

# 0541/A/B:

Removal of uncontrollable UNC charges at ASEPs which include sub-terminals operating on a 06:00 to 06:00 Gas Day via:

0541: ex-ante quantity adjustments

0541A: setting charges which arise solely as a result of the different Gas Day timings to zero

0541B: ex-post credits to a second category of capacity and accounts balancing neutrality

- 01 Modification
- 02 Workgroup Report
- 03 Draft Modification Report
- 04 Final Modification Report

These modifications propose to achieve the removal of uncontrollable UNC charges incurred by shippers allocated 05:00 to 05:00 Gas Day User Daily Quantity Inputs at ASEPs which include sub-terminals operating on a 06:00 to 06:00 Gas Day.



The Workgroup recommends that these modifications should now proceed to Consultation.













High Impact: Shippers



Medium Impact: None



Low Impact: None

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<p>This report will be presented to the Panel on 19 November 2015.</p> <p>The Panel will consider whether these modifications should proceed to Consultation or be returned to the Workgroup for further assessment.</p>		 <a href="mailto:enquiries@gasgovernance.co.uk">enquiries@gasgovernance.co.uk</a>												
<p>The Workgroup recommends the following timetable:</p> <table border="1"> <tr> <td>Initial consideration by Workgroup</td> <td>06 August 2015</td> </tr> <tr> <td>Workgroup Report presented to Panel</td> <td>19 November 2015</td> </tr> <tr> <td>Draft Modification Report issued for consultation</td> <td>19 November 2014</td> </tr> <tr> <td>Consultation Close-out for representations</td> <td>10 December 2015</td> </tr> <tr> <td>Final Modification Report published for Panel</td> <td>11 December 2015</td> </tr> <tr> <td>UNC Modification Panel recommendations</td> <td>17 December 2015</td> </tr> </table>		Initial consideration by Workgroup	06 August 2015	Workgroup Report presented to Panel	19 November 2015	Draft Modification Report issued for consultation	19 November 2014	Consultation Close-out for representations	10 December 2015	Final Modification Report published for Panel	11 December 2015	UNC Modification Panel recommendations	17 December 2015	 0121 288 2107
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<p>Throughout this report black text is used for items common to all three proposals. The following colour coding is used to denote modification-specific text:</p> <p>0541 is shown purple</p> <p>0541A is shown red</p> <p>0541B is shown blue</p>		<p>Proposers:</p> <p>0541 - Sofia Eng, EDF Trading</p> <p>0541A – Andrew Pearce, BP</p> <p>0541B – Francisco Gonçalves, Gazprom</p>												
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# 1 Summary

## Are these Self-Governance Modifications?

The Modification Panel determined that these are not self-governance modifications because they are likely to have material effect on competition in the shipping of gas, since the modifications attempt to ensure that UNC charges are not unfairly applied to certain Users.

## Are these Fast Track Self-Governance Modifications?

No, Fast-Track procedures do not apply because these are not housekeeping modifications.

## Why Change?

Modification 0461 – Changing the UNC Gas Day to align with the Gas Day in EU Network Codes will be implemented on 01 October 2015 (<http://www.gasgovernance.co.uk/0461>), however it does not apply to arrangements “upstream” of the NTS (within which the Balancing zones are situated) such as the UK gas beach processing terminals. The NTS will run a United Kingdom time 05:00 hours to 05:00 hours Gas Day, however the majority of United Kingdom gas beach processing sub terminals will continue to run on a United Kingdom time 06:00 hours to 06:00 hours Gas Day (the “GMT Terminals”).

This results in a situation where Users have to base their nominations and claims on an 06:00 Gas Day whilst National Grid NTS will provide flow data on an 05:00 Gas Day basis. The resulting “Time Shift Mismatches” would be likely to inadvertently place affected Users out of balance; triggering Imbalance, Scheduling and potentially Incentivised Nomination charges. Such “Time Shift Charges” would be not be as a result of Users’ failure to balance or an NTS imbalance and are not able to be mitigated by Users.

Monies raised from Time Shift Charges would be returned to all Users via the neutrality mechanism. Time Shift Charges would therefore not be in compliance with the principles set out in the EU Regulation that balancing rules should: (i) financially incentivise network users to balance their balancing portfolios via cost reflective imbalance charges; (ii) reflect genuine system needs; (iii) be non discriminatory; and (iv) avoid cross subsidisation.

## Solution

Three alternative solutions have been identified:

**0541 Amending each User’s User Daily Quantity Input**, at a GMT Terminal, so no Time Shift Mismatches are created. This would mean that no Time Shift Charges would arise and would avoid Users incurring unearned charges, restore the correct financial incentives to balance and avoid discrimination of Users at GMT Terminals and cross subsidisation by Users at GMT Terminals of all other Users.

**0541A Setting the Time Shift Charges to zero** by calculating charges using GMT UDQIs at GMT Terminals. This would prevent Users incurring unearned charges, restore the correct financial incentives to balance and avoid discrimination of Users at GMT Terminals and cross subsidisation by Users at GMT Terminals of all other Users.

**0541B Reimbursing Users at GMT Terminals for Time Shift Charges** by creating a second category of Capacity and Balancing Neutrality Charges for Users at GMT Terminals only. This would mean that Users would be reimbursed for Time Shift Charges and would have the effect of preventing Users incurring unearned charges, restore the correct financial incentives to balance and avoid discrimination of Users at GMT Terminals and cross subsidisation by Users at GMT Terminals of all other Users.

## Relevant Objectives

These modifications better facilitate the achievement of Relevant Objectives d) (i) securing of effective competition between relevant shippers, and g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.

## Implementation

No implementation timescales are proposed, however it is anticipated that the successful modification should be implemented on 01 October 2015, the date on which the gas Day will change to 05:00 hours to 05:00 hours, or at the earliest possible date thereafter. If implementation is post 01 October 2015 then a reconciliation of the relevant charges will be applied.

## Do these modifications impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

These modifications are likely to have an impact on the EU Phase 3 systems changes due to the need to acquire additional 06:00 hours to 06:00 hours flow data.

## 2 Why Change?

The European Network Code on Capacity Allocation Mechanisms (“CAM”) stipulates that there should be a harmonised gas Day across the EU. CAM is due to be implemented from 01 November 2015. The European Network Code on Gas Balancing (“BAL”) makes reference to the gas Day as defined in the CAM Network Code. BAL is due to be implemented from 01 October 2015. Both the CAM and BAL Network Codes form part of Regulation (EC) No 715/2009 of the European Parliament dated 13 July 2009 (the “Regulation”). However the Regulation only applies the harmonised gas Day to Interconnection Points and downstream systems within the EU. It does not apply to arrangements “upstream” of the transmission systems (within which the Balancing zones are situated) such as the UK gas beach processing terminals.

The National Transmission System will run a United Kingdom time 05:00 hours to 05:00 hours gas Day from 01 October 2015. However, the majority of United Kingdom gas beach processing sub terminals will continue to run on a United Kingdom time 06:00 hours to 06:00 hours gas Day on and after 01 October 2015 (the “GMT Terminals”). This is due to the technical challenges and costs that would be incurred in changing all terminal and upstream metering to run on an 05:00 hours to 05:00 hours gas Day.

There will be no arrangements (for example linepack flexibility or operational balancing type arrangements) between National Grid NTS and the GMT Terminals to handle mismatches arising from the NTS running on a 05:00 hours to 05:00 hours gas Day and the GMT Terminals running on a 06:00 hours to 06:00 hours gas Day.

### Impact on Users at GMT Terminals

Users inputting gas to the NTS from GMT Terminals will only have Day ahead and within Day information about their intended and actual flows on a 06:00 hours to 06:00 hours basis and will accordingly have to schedule and nominate to National Grid NTS and make “Claims” to the Claims Validation Agent based on 06:00 hours to 06:00 hours numbers.

Without this modification National Grid NTS would give the Claims Validation Agent a 05:00 hours to 05:00 hours metered Entry Point Daily Quantity Delivered for each System Entry Point at a GMT Terminal and the Claims Validation Agent would need to allocate that quantity between Users based on 06:00 hours to 06:00 hours Claim numbers. There would therefore likely be on all Days mismatches arising from the differences between the 05:00 hours to 06:00 hours aggregate quantity on one Day and the 05:00 hours to 06:00 hours quantity on the next Day (“Time Shift Mismatches”).

The effect of such Time Shift Mismatches on the existing Claims Validation arrangements would be that: (1) if the Entry Point Daily Quantity Delivered is less than the aggregate of all Users' Claims, all Users' Claim numbers and therefore their User Daily Quantity Input quantities will be reduced pro rata; and (2) if the Entry Point Daily Quantity Delivered is greater than the aggregate of all Users' Claim numbers, the resulting "Time Shift Excess Gas" will be lost to the NTS as unallocated gas. Depending on the overall NTS balance, such Time Shift Excess Gas may be sold by National Grid and the proceeds returned to all Users via the balancing neutrality system rather than just to Users using the GMT Terminals.

In order to prevent the loss of Time Shift Excess Gas on a regular basis as a result Time Shift Mismatches, the shareholders of the Claims Validation Agent are in the process of amending the Claims Validation arrangements so that Time Shift Excess Gas will be allocated to Users at the GMT Terminals rather than be treated as unallocated gas. This will have the effect of increasing each such User's Claim number and therefore their User Daily Quantity Input quantities. These changes will also enable the Claims Validation Agent to provide National Grid NTS with each User's UDQI on a 05:00 hours to 05:00 hours basis and on 06:00 hours to 06:00 hours basis if required.

Even following such intervention, Users at GMT Terminals will likely incur on every Day NTS Daily Imbalance Charges and Scheduling Charges and potentially Overrun Charges and Incentivised Nomination Charges as a result of the Time Shift Mismatches since they will be out of balance every Day (long or short) depending on whether the Entry Point Daily Quantity Delivered is greater or smaller than the aggregate of all Users' Claim numbers ("Time Shift Charges").

The Users will be unable to manage or mitigate the Time Shift Charges as they are a factor simply of the difference between the 05:00 hours to 06:00 hours aggregate quantity on one Day and the 05:00 hours to 06:00 hours quantity on the next Day. The Time Shift Mismatches will have no effect on the overall physical balance of the NTS. Users will only become aware of their Time Shift Mismatches after the Day.

Time Shift Charges will be unearned and not capable of mitigation by Users and will not arise from the physical needs of the NTS nor the Users' failure to balance. Monies raised from Time Shift Charges will be returned to all Users via the neutrality charge systems. Time Shift Charges will therefore not be in compliance with the principles set out in Regulation that balancing rules should: (i) financially incentivise network users to balance their balancing portfolios via cost reflective imbalance charges; (ii) reflect genuine system needs; (iii) be non discriminatory; and (iv) avoid cross subsidisation.

## 3 Solution

### 0541

Amending each User's User Daily Quantity Input, at a GMT Terminal, so no Time Shift Mismatches are created.

This would mean that no Time Shift Charges would arise and would avoid Users incurring unearned charges, restore the correct financial incentives to balance and avoid discrimination of Users at GMT Terminals and cross subsidisation by Users at GMT Terminals of all other Users. For the avoidance of doubt, Uniform Network Code charges will continue to be applied for User imbalances arising from physical imbalances and as such the Users' allocated gas at GMT Terminals will not benefit from any positive discrimination.

National Grid NTS should have access to hourly metering at all GMT Terminals and can therefore calculate the aggregate quantities off taken on a 0600 hours to 0600 hours basis. Alternatively the Claims Validation Agent can provide the 0600 hours to 0600 hours sub terminal meter reading as well as the User's UDQIs.

Changes should be made to, inter alia, the following Sections of the Uniform Network Code:

### TPD Section A - System Classification

Add concept of “**Associated GMT Day**” to General Terms, being the period starting at 0600 hours on the Day and ending at 0600 hours on the next Day.

Add a new TPD Section A 5 introducing concept of a “**GMT System Entry Point**”, being a System Entry Point connected to facilities using an Associated GMT Day.

### TPD Section E - Daily Quantities, Imbalances and Reconciliation

Add a new Section E 1.4.4 to provide that for GMT System Entry Points, the “**Entry Point Daily Quantity Delivered**” for the Day is the aggregate quantity of gas delivered to the Total System on the Associated GMT Day at that GMT System Entry Point.

Section E 1.4.1 should then be expressed to be subject to Section E 1.4.4.

### TPD Section C – Nominations and Renominations

Amend Section C 1.1.5 to say that Users will use reasonable endeavours based on the information available to them nominate and renominate accurately

### Reconciliation

If this modification is not in force for 01 October 2015, National Grid NTS to run a reconciliation process from the date of implementation of the modification back to 01 October 2015 to reimburse Users for Time Shift Charges incurred by the Users in the period from 01 October 2015.

### **0541A**

Setting the Time Shift Charges to zero by calculating charges using GMT UDQIs at GMT Terminals.

This would prevent Users incurring unearned charges, restore the correct financial incentives to balance and avoid discrimination of Users at GMT Terminals and cross subsidisation by Users at GMT Terminals of all other Users. For the avoidance of doubt, Uniform Network Code charges will continue to be applied for User imbalances arising from physical imbalances and as such the Users allocated gas at GMT Terminals will not benefit from any positive discrimination.

The Claims Validation Agent will be able to provide National Grid NTS for each User at a System Point at a GMT Terminal (a “GMT System Entry Point”) for each Day with a UDQI calculated from National Grid’s Entry Point Daily Quantity Delivered (0500 hours to 0500 hours basis) and with a “GMT UDQI” calculated from the User’s Claim on an 0600 hours to 0600 hours basis for the “GMT Day” starting on the Day.

Changes should be made to, inter alia, the following Sections of the Uniform Network Code:

### TPD Sections A and E

Add concept of “GMT Day” (i.e. 0600 hours to 0600 hours) and a concept of “Associated GMT Day”, being the GMT Day starting on the Day, to General Terms.

Add a new Section A.5 introducing concept of “GMT System Entry Point”, being a System Entry Point connected to facilities using a GMT Day.

Add concept of a “GMT UDQI” being the quantity of gas treated as being entered by the User to the Total System on the Associated GMT Day at a GMT System Entry Point to Section E 1.1.2 and a new Section E2.4 detailing how GMT UDQI’s will be calculated.

### TPD Section F2.3 - Clearing Charge

Add a new Section 2.3.5 to provide that, for GMT System Entry Points the Daily Imbalance for the purposes of calculating the Daily Imbalance Charge shall be calculated by using GMT UDQIs instead of UDQI’s.

Section 2.3.1 should then be expressed to be subject to Section 2.3.5.

### TPD Section F3.2.1 – Input Scheduling Charges

Definition of “Input Scheduling Quantity” amended to use GMT UDQIs instead of UDQIs for GMT System Entry Points.

### TPD Section B2.12.2 – Overrun Charges

The “overrun quantity” to be calculated using use GMT UDQIs instead of UDQIs for GMT System Entry Points for the purposes of determining System Entry Overrun Charges.

### TPD Section E5.3 – Incentivised Nomination Charges

Add an extra sub Section 5.3.8 (d) to provide that “A”, the User’s Daily Imbalance, is calculated for GMT System Entry Points by using GMT UDQIs instead of UDQIs.

### TPD Section C – Nominations and Renominations

Amend Section 1.1.5 to say that Users will use reasonable endeavours based on the information available to them nominate and renominate accurately

### Reconciliation

If this modification is not in force for 01 October 2015, National Grid NTS to run a reconciliation process from the date of implementation of the modification back to 01 October 2015 to reimburse Users for Time Shift Charges incurred by the Users in the period from 01 October 2015.

## **0541B**

Reimbursing Users at GMT Terminals for Time Shift Charges by creating a second category of Capacity and Balancing Neutrality Charges for Users at GMT Terminals only.

This would mean that Users would be reimbursed for Time Shift Charges and would have the effect of preventing Users incurring unearned charges, restore the correct financial incentives to balance and avoid discrimination of Users at GMT Terminals and cross subsidisation by Users at GMT Terminals of all other Users. For the avoidance of doubt, charges will continue to be applied for User imbalances arising from physical imbalances and as such the Users allocated gas at GMT Terminals will not benefit from any positive discrimination.

The Claims Validation Agent will be able to provide National Grid NTS for each User at a System Point at a GMT Terminal (a “GMT System Entry Point”) for each Day with a UDQI calculated from National Grid’s Entry Point Daily Quantity Delivered (0500 hours to 0500 hours basis) and with a “GMT UDQI” calculated from the User’s Claim on an 0600 hours to 0600 hours basis for the “GMT Day” starting on the Day. The User’s “Time Shift Quantity” for the Day, being the difference between the UDQI and the GMT UDQI, whether positive or negative, can therefore be calculated.

Changes should be made to, inter alia, the following Sections of the Uniform Network Code:

### TPD Sections A and E

Add concept of “GMT Day” (i.e. 0600 hours to 0600 hours) and a concept of “Associated GMT Day”, being the GMT Day starting on the Day, to General Terms.

Add a new Section A.5 introducing concept of “GMT System Entry Point” being a System Entry Point connected to facilities using a GMT Day.

Add concept of a “GMT UDQI” being the quantity of gas treated as being entered by the by the User to the Total System on the Associated GMT Day at a GMT System Entry Point to Section E1.1.2 and a new Section E2.4 detailing how GMT UDQI’s will be calculated. Then add concept of a “Time Shift Quantity” being the difference between the UDQI and the GMT UDQI.

### TPD Section B – Capacity Neutrality Arrangements



Exclude “Time Shift Entry Overrun Charges” (being System Entry Overrun Charges arising solely from Time Shift Quantities) from the calculation of Relevant Capacity Revenues in Section 2.13.2.

Add new Sections from 2.13.8 onwards setting up a new “Time Shift Capacity Neutrality Arrangements” scheme. This scheme should follow the existing Capacity Neutrality Arrangements but:

- only be in respect of Time Shift Entry Overrun Charges less any applicable National Grid NTS costs (“Relevant Time Shift Capacity Revenues)
- be in respect of GMT System Entry Points only
- shall return the Relevant Time Shift Capacity Revenues arising at a GMT System Entry Point to Users at such GMT System Entry Point pro rata to the amount of Time Shift Entry Overrun Charges paid by them in the relevant period.

#### TPD Section I – Balancing Neutrality Charges

Exclude “Time Shift Daily Imbalance Charges” payable to National Grid NTS (being Daily Imbalance Charges arising solely from Time Shift Quantities), “Time Shift Scheduling Charges” (being Scheduling Charges arising solely from Time Shift Quantities) and “Time Shift Incentivised Nomination Charges” (being Incentivised Nomination Charges arising solely from Time Shift Quantities) from the calculation of Aggregate System Receipts in Section 4.4.2 and the calculation of the Monthly Adjustment Neutrality Amount in Section 4.5.3.

Exclude “Time Shift Daily Imbalance Charges” payable by National Grid NTS (being Daily Imbalance Charges arising solely from Time Shift Quantities) from the calculation of Aggregate System Payments in Section 4.4.3 and the calculation of the Monthly Adjustment Neutrality Amount in Section 4.5.3.

Add new Sections from 4.7 onwards setting up a new “Time Shift Balancing Neutrality Arrangements” scheme. This scheme should follow the existing Balancing Neutrality Arrangements but:

- only be in respect of Time Shift Entry Daily Imbalance Charges (positive and negative), Time Shift Scheduling Charges and Time Shift Incentivised Nomination Charges less any applicable National Grid costs and adjusted by any interest due for late payments (“Time Shift Balancing Neutrality Charge”)
- be in respect of GMT System Entry Points only
- shall return the Time Shift Balancing Neutrality Charge arising at a GMT System Entry Point to Users at such GMT System Entry Point pro rata to the amount of such charges paid by them in the relevant period.

#### TPD Section C – Nominations and Renominations

Amend Section 1.1.5 to say that Users will use reasonable endeavours based on the information available to them nominate and renominate accurately

#### Reconciliation

If this Modification is not in force for 01 October 2015, National Grid NTS to run a reconciliation process from the date of implementation of the Modification back to 01 October 2015 to reimburse Users for Relevant Time Shift Capacity Revenues and Time Shift Balancing Neutrality Charges due to the Users in the period from 01 October 2015. Note: National Grid NTS to use Reconciliation process to reallocate any such Relevant Time Shift Capacity Revenues and Time Shift Balancing Neutrality Charges that have been returned to all Users using the existing neutrality processes in the interim period.



### User Pays – Proposers View

Classification of the modifications as User Pays, or not, and the justification for such classification.	No User Pays service would be created or amended by implementation of these modifications and they are not, therefore, classified as User Pays Modifications.
Identification of Users of the service, the proposed split of the recovery between Gas Transporters and Users for User Pays costs and the justification for such view.	N/A
Proposed charge(s) for application of User Pays charges to Shippers.	N/A
Proposed charge for inclusion in the Agency Charging Statement (ACS) – to be completed upon receipt of a cost estimate from Xoserve.	N/A

National Grid NTS' view differed on the matter of User Pays. They cited the recent [Ofgem Decision relating to Modification 0534](#):

[“The UNC534 FMR and a number of consultation responses considered that the modification is required due to the implementation of the CAM Network Code, which led to the Bacton split. In our view, the proposals in UNC534 to change the application of the shorthaul charge are separate from the decision to split Bacton. They are being made to provide a service to NTS users electing to pay that charge at Bacton and not to ensure compliance with the CAM Network Code or to facilitate the achievement of its objectives. On this basis, we do not consider that the costs associated with implementing the modification should be captured by the allowance NGGT receives to introduce code modifications required by European Network Code changes.”](#)

### User Pays – National Grid NTS View

Classification of the modification as User Pays, or not, and the justification for such classification.	<p>Implementation of any of the alternates would create a User Pays Service and therefore the Modification Proposal should be classified as a User Pays Modification Proposal.</p> <p><b>0541:</b> The implementation of functionality to undertake a one off adjustment back to 1st October 2015 to adjust a relevant User's "Time Shift Charges" for this retrospective period would require changes to the Transporter Agency systems and processes.</p> <p><b>0541A:</b> The implementation of functionality to adjust a relevant User's "Time Shift Charges" prior to being invoiced (and a one off adjustment back to 1st October 2015) would require changes to the Transporter Agency systems and processes.</p> <p><b>0541B:</b> The implementation of functionality to adjust</p>
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	<p>a relevant User's "Time Shift Charges" subsequent to the issue of the original invoices for the relevant period (and a one off adjustment back to 1st October 2015) require changes to the Transporter Agency systems and processes.</p>
<p>Identification of Users of the service, the proposed split of the recovery between Gas Transporters and Users for User Pays costs and the justification for such view.</p>	<p>Users of the service will be those Shipper Users with entry allocations at the relevant Entry Points ("GMT Terminals") as recipients of the adjustments proposed. On this basis the proposed split of the recovery between Gas Transporters and Users for User Pays is 100% Shipper Users.</p>
<p>Proposed charge(s) for application of User Pays charges to Shippers.</p>	<p>0541: Shippers will pay a charge based on their proportion of the total flows allocated over the retrospective period i.e. back to 1st October 2015 on the basis that this is the earliest date in respect of which adjustments under this Proposal will be processed. The costs attributable to the solution will be recovered over [x] pending completion of a ROM cost assessment.</p> <p>0541A: Shippers will pay a charge based on their proportion of the total flows allocated i.e. over each 12 month period (from 1st October 2015 on the basis that this is the earliest date in respect of which adjustments under this Proposal will be processed)</p> <p>0541B: Shippers will pay a charge based on their proportion of the total flows allocated i.e. over each 12 month period (from 1st October 2015 on the basis that this is the earliest date in respect of which adjustments under this Proposal will be processed)</p>
<p>Proposed charge for inclusion in the Agency Charging Statement (ACS) – to be completed upon receipt of a cost estimate from Xoserve.</p>	<p>0541 – <del>not applicable</del><u>tc</u></p> <p>0541A - System and process changes: In the range [£x to £y]</p> <p>0541B - System and process changes: In the range [£x to £y]</p>

## 4 Relevant Objectives

Impact of the modification on the Relevant Objectives:

Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	None
b) 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.	None
c) Efficient discharge of the licensee's obligations.	None
d) 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.	0541 – Positive 0541A – Positive 0541B – Positive
e) 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.	None
f) Promotion of efficiency in the implementation and administration of the Code.	None
g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	0541 – Positive 0541A – Positive 0541B – Positive

## Proposer's Initial Views

The proposers believe that these modifications ensure that those UNC charges which would be levied on Users at GMT Terminals as a result of mismatches arising from the differences between the 05:00 hours to 06:00 hours aggregate quantity on one Day and the 05:00 hours to 06:00 hours quantity on the next Day are not applied. Users have no control over the "Time Shift Mismatches" and are unable to take any mitigating actions to address them. The imposition of UNC charges, which result from Time Shift Mismatches means that affected Users face unwarranted costs, which are redistributed to all Users via neutrality charges, for example. In combination, these outcomes create inefficiencies in terms of cost allocation and undermine competition.

## Workgroup Assessment

### Initial Representation from National Grid NTS

The workgroup initially considered National Grid NTS' views and requested that the proposers respond on the issues identified.

This representation is published on the Joint Office website (<http://www.gasgovernance.co.uk/0541>) however, for convenience, the content is reproduced in Appendix 1 of this report.

### Transport (Gas Day) Working Group Response

Following approval of Modification 0461 (and prior to 0541/A/B) a Working Group was established under the chairmanship of DECC to investigate the issues arising from implementation of the new gas day arrangements. On behalf of the proposers, the Working Group submitted a response to National Grid NTS' representation that is also published on the Joint Office website (<http://www.gasgovernance.co.uk/0541/020915>). The content of this response is reproduced in Appendix 2.

In addition, a background paper was provided by this Working Group, which describes the gas day impacts and options considered (<http://www.gasgovernance.co.uk/0541/020915>).

## Impact Assessment

Workgroup participants carried out an impact assessment, identifying six key issues arising from proposals 0541/A/B that are listed below. Based on this assessment, the Workgroup assessed each modification against the Relevant Objectives d) (i) securing of effective competition between relevant shippers, and g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.

1. **Compliance with EU Legislation**
2. **NTS physical needs**
3. **Incentive to Balance**
4. **Cost Best Analysis**
5. **Appropriateness of, and impacts on, Scheduling Charges/Balancing Neutrality**
6. **Effect on Competition**
- ~~6.7. Justification for Retrospectivity~~

The six key areas of impact identified by the Workgroup are explored below:

### 1. **Compliance with EU Legislation needs more work to explain why these mods do not adversely impact compliance**

The Workgroup noted National Grid NTS' concerns that some elements of Modifications 0541/A/B might not be consistent with the EU Balancing Code (BAL), specifically around the calculation of daily imbalance quantities and charges. The proposers agreed that some elements of the proposals might make it more difficult to comply with the detail of BAL, however they believed it was more important to follow the principles enshrined in the 2009 Regulation and BAL than the finer details of one code. In summary, shipper participants active at the affected sub-terminals observed that they could see no way to comply with both the principles of the Regulation and with the detail of BAL if the UNC was to be applied as currently written.

The Workgroup considered whether a hierarchy of legislation existed; whether being consistent with the principles of the Regulation was 'better' than complying with the letter of the various Codes. Ultimately it was clarified that there is no such hierarchy and modifications needed to evidence how they furthered the Relevant Objectives. It was observed that BAL was more detailed than the UNC and that if one or more of these proposals were in conflict with BAL then this may reduce the likelihood of implementation.

National Grid also believed that Ofgem's Decision letter relating to Modification 0534 (<http://www.gasgovernance.co.uk/0534>) included clarification was worth noting in respect of compliance with EU Legislation. [and.....]

As such polar views were expressed, participants agreed to differ and no consensus could be achieved; it would ultimately be a matter for Ofgem to consider in determining whether to implement one of the proposals.

## 2. NTS physical needs

National Grid NTS maintained concerns with the aspects of all three proposals that seek to relax the obligation on Users to provide accurate nominations under UNC TPD C. This was on the basis that nominations are part of the suite of information National Grid NTS uses inform the process of making Operational Balancing decisions (as required by both the UNC (TPD D1.3.1(c)) and the EU Balancing Code Article 6(2)(b)):

### UNC TPD D

#### 1.3 Operational Balancing decisions

1.3.1 In making decisions as to the taking of Operational Balancing Steps, National Grid NTS will and shall be entitled to take into account such information as it shall judge appropriate, including:

- a) its own estimates of demand and profiles of demand within the Day;
- b) Nomination Information under Output Nominations (including Renominations pursuant to Interruption of Interruptible Supply Points and Constrained Storage Renominations); and, in respect of NExA Supply Meter Points and Connected System Exit Points, information provided pursuant to Section J4, J5 or J6 and the applicable Network Exit Provisions; and similar information provided to National Grid NTS pursuant to any other transportation arrangement;
- c) Nomination Information under Input Nominations; and
- d) Local Operating Information.

### EU Balancing Code (Regulation 312/2014) Article 6: General provisions

2. While undertaking balancing actions the transmission system operator shall consider at least the following in respect of the balancing zone:

- a) the transmission system operator's own estimates of demand of gas over and within the gas day for which the balancing action(s) is (are) considered;
- b) nomination and allocation information and measured gas flows;
- c) gas pressures throughout the transmission network(s).

## 3. Incentive to Balance

Proposers to write this section

## 4. Cost Benefit Analysis

Note – Appendix 3 has the “do nothing” spreadsheet, Appendix 4 has the “cost impact” spreadsheet. Proposers to develop the ‘plain English’ CBA, referencing these appendices.

## 5. Impacts on Charges and Neutrality

National Grid NTS observed that in the balancing neutrality model UNC charges removed from one shipper are required to be allocated to other shippers in order to remain cash-neutral. This is explained further in the diagram in Appendix 5

Shipper participants believed that the charges didn't really exist, as they related to a synthetic imbalance described in the Solution section, and they should be removed in totality from the neutrality mechanism.

Proposers to articulate how the mods flow through into the three types of charges

## 6. Effect on Competition **needs to explore the issues affecting competition**

National Grid NTS expressed concerns that, in the event imbalance-related costs were ultimately attributable somewhere within the neutrality mechanism (ie and not removed as suggested), then to allocate them to any party other than those triggering the imbalance would potentially create cross-subsidisation contrary to the principles of effective competition.

The proposers disagreed, believing that these proposals have the opposite effect since they restore equality for affected shippers with those not using the sub-terminals retaining a 06:00 - 06:00 gas day. Otherwise liquidity in beach trading and National Balancing Point<sup>1</sup> (NBP) swaps could be diminished, with a consequential adverse impact on consumer prices.

Again, no consensus view was achieved as views were recognised as being very much influenced by the degree to which a party is impacted; affected shippers felt disadvantaged by a matter they had no control over, whereas other shippers did not believe it was something they should be required to contribute towards.

### **Relevant Objectives** [section to be completed by the WG after evidence has been compiled]

Taking the issues raised into account, the workgroup participants assessed the impact of each proposal on the Relevant Objectives d) and g).

#### **Relevant Objective d) Securing of effective competition between shippers**

##### 0541 Amending each User's User Daily Quantity Input

##### 0541A Setting the Time Shift Charges to zero

##### 0541B Reimbursing Users at GMT Terminals for Time Shift Charges

#### **Relevant Objective g) Compliance with the Regulation.....**

##### 0541 Amending each User's User Daily Quantity Input

##### 0541A Setting the Time Shift Charges to zero

##### 0541B Reimbursing Users at GMT Terminals for Time Shift Charges

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<sup>1</sup> the nominal 'centre' of the NTS; a virtual trading location for the sale, purchase and exchange of gas

## 5 Implementation

There are likely to be limited costs associated with the central systems changes to implement these modifications. **To be reviewed once a clearer view on implementation is made**

### 0541

The costs will arise from the need to obtain the additional 06:00 hours to 06:00 hours flow data.

### 0541A

The costs will arise from the need to obtain the “GMT UDQI” data and the subsequent changes to UNC charges.

### 0541B

The costs will arise from the need to obtain the “GMT UDQI” data and the subsequent adjustments to Capacity and Balancing Neutrality charges.

No implementation timescales are proposed, however as the UNC gas Day will change to 05:00 hours to 05:00 hours on 01 October 2015, implementation should be on this date, or as soon as possible thereafter. **If implementation is post 01 October 2015 then a reconciliation of the relevant charges will be applied as set out in the business rules in Section 3 above.**

## 6 Impacts

### Do these modifications impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

~~These modifications are likely to have an impact on the EU Phase 3 systems changes due to the need to acquire additional 06:00 hours to 06:00 hours flow data.~~

~~The EU Phase 3 systems Design phase has been completed, meaning that any central systems changes arising from these proposals would need to be delivered as a separate programme of works at a later date.~~

## 7 Legal Text

### Text Commentary

Insert text here

### Text

The following Text has been prepared by X, and no issues were raised by the Workgroup regarding its content.

or

Text was not available for Workgroup assessment. However Text has been provided as a separate document published alongside this report.

or

The following Text has been prepared by X at the request of the Modification Panel.



## 8 Recommendation

The Workgroup invites the Panel to:

- AGREE that these modifications should be submitted for Consultation.

## 9 Appendices

### Appendix 1 – National Grid NTS’ Initial Representation (content only)

Thank you for your invitation seeking initial representations with regards to UNC Modification Proposals 0541/A/B (the “Proposals”). This response is submitted on behalf of National Grid NTS and is a combined response applicable to all of the Proposals.

We understand that NTS Shippers have raised the Proposals to mitigate a risk they have identified which is associated with the continued application of 06:00-06:00 gas day arrangements by upstream producers, whilst the NTS and downstream networks move to 05:00-05:00 gas day arrangements under the direction of EU legislation and as implemented through UNC Modification Proposal 0461 (Changing the UNC Gas Day to Align with the Gas Day in EU Network Codes).

We have been actively involved in the Gas Day Industry Workgroup chaired by DECC, with some involvement in the sub-group that has developed the Proposals. This response includes a number of points we have already highlighted in discussions with that sub-group prior to the Proposals being raised, and which we believe should be considered further by the UNC Workgroup.

As a result of our involvement in pre-modification discussions, we have a good understanding of the issue that the proposers are seeking to address, i.e. Shippers who may feel they are exposed to an increased system clearing imbalance risk (as a consequence of their current upstream production contracts) are looking to mitigate this risk by amending the downstream regulatory regime administered under the UNC. However, we have concerns that seeking a resolution of this issue in the downstream UNC arrangements may not be an efficient, targeted or equitable approach for all Shippers. Specifically, some Shippers who do not have input allocations at the affected NTS entry points may incur additional financial risk via the energy balancing neutrality mechanism. We would therefore suggest that further work continues, alongside the UNC Workgroup, to consider alternative upstream solutions that sit outside the UNC framework.

There are a number of areas that we suggest should be discussed further as part of the Workgroup development and have detailed our initial thoughts below.

#### 1. EU Network Code Compliance (CAM and Balancing)<sup>2</sup>

A suite of Modifications has been developed by National Grid NTS over the past 2 years in order to achieve GB compliance with the legislative requirements of the EU Network Codes. Many of these Modifications will be implemented in October/November 2015, including the change to the UNC gas day under UNC Modification 0461, to ensure consistency with the definition detailed in the EU Capacity Allocation Mechanism (CAM). We have concerns that some fundamental elements of the Proposals are not compliant with the requirements of the EU Balancing Code, specifically around the calculation of Shippers’ daily imbalance quantities and charges. For example, the Workgroup may need to consider whether knowingly utilising a 06:00-06:00 User Daily Quantity Input (UDQI) in the calculation of daily imbalance quantities and charges for a 05:00-05:00 gas day is consistent with the obligations placed upon TSOs and Shippers by the EU Balancing Code (Articles 19, 21 and 37).

#### 2. Principles of the GB Balancing Regime

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<sup>2</sup> Commission Regulation (EU) No 984/2013 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems, and Commission Regulation (EU) No 312/2014 establishing a Network Code on Gas Balancing of Transmission Networks  
0541/A/B  
Workgroup Report (DRAFT for WG)

The GB Balancing Regime has been developed with the Shipper as the primary energy balancer, and the Transmission System Operator (TSO) as the residual balancer. This model, which has subsequently been adopted by the EU Balancing Code, explicitly prescribes that the Shipper is incentivised to balance its own portfolio<sup>3</sup>. If it is unable to do so, the Shipper pays costs associated with its imbalance position for the relevant gas day (the 'polluter pays' principle). We believe the Workgroup may wish to consider whether the solutions described within Modification Proposals 0541A and 0541B weaken this principle. Under the balancing neutrality model, if UNC charges are removed from one Shipper, they will be allocated elsewhere in order that the Shipper community as a whole remains cash-neutral. This could result in some Shippers who do not have input allocations at the affected NTS entry points being liable for a proportion of these charges. The Workgroup should consider whether this creates the potential for cross-subsidisation of imbalance costs, and whether this could therefore be viewed as undermining effective competition between Shippers.

### **3. Industry System Changes and User Pays**

Our current understanding of the solutions described is that there are likely to be changes required to industry systems (UKLINK) which are managed by the Transporters' Agency (Xoserve). We note that the User Pays Guidance Document<sup>4</sup> published on the Joint Office of Gas Transporters website states that "...any Modification Proposal which has the potential to incur incremental Transporter Agency costs... will be classified as a User Pays Modification Proposal". If the Proposals were to be classified as User Pays, as we believe they should be, the Workgroup will need to consider which UNC parties would benefit from implementation to identify how such User Pays costs should be apportioned. In pre-Modification discussions with the proposers, it was suggested that National Grid NTS should pay the system change costs associated with any solution from our RIIO-T1 EU market facilitation funding. However, we do not believe that the solutions outlined are necessitated by EU legislation and therefore we do not consider these to be EU related Modifications. As a result, we do not believe the use of RIIO-T1 EU market facilitation funding is appropriate.

National Grid NTS has also met with Xoserve to discuss the Proposals. After reviewing the level of detail provided within the current stated solutions, and taking into account both parties' interpretation of the Proposals, Xoserve has advised us that, at this stage, there is insufficient detail to complete a cost assessment ('Rough Order of Magnitude' - ROM) which is meaningful. However, we recognise that the Proposers have suggested (and the Modification Panel subsequently directed) that the Proposals be issued to a Workgroup for further development. We believe that the Workgroup should seek to strengthen and provide further detail in respect of each of the solutions (likely to be in the form of detailed Business Rules) at an early stage in the Workgroup discussions, so the impacts can be understood and a ROM completed at the earliest opportunity.

### **4. Cost Benefit**

The Workgroup may wish to consider whether a cost benefit analysis is required to ensure that any implementation costs are justified as there is no quantification of the impact of 'Time Shift Charges' (and therefore the extent of the impact on neutrality charges) detailed in the Proposals for impacted Shippers. Although a level of cost benefit analysis could be completed based on past information, the Workgroup may wish to consider whether a thorough and accurate quantification of the additional imbalance risk is achievable prior to implementation and evaluation of the impacts of the gas day industry solution (otherwise known as 'Option A'). If such a quantification cannot be completed prior to this point, then as Option A will not be implemented until October 2015, it may be appropriate to allow a minimum evaluation period (for example 3 months) to fully assess the extent of 'Time Shift Charges' whilst operating in

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<sup>3</sup> Article 4.1 of Commission Regulation (EU) No 312/2014 establishing a Network Code on Gas Balancing of Transmission Networks

<sup>4</sup> <http://www.gasgovernance.co.uk/sites/default/files/User%20Pays%20Guide%20Doc%20v2.pdf>: page 3 paragraphs 4 and 6

accordance with Option A in order to provide an accurate cost benefit assessment of the solutions presented in the Proposals.

## 5. Relevant Objectives

The Workgroup may wish to make an assessment of whether the proposers' suggestions that the Proposals would have a positive impact on Relevant Objective (d) "Securing of effective competition" and Relevant Objective (g) "Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators" are correct. Our initial thoughts in respect of this are outlined below:

**Relevant Objective d):** We believe the Proposals have the potential to have an adverse impact on competition between Shippers, by creating additional undue Neutrality cashflows for parties who do not have input allocations at the relevant sub- terminals, and creating cross-subsidies that may weaken the proposers' balancing incentives. Further, the potential for retrospective application of the solutions from the point of direction from the Authority (should this be forthcoming) may arguably undermine competition still further.

**Relevant Objective g):** As previously mentioned, we do not believe that the solutions as described in the Proposals are mandated by the EU Network Codes; therefore we would question whether this Relevant Objective is better facilitated. The Workgroup may need to consider whether the Proposals may negatively impact upon this Relevant Objective as they have the potential to jeopardise TSO and Shipper compliance with EU Regulation, by effectively seeking to retain a 06:00 to 06:00 gas day for a subset of Shippers within the framework of the UNC neutrality regime. This may be contrary to the requirements of the EU Balancing Code.

## 6. Implementation and Retrospective Adjustment

We note the proposers' ambition to implement one of the Proposals by 01 October 2015. Due to the timescale for development of the Proposals in the Workgroup, the lead time for development and implementation of a robust system/process solution and the existing change congestion associated with Xoserve system delivery, we believe this implementation date is not achievable.

The proposers have also suggested that if 01 October 2015 implementation cannot be achieved, the adjustment to Shippers' UNC charges should be calculated retrospectively from 01 October 2015. Modifications with retrospective application have historically been heavily debated within UNC Workgroup discussions, and in previous decision letters Ofgem has documented its concerns associated with such retrospective application.<sup>5</sup> Such concerns include introducing uncertainty into the market and an increase in the perception of risk, which can negatively impact on competition. The Workgroup will need to consider whether the retrospective element of the Proposals could be seen as anti- competitive (as described above), especially if new entrants to the market may be liable for costs at a time when they were not active market participants.

In summary, we believe there are several aspects of the Proposals that are unclear, or require further consideration, and which need to be further developed and understood as part of the Workgroup development. National Grid NTS welcomes further discussion on the points highlighted in this initial representation at the forthcoming Workgroup meetings.

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<sup>5</sup> For example, UNC Modification 451V and 451AV Individual Payments for Pre-Payment and Smart Meters

## Appendix 2 – Transport Working Group Response

The Workgroup has considered carefully the impact of the EU Regulations on network users using sub terminals that continue to operate on a 0600 hours to 0600 hours gas day ("Affected Terminals") and National Grid as Transmission System Operator.

**The Workgroup has concluded that, without the proposed Modifications, neither National Grid nor network users at Affected Terminals will be able to comply with the Regulations.**

The Gas Day changes are required by Regulation (EC) No 715/2009 of the European Parliament dated 13 July 2009 ("**2009 Regulation**") and Commission Regulation (EU) No 312/2014 of 26 March 2014 establishing a Network Code on Gas Balancing of Transmission Networks ("**BAL Code**"). The BAL Code forms part of the 2009 Regulation.

The relevant principles that the 2009 Regulation seeks to achieve are set out in the 2009 Regulation and repeated in the BAL Code and are as follows:

- (i) Access rules to natural gas transmission systems to be **non-discriminatory** (Art 1(a) 2009 Regulation and Recital 4 BAL Code)
- (ii) Balancing Rules to reflect **genuine system needs** (Art 21.1 2009 Regulation and Art 4.2 BAL Code)
- (iii) Imbalance charges to be **cost reflective** to the extent possible and shall take account of the prices associated with the TSO's balancing actions (Art 21.3 2009 Regulation and Art 19.3 BAL Code)
- (iv) Imbalance charges shall act as **appropriate incentives on network users to balance** their input and offtake of gas (Art 21.3 2009 Regulation and Art 4.2 BAL Code)
- (v) Imbalance charges shall **avoid cross subsidisation** between network users (Art 21.3 2009 Regulation)
- (vi) Imbalance charges shall **not hamper the entry of new market entrants** (Art 21.3 2009 regulation)

The BAL Code further sets out at Art 21 how to calculate daily imbalances (inputs – offtakes) and calculate imbalance charges (Art 22).

Given that post 1<sup>st</sup> October 2015 at Affected Terminals:

- a) day ahead, within day and post day flow information will only ever be available to users of those terminals on a 0600 hours to 0600 hours basis and they will therefore have to schedule to National Grid on a 0600 hours to 0600 hours basis;
- b) National Grid will use an 0500 hours to 0500 hours metered Daily Quantity for the Affected Terminals;
- c) network users inputting gas into the NTS at Affected Terminals will have their NTS input quantities artificially adjusted after the day so as to reconcile the 0600 hours to 0600 hours terminal numbers to the National Grid 0500 hours to 0500 hours Daily Quantity;
- d) such network users will, in addition to any imbalances arising from failures to physically flow to scheduled quantities, consequently be out of balance long or short every day due solely to such hour adjustment ("**Time Shift Adjustments**");
- e) such network users will, unless Modification to the UNC is achieved, incur imbalance charges (SMBP, SMSP, Scheduling and Overrun Charges) every day as result of the Time Shift Adjustments (please note that if the UNC is applied by National Grid as currently drafted these imbalance charges **will be** incurred, it is not merely a question of network users "feeling" they may be exposed to increased system clearing imbalance risks);

- f) as explained at paragraph 4, the Time Shift Adjustments are not a result of actual physical flows of gas into the NTS and the mass balance of the NTS nor any balancing actions taken by National Grid but are solely a result of the differences between the 0500 hours to 0600 hours aggregate flows of gas through an Affected Terminal on day 1 and the 0500 hours to 0600 hours aggregate flows of gas through the Affected Terminal on day 2; and
- g) monies raised from the imbalance charges levied by National Grid arising from Time Shift Adjustments will be returned to all network users entering and exiting gas to and from the NTS through the neutrality charge regimes not just to network users at Affected Terminals (please note that network users at non Affected Terminals will not incur additional financial risk as a result of the proposed Modifications but rather without the Modifications will receive "windfall gains");

then, unless the UNC is modified,:

- h) any imbalance charges levied on network users as a result of Time Shift Adjustments would **not arise as a result of genuine system needs** nor would they relate to network users intended flows, resulting in National Grid and network users failing to comply with Art 21.1 2009 Regulation and Art 4.2 BAL Code;
- i) imbalance charges arising from Time Shift Adjustments will therefore **not incentivise shippers to balance**, resulting in National Grid and network users failing to comply with Art 21.3 2009 Regulation and Art 4.2 BAL Code;
- j) since National Grid will take no balancing actions in respect of Time Shift Adjustments, the resulting imbalance charges will **not be cost reflective**, resulting in National Grid and network users failing to comply with Art 19.3 BAL Code;
- k) network users at non Affected Terminal will not bear these additional imbalance charges arising solely from Time Shift Adjustments so network users using Affected Terminals will **be discriminated against**, resulting in National Grid and network users failing to comply with Art 1(a) 2009 Regulation and Recital 4 BAL Code; and
- l) monies raised by National Grid from these imbalance charges will be returned to all network users entering and exiting gas to and from the NTS through the neutrality charge regimes not just to network users at Affected Terminals so there will be **cross subsidisation** of all network users by those at Affected Terminals, resulting in National Grid and network users failing to comply with Art 21.3 2009 Regulation.

Without any correction of the unjustified imbalance charges there will be wider impacts on the industry falling out from the risks to beach trading (and NBP swaps). It is evident that liquidity in these markets will likely be diminished, which in turn will frustrate true price discovery and the delivery of gas to consumers at the most cost effective price. Beach trading and swaps permit shippers to optimise their portfolios so that deliveries into the system can be managed most effectively, in terms of location, volume and price.

We note that some of the proposed Modifications may make it harder to comply with some of the details in Articles 21 and 22 of BAL Code but, in the case of any such inconsistencies, complying with the principles set out in the 2009 Regulation and the BAL Code should take precedence over the details of the BAL Code. Unless the Affected Terminals change their gas day or National Grid enters into operational balancing arrangements with the Affected Terminals, the Workgroup cannot see anyway to comply with both principles in the 2009 Regulation and all provisions of the BAL Code if the UNC is applied as currently drafted.

# Appendix 3 – “DO nothing” Costing Model

## Example Gas Day:

Gas Prices	p/wh
SWPB	48.90 (Short Gas)
SAP	48.00 (Day Average)
SHPs	48.13 (Long Gas)
Capacity Overrun	2.00

Scheduling Charges	p/wh
Tolerance <3% = FREE	0.00
Inner tolerance 3-5% = 2% SAP	0.98
Outer Tolerance >5% = 5% SAP	2.48
% Difference between 5-5 & 6-6	2.00%

## Gas Day Process Flow

**INFORMATION AVAILABLE ON THE GAS DAY FROM PRODUCERS FOR SHIPPERS TO ACT UPON (DAY 1 & 2 ASSUMED IDENTICAL - PERFECT DAY)**

*The Gas Day - Producers sell 10m tonnes their expected daily allocation. Shippers trade with each other at beach. Shippers all balance positions to zero through sales at NBP.*

	Production	Forecast Sale to Producer	Beach Sale Shipper2 to Shipper3	Shipper Position at Sub-Terminal	Shipper Allocation (Shipper UDO)	Sub-Terminal Purchase	Shipper Capacity	Shipper Sale @ NBP	Shipper Daily Imbalance	Shipper Capacity Overrun	Scheduling Error Percentage	Shipper Daily Imbalance Charge £	Shipper Daily Capacity Overrun	Capacity Overrun £	Scheduling Charge (Inner/Outer) £	Overall Shipper Cost/Revenue £	Balancing Neutrality Pot Impact £
Sub-Terminal 6-6	10,000,000	5,000,000	-250,000	5,000,000	5,000,000	5,000,000	5,000,000	-5,000,000	0	0	0%	50,000	0	50,000	50,000	50,000	50,000
Field1	5,000,000	5,000,000	-250,000	4,750,000	4,750,000	4,750,000	4,750,000	-4,750,000	0	0	0%	50,000	0	50,000	50,000	50,000	50,000
Field2	5,000,000	5,000,000	-250,000	4,750,000	4,750,000	4,750,000	4,750,000	-4,750,000	0	0	0%	50,000	0	50,000	50,000	50,000	50,000
Shipper1	5,000,000	5,000,000	-250,000	4,750,000	4,750,000	4,750,000	4,750,000	-4,750,000	0	0	0%	50,000	0	50,000	50,000	50,000	50,000
Shipper2	5,000,000	5,000,000	-250,000	4,750,000	4,750,000	4,750,000	4,750,000	-4,750,000	0	0	0%	50,000	0	50,000	50,000	50,000	50,000
Shipper3	5,000,000	5,000,000	-250,000	4,750,000	4,750,000	4,750,000	4,750,000	-4,750,000	0	0	0%	50,000	0	50,000	50,000	50,000	50,000
Sub-Terminal 5-5	10,000,000	5,000,000	-250,000	4,750,000	9,800,000	9,800,000	4,900,000	-5,000,000	-100,000	0	2.0%	-48,900,000	0	50,000	-48,900,000	50,000	50,000
Field1	5,000,000	5,000,000	-250,000	4,750,000	4,950,000	4,950,000	4,750,000	-4,750,000	-95,000	0	2.0%	-47,405,000	0	50,000	-47,405,000	50,000	50,000
Field2	5,000,000	5,000,000	-250,000	4,750,000	4,850,000	4,850,000	4,750,000	-4,750,000	-95,000	0	2.0%	-47,405,000	0	50,000	-47,405,000	50,000	50,000
Shipper1	5,000,000	5,000,000	-250,000	4,750,000	4,850,000	4,850,000	4,750,000	-4,750,000	-95,000	0	2.0%	-47,405,000	0	50,000	-47,405,000	50,000	50,000
Shipper2	5,000,000	5,000,000	-250,000	4,750,000	4,850,000	4,850,000	4,750,000	-4,750,000	-95,000	0	2.0%	-47,405,000	0	50,000	-47,405,000	50,000	50,000
Shipper3	5,000,000	5,000,000	-250,000	4,750,000	4,850,000	4,850,000	4,750,000	-4,750,000	-95,000	0	2.0%	-47,405,000	0	50,000	-47,405,000	50,000	50,000
Sub-Terminal 6-6	10,000,000	5,000,000	-250,000	4,750,000	10,200,000	10,200,000	5,100,000	-5,000,000	100,000	100,000	2.0%	548,100,000	0	50,000	548,100,000	548,100,000	50,000
Field1	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	95,000	2.0%	545,235,500	0	50,000	545,235,500	545,235,500	50,000
Field2	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	95,000	2.0%	545,235,500	0	50,000	545,235,500	545,235,500	50,000
Shipper1	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	95,000	2.0%	545,235,500	0	50,000	545,235,500	545,235,500	50,000
Shipper2	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	95,000	2.0%	545,235,500	0	50,000	545,235,500	545,235,500	50,000
Shipper3	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	95,000	2.0%	545,235,500	0	50,000	545,235,500	545,235,500	50,000
Sub-Terminal 6-6	10,000,000	5,000,000	-250,000	4,750,000	10,200,000	10,200,000	5,100,000	-5,000,000	100,000	5,000	2.0%	548,100,000	5,000	50,000	548,100,000	548,100,000	50,000
Field1	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	5,000	2.0%	545,235,500	5,000	50,000	545,235,500	545,235,500	50,000
Field2	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	5,000	2.0%	545,235,500	5,000	50,000	545,235,500	545,235,500	50,000
Shipper1	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	5,000	2.0%	545,235,500	5,000	50,000	545,235,500	545,235,500	50,000
Shipper2	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	5,000	2.0%	545,235,500	5,000	50,000	545,235,500	545,235,500	50,000
Shipper3	5,000,000	5,000,000	-250,000	4,750,000	4,845,000	4,845,000	4,750,000	-4,750,000	95,000	5,000	2.0%	545,235,500	5,000	50,000	545,235,500	545,235,500	50,000
Base Case Balancing Neutrality Pot Impact £																	
Option A Day1 Balancing Neutrality Pot Impact £																	
Option A Day2 Balancing Neutrality Pot Impact £																	
Overall Balancing Neutrality Pot Impact £																	

**INFORMATION AVAILABLE ON THE GAS DAY FROM PRODUCERS FOR SHIPPERS TO ACT UPON (DAY 1 & 2 ASSUMED IDENTICAL - PERFECT DAY)**

*Current world perfect day pre 1st Oct 1s, with 10m tonnes produced as planned on a 6-6 basis.*

*Exactly 10m tonnes produced as planned on a 6-6 basis, but a small difference in the hour 5-6 results in a different order of gas flow.*

**OPTION A - DAY 1 - 5-5 DO < 6-6 DO**

*Exactly 10m tonnes produced as planned on a 6-6 basis, but a small difference in the hour 5-6 results in 10 2m tonnes received on 5-5 basis.*

**OPTION A - DAY 2 - 5-5 DO > 6-6 DO**

*Exactly 10m tonnes produced as planned on a 6-6 basis, but a small difference in the hour 5-6 results in 10 2m tonnes received on 5-5 basis.*

**New costs introduced through Option A process that shippers at 6-6 sub-terminals will incur and cannot mitigate. Resultant revenues are generated into the Balancing Neutrality Pot and unfairly distributed to all shippers, not just impacted shippers.**



# Appendix 4 – Cost Impacts

## Example Gas Day:

Gas Prices	p/ht
SMPB	51.00 Short Gas
SAP	50.00 Day Average
SMPS	49.00 Long Gas
Capacity Overrun	4.00

Scheduling Charges	p/ht
Tolerance <3% = FREE	0.00
Inner tolerance 3-5% = 2% SAP	1.00
Outer Tolerance >5% = 5% SAP	2.50
Sub-Terminal Supply Change %	2.00%

### Gas Day Process Flow

#### INFORMATION AVAILABLE ON THE GAS DAY FROM PRODUCERS FOR SHIPPERS TO ACT UPON (DAY 1 & 2 ASSUMED IDENTICAL)

Sub-Terminal Allocation	Production Forecast	Forecast Sale Producer to Shipper	Beech Sale Shipper2 to Shipper3	Shipper Position at Sub-Terminal	Shipper Input Nominated Quantity	Sub-Terminal Purchase	Shipper sale @ NBP	Shipper Daily Imbalance	Shipper Capacity Overrun	Shipper Capacity Scheduling Error Percentage	Shipper Daily Imbalance Charge £	Capacity Overrun £	Scheduling Charge (Inner/Outer) £	Overall Balancing Neutrality Impact £
Sub-Terminal 6-6	10,000,000	5,000,000	-250,000	5,000,000	5,000,000	5,000,000	-5,000,000	0	0	0%	£0.00	£0.00	£0.00	£0.00
Field1	5,000,000	5,000,000		4,750,000	4,750,000	4,750,000	-4,750,000	0	0	0%	£0.00	£0.00	£0.00	£0.00
Shipper1														
Shipper2														
Shipper3														

#### AFTER THE DAY ALLOCATED INFORMATION (DAY 1 & 2 ASSUMED IDENTICAL)

Sub-Terminal Allocation	Final Sale Producer to Shipper	Beech Sale Shipper2 to Shipper3	Shipper Position at Sub-Terminal	Final Allocation (Shipper UDQ)	Sub-Terminal Purchase	Shipper sale @ NBP	Shipper Daily Imbalance	Shipper Capacity Overrun	Shipper Capacity Scheduling Error Percentage	Shipper Daily Imbalance Charge £	Capacity Overrun £	Scheduling Charge (Inner/Outer) £	Overall Balancing Neutrality Impact £
Sub-Terminal 6-6	10,000,000	-250,000	5,000,000	5,000,000	5,000,000	-5,000,000	0	0	0%	£0.00	£0.00	£0.00	£0.00
Field1	5,000,000		5,000,000	4,750,000	4,750,000	-4,750,000	0	0	0%	£0.00	£0.00	£0.00	£0.00
Shipper1													
Shipper2													
Shipper3													

#### OPTION A - DAY 1 - 5:5 DQ < 6:6 DQ

Sub-Terminal Allocation	Final Sale Producer to Shipper	Beech Sale Shipper2 to Shipper3	Shipper Position at Sub-Terminal	Option A Scaling for gas day	Final Allocation (Shipper UDQ)	Sub-Terminal Purchase	Shipper sale @ NBP	Shipper Daily Imbalance	Shipper Capacity Overrun	Shipper Capacity Scheduling Error Percentage	Shipper Daily Imbalance Charge £	Capacity Overrun £	Scheduling Charge (Inner/Outer) £	Overall Balancing Neutrality Impact £
Sub-Terminal 5-5	9,800,000	-250,000	5,000,000	9,800,000	4,900,000	5,000,000	-5,000,000	-100,000	0	2%	-£51,000.00	£0.00	£0.00	-£51,000.00
Sub-Terminal 6-6	10,000,000		5,000,000	10,000,000	4,655,000	4,750,000	-4,750,000	-95,000	0	2%	-£48,450.00	£0.00	£0.00	-£48,450.00
Field1	5,000,000		5,000,000	245,000	245,000	250,000	-250,000	-5,000	0	2%	-£2,550.00	£0.00	£0.00	-£2,550.00
Shipper1														
Shipper2														
Shipper3														

#### OPTION A - DAY 2 - 5:5 DQ > 6:6 DQ

Sub-Terminal Allocation	Final Sale Producer to Shipper	Beech Sale Shipper2 to Shipper3	Shipper Position at Sub-Terminal	Option A Scaling for gas day	Final Allocation (Shipper UDQ)	Sub-Terminal Purchase	Shipper sale @ NBP	Shipper Daily Imbalance	Shipper Capacity Overrun	Shipper Capacity Scheduling Error Percentage	Shipper Daily Imbalance Charge £	Capacity Overrun £	Scheduling Charge (Inner/Outer) £	Overall Balancing Neutrality Impact £
Sub-Terminal 5-5	10,200,000	-250,000	5,000,000	10,200,000	5,100,000	5,000,000	-5,000,000	100,000	100,000	2%	£49,000.00	-£4,000.00	£0.00	£45,000.00
Sub-Terminal 6-6	10,000,000		5,000,000	10,000,000	4,845,000	4,750,000	-4,750,000	95,000	95,000	2%	£48,550.00	-£3,800.00	£0.00	£44,750.00
Field1	5,000,000		5,000,000	255,000	255,000	250,000	-250,000	-5,000	5,000	2%	£2,450.00	-£200.00	£0.00	£2,250.00
Shipper1														
Shipper2														
Shipper3														

## Appendix 5 – Explanation of System Average Prices

System Average Price (SAP) is the sum of all Balancing Transaction Charges divided by the sum of the Market Transaction Quantities and Non- Trading System Transaction Quantities for all Balancing Transactions respectively effected in respect of that Day.

Each User is incentivised to maintain a balance each day between the quantities it inputs to the system for that day and the quantities it offtakes from the system for that day. The incentive works by levying imbalance charges for the difference on the following basis:

- for Users with supply in excess of demand, at a unit cost below the system average price (**System Marginal Sell Price**); and
- for Users with demand in excess of supply, at a unit cost premium above the system average price (**System Marginal Buy Price**).

The System Marginal Sell Price is set on the basis of the lower of:

- SAP minus the Default Cashout Differential; and
- the lowest priced 'sell'\* trade by National Grid as residual system balancer

The System Marginal Buy Price is set on the basis of the higher of:

- SAP plus the Default Cashout Differential; and
- the highest priced 'buy'\* trade by National Grid as residual system balancer

### Imbalance Cashout

- Imbalance charges (Cashout) – incentive on shippers to balance. It is based on physical allocations derived from metered flows and traded volumes.

