Joint Office of Gas Transporters

**Stage 01:** Modification

At what stage is this document in the process?

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

# 0494:

# Imbalance Charge amendments required to align the UNC with the Network Code on Gas Balancing of Transmission Networks

This Modification Proposal seeks to facilitate compliance with Commission Regulation (EU) No 312/2014 - Network Code on Gas Balancing of Transmission Networks, via an amendment to the calculation of System Marginal Buy Price (SMBP) and System Marginal Sell Price (SMSP).

The Proposer recommends that this modification should be:

- assessed by a Workgroup

High Impact:

Medium Impact: Shippers, Xoserve, NG NTS

Low Impact:

## Contents



## About this document:

This modification was presented by the proposer to the panel on 17th April 2014.

The panel considered the proposer's recommendation and agreed for this modification to be referred to a workgroup for assessment.

**Any questions?**


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# 1 Summary

## Is this a Self-Governance Modification?

Self-Governance procedures are not proposed because this proposal is likely to have a material effect on commercial activities connected with the shipping of gas conveyed through pipes[1]. The Modification seeks to change the imbalance charge calculation which is currently deemed appropriate to incentivise Shipper Users to balance their portfolios. Where Shippers Users don't balance their portfolios, National Gird NTS, may make Market Balancing Actions. The costs of these actions are passed back through to Shipper Users via Balancing Neutrality Charges. Any change to the imbalance charge calculation, may result in a financial impact in the level of Balancing Neutrality Charges.[2]

## Is this a Fast Track Self-Governance Modification?

Fast Track Self-Governance procedures are not proposed as Self-Governance procedures are not being proposed.

## Why Change?

The European Network Code on Gas Balancing of Transmission Networks (the "Balancing Code") sets out, for the purpose of daily imbalance charge calculations, how the System Marginal Price for the buying and selling of gas shall be determined. There is a difference between the Balancing Code calculation and the calculation that is currently utilised in the GB regime.

At present, the System Marginal Buy Price (SMBP) and System Marginal Sell Price (SMSP), can be set by using any Market Balancing Action taken by National Grid NTS (the Transmission System Operator (TSO)) in the course of a given Day (e.g. SMBP can be set by a Market Balancing Buy or Sell Action, and SMSP can be set by a Market Balancing Buy or Sell Action).

The requirement contained within the Balancing Code states that, if the System Marginal Price is being set by a Market Balancing Action, a Market Balancing Buy Action can only set SMBP, and a Market Balancing Sell Action can only set SMSP. This obligation applies to the whole GB balancing zone, including Interconnection Points (IPs).

## Solution

It is proposed that UNC TPD Section F, 1.2 System Prices is amended to remove the ability for any Market Balancing Action to set SMSP and SMBP. This proposal is illustrated by the following addition to the current text:

*1.2.1 Subject to paragraphs 1.2.2 and 1.2.5, for each Day:*

*(a) the "**System Marginal Buy Price**" is the greater of:*

*(i) the System Average Price plus the Default System Marginal Price; and*

*(ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(a)) is equal to the highest Balancing Action Offer Price in relation to a Market Balancing **Buy** Action taken for that Day;*

[1] The relevant self-governance criteria as specified in SSC A11 24(a)

[2] In 2011, total imbalance cashed out was 2.53% of throughput. Financially this equated to a £83, 283, 314 credit to the Balancing Neutrality Account.

*(b) the "**System Marginal Sell Price**" is the lesser of:*

*(i) the System Average Price less the Default System Marginal Price; and*

*(ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(b) and 4.1.7) is equal to the lowest Balancing Action Offer Price in relation to a Market Balancing **Sell** Action taken for that Day;*

## Relevant Objectives

**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**

This Modification Proposal will facilitate compliance with European legislative requirements contained within the Balancing Code, Chapter V Imbalance Charges.

## Implementation

No implementation timescales are proposed, however the deadline for implementation of the provisions of the EU Gas Balancing Code have been set as 1st October 2015. Therefore it is proposed these changes need to be implemented no later than this date.

# 2 Why Change?

The Balancing Code sets out how TSOs (such as National Grid NTS) should calculate the daily imbalance charges applied to each User in respect of their inputs and offtakes from the transmission network. This is contained within Chapter V of the Balancing Code (See Appendix 1).

The UNC is largely compliant with the requirements of Chapter V; however there is a difference in how the System Marginal Price for buying and selling gas is calculated (Chapter V, Article 22 Applicable Price).

### 2.1 Background

Where a User's input and offtake of gas from the network are not equal, the User is said to be 'out of balance.' If this situation applies, the TSO, may make a Market Balancing Action, to ensure that the overall system balances.

Where an imbalance exists between a User's input and offtake of gas from the network, a daily imbalance charge methodology shall apply to the imbalance. This is calculated in a manner that should incentivise Users to balance their portfolio. If a User has a positive imbalance (they have input more gas into the system than they have offtaken), then the System Marginal Sell Price (SMSP) will apply (the TSO will, in effect, buy the excess gas from that Shipper). Conversely, if they have a negative imbalance (they have offtaken more gas from the system than they have input) then the System Marginal Buy Price (SMBP) will apply (the TSO will, in effect, sell gas to that Shipper).

The calculation for SMBP and SMSP contains the System Average Price (SAP) – "*the price in pence/kWh calculated as the sum of all Balancing Transaction Charges divided by the sum of all Market and Non-Trading System Transaction Quantities for all Balancing Transactions respectively effected in respect of that Day.*" (UNC Section F) In the Balancing Code the equivalent of SAP is referred to as the 'Weighted Average

Price.' Although this is not specifically defined, the Balancing code states: *"The weighted average price shall be the energy weighted average price of trades in title products carried out at the virtual trading point in respect of a gas day."* (Article 22, Applicable Price).

The Default System Marginal Price (DSMP) also forms part of the daily imbalance calculation (UNC TPD Section F). This is published by National Grid NTS no later than August each year and is applicable for the forthcoming Gas Year. In the Balancing Code the equivalent of the DSMP is referred to as a 'small adjustment.'

### 2.2 Daily Imbalance Charge Calculation

Article 22, of Chapter V of the Balancing Code states:

*2. A marginal sell price and a marginal buy price shall be calculated for each gas day pursuant to the following:*

*(a) a marginal sell price is the lower of:*

*(i) the lowest price of any sales of title products in which the transmission system operator is involved in respect of the gas day; or*

*(ii) the weighted average price of gas in respect of that gas day, minus a small adjustment.*

*(b) a marginal buy price is the higher of*:

*(i) the highest price of any purchases of title products in which the transmission system operator is involved in respect of the gas day; or*

*(ii) the weighted average price of gas in respect of that gas day, plus a small adjustment.*

The UNC equivalent of this calculation is contained within Section F 1.2 System Prices:

*1.2.1 Subject to paragraphs 1.2.2 and 1.2.5, for each Day:*

*(a) the "**System Marginal Buy Price**" is the greater of:*

*(i) the System Average Price plus the Default System Marginal Price; and*

*(ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(a)) is equal to the highest Balancing Action Offer Price in relation to a Market Balancing Action taken for that Day;*

*(b) the "**System Marginal Sell Price**" is the lesser of:*

*(i) the System Average Price less the Default System Marginal Price; and*

*(ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(b) and 4.1.7) is equal to the lowest Balancing Action Offer Price in relation to a Market Balancing Action taken for that Day;*

By comparing the daily imbalance calculations defined within the Balancing Code and the UNC, it can be seen that the methodology used to calculate the SMBP and SMSP is different. To be compliant with the Balancing Code, UNC will have to be amended to reflect the definition contained within the Balancing Code.

# 3 Solution

To be compliant with the Balancing Code, the proposer suggests the wording contained within UNC Section F 1.2 is amended to become compliant with the Balancing Code (2. Article 22, Applicable Prices).

The result of this amendment will mean only buy Market Balancing Actions made by the TSO will be able set the SMBP when these are greater than SAP plus the DSMP, and only sell Market Balancing Actions made by the TSO will be able to set the SMSP when these are lower than SAP minus the DSMP. The ability for any Market Balancing Action (whether a buy or a sell) to be able to set either the SMBP or SMSP will be removed.

The proposer suggests the UNC Section F 1.2 System Prices is amended to reflect the following illustrative text:

*1.2.1 Subject to paragraphs 1.2.2 and 1.2.5, for each Day:*

*(a) the "**System Marginal Buy Price**" is the greater of:*

*(i) the System Average Price plus the Default System Marginal Price; and*

*(ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(a)) is equal to the highest Balancing Action Offer Price in relation to a Market Balancing Buy Action taken for that Day;*

*(b) the "**System Marginal Sell Price**" is the lesser of:*

*(i) the System Average Price less the Default System Marginal Price; and*

*(ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(b) and 4.1.7) is equal to the lowest Balancing Action Offer Price in relation to a Market Balancing Sell Action taken for that Day;*

There are also some minor changes required for UNC Section Q 6.3.5 (a) and 6.3.5 (b) to rectify incorrect cross references (see Section 6 Legal Text).

| User Pays |
| --- |
| Classification of the modification as User Pays, or not, and the justification for such classification. |
| No User Pays service would be created or amended by implementation of this modification and it is not, therefore, classified as a User Pays Modification. |
| 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 |

This modification seeks to amend the UNC to comply with European Network Code delivery into the GB gas regime. It is part of a wider suite of UNC changes that will be proposed to achieve compliance with the European Network Codes. National Grid Transmission has been allocated some funding through the RIIO-T1 price control process for EU market facilitation. National Grid expects to be able to utilise this funding to meet the costs of this EU-related change and where this proves insufficient it anticipates using the mid-point review as the mechanism to address any funding gaps. Therefore no User Pays charges will be raised in relation to Modification 0494.

# 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<br>(i) the combined pipe-line system, and/ or<br>(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:<br>(i) between relevant shippers;<br>(ii) between relevant suppliers; and/or<br>(iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers. | None |
| 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. | Positive |

**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**

This Modification Proposal will facilitate compliance with European legislative requirements contained within the Balancing Code, Chapter V Imbalance Charges.

# 5 Implementation

No implementation timescales are proposed, however the deadline for implementation of the provisions of the EU Gas Balancing Code have been set as 1st October 2015. Therefore it is proposed these changes need to be implemented no later than this date.

# 6 Legal Text

## Suggested Legal Text

Suggested changes to UNC TPD Section F

1.2.1 Subject to paragraphs 1.2.2 and 1.2.5, for each Day:

(a) the "**System Marginal Buy Price**" is the greater of:

(i) the System Average Price plus the Default System Marginal Price; and

(ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(a)) is equal to the highest Balancing Action Offer Price in relation to a Market Balancing Buy Action taken for that Day;

(b) the "**System Marginal Sell Price**" is the lesser of:

(i) the System Average Price less the Default System Marginal Price; and

(ii) the price in pence/kWh which (subject to Section D4.1.4, 4.1.5(b) and 4.1.7) is equal to the lowest Balancing Action Offer Price in relation to a Market Balancing Sell Action taken for that Day;

Reference corrections to UNC Section Q 6.3.5 (a) and 6.3.5 (b).

6.3.5 For the purposes of paragraph 6.3.4:

(a) the **"relevant sell price"** for any Day:

(i) in respect of which Stage 1 (but not Stage 2 and higher) of a Gas Deficit Emergency has been declared, is the System Marginal Sell Price determined under Section F1.2.~~2~~1(b) and;

(b) the **"relevant buy price"** for any Day:

(i) in respect of which Stage 1 (but not Stage 2 and higher) of a Gas Deficit Emergency has been declared, is the System Marginal Sell Price determined under Section F1.2.~~2~~1(b) and;

# 7 Recommendation

The Proposer invites the Panel to:

- Refer to Workgroup.

# 8 Appendix 1

Below is the related text from Chapter V Daily Imbalance Charges of the Commission Regulation (EU) No 312/2014 of 26 March 2014 establishing a Network Code on Gas Balancing of Transmission Networks.

**CHAPTER V**

**DAILY IMBALANCE CHARGES**

*Article 19*

**General provisions**

1. Network users shall be bound to pay or be entitled to receive (as appropriate) daily imbalance charges in relation to their daily imbalance quantity for each gas day.

2. Daily imbalance charges shall be identified separately on the transmission system operator's invoices to network users.

3. The daily imbalance charge shall be cost reflective and shall take account of the prices associated with transmission system operator's balancing actions, if any, and of the small adjustment referred to in Article 22(6).

*Article 20*

**Daily imbalance charge calculation methodology**

1. The transmission system operator shall submit the daily imbalance charge calculation methodology to be applied in its balancing zone to the national regulatory authority for approval.

2. Once approved, the daily imbalance charge calculation methodology shall be published on the relevant website. Any update thereof shall be published in a timely manner.

3. The daily imbalance charge calculation methodology shall define:

(a) the calculation of the daily imbalance quantity referred to in Article 21;

(b) the derivation of the applicable price referred to in Article 22; and

(c) any other necessary parameter.

*Article 21*

**Daily imbalance quantity calculation**

1. The transmission system operator shall calculate a daily imbalance quantity for each network user's balancing portfolio for each gas day in accordance with the following formula:

daily imbalance quantity = inputs – off-takes

2. The daily imbalance quantity calculation shall be adapted accordingly where:

(a) a linepack flexibility service is offered; and/or

(b) any arrangement is in place whereby network users provide gas, including gas in kind, to cover:

(i) gas unaccounted for as off taken from the system, such as losses, metering errors; and/or

(ii) gas used by the transmission system operator for the operation of the system, such as fuel gas

3. Where the sum of a network user's inputs for the gas day is equal to the sum of its off-takes for this gas day, a network user is deemed balanced for this gas day.

4. Where the sum of a network user's inputs for the gas day is not equal to the sum of its off-takes for this gas day, a network user is deemed imbalanced for this gas day and daily imbalance charges shall be applied in accordance with Article 23.

5. The transmission system operator shall provide a network user with its initial and its final daily imbalance quantities in accordance with Article 37.

6. The daily imbalance charge shall be based on the final daily imbalance quantity.

*Article 22*

**Applicable price**

1. For the purpose of daily imbalance charge calculation as provided in Article 23 the applicable price shall be determined as follows:

(a) marginal sell price where the daily imbalance quantity is positive (i.e. the network user's inputs for that gas day exceed its off-takes for that gas day); or

(b) marginal buy price where the daily imbalance quantity is negative (i.e. the network user's off-takes for that gas day exceed its inputs for that gas day).

2. A marginal sell price and a marginal buy price shall be calculated for each gas day pursuant to the following:

(a) a marginal sell price is the lower of:

(i) the lowest price of any sales of title products in which the transmission system operator is involved in respect of the gas day; or

(ii) the weighted average price of gas in respect of that gas day, minus a small adjustment.

(b) a marginal buy price is the higher of:

(i) the highest price of any purchases of title products in which the transmission system operator is involved in respect of the gas day; or

(ii) the weighted average price of gas in respect of that gas day, plus a small adjustment.

3. For the purpose of determining the marginal sell price, the marginal buy price and the weighted average price, the related trades shall be made on trading platforms that are pre-identified by the transmission system operator and approved by the national regulatory authority. The weighted average price shall be the energy weighted average price of trades in title products carried out at the virtual trading point in respect of a gas day.

4. A default rule shall be defined in case paragraph 2(a) and (b) do not allow for the derivation of a marginal sell price and/or a marginal buy price.

5. Subject to the approval of the national regulatory authority, the price of locational products may be taken into account for the purpose of determining the marginal sell price, the marginal buy price and the weighted average price, where proposed by the transmission system operator with corresponding consideration of the extent of the transmission system operator's use of locational products.

6. The small adjustment shall:

(a) incentivise network users to balance their inputs and off-takes;

(b) be designed and applied in a non-discriminatory manner in order to:

(i) not deter market entry;

(ii) not impede the development of competitive markets;

(c) not have a detrimental impact on cross-border trade;

(d) not result in network users' excessive financial exposure to daily imbalance charges.

7. The value of the small adjustment may differ for determining the marginal buy price and the marginal sell price. The value of the small adjustment shall not exceed ten percent of the weighted average price unless the transmission system operator concerned can justify otherwise to the national regulatory authority and have it approved pursuant to Article 20.

*Article 23*

**Daily imbalance charge**

1. To calculate daily imbalance charges for each network user, the transmission system operator shall multiply a network user's daily imbalance quantity by the applicable price determined in accordance with Article 22.

2. Daily imbalance charges shall be applied as follows:

(a) if a network user's daily imbalance quantity for the gas day is positive then this network user shall be deemed to have sold gas to the transmission system operator equivalent to the daily imbalance quantity and therefore shall be entitled to receive a credit in respect of daily imbalance charges from the transmission system operator; and

(b) if a network user's daily imbalance quantity for the gas day is negative then this network user shall be deemed to have purchased gas from the transmission system operator equivalent to the daily imbalance quantity and therefore shall be obliged to pay daily imbalance charges to the transmission system operator.