelling and computational inaccuracies, these are consistent with expectations of no significant change. However, this does not preclude the possibility that individual Supply Point SOQs nor individual User portfolio SOQs would not change. In aggregate, NDM Supply Point capacity charge related revenues would be unchanged.

Transco has also analysed the remaining 7% of NDM load above 2196 MWh pa. These typically represent a less weather sensitive load and are found to have less of an impact when compared to the other categories assessed. For the consumption bands 05, 06, 07 and 08 (i.e. 2196 - 5860 MWh pa, 5860 - 14650 MWh pa, 14560 - 29300 MWh pa and 29300 - 58600 MWh pa), the NDM SOQs change by 0.3%, 0.1%, 0.0% and -0.2% respectively.

With respect to other transportation revenues, Transco believes that it is reasonable to assert that provided the unit charges applicable also change in line with the AQ change, there should not be any revenue impact in aggregate.

As NDM SOQs are not expected to change, no impact on capacity charges will occur. Commodity charges would also be unaffected since these are derived from NDM allocations. Transco expects a minor impact on customer charges will occur when a lower AQ moves a Supply Point down into a lower charging bracket. Transco expects little difference in charges at the margins of price bands.

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

No such implications have been identified.

9. Consequences on the legislative and regulatory obligations and contractual relationships of Transco and each User and Non-Network Code Party of implementing the Modification Proposal

It should be noted that the change in the number of years used to calculate seasonal normal AQs and their subsequent change would not directly affect the Ten Year Statement (TYS) published by Transco. The change in the number of years would however affect the annual demand forecasts and consequently the lower forecasts will be published within the TYS. (Note: AQs are not published in the TYS).

In summary:

- Currently:
AQ based on 75 years average weather.
TYS annual demands based on 35 year average weather.
- New:
AQ based on 17 years average weather.
TYS annual demands based on 17 year average weather.

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

Advantages:

- Ensures that the sustainable provisions are incorporated within the Network Code which enable the consequences of a review of the Composite Weather Variable to be reflected on the calculation of AQs during the annual AQ review.
- Provides a mechanism whereby the a revised seasonal normal may be applied to AQs irrespective of whether they are recalculated or otherwise as a consequence of an annual AQ review.

Disadvantages:

- No disadvantages have been identified.

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

Six representations were received with respect to this Modification Proposal. Five were supportive of its implementation and one was supportive in principle.

E.ON UK comments that *"The anticipated changes to reduce AQs are a necessary consequence of revising the normal weather definition. We consider it important that the changes are seen as a package as it would be unacceptable to change the normal weather definition without the changes to reduce AQs either normally or by scaling factors"*.

Gaz de France (GDF) notes that *"It is important that an AQ for an NDM supply point is as accurate as possible in the demand attribution process. More accurate AQs and better profiling methodology proposed here should reduce the potential for excessive energy and transportation reconciliation, this is a welcome enhancement and we perceive this to have the desirable consequences of reducing risks to Shippers and the system operator alike"*.

Total Gas & Power comments that *"We support any revision to the AQs which are more reflective of customer consumption, as this improves efficiency accross the industry. Giving Transco the ability to revise previous calculations will enable historical weather and consumption trends to be taken into account. This will improve the quality of the data being inputted into the AQ calculation and improve the AQs to be calculated for the current and future Gas Years"*.

RWE Npower notes that *"It is a requirement of the Network Code to review Composite Weather Variables (CWW) after 5 years. This proposal seeks to address some of the known issues with AQs and, importantly, allows for the adjustment of all AQs in this years review. The analysis that has been undertaken by the Demand Estimation Sub Committee (DESC) has been of great interest to us. The results of this exercise clearly show that the revised methodology has removed bias and slightly improved attribution, which was very apparent"*

in spring (overestimating) and autumn (underestimating). It is our opinion that this initiative of the DESC must be applied across all meters during AQ review and that all AQs reflect the new methodology. Integral to achieving this objective is to ensure that those meters that fail the current criteria for AQ review (i.e. those meters with insufficient or inaccurate meter reads) are also be factored during this years review. Modification Proposal 739 addresses both of these issues and achieves a desirable "all or nothing" approach to AQ calculation".

Transco concurs with the views of all of the above respondents.

GDF comments that "The revised methodology better reflects warmer weather patterns seen over recent years and we agree that implementation in October 2005 would be beneficial, providing there is no delay to the summer AQ review timetable".

Transco agrees with the above respondents view and does not anticipate a delay in the planned timetable for the 2005 AQ review.

BGT identifies that while it is "...supportive of the principals behind the modification proposal and are in agreement with the methodology, which has been developed by Transco and shippers via the Demand Estimation Sub Committee (DESC), BGT still have some concerns over the impact of this modification to the movement of supply points across the threshold and to the non-effect on SOQ's".

BGT notes that "It is important to note that the proposal will result in higher levels of supply points than normal, moving from being Larger Supply Points to Smaller Supply Points. BGT is of the view that Transco should provide, within the Final Modification Report, a detailed analysis with regard to this issue as it is important that shippers fully understand how their NDM allocations will be affected by this change". BGT comments that it has "...previously requested that this piece of analysis be undertaken by Transco, most recently at the DESC meeting on 23rd February 2005 and are disappointed by Transco's response that there are currently insufficient resources available to carry out this work, especially as we see this as being key to understanding the full implications of the modification proposal".

Transco understands and appreciates the concerns of the respondent. To mitigate these, Transco intends to undertake analysis using historical threshold crosser movement to provide approximate impacts. Users should be aware though that this may not bear any relation to what actually occurs as Transco cannot predict what Meter Readings would be procured. Transco has previously provided analysis in support of Review Group 0615 which showed that customer behaviour varied by an average of +/- 9% a year. Transco intends to share the results of its analysis by issuing a written report at the end of March 2005. This will be available for discussion at the June AQ sub group or the April RbD sub group if Shippers request this.

BGT states that "On a further point we would like clarification within the Final Modification Report as to why the SOQ values are not being reduced in line with the

reduction of AQ values. Again this issue has been previously raised with Transco at the February DESC meeting, however we would appreciate a comprehensive response to our concerns".

Transco's response is that the purpose of the SOQ is to provide peak capacity planning. Although there are AQ changes, this is due to the determination that the average temperature is lower. There is no evidence that the peak temperature should be impacted. Simply explained, the peak is still likely to be at a similar level if a 1 in 20 peak day was experienced. Equally, because colder temperatures have not been experienced, this does not necessarily mean that if such occurred, it would not be as cold as has been historically expected.

Transco has under the aegis of DESC, reviewed and proposed a revised basis for average weather conditions as required to do so every 5 years under the terms of Section H1.5 of the Network Code. The Code does not specify nor require any similar concurrent review of the methodology for determination of peak demands. Transco's licence specifies that a long period of years of at least 50 should be used in the simulation methodology for determining 1 in 20 peak demands.

The revised weather basis adopted for average conditions is the 17 years running from 1986/87 to 2002/03. The assessment of 1 in 20 peak demands over a period of less than 20 years would be statistically meaningless and the licence condition aforementioned also mandates the use of a long period for such purpose. Transco's view is further that the period of weather history used for in the simulation leading to assessment of 1 in 20 peak demands does not materially affect the magnitude of the peak demand. Moreover and in particular, the use of shorter periods leads to an increase in the peak demand because of the disproportionate contribution of any extreme cold weather in such shorter durations of weather history. For example:

Number of Years of weather history	2004/05 1 in 20 Firm Peak Demand (TWh/d)	% Difference from 76 Year Case
76	5.228	0.0%
70	5.222	-0.1%
60	5.220	-0.2%
50	5.211	-0.3%
40	5.215	-0.2%
30	5.249	0.4%
25	5.251	0.4%
20	5.269	0.8%

Transco believes that the respondents comments may imply or assume that a reduced period applied to the 1 in 20 peak simulation methodology would lead to reduced 1 in 20 peak demand estimates. As the above example shows, this is not the case. These matters were discussed at DESC during the extended investigative work undertaken under the remit of that body.

However, as was noted at the DESC meeting held on 23rd February 2005, as well as during the discussions at DESC on the analyses undertaken during the course of the past two years, which led to the revisions now adopted, the coldest day observed nationally occurred within the past 20 years was on 13th January 1987 (less than 20 years ago) and extreme, severe, cold weather occurred in Scotland as recently as 29th December 1995. There is no evidence therefore of any lessening of the propensity for extreme cold days.

Therefore, also, the use of shorter durations of, for example 20, 25 or 30 years when assessing 1 in 20 peak demands by simulation, actually results in greater values of 1 in 20 peak demand (than those arising from the normally applied 75+ year weather experience) because of the strong influence of these recent occurrences of extreme cold weather in the periods covered by these durations.

Thus, Transco's view is that there is at present no basis or nor justification for any assertion that 1 in 20 peak demands should reduce.

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

Implementation is not required to facilitate such compliance.

13. The extent to which the implementation is required having regard to any proposed change in the methodology established under Standard Condition 4(5) or the statement furnished by Transco under Standard Condition 4(1) of the Licence

This Modification Proposal is not required to facilitate any such change.

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

Transco (xoserve) would be required to undertake minor systems and process changes to accommodate implementation of this Modification Proposal. These are mainly associated with ensuring that adjustments may be applied to AQs which are not recalculated during the AQ review.

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

This Modification Proposal may be implemented with effect from 1 September 2005.

16. Recommendation concerning the implementation of the Modification Proposal

Transco recommends that this Modification Proposal be implemented.

17. Restrictive Trade Practices Act

If implemented this proposal will constitute an amendment to the Network Code. Accordingly the proposal is subject to the Suspense Clause set out in the attached Annex.

18. Transco's Proposal

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

19. Text

Amend paragraph 3.4.1 to read as follows:

“Subject to paragraph 3.4.3, the Annual Quantity (“AQ”)...”

Amend paragraph 3.1.2 to read as follows:

“Subject to paragraph 3.4.4, in the circumstances in paragraph 3.2.4...”

Add new paragraph 3.4.3 to read as follows:

“Where a review has taken place pursuant to paragraphs 1.4.2 and 1.5.2 (for the purposes of this paragraph 3.4.3 and paragraph 3.4.4, the “**Review**”) the Annual Quantity for an NDM Supply Meter Point applicable from the start of the Gas Year in which the Review took effect will use revised Applicable Demand Models derived from the data used to calculate the Applicable Demand Models for the Gas Year immediately prior to the Gas Year that the Review took effect, together with the revised Composite Weather Variables and seasonal normal values, to calculate the values of ALPt, DAFt and EWCft.”

Add new paragraph 3.4.4 to read as follows:

“Notwithstanding paragraph 3.1.2, where a Review has taken place and the provisions of paragraph 3.4.3 apply, the Annual Quantity or the Provisional Annual Quantity of the NDM Supply Meter Point will be calculated as follows:

$$AQ = AQ_i \times \frac{A}{B}$$

Where:

AQ_i = the Annual Quantity or the Provisional Annual Quantity of the NDM Supply Point applicable for the Preceding Year.

$$A = \sum_{i=1}^{365} SNDE_t$$

Where the values of SNDE_t shall be derived using revised Applicable Demand Models derived from the data used to calculate the Applicable Demand Models for the Gas Year immediately prior to the Gas Year that the Review took effect, together with the revised Composite Weather Variables and seasonal normal values

$$B = \sum_{i=1}^{365} SNDE_t$$

Where the values of SNDE_t shall be derived using the Applicable Demand Models for the Gas Year immediately prior to the Gas Year that the Review took effect.

Signed for and on behalf of Transco.

Signature:

Declan McLaughlin
Commercial Manager, Customer Service
Support Services

Date:

Gas and Electricity Markets Authority Response:

In accordance with Condition 9 of the Standard Conditions of the Gas Transporters' Licences dated 21st February 1996 I hereby direct Transco that the above proposal (as contained in Modification Report Reference **0739**, version **1.0** dated **23/03/2005**) be made as a modification to the Network Code.

Signed for and on Behalf of the Gas and Electricity Markets Authority.

Signature:

The Network Code is hereby modified with effect from, in accordance with the proposal as set out in this Modification Report, version **1.0**.

Signature:

Process Manager - Network Code

Transco

Date:

Annex

1. Any provision contained in this Agreement or in any arrangement of which this Agreement forms part by virtue of which The Restrictive Trade Practices Act 1976 ("the RTPA"), had it not been repealed, would apply to this Agreement or such arrangement shall not come into effect:
 - (i) if a copy of the Agreement is not provided to the Gas and Electricity Markets Authority ("the Authority") within 28 days of the date on which the Agreement is made; or
 - (ii) if, within 28 days of the provision of the copy, the Authority gives notice in writing, to the party providing it, that he does not approve the Agreement because it does not satisfy the criterion specified in paragraphs 1(6) or 2(3) of the Schedule to The Restrictive Trade Practices (Gas Conveyance and Storage) Order 1996 ("the Order") as appropriate

provided that if the Authority does not so approve the Agreement then Clause 3 shall apply.

2. If the Authority does so approve this Agreement in accordance with the terms of the Order (whether such approval is actual or deemed by effluxion of time) any provision contained in this Agreement or in any arrangement of which this Agreement forms part by virtue of which the RTPA, had it not been repealed, would apply this Agreement or such arrangement shall come into full force and effect on the date of such approval.
3. If the Authority does not approve this Agreement in accordance with the terms of the Order the parties agree to use their best endeavours to discuss with Ofgem any provision (or provisions) contained in this Agreement by virtue of which the RTPA, had it not been repealed, would apply to this Agreement or any arrangement of which this Agreement forms part with a view to modifying such provision (or provisions) as may be necessary to ensure that the Authority would not exercise his right to give notice pursuant to paragraph 1(5)(d)(ii) or 2(2)(b)(ii) of the Order in respect of the Agreement as amended. Such modification having been made, the parties shall provide a copy of the Agreement as modified to the Authority pursuant to Clause 1(i) above for approval in accordance with the terms of the Order.
4. For the purposes of this Clause, "Agreement" includes a variation of or an amendment to an agreement to which any provision of paragraphs 1(1) to (4) in the Schedule to the Order applies.