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Gas Significant Code Review Statutory Consultation

Consultation

Publication date: 16 June 2014

Response deadline: 16 July 2014

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Overview:
The aim of the Gas Security of Supply Significant Code Review is to reduce the likelihood, severity and duration of a gas supply emergency. We want to ensure that in an emergency the market rules provide appropriate incentives on gas shippers to balance supply and demand. We also propose a mechanism for paying large consumers if they are able to reduce their demand before an emergency. This is intended to avoid or minimise an emergency and protect consumers that incur high costs when interrupted.

In this statutory consultation we confirm our final policy decision set out in February 2014 to reform cash-out arrangements in an emergency. We also confirm the policy decision to proceed with development of a centralised demand side response (DSR) mechanism and to place a licence obligation on National Grid to develop it.

Alongside this document, we are publishing statutory notices relating to our proposals to modify the shipper, supplier and gas transporter licences. We are seeking views on whether the proposed changes to licences reflect the final policy decision.

Context

We began our Significant Code Review (SCR) into gas security of supply in January 2011 in response to our concerns with the gas emergency arrangements. We have consulted and received extensive feedback from gas shippers, consumers and transporters through consultation and stakeholder meetings. We have carefully considered these representations and where appropriate incorporated them into our proposals.

In February 2014 we published our final policy decision to reform the commercial arrangements that would apply in an emergency. We also decided to proceed with development of a demand side response mechanism whereby large consumers are able to voluntarily reduce their gas consumption, thereby helping avert an emergency or reducing the impact should one occur.

Associated documents

Statutory Consultation Notice – Gas Transporter Licence:
https://www.ofgem.gov.uk/ofgem-publications/88181/transporter.pdf

Statutory Consultation Notice – Gas Shipper Licence:
https://www.ofgem.gov.uk/ofgem-publications/88182/shipper.pdf

Statutory Consultation Notice – Gas Supplier Licence:
https://www.ofgem.gov.uk/ofgem-publications/88184/supplier.pdf

Uniform Network Code Text – TPD Section F:
https://www.ofgem.gov.uk/ofgem-publications/88185/unctpdsectionf-scrchanges.pdf

Uniform Network Code Text – TPD Section Q:
https://www.ofgem.gov.uk/ofgem-publications/88186/unctpdsectionq-scrchanges.pdf

Final Policy Decision – Gas Security of Supply Significant Code Review, February 2014:
https://www.ofgem.gov.uk/publications-and-updates/gas-security-supply-significant-code-review-final-policy-decision

Impact Assessment for Final Policy Decision – Gas Security of Supply Significant Code Review, February 2014:
https://www.ofgem.gov.uk/publications-and-updates/gas-security-supply-significant-code-review-impact-assessment-final-policy-decision

Updated Proposed Final Decision – Gas Security of Supply Significant Code Review, July 2013 (ref 128/13):
http://www.ofgem.gov.uk/Markets/WhlMkts/CompandEff/GasSCR/Documents1/130723_GasSCR_upfd.pdf

Gas Security of Supply Report, November 2012:
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=3&refer=Markets/WhlMkts/monitoring-energy-security/gas-security-of-supply-report

Proposed Final Decision – Gas SCR, July 2012 (ref 111/12):
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=85&refer=Markets/WhlMkts/CompandEff/GasSCR

Impact Assessment for the Proposed Final Decision – Gas SCR, July 2012 (ref 112/12):
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=91&refer=Markets/WhlMkts/CompandEff/GasSCR

Draft Policy Decision - Gas SCR, November 2011 (ref 145/11):
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=46&refer=Markets/WhlMkts/CompandEff/GasSCR

Initial Consultation - Gas SCR, January 2011 (ref 02/11):
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=1&refer=Markets/WhlMkts/CompandEff/GasSCR

Launch Statement – Gas SCR, January 2011:
http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=2&refer=Markets/WhlMkts/CompandEff/GasSCR

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Executive Summary

The GB gas market has historically provided secure supplies, and it is likely to remain resilient to all but the most extreme shocks. We have never experienced a gas deficit emergency in GB, and the probability of one remains low. However, it is prudent to ensure that the market arrangements provide appropriate incentives to maintain secure supplies. The aim of the Gas Security of Supply Significant Code Review (Gas SCR) is to reduce the likelihood, severity and duration of an emergency.

In this statutory consultation we confirm our final policy decision set out in February 2014 to reform cash-out arrangements in an emergency. We also confirm the policy decision to proceed with development of a centralised demand side response (DSR) mechanism and to place a licence obligation on National Grid to develop it. We are seeking views on whether the proposed changes to supplier, shipper and gas transporter licences reflect the final policy decision.

We intend to issue a direction to implement the changes to the Uniform Network Code (UNC) using our powers under Section 36C of the Gas Act 1986. We are seeking views on whether the proposed changes to the UNC reflect the final policy decision.

Cash-out reform

Gas shippers who do not balance their supply and demand are subject to cash-out charges. Under current arrangements, cash-out prices are frozen in an emergency. The emergency would be managed by National Grid instructing domestic gas suppliers to maximise flows and, where necessary, interrupting consumers.

Given GB's increasing reliance on imports, managing an emergency by instructing domestic supplies to flow may not be enough to resolve an emergency. Furthermore, under current arrangements the cost of interrupting consumers (including domestic consumers) involuntarily is not factored into the cash-out price. This means the risks of interruptions in an emergency sit with consumers who are poorly placed to manage them. Thus shippers do not account for the full value consumers place on maintaining their gas supplies.

In February 2014, we published our proposals for cash-out reform under the Gas SCR. Our rationale for cash-out reform remains as we set out in February. We still consider cash-out reform will improve incentives on shippers and reduce the likelihood, duration and/or severity of an emergency. Key aspects of our proposals are:

- Cash-out is unfrozen and dynamic throughout an emergency.
- The cost of network isolation is priced at the estimate of a domestic consumer's value of lost load (VoLL) – £14/therm.
- Consumers are paid for the involuntary DSR service they provide if interrupted in an emergency.

On this basis, we developed detailed business rules and legal text to implement cash-out reform.

DSR Mechanism

The gas market would benefit from large consumers reducing demand voluntarily ahead of an emergency. However stakeholders expressed doubts that a market for voluntary interruption would emerge of its own accord. A number of stakeholders suggested the development of a centralised mechanism for DSR.

In our final policy decision we decided to proceed with the development of a centralised mechanism for DSR, run by the system operator, National Grid Gas (NGG). We envisage this kick-starting the market for commercial interruption in the medium to long term. We are consulting on a licence obligation for NGG to develop a DSR methodology. This obligation sets out the objectives and principles we consider the DSR methodology should meet. We would decide whether to approve it with regard to these principles, before NGG could implement DSR.

Purpose of this document and consultation

In February 2014 we set out our final policy decision and consulted on business rules, legal text and code modification changes. Chapter 1 of this document summaries the final policy decision. Chapter 2 sets out stakeholder responses to the final policy decision and our response to these views. Chapter 3 summarises stakeholder comments on code and licence changes and sets out Ofgem's response. Chapter 4 sets out the policy aim, policy proposals and references the relevant part of business rules, UNC text and licence conditions for cash-out reform and the proposed DSR mechanism.

We are seeking views from stakeholders on whether the proposed licence conditions and UNC text reflect the final policy decision.

Alongside this document we have published statutory notices relating to our proposal to modify the shipper, supplier and gas transporter licences. These licence changes propose to implement the design set out in Chapter 4 of this document. This consultation closes on 16 July 2014.

Next Steps

We intend system changes for cash-out to be implemented ahead of winter 2015/16. We expect NGG to submit the DSR methodology for approval by March 2015. Subject to time required for system changes, we anticipate implementation of the DSR mechanism ahead of winter 2016/17.

At the end of the statutory consultation, and after we have considered the responses we may direct the modification to the licences of parties and the UNC. Following publication of any decision to modify from the Authority, relevant parties have 20 working days for licence changes and 15 working days for UNC changes in which to seek permission to appeal our decision to the Competition Markets Authority (CMA).

1. Summary of Final Policy Decision

Chapter Summary

This chapter summarises our final policy decision and sets out why we consider our cash-out reforms will reduce the likelihood, duration and severity of a Gas Deficit Emergency.

Gas SCR to Date

1.1. Within Great Britain (GB) shippers are required to ensure they buy enough gas to meet demand. If they do not take the same amount of gas off the system as they put on, they are liable for imbalance charges (called cash-out). Cash-out reflects the cost to the System Operator (SO) of balancing the system. They are generally more expensive than the costs the shipper would have faced had they balanced their position on the market. Therefore they provide the incentive on shippers to balance supply and demand. If the supply of gas is insufficient to meet demand the system operator can declare a Gas Deficit Emergency (GDE).[1]

1.2. Ofgem's Project Discovery[2] highlighted concerns that the incentives for gas shippers to ensure secure supplies and in particular set out issues with the current cash-out arrangements. We began our Gas Security of Supply Significant Code Review ('the Gas SCR') in January 2011 in response to these concerns, particularly that in the event of a GDE:

- Domestic flows might be insufficient to meet demand in an emergency
- Freezing the cash-out price in an emergency might not provide sufficient incentives to attract gas to GB
- The risk of interruption in an emergency currently sits with consumers who are not best placed to manage them

1.3. Since November 2011, the publication of our draft policy decision, the Gas SCR has focussed on reforms to the commercial arrangements that would apply in an

[1] Throughout this document the terms 'GDE' and 'emergency' may be used interchangeably. Strictly speaking a gas emergency could refer to a number of different types of emergency, which may variously occur on a regional or national basis and which may be caused by specific transportation constraints or by an overall deficit in gas supplies. The Gas SCR has only ever been concerned with Gas Deficit Emergencies. Where the word 'emergency' is used in this document we are referring to a GDE unless otherwise stated. Further details on gas emergencies can be found here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/47867/6912-national-emergency-plan-gas-electricity.pdf

[2] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=73&refer=Markets/WhlMkts/monitoring-energy-security/Discovery

emergency. We provided our Gas Security of Supply Report to government in November 2012[3], assessing the risks and resilience of the gas market and considering some further measures that could enhance security of supply. After considering and quantitatively assessing some options such as intervention in the form of supporting storage, government concluded these were not deemed to be cost-effective[4].

1.4. Following consultation with stakeholders we published our final policy decision on cash-out reform in February 2014. We also published our decision to proceed with a Demand Side Response (DSR) mechanism, subject to a methodology design that meets the principles we set out. We have placed a licence obligation on National Grid Gas to develop a DSR methodology.

Cash-Out Reform

1.5. The aim of the Gas SCR is to reduce the likelihood, severity and duration of a GDE. Our view is that reforming the market rules that prevail in a GDE is likely to be the most efficient way to achieve this. As such, our reforms have sought to ensure that the cash-out arrangements provide the right incentives on gas shippers to balance supply and demand.

1.6. Our rationale for cash-out reform is as follows:

a. **A GDE will be the result of a shipper imbalance and shippers are likely best placed to take the most efficient steps to mitigate the risks of an emergency if properly incentivised.** This is because by definition an emergency arises when there is insufficient gas available to meet GB demand (ie the system is net short). Cash-out charges are key to incentivising shippers to balance their supply and demand.

b. **Ofgem has long-standing concerns with the existing cash-out arrangements in the event of an emergency**. Under current arrangements, cash-out prices are frozen in an emergency. The emergency would be managed by National Grid instructing domestic sources of supply to maximise flows and, where necessary, interrupting consumers. Given GB's increasing reliance on imports, managing an emergency by instructing domestic supplies to flow may not be enough to resolve an emergency. Furthermore, we are of the view that interrupting consumers is a balancing action, but at present interruptions are not treated as such. Our concerns with the impact this has on incentives for shippers are well documented.

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[3] http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=3&refer=Markets/WhlMkts/monitoring-energy-security/gas-security-of-supply-report

[4] Gas Security Policy Framework https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/236756/Gas_Security_Policy_Announcement_-_Final__3_.pdf

c. **The risks to GB security of supply at present are low but they will change over time as indigenous supplies decline**. It seems prudent to implement reforms that create incentives (and thus incur costs) at a level that changes in proportion to the threats to security of supply.

1.7. Whilst our proposals for cash-out reform have evolved since the draft policy decision they have consistently sought to improve the efficiency of price signals and transfer the risks of an emergency from consumers to shippers.

1.8. Key aspects of our reforms are:

- **Cash-out is unfrozen and dynamic throughout an emergency**
- The cost of **network isolation is priced in at the estimate of interrupting domestic consumers** (referred to as a consumer's Value of Lost Load (VoLL)) - £14 per therm.
- **Consumers will be paid for providing involuntary DSR** if interrupted in an emergency

1.9. Our reforms improve the efficiency of price signals in two ways – by unfreezing cash-out prices in an emergency and ensuring prices reflect the cost of consumer interruptions.

1.10. Unfreezing the cash-out price in an emergency should provide the right incentives on shippers to ensure that they balance their portfolio. This will ensure the levels of imports attracted are based on the state of the system on any given day within a GDE. Attracting additional sources of gas will reduce the severity and duration of an emergency should one occur.

1.11. Currently the cost of interrupting consumers is not priced into cash-out. The effect of the current non-costing of consumers' interruptions taken to balance the system is to shield industry from facing the full cost that an emergency imposes on consumers. This dampens cash-out prices as a signal of scarcity at times of system stress, and leads to reduced incentives for shippers to balance their positions efficiently and procure gas to avoid consumer disconnections. Also, consumers are not paid for the demand side response they provide by virtue of being involuntarily interrupted. This places the risk of a GDE on consumers and lessens the incentive on shippers to ensure they contract for enough supply to meet demand. Our reforms will transfer the risks from consumers to shippers who are better placed to manage them. As shippers take actions to mitigate the transfer of risk, the likelihood of a GDE occurring will be reduced if shippers take measures that results in additional gas being available. Measures taken by shippers, such as signing interruptible contracts or changes to hedging strategy, could also reduce the severity and duration should an emergency occur.

DSR Mechanism

1.12. A key part of the Gas SCR is identifying the cost of interrupting consumers so this can be priced into cash-out. For those consumers where it is possible to do so,

we think this is best achieved through participation in the market. Consumers would signal a price for which they would voluntarily reduce demand ahead of an emergency. The benefits of greater levels of DSR are:

- Reduced likelihood of entering an emergency (or for one to escalate further)
- Interruptions in price order – rather than size as in the current arrangements
- Payment to consumers for voluntary interruption

1.13. We have worked with stakeholders to see how this could be achieved. Large consumers highlighted a potential lack of trust between shippers and consumers which was inhibiting the development of commercial DSR. They have also expressed concerns that agreements with shippers could be utilised more frequently in response to commercial drivers rather than genuine system tightness.

1.14. Having listened to stakeholder views we consider that there is a case for a centralised system operator run mechanism at least in the short term. We see this potentially kick-starting a market for commercial interruption in the medium to long term as industry becomes more familiar with the concept of providing DSR on a commercial basis.

1.15. Our final policy decision in February 2014 confirmed our intention to proceed with a DSR mechanism and to place a licence obligation on NGG to develop the DSR methodology. We consulted on the draft licence condition.

2. Responses to Final Policy Decision

Chapter Summary

The February 2014 consultation was focussed primarily on business rules for cash-out and legal text. Some stakeholders also made comments about the general policy proposals and these are summarised here. We set out our thinking and response to these comments in this chapter.

Responses to Cash-Out Reform

2.1. Our proposed changes to the cash-out arrangements have evolved since our draft policy decision in light of stakeholder feedback. We have sought feedback through our consultations, which can be found on our website, and through stakeholder meetings which have included policy workshops.

2.2. Stakeholder responses to our final policy decision tended to focus on the DSR mechanism. Those that commented on our proposals to reform the cash-out arrangements mostly considered them to be an improvement on the proposals we made in 2012. Some of the responses indicated that stakeholders were now supportive of our cash-out reforms in light of these changes. However, some stakeholders still expressed concerns with the proposals.

Unfreezing cash-out prices

2.3. Throughout the SCR process a number of stakeholders have expressed concerns about an unfrozen, uncapped cash-out price being able to reach any level in an emergency. As noted in previous publications and workshops, there is no hard limit on the level that cash-out prices could reach under current arrangements. Up until the point at which they are frozen under current arrangements, prices could reach any level.

2.4. Furthermore, we proposed capping cash-out prices earlier in the SCR process, but this faced opposition from the vast majority of stakeholders. Consumers were concerned that any cap would limit their ability to fully recoup the costs they incur when reducing demand. Shippers were concerned that any cap would act as a target for trading. The SO was concerned that any cap would limit its discretion to take actions in an emergency. These points were reiterated by a range of stakeholders in their latest responses.

2.5. In moving to an unfrozen price we have considered parties' views and been careful to avoid any unintended consequences. For instance, we have introduced criteria to ensure that unfrozen cash-out prices in an emergency will continue to be based on a System Average Price (SAP) that is underpinned by robust trading data. Similarly, we have introduced a safeguard to prevent these unfrozen cash-out prices

falling as an emergency worsens. Without this safeguard, there could be perverse incentives if cash-out prices reduce as the emergency escalates. These safeguards have been well received, both in stakeholder workshops and responses.

Accounting for the cost of consumer interruptions

2.6. Accounting for the cost of consumer interruptions entails attaching a price to any such interruptions. We also propose paying consumers for the service they have provided in the event that they are interrupted to balance the system.

2.7. Support for this element of our proposals remains mixed. Some stakeholder responses indicated that the additional steps we have taken to minimise distortions and limit the costs faced by the industry are sufficient to assuage their concerns regarding payments to consumers. For instance, stakeholders had expressed concerns that in certain situations these monies from short shippers may be insufficient, resulting in what we have referred to throughout the SCR as a "shortfall". Any shortfall would have been smeared across all shippers via the neutrality process according to their throughput on the day.

2.8. We have reduced the likelihood of any "shortfall" in net cash-out funds and minimised the size should one occur by revising elements of the policy. We think it is unlikely that a shortfall would arise when the system is sufficiently net short for consumer interruptions to occur.[5] Even so, we are mindful that excessive risks should not be transferred to shippers, particularly to those shippers that are not responsible for causing an emergency. We have therefore taken several additional steps to mitigate the effects of any shortfall.

2.9. Stakeholders have been supportive of these changes. Whilst some note there is still a risk of contagion, completely eliminating the risks of shipper default has not been workable. As we have noted previously, this risk is also a feature of the current arrangements.

2.10. Despite the changes we have made to our reforms, some stakeholders still remain opposed to the introduction of NDM VoLL into the cash-out arrangements as the price of network interruption and opposed to payments to consumers. They have taken the view that £14/therm is significantly above any price that has been

[5] This is for two reasons. Firstly, by definition a GDE will be the result of a shipper imbalance. This means that at the time of consumers being interrupted, the system must be net short. As such the volume of short shippers should generally equal the volume of long shippers + the volume of any consumer interruptions. Strictly speaking shippers can recover their positions within-day (ie, after consumer interruptions have already occurred). However, the scope for them to do this is likely limited in a GDE relative to normal market conditions. Secondly, even if the volume of short shippers is less than the volume of long shippers and consumer interruptions, a shortfall will only arise if that insufficient volume translates into an insufficient monetary sum. Importantly though, short volumes will entail payments in at the marginal price (ie, SMPbuy). Long volumes and consumer payments will entail payments out that are at or below the marginal price (ie, £14/therm, 30-day SAP, SMPsell). This further reduces the likelihood of money out exceeding money in and creating a shortfall.

previously seen in the market, or that some stakeholders would expect to see in the future, notwithstanding the impact of proposed electricity market reforms. We note in paragraph 2.30 the price levels reached in the North East US markets in January 2014 during a cold snap as providing useful insights in this regard. Furthermore, we have never had an emergency in which consumers have been interrupted, and so past price levels are likely a poor guide as to the level that prices may reach in an emergency. Lastly, we would re-iterate that the purpose of setting NDM VoLL at this level is to reflect the cost to consumers of being interrupted. The fact that this level is well above the level reached by historical market prices is consistent with the high value that consumers place on maintaining secure supplies.

2.11. The respondents in question also note the additional costs that consumer payments will place on industry in an emergency. They argue that the combination of higher prices and additional payments to customers will affect market prices both outside of and during an emergency, as well as increasing the credit requirements associated with both trading and balancing. The potential costs and risks associated with prices reaching £14/therm, particularly with respect to credit, are discussed later in this chapter.

2.12. A stakeholder raised concerns regarding the calculation of the NDM VoLL. We have taken on board stakeholders' comments earlier in the SCR when we revised our estimate of NDM VoLL.[6]

2.13. One stakeholder also expressed concerns about NDM VoLL acting as a target price for trading. We note that no new evidence has been offered to support this. Competition in the market[7] should create incentives to trade below VoLL. If a party could exercise market power, then they may be able to target VoLL. However, in such a situation, prices could theoretically be unlimited. Further, ex-post regulatory safeguards – such as the regulation on wholesale energy markets integrity and transparency (REMIT) – are in place to provide for such behaviour to be investigated if we think it may constitute market abuse.

2.14. One stakeholder suggested that using existing demand attribution calculations would be more accurate/appropriate for NDM payments than our intention to use average volumes and load bands. Our proposal ensures that similar consumers (eg, domestic) are paid the same for a given interruption. We agree that a more sophisticated approach could lead to a more accurate estimate of NDM volumes. However, this would likely require the creation of additional systems to do the necessary calculations. The cost of establishing such systems is difficult to justify given the low probability of a GDE.

[6] See paragraphs 2.29 to 2.39 in our July 2013 responses document: https://www.ofgem.gov.uk/publications-and-updates/gas-security-supply-significant-code-review-updated-proposed-final-decision-%E2%80%93-responses-document

[7] In this document we use the terms 'market' and 'markets' as shorthand for referring to different segments of the energy sector. For the avoidance of doubt, these terms are not intended to describe or otherwise suggest the approach that may be taken by Ofgem for the purposes of market definition in competition law investigations.

Electricity interactions

2.15. A number of stakeholder responses flag up the ongoing uncertainty regarding the impact on the gas market of reforms proposed as part of the Electricity Market Reform (EMR) Capacity Mechanism (CM) and Electricity Balancing SCR (EBSCR). These reforms increase the penalties incurred by electricity generators that fail to generate at times of system stress.

2.16. As mentioned in previous publications, changes in the generation mix mean that any gas emergency is almost certain to result in electricity curtailments, although any gas emergency will be extremely rare. If such an event arises, any gas-fired power stations that decide to provide DSR in the gas market will likely incur higher costs than has been the case in the past (ie, due to increased electricity market penalties). This applies equally to the provision of DSR commercially (ie, by offering on the OCM) or to the provision of DSR in a centralised mechanism in the event that gas-fired generation is eligible. To cover these increased costs gas-fired power stations will almost certainly increase the price that they attach to their DSR. This could entail gas-fired power stations offering DSR on the OCM at a price in excess of £88/therm.[8]

2.17. A number of stakeholders have continued to express concerns with these new electricity market penalties feeding through into the gas market. On the specific impact of the Gas SCR reforms, we would note that the risk of electricity market penalties feeding through to the gas market is largely unaffected by our proposed reforms to the gas cash-out arrangements. This is because there is no hard cap on gas cash-out prices either before or after our reforms. The proposed introduction of a DSR mechanism should also encourage industrial and commercial (I&C) consumers to voluntarily offer DSR ahead of a GDE. This could then reduce the likelihood of gas-fired power stations being curtailed, thus going some way to mitigating concerns regarding this interaction.

2.18. Furthermore, Ofgem has been very mindful of these risks and considered the gas and electricity interactions as a whole to ensure cash-out policy proposals provide appropriate incentives and price signals. Central to policy development is the role for market parties to determine their own response to arrangements and actions they may take to mitigate risks. We are still of the view that gas plants have a number of viable options available to manage the risks of such an event, including investing in back-up fuel capability and seeking remuneration via the Post Emergency Claims (PEC) process. We note that whilst the PEC process could help keep some extreme prices out of the market, these costs would still have to be met by short shippers eventually via neutrality charges.

[8] Should Demand Control actions have to be taken in the electricity market, EBSCR reforms mean that power stations that are short will face a cash-out price equal to £3000/MWh from 2015/16. This will then rise to £6000/MWh by 2018/19. These equate to equivalent gas prices of £44/therm and £88/therm respectively for a 50% efficient gas-fired power station.

European Interactions

2.19. One stakeholder has expressed concerns that our proposed reforms to the GB cash-out arrangements may unduly incentivise delivery of gas to GB consumers over those in interconnected markets. They asked for clarification on how this relates to Regulation (EU) 994/2010 which states that any measures introduced must avoid: unduly impeding cross-border flows, endangering seriously the gas supply situation of another Member State, or inhibiting access to cross-border infrastructure as far as technically and safely possible.

2.20. We consider our cash-out reforms to be consistent with these conditions. The introduction of cash-out reform ensures price signals in GB reflect the value that GB consumers place on secure supplies. If prices in an interconnected market exceeded the NBP (National Balancing Point) price our reforms in no way preclude gas from flowing to that market. This is entirely in line with the principles of the internal market whereby gas should flow to those that value it most.

Other comments

2.21. One stakeholder questioned whether the SCR reforms would actually help ensure shippers/suppliers meet their contractual supply obligations in emergency conditions. They therefore pointed out that there are other measures besides cash-out reform that could be taken to protect security of supply, such as placing an obligation on shippers/suppliers.

2.22. We would note that our initial consultation on the Gas SCR[9] considered a range of measures that could be implemented to improve GB security of supply, of which cash-out reform was one. Furthermore, we submitted a Security of Supply Report[10] to government in November 2012 setting out a range of further measures that could be taken in addition to the SCR reforms. After modelling these options, government decided not to proceed with any further measures to protect security of supply (eg, greater intervention in the form of supporting storage) as it concluded these were not likely to be cost-effective.[11]

9 http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=1&refer=Markets/WhlMkts/CompandEff/GasSCR

10 http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=3&refer=Markets/WhlMkts/monitoring-energy-security/gas-security-of-supply-report

11 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/236756/Gas_Security_Policy_Announcement_-_Final__3_.pdf

Responses to Impact Assessment

2.23. Some stakeholders also commented on our assessment of the impact of our proposals, both in terms of the anticipated costs and benefits. This section sets out our further thinking and response to these comments.

Credit

2.24. Balancing indebtedness (and thus required balancing credit) is largely dependent on the level that cash-out prices reach, as well as the extent of shipper imbalances and any costs imposed on the industry when balancing the network. Because our proposed reforms have the potential to alter all of these we are mindful that cash-out reform will likely have implications for the extent of industry indebtedness for balancing.

2.25. Several stakeholders expressed concerns with the way the credit arrangements function in an emergency. For instance, the ten day time lag associated with the calculation of User Anticipated Balancing accruals has been raised as a key risk in an emergency when there may be an increased probability of shipper default. There are also concerns that the existing neutrality bank account and its associated overdraft is insufficient to deal with cash flows in a GDE.

2.26. Whilst we agree that the proposed changes to cash-out may have brought these issues into sharper focus, some of the issues are not specifically related to the Gas SCR. Rather they seem to be with the way the broader credit regime functions in an emergency and would likely arise under current arrangements.

2.27. We are supportive of the discussions that have already begun at some industry meetings to resolve these issues and note that industry is able to raise a modification to consider these issues if this is thought to be appropriate.[12] We have maintained throughout the SCR that Ofgem would always give due consideration to any changes the industry may deem necessary to the existing credit arrangements in a GDE. We will participate in industry discussions as appropriate.

2.28. Despite these concerns with the general state of the credit arrangements, it was noted earlier that some stakeholders have also taken the view that the introduction of a £14/therm price for NDM interruptions will definitely result in both greater imbalances and higher prices. This would then require greater levels of security in order to cover industry indebtedness, and these increases have not been factored in our quantitative assessment of our reforms. Concerns regarding this possible increase in indebtedness also raise the possibility that increased credit requirements could actually increase the probability of some shippers entering bankruptcy. As the losses incurred by insolvent shippers are borne by the rest of the industry via the neutrality mechanism, the possibility of a 'domino effect' has been raised whereby socialised losses cause further shipper defaults.

[12] http://www.gasgovernance.co.uk/ebcc/300414

2.29. As has been made clear in this and recent publications, the impact of our proposed cash-out reforms on prices is difficult to predict. We have also been mindful of the results of the very cold winter experienced in 2013/14 in the USA. Spot prices at North-Eastern hubs around New York and Boston peaked as high as £8-9/therm. These peaks were in excess of 30 times the "normal" price level. A comparable calculation for GB with prices peaking at £14/therm equates to an increase on "normal" price levels closer to 20 times. This suggests that price spikes equivalent to those envisaged as possibly occurring under cash-out reform are not actually as unprecedented as stakeholders may have previously considered.

2.30. Furthermore, many of the regions in the US where these price spikes occurred also had Operational Flow Orders in place. These entail increased imbalance charges on any short imbalance outside a given tolerance (these can amount to as much as ~£3/therm in additional charges).[13] Whilst a full-blown emergency was never reached, a number of consumer curtailments were actioned by pipeline operators over the course of the winter. We have been unable to find evidence of shippers in the USA being unable to manage the credit requirements associated with these price spikes. We have also found little evidence of trading liquidity drying up (ie, as a result of credit requirements forcing shippers to exit the market).

2.31. Still, we are mindful that relative to current arrangements our proposed reforms do increase the likely extent of shipper imbalances in an emergency[14] and introduce new payments to involuntarily interrupted consumers. Both of these factors are likely to contribute to increased shipper *balancing* indebtedness in a GDE relative to current arrangements, particularly a GDE in which NDM interruptions occur. This would necessarily place greater strain on balancing credit requirements.

2.32. However, our concerns are that the current arrangements would actually entail unjustifiably low levels of balancing indebtedness, particularly for short shippers. This is not a virtue of the current arrangements – rather it is a shortcoming that we have repeatedly identified as causing shippers to discount the costs of an emergency and fail to take sufficient steps to prevent one happening.

2.33. Moreover, uncertainties regarding the extent of prices in a GDE both before and after our reforms have meant quantitatively costing this impact of our reforms has not been feasible. Importantly though, we also consider we have been unable to quantify many of the benefits of the SCR. Notable unquantified benefits would be the reduced cost of trading as a result of unfrozen prices at the end of a GDE, or the dynamic effects of any steps taken by shippers to improve security of supply. Both these factors would necessarily alleviate the costs and risks associated with increased balancing indebtedness in a GDE.

2.34. Lastly, one stakeholder attempted to estimate the possible balancing security requirements associated with our reforms in a previous response. Ofgem has

[13] See for example: http://www.1line.williams.com/Transco/files/training/Critical_Day.pdf
[14] This is due to incorporating NDM consumers into the ECQ arrangements.

engaged in further discussions with the relevant stakeholder to understand their latest efforts in this regard.

2.35. We noted in previous publications that we had some concerns with the respondent's approach to calculating balancing credit impacts.[15] The simplicity of the current calculation means it fails to fully account for the diverse array of factors that could affect a shipper's required level of balancing security in an emergency. For instance, the impact of neutrality smears on balancing security is not properly accounted for in the calculation at present. Whilst we appreciate that there is a lack of historical evidence on which to base this kind of analysis, we still think further consideration needs to be given to how any such calculation is done.

2.36. Furthermore, when quantifying the *relative* impact of our reforms it is important to calculate an estimate of balancing security requirements in an emergency under current arrangements to act as a baseline. As we have noted in previous publications, prices would likely reach unprecedented levels in an emergency under current arrangements and this would therefore entail unprecedented levels of balancing security. What this price level would be is difficult to predict and again, we appreciate that the respondent's decision not to attempt such an estimate is likely due to the lack of historical evidence on which to base such an assessment. Nevertheless, understanding the relative effect on prices is essential to being able to properly assess the impacts on credit.

2.37. Despite these concerns, we are supportive of the respondent's efforts to help shippers understand the possible impact an emergency may have on their credit requirements. As with other industry discussions, we are open to engaging and participating as appropriate.

Costs of mitigating actions

2.38. Throughout the Gas SCR we have persistently made the point that the cheapest and most effective way for shippers and suppliers to mitigate the risks they face is for them to change their behaviour. This could be by taking measures that reduce their likelihood of being short in an emergency. One stakeholder argued that our previous analysis failed to quantify the costs associated with the kinds of mitigation measures open to shippers and suppliers. They also questioned whether most mitigation measures would actually have a discernable impact on security of supply.

2.39. Below we set out a range of mitigation measures open to shippers and suppliers, some of which were raised by the stakeholder in question.

[15] See paragraph 2.62 in our July 2013 responses document: https://www.ofgem.gov.uk/publications-and-updates/gas-security-supply-significant-code-review-updated-proposed-final-decision-%E2%80%93-responses-document

- **Increasing forward hedging.** The stakeholder noted that one way to reduce the risks of being short in a GDE was for suppliers to contract forward for their peak demand, and then sell any excess into the spot market (ie, on any days when demand was below peak levels). Whilst we consider increased forward hedging to be a viable mitigation strategy, we would envisage shippers and suppliers making incremental changes rather than moving to fully hedging peak demand. This would perhaps be more consistent with the low likelihood of a GDE.

- **Holding more storage capacity and/or altering the utilisation of storage capacity.** Gas storage plays an important role in meeting consumer demand during winter, particularly on peak days. The stakeholder provided estimates of the costs reserving half of the capacity at Rough and Hornsea for use solely in the event of a GDE. We would question whether this is a plausible strategy for mitigating the risks of a GDE given it is effectively predicated on an assumption that a GDE will happen in any given year with certainty. The low likelihood of a GDE suggests utilising storage in this way would not be an efficient response to the incentives being placed on shippers.

- **Diversifying supply portfolio.** A shipper that is reliant on a single piece of supply infrastructure to meet their supply/demand obligations is at risk of being significantly imbalanced in the event that that piece of infrastructure suffers an unexpected outage. It is necessarily difficult to quantify the costs to each shipper (and therefore the industry as a whole) of taking such steps. This is something each shipper must consider when looking to mitigate the risks of a GDE.

- **Signing interruptible contracts.** We are aware that feedback from stakeholders has been that a commercial market for DSR would not emerge, which is why we are proposing to introduce a centralised DSR mechanism. Nevertheless, we still see consumers and shippers as being well placed to negotiate for commercial DSR and consider a DSR mechanism (if implemented) may even help facilitate these negotiations in the future. Any such contracts would help a shipper reduce their imbalance exposure in an emergency by allowing them to avoid going through the Emergency Curtailment Quantity (ECQ) process for any consumers they have successfully negotiated with.

- **Investing in new infrastructure.** Shippers have argued that cash-out reform would not bring forward any new investment in and of itself. We acknowledge that at present it is highly unlikely that a piece of infrastructure would go ahead with the sole purpose of dealing with the risks of a GDE. However, it is still entirely rational for a shipper considering such an investment to account for the value of the facility in all possible circumstances. Our proposed reforms would likely increase the value of new infrastructure near or during a GDE. Whilst such a situation is unlikely to arise, we question whether a shipper would discount this possibility completely. Moreover, if the risks of a GDE were to increase we would expect the value of new infrastructure to necessarily increase as well.

- **Financial mitigations.** The stakeholder raised the possibility of shippers or suppliers taking out disaster insurance or putting aside a payments pot to deal with the risks of a GDE, most notably those associated with consumer payments. The cheaper of these two (disaster insurance) was estimated as costing suppliers 5% of the value of the expected industry losses due to consumer payments in a GDE. However the costs calculated by the respondent appear to be based on the most extreme GDE modelled by Pöyry in which consumer payments amounted to ~£1.3bn. Still, we accept the stakeholders view that any such financial mitigation will not actually contribute to improved security of supply.

2.40. When the risks of an emergency occurring are very low, the rational response may well be for suppliers and shippers to take no mitigating measures. Here the upfront costs of taking steps to mitigate the risks of an emergency are likely greater than the costs associated with simply remaining exposed to the risks of high cash-out prices and emergency consumer payments. When the risks of an emergency occurring are relatively high the opposite is the case.

2.41. In order to fund these kinds of mitigation measures, shippers and suppliers will likely have to increase their prices. In this case though there is a clear benefit: the shipper/supplier benefits by reducing its likely exposure to emergency consumer payments and consumers benefit from more secure supplies. Furthermore, the necessary increase in prices due to mitigation may well be less than the increase associated with taking no mitigating measures.

Other comments

2.42. One stakeholder was unclear as to how our IA had quantified the impact of the Gas SCR on the likelihood, severity and duration of an emergency. Our IA made clear where we have relied on quantitative evidence, and where quantitative analysis has not been feasible. In particular, Appendix 2 provided a detailed description of the pros and cons of the various quantitative modelling conducted for the Gas SCR, as well as summarising stakeholder feedback on our quantitative modelling. Throughout our IAs we have clearly stated that given the limitations of modelling low probability, high impact events, we think the qualitative analysis and rationale for our reforms are just as important as any quantitative analysis.

2.43. One stakeholder noted that the costs to the economy of a GDE were modelled by Pöyry as being at times in excess of £50bn, but was unsure where it was shown how our reforms, including a DSR mechanism, reduced these costs.

2.44. This was shown in Figures 33, 36, 37 38 and 39 in Pöyry's report[16]. All show that a more efficient disconnection order resulting from our reforms reduces the economic costs of a GDE. The modelling assumed that a DSR mechanism would bring forward the greatest amount of DSR for use in an efficient manner. As such the

[16] See pages 78-84 in Pöyry's report: https://www.ofgem.gov.uk/ofgem-publications/85990/poyrygasscrdsrcbafinalreportv20.pdf

scenarios where a DSR mechanism was in place resulted in the greatest reduction in the costs of a GDE.

2.45. Finally, one respondent also raised concerns that the effect of higher gas prices feeding through to the electricity market had not been properly quantified in Ofgem's latest IA. We note that this point has also been raised in comments on earlier modelling commissioned for the Gas SCR. We acknowledge that we have not directly quantified all second order effects, including this one. However, as we have stated previously, the gas price impacts of the Gas SCR are uncertain. This means the impacts on electricity prices are also uncertain.

2.46. In some instances it is possible that increased gas prices (eg, as a result of NDM VoLL being factored in) may feed through into higher electricity prices. However, a frozen price under current arrangements may mean high gas prices feeding through into the electricity market for excessive periods of time. Similarly, Pöyry's modelling primarily showed that greater volumes of I&C DSR (be it due to commercial negotiations or the establishment of a DSR mechanism) increased the security of supply of gas-fired power stations. This reduced the likelihood of electricity consumers being interrupted means a lower probability of electricity VoLL influencing electricity prices. In both these latter instances our proposed reforms would actually reduce costs in the electricity market. We are therefore of the view that the omission of this second order effect from our IA is unlikely to significantly affect any assessment of the expected net benefits of the Gas SCR.

Responses on DSR Mechanism

2.47. We consulted on a draft licence condition to oblige NGG to develop a methodology for a DSR mechanism. This condition also set out the principles that the methodology should meet. Several respondents supported our decision to proceed with a DSR mechanism. Our decision to allow for more time to develop the specific design of the DSR mechanism, including trialling, was also mostly positively received.

2.48. One stakeholder expressed concerns with the delay in the implementation timelines for the DSR mechanism, relative to cash-out reform. They suggested this made assessing the overall impact of the combined proposals difficult, as the final design of any DSR mechanism remained uncertain. Our view is that the current cash-out arrangements in an emergency may not provide efficient price signals and are not fit for purpose in light of our increasing dependency on imports. We think cash-out reform is in consumers' interests as it will help ensure efficient price signals and act to reduce the likelihood and/or severity or duration of a GDE. It is therefore prudent to implement cash-out reform as soon as possible.

2.49. There may be further benefits to consumers if a DSR mechanism can bring forward additional DSR, provided the mechanism does not create distortions. Ensuring the design of any DSR mechanism is appropriate and avoids distortions will require time to get the detailed methodology right. For the avoidance of doubt, the actual decision to trial and implement any DSR mechanism will come as and when any detailed methodology that is submitted by NGG is approved by Ofgem. The

licence obligation we are consulting on sets out the objectives and principles we consider the DSR methodology should meet.

2.50. Another stakeholder noted that a DSR mechanism would likely complement cash-out reform, but suggested possibly allowing more time to assess the impact of cash-out reform (eg, on the extent of commercial interruption) before proceeding with a DSR mechanism. Here we would highlight the risks of putting a DSR mechanism on hold given the extensive feedback we have received from many consumers that significant volumes of commercial interruption are unlikely to emerge irrespective of cash-out reform. Furthermore, the impact of the Gas SCR on commercial interruption would likely only be truly tested in the event of a GDE or near-GDE. We are mindful of the risks of a DSR mechanism duplicating or crowding out any commercial interruption. As such, the principles the mechanism must meet have been designed to avoid this kind of distortion.

2.51. Another stakeholder expressed concern that the additional time being given for NGG to develop the DSR methodology risks being wasted if Ofgem does not approve the methodology. This would be at a time when the industry is already under strain to implement a wide range of changes to both the gas and electricity markets. Whilst we acknowledge that such a risk exists in this process, this risk is present in any modification process that requires Ofgem approval. We have provided clear principles that the methodology must satisfy in order to meet our objectives.

Participation of gas fired generators

2.52. Some stakeholders disagreed with the implications of Ofgem's interpretation of some of the DSR principles and highlighted our views on the participation of gas-fired generators. In our final policy decision document, we set out our initial view that gas-fired generators should be excluded from participation in the DSR mechanism. This is because we have concerns about the potential impact on current market arrangements if a DSR mechanism removed liquidity from the OCM. Our current view remains unchanged, but we have not made a decision on this issue; it is for NGG to make proposals on the exact design.

2.53. Some stakeholders considered that the exclusion of gas-fired generators could be discriminatory. Our view is that the methodology should determine eligibility, and this should be considered in line with the principles set out in the licence condition. Any DSR methodology submitted to Ofgem will be assessed according to the principles set out in the licence condition. We have not ruled-out the inclusion of gas-fired generators – provided that a methodology that included them could meet our principles.

Option fees

2.54. Some stakeholders thought including option fees would be important to encourage participation in any DSR mechanism. In our final policy decision, we set out our initial views that including option fees was unlikely to be cost effective given the low likelihood of a GDE. This was supported by the results of modelling carried

out for our impact assessment. Several stakeholders also referred to this particular finding of the modelling in their responses.

2.55. As with our views on gas-fired generation, we have not reached a decision on this issue. If the DSR methodology contained option fees they would have to be cost-effective, in line with the principles set out in the licence condition.

Moffat

2.56. One respondent considered that shippers at the Moffat exit point, who deliver gas to the island of Ireland, should be eligible to participate in the DSR mechanism. Our view is that the DSR mechanism should be aimed at providing a route to market for consumers who might not otherwise engage in providing commercial interruption. The DSR methodology will specify which consumers are and are not eligible to participate. Shippers at Moffat would be able to offer commercial DSR through the OCM and so do not require a route to market.

Role of shipper

2.57. Some respondents highlighted the importance of clarity regarding the role of shippers in any DSR mechanism. We think that the role of shippers in the mechanism should be considered and defined as part of the methodology development.

Other comments

2.58. Our final policy decision identified a number of risks and unintended consequences with introducing a centralised DSR mechanism. These included:

- the risk of distortions to the traded market by moving DSR currently available to all shippers over to the DSR mechanism where it is only available to the SO;
- the risk of producing inefficient and/or uncompetitive bidding outcomes (eg, due to low participation or strategic bidding); and,
- the risk of unduly inhibiting any commercial market for interruption that may emerge in the future.

2.59. A number of these concerns chimed with stakeholder responses. Several stakeholders noted that participation was crucial to ensuring competitive outcomes and that simple design would be important to facilitating this. One stakeholder highlighted that transparency would be important in ensuring the mechanism operated efficiently and provided appropriate price signals to the rest of the market.

2.60. Stakeholders saw product design as important for ensuring efficient outcomes and a range of views were expressed. For instance, one respondent

acknowledged the need for further industry discussions on this issue, whilst another respondent expressed a desire for Ofgem to have made a firm decision here. Whilst we accept that an Ofgem decision on this issue may have helped speed the development process, we note that industry discussions that have occurred since our final policy decision have already made progress in this area. As such we think that leaving this as an issue to be settled in the detailed methodology is still the most appropriate course of action.

3. Responses to Business Rules and Legal Text

Chapter Summary

This chapter summarises the comments received on the draft licence and code text published with our final policy decision. It sets out where we have made changes to the licence and code drafting as a result. Where we have not made any changes we explain why the current drafting is appropriate.

Implementing our Final Policy Decision

3.1. In February 2014 we reaffirmed our proposals for the reform of cash-out in an emergency. This followed a period of extensive engagement and consultation with stakeholders.

3.2. We also set out our final proposed decision to place a new licence condition on NGG to develop a DSR methodology that met a number of principles set out within the licence condition. Following approval of the methodology NGG would trial DSR, and if directed by the Authority, implement the DSR methodology from winter 2016/17.

3.3. We invited comments on the business rules and legal text necessary to implement our policy for cash-out reform. We also published for consultation the draft licence condition on NGG to develop a DSR methodology.

Stakeholder feedback on licence and code changes

UNC legal text

3.4. Stakeholders have commented on the calculation of the fall back price in the event there are zero trades on the day of an emergency. Under the drafting published with our final policy decision, the fall back prices would be set at half of the preceding SAP if there are zero trades on the day. This was not our policy intent. We have amended the wording to say that where there are zero trades on a day, the fall back price will be set at the preceding SAP.

3.5. We have also clarified that a NDM consumer interrupted in stage 2 of an emergency will be paid at 30 day SAP in line with DM consumers interrupted at the same time. We expect the number of NDM consumers who could be involuntarily interrupted in stage 2 to be extremely low. For the avoidance of doubt, should the emergency progress to stage 3, these consumers would be paid at NDM VoLL for the first day of network isolation only.

3.6. Finally we have made a further minor change so that NGG will provide supporting information to shippers in respect of any DSR payments. This will aid shippers and suppliers in identifying which consumers should receive DSR payments passed on by NGG.

3.7. One stakeholder asked for clarification in the legal text whether the revised arrangements for stage 2 of a GDE commenced from the announcement of stage 2, or once the first consumers had been firm load shed. We consider that it is more appropriate for the revised arrangements to take place following clear and recognisable events in the process (eg, announcement of entry into stage 2 of a GDE). This provides all stakeholders with confidence as to what the cash-out price is at any given time. We do not therefore consider it is necessary to change the current drafting, which uses stages as defined points.

Shipper and supply licence condition

3.8. One respondent stated that it was not clear in the existing drafting what changes would be required to the shipper licence to facilitate the DSR mechanism. For example - shippers would be obligated to manage bids on behalf of consumers. We are only placing an obligation on NGG at this time. It may not be necessary for further licence conditions to ensure engagement from shippers, rather the contractual arrangements between the shipper and consumer would provide for this. However further changes may emerge as necessary whilst the methodology is developed and implemented.

NGG draft licence condition

3.9. One respondent noted that the licence condition on NGG to develop a DSR methodology referred to NGG providing a report to the Authority on the outcome of the trial but did not specify what this report should contain. The proposed licence condition has been drafted so that it sets out the principles that the methodology should meet but is not prescriptive in how NGG achieves this. We consider that this allows NGG to develop a methodology in consultation with stakeholders that best suits the parties involved while still meeting the principles. We have not specified what the trial must look like as this might preclude certain design aspects. However, there are some aspects that we would expect to be considered. These are:

- The volume of DSR potentially made available
- The number of potential participants
- The price of potential bids

3.10. A respondent also commented that the current drafting seemed to pre-determine that certain DMC Supply Point Components should be excluded, such that NGG would not be in compliance with their licence condition if all DMC Supply Point Components were allowed to participate. They stated that any exclusion should not discriminate unfairly and the licence should be redrafted to allow full or limited participation by DMC Supply Point Components. The proposed licence drafting allows NGG the opportunity to develop the methodology in consultation with stakeholders and does not predetermine exclusion of any particular consumer or group of

consumers. For example, the methodology could set criteria so that all DMC Supply Components were able to participate. However NGG would need to be able to demonstrate this was consistent with meeting the principles set out in the licence. We have made minor changes to the wording of the licence condition but the intent remains the same.

3.11. We have amended the draft licence condition so that, following completion of the trial, NGG must proceed with implementation of the methodology unless the Authority directs otherwise within 28 days. We consider that this allows NGG to proceed with implementation of the DSR mechanism with certainty and therefore helps avoid any inefficient expenditure. We have also stated that changes made pursuant to Part E of the licence condition are subject to a similar veto period by the Authority.

4. Final Policy Decision and Legal Text

Question box

Question 1: Do you consider that the proposed licence modifications appropriately reflect the policy proposals described in the business rules?

Question 2: Do you consider that the proposed code modifications appropriately reflect the policy proposals described in the business rules?

Question 3: Do you have any comments on the licence obligation on National Grid Gas to develop the DSR mechanism?

Cash Out Reform

4.1. The tables below summarises the key policy decisions we have made to implement cash-out reform under the gas SCR. It references where this detail has been translated into business rules and legal text, for both UNC and shipper and supplier licence conditions. More detail on our final policy decision can be found in the document published in February 2014 and in particular in chapter 4 of the final policy decision document.[17]

4.2. The business rules are published in Appendix 3 of this document and UNC modifications and licence modifications alongside this document.

UNC business rules and legal text

Aim	Policy decision	Business Rules reference	Legal text reference
Define cash-out prices in an emergency so that they provide more efficient price signals	Cash-out prices unfrozen, so set on daily basis throughout GDE Cash-out prices do not fall as GDE escalates between stages; set at least at prevailing level on entry to stages 2 and 3. Prices incorporate costs of involuntary DSR. In	1.1-1.5	UNC TPD Section Q 4.2.4

[17] https://www.ofgem.gov.uk/publications-and-updates/gas-security-supply-significant-code-review-final-policy-decision

	case of network isolation of NDM, set at VoLL of £14/therm.		
Ensure daily SAP within a GDE is robust and provides reliable reference price, as part of improving efficiency of price signals	Set out criteria that trades on the OCM must meet for SAP to be incorporated into cash-out price calculations. Criteria are: • minimum 250,000 therms traded • minimum 5 trades, and; • minimum 5 counterparties	1.6	UNC TPD Section Q 4.1.4
If SAP doesn't meet criteria, have representative alternative price, as part of improving efficiency of price signals	Derive "fall-back" SAP as weighted average: • mean price on the day {25% weighting}, • median price on the day {25%}, and; • previous SAP that met criteria {50%} If no trades, then "fall-back" SAP is previous SAP that met criteria	1.6	UNC TPD Section Q 4.1.5
Maintain imbalance positions when DM consumers curtailed – and encourage commercial interruption, as part of improving efficiency of price signals	Maintain existing "DR" ECQ process to adjust imbalances to account for emergency curtailment. Process for shippers to notify NGG of any commercial interruptions to be excluded from ECQ.	3.1, 3.8	UNC TPD Section Q 6.1.2, 6.1.4, 6.1.5, 6.2.2, 6.3
Make imbalance adjustments in respect of NDM curtailment (equivalent to existing ECQ process), to improve efficiency of price signals.	Introduce equivalent "NDR" ECQ process – to adjust imbalances on an aggregate level to account for emergency curtailment of NDMs.	3.1-3.7	UNC TPD Section Q 6.1.3, 6.2.3
Set payments to curtailed DMs that recognise	Set payments to DMs at 30-day average of SAP,	4.6-4.11	UNC TPD Section Q 6.4

interruption, transfer risks from consumers to shippers but maintain incentives for commercial interruption.	fixed at point of entry to stage 2. Reference volume for payment based on ECQ volume.		
Set payments to curtailed NDMs that reflect value of lost load (VoLL), transfer risks from consumers to shippers and recognise that NDMs can't provide commercial interruption.	Set payments to NDM consumers at VoLL (£14/therm) – capped at one day to limit liabilities.	4.6-4.11	UNC TPD Section Q 6.4
Payments to consumers funded through cash-out charges, to transfer risks from consumers to shippers.	Payments funded via neutrality account. In stages 2, 3 and 4, funded by: 1) Cash-out payments by short shippers; then, 2) Additional charge on short shippers, based on ratio between imbalance position and volume of interruption; then, 3) If insufficient funds remain, payments to consumers pro-rated.	5.1-5.7	UNC TPD Section Q 6.5.4-6.5.11
Avoid disincentives to flow additional gas into GB during a GDE, to mitigate some risks of cash-out reform.	In stages 2, 3 and 4, neutrality charges/ payments based on throughput from preceding 365 days.	6.1	UNC TPD Section Q 6.5.2

Shipper and supplier licence conditions

Aim	**Policy decision**	**Shipper licence reference**	**Supplier licence reference**
Ensure that payments for consumers are passed through by shippers and suppliers, to ensure risks are transferred from consumers to shippers	Licence conditions oblige: • shippers to pass funds and information to relevant suppliers when received from NGG/Xoserve • suppliers to include terms to credit	15B.1	19C.1-19C.3

	payments to consumers when received from shippers		
Ensure that information is passed from consumers to NGG	Licence conditions oblige suppliers and shippers to pass through information on interruptible contracts and proof of curtailment.	15B.2-15B.3	19C.4-19C.9

DSR Mechanism

4.3. The proposed DSR licence condition intends to place an obligation on National Grid to:

- develop a draft DSR methodology and submit it to The Authority
- run a trial if directed by the Authority to do so
- submit to the Authority a report on the outcome of the trial and submit a final version of the Demand Side Response methodology
- Implement the methodology if directed to do so

4.4. The DSR licence condition sets out some principles that the DSR methodology should meet. The intent of these principles is set out in the table below along with the reference to the relevant licence text.

Aim	**Relevant "principle" from Licence Condition**	**Reference**
Shippers will need to submit offers on behalf of consumers	"ensure that any party making a Demand Side Response Offer is a party to the Uniform Network Code"	8I.4 (a)
The methodology will set out which end consumers are eligible to participate in the DSR mechanism	"set 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"	8I.4 (b)
The mechanism is intended to avert an emergency. A GDW (gas deficit warning) is the trigger point at which NGG may utilise mechanism	"allow the Licensee to accept Demand Side Response Offers only where a Gas Deficit Warning is in place or within Stage 1 of a Gas Deficit Emergency"	8I.4 (c)
Exercised DSR bids should be factored into the cash-out price and if it is the highest balancing action it should set the short cash-out price	"demonstrate compatibility with existing market arrangements by setting out the manner in which any Demand Side Response Offers accepted by the Licensee are to be	8I.4 (d)

	treated as Eligible Balancing Actions and included in the System Clearing Contract, System Marginal Buy Price and System Marginal Sell Price"	
The DSR mechanism should provide a route to market for a wider range of consumers than currently access the market	"promote, and further facilitate, parties making Demand Side Response Offers to the Licensee through open and transparent market-based arrangements"	8I.4 (e)
The DSR mechanism must not foreclose the market for commercial interruption products, or penalise self interruption by consumers	"not unduly preclude the emergence of commercial interruption arrangements"	8I.4 (f)
The DSR mechanism should be designed to ensure no harm to operation of normal traded markets. Some consideration of the impact on electricity markets may be necessary.	"minimise distortions and unintended consequences on existing market arrangements and the principle of parties balancing their own positions in the wholesale gas market"	8I.4 (g)
The DSR mechanism must be cost effective to minimise cost to consumers. Therefore NGG must procure DSR in an economic and efficient manner	"ensure 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 pipe-line system to which this licence relates in an efficient, economic and co-ordinated manner"	8I.4 (h)

4.5. The licence condition also sets out the framework for the development, trialling and approval of the methodology. This requires NGG to develop the methodology in consultation with interested parties – to ensure that the methodology takes account of the views of shippers, consumers and other parties. NGG must submit to us a draft of the methodology by 1 March 2015, and include any written representations received. This deadline is set so that there is time for a potential trial to be run in 2015/16 and for full implementation to occur ahead of winter 2016/17.

4.6. When we receive the draft methodology, we will decide whether or not to approve it within 90 days. If we approve the methodology, we would direct NGG to carry out a trial and to publish the finalised methodology. If we do not approve the methodology, then we would direct NGG to consult with interested parties and submit a revised methodology. This direction would set out the conditions and timetable for this.

4.7. Where we direct NGG to carry out a trial, NGG must submit a report on this within 28 days of the end of the trial. Unless we direct otherwise within 28 days, NGG will then be required to develop any necessary UNC modifications and systems changes and then implement the methodology. This means that a successful trial will result in the DSR methodology proceeding to full implementation, unless evidence from the trial leads us to determine that the methodology requires further development.

4.8. The licence condition allows us to direct that NGG is not required to comply with the obligations, and to direct that NGG must temporarily or permanently stop operating the DSR methodology. This would allow us to stop the development or operation of the DSR mechanism if it becomes clear that in discussion with interested parties that it will not be possible to design a DSR mechanism in line with the principles or further adverse effects are identified.

4.9. The licence condition requires NGG to review the methodology annually, if appropriate revise it, carry out a consultation and then submit to the Authority. NGG can revise the methodology if we do not direct otherwise within 28 days. This means that the methodology can be updated in light of operational experience, market developments or other factors.

5. Next Steps

Statutory consultation on licence changes and final consultation on code changes

5.1. Our statutory consultation on the new licence conditions and their effect will close on 16 July 2014. Once we have considered any responses, the Authority will make a final decision on whether to introduce the licence obligation on NGG to develop a DSR methodology. The Authority will also make a decision on any modifications to shipper and supply licence conditions that are necessary to implement our proposals. We have published alongside this document notices under section 23(2) of the Gas Act 1986 that set out draft licence text that is intended to reflect our final policy design.

5.2. Under section 36C of the Gas Act 1986 the Authority is able to direct changes to the Uniform Network Code. The modification must relate to the arrangements contained in the code in respect of a Gas Supply Emergency and must be considered by the Authority to be a market-based modification.

5.3. The Authority intends to make a direction pursuant to section 36C as it believes that the proposed modification will do the following:

- decrease the likelihood of a Gas Supply Emergency occurring;
- decrease the duration and severity of a Gas Supply Emergency which occurs.

5.4. We have consulted on the code changes previously but in the interests of transparency we are providing a final opportunity for comments on the code drafting. The legal drafting for these changes is also published alongside this document.

5.5. Subject to consultation responses, our proposed timescale for implementation is as follows:

Stage	Date
Statutory consultation on licence changes Further consultation on code drafting	June 2014
Direction to modify licences Section 36C direction to modify the UNC	September 2014
NGG to submit DSR methodology to Ofgem for approval	1 March 2015
Authority decision on DSR methodology	30 May 2015
Implementation of cash-out reform	By Winter 2015/16
Implementation of DSR methodology	Winter 2016/17

Appendices

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Appendix 1 - Consultation Response and Questions

1.1. Ofgem would like to hear the views of interested parties in relation to the issues set out in this document and in particular if the licence drafting and UNC text reflect the policy proposals.

1.2. We would especially welcome responses to the specific questions which we have set out at the beginning of each chapter heading and which are replicated below.

1.3. Responses should be received by 16 July 2014 and should be sent to:

- Anjli Mehta
- Wholesale Markets
- 9 Millbank
  London
  SW1P 3GE
- 020 7901 1859
- wholesale.markets@ofgem.gov.uk

1.4. Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website www.ofgem.gov.uk. Respondents may request that their response is kept confidential. Ofgem shall respect this request, subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

1.5. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses.

1.6. Next steps: Having considered the responses to this consultation, Ofgem intends to issue a final decision and direction to change the relevant licences and UNC text. Any questions on this document should, in the first instance, be directed to:

- David McCrone
- Wholesale Markets
- 0141 341 3993
- Wholesale.markets@ofgem.gov.uk

CHAPTER Four:

Question 1: Do you consider that the proposed licence modifications appropriately reflect the policy proposals described in the business rules?

Question 2: Do you consider that the proposed code modifications appropriately reflect the policy proposals described in the business rules?

Question 3: Do you have any comments on the licence obligation on National Grid Gas to develop the DSR mechanism?

Appendix 2 – Summary of Consultation Responses

Cash-out Reform

1.1. Most stakeholders indicated that our latest cash-out proposals were an improvement on those we put forward in 2012. Some of the responses indicated that stakeholders were now supportive of our cash-out reforms in light of these changes. However, some stakeholders still expressed concerns with the proposals.

1.2. A number of stakeholders were supportive of the changes we have made with respect to the treatment of shortfall. However, some stakeholders noted there is still a risk of contagion.

1.3. Some stakeholders still remain opposed to the introduction of NDM VoLL for the pricing of network interruption, and the associated payments to consumers. They have taken the view that £14/therm is significantly above any price that has been previously seen in the market, or that could be expected in the future, notwithstanding the impact of proposed electricity market reforms.

1.4. Some stakeholders have also taken the view that the introduction of a £14/therm price for NDM interruptions will definitely result in both greater imbalances and higher prices. They argue this would then require greater levels of security in order to cover industry indebtedness. Concerns regarding this possible increase in indebtedness also raise the possibility that increased credit requirements could actually increase the probability of some shippers entering bankruptcy. As the losses incurred by insolvent shippers are borne by the rest of the industry via the neutrality mechanism, the possibility of a 'domino effect' has been raised whereby socialised losses cause further shipper defaults.

1.5. A stakeholder also noted broader concerns with the way the credit arrangements function in an emergency. For instance, the ten day time lag associated with the calculation of User Anticipated Balancing accruals has been raised as a key risk in an emergency when there may be an increased probability of shipper default. There are also concerns that the existing neutrality bank account and its associated overdraft is insufficient to deal with cash-flows in a GDE.

1.6. A stakeholder also raised concerns regarding the calculation of the NDM VoLL and how NDM VoLL could act as a target price for trading.

1.7. One stakeholder suggested that using existing demand attribution calculations would be more accurate/appropriate for NDM payments than our intention to use average volumes and load bands.

1.8. A number of stakeholder responses flagged up the ongoing uncertainty regarding the impact on the gas market of reforms proposed as part of the EMR CM and EBSCR. A number of stakeholders have expressed concerns with these new electricity market penalties feeding through into the gas market.

1.9. One stakeholder expressed concerns that our proposed reforms to the GB cash-out arrangements may unduly incentivise delivery of gas to GB consumers over those in interconnected markets. They asked for clarification on how this relates to Regulation (EU) 994/2010 which states that any measures introduced must avoid: unduly impeding cross-border flows, endangering seriously the gas supply situation of another Member State, or inhibiting access to cross-border infrastructure as far as technically and safely possible.

1.10. Lastly, one stakeholder questioned whether the SCR reforms would actually help ensure shippers/suppliers meet their contractual supply obligations in emergency conditions. They therefore pointed out that there are other measures besides cash-out reform that could be taken to protect security of supply, such as placing an obligation on shippers/suppliers.

DSR mechanism

1.11. Several respondents supported our decision to proceed with a DSR mechanism. Our decision to allow for more time to develop the specific design of the DSR mechanism, including trialling, was also mostly positively received.

1.12. One stakeholder expressed concerns with the delay in the implementation timelines for the DSR mechanism, relative to cash-out reform. They suggested this made assessing the overall impact of the combined proposals difficult, as the final design of any DSR mechanism remained uncertain.

1.13. Another stakeholder noted that a DSR mechanism would likely complement cash-out reform, but suggested possibly allowing more time to assess the impact of cash-out reform (eg, on the extent of commercial interruption) before proceeding with a DSR mechanism.

1.14. Another stakeholder expressed concern that the additional time being given for NGG to develop the DSR methodology risks being wasted if Ofgem does not approve the methodology. This would be at a time when the industry is already under strain to implement a wide range of changes to both the gas and electricity markets.

1.15. Some stakeholders disagreed with the implications of Ofgem's views on elements of DSR design. They highlighted the views on the participation of gas-fired generators. Some stakeholders also thought including option fees would be important to encourage participation in any DSR mechanism.

1.16. One respondent considered that shippers at the Moffat exit point, who deliver gas to the island of Ireland, should be eligible to participate in the DSR mechanism.

1.17. Some respondents highlighted the importance of clarity regarding the role of shippers in any DSR mechanism.

1.18. Several stakeholders noted that participation was crucial to ensuring competitive outcomes and that simple design would be important to facilitating this. One stakeholder highlighted that transparency would be important in ensuring the mechanism operated efficiently and provided appropriate price signals to the rest of the market.

1.19. Stakeholders saw product design as important for ensuring efficient outcomes and a range of views were expressed. For instance, one respondent acknowledged the need for further industry discussions on this issue, whilst another respondent expressed a desire for Ofgem to have made a firm decision here.

Impact Assessment

1.20. One stakeholder was unclear as to how our IA quantified the effect of the Gas SCR on the likelihood, severity and duration of an emergency. They also argued that our previous analysis failed to quantify the costs associated with the kinds of mitigation measures open to shippers and suppliers. They questioned whether most mitigation measures would actually have a discernable impact on security of supply.

1.21. Those stakeholders raising concerns with regards to the impact of our cash-out reforms on credit also argue that the impacts they mention have not been costed in our assessment of our reforms. One stakeholder has offered a calculation of possible balancing security requirements in an emergency due to the Gas SCR. In a previous response they had put this at £10bn. From discussion Ofgem has had with the relevant stakeholder, their latest estimates put this at ~£7bn. The change is due to their taking into account the reduction of NDM VoLL from £20/therm to £14/therm.

1.22. One stakeholder noted that the costs to the economy of a GDE were modelled by Pöyry as being at times in excess of £50bn, but was unsure where it was shown how our reforms, including a DSR mechanism, reduced these costs.

1.23. One respondent also raised concerns that the effect of higher gas prices feeding through to the electricity market had not been properly quantified in Ofgem's latest IA.

Business rules and legal text

1.24. Stakeholders have commented on the calculation of the fall back price in the event there are zero trades on the day of an emergency. Under the drafting published with our final policy decision, the fall back prices would be set at half of the preceding SAP if there are zero trades on the day.

1.25. One stakeholder asked for clarification in the legal text whether the revised arrangements for stage 2 of a GDE commenced from the announcement of stage 2, or once the first consumers had been firm load shed.

1.26. One respondent also commented on what they considered to be an inconsistency in the treatment of shortfall. This was due to shortfall resulting from shipper default being treated differently to shortfall resulting from there being insufficient monies from solvent short shippers.

1.27. One respondent stated that it was not clear in the existing drafting what changes would be required to the shipper license to facilitate the DSR mechanism.

1.28. One respondent noted that the license condition on NGG to develop a DSR methodology referred to NGG providing a report to the Authority on the outcome of the trial but did not specify what this report should contain.

1.29. A respondent also commented that the current drafting seemed to pre-determine that certain DMC Supply Point Components should be excluded, such that NGG would not be in compliance with their license condition if all DMC Supply Point Components were allowed to participate. They stated that any exclusion should not discriminate unfairly and the licence should be redrafted to allow full or limited participation by DMC Supply Point Components.

Appendix 3 - Draft Business Rules with no DSR Mechanism

Assumptions

- **GDE Cash-out Prices** - For each day within a Gas Deficit Emergency (GDE), where the GDE has progressed to Stage 2+ of the Network Gas Supply Emergency Classifications, as defined in the National Emergency Coordinator (NEC) Safety Case , the following will apply;
    - For each day of Stage 2 - The cash-out price for each User's **'short'** balance position will be the greater of:
        - the prevailing System Marginal Buy Price SMP(b) price upon entry to stage 2;and
        - the SAP price plus the fixed differential for the relevant day; and
        - the unit price of DR (Daily Read) involuntary Demand Side Response (DSR) action taken on the relevant day.
    - For each day of Stage 2+ - The cash-out price for each User's **'long'** balance position will be;
        - the daily System Average Price (SAP) throughout the GDE; and
        - the SAP will continue to be dynamic throughout the GDE. Based on Shipper to Shipper Trading on the OCM for the relevant day.
    - For each day of Stage 3 – The cash-out price for each User's 'short' balance position will be the greater of :
        - the prevailing SMP(b) price upon entry to stage 3;and
        - the SAP price plus the fixed differential for the relevant day; and
        - the unit price of NDR (Non Daily Read) involuntary Demand Side Response (DSR) action taken on the relevant day.
    - For each day of Stage 4 the cash-out price for User's 'short' balance position will be applied at the SAP + Fixed Differential only.
    - During Stage 2+ SAP will NOT be derived from any prices or volumes associated with either DR or NDR involuntary DSR.
- **GDE Fall-Back SAP -** where there are insufficient bids available on the OCM, such that the market actions used to derive the relevant day's SAP, do not meet the criteria, set out in BR 1.6 (b), a Fall-Back SAP will be applied for the relevant Day.
- **End Consumer DSR Payment** - Demand eligible for DSR payments will be referred to as Daily Read (DR) e.g. DM sites that are eligible for DSR payments and Non-Daily Read (NDR) e.g. NDM sites that are eligible for DSR payments.

- In the event that an End Consumer is Firm Load Shed (FLS) during GDE Stage 2+ the End Consumer will be entitled to receive an involuntary DSR payment for the volume of demand curtailed at the following unit prices:
    - DR sites FLS at GDE Stage 2 will receive a DSR payment based on a unit price of 30 day average SAP price per kWh. This will be calculated as the average over the 30 days prior to the start of GDE Stage 2 Entitlement for this payment will be for each day of the DR site's curtailment during the GDE (subject to stage 3 isolation).
    - NDR sites at GDE stage 3 will receive a DSR payment based on a unit price of NDM VoLL @ 47.77p/p/kWh (£14 per therm. Entitlement of this payment will be for the first day of DSR curtailment only.
- NDRs will receive DSR payments based on a pro-rated proportion of the total NDR DSR fund. The volume by which each NDM DSR payment will be based will depend on the Load Band and Market Sector within which NDR site resides;

    Users NDR curtailment payment volume =
    (i) Domestic NDR = a single average SOQ for all Domestic Load
    (ii) Non-domestic =

    a. For site within the 3 non domestic load bands (0-73.2, 73.2 – 293, 293 – 732 MWh) the average SOQ for the relevant Load Band will apply;

    b. Non domestics > 732 MWh will be calculated on their individual SOQ

    (iii) Priority Loads = will receive DSR payments based on the volumes calculated using the ECQ methodology.
- Where Network Isolation has occurred, curtailed sites (both DR and NDR) within the affected area will receive DSR payments for Day 1 of the Network Isolation only. DSR Payments will continue to be made for each day where a relevant site (that is curtailed due to FLS) is NOT within the area of an LDZ that is subject to Network Isolation.
- Storage and interconnector users will not be entitled to DSR payments.
- **Funding of DSR Payments** - Funds required to pay End Consumers for Involuntary DSR will be deemed to be Balancing Neutrality Charges.
- In accordance with prevailing Balancing Neutrality arrangements all Balancing Neutrality Charges (all charges to National Grid NTS and Payment from National Grid NTS) will be netted off. For each day within a GDE Stage 2+;
    - If the net neutrality position is in shortfall; these costs, the **DSR Fund imbalance**, will in the first instance be recovered from Users that have a negative imbalance position on the relevant gas flow day. If these 'targeted' costs do not fully recover the DSR Fund and there continues to be a shortfall in the DSR Fund Imbalance; the shortfall in funds will reduce the payments made to all relevant End Consumers on a pro-rated basis.
    - If the net neutrality position is in surplus; the surplus funds will be smeared to Users through the Neutrality process.

- Shortfall in the Neutrality account may occur as a result of a Shipper default. This type of shortfall will not present itself until the initial Energy Balancing Invoice, for the relevant day;
    - has been generated; and
    - the payment due date has lapsed; and
    - the defaulting Shipper has either only part or not settled the outstanding invoice.

      In this instance the prevailing Neutrality Mechanism and Energy Balancing Debt Recovery arrangements will apply, with the exception that the neutrality apportionment will based on shippers' throughput described in the following bullet.

- In respect of each day within GDE Stage 2+ the Balancing Neutrality mechanism will smear outstanding Balancing Neutrality Charges and Adjustment Neutrality charges over the sum of each relevant User's User Daily Quantity Input (UDQI) and User Daily Quantity Output (UDQO) for the preceding 365 days. This represents a change to the prevailing neutrality arrangements which currently smear neutrality charges/credits across Users' total UDQI/O for the relevant day.

- **DSR Payment timescales** - DSR Payments to Users, for the settlement of End Consumer payments for involuntary DSR curtailment, will not be executed within the settlement timescales prescribed for the relevant Energy Balancing invoices. All DSR funds will reside within the Neutrality account; and will be settled on a subsequent payment timescales, to ensure that payments into the DSR Fund have been recovered.
- DSR Payments to Users, for the settlement of End Consumers payments for involuntary DSR curtailment, shall be invoiced in a subsequent Energy Balancing Invoice within the defined DSR payment timescales of 4th EBI following issue of the relevant EBI.
- Users will be obliged to pass the relevant DSR Payments on to their suppliers (as soon as reasonably practicable), which in turn will be obliged to pass these on to customers (as soon as reasonably practicable), e.g. through a rebate on the next energy bill. This process will be enforced through licence conditions.
- This obligation will be governed through licence changes rather than UNC changes.
- If consumers have changed suppliers prior to receiving their DSR Payment, it would be the Shippers and Supplier at the time DSR Payments are allocated that would receive the money and be required to pass it on.
- **Commercial Interruption** – Sites that have a commercial interruption contract will **not** receive DSR, or ECQ, payments, but may be instructed to curtail load during GDE Stage 2 FLS.
- If sites with commercially interruptible contracts are curtailed by their Transporter following a NEC instruction, these sites would receive the contractually agreed exercise price from their supplier. The quantity would not be included in the DR ECQ process for that supplier and would therefore not receive the System Average Price of the last 30 days, but will retain any volume for the

purposes of their imbalance position. To this end, suppliers will be required to provide information on commercially interruptible contracts to NGG. Contracts for commercial interruption for NDR will not be able to be included in this process.

- **Calculation of DR and NDR Curtailment Volume** - DR Emergency Curtailment Quantity (ECQ) will be used to calculate the volume of DSR payments that should be paid for Stage 2 FLS of DR sites.
- In respect of each relevant LDZ; the relevant NDR Users' market balance calculation will include an NDR ECQ that accounts for the NDR demand curtailment volumes above that which has been allocated through Gemini. The NDR ECQ will be based on the forecast undertaken prior to the NEC instruction to the DN to reduce load. The NDR ECQ will be enacted in the form of a 'deemed' trade with the SO. The NDR ECQ will determine the payment for additional gas that is 'contracted' to be delivered by NDR Users; the User will receive 30 day average SAP for this gas.
- On the GDE day; where the NEC has instructed the DN to reduce offtake to an LDZ; and NDR curtailment is likely to reduce NDR Allocation, Users' will be informed of the revised forecast demand that includes an NDR ECQ, which reflects the additional quantity of gas that is required to be delivered.
- The NDR ECQ used in the calculation of market imbalances for NDR Users will only be used for Day 1 of the demand curtailed as part of Network Isolation. If additional Network Isolation is initiated on Day 2, only demand curtailed as part of this additional Day 2 Network Isolation will be included in the calculation. For avoidance of doubt, a site will only be factored into the NDR ECQ calculation on the first day it is subject to Network Isolation.
- Where, following Stage 3 Network Isolation, the number of Supply Points affected by Network Isolation becomes clearer, a process will allow for the amended list of Supply Points to receive DSR payments.
- For the purposes of calculating imbalances, if NDR sites are asked to reduce or curtail the flow of gas to the site, the default assumption is that the customer obliges.
- In respect of GDE Stage 2: For the purposes of calculating DSR payments, if large NDR sites are asked to reduce or curtail the flow of gas, the default assumption is that the customer has not reduced the flow of gas unless the customer can prove that the site has been curtailed.
- Where a GDE has begun and finished within the same calendar month all charges described within these business rules shall be included in that months Energy Balancing Invoice. If the GDE spans across two calendar months the daily charges described within these business rules shall be included within the relevant M+23 Energy Balancing Invoice.

Business Rules

These business rules explain the proposed changes to the Uniform Network Code associated with the Gas Security of Supply – Significant Code Review to implement cash-out reform that can function without a DSR mechanism in place.
In the event of a GDE (stage 2 and above) being declared by the National Emergency Coordinator (NEC) the following shall apply;

1. **GDE Cash-out Arrangements**

1.1. For each day of stage 2 – the cash-out price for each User's **'short'** balance position will be the greater of ;

(a) the prevailing System Marginal Buy (SMPb) price upon entry to GDE Stage 2; and

(b) the relevant day's SAP+ Fixed Differential; and

(c) The unit price of an involuntary Demand Side Response (DSR) action taken on the relevant day

1.2. For each day of Stage 3 – The cash-out price for each User's 'short' balance position will be the greater of :

(a) the prevailing SMP(b) price upon entry to stage 3;and

(b) the SAP price plus the fixed differential for the relevant day; and

(c) The unit price of an involuntary Demand Side Response (DSR) action taken on the relevant day (including NDM involuntary DSR during stage 3)

1.3. The provision of 1.1 and 1.2 will apply up to the declaration of Stage 4 – restoration.

(a) During stage 4 the SAP + Fixed Differential will be applied as the cash-out price for 'short' shipper balance positions.

1.4. In the case of Users with a **'long'** balance position, the cash-out price for each day during a GDE will be the SAP for the relevant gas flow day. This price will apply for the duration of the emergency.

1.5. Subject to paragraph 1.6: The SAP will be dynamic throughout the GDE and will be set through shipper to shipper trading on the OCM for the relevant GDE day.

1.6. In respect of the applicable SAP, for a relevant GDE day;

(a) where there are insufficient bids available on the OCM, such that the market actions used to derive the relevant day's SAP, do not meet the criteria, set out in BR 1.6 (b), a Fall-Back SAP will be applied for the relevant Day;

(b) the relevant Day's SAP will be required to meet the following criteria;

i. the Total volume traded is below 250,000 therms/day; and/or

ii. the minimum number of 5 trades per day is not met; and/or

iii. the minimum number of 5 counterparties is not met;

(c) where Relevant SAP does not meet the criteria, set out in 1.6 (b), the Fall-Back SAP will be the weighted average of;

i. the median of all executed trades (25% weighting); and

ii. the volume-weighted average of all executed trades (25% weighting); and

iii. the last SAP, from the previous days, in which the derivation of SAP met the criteria defined in 1.5 (f) (50% weighting).

(d) If either median of all executed trades or volume-weighted average equal zero then the Fall-Back SAP shall be the preceding SAP.

GDE Cash-out Summary Table

GDE Stage	**Short Cash-Out (SMP(b))**	**Long Cash-Out**
Up to and including Stage 1	Greater of: - Highest MBA set by NGG ;and - SAP +Fixed Diff	SMP(s)
Stage 2	Greater of: - Prevailing SMP(b) set upon entry to stage 2; and - SAP+Fixed Diff; and - DR Involuntary DSR price	SAP
Stage 3 – new Network Isolation initiated	Greater of: - Prevailing cash-out price upon entry to Stage 3; and - SAP+Fixed Diff; and - DR Involuntary DSR price; and - NDM VoLL	SAP
Stage 3 – **no** new Network Isolation initiated	Greater of: - Prevailing cash-out price upon entry to Stage 3; and - SAP+Fixed Diff; and	SAP

	- DR Involuntary DSR price	
Stage 4	- SAP+Fixed Diff	SAP
Market restored	- SMP(b) (normal operations)	SMP(s)

2. Involuntary DSR Payments to End Consumers

2.1. Demand eligible for DSR payments will be referred to as DR (DM sites that are eligible for DSR payments) and NDR (NDM sites that are eligible for DSR payments).

2.2. In the event that an End Consumer is Firm Load Shed (FLS) during GDE Stage 2+ the End Consumer will be entitled to receive an involuntary DSR payment for the volume of demand curtailed at the following unit prices:

2.3. DR sites FLS at GDE Stage 2 will receive a DSR payment based on a unit price of 30 day average SAP price per kWh, Entitlement of this payment will be for each day of the GDE (subject to the stage 3 isolation arrangements prescribed in para 2.5).

2.4. NDR sites at GDE stage 3 will receive a DSR payment based on a unit price of NDM VoLL @ 47.77p/p/kWh (£14 per therm). Entitlement of this payment will be for the first day of involuntary DSR curtailment only.

2.5. Where Network Isolation has occurred, curtailed sites (both DR and NDR) within the affected area will receive DSR payments for Day 1 of the Network Isolation only. DSR Payments will continue to be made for each day where a relevant site (that is curtailed due to DR Firm Load Shedding) is NOT within the area of an LDZ that is subject to Network Isolation.

2.6. During Stage 2+ SAP will NOT be derived from any prices or volumes associated with either DR or NDR involuntary DSR.

2.7. Storage and interconnector Users will not be entitled to DSR payments.

3. Market Imbalance Calculation applicable in the event of a GDE

3.1. During a GDE Stage 2+, the calculation to determine each Users market imbalance that is associated with FLS, will be calculated using the following:

(a) The DR ECQ methodology will be used to calculate DR volumes;

(b) A new NDR ECQ methodology will be used to calculate NDR volumes (described below).

3.2. Where NDR demand has been curtailed, a new NDR ECQ methodology will be implemented that will 'uplift' a NDR Users UDQO to account for the drop in demand that would have been allocated to that specific User were no NDR curtailment to have taken place. This uplift in demand volume will be the NDR ECQ. The NDR ECQ quantity will be based on the difference between the forecast NDR demand for the gas flow day and the NDR allocation for the gas flow day.

3.3. The NDR ECQ will be enacted in the form of a 'deemed' trade with the SO; and will be used to determine payment for additional gas that is 'contracted' to be delivered by NDR Users.

3.4. The User will be paid the NDR ECQ volume multiplied by the average of the previous 30 days SAP.

3.5. In respect of Stage 3 - The NDR ECQ used in the calculation of market imbalances for NDR Users will only be used for Day 1 of the NDR demand curtailed as part of a Network Isolation. If additional Network Isolation is initiated on Day 2, only demand curtailed as part of this additional Day 2 Network Isolation will be included in the calculation.

3.6. In respect of Stage 2, where NDR demand has been curtailed and is likely to reduce the total LDZ's NDR allocation quantities, the NDR ECQ will be calculated for each day that the relevant NDR demand is curtailed, or affects the NDR allocation.

3.7. LDZ Forecasts provided by DNs shall reflect the reduction in demand associated with NDR reduction in the LDZ.

3.8. Where a Supply Point with a commercially interruptible contract is curtailed as part of FLS, the DR ECQ process will not apply for the contracted volume and no corresponding DSR Payment will be allocated for the contracted volumes.

4. DSR Funding and Payment Arrangements

4.1. During GDE Stage 2+ all payments, required to be made to End Consumers for DR and NDR involuntary DSR, will be funded through the **DSR Fund**.

For Clarity:

*"As specified in the UNC section F1.1.2 (d) ""**Balancing Neutrality Charges**" are amounts payable by or to National Grid NTS, so that it does not gain or lose by the payment and receipt of Market Balancing Action Charges, Daily Imbalance Charges, Scheduling Charges ….."*

4.2. The total DSR Fund will be included as a Balancing Neutrality Charge, however, the DSR payments from the account to the Users, to pay End Consumers DSR costs, will not be settled within the timescales of the relevant Energy Balancing Invoice payment due date.

4.3. The DSR Fund will reside in the Neutrality account and be settled under separately prescribed timescales of 4th EBI following the relevant EBI.

4.4. In accordance with the Neutrality arrangements, all Balancing Neutrality Charges, payments and receipts, are netted off. Any residual negative (shortfall) imbalance in the net neutrality position will be deemed to be a DSR Fund Imbalance and recovered in accordance with paragraph 5.4.

4.5. Any DSR Fund Imbalance Charges will be accounted for and settled within the same Energy Balancing Invoice as the relevant Balancing Neutrality Charges.

4.6. The DSR Fund will be calculated using the following formula:

DSR Fund = DR curtailment Funds + NDR curtailment Funds

Where:

DR Curtailment Funds = 30 day avrg SAP (average over the 30 days prior to the start of GDE Stage 2) x applicable DR curtailment volume

And:

NDR Curtailment Funds = NDM VoLL x applicable NDR curtailment volume

Applicable DR and NDR curtailment volume is calculated as in Appendix A.

4.7. Each User will receive, on behalf of each curtailed End Consumer, a DSR Payment for each applicable Supply Point curtailed during Stage 2 and 3 of a GDE in line with the following;

User DSR Payment = Users DR curtailment Payment + Users NDR curtailment Payment

Where:

Users DR curtailment Payment = 30 day avrg SAP (average over the 30 days prior to the start of GDE Stage 2) x Users DR curtailment payment volume
Users DR curtailment payment volume is calculated using the DR ECQ methodology.

And:

Users NDR curtailment Payment = NDM VoLL x Users NDR curtailment payment volume

Users NDR curtailment payment volume =

(i) Domestic NDR = a single average SOQ for all Domestic Load

(ii) Non-domestic =

c. For site within the 3 non domestic load bands 0-73.2, 73.2 – 293, 293 – 732 MWh the average SOQ for the relevant Load Band will apply;

d. Non domestics > 732 MWh will be calculated on their individual SOQ

(iii) Priority Loads = will receive DSR payments based on the volumes calculated using the ECQ methodology.

4.8. For the avoidance of doubt, for each day within Stage 2 and above of a GDE, where a User's Supply Point, with a commercially interruptible contract, is curtailed as part of Firm Load Shedding, the End Consumer will receive no DSR Payment for the contracted volume.

4.9. Xoserve will determine each Users aggregate DSR Payment for all Supply Points across all days of the GDE in accordance with the DSR Payment calculation (see para 4.7).

4.10. NDR Supply Points which may be subject to FLS in GDE Stage 2 shall provide information to prove that the flow of gas to the Supply Point was reduced or curtailed to the level determined in accordance with paragraph 4.7. NDR Supply Points subject to FLS in GDE Stage 2 and able to prove curtailment shall receive payment in the same way as DR supply points interrupted at that time. If no proof is provided, DSR payment will not be made.

4.11. Where there is more up to date information on what sites have been curtailed, the following will apply:

a. Where additional sites have been identified as having been curtailed above that identified in the initial Distribution Networks DSR curtailment information provision, the additional payment will be calculated using para 4.7, and shall be recovered through neutrality. These additional funds will be passed onto the relevant User as an additional DSR Payment;

b. Where it has been identified that there is a reduction in the number of sites that have been curtailed, the DSR Fund will return the equivalent money to neutrality. If a DSR Payment has been made to a User that should not have been made, this will be recovered from the User.

This process will be run each month, for the first 4 months following the end of an emergency and then on an ad-hoc basis dependent on information received.

4.12. Interest accrued by the DSR Fund will be passed through neutrality.

5. Processing the DSR Fund through the Neutrality Mechanism

5.1. The total DSR Fund account will be defined as a Balancing Neutrality Charge, however the "DSR payments" from the account to the Users, for the settlement of End Consumers DSR costs, will not be settled within the timescales of the relevant Energy Balancing invoice payment due dates defined within the UNC TPD Section S.

5.2. The DSR Funds will reside in the Neutrality account and settled separately in prescribed timescales of 4th EBI.

5.3. As part of the Neutrality mechanism all Balancing Neutrality Charges, payments and receipts, are netted off:

(a) A residual of the net neutrality position which is in surplus will be paid, through the Neutrality mechanism, to Users based on throughput for the relevant gas day

(b) A residual of the net neutrality position that is in shortfall will be deemed to be a DSR Fund Imbalance and recovered in accordance with paragraph 5.4.

5.4. Where there is a DSR Fund Imbalance the following arrangements will apply:

(a) Users with a negative Daily Imbalance Volume shall pay a DSR Fund Imbalance Charge, (in accordance with paragraph 5.5);

following the application of the DSR Fund Imbalance Charge;

(b) where there continues to be a shortfall in DSR Fund the shortfall in funds will reduce the payments made to all relevant end consumers on a prorated basis.

(c) where there is a surplus in DSR Fund Imbalance the surplus will be smeared back to all Users through Neutrality mechanism.

For the duration of the GDE the Neutrality mechanism arrangements described in section 6 will apply.

5.5. For the purpose of calculating the DSR Fund Imbalance Charge; a Unit DSR Fund Imbalance Price will be determined as;

(a) The Unit DSR Fund Imbalance Price shall be the sum of the DSR Fund Imbalance divided by the greater of; the total volume of DSR curtailed through Firm Load Shedding or Network Isolation for the relevant day; and the total volume of Users short imbalance.

(b) The DSR Fund Imbalance Charge will be the Unit DSR Fund Imbalance Price multiplied by the User's total negative Daily Imbalance volume.

5.6. Users with a negative Daily Imbalance will pay National Grid NTS a DSR Fund Imbalance Charge. The DSR Fund Imbalance Charge will be in addition to the emergency imbalance charge.

5.7. Shortfall in the Neutrality account may occur as a result of a Shipper default. This type of shortfall will not present itself until the initial Energy Balancing Invoice, for the relevant day;

- has been generated; and
- the payment due date has lapsed; and
- the defaulting Shipper has either only part or not settled the outstanding invoice.

In this instance the prevailing Neutrality Mechanism and Energy Balancing Debt Recovery arrangements will apply, with the exception that the neutrality apportionment will based on shippers' throughput described in section 6.

6. Relevant UDQI and UDQO during GDE Stage 2+

6.1. In respect of a relevant day within GDE Stage 2+ the Balancing Neutrality mechanism will smear all outstanding Balancing Neutrality Charges and Adjustment Neutrality charges over the sum of each relevant User's User Daily Quantities Inputs (UDQI) and User Daily Quantity Outputs (UDQO) for the preceding 365 days. This represents a change to the prevailing neutrality arrangements which currently smear neutrality charges/credits across Users' total UDQI/O for the relevant day.

7. Settlement Timing

7.1. Imbalance Charges and DSR Fund Imbalance Charges will be included within the same relevant Energy Balancing Invoice.

7.2. DSR Payments to Users, for the settlement of End Consumers payments for involuntary DSR curtailment, shall be invoiced in a subsequent Energy Balancing Invoice within the defined DSR payment timescales of 4th EBI following issue of the relevant EBI.

7.3. If a GDE spans across two or more calendar months, the Imbalance Charges calculated in paragraph 2 shall be included within the relevant (separate) Energy Balancing Invoice and not invoiced together.

7.4. Users will be obliged to pass the relevant DSR Payments on to their suppliers (as soon as reasonably practicable), which in turn will be obliged to pass these on to customers (as soon as reasonably practicable), e.g. through a

rebate on the next energy bill. This process will be enforced through licence conditions.

7.5. Xoserve will administer the reconciliation outlined in para 4.12.

8. Demand Side Reduction Information

This section explains the process to identify the supply points curtailed in the event of a GDE escalating.
For Firm Load Shedding (as part of stage 2);

8.1. In the event of curtailment associated with FLS in Stage 2; the relevant Gas Transporter (NTS and DN) shall determine each site affected for each day of the GDE and identify for each site;

(a) Meter Point Reference Number; and

(b) For DR sites, volume of demand curtailed (it is expected that this volume will be the same as that calculated for DR ECQ);

(c) For NDR sites, User name(s).

8.2. This information will be passed onto Xoserve no later than 5 business days after the curtailment has occurred.

For Network Isolation (as part of stage 3):

8.3. In the event of a Network Isolation occurring within an LDZ as part of a GDE the relevant Gas Transporter (DN) shall determine each NDR property affected by the Network Isolation for each day of the GDE and identify for each property;

(a) Meter Point Reference Number; and

(b) Postcode and house number;

(c) Market Sector Flag

Xoserve will use this information to determine the following:
Meter Point specific Supply Offtake Quantity (SOQ).

8.4. No later than 5 business days following the start of a GDE, all Gas Transporters will confirm to Xoserve whether or not Network Isolation occurred within one or more of its Local Distribution Zones and, if Network Isolation has occurred, provide the accompanying Network Isolation information as stated in paragraph above

8.5. If, following the submission of the information described in section 8, the relevant Transporter is aware of an amendment to this information the relevant Transporter shall submit an amended version of this information to Xoserve as soon as is reasonably practical. This information shall feed into the process outlined in para 4.11.

8.6. If National Grid NTS is unable to process the relevant DSR Payments before submitting the 'final' Energy Balancing Invoice as described in paragraphs 7.1 and 7.2, these payments will be processed within a proceeding Energy Balancing Invoice and shall be funded by Neutrality.

8.7. National Grid NTS will, where a User has received a Demand Side Response Payment for one or more of its smaller NDR Supply Points, provide to each

User the relevant supporting information to support the onward payment of the DSR Payment to the End Consumer. This supporting information will include the information described in this section 8.

9. Commercial Interruption Contract

Where a Supply Points with a commercially interruptible contract is curtailed as part of Firm Load Shedding

9.1. Suppliers shall, where a commercially interruptible contract has been agreed between the Supplier and end consumer, submit to National Grid NTS, 30 days prior to the start of October each year, or, as soon as is reasonably practical after the information is known but prior to the emergency occurring, the following information relating to the relevant Supply Point;

(a) The quantity of gas calculated as available for reduction or discontinuance per day "Daily Curtailment Volume" *(maximum can be no more than SOQ);*

(b) Details of the specific site, i.e. site name, postcode, LDZ site is located and meter point reference number;

(c) Relevant User / supplier name and contact information; and

(d) Any other remarks that will need to be known e.g. limitations in time to turn down.

9.2. For sites with partial commercially interruptible contracts, the same process will be used as outlined in para 9.1. In addition to the information outlined in para 9.1, the following additional information will be required:

(a) The quantity of gas calculated as available for reduction or discontinuance per day "Daily Curtailment Volume" as a proportion or percentage of the overall demand; or

(b) The quantity of gas demand remaining post curtailment.

9.3. The information submitted in 9.1 and 9.2 will be used to determine the volume of demand that will be assumed to be interrupted prior to the curtailment of firm demand in Stage 2.

9.4. Xoserve will maintain a register of all Supply Points submitted to it by Users in accordance with paragraph 9.1.

9.5. Where a Supply Point with a commercially interruptible contract is curtailed as part of FLS, the relevant User shall receive no Demand Side Response Payment for the volume of contracted commercial demand interruption as calculated in 9.3. The DR ECQ methodology will not apply to this volume of contracted commercial interruption and as such the DR demand shall be assumed to have been reduced by this volume.

10. Process Closeout

10.1. The process will close out in line with the current provisions in Section S1.8, i.e. 18 months after the invoice due date. The close out of the process will mean:

(a) No additional curtailment information will be taken into account post close out date;
(b) Any surplus / deficit in the DSR Fund will be recovered from / passed onto neutrality at the next settlement date;
(c) No additional DSR Payments will be made to Users or onto consumers;
(d) No additional payments will be recovered from Users or Neutrality.

Appendix A

Emergency Curtailment Volume Calculation

A1. DSR Volumes

A1.1 The daily Emergency Curtailment Volumes will be calculated using the following formula:

Applicable DR curtailment volume + Applicable NDR curtailment volume

A1.2 The following information is required:

(a) DM metered volumes;

(b) LDZ metered volumes;

(c) Forecast demand prior to NEC demand curtailment instruction.

A1.3 For DR applicable curtailment volume :

DR demand side curtailment volume = The expected offtake for the relevant day, using same methodology as the DR ECQ process – Emergency Curtailment Volume
For days of part curtailment, pro-rated volumes shall be used

A1.4 For NDR demand applicable curtailment volume:

Applicable NDR curtailment volume = (Forecast demand – End of day metered demand)
End of day metered demand = LDZ metered at the end of the day – DM demand
Forecast demand = Forecast demand prior to NEC demand curtailment instruction

Appendix 4 - Glossary

A

Authority (The)

The Authority is the Gas and Electricity Markets Authority (GEMA). GEMA is the governing body of Ofgem and consists of non-executive and executive members and a non-executive chair.

C

Cash-out

National Grid Gas is responsible for residual balancing of the gas system. The prices paid for these balancing actions are then passed onto long and short shippers. That is, long shippers are paid at one rate for their positive imbalance and short shippers have to pay at a different rate for their negative imbalance. These charges are known as cash-out prices.

Cash-out (dynamic)

Dynamic cash-out means that the level of the cash-out is unfrozen and continues to change in response to circumstances upon declaration of stage 2 of an emergency.

Cash-out (frozen)

Under current gas emergency arrangements the cash-out price is frozen when stage 2 of an emergency is declared. That is, the cash-out price remains at the level it was at this time for the duration of the emergency.

D

Daily-metered (DM) consumer

This is a gas consumer with a meter which allows their consumption to be measured on a daily basis.

Demand Side Response (DSR)

A demand side response is a short-term change in the use of, in this case, gas by consumers following a change in the balance between supply and demand.

E

Emergency curtailment arrangements

The emergency curtailment arrangements provide for payments to be made to shippers in the event that transporters instruct, under the direction of the Network Emergency Coordinator, the curtailment of gas off-takes at any relevant supply

point. Shippers are still required to pay cash-out on their imbalances but curtailed quantities are subject to a trade between the shipper and the residual balancer at the Emergency Curtailment Trade Price.

Emergency Curtailment Trade Price

This is the price at which a shipper's emergency curtailment quantity is paid. This is determined as the 30 day average System Average Price.

European Gas Security of Supply Regulation

Regulation (EU) No 994/2010 of the European Parliament and of the Council of 20 October 2010 concerning measures to safeguard security of gas supply and repealing Council Directive 2004/67/EC. This regulation aims to improve European gas security of supply, and places a number of requirements on member states.

Exit Reform

The Reform of the NTS Exit Capacity arrangements also known as Exit Reform began in 2005 following the Authority's decision to approve National Grid Gas's sale of four of its distribution network businesses. The process concluded in January 2009 with the implementation of code modification UNC195AV known as the Introduction of Enduring NTS Exit Capacity Arrangements.

The reform was necessary to ensure NGG received efficient investment signals in respect of NTS users' capacity needs under the new arrangements. This reforms process has also resulted in changes being made to the stages of a national gas deficit emergency.

F

Firm consumer

This is a consumer with a non-interruptible gas supply contract. These consumers cannot be instructed to reduce their demand or have their demand curtailed except for following the announcement of stage 2 or greater of an emergency.

Firm load shedding

Upon declaration of stage 2 of an emergency, the Network Emergency Coordinator may instruct transporters of gas to instruct consumers stop using gas. This is known as firm load shedding. Firm load shedding starts with the largest consumers – who are typically large industrial users or power generators.

Force majeure

Force majeure is a way in which parties to a contract can agree on specific circumstances when a failure to perform an obligation will be excused (ie when the breaching party will not face liability for its breach).

G

The Gas Act (1986)

The Gas Act is a piece of primary legislation that prohibits persons from engaging in specified activities unless authorised to do so by a licence granted by the Authority. The Gas Act also sets out the powers of the Authority in carrying out its functions under Part I of the Gas Act.

Gas Deficit Emergency (GDE)

A Gas Deficit Emergency is a type of Gas Supply Emergency arising as a result of insufficient deliveries of gas being available to meet required demand on the gas system or as a result of a potential or actual breach of a safety monitor.

The Gas Safety (Management) Regulations 1996 (GS(M)R)

The GS(M)R set out the requirement for a Network Emergency Coordinator (NEC) for any network which includes more than one gas transporter. They also require each gas transporter, as well as the NEC, to prepare a safety case which must be approved by the Health and Safety Executive.

Gas Supply Emergency

A Gas Supply Emergency is defined in the Uniform Network Code as the occurrence of an event or series of events that results in, or gives rise to a significant risk of, a loss of pressure in the gas system which may lead to a supply emergency.

H

Health and Safety Executive (HSE)

The Health and Safety Executive (HSE) is the national independent watchdog for work-related health, safety and illness. The safety case produced by the Network Emergency Coordinator must be submitted to the HSE for their approval.

I

Interconnector (Gas)

The gas pipelines and associated terminals which connect the European and UK gas transmission networks.

Interruptible contract

An interruptible contract may be signed by gas consumers where the relevant transporter and/or supplier have the ability to ask a consumer to reduce its off-takes (generally daily metered consumers). These contracts allow the transporter and/or supplier to disconnect the consumer (in or out of an emergency) in order to manage demand on the system. Consumers may sign these contracts in return for reduced rates on their gas supply.

L

Licensee (Gas)

The Gas Act requires parties involved in the gas industry to be licensed by the Authority. As licence holders, these parties are required to comply with a number of licence conditions.

Licence condition

All parties licensed by the Authority to partake in gas industry activities are required to meet certain licence conditions. The licence conditions for the gas industry are categorised into transporter, shipper, supplier and interconnector licence conditions. The licence conditions are separated into standard licence conditions which apply to all licensees of one type (eg transporters) and special licence conditions which apply only to a specific party (eg National Grid Gas).

Liquefied Natural Gas (LNG)

Liquefied Natural Gas is natural gas (predominantly methane, CH_4) that has been converted temporarily to liquid form for ease of storage or transport.

Liquidity

Liquidity is a measure of the number of times a given commodity is traded. A low liquidity can mean that it is difficult for new entrants to enter into and grow in a market.

Local Distribution Zone (LDZ)

Local Distribution Zones (LDZs) are low pressure pipeline systems which deliver gas to final users and Independent Gas Transporters. There are twelve LDZs which take gas from the high pressure transmission system for onward distribution at lower pressures.

M

Market Balancing Action (MBA)

An action taken by National Grid Gas to balance the system in which it enters into a transaction with a party so that that party will agree to make an acquiring or disposing trade nomination. The prices at which these trades are made set cash-out prices.

Modification (Code)

The Uniform Network Code (UNC) is the framework which sets out the gas transportation arrangements for those parties licensed under the Gas Act 1986. This code has developed through modifications raised by signatories to the UNC. It is still possible for modifications to be made through this industry led process. However, the introduction of the Significant Code Review process now allows for Ofgem to lead on the development of modifications before directing them to be raised.

N

National Grid Gas (NGG)

National Grid Gas (NGG) is the Gas Transportation licence holder for the North West, West Midlands, East England and London Gas Distribution Networks. NGG also hold the Gas Transportation licence for the gas National Transmission System (NTS). Prior to 10 October 2005, NGG was known as Transco.

National Transmission System (NTS)

This is National Grid Gas' high pressure gas transmission system. It consists of more than 6,400 km of pipe carrying gas at pressures of up to 85 bar (85 times normal atmospheric pressure).

Network Emergency Coordinator (NEC)

The Network Emergency Coordinator is responsible under safety legislation for the coordination of a gas supply emergency.

Non-daily metered gas consumer (NDM)

This is a gas consumer who does not have a meter which can be read on a daily basis. This includes small consumers, including domestic consumers.

Neutrality

This refers to the system of Balancing Neutrality Charges which are used under the Uniform Network Code (UNC) to ensure that National Grid neither benefits nor loses financially from the balancing actions it is required to undertake. The charges reflect the difference between all amounts received and paid by National Grid for gas used to balance the system and are spread across all signatories of the UNC on the basis of their usage of the transportation system.

O

On-the-day Commodity Market (OCM)

This is the market on which trading takes place to allow NGG to balance the system. Shippers may also trade with each other on the OCM.

P

Post Emergency Claim (PEC)

The post emergency claims arrangements are used to recompense parties for flowing additional gas onto the system in an emergency if opportunity costs for shippers to do so exceed the cash-out price they received for being long.

Project Discovery

Project Discovery is Ofgem’s investigation published in 2010 into whether or not future security of supply could be delivered by the existing market arrangements

over the coming decade. A copy of the report and associated documents can be accessed on our website.

Public Appeal

An appeal made by National Grid Gas to consumers in the event of a Gas Supply Emergency to reduce gas use.

S

Safety case

The Gas Safety (Management) Regulations 1996 set out the requirement for each transporter of gas to publish a safety case which must be approved by the Health and Safety Executive. These safety cases must demonstrate the method by which the holder will ensure the safe operation of its network. In the case of the Network Emergency Coordinator (NEC), the safety case includes details of the procedures that the NEC has established to monitor the situation throughout a supply emergency and for co-coordinating actions across affected parts of the gas network.

Safety and Firm Gas Monitor Methodology (Safety Monitor)

The Safety Monitor provides a requirement for sufficient gas to be held in storage to meet a number of criteria. This requirement remains valid in the event of a GDE.

Significant Code Review (SCR)

The SCR is a new modifications process introduced through the Code Governance Review. This process allows Ofgem to develop modifications proposals before directing them to be raised.

Shippers

Gas shippers buy gas from producers and sell the gas onto suppliers, and are defined as entity which introduces, conveys and takes out gas from a pipeline system.

Smeared/shared cost

This is a cost that is spread across all relevant parties. For example, the costs to National Grid of a certain activity may be spread across all shippers involved in the Great Britain gas market.

System Average Price

This is the weighted average price of all trades on a given day.

System Marginal Buy Price

The System Marginal Buy Price is the greater of the system average price plus the default system marginal price, and; the price of the highest balancing action offer price in relation to a Market Balancing Action taken by National Grid Gas for that day.

System Marginal Sell Price

The System Marginal Sell Price is the lesser of the system average price minus the default system marginal price, and the price of the lowest balancing action offer price in relation to a Market Balancing Action taken by National Grid Gas for that day.

System Operator

This is the entity responsible for operating the Great Britain transmission system and for entering into contracts with those who want to connect to and/or use the transmission system. National Grid is the GB system operator.

T

Therm

A unit of heating value equivalent to 100,000 British thermal units (Btu).

The Third Package

The Third Package is a key step in implementation of the internal European energy market. It recognises the need for better co-ordination between European network operators and continuing co-ordination between regulators at that level.

When discussing the 'Third Package' in this document we are referring to Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and to Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators.

Transporter (Gas)

The holder of a Gas Transporter's licence in accordance with the provisions of the Gas Act 1986.

U

Uniform Network Code (UNC)

The UNC defines the rights and responsibilities for all users of gas transportation systems in Great Britain. The UNC is, in effect, a contract between the gas transporter and the users of its pipeline system.

Uniform Network Code (UNC) – Section Q

Section Q of the UNC is the main framework which sets out the arrangements that will be in place in the event of declaration of a gas emergency.

V

Value of Lost Load (VoLL)

This is the theoretical price at which a consumer would rather have their gas supply disconnected than continue to pay for a firm supply.

Appendix 5 - Feedback Questionnaire

1.1. Ofgem considers that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process, which was adopted for this consultation?
2. Do you have any comments about the overall tone and content of the report?
3. Was the report easy to read and understand, could it have been better written?
4. To what extent did the report's conclusions provide a balanced view?
5. To what extent did the report make reasoned recommendations for improvement?
6. Please add any further comments?

1.2. Please send your comments to:

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