

**CODE MODIFICATION PROPOSAL No. 0086**  
"Introduction of Gas Demand Management Reserve Arrangements"  
Version 2.0

**Date:** 05/06/2006

**Proposed Implementation Date:** 20/07/2006

**Urgency:** Urgent

**Proposer's preferred route through modification procedures and if applicable, justification for Urgency**

(see the criteria at [http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/2752\\_Urgency\\_Criteria.pdf](http://www.ofgem.gov.uk/temp/ofgem/cache/cmsattach/2752_Urgency_Criteria.pdf))

Gaz de France ESS requests that this Modification Proposal is deemed to be an Urgent Modification Proposal by the Authority on the basis that the proposed arrangements should be implemented prior to Winter 2006/07. These arrangements are time critical in nature ahead of winter 2006/7. The Gas Demand Management Reserve Arrangements are required imminently to help prevent a Gas Supply Emergency occurring and to add to Security of Supply for the coming winter.

In order to give the industry sufficient time to develop Gas Reserve Arrangements and also to give potential participants the opportunity to engage in the scheme, Gaz de France ESS believes that the decision on this Modification Proposal should be provided as a matter of urgency. There is significant benefit to be had from an early decision on this Modification Proposal in order for the industry to develop an appropriate set of arrangements and to promote the scheme effectively via shippers and suppliers.

Gaz de France ESS believes that this Modification Proposal is critical to assist with Security of Supply for the UK gas market. Winter 2006/07 is forecast to be even tighter than winter 2005/06 and the extra volumes that could be achieved by removing barriers to demand side participation could be significant and instrumental in achieving a supply/demand balance on "difficult days". This Modification Proposal would help to hedge against the uncertainty of supply side delivery and provide an additional tool to maintain Security of Supply.

**Suggested Timetable:**

Ofgem decision on Urgency	23 May 2006
Agenda item at Transmission Workstream	1 June 2006
Issued for Consultation (10 days)	5 June 2006
Close out for representations	19 June 2006
FMR to Panel	26 June 2006
Panel Decision (Mod Panel after TWS)	6 July 2006
OFGEM Decision	13 July 2006

**Nature and Purpose of Proposal (including consequence of non implementation)**

The specific changes to Uniform Network Code that we envisage are applicable as a result of this Modification Proposal are:

- This Modification Proposal seeks to require National Grid Gas NTS to put in place a tender scheme to encourage gas demand side response;
- Appropriately target costs of the scheme on a “polluter pays” principle and ensure that the incentive to balance is not eroded by feeding through the Availability Costs of the scheme into System Marginal Buy Price;
- Ensure that actions taken by National Grid Gas NTS as part of the scheme are classed as Eligible Balancing Actions as defined in section D1.4 of the Uniform Network Code;
- Allow Utilisation Prices to set the System Marginal Buy Price where applicable when actions are exercised under the scheme;
- Allow multi-day offers to be taken where appropriate under the scheme using existing methodology set out in the UNC following implementation of modification 0061;

This Modification Proposal builds on the discussions held in the recent Gas Reserve group chaired by OFGEM and looks to develop an enhanced System Operator approach. Recent analysis provided by National Grid Gas NTS may help to inform the potential range of volumes that may be contracted under any scheme.

Gaz de France ESS see this Modification Proposal as a way to facilitate change in terms of enabling Gas Demand Management Reserve Arrangements to be put in place. The development of much of the details of the tender scheme are outside of the scope of this Modification Proposal, however the terms of the demand side response tender scheme should be developed in conjunction with all Users and potential participants. We would expect the details of the scheme to begin to be drafted imminently and be developed alongside the progression of this Modification Proposal.

### **Consequences of non-implementation**

Gaz de France ESS believes that as a consequence of non implementation of this Modification Proposal, in the light of further constraints imposed whilst the GB market transitions towards dependence upon imports of gas generally and in the light of evident nervousness in the market about Winter 2006/07 in particular, we could see more widespread disruption to our Generation and Industrial and Commercial communities.

This Modification Proposal seeks to offer a more centrally coordinated route for utilisation of the affected gas volumes in an effort to maintain security of gas supplies. In addition it removes a real barrier to entry for Industrial and Commercial consumers providing a necessary route to market. Such customers would be willing to assist National Grid NTS avoid a Network Gas Supply Emergency. This will deliver certainty around delivery of significant additional gas to the Total System through the creation of a clear incentive to participate at a time when the market could expect reduced response due to potential changes in the contracting regime but in a way that enables Daily Metered customers to properly quantify and value flexible demand response.

### **Background to the Proposal**

Gaz de France ESS believes that the proposed Gas Reserve Arrangements are a vital tool to help secure additional demand balancing opportunities for winter 2006/07 and represents an enduring

option for subsequent years to alleviate any shortfall associated with non delivery of gas supplies or excessive supply driven prices as a result of stress on the system.

It is proposed that National Grid NTS procure gas reserve via a reserve tender process. The terms of the tender process should be defined by National Grid NTS but informed by industry feedback, with arrangements organised in a similar way to the current Operating Margins Gas tender process. We envisage that National Grid NTS will define minimum requirements for inclusion within the scheme, comprising the required economic volumes, notice periods and utilisation time periods. This will enable potential participants the opportunity to tailor the extent of their availability. Participation in the tender process would be voluntary for shippers, and volumes acquired would be additive to arrangements already in place with their customers via commercial interruption arrangements.

In the run up to and during the Winter 2005/06 security of supply issues were at the forefront of industries discussions. The 'Winter Outlook Report' 2005/06 published by National Grid NTS highlighted the importance of demand side response in maintaining the balance of the Total System during periods of high demand.

Gaz de France ESS has, in conjunction with other interested industry parties, fully participated in the Ofgem chaired Demand Side Working Group and Gas Reserve Group. At the Gas Reserve Group meeting of 1st March 2006 National Grid NTS presented a realistic scenario (1 in 10) for winter 2006/07. Their presentation highlighted that there would be a requirement for up to 60mcm/day of demand side response. Analysis from winter 2005/06 identified a demand response of around 30mcm/day in total, 22mcm of which was provided by CCGTs, suggesting an important, if modest, contribution by other DM customers. On the Gas Balancing Alert day of 13th March 2006 there was only 34mcm demand response, a level well-short of that indicated by the Winter Outlook Report of 2005/06 as necessary.

UK gas arrangements are currently based upon a market mechanism for calculation of gas cashout prices. During Winter 2005/06 we experienced an 83% rise in those cashout prices compared to 2004/05 out-turn price. Those who use gas as a primary fuel, including the CCGT and Industrial and Commercial communities, responded by reducing their gas demand, in some cases switching to alternate fuels but in others interrupting their production processes.

The Modification Proposal seeks to:

- Diversify the Security of Supply risks associated with a reliance on supply side activities, increasing participation in a more coordinated and structured manner from a wider range of demand side participants by accessing flexibility presently outside current arrangements with shippers;
- Enable National Grid NTS, in its System Operator role, currently including purchasing of gas, to identify the volumes of demand reduction available and that necessary ahead of real time and procure an appropriate volume in an efficient and economic manner;
- As a general principle those awarded gas reserve contracts should be instructed to deliver agreed demand reduction volumes when it becomes economically efficient for National Grid NTS to do so;

- Put into place further measures to utilise such volumes to assist in maintenance of the gas energy balance and the avoidance of a Gas Deficit Emergency thus protecting Domestic consumers;
- Require National Grid NTS to initiate a gas reserve tender process to procure such volumes via which participants can submit offers to provide gas reserves and National Grid NTS can administer through a transparent and targeted cost recovery mechanism;
- Build confidence in the supply/demand balance which may reduce excessive wholesale market volatility and smooth unwarranted price spikes;
- Appropriately target costs and ensure that the incentive to balance is not eroded by feeding through scheme costs into System Marginal Buy Price;
- Better assist the forecasting and investment processes for procurement and delivery of alternate fuel supplies by customers, which should deliver security of supply benefits both on the gas and electricity systems; and
- Encourage the potential development of a new element to the SO incentive scheme that will establish appropriate drivers on the National Grid NTS to carry out procurement of such additional reserve services and maintain downward pressure on costs to consumers.

### **Justification for National Grid NTS Involvement**

National Grid NTS has statutory responsibilities to operate the Transmission System efficiently and economically. The proposed Gas Reserve Arrangement is intended to provide it with additional mechanisms for discharging the responsibility and to forestall a possible gas emergency, especially in circumstances where operational problems arise from issues with the system balance. There is precedent for National Grid NTS to do so as the framework is already partially in place given its approach to system management services and system reserve in the Procurement Guidelines.

It is intended these services will complement, not displace, shipper offered services. By creating an ex ante value for capability of Gas Reserve, the shipper will be able to pass this through to potential participants creating a clear incentive to make further quantities available for reduction bids and enabling an increase in system flexibility when supplies are tight.

Above all introduction of Gas Reserve Arrangements will enable negative demand to be used as a positive agent in the market by selling real flexibility, rather than acting as a response to excessive short-term prices that can lead to demand destruction. All the indications from last winter are that few quantities were sold back even where customers had title to gas, and this is a deficiency that needs to be corrected if the scope for demand side response is to be increased.

The involvement of National Grid NTS adds credibility generally and a single source of publicly available information to market participants and customers about the level of demand response available. National Grid NTS currently have the ability to make a discretionary adjustment to Gas Balancing Alert (GBA) trigger level; this could be used to make a positive adjustment in the case of contracted demand side response volumes to make a more accurate assessment of the supply/demand forecast. It is intended that details of tenders and call off of services will be communicated to the market in a timely manner through existing systems.

**Basis upon which the Proposer considers that it will better facilitate the achievement of the Relevant Objectives, specified in Standard Special Condition A11.1 & 2 of the Gas Transporters Licence**

Implementation of this modification would better facilitate the following relevant objectives:

- (a) “the efficient and economic operation of the pipeline system” by ensuring that National Grid Gas NTS has an addition to the necessary but limited tools available at their disposal to facilitate its residual balancing role. Contracting for gas reserve in an economic manner in advance may protect the residual balancer from on-the-day exposure to very high prices on difficult days for the system and as such introduce additional efficiencies and reduce the overall costs of system actions. National Grid NTS will be incentivised to ensure efficient and economic procurement of the gas volumes to be utilised via this mechanism. This modification proposal will provide for additional demand response to the market at the time when the Total System most requires it.

Additionally we consider that a direct route to market for Daily Metered customers, through their shipper, backed up by a clear availability incentive will bring more demand response to the market, enhancing security of supply.

- (d) “the securing of effective competition between shippers and suppliers” by introducing a wider range of contracts available to daily metered customers and reducing current barriers in the market to demand side participation.
- (e) “the provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards are satisfied as respects to the availability of gas to their domestic customers” by adding additional security of demand side response over and above storage safety monitors and reducing the likelihood of any emergency escalating to stage 3 firm load shedding.

This Modification Proposal provides assistance to Ofgem in delivery of their wider statutory duties around Security of Supply.

**Any further information (Optional), likely impact on systems, processes or procedures, Proposer's view on implementation timescales and suggested text**

Potential areas for change as a consequence of this modification Proposal being implemented:

- System Management Principles Statement
- National Grid Gas Procurement Guidelines
- System Operator Incentive Scheme

It would be prudent to scope such amendments be undertaken as soon as possible, an early indication by National Grid Gas NTS of the required amendments would be much appreciated.

Where National Grid NTS incurs costs, for example, following changes to IT systems, cost recovery would be achieved through the development of an appropriate modification to the current System Operator Incentive arrangements.

### **Gas Reserve tender process guidelines**

- It is proposed that National Grid NTS procure gas reserves via a tender process to identify appropriate volumes to secure potential demand reduction for the subsequent winter;
- The desired volumes of load curtailment would be quantified by reference to a published methodology backed up by procurement guidelines, in a way very similar to that already in place for Operating Margins gas;
- National Grid NTS would tender for the defined quantity of load curtailment initially from shippers with qualifying Daily Metered Supply Points;
- Shippers would then bid for the load reduction and these quantities would be financially committed if called;
- National Grid NTS would enter into contracts with successful bidders, and manage the call-off of options under these contracts.

### **Contracted Volumes and indicative costs**

Indicative costs for the scheme have been identified by National Grid Gas NTS as a result of a request from the Gas Reserve Group and an estimate of the cost of availability payments the may result under the scheme are below:

Indicative costs of Availability Payments 1 in 10 Winter scenario  
(Excluding 10% SO Premium)

Day 1-7	£12.9M
Day 1-30	£47.3M

Source: National Grid Gas NTS paper “Above the line analysis: Option 3”

The above costs illustrate a cost estimate for a 1 in 10 winter scenario on both a 1 week and a 1 month support basis. This example assumes that there is no other shipper interruption and that all required volumes, 63mcm (day 1), 476mcm (cumulative over 7 days) and 1,748 (cumulative over 30 days), are contracted under the scheme. Such volumes and costs could be deemed representative of the bids offered by customers to help the system on difficult days.

### **Volume Calculations**

- Demand reduction volumes should be equal to a shipper nomination minus an agreed minimum quantity (where applicable) for an affected Supply Point;
- A site may require to specify a minimum quantity in order to continue safe operation
- In the event that shipper nominations are not available, the Daily Metered SOQ minus agreed minimum quantity (where applicable) should be used as a default quantity;
- Multi-Day offers should be encompassed in the scheme as per mod 0061 in order to remove further barriers to participation from potential participants

### **Costs and changes to the derivation of System prices**

#### **Availability Payment**

- Successful participants will receive a flat fee Availability Payment on entry to the scheme;
- The cost of Availability Payments will be included in the cost calculation for System Marginal Buy Price on a flat daily basis for example;. £'s annual cost of availability payments / 365 (days);
- The cost of Availability Payments will be reported by National Grid NTS in advance of the scheme commencing;

### **Utilisation Payment**

- Where called to provide demand response participants will be paid a Utilisation Fee based upon the volume made available at the time of the instruction, validated by Daily Metered volumes, subject to an agreed delivery tolerance;
- The Utilisation Fee (p/kwh) will be determined in advance of the bid being instructed;
- Utilisation may be tailored to occur on a specified number of occasions over a period and will include a minimum/maximum duration, notice period and recovery time;
- Where a System Balancing Action has been taken by National Grid Gas NTS under the scheme the Utilisation Price may, where it is the highest price, set the System Marginal Buy Price on the applicable day;
- Non-delivery will be discouraged via events of default and associated contractual consequences.

### **Note**

It is not anticipated that the speed in which system prices are calculated and published will be adversely affected should this modification be implemented.

### **Governance Arrangements and Reporting**

Alongside the progression of this proposal NG Gas NTS should develop a gas reserve tender methodology statement in conjunction with users and potential providers of demand side response. Once developed, this methodology should, in the first instance be published for comments and a subsequent report produced on User's responses. It is envisaged that initially User's will have recourse to OFGEM if not satisfied but it is intended that in the long term the document will be brought under formal UNC governance arrangements.

Reporting for the tender scheme should follow a similar process for that of electricity standing reserve. Following tender acceptances National Grid NTS should report on volume tendered, profile of days available, scheme costs including Availability cost and average Utilisation price. There should also be a post winter report published to detail Utilisation and costs incurred and to provide an auditable trail of actions taken under the scheme.

### **Advantages of this proposal**

- Increases total demand reduction available to the market and represents a move towards a two sided market;
- Increases mechanisms available to the System Operator;

- Achieves greater certainty and visibility about actual demand reduction deliverable on the day;
- May allow upward adjustment of GBA trigger level to help prevent an emergency;
- A diverse range of demand side participants helps to avoid passing through problems to electricity market;
- Diversifies risk away from storage only options – hedges reliability (e.g. Rough), while achieving an ‘above the line’ solution;
- Restore confidence in supply/demand balance which may reduce wholesale market volatility and smooth unwarranted market prices;
- Creates incentives that will encourage customers to identify and value flexibility and gives better knowledge of firm customers that may be available to respond, in addition to facilitating increased awareness within organisations;
- Provides appropriate compensation mechanism for demand side participants which reflects true value of the service;
- Gives an incentive for investment in fuel switching via guaranteed option payments to successful bidders;
- Incentivises demand side participants to contract for alternative fuel;
- Customers can continue to benefit from flexible contracts and reserve market could stimulate further contract innovation;
- Smaller customers can participate via shipper aggregation services;
- Structured and visible contract conditions for demand response;
- Allows market participants faster decision making and response times;
- Represents tangible evidence that the industry and appropriate regulatory authorities are working towards putting into place the necessary system support mechanisms to provide additional flexibility and stability whilst also helping ensure security of supply;

### **Disadvantages of this proposal**

None identified

### **Suggested Legal Text**

Transporter to provide

### **Code Concerned, sections and paragraphs**

Uniform Network Code - Transportation Principal Document

D - Operational Balancing and Trading Arrangements

F - System Clearing, Balancing Charges and Neutrality

K - Operating Margins



**Proposer's Representative**

Phil Broom (Gaz De France)

**Proposer**

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**Signature**

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