

# **Demand Side Response Methodology (DSR) for Use after a Gas Deficit Warning (GDW)**

## **The Demand Side Response Methodology**

Version 0.1

Following the broad consensus of the Workgroup 0504 meeting held on 13 October 2014, these Business Rules are currently drafted based on the DSR Product being offered as:

1. a 'Daily' and 'Multiday' Product; and
2. DSR Offers being submitted onto the existing Locational Platform of the On the day Commodity Market (OCM).

## **Background**

In February 2014 Ofgem published its Final Policy Decision Consultation on the Security of Supply (SoS) Significant Code Review (SCR). As part of the Consultation, Ofgem proposed a revision of National Grid's NTS Transporters Licence to introduce a new Special Condition 8I (SC8I) – 'Development and Implementation of a Demand Side Response (DSR) Methodology for use after a Gas Deficit Warning'. The Licence revisions were approved by the Authority in September 2014. SC8I requires National Grid NTS to:

1. Develop a methodology (the "Demand Side Response Methodology"), in consultation with the industry, for assessing and accepting Demand Side Response Offers, with a draft to be submitted to the Authority no later than 1<sup>st</sup> March 2015;
2. Where Directed by the Authority to do so, run a trial of the approved draft Demand Side Response Methodology;
3. Following such a trial, submit to the Authority a report on the outcome of the trial and a final version of the Demand Side Response Methodology, amended to address issues identified by the Licensee during the trial; and
4. Where Directed by the Authority to do so, implement the Demand Side Response Methodology.

This DSR Methodology seeks to describe the arrangements and provisions required for the proposed DSR Methodology, and will include some provisions that may form part of other governance arrangements for example: [the UNC and suggested Heads of Terms for Shipper/Supplier contracts with End Users]. The DSR Methodology arrangements described within this document seek to ensure that all relevant SC8I Licence condition principles are met.

## The DSR Methodology

Ofgem’s SCR process identified that the gas market would benefit from large End Users reducing demand voluntarily ahead of an emergency. However, during the same process stakeholders expressed doubts that a market for Commercially Contracted reduction in demand would emerge of its own accord. During this process a number of stakeholders also suggested the development of a centralised mechanism for DSR. Ofgem has since directed National Grid NTS to develop a centralised mechanism for specific types of End Users to Offer their DSR directly to National Grid NTS. It is envisaged that establishing this mechanism will ultimately serve to ‘kick-start’ the market for commercially contracted reduction in demand between End Users and Shippers in the medium to long term and thereby increase competition for the provision of DSR.

Following several industry engagement sessions, over the last year, meeting with approximately 60 Large Industrial End Users, Shippers and Suppliers, and a suite of Modification Proposal 0504 – ‘Development of a Demand Side Response Methodology’ Industry Workgroup sessions, these draft Business Rules seek to provide an initial view, of the DSR Methodology which represents a broad industry consensus from discussions to date.

The DSR Methodology seeks to provide an additional ‘route to market’ through which End Users (via their Shipper) can signal their willingness to make available additional DSR volume, i.e. DSR volumes which would not otherwise be offered through existing market mechanisms. Encouraging as much DSR volume to come forward, post a Gas Deficit Warning (GDW), but prior to the end of Gas Deficit Emergency (GDE) stage 1 may, in some circumstances, provide sufficient additional system balancing volumes to avoid the system entering into stage 2 of a GDE, this may enhance the security of supply to more critical load and help all affected parties avoid the high costs and risks associated with an escalation into the later stages of a GDE.

## DSR Methodology

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## DSR Methodology

### Section 1. Definitions

#### 1.1. Definitions:

- |   |                             |  |
|---|-----------------------------|--|
| a | DSR                         | Demand Side Response. The reduction in an Eligible DMC's rate of gas offtake in the period following declaration of a GDW.   |
| b | DSR Service                 | The framework as set out in the DSR Service Contract in which the End User and Shipper/Supplier will determine, agree and offer DSR to National Grid NTS. As set out in section [2] of this DSR Methodology    |
| c | DSR Offer                   | Each individual trade offer that may be submitted on to the OCM – [Locational] platform.   |
| d | DSR Product                 | The basis of the methodology that puts in place the framework and arrangements by which all DSR Offers will be placed and accepted. As set out in section [4] of this DSR Methodology.                         |
| e | DSR Period                  | The period between the GDW being declared for the Gas Day and the earlier of: (i) the revocation of the GDW; or (ii) the end of GDE Stage 1. This is the period where National Grid NTS may accept DSR Offers. |
| f | OCM – [Locational] platform | The Trading platform that DSR Offers may be submitted upon. As set out in section [3] of this DSR Methodology.   |
| g | GDW                         | Gas Deficit Warning ref: UNC Section V5.9.   |
| h | GDE                         | Gas Deficit Emergency ref: UNC Section Q.  |
| i | Firm Load Shedding (FLS)    | During Stage 2 of a GDE; upon direction from the Network Emergency Coordinator (NEC), National Grid NTS and relevant Transporters may instruct the End Users to curtail gas offtake at specified sites.        |

- j Tick Down A DSR Offer may be offered with a reducing down feature that reduces the volume of DSR available on the Gas Day as the unaccepted Offer progresses through the Day.
- k The GDE Stages GDE Stages are defined in UNC TPD section Q and in the Network Gas Supply Emergency Classifications as provided in the National Grid NTS safety case for a Network Gas Supply Emergency
- l Eligible DMC As set out in section [5.2] of this DSR Methodology

Where capitalised words and phrases are used within this document, those words and phrases shall usually have the meaning provided within the Uniform Network Code (unless they are otherwise defined within the terms detailed above).

## Section 2. DSR Service

2.1. The DSR service features 2 principle contractual arrangements:

- a **For reduction in gas quantity offtaken, at relevant Site** – Shipper/Supplier to End User contractual arrangement. On behalf of the End User (in some cases through instruction by the Supplier) the Shipper will agree to place an offer onto the DSR Mechanism, which reflects the agreed DSR volume and price for End User's reduction in offtake from the NTS. In return the End User commits to honouring and delivering on the agreed offtake reduction if called to do so by the relevant Shipper. *Requirements for this aspect of the DSR mechanism may be defined by the Shipper, Supplier End User through their Contractual arrangements;* and
- b **For the procurement of the gas associated the DSR Offer** – Shipper to National Grid contractual arrangements. Under prescribed parameters and criteria set out in this DSR Methodology, the Shipper will offer to sell title to gas (associated to the DSR Offer), to National Grid, in its Role as Residual Balancer.

2.2. The End User (in some cases through the Supplier) will work together with their registered Shipper to set-out and agree details, criteria and arrangements associated with posting the DSR Offer(s) for an Eligible site onto the OCM [Locational] platform. DSR Offers may be placed, updated or withdrawn, at any time up to the declaration of a GDE Stage 2.

2.3. DSR Offers associated to the DSR Service may only be accepted by National Grid NTS and only for a Gas Day in which a GDW has been declared and is in effect. DSR Offers posted

onto the [Locational] Platform will be available for National Grid NTS to accept throughout the DSR Period.

- 2.4. National Grid NTS will notify the OCM Market Operator in [ASAP] that a GDW has been declared and is in effect and also when a GDW has been revoked.
  
- 2.5. Where a DSR Offer is accepted by National Grid NTS on the OCM – [Locational] platform;
  - 2.5.1. The Shipper will notify the End User of the requirement to reduce their notified End Of Day (EOD) offtake by a volume at least equal to the DSR Offer (including any allowances for 'Tick down'). This will be undertaken within the timescales set out in section [7.5] of this DSR Methodology
  - 2.5.2. The Gas Balance position, for both the Shipper's and National Grid NTS, in its Residual Balancing role, registered on the UK Link system, will be adjusted to reflect the completed gas trade on the OCM – [Locational] platform.
  - 2.5.3. DSR Offers may be accepted:
    - a Solely by National Grid NTS for National Balancing purposes only; and
    - b Post GDW being declared up to the end of Gas Deficit Emergency Stage 1; and
    - c Where the DSR Offer meets the criteria set out in this DSR Methodology.

### **Section 3. The OCM Locational Platform**

The OCM's Locational Platform will be revised from a market in which Shipper Users OCM Market participants may both post and accept locational bids and offers to a market where National Grid NTS is permitted to accept Locational bids and offers; and Shipper Users are only able to post Locational bids and offers.

- 3.1. National Grid NTS will be the only Market participant on the OCM [Locational] platform able to accept Locational bids and Offers;
- 3.2. As Network Code signatories able to post physical Offers, Shippers will be the only Market participants able to post Locational bids and offers ;
- 3.3. DSR Offers will be posted on to the OCM Locational Market;

- 3.4. DSR Offers will be identified by a DSR Flag;
- 3.5. DSR Offers will not be visible on the Locational Platform until a GDW for a Gas Day has been declared;
- 3.6. Where a DSR Offer is accepted it will be regarded as a 'Locational Market Transaction' that will be undertaken in accordance with UNC section D2.2.1 (d) a 'Locational Market Transaction'; and
- 3.7. For the avoidance of doubt, all accepted DSR Offers will be included in the system clearing processes and cashout for the relevant Gas Day.

## **Section 4. The DSR Product**

- 4.1. The DSR Product provides 2 items:
  - a A specified volume of DSR provided by the End User; and
  - b A Gas Trade for the equivalent DSR volume provided by the Shipper.
- 4.2. Features of the DSR Product:
  - 4.2.1. The DSR Product must be associated with a specific Daily Metered Supply Point that has an Annual Quantity (AQ) greater than 2 million therms per annum (DMC).
  - 4.2.2. The Product must be submitted onto the OCM – [Locational] platform by a Registered User at the relevant DMC.
  - 4.2.3. The Product will be offered as;
    - a a Daily product and accepted for each Gas day exclusively in accordance with UNC Section D2.2.1 (d) a 'Locational Market Transaction' ; or
    - b a Multiday product undertaken in accordance with the UNC Section D4 – Multi-Day Balancing Actions ;
  - 4.2.4. The DSR Product must be submitted onto the OCM - [Locational] platform as a DSR Offer, prior to the declaration of a Gas Deficit Emergency (GDE) Stage 2.
  - 4.2.5. The DSR Product may be offered in separate tranches of volume, which may be priced individually, according to the Value of Lost Load (VoLL) associated to each separate tranche;
  - 4.2.6. Each tranche will be submitted as a single DSR Offer.
  - 4.2.7. There may be more than one DSR Offer at a specific DMC.
  - 4.2.8. Each DSR Offer must be greater than 100,000 kWhs (4k therms on OCM).
  - 4.2.9. Where the DSR Offer has been submitted onto the OCM-[Locational] platform for a relevant Gas Day, and remain a valid offer, National Grid NTS may accept the Offer, during the DSR Period.
  - 4.2.10. Features of the daily DSR Offer product. The daily DSR Offer may be offered in the form of:
    - a an offer that is input on a daily basis; or
    - b a 7 Day profile of daily offers (submit differing values for each day of the week if so required) the 7 day profile of daily offers will be replicate automatically until revised or withdrawn.

## Section 5. Eligibility

- 5.1. Only the registered User at Supply Points that comply with the eligibility rules specified in this DSR Methodology may enter offers onto the DSR mechanism. In turn the DSR Methodology must satisfy the criteria and obligations set out in the GT Licence obligation SC8I.
- 5.2. An Eligible Supply Point is a 'DMC' customer as defined in the UNC Section A 4.5. An Eligible DMC will be:
  - a A Supply Point with a demand >2million therms per Annum (2M tpa);
  - b Able to offer a minimum DSR Offer volume of 100,000 kWhs in any one DSR Offer Notice.
- 5.3. A Shipper may only submit a DSR Offer onto the OCM – [Locational] platform for a n Eligible DMC where:
  - a it is a registered User at the Eligible DMC; and
  - b it has entered into a DSR Service Contract, with the relevant End User, prior to the relevant GDW being declared.

## Section 6. DSR Participants

- 6.1. There are four/five counter- parties participating in the DSR arrangement.
  - 6.1.1. End User at the Eligible DMC;
  - 6.1.2. Shipper & Supplier;
  - 6.1.3. OCM Market Operator; and
  - 6.1.4. National Grid NTS
- 6.2. **End Users**
  - 6.2.1. The End User, with an Eligible DMC, may choose to enter into a DSR arrangements with its registered Shipper.
- 6.3. **The Shipper/Supplier**
  - 6.3.1. The Shipper, who must be a Registered User at the Eligible DMC, is the party eligible to participate on the OCM-[Locational] platform on behalf of the relevant End User with the Eligible DMC.
- 6.4. **OCM Market Operator**
  - 6.4.1. The OCM Market Operator will provide the [Locational] platform within the OCM.
  - 6.4.2. The OCM Market Operator will facilitate offer and acceptance of DSR trades in accordance with the OCM Market Rules contract, The UNC Section Annex D1 and the DSR Methodology.
- 6.5. **National Grid NTS**

- 6.5.1. National Grid NTS will be the sole party that may accept DSR Offers within the DSR mechanism.
- 6.5.2. National Grid NTS will only accept DSR Offers for national balancing purposes.
- 6.5.3. DSR Offers for the relevant Gas Day may be accepted by National Grid NTS at any time following the declaration of a GDW for the relevant Gas Day and for the duration of the DSR Period.
- 6.5.4. The acceptance of a DSR Offer by National Grid NTS does not affect, or set aside, the Network Emergency Coordinator's (NEC), National Grid NTS's or other relevant Transporters' rights or obligations when undertaking their duties under the provisions set out in 'The Gas Safety (Management) Regulations 1996 - NEC Safety Case'.

## **Section 7. DSR Contractual Relationship**

- 7.1. Prior to posting a DSR Offer the registered Shipper must seek agreement with the relevant End User that the registered Shipper may post DSR Offers onto the OCM - [Locational] platform, on behalf of the End User;
- 7.2. Where a DSR Offer is accepted by National Grid NTS:
  - 7.2.1. The DSR Offer acceptance will be a contractual arrangement between the Shipper and National Grid NTS through the existing OCM Market Rules and UNC contractual arrangements.

## **Section 8. The DSR Offer Price**

- 8.1. The DSR Offer price will be a p/kWh per Gas Day conforming to OCM Market Rules.
- 8.2. The derivation of the DSR Offer price will be agreed between the relevant End users and its registered Shipper.
- 8.3. Accepted DSR Offers will be treated in a similar manner to a Market Balancing Actions (MBA) and as such all accepted DSR Offer prices will feed into the System Average Price (SAP) and System Marginal buy Price (SMPb) calculation for the relevant Gas Day in accordance with existing arrangements for other MBAs.
- 8.4. Payment for the accepted DSR Offer will be paid within the same timescales prescribed for all other MBAs, and in accordance with the UNC TPD Section S;
- 8.5. The Shipper pay the End User the agreed DSR payment for an accepted DSR Offer in the timescale agreed by the two parties

## **Section 9. Posting DSR Offers**

- 9.1. The minimum DSR Offer volume that may be placed on the OCM- [Locational] platform, in respect of any DSR Offer, is 100,000 kWhs.

- 9.2. In respect of a DSR Offer submitted through the Gas Day on a 'Tick Down' option, once the DSR Offer reduces below the minimum quantity the DSR Offer will be withdrawn from the market for the relevant Gas Day, this is due to the DSR Offer falling below the minimum bid criteria and will not be valid.
- 9.3. DSR Offer(s) will be for a specified offtake reduction volume (kWhs) at an Eligible DMC and in the form specified by the DSR Methodology. Each DSR Offer(s) will relate to one individual volume of reduced offtake (a tranche); for each Eligible DMC the total volume of offtake reduction of all DSR Offers shall not exceed the prevailing Supply Point nominated offtake quantity, as set out in the prevailing Gas Flow Nomination, submitted by the relevant Shipper, for the Eligible DMC, for the relevant Gas day.
- 9.4. A DSR Offer may be posted on to the [Locational] platform of the OCM at any point in time up to the declaration of GDE stage 2 for the Gas day, but will only be able to be accepted during the DSR Period.

## **Section 10. DSR Offer Acceptance arrangements process**

- 10.1. Where a GDW has been declared National Grid NTS may accept DSR Offers on the OCM – [Locational] platform for each day up to the day that the GDW is revoked, or the Gas Day within which GDE Stage 1 has ended and Stage 2 is declared.
- 10.2. Following the declaration of a GDE Stage 2 National Grid NTS will not be required to accept any further DSR Offers.
- 10.3. Where Declaration of a GDE Stage 2 occurs within a Gas day all DSR Offers accepted whilst in GDE stage 1 will apply.
- 10.4. All available DSR Offers will be displayed in a price order of Offers consistent with all other OCM markets.
- 10.5. National Grid NTS will accept lowest priced offers first in stack order, making an assessment across the OCM Title, Physical, Locational Markets.
- 10.6. Where National Grid NTS accepts a DSR Offer the Shipper will be notified through existing OCM notification processes.

## **Section 11. Exercising the accepted DSR Offers process**

### **11.1. Daily Product**

Where National Grid NTS accepts the DSR Offer;

11.1.1. The relevant Shipper will notify the relevant End User of the requirement to reduce their gas offtake for the Gas Day by the volume specified; at the specified site; within the timescales; and arrangements prescribed in the relevant DSR Offer Notice.

11.1.2. As with all Locational Market Offers accepted on the OCM, the Shipper will notify National Grid NTS of the intent to reduce offtake at the Eligible DMC by submitting a re-nomination at the Eligible DMC Supply Meter Point, as prescribe in UNC Section D2.3 – Contract Re-nominations.

## **Section 12. Treatment of accepted Offers when entering into a GDE Stage 2**

12.1.1. Where National Grid NTS has already accepted a DSR Offer for a Gas Day on which National Grid NTS subsequently declares a GDE Stage 2 the accepted DSR Offer will be exercised for each day following the Day the offer was accepted until countermanding instructions are issued by National Grid NTS i.e. instruction from National Grid NTS during the restoration stage of the GDE.

## **Section 13. Payment Arrangements:**

- 13.1. In respect of the Day, or Multiday, that the DSR Offer contract duration was accepted for, payment will be made in accordance with the accepted DSR Offer price;
- 13.2. For subsequent days during GDE stage 2; payment at 30 day average SAP for the accepted DSR volume will made up to the point that the relevant site has been instructed to Firm Load Shed, by National Grid NTS or the relevant Transporter;
- 13.3. In the event that the accepted Multiday Offer contract duration runs beyond FLS; the payment will continue to be paid in accordance with the agreed DSR Offer price until the contract duration is extinguished.
- 13.4. Where the Eligible DMC is Firm Load Shed the prevailing DSR payment arrangements will apply in accordance with SCR SoS legal text 11.a & 11.b;
- 13.5. In respect of 11.a & 11.b the Gas SCR SoS legal text section 6.4 – ‘DSR Payments’ prescribes a DSR payment, for each day of curtailment, of 30 Day Average SAP (price set from the Day prior to entering Stage 2) multiplied by the Volume that was Firm Load Shed.
- 13.6. As the DSR is exercised through an OCM trade, once the DSR service has been exercised, the relevant End User will be entitled to receive the relevant DSR payment until the end of the contracted duration on which the DSR Offer was accepted, irrespective of any countermand instruction from National Grid NTS that the GDW for the relevant Gas Day has been repealed.

## Section 14. DSR Settlement Arrangements

- 14.1. For the purposes of payment and settlement arrangements all accepted DSR Offers will be regarded as Market Balancing Actions (MBA) taken by National Grid NTS. These payments will be settled with the relevant Shipper.
- 14.2. The Shipper will be required to pass agreed payments associated with the DSR Offer to the relevant End User within their agreed settlement timescales.
- 14.3. Where National Grid NTS accepts a DSR Offer on a Day for which it later declares a GDE Stage 2; the offer acceptance shall continue to be exercised throughout GDE Stage 2 and higher emergency stages. Payments associated with accepted DSR offer volumes will be settled as follows:
  - a For each relevant Day after the declaration of GDE stage 2, all settlement of DSR Offer volumes accepted prior to the declaration of entry into GDE stage 2, will NOT be executed within the settlement timescales prescribed for Market Balancing Action settlement arrangements. These DSR Offer payments will be settled in accordance with the Gas SCR SoS legal text section 6.4 – ‘DSR Payments’, and will be settled with the same timescales and under the funding arrangements provided for DSR Payments relating to Involuntary DSR through Firm Load Shedding.
  - b Accepted DSR Offers will receive DSR Payment, at the offer price multiplied by the volume accepted in the DSR Mechanism, for each Day the site is curtailed, up to the day on which the site is subject to Firm Load Shed. A Firm Load Shed site will receive DSR Payments, for the total volume of interrupted load (including both voluntary and involuntary DSR) in accordance with the DSR settlement arrangements prescribed in [the Gas SCR SoS legal text section 6.4 – ‘DSR Payments’].
- 14.4. Supplier Licence Condition 19D of the Gas Supply Licence and Shipper licence Condition 15A of the Gas Shipper Licence set out the obligation for passing on Involuntary DSR payments to End Users as soon as reasonably practicable.

[these Licence conditions may need to include passing on Voluntary DSR payment that relate to the DSR mechanism]

## Section 15. Liability Arrangements

- 15.1. When submitting the DSR Offer onto the OCM – [[Locational] platform the Shipper warrants that the DSR Offer accurately reflects the details agreed in the relevant DSR Offer Notice. The Shipper will be solely responsible and liable for any error or omission in the DSR Offer, when registering onto the OCM [Locational] platform; these liabilities will manifest themselves as cash-out cost and Physical Re-nomination Incentive (PRI) charges.

- 15.2. Where the amount of gas offtaken for a relevant Gas Day at the relevant Eligible DMC is not less than or equal to the re-nomination submitted by the Shipper, in response to the acceptance of a DSR Offer, then the Shipper is potentially exposed to a cash-out shortfall quantity, and the End User has therefore not met its trade requirements. End User and the registered Shipper.

## **Section 16. The UNC Provisions**

In respect of the DSR Methodology the UNC will include the following provisions:

- 16.1. Prior to posting a DSR Offer onto the OCM, the registered Shipper will have a record of the agreement with the relevant End User of the relevant site, that the Shipper may post the DSR Offer(s) on behalf of the Relevant End User.
- 16.2. An accepted DSR Offer will be processed and settled in accordance with Locational Market Transaction arrangements.

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