








UNC Modification	At what stage is this document in the process?
<h1 data-bbox="134 320 657 412">UNC 0845:</h1> <h2 data-bbox="134 450 1038 663">Enhancements to Demand Side Response (DSR) Arrangements including a D-5 Product</h2>	<div data-bbox="1209 309 1468 627"> <div>01 Modification</div> <div>02 Workgroup Report</div> <div>03 Draft Modification Report</div> <div>04 Final Modification Report</div> </div>
<p><b>Purpose of Modification:</b></p> <p>This Modification, raised as an output from Request 0835R, seeks to:</p> <ul style="list-style-type: none"> <li>Extend eligibility to participate in gas DSR to Class 2 Consumers;</li> <li>Amend the determination of the quantity of demand reduction under a DSR Option;</li> <li>Enable DSR Option Offers to specify a maximum number of days on which the DSR Option could be exercised and incorporate this into the NGT assessment process for DSR Options;</li> <li>Clarify the obligations of a User if a DSR Option is exercised;</li> <li>Provide greater optionality for Users and Consumers in the DSR Options tender process; and</li> <li>Enable National Gas Transmission (NGT) to procure DSR Options that may be exercised with a 5-day lead-time.</li> </ul>	
<p><b>Next Steps:</b></p> <p>The Proposer recommends that this Modification should be:</p> <ul style="list-style-type: none"> <li>considered a material change and not subject to Self-Governance</li> <li>assessed by a Workgroup</li> </ul> <p>This Modification will be presented by the Proposer to the Panel on <b>20 April 2023</b>. The Panel will consider the Proposer's recommendation and determine the appropriate route.</p>	
<p><b>Impacted Parties:</b></p> <p>High: Large industrial and commercial consumers, Shippers, Suppliers, NGT Transmission (NGT), Distribution Network Operators, On-the-Day Commodity Market (OCM) Market Operator, CDSP</p> <p>Low: IGTs</p>	
<p><b>Impacted Codes:</b></p> <p>Independent Gas Transporter Code</p>	

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Timetable		 0121 288 2107
<b>Modification timetable:</b>		Proposer: <b>Phil Hobbins, NGT</b>
Pre-Modification Discussed	06 April 2023	 <a href="mailto:philip.hobbins@nationalgas.com">philip.hobbins@nationalgas.com</a>
Date Modification Raised	12 April 2023	 07966 865623
New Modification to be considered by Panel	20 April 2023	Transporter: <b>NGT</b>
First Workgroup Meeting	04 May 2023	 <a href="mailto:philip.hobbins@nationalgas.com">philip.hobbins@nationalgas.com</a>
Workgroup Report to be presented to Panel	15 June 2023	 telephone
Draft Modification Report issued for consultation	16 June 2023	Systems Provider: <b>Xoserve</b>
Consultation Close-out for representations	07 July 2023	 <a href="mailto:UKLink@xoserve.com">UKLink@xoserve.com</a>
Final Modification Report available for Panel	12 July 2023	
Modification Panel recommendation	20 July 2023	
Final Modification Report issued to Ofgem	20 July 2023	

# 1 Summary

## What

The Gas Demand Side Response (DSR) arrangements provide a mechanism for large consumers of gas to offer, via their User, to reduce their demand during times of system stress in return for a payment that they define. .

The DSR arrangements as reformed by Modification 0822<sup>1</sup> now provide for distinct “*option*” and “*exercise*” stages with separate payments made for each. Ahead of each forthcoming Winter Period, NGT issues an invitation to all Users seeking commitments, in advance, to offer DSR quantities on behalf of Consumers for the next three Winter Periods. When a Margins Notice (MN) or Gas Balancing Notification (GBN) has been issued, NGT may exercise any accepted DSR Options (and any DSR Market Offers that are not linked to a DSR Option) via an (On-day Commodity Market) OCM trade which triggers a requirement for the User to reduce the relevant Output Nomination and the Consumer to reduce its offtake of gas.

NGT sought non-binding expressions of interest in D-5 DSR Options via its DSR Option Invitation that was published on 18 November 2022. During this process, NGT received one expression of interest which was not considered to deliver a material volume and as a result, NGT decided not to proceed with raising an urgent modification at that time to deliver the market reforms required to permit a D-5 DSR product.

## Why

Following the implementation of urgent Modifications 0822 and 0833, NGT raised Request 0835R ‘Review of Gas Demand Side Response Arrangements’ in part to review the new processes that were implemented by these Modifications as well as to consider broader reforms to the DSR regime. NGT has also engaged separately with large industrial consumers with regards to further changes that could be made to enable the growth of the gas DSR market. Based on stakeholder feedback from these meetings, as part of a package of reforms arising from Request 0835R, NGT considers it beneficial to extend the eligibility criteria to include Class 2 Consumers and make process enhancements to the way in which the DSR options are structured.

In its decision letter for Modification 0822, Ofgem encouraged NGT to consider how consumer access to gas DSR could be broadened for this winter and beyond. NGT considers it desirable to seek to maximise the quantity of gas DSR that would be made available because it serves as a pre-emergency tool to mitigate against the risk or severity of a Gas Deficit Emergency (GDE). Feedback provided by industrial consumers to NGT during the development of Modification 0822 revealed that a longer notice period could increase the level of participation; some industrial consumers specifically indicated that they would require a notice period of greater than one day to enable them to participate in the DSR scheme. Additional feedback gained through the UNC0835R Workgroup has confirmed that some stakeholders remain supportive of a D-5 DSR product.

Given this, NGT is of the view that being able to consider the supply / demand balance position for a Gas Day at an earlier stage (in the context of offers to voluntarily reduce demand) and making arrangements under which voluntary demand curtailment may be directed at this stage, may increase the volumes of gas that are able to be curtailed. NGT also recognises that a forecast imbalance 5 days in advance is subject to greater uncertainty than D-1 and within day forecasts.

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<sup>1</sup> <https://www.gasgovernance.co.uk/0822>

## How

It is proposed to modify the UNC (and separately the Gas DSR methodology statement) to:

- Extend the eligibility criteria for Consumer participation (whether via a DSR Option Invitation or otherwise) from class 1 Consumers to also include class 2 Consumers, thus enabling all daily metered (DM) Consumers via their Registered User to participate;
- Amend the basis on which demand reduction is determined to have been delivered following exercise of a DSR Option from a reduction from a prevailing Output Nomination to a commitment not to flow above a minimum quantity (for the avoidance of doubt, the determination of any DSR quantity that may be offered on the day that is not linked to a DSR option shall remain unchanged);
- Enable Users to specify a maximum number of days on which a DSR option could be exercised;
- Clarify the obligations on Users if DSR is exercised;
- Deliver greater optionality for Users and consumers in the DSR Options tender process;
- Expand NGT's DSR Option Invitation to include D-5 DSR Options for future Winter Periods (01 November to 30 April), whereby NGT will invite Users to offer demand reduction with a 5-day lead time on behalf of Consumers that meet the eligibility criteria for DSR participation. If specified criteria are met at D-5 (i.e. a forecast supply shortfall of a defined magnitude), NGT may exercise such D-5 DSR Options to reduce demand for Gas Day D. If the option is exercised, NGT would commit to this at D-5 (unlike the within day and D-1 arrangements where the User has the obligation to post a DSR Market Offer which NGT may choose not to accept) with the actual DSR trade executed on D-1 when the OCM opens for D-1 trading and the relevant Consumer(s) would be required not to exceed the minimum offtake quantity which was submitted by its Registered User as part of the D-5 DSR Option Offer.

## 2 Governance

### Justification for Authority Direction

The reforms to the gas DSR regime proposed by this Modification are designed to expand the DSR market and thereby further enhance the effectiveness of DSR as a pre-emergency tool. This Modification is expected to have a material effect on existing or future gas Consumers and matters relating to security of supply. On this basis, there is sufficient justification to require Authority Direction.

At present, only 'class 1' Consumers are eligible to participate in gas DSR, of which in total there are 563 connected to GDN networks. Expansion to include 'class 2' Consumers would expand eligibility to a further 701 Consumers, provided they are able to offer at least the 100,000 kWh/day minimum quantity of DSR.

The Russian invasion of Ukraine and subsequent reduction in gas supplies to the EU has created material risks to global gas markets and the EU and GB gas markets are linked both via physical assets and market arrangements. NGT therefore considers that it is prudent to further enhance DSR arrangements as described in this Modification as a mitigation against these risks; they could also provide mitigation against the unlikely event of a GDE being declared which would have a significant commercial impact on GB gas market participants and more widely in GB.

### Requested Next Steps

This Modification should:

- be considered a material change and not subject to Self-Governance.

- be assessed by a Workgroup.

## 3 Why Change?

### Background

The Gas DSR arrangements were introduced into the UNC in 2016 by Modification 0504 '*Demand Side Response Methodology Implementation*'. This provided a mechanism for large consumers of gas to offer to reduce their demand in return for a payment which they defined during times of system stress when a Gas Balancing Notification (GBN) is in operation. The User discharges that function with NGT by posting a DSR Market Offer onto the OCM DSR Locational Market on behalf of a consumer which NGT may accept. Such voluntary demand reductions are intended to reduce the likelihood, severity and duration of a gas supply emergency and provide a 'route to market' for large consumers to receive greater financial compensation by voluntarily curtailing their demand than if they were involuntarily curtailed in a stage 2 of a GDE.

Modification 0822 introduced obligations on NGT to run an annual tender process (the DSR Options Invitation) whereby Users could, on behalf of eligible Consumers, offer and hold DSR Options whereby Users receive payment in return for agreeing to offer DSR on behalf of the relevant Consumer if a Margins Notice or Gas Balancing Notification is issued. As this was an urgent Modification, NGT has reviewed its application in light of experience with the industry as part of Request 0835R and, separately, with a group of large industrial consumers and their associations including the chemicals, glass, steel and ceramics sectors. From these discussions, NGT has concluded that further reforms to this process would be beneficial, as well as its expansion for Users to participate on behalf of all daily metered (DM) sites, whether they are class 1 or class 2.

In its decision letter for Modification 0822, Ofgem encouraged NGT to consider how consumers' access to DSR may be broadened to further contribute towards the effectiveness of the DSR tool. Extending the lead-time for exercise of a DSR Option is a means of achieving that objective.

### Further Engagement

At present, if a DSR Option is exercised by NGT accepting a DSR Market Offer, the quantity by which the relevant Consumer is required to reduce its demand is equal to the lesser of the accepted Option Quantity and the User's prevailing Output Nomination<sup>2</sup>. Where the latter applies, this would result in the consumer being obliged to reduce its demand to zero, which some Consumers have highlighted constitutes a risk to their need to maintain a minimum level of demand to maintain certain processes. Feedback received indicates that determination of a demand reduction requirement based on a deemed level of reduction from a historical average to a minimum quantity would be a more attractive proposition for some Consumers.

Consumers have also indicated that because the number of times on which a DSR Option could be exercised in a Winter Period is uncapped, this could expose them to excessive disruption in their production processes and therefore an ability to indicate the maximum number of instances that they would be prepared to incur demand curtailment would remove this as a barrier to their participation.

A review of the obligations on Users when a within-day or D-1 DSR Option is exercised has revealed a need for further clarity in terms of the timescales within which a User is obligated to post a DSR Market Offer, depending on the type of option held and the trigger for opening the DSR locational market. At present, UNC TPD D7.6.2 provides that where a DSR Option is in force, the relevant User is required to post a DSR Market Offer onto the

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<sup>2</sup> For within-day DSR options, this is scaled based on the tendered lead-time and the number of hours remaining in the gas day.

OCM<sup>3</sup> on each Day in the Winter Period which falls within a Voluntary DSR Period, on the first Day within 60 minutes from the time at which the Margins Notice or GBN was issued and on each subsequent Day, by 06:00 on the Day. However, this fails to capture all the potential permutations. For example, where the User holds a within day DSR Option and the DSR Locational Market has been opened by a Margins Notice at D-1, a within-day offer cannot be placed until gas day D starts, meaning the User could not comply with the 60-minute rule. Equally, if a D-1 DSR Option is held and the trigger for opening the market is a Margins Notice, for subsequent Days a new Margins Notice would need to be issued to prolong the DSR event, therefore the User's obligation should remain as being within 60 minutes of that next Margins Notice being issued.

Engagement with large industrial Consumers and their associations during the development of Modification 0822 and throughout the UNC0835R Workgroup indicated that one of the reasons that DSR contracts have not historically been struck is that the lead-time for exercise of a DSR Market Offer is challenging for some Consumers to react to. To enable voluntary demand curtailment to be exercised ahead of D-1, a definition of the trigger for activating such arrangements is required. Any such consideration must be balanced against the potential consequences of intervention in the market by NGT outside of prompt timescales when supply and demand data is less certain, impacts on its role as residual balancer and its obligations to discharge this function economically and efficiently.

### Consequences of Non-implementation

If this change is not made, NGT's engagement with relevant stakeholders indicates that Consumers that could potentially offer voluntary reductions in their gas demand are less likely to do so or be prevented completely, for example if they are not within Class 1 or need longer than one day to schedule demand reduction. This would mean that one of the tools available to NGT to mitigate a material imbalance between national demand and supply that could progress to a GDE may not provide as much demand reduction as it potentially could.

## 4 Code Specific Matters

### Reference Documents

- Modification [0504](#) "*Demand Side Response Methodology Implementation*"
- Modification [0822](#) "*Reform of Gas Demand Side Response Arrangements*"
- Modification [0833](#) "*Enabling DSR Market Offers to be made by Non-Trading System Transactions*"
- NGT [Gas Demand Side Response Methodology](#)
- [Decision](#) on the proposed modifications to the DSR Methodology of NGT's Gas Transporter Licence and Decision further to NGT's request for Derogation from Special Condition 9.22.3(c) of its Gas Transporter Licence.
- [Procedure for Network Gas Supply Emergency](#) ('E1')
- Special Condition 9.22 in the NTS Licence that sets out Gas DSR requirements and principles is reproduced in Appendix 1.

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<sup>3</sup> Where the User does not have access to them OCM, this may be conducted via an 'over-the-counter' process



## Knowledge/Skills

An awareness of the current DSR rules in UNC (as revised by Modification 0822) and where they feature in the emergency arrangements would be helpful. In the UNC, these are contained in TPD sections D5 and D7.

## 5 Solution

It is proposed that the UNC is modified to amend the DSR arrangements in 6 areas:

### 1. Eligibility Criteria

Extend the eligibility criteria for Consumers to participate in gas DSR (whether or not pursuant a DSR Option) from the current Class 1 group only (requiring a minimum Annual Quantity of 2 million therms) to also include Class 2 Consumers, which are also daily metered.

### 2. Basis of DSR Option Offer and determination of the quantity of demand reduction

The determination of the quantity of demand reduction that a User may offer via a DSR Option and which, if exercised, validation of delivery is based on, shall be the difference between the average daily demand of the relevant Consumer over the previous Winter Period (excluding any days on which demand was reduced either by DSR exercise or a NGSE) and a minimum offtake quantity that the User provides on behalf of that Consumer via the DSR Option Invitation. This will replace the existing arrangement whereby such quantity is determined by the lesser of the accepted Option Quantity and the prevailing Output Nomination for that Consumer.

### 3. Number of DSR occurrences

The terms of the DSR Option Invitation shall enable Users to specify a maximum number of days within any one Winter Period that the relevant Consumer is willing to have the DSR Option exercised in respect of and enable NGT to take account of this in its assessment process.

### 4. User Obligations – DSR Options

Amend the obligations on a User holding a DSR Option to post DSR Market Offers if the DSR Locational Market is opened. Where a D-1 DSR Option is held and the trigger for opening the market is a Margins Notice, for subsequent Days a new Margins Notice would need to be issued to prolong the DSR event, therefore the User obligation shall remain as being within 60 minutes of that next Margins Notice being issued.

A Margins Notice, once issued, remains in force for the Day to which it applies, whereas a GBN remains in place, potentially across several Days, unless it is withdrawn. Therefore, where a User holds a D-1 DSR Option and the trigger for opening the DSR locational market is a GBN, the obligation on the User shall be to post a DSR Market Offer on subsequent days within 60 minutes of the market opening for D-1 trading, being by 0900 for the following day. The obligations that shall apply for different combinations of DSR Option and notification trigger are summarised in the table below:

Option held	Notification trigger	Shipper obligation - first day	Shipper obligation - subsequent days
Within-day	Margins Notice on D-1	post offer on D by 06:00 on D	post offer on D by 06:00 on D
	GBN D-1	post offer on D by 06:00 on D	post offer on D by 06:00 on D
	GBN within day	post offer for current day within 60 mins of GBN issue	post offer for current day by 06:00 if GBN not withdrawn
D-1	Margins Notice on D-1	post offer on day MN issued for tomorrow within 60 mins of MN issue	post offer on day MN issued for tomorrow within 60 mins of MN issue
	GBN D-1	post offer on day GBN issued for tomorrow within 60 mins of GBN issue	post offer by 09:00* for tomorrow if GBN not withdrawn
	GBN within day	post offer for tomorrow within 60 mins of GBN issue	post offer by 09:00* for tomorrow if GBN not withdrawn

## 5. Product Optionality

Whereas at present, a User may offer either a D-1 or a within-day DSR Option on behalf of a Consumer, it is proposed to enable greater optionality by enabling Users to offer DSR Options for more than one DSR product on behalf of the same Consumer, from which NGT may select one.

## 6. Introduction of a D-5 DSR Product

It is proposed that the UNC is modified to extend the arrangements that have been implemented by UNC0822 which introduced within-day and D-1 DSR Options to also include D-5 DSR Options. NGT would have the ability to enter into such arrangements and ultimately exercise such options at D-5 in respect of day D if it forecasts a supply deficit on day D of 14 mcmd or greater. The rationale for this threshold is that 13.7 mcm is the target forecast error for NGT's D-2 to D-5 reputational demand forecasting incentive and as such can be considered as a reasonable level of uncertainty. If this condition was met, NGT would then decide whether to exercise D-5 DSR Options.

The business rules for UNC0822 shall apply as far as possible in respect of D-5 Options, subject to amendments in the following key areas:

- The annual DSR Option Invitation shall include D-5 DSR Options;
- The timescales by which Users post their DSR Market Offers and NGT accepts them pursuant to accepted D-5 DSR Options;
- A new trigger for D-5 exercise and definition of the period within which DSR Market Offers pursuant to D-5 DSR Options shall be executed.

## Business Rules: D-5 Product

### Product Definition

1. A D-5 DSR Option shall be a 'balancing service' as contemplated by the EU Balancing Code, whereby a User may offer, and NGT may accept, a commitment in advance on behalf of a Consumer to reduce gas demand with 5 Days' notice.

2. For a DSR Option exercised at D-5, the start time for demand reduction shall be 0500 on gas day D with the reduction in place until the end of gas day D. For example, if a D-5 DSR Option is exercised on gas day 16<sup>th</sup> February, the demand reduction day (D) would be the gas day 21<sup>st</sup> February.

### Procurement Process

3. The DSR Option Invitation rules set out in UNC TPD D7 shall be extended to include D-5 DSR Options within the same procurement process, whereby invitations are issued annually not later than 31 August.

4. A User may submit offers on behalf of a Consumer for a D-5, D-1 and within day DSR product from which NGT may accept one.

5. Each D-5 DSR Option offer that Users may make shall be required to contain:

- a. The Winter Period each offer is made in respect of;
- b. An end-of-day energy quantity that the consumer will not exceed in the event of the product being exercised;
- c. The identity of the consumer and its supply meter point reference that will deliver the demand curtailment, if exercised by NGT;
- d. A price ('option price'), specified in p/kWh/day, that the User requires to be paid in return for its commitment to making the relevant quantity available for gas DSR purposes;



- e. A price ('exercise price') which the User requires to be paid if its associated DSR Market Offer is accepted by NGT which may be specified either:
  - i. in p/kWh or
  - ii. indexed to the System Average Price (SAP) applicable on D-1, where D is the Day on which notification of exercise of the D-5 DSR Option is given by NGT to the relevant User (and may otherwise be understood as D-6 where D is the Day on which the demand reduction is to be effective).

6. A User may specify the maximum number of days on which NGT may exercise the DSR Option in any one Winter Period.

7. A User may submit multiple D-5 DSR Option offers for tranches of load reduction in accordance with BR6(b) on behalf of the same Consumer.

### **Assessment of Offers**

8. When selecting DSR Option Offers, NGT may prioritise acceptance of within day DSR Options first, followed by D-1 Options and then D-5 Options.

9. The aggregate value of D-5 DSR Options accepted by NGT in respect of a Winter Period shall be determined in accordance with the Option Selection Guidance set out in NGT's DSR Methodology.

10. There shall be no limit on the aggregate energy quantity of D-5 DSR Option offers that NGT may accept pursuant to its invitation to offer.

11. Where a User offers an exercise price that is indexed in accordance with BR6(e)(ii), NGT shall determine such price for the purposes of its assessment as being the forward price for the relevant winter as published in the Argus European Natural Gas Report on the day the invitation to offer closes.

12. Accepted D-5 DSR option offers shall come into force immediately following notification by NGT to the relevant User who would have responsibility to communicate this to the relevant Consumer(s).

### **Accepted D-5 DSR Options**

13. Where D-5 DSR Options are in force, NGT shall, for each Day in the relevant Winter Period, assess expected available supply against forecast demand on D-5.

14. Where NGT projects an end of day national supply deficit at D-5 of 14 mcmd or greater in respect of Day D, NGT may exercise D-5 DSR Options as described in these business rules.

15. Where the condition in BR15 is satisfied and NGT has decided to exercise D-5 DSR Options, NGT shall issue an Active Notification Communication to all Users that it is doing so and a D-5 Voluntary DSR Period shall become effective as described in BRs 43 and 44.

16. NGT shall then review all accepted D-5 DSR Options and notify the relevant Users not later than 17:00 on D-5 which D-5 DSR Options it is exercising. NGT shall publish the total quantity, total exercise costs and highest price of the D-5 DSR Options that it has exercised not later than the end of the Day D-5.

17. Such Users are expected to notify the relevant Consumer as soon as is reasonably practicable thereafter and shall then be obliged to post DSR Market Offers in respect of Day D by not later than 10:00 on D-1, which:

- i) in the case of a DSR Market Offer posted on the OCM, NGT shall accept not later than 12:00 on D-1; and
- ii) in the case where a User that does not have OCM access submits a DSR Market Offer as a Non-Trading System Transaction, NGT shall accept such offer not later than 14:00 on D-1.

18. The quantity (Trade Nomination Quantity) associated to the DSR Market Offer to be posted by each relevant User shall be equal to the Consumer's average daily offtake for the previous Winter Period (excluding any days on which the consumer's demand was reduced due to DSR being exercised or pursuant to an NGSE) minus the minimum flow requirement identified by the User in the DSR Options invitation.

19. The price at which the DSR Market Offer shall be posted shall be equal to the User's accepted exercise price in the DSR Option Invitation.

20. The relevant User shall submit an Output Nomination in respect of the relevant Consumer equal to the Consumer's minimum flow requirement.

21. Where NGT has issued a notification pursuant to BR15, the User may not increase its Output Nomination for the relevant Consumer in respect of day D from the time at which the notification of exercise by NGT is received by the User.

22. NGT will review the position on the following Day for the 'new' D-5 and if expected available supply is projected to be below forecast demand for the 'new' day D then NGT may give a further notification to the User that the Consumer is required to maintain its demand reduction in respect of the 'new' Day D. In this case the relevant User is required to post a further DSR Market Offer according to the above process.

23. Users that do not have D-5 DSR Options in force shall not be eligible to make DSR Market Offers on D-1 unless a Voluntary DSR Period also applies in respect of that Day (triggered by a Margins Notice and/or Gas Balancing Notification).

### Further Business Rules

The following business rules which were established as part of Modification 0822 shall also apply to D-5 DSR Options and are included here for completeness.

24. Where a User fails to post a DSR Market Offer in accordance with the above business rules, it shall become liable for a charge equal to:

$$OP \times 1.1 \times (NP / CP)$$

where:

OP = the total value of the User's Option Fee for that Winter Period,

NP = the total number of that User's non-compliant DSR Market Offers and failure to post DSR Market Offers within that Winter Period

CP = the total number of Days on which the User was obliged to post a DSR Market Offer within that Winter Period.

For example, if the DSR market was opened on 4 separate days across a Winter Period and the User failed to post or posted a DSR Market Offer that was in breach of its obligations pursuant to its accepted option offer on one of those days but posted compliant DSR Market Offers on the other three days then the User's penalty would be equal to 110% of its Option Fee multiplied by 0.25.

25. NGT shall review the performance of each relevant User for the purposes of making its determinations pursuant to BR24 as soon as is reasonably practicable after the end of the relevant Winter Period and shall instruct the CDSP to issue the relevant invoice thereafter.

26. NGT shall provide appropriate supporting information to each User to whom an invoice is issued pursuant to BR24 and the User may dispute such invoice by providing its own supporting information to NGT. If such a dispute occurs, NGT and the relevant User shall work together in good faith to agree a resolution.

27. Where a User ceases to be the Registered User for a Consumer in respect of which a D-5 DSR Option offer has been accepted pursuant to the DSR Option Invitation:

- a. That User shall, as soon as reasonably practicable, notify NGT of the change of Registered User;
- b. That User's obligations to provide DSR Market Offers in respect of that consumer shall cease with effect from the date of transfer of Registered User;
- c. NGT shall instruct the CDSP to cease making payment of any further Option Fee Instalments to that User in respect of that Consumer;
- d. The new Registered User may inform NGT that it wishes to adopt the same DSR Option obligations in place of the retiring User, in which case NGT shall instruct the CDSP to pay the relevant subsequent Option Fee Instalments to the new Registered User.

28. Where a D-5 DSR Option applies in respect of a Supply Point which becomes Isolated,

- a. The Registered User shall so notify NGT as soon as reasonably practicable following the date of Isolation;
- b. NGT shall instruct the CDSP to cease making payment of any further Option Fee Instalments to that User based on the accepted DSR Options in place at that time; and
- c. The User's obligations to provide DSR Market Offers in respect of such DSR Options on behalf of that Consumer shall cease.

29. Where BR 28 applies and the Supply Point is subsequently Re-established, the provisions of BR 28 shall continue to apply, notwithstanding that the Registered User may submit D-5 DSR Option offers in respect of that Supply Point in response to future DSR Option Invitations issued by NGT.

30. Where a User is terminated, NGT shall instruct the CDSP to cease making payment of any further Option Fee Instalments to that User and all D-5 DSR Options in relation to that User shall automatically lapse.

31. A User may not cancel any D-5 DSR option within the Winter Period to which that option relates or in the time between NGT's acceptance of that D-5 DSR option and the next Winter Period.

32. Commercial terms detailing the basis on which D-5 Option Fees shall be passed through to the consumer by the shipper/supplier are outside the scope of the UNC and shall be detailed in arrangements agreed between the shipper/supplier and consumer.

## **Payment and Funding Arrangements**

33. A User's D-5 DSR Option Fee for a Winter Period shall be determined as each D-5 DSR Option Quantity multiplied by the relevant Option Price (in p/kWh/day) that has been accepted by NGT pursuant to the DSR Option Invitation multiplied by the number of the days in the Winter Period.

34. D-5 Option Fees shall be funded from, and payments under BR 24 made to, balancing neutrality. NGT shall instruct the CDSP to make payment of D-5 DSR Option Fees to the relevant Users in monthly instalments for the duration of the relevant Winter Period, calculated as follows:

Total Option Fee divided by the number of days within the Winter Period on which the obligations apply, multiplied by the number of days in the month for which payment is being made.

35. D-5 DSR Option Fees shall be paid to relevant Users in respect of each relevant month on the Invoice Due Date for Energy Balancing Invoices for that month (being 12 calendar days following the 23<sup>rd</sup> day following the end of that month).

36. Where BR 27 (a) to (c) applies, the Option Fee for the relevant month shall be calculated pro-rata up to the date on which the retiring User ceased to be the Registered User.

37. Where BR 27 (d) applies, the Option Fee for that month shall be calculated pro-rata from the date on which the new User became the Registered User.

38. Where BR 28 applies, the Option Fee for the relevant month shall be calculated pro-rata up to the date of Isolation.

39. The accepted D-5 DSR Option prices that are used to determine the Option Fees shall not contribute to imbalance cashout price determination for any Day.

40. The aggregate amount of D-5 Option Fees for each relevant month within the Winter Period shall be processed through the balancing neutrality mechanism as a debit on each User's Energy Balancing Invoice for that month. Each User's share of this amount shall be determined by the percentage of its system throughput (determined by its allocated inputs and outputs (UDQIs and UDQOs)) versus total system throughput for that month.

41. All accepted D-5 DSR Market Offers, shall continue to be treated as Eligible Balancing Actions and thus shall continue to contribute to the formation of cashout prices for the relevant Day.

## Reporting

42. Within 5 business days from the date on which NGT notifies participating Users of the acceptance or rejection of their DSR option offers, NGT shall notify all Users of the following outcomes from the DSR Option Invitation:

- a. Total volumes offered
- b. Total volumes accepted
- c. Number of participating Users
- d. Number of participating Consumers
- e. Weighted average option price for all accepted DSR option offers
- f. Total cost of accepted DSR option offers
- g. Lowest option price accepted
- h. Highest option price accepted
- i. Lowest exercise price accepted, where offered as a p/kWh rate
- j. Highest exercise price accepted, where offered as a p/kWh rate
- k. Lowest exercise price accepted, where offered as an index
- l. Highest exercise price accepted, where offered as an index

## D-5 Voluntary DSR Period

43. A new definition of 'D-5 Voluntary DSR Period' shall be created, being the period within which Users shall post and NGT shall accept DSR Market Offers pursuant to D-5 DSR Options.

44. Where NGT has issued an Active Notification Communication to Users pursuant to BR15, the 'D-5 Voluntary DSR Period' shall start at 08:00 on D-1 and shall end at 04:59 on Day D, unless NGT determines that there is a requirement to exercise D-5 DSR Options on the next Day(s), in which case the D-5 Voluntary DSR Period shall end at 04:59 on the last day D when D-5 exercise is no longer required.

## 6 Impacts & Other Considerations

### **Does this Modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?**

None.

### **Consumer Impacts**

This Modification will remove some of the barriers identified by large Consumers of gas to their participation in the gas DSR arrangements, thereby facilitating an increase the quantities of DSR that Consumers are willing to offer to NGT via the DSR Option arrangements. If such offers are forthcoming and accepted then Consumers will have greater confidence that voluntary demand curtailment will be available to NGT during the Winter Period if required, thus mitigating the risk of a national gas supply shortage escalating to a GDE which could have detrimental impacts on a wider group of Consumers. The avoidance of involuntary curtailment of gas demand that would occur under the procedure for firm load shedding in a stage 2 GDE enhances electricity security of supply.

The introduction of a D-5 DSR Product will provide incentives for large consumers of gas, who require more advance notice of curtailment, to offer voluntary DSR to NGT at times when expected available supply is insufficient to meet forecast demand and would enable such consumers to recover their required value of turning down their gas offtake rather than at the Emergency Curtailment Trade Price (currently 30 day average SAP) that would otherwise apply in the case of firm load shedding.

### **What is the current consumer experience and what would the new consumer experience be?**

The introduction (via Modification 0822) of a financial incentive designed to cover the costs among Consumers, Users and Suppliers of setting up the capability to deliver voluntary DSR and extending the circumstances under which Consumers could be called upon to respond to provide this response was designed to enhance the incentives for large industrial Consumers to participate in voluntary DSR. Take-up for Winter 2022/23 has been modest however, with Consumers citing a difficulty to adequately assess liability and risk as the foremost barrier and others unable to participate due to insufficient leadtimes.

By giving Consumers (via their User) greater flexibility to specify a maximum number of occasions on which an instruction to reduce their demand could be called, reforming the product to be based on a minimum flow requirement instead of a reduction quantity that would not be known until prompt timescales and introducing a D-5 product would help to address such concerns and could result in greater levels of DSR participation. The new consumer experience would continue to be funded by all other Users based on their physical throughput via balancing neutrality and thus ultimately by all consumers, effectively as an insurance premium against the risk of a GDE.

Impact of the change on Consumer Benefit Areas:	
Area	Identified impact
<p><b>Improved safety and reliability</b></p> <p>Where insufficient physical supply to meet demand is forecast, the lack of ability to take sufficient demand off the system voluntarily could mean that the situation escalates towards a GDE, and the associated increased risks to network safety and reliability which result from falling pressures.</p> <p>This Modification is designed to encourage additional voluntary curtailment such that this pre-emergency tool would be available to NGT in preventing such an escalation and mitigate such risks materialising, which could potentially impact all consumer groups.</p>	Positive
<p><b>Lower bills than would otherwise be the case</b></p> <p>Should a GDE occur, the impacts on consumer bills are unquantifiable in advance but are likely to be significant as wholesale gas prices would rise in response to the insufficient supply situation that would trigger such an event. The insurance premium to enable further voluntary curtailment that this Modification would enable would provide a mitigation against such an impact. However, if, with hindsight, voluntary demand curtailment would not have been required based on the actual supply / demand position observed on the Gas Day during a Winter Period then the demand reduction triggered at D-5 would still be funded by Users through balancing neutrality which may then be passed on to consumers. It is also possible that exercise of D-5 DSR Options by NGT itself creates upward pressure on wholesale prices which could potentially feed through to customer bills.</p>	Positive
<p><b>Reduced environmental damage</b></p> <p>We do not envisage any quantifiable impact on the environment as a result of this Modification. There is potential for additional consumers to offer DSR that may deliver it via fuel-switching to a more polluting source than natural gas but this is unknown at this stage.</p>	Unknown / negligible
<p><b>Improved quality of service</b></p> <p>Declaration of a GDE resulting in compulsory firm load shedding would result in a significant impact on quality of service that for those parties that may be unable to continue their gas offtake. This Modification helps to mitigate such a scenario arising.</p>	Positive



<p><b>Benefits for society as a whole</b></p> <p>The potential impact on heating capability, gas fired electricity generation, interruption to industrial production and knock-on impacts into wider supply chains that a GDE is capable of causing could result in a major economic and societal impact for the country. Putting in place a comparatively modest financial incentive relative to the potential scale of these impacts as proposed by this Modification would provide additional mitigation against such risks arising. The avoidance of involuntary curtailment of gas demand that would occur under the procedure for firm load shedding in a stage 2 GDE enhances electricity security of supply.</p>	Positive
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## Cross-Code Impacts

The extension of eligibility requirements and introduction of a D-5 DSR product proposed by this Modification should also apply to Consumers connected to IGT networks, therefore an equivalent modification may be required to the IGT Code.

## EU Code Impacts

Regulation 8(3) of the EU Balancing Code (as transposed into UK law) requires that TSOs' balancing services must be procured via a tender process which this Modification would be compliant with. The proposal to include the costs of exercise of a D-5 DSR product within imbalance cashout processes is also consistent with Article 19(3) of this EU Network Code.

## Central Systems Impacts

No impacts on central systems are envisaged to implement this Modification. It is envisaged that invoicing activities associated with DSR Options (including any D-5 Options) would continue to be managed via the CDSP 'request to bill' process and existing system functionality and processes implemented as part of Modification 0822 used to recalculate energy balancing invoices to apportion the costs of DSR Options among all other Users based on their system throughput.

NGT may require additional data to be provided from the CDSP to determine the average demand of Consumers that participate in the DSR Option Invitation for the purposes of determining the quantity of DSR that is offered and which may be exercised.

# 7 Relevant Objectives

## Impact of the Modification on the Transporters' Relevant Objectives:

Relevant Objective	Identified impact
a) Efficient and economic operation of the pipe-line system.	Positive
b) Coordinated, efficient and economic operation of <ul style="list-style-type: none"> <li>(i) the combined pipe-line system, and/ or</li> <li>(ii) the pipe-line system of one or more other relevant gas transporters.</li> </ul>	Positive

c) Efficient discharge of the licensee's obligations.	None
d) Securing of effective competition: (i) between relevant shippers; (ii) between relevant suppliers; and/or (iii) between DN operators (who have entered into transportation arrangements with other relevant gas transporters) and relevant shippers.	None
e) Provision of reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards... are satisfied as respects the availability of gas to their domestic customers.	None
f) Promotion of efficiency in the implementation and administration of the Code.	None
g) Compliance with the Regulation and any relevant legally binding decisions of the European Commission and/or the Agency for the Co-operation of Energy Regulators.	None

Relevant Objective (a) “*efficient and economic operation of the pipe-line system*” is furthered by this Modification, which is designed to encourage further voluntary curtailment and thus mitigate the risk of a supply shortage escalating to declaration of a GDE. Should a GDE be declared and progress to Stage 2 then compulsory firm load shedding would result in disruption and inefficiency in the operation and use of the network as some parties that would wish to be taking gas would be prevented from doing so.

Specifically in respect of the introduction of a D-5 DSR product, this should be balanced against the possibility that an NGT decision to call demand off the system at D-5 turns out to be unnecessary as the market responds to the D-5 forecast position and more accurate supply/demand information is available closer to the day. Furthermore, exercise of D-5 DSR Options itself may lead to higher wholesale prices than would otherwise be the case.

NGT considers that on balance it would be beneficial to take precautionary action ahead of time to mitigate the larger risk of a GDE if consumers are willing to curtail their demand for a consumer defined compensation.

Relevant Objective (b) “*co-ordinated, efficient and economic operation of (i) the combined pipeline system and/or (ii) the pipeline system of one more other relevant gas transporters*” is also furthered by this Modification, also due to its mitigation of a GDE being declared. If such an event occurred, in addition to firm load shedding on the NTS, Gas Distribution Networks may be given instructions to implement the shedding of firm loads within their networks resulting in disruption and inefficiency at LDZ level too.

## 8 Implementation

Implementation is sought by early August 2023 to allow time for the amendments to be included within the DSR Options Invitation that NGT is obliged to issue by 31 August 2023. The following implementation dates are therefore suggested:

If a decision is received by 04 August 2023, the implementation date should be 07 August 2023.

If a decision is received after 04 August 2023 but by 07 August 2023, the implementation date should be 08 August 2023.

If a decision is received later than 07 August 2023, implementation should be on the next business day thereafter.

A change to NGT's Gas DSR Methodology statement will be required to include DMA (class 2) supply points within scope of eligibility to participate as well as DMC sites (class 1). Consultation on these changes is proposed to be being conducted concurrently with this Modification.

It will also be necessary to amend Special Condition 9.22.3(b) of the NTS Licence for the same reason and to enable NGT to accept DSR Market Offers that are posted pursuant to D-5 DSR Options. It is proposed that this process would be initiated following a positive decision on this Modification with NGT operating under derogation in the interim.

## 9 Legal Text

### Text Commentary

#### Text

The legal text and associated commentary shall be provided for the Workgroup to review at the appropriate time.

## 10 Recommendations

Panel is asked to:

- Agree that Authority Direction should apply; and
- Refer this Modification to a Workgroup for assessment.

## 11 Appendix 1: DSR Condition in the NTS Licence

Note: Ofgem has granted a derogation in relation to paragraph 9.22.3(c) to enable NGT to accept DSR offers where a Margins Notice is in force as well as a Gas Balancing Notification.

### **Special Condition 9.22 Implementing and maintaining the Demand Side Response Methodology for use after a Gas Balancing Notification**

#### **Introduction**

9.22.1 This condition sets out the licensee's obligations to:

- a) have in place and maintain the Demand Side Response Methodology for assessing and accepting Demand Side Response Offers;
- b) where directed by the Authority, run a trial of the Demand Side Response Methodology with any revisions proposed under paragraph 9.22.6(b); and
- c) following such a trial, send to the Authority a report on the outcome of the trial and a version of the Demand Side Response Methodology amended to address issues identified by the licensee during the trial and, if appropriate, containing any further proposed revisions to the Demand Side Response Methodology following conclusion of the trial.

#### **Part A: The Demand Side Response Methodology**

9.22.2 The licensee must have in place and maintain a Demand Side Response Methodology approved by the Authority.

9.22.3 The licensee must ensure that the Demand Side Response Methodology:

- a) ensures that any party making a Demand Side Response Offer is a party to the Uniform Network Code;
- b) sets out the criteria for determining that particular DMC Supply Point Components are DMC Supply Point Components in respect of which a party may not make Demand Side Response Offers;
- c) allows the licensee to accept Demand Side Response Offers only where a Gas Balancing Notification is in place or within stage 1 of a Gas Deficit Emergency;
- d) demonstrates compatibility with existing market arrangements by setting out the manner in which any Demand Side Response Offers accepted by the licensee are to be treated as Eligible Balancing Actions and included in the System Clearing Contract, System Marginal Buy Price and System Marginal Sell Price;
- e) promotes, and further facilitates, parties making Demand Side Response Offers to the licensee through open and transparent market-based arrangements;
- f) does not unduly preclude the emergence of commercial interruption arrangements;
- g) minimises distortions and unintended consequences on existing market arrangements and the principle of parties balancing their own positions in the wholesale gas market; and
- h) ensures that Demand Side Response is procured in a manner consistent with the licensee's duties under the Act and, in particular, the licensee's obligation to operate the pipeline system to which this licence relates in an efficient, economic and co-ordinated manner.

#### **Part B: Revising the Demand Side Response Methodology**

- 9.22.4 The licensee must, at least once in every period of two Regulatory Years, review, and if appropriate revise, the Demand Side Response Methodology in consultation with interested parties.
- 9.22.5 The consultation must allow a period of not less than 28 days in which interested parties can make representations to the licensee.
- 9.22.6 During the period of 7 days beginning with the date of completion of the consultation, the licensee must send to the Authority:
- a) a report on the outcome of the review;
  - b) a statement of any proposed revisions to the Demand Side Response Methodology that the licensee (having regard to the outcome of the review) reasonably considers would better achieve the Demand Side Response Methodology principles; and
  - c) any written representations (including proposals for revising the statement that have not been accepted by the licensee) that were received from interested parties during the consultation process and have not been withdrawn.
- 9.22.7 The Authority, within 28 days of receiving a report under paragraph 9.22.6(a) and a statement under paragraph 9.22.6(b), will:
- a) approve any proposed revisions;
  - b) direct the licensee to conduct a trial of the revised Demand Side Response Methodology to assess the effectiveness of the methodology and any revisions proposed by the licensee under paragraph 9.22.6(b); or
  - c) reject any proposed revisions.
- 9.22.8 In considering whether to approve the licensee's proposed revisions to the Demand Side Response Methodology, the Authority will have regard to whether they are consistent with the objectives in paragraph 9.22.3.

### **Part C: Trial and implementation**

- 9.22.9 Where the Authority directs the licensee to conduct a trial of the Demand Side Response Methodology comprising the proposed revisions as outlined in paragraph 9.22.7(b), the licensee must during the period of 28 days beginning with the last day of the trial submit to the Authority a report on the outcome of the trial, including any further proposed revisions (having regard to the outcome of the trial) to the Demand Side Response Methodology.
- 9.22.10 Following completion of the trial and during the period of 28 days beginning with the date of receipt of the submissions under paragraph 9.22.9, the Authority will:
- a) approve any proposed revisions and direct the licensee to:
    - i. develop appropriate modifications to the Uniform Network Code and other processes and systems to enable it to implement the revisions to the Demand Side Response Methodology;
    - ii. implement the revisions to the Demand Side Response Methodology as soon as is reasonably practicable and once the modifications, processes and systems under paragraph 9.22.10(a)(i) are complete; and
    - iii. publish the final revised Demand Side Response Methodology on its website and in such other manner as the Authority may direct; or
  - b) reject any proposed revisions to the Demand Side Response Methodology.

9.22.11 Where the Authority does not provide a direction under 9.22.7 or 9.22.10, the licensee must not implement the proposed revisions.

**Part D: Exception to compliance with condition**

9.22.12 The licensee may apply to the Authority for a derogation relieving the licensee of any of its obligations under this condition.

9.22.13 The Authority may, having consulted with the licensee and interested parties, direct that the licensee must temporarily or permanently cease operation of the Demand Side Response Methodology.