

Modification Report
Removal of NDM Forecast Deviation from Imbalance Calculations
Modification Reference Number 0511
Version 4.0

This Modification Report is made pursuant to Rule 8.9 of the Modification Rules and follows the format required under Rule 8.9.3.

1. The Modification Proposal

It is proposed that the NDM Forecast Deviation should no longer afford any prospect of any element of a User's imbalance being cashed out at SAP. The proposed change, if implemented, will effectively set the Imbalance Tolerance Quantity to zero.

2. Transco's Opinion

Provisions in the Network Code relating to NDM Forecast Deviations reduce Users' exposure to SMP cashout prices arising up to the difference between final NDM nominations and NDM allocations. Where the NDM Forecast Deviation might be considered to have contributed to a User's long or short allocated imbalances (i.e. where the Daily Imbalance and the NDM Forecast Deviation are either both positive or both negative), the User's Daily Imbalance, up to the ITQ, is cashed out at System Average Price (SAP) and the remaining imbalance, if any, is cashed out at System Marginal Prices (SMP_{sell} or SMP_{buy} , depending on the direction of the imbalance). The NDM Forecast Deviation therefore reduces Users' exposure to SMP.

It has been suggested that no element of a User's imbalance should be cashed out at SAP. For Users serving NDM Supply Points this change would increase each User's exposure to marginal priced cashout thereby further enhancing User's incentives to balance. Transco believes that this might be considered to improve the degree of cost targeting within the regime but, having taken account of the representations made in response to this Modification Proposal, does not recommend implementation of this proposal at this time.

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

Whilst User imbalance cashout exposure might be increased Transco does not necessarily believe, following consideration of shipper responses, that this will necessarily improve the economic and efficient operation of the system. Additionally Transco accepts that implementation could expose Users, particularly those with NDM portfolios having uncertain demands, with increased risks. This risk exposure may generate redistributive effects and, as such, may not be consistent with facilitating competition between Users.

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

The removal of the NDM Forecast Deviation would increase User cashout exposure. It has been suggested this might therefore increase User incentives to balance. However, this is only likely to improve the operation of the system if Transco were to have information about the individual User forecasts of NDM demand and Transco were able to use such information to generate more accurate forecasts to inform system operation and the system balancing decision making process.

The balancing decision making process depends on the assessment of the difference between the forecasts of inputs and outputs. Transco forecasts of offtakes from the NTS take account of aggregate LDZ level demand projections. These forecasts take account of large DM nomination information provided by Users and, where appropriate, end users. Transco takes balancing actions and manages flows across the NTS/LDZ interface based upon these forecasts. Transco's ability to make accurate forecasts will not be improved by this Proposal and therefore Transco believe that this Proposal will have only minimal impacts on the operation of the system.

b) development and capital cost and operating cost implications:

The development and capital costs are likely to be low. Based on current information Transco believes that the only system change required is a parametric change within the AT-Link system that would set the Imbalance Tolerance Quantity to zero.

Operating costs, including invoicing, are likely to be unaffected by this change.

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 would not seek to recover incremental costs of implementation of this Proposal.

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

This proposal is not considered to have consequences in respect of price regulation.

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

No such consequences are anticipated.

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

Transco's AT-Link system would need to be amended so that the Imbalance Tolerance Quantity is set to zero. This would be achieved by setting the first Imbalance Tranche Quantity equal to zero on all days for all Users. The full imbalance, if any, will then be accounted for in the Second Imbalance Tranche which attracts SMP cashout in the billing system when invoices are calculated. Thus no changes will be required in the billing system or in respect of charge items. Similarly, Transco considers that Users are unlikely to need to change functionality of their operational and financial computer systems.

7. The implications of implementing the Modification Proposal for Users

Transco considers that the main implication for Users would be an increased exposure to marginal cashout prices. In addition, Transco consider that Users would need to decide whether to accept the risk, invest in better forecasting systems or seek to procure better risk management tools from other providers.

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

Transco believes that there would be no direct impact on the above parties. .

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

No changes to contractual relationships are anticipated.

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

Advantages:

- Removing the NDM forecast deviation increases User exposure to marginal cashout prices.
- Might improve cost targeting via removal of SAP cashout.
Encourages Users to develop more accurate forecasts of demand.
Reduces the opportunity of "after the day" trading of imbalances to avoid full SMP exposure.
- May promote the development of new risk management tools.

Disadvantages:

- Demand change within day can be difficult to predict and may be outside of User control, thereby exposing Users to inappropriate risk.
- Exposing Users to marginal cashout prices for inaccuracies in their forecasting could disproportionately affect those Users susceptible particularly uncertain NDM allocations. This may be particularly true of small Users with a predominantly NDM portfolio.

- To compensate for the increased cashout exposure charges to NDM customers may rise.

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

Representations have been received from seven respondents.

Natural Gas Shipping Services Limited	NGSS
TotalFinaElf Gas and Power Ltd	TFE
Innogy	Innogy
Shell Gas Direct Limited	SGD
Powergen UK Plc	Powergen
British Gas Trading	BGT
Scottish and Southern Energy Plc	SSE

BGT expresses support for this Modification Proposal. All other respondents do not support the Proposal.

BGT makes the observation that this Modification Proposal to remove Forecast Deviation from the imbalance calculation is not unexpected following the removal of other imbalance tolerances quantities from the Network Code.

Incentives for Users to Balance

Two respondents (SGD, SSE) do not agree that this Proposal will deliver enhanced Shipper incentives to balance and a reduction in the number of balancing actions that Transco would need to take to operate its system efficiently. SSE expresses the view that, *"The Modification Proposal will not incentivise Shippers to balance, but instead incentivise them to go 'long' or 'short' depending on their assessment of the cashout risk on the day"*.

BGT and Powergen support the view that this Modification Proposal will increase the incentives upon Users to achieve a position of balance.

Transco Response

Transco notes that by fully exposing imbalances to SMP based cashout prices some believe that User incentives to balance will be increased. Transco also notes that, as part of a series of Modification Proposals intended to enhance the principle of strengthening User incentives, implementation of this Modification Proposal would complete the phasing out of the application of tolerances within the cashout regime.

However, Transco notes the comments made by Users, and believes that the current arrangements provide incentives for Users to track the NDM nominations generated by the Demand Attribution process. Transco notes the SSE comment that the Proposal may actually encourage Users to go “long” or “short”. This may be an inevitable consequence of implementation of this Proposal since SMPs are not designed to represent a fair or neutral price on the day whereas SAP has specifically been formulated to achieve this objective. It is therefore possible that implementation may decrease incentives to balance.

Transco Balancing Actions

Three respondents (Innogy, NGSS, SSE) consider that it is not clear how the Modification Proposal will result in Transco taking less balancing actions.

BGT considers that, *"Increased incentives for Users to balance will reduce the need for Transco to take residual balancing actions"*.

SGD suggests that, *"Making improvements to Transco's forecasting is much more likely to reduce the need for Transco to take balancing action"*.

NGSS expresses the view there is no certainty that, *"The Modification Proposal will result in Transco taking less balancing actions"*. It suggests that, *"Shippers will have to decide whether to make no adjustment for, or guess the variation of, forecast deviation and that no adjustment may result in Transco taking a balancing action"*. NGSS considers that there is no evidence that the implementation of this Proposal would increase efficiency in the operation of the system, and believes that, *"Only if shippers had the means to calculate the forecast deviation would it result in less balancing actions by Transco"*. SGD suggests that Users with large NDM portfolios may find it more efficient to use their own forecasts and that it is unclear what impact this may have on Transco's actions.

Transco Response

Transco accepts that there is uncertainty concerning the impact of implementing this Modification Proposal, with respondents unclear how the Proposal would impact the extent of balancing actions.

As a general principle better daily balancing by Users should give rise to a reduced requirement for residual balancing actions. Most respondents would regard this as an efficient outcome. However this is only likely to be the case where Transco has improved information about both inputs and offtakes from the system. The balancing decision making process depends crucially on the assessment of the difference between the forecasts of inputs and outputs. Transco forecasts of offtakes from the system take account of aggregate LDZ level demand projections. These forecasts take account of large DM nomination information provided by Users and where appropriate end users. Transco takes balancing actions based on these forecasts and will be managing flows across the NTS/LDZ interface based upon these forecasts. This Proposal does not provide Transco with any better information to forecast demands.

Shipper Risk Exposure

Innogy and SSE suggest that the regime of fixed SAP/SMP differentials is flawed and does not reflect actual system costs where Transco does not set the SMP. In consequence, Innogy states that, *"As a result of the Modification Proposal NDM shippers will be exposed to a charge that is not cost reflective on an imbalance that they cannot effectively manage"*. Innogy and SSE expect that as a result of implementation of the Modification Proposal Users would tend to over-deliver gas on to the system to gain some protection against SMP buy prices, and observe that it is unclear how this would reduce the need for residual balancing actions. Innogy also considers that, *"The result would be an inequitable redistribution of monies between industry players"*.

Four respondents (SSE, Powergen, NGSS and TFE) express the view that increased cashout exposure will lead to increased charges to NDM customers. SSE highlights concerns that, *"Costs for domestic shippers/suppliers will increase as they seek to hedge against SMP cashout and that such costs might lead to increased prices for NDM customers to offset the additional risks and cost in supplying them"*. SSE adds that this may deter new entrants from competing in the domestic market. NGSS warns that there is a danger that increased risk and cost may force Users to leave the market resulting in less choice and potentially higher prices for consumers. As a relatively small shipper providing services to a number of small suppliers, NGSS believes that the implementation of this Modification Proposal will increase cost without any benefit.

Transco view

A number of respondents highlight concerns over NDM Shippers inability to efficiently manage their imbalance and being exposed to charges that are not cost reflective. Transco recognises that Users with difficult to forecast NDM load particularly Users with small NDM portfolios may face greater difficulty in achieving a close to balance position than a larger User with a greater diversity of supply and demand. It is anticipated that implementation of this Proposal may encourage Users to seek better NDM forecasting capabilities. Transco Demand Forecasting capability has achieved a level of accuracy that confers a benefit on the community via individual User avoided costs (of additional forecasting), which potentially generates both commercial and operational efficiencies within the regime.

Transco notes the concern of respondent that this Proposal will increase cashout exposure for NDM Users. Even if this only relates to small quantities of gas cashout, it may distort individual User balancing behaviours to such an extent that incentives to balance are reduced.

Implementation might therefore generate redistribution arising from the balancing neutrality process.

Demand Forecasting

TFE welcome Transco's continued provision of a NDM demand forecasting service. BGT state that the service, *"... is essential as, although some Users will be in a position to develop their own systems for generation of NDM consumption, the majority of Users will rely on the service provided by Transco"*. TFE expresses concern over the accuracy of this information. It argues that *"... in the absence of Forecast Deviation Shippers may be reluctant to rely upon this information to balance their portfolios"*. BGT notes that the ability to achieve a balance position is dependent upon the accuracy of the NDM Forecasts and the ability to track changes to this forecast caused by variations in weather. It observes that with the removal of the Forecast Deviation there will be much more reliance upon forecasts of consumption and the anticipation of demand variations. BGT suggests that *"The concerns relating to NDM forecasts are in respect of both availability and accuracy"*.

SSE states that demand changes within day in respect of domestic customer demand is difficult to predict and is out of Shipper's control. It observes that, *" This Proposal will therefore have an adverse effect on Shippers with a predominantly domestic portfolio, who have a shifting customer base, which is extra sensitive to weather"*. Powergen suggests that implementation of this Proposal would *"Give a huge advantage to the dominant Shipper, who is capable of*

forecasting accurately". It expresses concern that there may be competition implications in the short and medium term.

Four respondents (TFE, NGSS, Powergen and SGD) express concern that the cost of individually developing forecasting systems might be prohibitive. NGSS suggests that some Users may have an information advantage giving rise to "gaming opportunities" but does not state the nature of these opportunity. Additionally it notes that a mechanism for Transco to share data would be impractical and that costs might prohibit all but few of the shipping community from individually forecasting. TFE observes that in order for Users to mitigate increased costs they may have to incur potentially significant costs from investment in their own demand forecast modelling or contracting third parties for the provision of a service. SGD suggest that it may be that the Modification intends to encourage all Users to calculate their own NDM forecasts or to seek an alternative provider of such information. SGD notes that "*Transco uses statistical techniques and a wide range of data sources to produce the forecasts*", it argues that "*It would be inefficient and costly for this approach to be changed*".

SSE expresses concern that this Modification Proposal would be detrimental to second tier suppliers. SSE suggests that it is unlikely that these suppliers would be able to forecast demand as accurately as Transco and it is not efficient or cost effective for them to introduce their own demand forecast systems. It observes that the inability to demand forecast may be compounded by the long time between actual consumption, allocation and reconciliation for this category of customer. SSE concludes that, "*Second tier suppliers will be penalised where as the incumbent will benefit unfairly via increased cash flow into neutrality*".

NGSS does not believe that it could second guess national demand and be able to fulfil the new obligations that this Modification Proposal will impose.

SGD argues that "*Where Shippers balance their portfolios using forecasts provided by Transco, charging Shippers for Transco forecasting errors does not appear to be an efficient change to make*".

NGSS suggests that it must be recognised that current methodology for attributing demand uses a series of approximations which across even a small portfolios variances, largely cancel out, therefore settlement of these individual differences at SAP is reasonable. NGSS believes that it is practical for Transco to manage the national daily variance and that this is the most efficient way to manage variances between actual and calculated demand. NGSS believes that "*In respect of small NDM loads, the current system is efficient and cost reflective and that under the current regime it can manage its demand and supply portfolio without exposing the system to any additional cost.*"

Transco's Response

It is not the intention of this Modification Proposal to dispense with the provision of a NDM demand forecast service, indeed Transco is obliged to provide such a service in accordance with C1.6.1. however, this is not to say that Users might wish to consider the benefits of developing better forecasting facilities in respect of individual User portfolios.

Whilst Transco notes concerns about the costs of forecasts to individual Users Transco believes that should this Modification Proposal be implemented, then it is a matter for each User to

establish whether it wishes to invest to try to achieve better forecasting than is currently delivered via the NDM demand attribution process. Users will only make such investment if it is considered beneficial.

Implementation Programme for Proposal

Innogy expresses the view that this Modification Proposal represents a significant change to the cashout regime, shifting the responsibility for demand forecasting away from the system operator onto the Users. It suggests that any such change should be phased in, and proposes a 12 month planned transition programme in which *"... data currently held by Transco can be provided to Users as they calibrate and develop their internal forecasting systems"*. Innogy note that under NETA, suppliers had at least two years notice that they would be responsible for forecasting their own demand. SGD considers that historic NDM demand information would need to be made available to the wider market on a non-discriminatory basis before this Modification Proposal could be implemented. Powergen advises that in the longer term it could invest, develop and implement a forecasting system, although it does not currently have this capability.

SSE and BGT recognise that Modification Proposal 0496 - 'Improvement to NDM Demand Determination' would go some way to improve the accuracy of the NDM Forecasts by assessing NDM demand independently rather than simply using the differential between demand and DM loads. SSE advises that if Ofgem determine that the Modification Proposal merits implementation it would strongly urge that the effective date is in line with Modification Proposal 0496, which has a recommended effective date of 1 October 2002.

Powergen does not believe that the industry is ready for such a change. NGSS and SSE both observe that Ofgem proposes implementation of 'Reform to Gas Balancing Regime' with a commencement date of October 2002. SSE suggests that *"It would be inappropriate to introduce piecemeal changes in isolation of the longer term strategy for the regime"*. NGSS considers it practical to adopt, *"A coherent approach with all changes being considered together"*, and expresses concern that *"... an incremental approach to change may result in contradictory results"*. SGD expresses the view that this Modification Proposal should not be implemented until analysis is provided to the Industry and Ofgem on the likely impact on revenues and how these will be distributed.

Transco response

Transco acknowledges that in order for the underlying intentions of this Modification Proposal to be effective, Users might need to secure better forecasting services or risk mitigation services. Transco therefore agrees with the views expressed by respondents that, if a decision to implement is made, that the implementation programme should afford Users sufficient time to develop alternative forecasting tools, should they deem this to be the most appropriate and viable approach.

Transco currently provides the final NDM demand forecast for the day at 16:00 hrs. Transco recognises that with the proposed implementation of this Modification Proposal it may be appropriate to consider the provision of a further NDM demand forecast later in the day. Transco considers that the provision of an additional forecast might be appropriate if this Modification Proposal is to be implemented.

Transco acknowledges the views expressed by respondents that implementation of Modification 0496 may provide more accurate NDM forecast information and agrees that there may be merit in considering the implementation of the Modification Proposal after Users have had the opportunity to assess the effects of Modification Proposal 0496. Therefore, in the light of views expressed by the respondents, it might be appropriate to recommend the deferral of implementation until April 2003 if this Modification Proposal is to be implemented. Such a timescale would permit time to assess the NDM attribution process performance following implementation of Modification Proposal 0496.

Linepack Service

TFE associates this Modification Proposal with other proposals that, as part of a drive towards maintaining effective balancing incentives, were implemented to remove all other balancing tolerances. It notes that, *"It was envisaged that removal of tolerances would be implemented in conjunction with the introduction of a 'linepack service' to enable shipper to acquire tolerances to manage their imbalances and mitigate against exposure from marginal cash out prices"*. TFE expresses concern that to date the 'linepack service' has not been developed. It suggests that if implemented this Modification Proposal would further increase unmanageable risk to Users from exposure to penal cashout prices for small imbalances that have no material impact upon Transco's ability to balance the system. TFE notes that, *"NDM demand changes within day are difficult for Shippers to predict and manage in a cost effective manner and notes that this situation has been acknowledged by Ofgem, who previously associated its desire to remove blanket tolerance with the development and introduction of an alternative balancing tolerance in the form of a 'linepack service'"*.

Transco's Response

Transco notes the TFE concerns. Development of linepack services is one of the issues potentially considered within the remit of Review Group 0513 - 'Reform of Gas Balancing Regime' where these concerns and interactions can be investigated.

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 enable Transco 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 Standard Condition 4(5) or the statement furnished by Transco under Standard Condition 4(1) of the Licence

Not applicable.

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

The system changes are currently believed to be minor and, therefore, only a minor programme of works is required.

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

The proposed time table is as follows:

Modification Panel decision ("to consultation")	17 Jan 2002
Draft Modification Report published	25 Jan 2002
Industry consultations close out	15 Feb 2002
Final Modification Report published	08 Mar 2002
Anticipated Ofgem decision	15 Mar 2002
System changes live (subject to above)	28 Mar 2003
Implementation date (subject to above)	01 Apr 2003

16. Recommendation concerning the implementation of the Modification Proposal

In light of the concerns raised by respondents, Transco does not recommend implementation of this Modification Proposal. However, should Ofgem choose to direct implementation, Transco would advocate implementation with effect from 1st April 2003 to allow time for Users to develop better forecasting techniques (if considered appropriate) and to allow an assessment of the impact of Modification Proposal 0496 on the accuracy of the NDM attribution process.

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

Section F: System Clearing, Balancing Changes And Neutrality.

Delete Section 2.1.3.

Delete Section 2.2.

Delete Section 2.4.1.a

Renumber Section 2.4.1.b as 2.4.1 and amend to read:-

2.4.1 The Daily Imbalance Charge shall be the Clearing Charge in respect of the System Clearing Contract under this Paragraph 2 and shall be calculated by multiplying the Daily Imbalance of the User as follows:-

- a) Where the Daily Imbalance is positive, the System Marginal Sell Price for the Gas Flow Day; and
- b) Where the Daily Imbalance is negative, the System Marginal Buy Price for the Gas Flow Day.

In Section 2.4.2, renumber 2.4.1.b to 2.4.1.

Signed for and on behalf of Transco.

Signature:

Tim Davis
Head of Regulation NT&T

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 **0511**, version **4.0** dated **29/04/2002**) 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 **4.0**.

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.