

**Modification Report**  
**Update of the default System Marginal Buy Price and System Marginal Sell Price**  
**Modification Reference Number 0333/0333A**  
Version 3.0

This Modification Report is made pursuant to Rule 9.3.1 of the Modification Rules and follows the format required under Rule 9.4.

## **1 The Modification**

### **Nature and Purpose of this Proposal**

Where capitalised words and phrases are used within this Modification Proposal, those words and phrases shall usually have the meaning given within the Uniform Network Code (unless they are otherwise defined in this Modification Proposal). Key UNC defined terms used in this Modification Proposal are highlighted by an asterisk (\*) when first used.

This Modification Proposal\*, as with all Modification Proposals, should be read in conjunction with the prevailing Uniform Network Code\* (UNC).

### **Background**

#### **Current System Marginal Prices**

In the UNC, the System Marginal Buy Price\* and System Marginal Sell Price\* are derived from either the price of National Grid's Market Balancing Actions\*, or System Average Price\* (SAP\*) plus or minus a default value. System Marginal Sell Price\* is the lesser of the lowest Balancing Action Offer Price\* on a Day or SAP less 0.0324 pence per kWh. System Marginal Buy Price\* is the higher of the highest Balancing Action Offer Price on a Day or SAP plus 0.0287 pence per kWh.

For clarity, this Proposal is solely concerned with the 'default' System Marginal Buy and Sell Prices ("default SMPs") of SAP plus 0.0287p/kWh and SAP less 0.0324p/kWh. These default SMPs apply where National Grid has not taken a Market Balancing Action or where one or more Market Balancing Action is taken but the associated Balancing Action Offer Prices have not reached a sufficient level to set the System Marginal Buy or Sell Price.

The current default SMPs were implemented into the UNC on 1<sup>st</sup> April 2001.

#### **System Marginal Buy and Sell Prices and the Daily Balancing Regime**

The daily balancing arrangements within the UNC are supported commercially by a System Clearing Contract\* between Shipper Users via the Balancing Neutrality\* mechanism. In summary, a System Clearing Contract 'cashes out' a Shipper User at the end of each Day\* by multiplying a Shipper User's Daily Imbalance\* (the net difference between a Shipper User's physical inputs and NBP\* trade buys less physical outputs and NBP trade sells) by the relevant System Marginal Buy or Sell Price (as explained above). If a Shipper User has a long imbalance, i.e. has entered more gas into the system than its customers have offtaken, the resulting Daily

Imbalance is cashed out using the System Marginal Sell Price. If a Shipper User has a short imbalance i.e. its customers have offtaken more gas than it has entered then the Daily Imbalance is cashed out using the System Marginal Buy Price.

The cash flows paid to or by Shipper Users as part of the System Clearing Contract are included as a Daily Imbalance Charge\* and Balancing Neutrality Charges\* within the Balancing Invoice\*. It is important to note that Balancing Neutrality Charges ensure that National Grid does not gain or lose from any of the charges associated with clearing and balancing the system.

### Drivers for Proposal

The proposer considers that there are four main drivers to support a change to the default SMPs;

- Gas Transporters Special Licence Condition 27 obligation
- European gas code harmonisation
- The methodology of Network Code Modification 0433
- The desire to replace the now arbitrary nature of the default SMPs

### Gas Transporters Special Licence Condition 27 obligation

Paragraph 3 of Gas Transporters Special Licence Condition 27 (C27) has obligated National Grid NTS\* to use reasonable endeavours to update the default System Marginal Prices as stated in Sections F 1.2.1 (a) (i) and F 1.2.1 (b) (i) of the UNC Transportation Principal Document (TPD) by 1<sup>st</sup> April 2011.

C27 also includes the obligation to develop, in consultation with the industry, a linepack product by 1<sup>st</sup> April 2011 and, if directed to do so by the Authority, implement such product by 1<sup>st</sup> October 2011. For the avoidance of doubt, this proposal is solely proposing an update to the default SMPs.

### European gas code harmonisation

Work on aligning network codes within Europe, as documented within the EU 3<sup>rd</sup> Package and the more recent ERGEG Draft Pilot Framework Guideline on gas balancing rules – Initial Impact Assessment, have provided a number of recommendations regarding the calculation of imbalance charges. As such, the proposer believes that the default SMPs should be updated in line with these guidelines.

The EU 3<sup>rd</sup> Package provides the high level summary that “Imbalance charges shall be cost-reflective to the extent possible, whilst providing appropriate incentives on network users to balance their input and offtake of gas. They shall avoid cross subsidisation between network users and shall not hamper the entry of new market entrants”. In the target model proposed within the Draft Pilot Framework Guidelines on gas balancing rules ERGEG state that “Where no balancing action is taken by the TSO, the imbalance charge shall be based on the price on the wholesale market. It may include a small uplift in order to incentivise the network user to balance their portfolios. This uplift shall not deter market entry or impede the development of

competitive markets”. Further the ERGEG document recommends that “any imbalance charge imposed on market participants when the TSO has not taken any balancing actions on the market (or the balancing platform) are as cost reflective as possible”.

The methodology of Network Code Modification 0433 and the elapsed time since the introduction of the default SMPs

Network Code Modification 0433 ‘Changes to system cash-out prices’ introduced the default SMPs on 1 April 2001. The associated 0.0324p/kWh and 0.0287p/kWh values which are applied to SAP were derived using the average price of a Standard Bundled Unit (SBU) at the Hornsea Storage Facility for the 2001 Storage Year\*.

Rather than reflect the costs incurred by National Grid NTS’ when managing a Shipper User or system imbalance, the current default SMPs provide a proxy for the alternative option a Shipper User could arguably have taken, i.e. to inject or withdraw gas from a storage facility rather than allowing the imbalance to be subject to the System Clearing Contract and associated SMPs. Whilst the current default SMPs may have reflected a proxy for Hornsea storage flexibility for the initial year in which they were used, due to the annual changes in the price for Hornsea Storage the proposer believes the current default values are now out of date and no longer fully reflect the market conditions or operational costs.

To illustrate the above point further, Hornsea storage prices have increased by almost 80% since 2001, with an SBU costing 5.86 pence for the 2001 storage year (May to April), compared to 10.5 pence for the 2010 storage year. For illustration, if the default SMPs were calculated using the 2010 Hornsea prices the System Marginal Buy Price would be SAP plus 0.0452p/kWh and the System Marginal Sell Price would be SAP less 0.0442p/kWh.

Further, the proposer believes that the methodology used to provide the current default SMPs is flawed and in practice does not reflect the full cost of storage flexibility. In short the methodology assumes that a single SBU can provide sufficient flexibility to inject and withdraw 1 kWh of gas on alternate days. However, due to the normal seasonal use profile of storage i.e. ‘slow’ injection during the summer and a relatively quicker withdrawal during the winter months a single SBU does not provide the short term flexibility available via Linepack. A Hornsea SBU provides 17.9 kWh of space, 1 kWh of deliverability and 0.1 kWh of injectability per day which means that, in crude terms, to obtain 1 kWh of injectability a user would require approximately 10 SBUs. Whilst this is a worst case scenario and in reality users purchase thousands or more SBUs, it is important to note that the cost of storage flexibility cannot be compared with system flexibility using only 1 SBU. As such, the proposer believes that the cost of storage flexibility is higher than reflected by the current default SMPs.

The proposer believes that comments made in the decision letter for Network Code Modification 0433, published in March 2001, still apply to the modern balancing regime and reinforce the principles stated within the recent EU documentation. These comments are namely that “Transco’s (now National Grid NTS) role should be that

of residual gas balancer and Shipper Users should trade out their own imbalances to the greatest extent possible. Ofgem is not in favour of artificially restricting Transco's actions and forcing it into the market on more frequent occasions. Ofgem believes that this would lead to higher balancing costs, less efficient actions and could distort traded markets". Further the decision letter makes reference to how it believes the optimum default cashout solution should look with "Ofgem believes that ideally cash-out prices should reflect the pattern of supply and demand throughout the day and reflect the cost to Transco of managing any imbalance. If cash-out prices do not reflect the cost to the system of the imbalance, this will distort incentives". In addition the decision letter states that "Clearly it would be preferable if cash-out prices were based on the actual value of system flexibility over a particular balancing period".

#### Review Group\* 0291

To help meet the C27 GT Licence obligation National Grid NTS has initiated Review Group (RG) 0291 to discuss and develop potential updates to the default SMPs and potential Linepack service products.

A number of options were presented by National Grid at RG0291 meetings and discussed by RG 0291 attendees to identify the most appropriate update to the default SMP values. Among the options taken forward for further analysis and development by RG 0291 were:

- Removing the default SMPs ie. SMPs to be SAP unless National Grid NTS takes a Market Balancing Action
- Updating the default SMPs using the current methodology (as described above) with an up-to-date Hornsea or equivalent SBU price
- Updating the default SMPs with a percentage of SAP
- Updating the default SMPs with a number based on the operational costs incurred by National Grid NTS when managing a system imbalance.

With regards to removing the default SMPs and cashing Shipper Users out at SAP on days when NTS does not make a Market Balancing Action, the proposer has discounted this option as it believes that this option will reduce the Shipper User incentive to balance. The proposer believes that reducing this incentive will lead to greater industry costs through imbalance charges and residual balancing actions.

With regards to updating the default SMPs via an updated storage proxy or a percentage value of SAP, the proposer believes that both methods will derive an arbitrary value that is unlikely to satisfy the EU recommendations of using imbalance charges that are cost reflective. Further, with reference to Network Code Modification 0420 which sought to introduce a default SMP using a percentage of SAP over a rolling period, the Modification 0433 decision letter stated that "Ofgem considers that cash-out prices based on percentage differentials are arbitrary and do not bear any relationship to supply and demand".

Therefore, the proposer believes that the option proposed within this Modification Proposal (as summarised by the fourth bullet above) will better facilitate the relevant

objectives in particular (d) “the securing of effective competition” to a greater extent than the alternative options discussed at RG 0291. However, it is important to note that whilst the nature of this proposal has been presented and discussed alongside a number of alternative approaches at the RG 0291 meetings, agreement on a particular option did not occur and thus this proposal does not represent the consensus view of RG 0291. The Review Group report for RG 0291 stated that “The Group did not conclude that this review had identified deficiencies in the UNC that meant that a recommendation could be made in support of a Modification. However, it was recognised that potential Modifications could be assessed and developed on their own merits if any UNC party were to raise a Modification”.

#### Deriving updated fixed SMPs from TSO operational costs

As explained above, one of the key guidelines and recommendations from the ongoing work to harmonise gas codes in the EU is that imbalance charges that are levied when a Transmission System Operator (TSO) does not undertake a Market Balancing Action should be cost reflective. However there are a number of possible options, and unfortunately no recommended method, on how these imbalance charges should be calculated.

One such option of deriving cost reflective default SMPs could be to use the operational costs incurred by a System Operator of managing an imbalance without undertaking a Market Balancing Action (MBA). System imbalances that are managed without the requirement to undertake an MBA are absorbed by Linepack. Linepack and its associated flexibility is a by-product of installing and operating a high pressure gas network. In simple terms Linepack offers a “buffering” flexibility that means that the system inputs and outputs do not have to be equal on a daily basis.

One method of applying a price to linepack flexibility is included within a report written by the European University Institute<sup>1</sup> entitled “The trade-offs between line-pack flexibility and transport capacity in a liberalised gas market”. The report identifies compressor and pipelines as the fundamentals upon which a linepack flexibility charge could be constructed “The cost of line-pack flexibility, which is the main tool for balancing operations, should not only reflect the commodity price, but also the infrastructure costs, such as the cost of the pipeline and the compressors”. Further, the report goes on to propose a method by which the cost of linepack flexibility can be counted and converted into a potential imbalance charge by assuming that a unit of pipeline space taken up by storing gas cannot be used for gas transportation purposes. In short therefore the report suggests that “the fixed cost of line-pack flexibility for the TSO can be evaluated by the part of the pipeline cost

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<sup>1</sup> The European University Institute (EUI) was set up in 1972 by the six founding Member States of the European Communities to provide advanced academic training to doctoral researchers and to promote research at the highest level. It carries out research in a European perspective in Economics, Law, History and Civilization, and the Political and Social Sciences. The paper is available here: <http://web.mit.edu/ceepr/www/publications/workingpapers/2010-014.pdf>

utilised to store gas in order to address unbalanced situations, or by the opportunity cost of the line-pack flexibility, which is the market value of the available transport capacity”.

The proposer agrees with the recommendations stated within the above report, and considers that NTS compressors and pipeline space are the two main components used to provide Linepack flexibility and should therefore be used in defining default SMPs based on operational costs.

## **Background 0333A**

National Grid raised modification proposal 0333 “Update of the default System Marginal Buy Price and System Marginal Sell Price” as a direct result of the Licence Condition placed on National Grid by Ofgem. 0333A has been raised as an alternate to this proposal as EDF Energy does not believe that the proposed cost allocation arrangements under User Pays are appropriate. Therefore 0333A identical to National Grid’s proposal other than the User Pays aspects.

## **Nature of the Proposal**

In short this proposal seeks to introduce four amendments to the UNC;

1. The current default SMP values stated within Section F of UNC be removed and replaced with an ‘evergreen’ operational cost methodology (as stated below)
2. National Grid be obligated to undertake an update of the default SMPs in line with the methodology below on an annual basis and publish the relevant default SMP value for the subsequent Gas Year\* no later than 1<sup>st</sup> August each year.
3. The current default SMP values be updated in line with the methodology below to apply from 1<sup>st</sup> April 2011 or as soon as reasonably practical after implementation of this Modification Proposal.
4. Housekeeping to remove old UNC Section F text that should have been removed as part of Network Code Modification 433

The proposed changes summarised above are explained further in the following sub sections.

### 1. Default SMP Update

Firstly, it is proposed that a new definition “Default System Marginal Price” be included within the UNC to mean the number calculated by National Grid and published no later than 1 August each year to apply from 1 October of that year for each day up to and including 30 September the following year.

Secondly, this proposal seeks to update the UNC to replace the current ‘fixed’ numbers with the evergreen definition of Default System Marginal Price. As such, it is proposed that the **System Marginal Buy Price** shall be the greater of:

- (i) the System Average Price plus the Default System Marginal Price; and
- (ii) the price in pence/kWh which is equal to the highest Balancing Action Offer Price in relation to a Market Balancing Action taken for that Day;

It is also proposed that the "**System Marginal Sell Price**" shall be the lesser of:

- (i) the System Average Price less the Default System Marginal Price; and
- (ii) the price in pence/kWh which is equal to the lowest Balancing Action Offer Price in relation to a Market Balancing Action taken for that Day;

Default System Marginal Price Methodology (the “Methodology”)

To calculate the Default System Marginal Price using a proxy of the costs used to operate the NTS compressors and pipeline it is proposed that Default System Marginal Price is derived use the following Methodology;

$$\text{Default System Marginal Price (p/kWh)} = \left( \frac{\text{Annual Compressor Fuel Cost (£) x 100}}{\text{Total System Demand (TWh) x } 10^6} \right) + \text{Average Forecast NTS Entry \& Exit Capacity Charges (p/kWh)}$$

Where;

- Annual Compressor Fuel Cost, in pounds sterling (£), means the cost of operating all the NTS compressors for the previous Formula Year\* as published by National Grid on its website. It is important to note that this is a new data item which will be published no later than 1<sup>st</sup> August each year alongside the additional supporting information stated in the bullets below and the new Default System Marginal Price.
- Total System Demand, in Terawatt Hours (TWh), means the total system actual demand for the previous Gas Year\* as published within National Grid’s Ten Year Statement
- Average Forecast NTS Capacity Charges, in pence per kilowatt hour (p/kWh), means the Revenue to be recovered through TO Charges excluding Individual Entry and Exit K's as published by National Grid in relation to the current Formula Year divided by the 1 in 20 peak day demand\* in relation to the Gas Year starting within the Formula Year.

In order to derive a value in p/kWh the Annual Compressor Fuel Cost is multiplied by 100 to revert the value from pounds sterling into pence and Total System Demand is multiplied by 10<sup>6</sup> in order to revert the energy in TWh to kWh.

It is proposed that the above Methodology be included within the UNC.

2. Annual update of Default Marginal System Price

To enable the Default Marginal System Price to be kept as up to date as possible it is proposed that the Default Marginal System Price be updated on an annual basis with the updated value applying equally for all Days from 1 October each year to 30 September the following year. It is proposed that National Grid use the Methodology to update the Default Marginal System Price and publish the values derived for the forthcoming Gas Year by 1 August each year.

### 3. Update of the Default Marginal System Price to apply from 1<sup>st</sup> April 2011

To meet the C27 licence obligation, it is proposed that a Default Marginal System Price be introduced from 1<sup>st</sup> April 2011 (or as soon as reasonably and efficiently practical after this date). It is proposed that this Default Marginal System Price is set at 0.0263p/kWh. This proposed Default Marginal System Price is calculated in line with the proposed Methodology above as follows;

$$\text{Default System Marginal Price} = \left( \frac{\text{£33,434,260.92} \times 100}{1,092\text{TWh} \times 10^6} \right) + 0.0232\text{p/kWh}$$

$$= 0.0263\text{p/kWh (correct to 4 decimal places)}$$

It is proposed that this Default Marginal System Price shall apply until 1 October 2012 at which point it will be replaced by a Default Marginal System Price as calculated using the above Methodology.

#### Housekeeping

When the current SMPs were introduced into the UNC on 1 April 2001 as part of Network Code Modification 0433 part of the old text in Section F 1.2.1 of the UNC remained in error rather than being deleted.

The incorrect text is situated at the end of Section F 1.2.1 and reads “(and for the avoidance of doubt on a Day on which National Grid NTS takes no Market Balancing Action the System Marginal Buy Price and the System Marginal Sell Price shall be the System Average Price)”. This statement is in contrast to the nature of Network Code Modification 0433 which proposed using the default SMPs on a Day on which National Grid NTS does not make a residual balancing trade. As such it is proposed that this paragraph be removed.

### **Suggested text for Modification Proposal 0333**

#### **Transitional Arrangements**

#### **TRANSITION DOCUMENT PART IIC – Insert the following**



### **Transition Document UNC TPD Section F 1.2.1**

1. Prior to the 1 October 2012, the "**System Marginal Buy Price**" is the greater of:
  - (i) the System Average Price plus ~~0.0287~~ 0.0263 pence/kWh; 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;
  
2. Prior to the 1 October 2012, the "**System Marginal Sell Price**" is the lesser of:
  - (i) the System Average Price less ~~0.0324~~ 0.0263 pence/kWh; 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;

### **Enduring Arrangements**

#### **UNC TPD Section F**

##### **Section 1.1.2:**

1.1.2 For the purposes of the Code:

- (a) a "**Daily Imbalance Charge**" is an amount payable by or to a User in respect of a Daily Imbalance, in accordance with paragraph 2;
- (b) "**Scheduling Charges**" are amounts payable by a User in respect of differences between quantities delivered and offtaken to or from the Total System each Day and the quantities Nominated for such delivery or offtake, in accordance with paragraph 3;
- (c) "**Balancing Charges**" are Daily Imbalance Charges and Scheduling Charges;
- (d) "**Balancing Neutrality Charges**" are amounts payable by or to National Grid NTS, so that it does not gain or lose by the payment and receipt of Market Balancing Action Charges, Daily Imbalance Charges, Scheduling Charges and other amounts specified in and in accordance with paragraph 4;
- (e) "**Reconciliation Neutrality Charges**" are amounts payable by or to National Grid NTS, so that it does not gain or lose by the payment and receipt of Reconciliation Clearing Values, in accordance with paragraph 6 (or in relation to NTS System Exit Points, paragraph 4).
- (f) "**Default System Marginal Price**" means the number in pence per kWh calculated by National Grid NTS in accordance with the Default System Marginal Price Methodology and published within the Default System Marginal Price Statement no later than 1 August each year to apply from 1 October of that year for each day up to and including 30 September the following year.

(g) **“Default System Marginal Price Statement”** means the document prepared and published by National Grid NTS on 1 August 2012 and then subsequently no later than 1 August each year to include the Default System Marginal Price to apply for the following Gas Year.

(h) **“Default System Marginal Price Methodology”** means the following formula;

$$\text{Default System Marginal Price (p/kWh)} = \left( \frac{\text{Annual Compressor Fuel Cost (£) x 100}}{\text{Total System Demand (TWh) x 10}^6} \right) + \text{Average Forecast NTS Entry \& Exit Capacity Charges (p/kWh)}$$

Where;

**“Annual Compressor Fuel Cost”**, in pounds sterling (£), means the cost of operating all the NTS compressors for the previous Formula Year.

**“Total System Demand”**, in Terawatt Hours (TWh), shall be derived from the total system actual demand for the previous Gas Year as published within National Grid’s Ten Year Statement

**“Average Forecast NTS Capacity Charges”**, in pence per kilowatt hour (p/kWh), means the amount to be recovered by National Grid NTS excluding TOK<sub>t</sub> (as defined in Special Licence Condition C8B of the Transporter’s Licence) as published by National Grid NTS in relation to the current Formula Year divided by the 1 in 20 peak day demand in relation to the Gas Year starting within the Formula Year.

## 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 ~~0.0287 pence/kWh~~ 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 ~~0.0324 pence/kWh~~ 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;

(c) the "**System Average Price**" for a Day is (subject to Section D4.1.4 and 4.1.6) the price in pence/kWh calculated as 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

~~(and for the avoidance of doubt on a Day on which National Grid NTS takes no Market Balancing Action the System Marginal Buy Price and the System Marginal Sell Price shall be the System Average Price).~~

## 2

### User Pays

#### a) **Classification of the modification as User Pays or not and justification for classification**

This modification will require changes to xoserve's systems.

In a previous version of this modification, National Grid NTS stated that the costs associated with the implementation of this modification would be 'logged up' using paragraph (d) Special Condition C8G of the NTS Licence. In subsequent investigation, National Grid NTS found that this is not the appropriate route to recover the cost of the proposal.

As a result of this further investigation this modification is now considered by National Grid NTS to be a User Pays modification. As a result, this modification proposes to introduce a User Pays charge to recover the implementation costs.

#### b) **Identification of Users, proposed split of the recovery between Gas Transporters and Users for User Pays costs and justification**

National Grid NTS propose that the implementation costs of this modification are recovered 100% from Shipper Users.

Rather than propose the a split of costs in line with the principles set out in the User Pays Guidance Document, the National Grid NTS proposed split is based on its expected beneficiaries of this modification. For Gas Transporters, in particular National Grid NTS in its capacity as the Residual Balancer, no operational or commercial benefits are expected from the proposed change. National Grid NTS do not have any evidence to demonstrate that the proposed changes will lead to changes in shipper balancing performances in the near term and are therefore unable to demonstrate or quantify any change to the residual balancing role, whether beneficial or detrimental.

In contrast to the above, National Grid NTS considers that Users will benefit initially from a reduction in the default SMPs following the implementation of this proposal.

The application of the Methodology detailed in this Proposal will result in a revision to the default SMP for the period up to 1<sup>st</sup> October 2012 with a value less than the current default prices. This will result in both a reduction to the imbalance charges levied to individual Shipper Users and also a reduction to the Balancing Neutrality cash flows and associated credit requirements.

To illustrate the likely impact on Shipper Users, the imbalanced energy ‘cashed out’ during the calendar year of 2009 was approximately 14TWh at SMP Buy and 14TWh at SMP Sell. Assuming that this energy is cashed out at the current default SMPs, this less the daily SAP costs creates £8.8M of imbalance charges to be allocated to the industry. If this energy is cashed out using the proposed changes to the default SMP within this proposal then this will create £7.6M of imbalance charges, a net reduction in imbalance charges of £1.2M per annum to the User community.

The Workgroup, when considering the proposed User Pays apportionment of charges questioned the National Grid NTS argument that solely financial benefit should be considered rather than applying the principles set out in the User Pays Guidance Document. In any event, it was argued that application of a financial benefit concept would identify a benefit to National Grid NTS in terms of licence compliance - avoidance of financial penalties resulting from a licence breach.

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It is proposed that the implementation costs of this proposal are recovered 75% from Transporters and 25% from Shipper Users.

The proposed split is based on the Industry Cost Allocation Matrix contained within the User Pays Guidelines document. This document was produced by the Transporters, including National Grid and was designed to ensure that User Pays charges were targeted at the appropriate Users based on the relevant objectives that the proposal facilitated. For clarity it appears that proposal 0333 (and this alternate) predominantly facilitates Standard Licence Conditions A11.1 (a) and (c) and to a lesser extent A11.1 (d), suggesting a 75/25 split is appropriate. For clarity we expect that the majority of the costs on Transporters will be allocated to National Grid NTS, but recognise that this is outside of the scope of this proposal.

British Gas strongly disagrees with the Modification 0333 proposed charging split. They believe such a split is completely counter-intuitive, given that this proposal stems solely from a licence condition placed upon National Grid and that the proposed charging split also runs counter to transporters’ own guidance on User Pays, as set out in the User Pays Guidance Document. They believe that 0333A better reflects the wording and intention of the User Pays guidelines.

EDF Energy, E.ON UK, First Utility, SSE and Total E&P UK all prefer the proposed cost allocation in Modification 0333A. For clarity EDF Energy expect all of these costs to be allocated to Transporters to fall to National Grid, however, they point out that this is covered by a Transporter funding agreement not the UNC and therefore is outside the scope of this modification.

#### **c) Proposed charge(s) for application of Users Pays charges to Shippers**

National Grid NTS propose a one-off charge levied upon the day of implementation to Shipper Users based upon their individual proportion of the previous 365 days gross imbalance energy.

**d) Proposed charge for inclusion in ACS – to be completed upon receipt of cost estimate from xoserve**

xoserve's Rough Order of Magnitude (ROM) states that xoserve costs are likely to be at least £205k but probably not more than £227k.

There are no ongoing costs expected to be associated with this modification.

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For clarity EDF Energy believe that these costs are excessive for a simple data fix within a system and would encourage Ofgem to investigate the appropriateness of these costs further.

First Utility, SSE and Total E&P UK all comment on the Rough Order of Magnitude cost estimates from xoserve, and all believe that the costs are excessive for a simple data fix within Gemini.

**3 Extent to which implementation of the proposed modification would better facilitate the relevant objectives**

**Standard Special Condition A11.1 (a): *the coordinated, efficient and economic operation of the pipe-line system to which this licence relates;***

Default prices which reflect the costs of linepack utilisation would be expected to result in more efficient use of linepack as a balancing tool and consequently, as a result of more efficient market balancing actions, system operation would be more efficient. However, no significant change in balancing behaviour is anticipated as a result of the scale of change envisaged in this Proposal such that no benefit may be anticipated.

Given the inability to quantify potential effects Workgroup members did not believe that it could be confidently asserted that this modification would actually facilitate efficient and economic operation of the pipe-line system.

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At the January 2011 Transmission Workgroup Ofgem identified that they expected this proposal to facilitate relevant objective (a). They believed that implementation of this proposal would encourage Shippers to make the most economic choice between balancing on the day or investing in a "flexibility" product such as storage that would enable them to balance. This would enable the economic and efficient operation of the system and so facilitate this relevant objective.

**Standard Special Condition A11.1 (b): *so far as is consistent with sub-paragraph (a), the (i) the combined pipe-line system, and/ or (ii) the pipe-line system of one or***

***more other relevant gas transporters;***

Implementation would not be expected to better facilitate this relevant objective.

***Standard Special Condition A11.1 (c): so far as is consistent with sub-paragraphs (a) and (b), the efficient discharge of the licensee's obligations under this licence;***

With regards to relevant objective (c) “so far as is consistent with sub-paragraphs (a) and (b), the efficient discharge of the licensee's obligations under this licence” it is believed that this proposal meets the requirement to update the default SMPs to satisfy the NTS Special Standard Licence Condition 27.

**0333A**

EDF Energy note that National Grid NTS would not have raised this proposal if they did not have this Licence Condition placed on them, and so this appears to be the most significant objective that this proposal facilitates. We would also note that were National Grid’s arguments to be accepted that User Pays should focus on targeting costs at the financial beneficiaries; then implementation of this proposal may ensure National Grid avoids any financial penalties imposed for failing to comply with their Licence conditions. Recent experience would suggest that National Grid could therefore benefit by avoiding another £8m fine.

British Gas do not necessarily disagree with the initial default value that is proposed from 1 April 2011, or the formula which is intended to drive default values in subsequent gas years. However, they struggle to see how such a change better facilitates any of the relevant objectives, except for facilitating National Grid’s compliance with Special Licence Condition C27, Paragraph 3, which requires it to use reasonable endeavours to update the default prices.

***Standard Special Condition A11.1 (d): so far as is consistent with sub-paragraphs (a) to (c) the securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers;***

National Grid believes that updating the default SMPs based upon a proxy of the costs incurred by National Grid when managing a system imbalance will ensure that the default SMPs are more cost reflective because they would be based on up to date costs rather than being fixed historically and not updated. In addition, by basing the default on the true costs of employing assets to manage system imbalance, cost reflectivity is improved. However, some Shippers do not believe this has been demonstrated to be the case.

By reflecting the National Grid cost of absorbing Shipper imbalances within the default cashout price, National Grid believes that this will better facilitate competition as Users will face a cost reflective price for competing flexibility products and be able to make balancing choices accordingly. To the extent that the

default level changes, this may be expected to change Shipper behaviour and ensure that actions reflect the costs they impose on the System Operator. By providing a more cost reflective default cashout price and that Users face the costs they impose, implementation would be expected to facilitate competition. However, some Shippers do not believe this has been demonstrated to be the case since there is no clarity that behaviours would be changed as a result of implementing the Proposal.

British Gas and EDF Energy are uncertain that this proposal will have a material impact on balancing behaviours.

British Gas suggest in respect of securing competition between shippers, that it is the value of the defaults which drive shipper behaviour, and not the knowledge that the values are “cost reflective”. They believe that these proposals do nothing to better inform Shippers as to the price of competing flexibility products, and they are therefore in no better position to make informed decisions about how they balance their position on a daily basis.

EDF Energy are not convinced that Modification 0333 would have any impact on Licence Conditional A11.1 (d). They believe that National Grid’s arguments in support of this objective are tenuous and aimed at ensuring that costs are allocated to Shippers. They believe that 0333A may have a marginal beneficial impact on competition if the allocation of costs of implementation is more accurately targeted.

***Standard Special Condition A11.1 (e): so far as is consistent with sub-paragraphs (a) to (d), the provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards (within the meaning of paragraph 4 of standard condition 32A (Security of Supply – Domestic Customers) of the standard conditions of Gas Suppliers’ licences) are satisfied as respects the availability of gas to their domestic customers;***

Implementation would not be expected to better facilitate this relevant objective.

***Standard Special Condition A11.1 (f): so far as is consistent with sub-paragraphs (a) to (e), the promotion of efficiency in the implementation and administration of the network code and/or the uniform network code.***

Implementation would not be expected to better facilitate this relevant objective.

**4 The implications of implementing the modification on security of supply, operation of the Total System and industry fragmentation**

No implications on security of supply, operation of the Total System or industry fragmentation have been identified.

**5 The implications for Transporters and each Transporter of implementing the modification, including:**

**a) implications for operation of the System:**

It is not believed that the magnitude of the proposed change to the default SMPs will have a material effect on the operation of the system.

**b) development and capital cost and operating cost implications:**

Not applicable.

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

The User Pays costs are identified above.

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

No consequences have been identified.

**6 The consequence of implementing the modification on the level of contractual risk of each Transporter under the Code as modified by the modification**

No contractual risk has been identified.

**7 The high level indication of the areas of the UK Link System likely to be affected, together with the development implications and other implications for the UK Link Systems and related computer systems of each Transporter and Users**

Implementation of this modification will require a change to the Gemini system.

**8 The implications of implementing the modification for Users, including administrative and operational costs and level of contractual risk**

*Administrative and operational implications (including impact upon manual processes and procedures)*

It is anticipated that Shipper Users may require the functionality to update the default SMPs within their systems.

*Development and capital cost and operating cost implications*

No implications have been quantified.

*Consequence for the level of contractual risk of Users*

No consequences have been identified.

**9 The implications of implementing the modification for Terminal Operators, Consumers, Connected System Operators, Suppliers, producers and, any Non**



## **Code Party**

There is awareness that the System Marginal Sell Price and System Marginal Buy Price may be referenced within industry contracts e.g. between Shipper Users and Storage Operators and Shipper Users and Industrial & Commercial end users.

In an attempt to mitigate the implications with these industry contracts, this modification proposes that the annual update to the default SMPs be published from 1 August and made effective from 1 October each year so that these values can be available for inclusion in industry contracts from 1 October onwards.

### **10 Consequences on the legislative and regulatory obligations and contractual relationships of each Transporter and each User and Non Code Party of implementing the modification**

Implementation of this modification would allow National Grid NTS to demonstrate compliance with Special Standard Licence Condition 27.

### **11 Analysis of any advantages or disadvantages of implementation of the modification**

#### **Advantages**

Implementation of this modification offers the following advantages:

- Amendment of default SMP values to better reflect the costs associated with managing a Shipper User's imbalance will allow Shipper Users to make more informed decisions with regard to gas flexibility products and to use Linepack where appropriate.
- Better alignment of the GB balancing regime to EU Regulations regarding cost reflective imbalance charges and providing an incentive to balance.
- Facilitation of the NTS Licence obligation to update default SMPs by 01 April 2011 (or as soon as is reasonably and efficiently practical to do so).

#### **Disadvantages**

The Transporter costs of implementation are significant. Implementation of this modification may also require a change to:

- Shipper User – Storage and / or End User industry contracts
- Shipper User systems.

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

Representations were received from the following parties:

<b>Organisation</b>	<b>Position</b>	<b>Preference</b>
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	<b>0333</b>	<b>0333A</b>	
British Gas	Not in Support	Comments	0333A
BG Gas Services	Not in Support	Qualified Support	0333A
EDF Energy	Qualified Support	Qualified Support	0333A
E.ON UK	Not in Support	Support	0333A
Exxon Mobil	Not in Support	Support	0333A
First Utility	Qualified Support	Support	0333A
National Grid Transmission	Support	Qualified Support	0333
RWE Npower and RWE Supply & Trading GmbH	Not in Support	Not in Support	0333A
SSE	Not in Support	Support	0333A
Total E&P UK	Not in Support	Support	0333A

Of the ten representations received, one party offered support to Modification 0333, with an additional two offering qualified support and the remaining seven not in support. The same parties offered five representations in support of Modification 0333A and an additional three offering qualified support, with one party not in support and one party providing comments. Of the ten representations received, nine indicated a preference for Modification 0333A.

British Gas highlighted, that during the development phase, the Workgroup did not consider that the operator's system costs is a function of all shippers' balance positions at the end of the day. They suggest that, despite individual balance positions being either "long" or "short", the system could still be perfectly balanced with a zero cost to the system operator. As the modification would levy significant charges on both short and long shippers British Gas could not agree that the proposed solution is any more cost reflective than the cash-out regime which it seeks to replace.

BG Gas Services offer qualified support for 0333A on the basis that cost apportionment is slightly more acceptable, however they are not convinced of the merits of updating the default SMP prices from the perspective of improving the incentive for shippers to balance. They do not consider it a necessary amendment. They believe that the existing asymmetrical values work effectively and provide some well understood stability that aids market liquidity. BG highlight that implementing either of these modifications with an annual update process introduces a risk that the values might go out of kilter with levels that make the market work effectively.

RWE are not convinced that the new methodology is robust or whether a calculation based upon an arbitrary definition of relevant TO/SO costs creates a better proxy for

setting default cash-out prices than the current methodology. They believe that the implementation costs will be greater than any efficiency gains and the only benefit of 0333A over 0333 is that it is based on a more equitable sharing of implementation costs.

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

No such requirement has been identified.

**14 The extent to which the implementation is required having regard to any proposed change in the methodology established under paragraph 5 of Condition A4 or the statement furnished by each Transporter under paragraph 1 of Condition 4 of the Transporter's Licence**

No such requirement has been identified.

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

No programme of works would be required as a consequence of implementing the modification.

**16 Proposed implementation timetable (including timetable for any necessary information systems changes)**

It is proposed that implementation of this modification to be effected on or before 01 April 2011 to allow the updated default SMPs to become effective by this date.

Should this date prove unachievable, it is proposed that the default SMPs be updated as soon as practically and efficiently possible after 01 April 2011.

**17 Implications of implementing this modification upon existing Code Standards of Service**

No implications of implementing this modification upon existing Code Standards of Service have been identified.

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

The Panel Chair summarised that the modification seeks to introduce four amendments to the UNC as follows;

1. Removal of default SMP values stated within Section F;
2. National Grid NTS to be obligated to undertake an update of the default SMPs in line with the methodology on an annual basis and publish the relevant default SMP value for the subsequent Gas Year, no later than 1<sup>st</sup> August each

year;

3. The current default SMP values be updated in line with the methodology to apply from 1<sup>st</sup> April 2011 or as soon as reasonably practical after implementation of this Modification;
4. Remove old UNC Section F text that should have been removed as part of Network Code Modification 0433.

Some Members recognised that default prices which reflect the costs of linepack utilisation would be expected to result in more efficient use of linepack as a balancing tool and consequently, as a result of more efficient market balancing actions, system operation would be more efficient and therefore further the relevant objectives. However, some members considered there would be no significant change in balancing behaviour as a result of the scale of change envisaged in this modification, such that no benefit may be anticipated.

Some Members were also concerned that there is an inability to quantify potential effects of the modification and did not believe that this modification would actually facilitate efficient and economic operation of the pipe-line system.

Some members considered that Users would benefit initially from a reduction in the default SMPs following the implementation of this modification. The application of the Methodology will result in a revision to the default SMP for the period up to 1<sup>st</sup> October 2012 with a value less than the current default prices. This will result in both a reduction to the imbalance charges levied to individual Shipper Users and also a reduction to the Balancing Neutrality cash flows and associated credit requirements.

Members agreed that as both modifications were the same with the exception of the funding arrangements, the Panel comments on the relevant objectives were applicable to both and that implementation of either would be consistent with efficient administration and implementation of the UNC.

Members considered the cost recovery routes of both modifications and some Members were concerned that User Pays was not the appropriate route through which to recover costs. Some were of the opinion that the modification facilitated the relevant objectives. However, User Pays is not an appropriate mechanism to recover costs and an appropriate central funding mechanism should be used.

### **Modification 0333**

Five out of a possible nine Members voted in favour of implementation. Therefore the Panel recommended implementation of this modification.

### **Modification 0333A**

Nine Members voted in favour of implementation. Therefore the Panel UNANIMOUSLY recommended implementation of this modification.

## Preferences

One Member voted in preference of Modification 0333.

Four Members voted in preference of Modification 0333A.

Panel's view of the benefits of implementation against the Code Relevant Objectives	
Description of Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	Potentially leads to the more efficient use of linepack as a balancing tool and consequently, as a result of more efficient market balancing actions, system operation would be more efficient.
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.	It is believed that this modification meets the requirement to update the default SMPs to satisfy the NTS Special Standard Licence Condition 27.
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.	Potentially facilitates competition by reflecting the cost of absorbing Shipper imbalances within the default cashout price, and Users will face a cost reflective price for competing flexibility products and be able to make balancing choices accordingly.
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	None

customers.	
f) Promotion of efficiency in the implementation and administration of the Code	None

## 19 Transporter's Proposal

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

## 20 Text

Text has been provided in response to a request from Ofgem. The same text will apply to both modifications.

### UNIFORM NETWORK CODE GENERAL SECTION TD Part IIC – Transition Rules

*Add new paragraph 1.10 to read as follows:*

#### **“1.10 TRANSITIONAL PERIOD: TPD Section F - System Clearing, Balancing Charges and Neutrality”**

1.10.1 For the purposes of this paragraph 1.10:

(a) “system clearing transition date” is the 1 October 2012; and

(b) “system clearing transition period” is the period commencing on the date on which the Modification giving effect to this paragraph 1.10 is made and ending on (and including) the Day before the system clearing transition date.

1.10.2 During the system clearing transition period:

- (a) TPD Section F, paragraphs 1.1.2(f), (g) and (h), and associated definitions and explanation shall not apply; and
- (b) TPD Section F, paragraph 1.2.1(a)(i) shall read "the System Average Price plus 0.0263 pence /kWh" and not "System Average Price plus the Default System Marginal Price";
- (c) TPD Section F, paragraph 1.2.1(b)(i) shall read "the System Average Price less 0.0263 pence /kWh" and not "System Average Price less the Default System Marginal Price".

**UNIFORM NETWORK CODE**  
**TRANSPORTATION PRINCIPAL DOCUMENT**  
**SECTION F – System Clearing, Balancing Charges and Neutrality**

*Amend paragraph 1.1.2 to read as follows:*

“1.1.2 For the purposes of the Code:

- (a) a "**Daily Imbalance Charge**" is an amount payable by or to a User in respect of a Daily Imbalance, in accordance with paragraph 2;
- (b) "**Scheduling Charges**" are amounts payable by a User in respect of differences between quantities delivered and offtaken to or from the Total System each Day and the quantities Nominated for such delivery or offtake, in accordance with paragraph 3;
- (c) "**Balancing Charges**" are Daily Imbalance Charges and Scheduling Charges;
- (d) "**Balancing Neutrality Charges**" are amounts payable by or to National Grid NTS, so that it does not gain or lose by the payment and receipt of Market Balancing Action Charges, Daily Imbalance Charges, Scheduling Charges and other amounts specified in and in accordance with paragraph 4;
- (e) "**Reconciliation Neutrality Charges**" are amounts payable by or to National Grid

NTS, so that it does not gain or lose by the payment and receipt of Reconciliation Clearing Values, in accordance with paragraph 6 (or in relation to NTS System Exit Points, paragraph 4).

- (f) **“Default System Marginal Price”** is the price (in pence per kWh):
- (i) calculated by National Grid NTS in accordance with the Default System Marginal Price Methodology;
  - (ii) contained in the Default System Marginal Price Statement; and
  - (iii) which shall apply for the Gas Year following the Gas Year in which the Default System Marginal Price Statement is published;
- (g) **“Default System Marginal Price Statement”** means the document prepared and published by National Grid NTS by no later than 1 August 2012 and by no later than 1 August in each subsequent Gas Year;
- (h) **“Default System Marginal Price Methodology”** means the following formula:

$$\text{Default System Marginal Price (p/kWh)} = \left( \frac{\text{Annual Compressor Fuel Cost (£) x 100}}{\text{Total System Demand (TWh) x } 10^6} \right) + \frac{\text{Average Forecast NTS Entry \& Exit Capacity Charges (p/kWh)}}{}$$

Where:

**“Annual Compressor Fuel Cost”** is the cost (in pounds sterling (£)) of operating all the NTS compressors during the Formula Year ending in the Gas Year in which the Default System Marginal Price Statement is published;

**“Total System Demand”** is the total system actual demand (in Terawatt Hours (TWh)), as published within National Grid NTS’s Ten Year Statement, for the Gas Year preceding the Gas Year in which the Default System Marginal Price Statement



is published;

“Average Forecast NTS Capacity Charges” are the charges (in pence per kilowatt hour (p/kWh)) determined as TORT less TOKt (both such terms being defined in Special Licence Condition C8B of National Grid NTS’s Transporter’s Licence ) in respect of the Formula Year commencing in the Gas Year in which the Default System Marginal Price Statement is published, divided by the 1 in 20 peak day demand in relation to the Gas Year following the Gas Year in which the Default System Marginal Price Statement is published; and

the numerical result derived from the application of the Default System Marginal Price Methodology shall be contained in the Default System Marginal Price Statement.

*Amend paragraph 1.2.1 to read as follows:*

“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 ~~0.0287 pence/kWh~~ 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 ~~0.0324 pence/kWh~~ 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;

- (c) the "**System Average Price**" for a Day is (subject to Section D4.1.4 and 4.1.6) the price in pence/kWh calculated as 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."

~~(and for the avoidance of doubt on a Day on which National Grid NTS takes no Market Balancing Action the System Marginal Buy Price and the System Marginal Sell Price shall be the System Average Price). "~~

For and on behalf of the Relevant Gas Transporters:

**Tim Davis**  
**Chief Executive, Joint Office of Gas Transporters**