



Promoting choice and value

for all gas and electricity customers

Gas Security of Supply Significant Code Review - Proposed Final Decision

Response to draft policy decision and further consultation

Reference: 111/12
Publication date: 31 July 2012
Response deadline: 24 October 2012

Contact: Thomas Farmer, Economist
Anjali Mehta, Senior Economist
Team: Wholesale Markets
Tel: 020 7901 7000
Email: gb.markets@ofgem.gov.uk

Overview:

The aim of the Gas Security of Supply Significant Code Review (Gas SCR) is to establish whether changes to the current gas market arrangements are required to enhance security of supply, and if so, what these reforms should be.

This document responds to representations received in response to our draft policy decision and sets out our proposed final decision on policy for cash-out reform under the Gas SCR. Further work on the Gas SCR will now focus on the business rules, code and licence changes required to implement this proposed final decision.

We consider our proposed final decision will strengthen the incentives on market participants to deliver adequate gas supplies by reforming the cash-out arrangements in an emergency. Further investigation of security of supply risks and the range of potential further measures is being progressed through the gas security of supply report to government.

Context

We launched the Gas SCR on 11 January 2011. On the same day we published our initial consultation document which outlined our initial proposals to enhance gas security of supply. Following feedback from stakeholders on our proposals we published for consultation our draft policy decision setting out a number of reform options and our preferred option. We also held several stakeholder events and meetings to elicit feedback on our draft policy decision. We have considered this feedback and developed and revised our reform proposals.

This document responds to representations received in response to our draft policy decision and sets out the Gas and Electricity Markets Authority's (the Authority) proposed final decision on the Gas SCR. Further work on the Gas SCR will now focus on the business rules (which set out the framework for the proposed changes), code and licence changes required to implement this proposed final decision. Our proposals can only come into effect following consultation on the detailed implementation. Whilst we remain open to representations on our proposed final decision more generally, we would not expect to change our high level policy decisions unless material new information comes to light.

Our draft policy decision also recommended investigating further measures to enhance gas security of supply. The government supported this view and requested that Ofgem undertake a review of medium to long term security of supply and explore the range of potential further measures which could be undertaken in addition to cash-out reform. We have agreed with government that we will submit the report on gas security of supply this autumn.

Associated documents

Gas SCR - Proposed Final Decision - Proposed Business Rules

http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/120731_GasSCR_br.pdf

Gas SCR - Proposed Final Decision - Proposed UNC Drafting

http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/120731_GasSCR_unc.pdf

Gas SCR - Proposed Final Decision - Proposed Shipper Licence Drafting

http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/120731_GasSCR_shipper.pdf

Gas SCR - Proposed Final Decision - Proposed Supplier Licence Drafting

http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/120731_GasSCR_supplier.pdf

Gas Security of Supply Significant Code Review – Impact Assessment for the Proposed Final Decision, July 2012 (112/11)

http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/120731_GasSCR_IA.pdf

Redpoint Energy - Gas SCR - Economic modelling for Ofgem's proposed final policy decision

http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/120731_GasSCR_RP.pdf

Draft Policy Decision - Gas Security of Supply Significant Code Review, November 2011 (Reference number 145/11):

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=46&refer=Markets/WhIMkts/CompandEff/GasSCR>

Draft Impact Assessment - Gas Security of Supply Significant Code Review, November 2011 (Reference number 146/11):

<http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/Draft%20Impact%20Assessment%20Gas%20Security%20of%20Supply%20Significant%20Code%20Review.pdf>

Redpoint Energy, Gas Security of Supply Significant Code Review: Modelling Report, November 2011:

<http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/Redpoint%20Energy,%20Gas%20Security%20of%20Supply%20Significant%20Code%20Review%20-%20Economic%20Modelling.pdf>

London Economics, Estimating the Value of Lost Load – Final Report to Ofgem, July 2011:

<http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/London%20Economics,%20Estimating%20Value%20of%20Lost%20Load%20-%20Final%20Report%20to%20Ofgem.pdf>

London Economics, Estimating the Value of Lost Load – Annexes, July 2011:

<http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/London%20Economics,%20Estimating%20Value%20of%20Lost%20Load%20-%20Annexes.pdf>

Ofgem Consumer First Panel Year 3, Report on Value of Lost Load (VoLL), Opinion Leader, May 2011:

<http://www.ofgem.gov.uk/Sustainability/Cp/CF/Documents1/Ofgem%20Consumer%20First%20Panel%20Year%203%20-%20Report%20on%20Value%20of%20Lost%20Load.pdf>

Launch Statement – Gas Security of Supply Significant Code Review, January 2011:

<http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/Launch%20Statement%20-%20Gas%20Security%20of%20Supply%20Significant%20Code%20Review.pdf>

Initial Consultation - Gas Security of Supply Significant Code Review, January 2011 (Reference number 02/11):

<http://www.ofgem.gov.uk/Markets/WhIMkts/CompandEff/GasSCR/Documents1/Initial%20Consultation%20-%20Gas%20Security%20of%20Supply%20Significant%20Code%20Review.pdf>

Contents

Executive Summary	5
1. Introduction	8
Scope and objectives.....	8
The current arrangements.....	8
Draft policy decision	9
Stakeholders’ response.....	10
Summary of proposed final decision	11
Our approach to this proposed final decision	12
Document structure	13
2. Background	15
Broader concerns about gas security of supply	15
Wider context.....	16
3. Our proposed final decision on emergency cash-out reform	19
Emergency cash-out price.....	20
Value of Lost Load (VoLL)	22
Accounting for emergency curtailment.....	25
Payments to customers	27
Force majeure	29
Cash flows	31
4. Assessment of options.....	34
Reform options.....	34
Summary of assessment for draft policy decision	34
Stakeholder feedback.....	35
Summary of assessment for proposed final decision	35
5. Process and timings	39
Process for modifying the UNC and relevant licence conditions	39
Next steps and stakeholder consultation	39
Appendices	41
Appendix 1 - Summary of consultation and responses	42
Appendix 2 – Current arrangements.....	46
Appendix 3 – Implementing our proposals for emergency cash-out reform	52
Appendix 4 – Consultation response.....	60
Appendix 5 - Glossary.....	61
Appendix 6 - Feedback Questionnaire	70

Executive Summary

The need for change

The decline in UK continental shelf production has resulted in increased reliance on international gas markets to deliver security of supply to customers and generators. This exposes GB to a range of additional risks. Our security of supply arrangements need to take account of the possibility of disruption from a wide range of potential events - from natural disasters, to technical failure, to the geopolitics of energy. In a more integrated European wholesale gas market we may potentially stand to benefit from increased security through greater diversification of supply sources. There are, however, also risks from the actions of players beyond the control of the GB market and we recognise that our current gas market arrangements need to be reformed to reflect an increased dependence on imports.

In GB shippers pay imbalance charges (called cash-out charges) if they do not take the same amount of gas off the system as they put in. Cash-out reflects the costs to the system operator of balancing the system and gives gas shippers an incentive to match supply and demand. At present cash-out prices are frozen during gas deficit emergencies (GDE)—a period when the supply of available gas is not sufficient to meet GB demand. The Network Emergency Coordinator will manage the emergency by instructing domestic gas supplies to flow and, where necessary, interrupting customers with firm gas supply contracts.

In 2010 Ofgem published Project Discovery¹ which noted that the consequence of freezing the cash-out price is that the incentive to bring gas to the UK is weakened at precisely the time when we would need the incentive to be the sharpest. Given our increasing reliance on imports, managing an emergency by instructing domestic supplies to flow may also not be sufficient to get us out of an emergency. We were also concerned that shippers do not face the true costs of an emergency. 'Firm' customers—including homes and small businesses— are not paid for any involuntary demand side response (DSR) they provide if they lose gas supply in a GDE. This means that the risk (and cost) of emergency disconnection sits with consumers, the vast majority of whom can do very little, if anything, to mitigate this risk. In response to these concerns we began a significant code review into the gas cash-out arrangements at the beginning of 2011.

Proposed final decision

We intend to sharpen the incentive on gas shippers to enhance security of supply in GB by reforming the gas cash-out mechanism. Under our proposals cash-out would be set at £20 per therm (an estimate of domestic customers' Value of Lost Load' or VoLL) in a GDE once gas supplies to firm customers are curtailed.

¹ Ofgem, Project Discovery - Options for delivering secure and sustainable energy supplies, February 2010, <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=73&refer=Markets/WhIMkts/monitoring-energy-security/Discovery>

A proportion of the cash-out payments from shippers would be used to fund payments to those firm consumers whose gas supply has been curtailed for the provision of involuntary DSR services. Firm customers would be paid £20 per therm for each day they are without gas due to firm load shedding (ie they are instructed to stop consuming gas). Although, if physical network isolation occurs (ie where parts of the network stop receiving gas), affected firm customers would be paid £20 per therm for the first day of the isolation only. Shippers would not be liable for cash-out charges in respect of isolated customers after the first day of a network isolation; this limits their exposure and reflects the fact that they are not directly responsible for the reconnection of customers.

In developing our proposed final decision we have considered a number of policy options for reforming the cash-out arrangements and stakeholders views on these options. We have sought to balance the interests of consumers in enhancing the security of gas supplies with the interests of shippers in not being exposed to an inappropriate level of risk. We consider that our proposals are effective in striking this balance and deliver the greatest net benefit to customers.

We consider our proposals will decrease the likelihood of an emergency occurring and decrease the duration or severity of one should it occur. Allowing the cash-out price to rise to £20 per therm in a GDE will increase the ability of GB to attract additional gas supplies. It will also provide a strong incentive to shippers to undertake actions which reduce the risk of a GDE occurring as the reforms move many of the risks of supply interruptions from consumers to shippers. This is justified because shippers are better able to manage this risk, for example by diversifying their supplies, building new infrastructure (eg storage) or arranging interruptible contacts to daily metered customers (usually large industrial customers).

We believe that setting the emergency cash-out price at an estimate of domestic VoLL is appropriate as it will provide a strong incentive for shippers to arrange interruptible contracts with industrial and commercial (I&C) customers. This is important as it enhances security of supply for firm customers – who might be unable or unwilling to self interrupt. We expect that I&C customers that enter into commercially interruptible contracts will be paid less than £20 per therm if their supplies are interrupted as they are likely to have VoLLs that are below this level. In return these customers will receive payments, or discount on the cost of their gas.

Our proposed final decision is based on an assumption that a market for interruptible contracts will develop in the I&C sector. We see no reason why it would not emerge. We think it is important to provide an opportunity for the commercial interruptible market to develop and our proposed emergency cash-out price of £20 per therm provides a strong incentive for this to occur. However if these arrangements have been in place for some time and there is evidence that there are obstacles to a market for commercially interruptible contracts developing which are outside of the control of industry, then we would consider carefully any proposal for the level of the emergency cash-out price to be modified.

We consider that it is prudent and proportionate to cap the liability faced by shippers by capping cash-out at maximum level of £20 per therm, and to limit cash-out exposure to one day in the case that a network isolation occurs. Allowing unlimited liabilities on shippers would, in our view, create disproportionate risks for shippers.

During consultation some shippers suggested that we should further limit financial exposure by introducing a clause which would exclude liability in force majeure events. There is no force majeure exemption clause in the current arrangements. We do not consider it appropriate to introduce a force majeure exemption clause as part of this Gas SCR. As noted above, our approach to capping cash-out in the event of network isolation limits the liabilities faced by shippers. Further, limiting shippers' liability by introducing a force majeure exemption clause would shift the risks associated with these events to individual consumers and could weaken security of supply compared to current arrangements. We note that we are undertaking further work for the government on the range of potential further measures that could further enhance security of supply. A possible consequence of some potential further measures could be to alter the balance of risk borne by different parties.

Our revised modelling suggests that our proposals enhance security of supply, have a positive overall net benefit and will add just 11 pence per year to an average annual consumer bill.² We believe that this small impact on bills is more than outweighed by the security of supply benefits for consumers that we consider our proposed reforms will deliver.

Process

This document responds to representations received in response to our draft policy decision and sets out the Authority's proposed final decision on policy for cash-out reform under the Gas SCR. Further work on the Gas SCR will now focus on the business rules (which set out the framework for the proposed changes), code and licence changes required to implement this proposed final decision. Our proposals can only come into effect following consultation on the detailed implementation. Whilst we remain open to representations on our proposed final decision more generally, we would not expect to change our high level policy decisions unless material new information comes to light.

Should we proceed to a final decision to implement our proposed reforms we intend to use the power in section 36C Gas Act 1986 to direct the necessary modifications to the Uniform Network Code. In addition, certain modifications to licences would be required. We believe that this will allow our changes to come into effect as quickly as possible and provide certainty to industry.

² The bill impact could differ from this estimate dependent on how shippers respond to the incentives created and the extent of investment in mitigating measures to enhance security of supply.

1. Introduction

Chapter Summary

This chapter provides an introduction to this proposed final decision on the Gas SCR. It includes our key objectives, the general messages from stakeholders to our draft policy decision and our response to them.

Scope and objectives

1.1. Our key objectives for this Gas SCR are to:

- minimise the likelihood of a GDE occurring by encouraging gas shippers and suppliers to undertake sufficient investment to enhance security of supply
- minimise the severity and duration of a GDE, if one ever occurred, by sharpening incentives to attract gas into GB, and
- ensure that firm consumers are paid for any involuntary DSR services that they provide in an emergency.

1.2. A GDE occurs when there are insufficient quantities of gas on the network. This could result in customers that are supposed to have an uninterrupted supply of gas (firm customers) having their gas supply interrupted. The reforms outlined in this proposed final decision would need to be reflected in the emergency arrangements (namely section Q) of the Uniform Network Code (UNC) and shipper and supply licence conditions. This review is not concerned with interruptions or emergencies that result from network infrastructure failures (except to the extent these could cause a GDE).

The current arrangements

1.3. In GB, gas shippers are provided with an incentive to balance their gas supplies and demands on a daily basis through imbalance or 'cash-out' charges. The level of cash-out will generally reflect supply and demand conditions and the cost of balancing the system, such that cash-out will rise when supplies are scarce relative to demand. These charges are designed to provide an incentive for shippers to keep their supply and demand in balance.

1.4. At present there are five stages of an emergency. At stage 2, the cash-out price is frozen at its current level and remains frozen for the duration of the emergency. Firm customers are not paid for the involuntary DSR services they provide if they have been curtailed (during firm load shedding or network isolation). Ahead of the implementation of Exit Reform, National Grid has reviewed the Network Emergency Coordinator (NEC) safety case and proposed changes to reduce the number of stages of an emergency from five to four. The Health and Safety

Executive has approved the changes to the safety case. The changes will come into effect in October 2012.

1.5. In developing our proposed final decision we have sought to ensure that our proposed reforms of the gas emergency arrangements are consistent with the changes to the NEC safety case as a result of Exit Reform. As a result, throughout this document we refer to the stages of emergency as they will appear in the NEC safety case from 1 October 2012. The business rules and draft code and licence changes also refer to stages of a GDE in this manner. For the avoidance of doubt, this does not fetter the Authority's discretion with respect to UNC modification proposal 412 (UNC 412), which proposes to make changes to align the UNC with the changes to the NEC safety case. Were the Authority to decide to reject UNC 412 this would necessitate minor changes to the business rules and draft code and licence changes to ensure consistency with the stages of a GDE as described in the UNC.

1.6. Further detail on the current cash-out arrangements as well as the current and future emergency arrangements is set out in appendix 2 as well as in our draft policy decision and initial consultation document.

Draft policy decision

1.7. In our draft policy decision and initial consultation document we outlined a number of concerns about the current emergency cash-out arrangements. Broadly we expressed concern that freezing the cash-out price upon entering a GDE is likely to weaken price signals at a time when it is likely that prices will need to rise to attract more gas. We also noted concerns that the costs associated with any firm customer emergency curtailments that are required to balance the system in a GDE are borne by the consumer, rather than the shippers that were short of gas and contributed to the need to curtail firm customers.

1.8. In our draft policy decision we considered a number of options to address these concerns, including reforms to the cash-out arrangements as well as additional measures. Our draft policy decision was to reform the cash-out arrangements, so that cash-out is set at £20 per therm in a GDE once gas supplies to firm customers are curtailed.

1.9. A proportion of these payments would be used to fund payments for involuntary DSR services to those consumers whose gas supply has been curtailed if firm load shedding or network isolation occurs. Firm customers would be paid £20 per therm for:

- all days of firm load shedding (where individual large customers are required to reduce their gas demand) and
- the first day of any network isolation (where parts of the network stop receiving gas).

1.10. We commissioned London Economics to provide us with an estimate of the Value of Lost Load (VoLL) for different categories of customers. VoLL is the

theoretical price at which a consumer would rather have their gas supply disconnected than continue to pay for firm supply. The proposed emergency cash-out price of £20 per therm is equal to London Economics' estimate of domestic VoLL for an outage consistent with the Gas Security of Supply Regulation (the "Regulation")³.

1.11. The intention of these reforms is to improve incentives on gas market participants to enhance gas security of supply in GB. These proposed reforms aim to ensure that risks are transferred to those better able to manage them, and ensure that firm consumers are paid for the involuntary DSR services they provide in balancing the system in an emergency.

1.12. In our draft policy decision we decided that it was prudent and proportionate to cap the liability faced by shippers by capping cash-out to at maximum level of £20 per therm, and to limit cash-out exposure to one day in the case that a network isolation (when domestic customers could be curtailed) occurs. We recognised that the capped approach could leave a gap in the emergency arrangements. Given this, we recommended that further measures to enhance security of supply should be investigated in addition to cash-out reform. The government supported this view and asked us to look into the remaining risks to security of supply and the range of potential further measures. We have agreed with government that we will submit the report this autumn.

Stakeholders' response

1.13. We invited written responses to the draft policy decision. We received 33 non-confidential responses, which are available on our website. In addition we undertook widespread consultation including five stakeholder events following the release of the draft policy decision and bilateral meetings with interested parties.

1.14. Most stakeholders generally agreed that there is merit in reviewing the risk of a gas supply emergency. There was recognition among many respondents that the present emergency cash-out arrangements may not provide an appropriate price signal, particularly in the context of increasing import dependency. Some stakeholders expressed qualified support for our proposed reforms.

1.15. However several stakeholders were concerned about the effect of our proposals on the market and the potential for unintended consequences. They considered that the proposals could expose shippers to unmanageable risks. Some stakeholders considered that the proposals would not necessarily improve security of supply. Some stakeholders noted that the market has performed well to date and that there was no need for cash-out reform. Many stakeholders highlighted their view that the use of domestic VoLL as an administered price for all consumers was inappropriate as it did not reflect the different characteristics of I&C customers. Some stakeholders also argued that cash-out reform should amend the current arrangements to exclude force majeure (FM) events.

³ 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.

1.16. Several stakeholders thought that the Gas SCR should be delayed to enable proposals for cash-out reform to be considered alongside work on further measures to enhance security of supply. Some stakeholders expressed a preference for further measures rather than cash-out reform.

Summary of proposed final decision

1.17. Our proposed final decision is to reform emergency cash-out such that the costs of firm customer curtailments are treated as a balancing action and so “priced-in” to the cash-out arrangements. Our proposals are designed to create incentives for shippers to purchase gas up to the value which consumers place on uninterrupted gas supplies.⁴ Where firm consumers are disconnected, they would receive a payment in recognition of the service they provide to the system by having their supply curtailed.

1.18. Reforming cash-out in this way transfers many of the risks of emergency from individual consumers to shippers. We believe shippers are better placed to manage these risks. This transfer of risks provides stronger incentives for shippers to take actions to reduce the likelihood of a GDE occurring. These actions could include arranging commercially interruptible contracts, diversifying supplies or investment in storage. It also provides a strong price signal for imports in a GDE and so would act to reduce the severity of an emergency should one occur.

1.19. We have considered the alternative of setting VoLL at different levels dependent on the stage of emergency (as different types of consumers will be likely to be curtailed at different stages of an emergency). However, our proposed final decision is to maintain the use of a single VoLL based on the estimate for domestic consumers. We are using domestic VoLL at £20/therm as a figure that is likely to sit above the VoLL for most I&C customers, and therefore of the customers who are likely to be interested and able to enter into commercially interruptible contracts. This maximises the scope for an efficient market for commercially interruptible contracts to emerge, allowing the market to reveal the “true” VoLL of individual I&C customers.

1.20. We have carefully considered the proposals introducing a FM exemption clause. We note that the existing cash-out arrangements do not include an exemption for FM events. We consider that the introducing an FM exemption clause would leave many of the risks of an emergency with consumers, and weaken the incentives on shippers to enhance security of supply. This is contrary to the objectives of the Gas SCR. We think that shippers are better placed than consumers to manage even FM-type risks, as they have a variety of risk mitigation measures they can pursue. We note the interactions between cash-out reform under the Gas SCR and our work for government on potential measures to further enhance security of supply and discuss this further in chapter 3.

⁴ Our proposals are also consistent with the safety requirements of operating the network in accordance with the Gas Safety (Management) Regulations (GS(M)R). The GS(M)R are available on the Health and Safety Executive website: www.hse.gov.uk/gas/supply/legislation.htm#gsmr

1.21. We consider that cash-out reform should be pursued regardless of the outcomes of our work on potential further measures for the gas security of supply report. Reforming the emergency cash-out arrangements improves the market incentives on shippers to enhance security of supply. As noted above our work on further measures is aimed at addressing the gap in the emergency arrangements that exists because of our decision to cap shippers' liabilities in an emergency. Potential further measures would not be a substitute for cash-out reform.

1.22. Chapter 3 contains a more detailed discussion of the comments on the different features of our draft policy decision and how we have reflected these comments in our proposed final decision.

Our approach to this proposed final decision

1.23. This document responds to representations received in response to our draft policy decision and sets out our proposed final decision on policy for cash-out reform under the Gas SCR. This proposed final decision should be considered with the impact assessment (IA) issued alongside this document as well as our draft policy decision, draft impact assessment and initial consultation document. The IA provides further information on the costs and benefits associated with the options we have considered. The draft policy decision and draft IA provide further background information, such as more detailed information on the current cash-out and GDE arrangements.

Process and timings

1.24. In reaching our proposed final decision, we have consulted widely through our initial consultation and draft policy decision. We have also held 11 stakeholder events throughout the Gas SCR process, in addition to numerous bilateral meetings with interested parties. Our proposed final decision on reforming emergency cash-out arrangements is set out in more detail in chapter 3 of this document.

1.25. This document responds to representations received in response to our draft policy decision and sets out the proposed final decision of the Authority on policy for cash-out reform under the Gas SCR. Further work on the Gas SCR will now be focussed on implementing our proposed cash-out reform. As a first step in this process, we have started considering the detailed implementation issues and developed a proposed implementation method. The framework for implementation is set out in detail in the business rules we have developed in conjunction with National Grid and this is carried through into proposed code and licence drafting. Further information on the matters we have considered in developing the framework for implementation is set out in appendix 3. The proposed business rules, along with the draft text for code and licence changes are published alongside this document.⁵

⁵ They can be found at the following links: proposed business rules
http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_br.pdf;

1.26. We intend to hold stakeholder events to discuss the draft legal text during the 12 week consultation period. Further details on these events will be provided by email. If you are interested in attending these events and do not currently receive email notifications from Ofgem regarding Gas SCR events, please register your interest by emailing gb.markets@ofgem.gov.uk.

1.27. Through this document and in the stakeholder events which will follow, we are consulting on the business rules, code and licence changes. Our proposals can only come into effect following consultation on the detailed implementation. Whilst we remain open to representations on our proposed final decision more generally, we would not expect to change our high level policy decisions unless material new information comes to light.

1.28. The Authority intends to implement the necessary code and licence changes by directing changes to the UNC pursuant to section 36C Gas Act 1986 and by making modifications to licence conditions pursuant to section 23 Gas Act 1986. We believe that the use of the new power introduced by the Energy Act 2011 will allow our changes to come into effect as quickly as possible and provide certainty to industry; we do not consider this to be a means of circumventing due process. Further detail on our intended process is set out in chapter 5.

Responses to this consultation document

1.29. We welcome comments on our proposed method of implementing our proposed final decision, including the business rules and draft legal text for code and licence changes. Responses should be sent to Ofgem no later than 24 October 2012. Details of how to respond can be found in appendix 4.

Document structure

1.30. This document is structured as follows:

- Chapter 2 contains an overview of the wider context in which the Gas SCR has been considered
- Chapter 3 provides a detailed discussion of feedback on our draft policy decision and our how we have reflected these comments in our proposed final decision
- Chapter 4 outlines our assessment of our proposed final decision

proposed UNC drafting

http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_unc.pdf;

proposed shipper licence drafting

http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_shipper.pdf;

proposed supply licence drafting

http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_supplier.pdf.

- Chapter 5 describes our process and next steps in more detail
- Appendix 1 summarises responses to our draft policy decision
- Appendix 2 provides more background on current arrangements
- Appendix 3 outlines the detail of our proposals to implement cash-out reform
- Appendix 4 provides details on how to respond to our consultation on our proposed method of implementation

2. Background

Chapter Summary

This chapter provides an overview of wider context that this Gas SCR has been considered.

Broader concerns about gas security of supply

2.1. The decline in UK continental shelf production has resulted in increased reliance on international gas markets to deliver security of supply to gas customers and electricity generation, which exposes GB to a range of additional risks. For example, in recent years, the GB market has been impacted by production problems in the Norwegian North Sea, a dispute between Russia and Ukraine over gas transit, tension and conflict in North Africa and the Middle East, and the consequences of the Fukushima nuclear disaster in Japan. As these events show, our security of supply arrangements need to take account of the possibility of disruption from a wide range of potential events - from natural disasters, to technical failure, to the geopolitics of energy.

2.2. In a more integrated European wholesale gas market we stand to benefit from increased security through greater diversification of supply sources. There are, however, also risks from the actions of players beyond the control of the GB market. We will both benefit from security of supply measures taken by our neighbours and in turn share the benefits of any measures that we take with them.

2.3. In the past, an emergency could be managed through the NEC instructing domestic gas supplies to flow and, where necessary, curtailing firm customers. However, as our domestic gas supplies are decreasing, instructing domestic supplies to flow may no longer be sufficient to get us out of an emergency.

2.4. National energy regulators and European policy makers have developed a target model for European gas markets. This aims to develop liquid wholesale gas markets allowing gas to flow to where it is valued most, from low priced markets to high priced markets. A range of measures facilitate this, including legally binding European Network Codes put forward in the Third Package. For example, the European Commission's Congestion Management Procedures and the European Network Code on Capacity Allocation Mechanisms will help ensure non-discriminatory access to and the efficient use of Interconnection Points between gas markets across Europe. In their 2011 conclusion paper⁶ on a conceptual model for European gas markets, energy regulators recognised that more needed to be done to achieve this target model. They therefore committed to take steps towards the creation of liquid wholesale markets, for example by putting in place trading rules that promote the

⁶ CEER Vision for a European Gas Target Model Conclusions Paper, December 2011: http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/Tab/C11-GWG-82-03_GTM%20vision_Final.pdf

development of liquid hubs and by ensuring speedy and full implementation of the Third Package (including the implementation of entry-exit systems, potentially across borders). Energy regulators also agreed to examine how the different wholesale markets interact and explore steps to improve this, for example market coupling, as well as a harmonised approach to determine the provision of incremental capacity.⁷ Successful steps towards the achievement of this target model, such as recent increases in trading hub liquidity, can already be observed across the European Union.

2.5. However, some problems around market integration remain. For example, while GB relies on price signals to provide security of supply, some markets are retaining public service obligations aimed at assisting their security of supply intentions. In addition, there are still problems around the efficient access and use of cross-border pipelines. This is partly due to a lack of transparency, but also due to a lack of appropriate congestion management procedures and delays in implementing the Third Package across Europe. These may be some of the underlying reasons for the suggestion that flows on European cross-border interconnection points do not always react to short-term price signals.⁸ Ongoing European policy development and implementation work is likely to improve this situation, but in the near future shippers may continue to face some of these obstacles when making forward arrangements to cover peak positions.

Wider context

2.6. We recognise that a number of other energy sector reforms are currently underway. To the extent that these reforms could affect, or be affected by, the Gas SCR, we have been mindful of these interactions and of the need for consistency in our approach.

Further work on gas security of supply

2.7. Our draft policy decision recommended investigating further measures to enhance gas security of supply. We recognised that the capped approach could leave a gap in the emergency arrangements. We noted that the government might decide this risk was significant enough to merit further measures in the gas market. The government supported this view and requested Ofgem to undertake a review of medium to long term security of supply and explore the range of potential further measures which could be undertaken. We have agreed with government that we will submit the report on gas security of supply this autumn.

Electricity market interactions

2.8. We recognise the interactions between the gas and electricity markets. Given the role of gas fired generation in the electricity market, ensuring adequate

⁷ See http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/OPEN%20PUBLIC%20CONSULTATIONS/Investment%20Procedures%20for%20Gas%20Infrastructure

⁸ European Commission, Quarterly Report on European Gas Markets: Volume 4 issue 3, July 2011 – September 2011 http://ec.europa.eu/energy/observatory/gas/doc/qregam_2011_quarter3.pdf

investment in gas security is important for ensuring electricity security of supply. The government has confirmed in its Electricity Market Reform that it intends to proceed with designing a capacity mechanism to ensure electricity security of supply. We are monitoring these developments closely due to the potential role of gas-fired generation in any capacity mechanism.

European legislation

2.9. Any options for reform must comply with the European legislative framework. The Third Package creates a framework for new legally-binding rules to liberalise European markets and to promote cross-border trade. The Third Package seeks to create an integrated regulatory regime by requiring national regulators to cooperate on cross-border issues, establishing network codes for cross-border issues and creating an Agency for Cooperation of national Energy Regulators.

2.10. The European Network of Transmission System Operators for Gas is currently developing the gas balancing network code which will be finalised by 5 November 2012. It will set out harmonised rules for the calculation of cash-out charges (based on the marginal and average price), but does not prevent Member States from implementing additional gas balancing arrangements that may apply during an emergency.⁹ There may also be interactions with the potential framework guideline on operational procedures in an emergency the scope and timing of which have not yet been determined.¹⁰ All framework guidelines will eventually be implemented through legally binding European network codes.

2.11. In addition, the Gas Security of Supply Regulation (the Regulation) came into force on 2 December 2010. This Regulation has important interactions with the Gas SCR and provides the European Commission with additional powers, including powers to declare and be able to take certain actions in a regional or European Union emergency. This Regulation also imposes a number of requirements on the Member State and the Competent Authority. Where possible, Member States are expected to fulfil these obligations through market-based mechanisms. There is also an obligation on the Competent Authority to put in place an emergency plan which clearly defines the roles and responsibilities of the various players involved in such events. Further, Member States are required to develop a preventive action plan that outlines all relevant measures in Member States that are intended to prevent an emergency occurring.

2.12. Under the Regulation, Member States are also required to publish a Risk Assessment that outlines risks to security of supply. DECC as the Competent Authority under the Regulation, published a Risk Assessment in November 2011 which shows that the United Kingdom gas supply infrastructure is resilient to all but the most unlikely combinations of severe infrastructure and supply shocks but that there are challenges in the medium to long term. The Risk Assessment also specifically outlines the measures as proposed under the Gas SCR to sharpen cash-

⁹ as defined in Article 10(3)(c) of Regulation 994/2010.

¹⁰ The Framework Guideline on Interoperability is currently in the scoping phase and work on the Framework Guideline on operational procedures in an emergency is yet to commence.

out incentives to enhance security of supply.¹¹ The Regulation also outlines a supply standard under Article 8 (1) to ensure gas supplies to protected customers under defined circumstances. As outlined in the draft policy decision, we have used this standard to inform our choice of an appropriate VoLL to set cash-out in an emergency.

¹¹ <http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/energy-security/3428-risk-assessment-eu-reg-sec-supply.pdf>

3. Our proposed final decision on emergency cash-out reform

Chapter Summary

This chapter sets out the Authority's proposed final decision on emergency cash-out reform. This includes a summary of our draft policy decision, stakeholder feedback and our response to this as reflected in our proposed final decision.

3.1. In developing our proposed final decision we have considered a number of policy options for reforming the cash-out arrangements and stakeholders views on these options. In assessing these options we have sought to balance the interests of consumers in enhancing the security of gas supplies with the interests of shippers in not being exposed to an inappropriate level of financial risk. We consider that our proposals are effective in striking this balance and deliver the greatest net benefit to customers.

3.2. In our draft policy decision, we considered two options for cash-out reform. Option 1 was for cash-out to be set at an estimate of customers' VoLL, when customers have to be curtailed in a GDE. Shippers would pay cash-out for affected volumes for all days of firm load shedding (where individual large consumers are required to reduce their gas demand) and for all days of network isolation (where parts of the network stop receiving gas). Firm customers would receive VoLL if they have been curtailed in consideration of the involuntary DSR services they provided. Under option 2 cash-out is set as under option 1 but shippers' liability is capped as cash-out charges are only accrued for the first day of any new network isolation. For the days after a given network isolation has occurred, these isolated volumes will not be factored into shipper imbalance calculation. Customers affected by network isolation would only receive VoLL for the first day they are curtailed. We also considered a number of variations to these two options, in particular we have considered the merits of introducing a FM exemption clause and two-step VoLL.

3.3. Our draft policy decision was for cash-out to be "capped", and for further measures to be investigated.¹² Our proposed final decision is in line with our draft policy decision, that cash-out should be capped, in order to limit the liabilities faced by shippers. The relative merits of these two options are discussed in chapter 4. For the purposes of this chapter we discuss our proposals in the context of a "capped" cash-out liability.

3.4. Alongside our proposed final decision, we have worked to develop a proposed method of implementation. This includes business rules together with draft legal text for code and licence changes. These implementation proposals are outlined in detail in appendix 3, and the business rules and draft legal text are published alongside

¹² These are being investigated through the report on gas security of supply

this document. We are consulting on these implementation proposals, and are open to alternative views on the best way to implement our proposed final decision.

3.5. We set out below our proposed final decision on key aspects of cash-out reform. This includes:

- the cash-out price during a GDE
- the Value of Lost Load
- accounting for emergency curtailment in calculating imbalances
- the treatment of commercially interruptible customers
- whether to change the arrangements for FM events, and
- how charges are levied and payments made.

Emergency cash-out price

Draft policy decision

3.6. The current arrangements do not allow the cash-out price to reflect day-to-day changes in conditions during a GDE. This is because the price is frozen at the prevailing level on the first day of stage 2, and remains frozen until the emergency ends. Our draft policy decision was to treat the emergency curtailment of firm consumers as an administratively priced demand side offer to reduce offtakes. In other words, the regulator would determine how much NGG should pay firm consumers when they are required to stop consuming gas. If firm customers are curtailed, then this administered price would feed into the cash-out price paid by short shippers (the System Marginal Buy Price – SMP_{buy}). We proposed that before firm customers are curtailed, SMP_{buy} would remain as under the current emergency arrangements. We also proposed that the cash-out price paid by long shippers (the System Marginal Sell Price – SMP_{sell}) would continue to be set as under the current emergency arrangements for the duration of the emergency. In effect, this would mean that SMP_{buy} would be frozen upon entry to stage 2 of an emergency, before moving to VoLL once firm demand is curtailed. SMP_{sell} would be frozen upon entry to stage 2 and remain at this level until the market is restored at the end of the GDE. Our draft policy decision also set out that we were minded to maintain the PEC process¹³ in order to recompense shippers for gas delivered at a cost greater than they receive from the cash-out regime.

Stakeholder responses

3.7. Many stakeholders acknowledged that a frozen cash-out price (as under current arrangements) may not be effective in providing appropriate price signals during an emergency. A few stakeholders supported our approach to “price-in” firm

¹³ Appendix 2 sets out more detail on how this process functions.

customer curtailments to the emergency cash-out regime. Other stakeholders disagreed with our concept of incorporating the cost of firm customer interruptions into the emergency cash-out regime. Some respondents commented that the cash-out price should be made more dynamic, rather than “jumping” from a frozen level to VoLL once firm customers are curtailed.

3.8. On the issue of retaining PEC, many respondents agreed that it would be appropriate to do so, although several commented that the process could be improved to give greater certainty to long shippers on the payments they would receive. Some respondents commented that it may not be necessary to retain the PEC process if a symmetrical cash-out price were adopted.

Proposed final decision

3.9. Our proposed final decision is for the cash-out price to be made more dynamic during a GDE. The cash-out price for long shippers would be set by the System Average Price (SAP) in the absence of market balancing actions taken by NGG. This would apply for long shippers throughout a GDE. The cash-out price for short shippers would be set at SMP_{buy}^{14} until firm customers are disconnected. As in our draft policy decision, once firm customers are curtailed the cash-out price for short shippers would be set at the administratively priced VoLL. Appendix 3 sets out in more detail how we propose a more dynamic cash-out price could be implemented.

3.10. We consider that a more dynamic cash-out price would be more beneficial than current arrangements as it would allow the cash-out price to vary on a day-to-day basis to reflect conditions during a GDE. This would ensure that the ‘right’ level of imports are attracted based on the state of the system on any given GDE day.

3.11. We have also considered the merits of a single cash-out price (one cash-out price for both short and long shippers). Although this would provide greater certainty for long shippers and reduce the reliance on the PEC process, we ultimately think that such arrangements would eliminate all incentives for shippers to trade out of their imbalances as shippers would be able to rely solely on the balancing mechanism. This would mean that short shippers would be unable to reduce their exposure to the short cash-out price through trading. In addition, a single cash-out price would incentivise shippers to continue to maximise their flows onto the system throughout a GDE, even when approaching the end of an emergency where this may no longer be necessary.

3.12. Alongside our approach to cash-out prices, we propose to maintain the PEC arrangements in order to recompense shippers who deliver gas to the system even though the cost of providing this gas is greater than the cash-out price they receive. However, we would expect a more dynamic cash-out price to reduce the number/value of PEC claims as the cash-out price for long shippers would be more reflective of the market conditions on each day of the emergency.

¹⁴ Which would be the greater of the highest priced balancing action or SAP plus the System Marginal Default Price.

Value of Lost Load (VoLL)

Draft policy decision

3.13. As outlined above, we propose to “price-in” the emergency curtailment of firm demand at an administered price. This administered price would be set to reflect a reasonable estimate of the value domestic consumers place on secure gas supplies where they have not agreed an alternative commercially interruptible contract. In our draft policy decision we proposed to set VoLL at £20/therm, based on London Economics’ assessment of domestic customers’ willingness to accept payment for a one week outage in winter occurring once every 20 years. This is consistent with the supply standard in the Regulation¹⁵. While shippers would not be relieved from paying cash-out in an emergency, cash-out would be set at a level consistent with the supply standard.

3.14. Also, we noted that domestic customers generally value reliable gas supplies above most other gas users, and so utilising domestic VoLL provided strong incentives for suppliers to negotiate commercially interruptible contracts with large non-domestic customers. The “true” VoLLs of individual I&C customers would be revealed through this process, leading to a more efficient outcome as they would receive a payment equivalent to the value they place on uninterrupted gas supplies. Our draft policy decision has more detail on our estimation of VoLL, and includes London Economics’ report as an associated document.

Stakeholder responses

3.15. Many respondents agreed that it was appropriate to determine the level of security of supply to be consistent with the Regulation. However, several respondents thought that no security of supply standard had been clearly defined by the Gas SCR, and some had reservations as to whether our draft policy decision clearly demonstrated that GB meets the Regulation.

3.16. Respondents held a range of views on the appropriateness of our choice of VoLL. Some respondents thought £20/therm was a reasonable estimate of a domestic customer’s VoLL. Others thought it represented an over estimate. Some respondents thought it was too low, particularly when accounting for consequential and indirect costs for some consumers (including some industrial gas users who could suffer significant damage to plant in an unplanned interruption).

3.17. Many respondents considered that using domestic VoLL as the administered price for all customers failed to recognise the different characteristics of I&C customers. Several stakeholders thought £20/therm would significantly over-pay the vast majority of I&C customers for their involuntary DSR services if suppliers did not enter into commercially interruptible contracts with these customers. However, some

¹⁵ Our draft policy decision contains further information on the Regulation together with other security of supply standards we considered.

respondents were supportive of our approach, and thought that it was appropriate to use domestic VoLL for all customers.

3.18. Some respondents disagreed entirely with the concept of VoLL, and noted that they thought it preferable for the market to set cash-out prices rather than relying on an administered price. Some respondents argued that the use of an administered price would set a target for market participants, with trading very quickly escalating to £20/therm if an emergency seemed imminent.

3.19. Several respondents thought that £20/therm would not incentivise shippers to respond as envisaged, and so not lead to the assumed increase in demand-side response and investment in security of supply. Respondents noted the low probability of an emergency as one reason they would be unable to justify a sizable discount for commercially interruptible customers. Respondents also noted that £20/therm would act as a target for customers, who would require a significant discount to accept a higher probability of interruption and a lower payment if interrupted. Many respondents were of the view that customers placed a high value on remaining firm, and that it was unlikely that significant volumes of customers would be willing to sign commercially interruptible contracts. However, some respondents thought that customers would be willing to sign commercially interruptible contracts if appropriate terms were available. Further, respondents noted that there may be a mismatch between shippers of daily metered (DM)¹⁶ sites (who have the opportunity to sign commercially interruptible contracts) and shippers of non daily read (NDM)¹⁷ sites (who face more variable demand and so are more likely to be short in an emergency).

Proposed final decision

3.20. Our proposed final decision is to set VoLL at £20/therm for all firm customer emergency curtailment. This is London Economics' estimate of domestic VoLL for a 7-day outage occurring once every twenty years. This is consistent with the security of supply standard in the Regulation. Through the SCR, we are not attempting to demonstrate that GB is compliant with the Regulation. We are using the Regulation to provide a benchmark to set VoLL. Our proposals are designed to create incentives for shippers to meet a level of security of supply that is consistent with that envisaged by the Regulation. In an emergency short shippers would be charged a cash-out price equal to consumers' willingness to accept payment for an outage consistent with the frequency and duration contained in the regulation. Firm customers are protected as they would theoretically be indifferent between receiving a completely firm supply of gas or a payment at VoLL if an outage occurred.

3.21. We also consider that this level of VoLL provides strong incentives for shippers to take action to reduce the likelihood of a GDE, including the agreement of commercially interruptible contracts. We are using domestic VoLL at £20/therm as a

¹⁶ Note, for the purposes of the attached legal drafting DM customers eligible for DSR payments are referred to as DR (daily read) system exit points.

¹⁷ Note, for the purposes of the attached legal drafting NDM customers eligible for DSR payments are referred to as NDR (non-daily read) system exit points.

figure that is likely to sit above the VoLL for most I&C customers, and therefore of the customers who are likely to be interested and able to enter into commercially interruptible contracts. This maximises the scope for an efficient market for commercially interruptible contracts to emerge, allowing the market to reveal the “true” VoLL of individual I&C customers.

3.22. We considered the option of setting VoLL at a different level during firm load shedding (when only large customers would be curtailed) – a “two-step” VoLL. This would mean that the administered cash-out price could be more closely aligned with the average cost of interrupting the affected group of customers at each stage of an emergency. However, we consider this would weaken incentives for commercially interruptible contracts to be agreed, leading to lesser security of supply benefits than a single VoLL. We do not think the risks to shippers of a VoLL set at £20/therm for all customers are prohibitively higher than this option of a two-step VoLL. This is because we are confident that shippers have at their disposal effective ways to mitigate the risk of exposure to this VoLL. Arranging commercially interruptible contracts is one example of such a measure.

3.23. While we note respondents’ views that there is a lack of appetite among customers to agree commercially interruptible contracts, we have not been presented with convincing evidence that a market for commercially interruptible contracts will not emerge. Based on previous interruptible regimes we consider that there is evidence that customers are willing to agree interruptible contracts provided they are able to obtain appropriate terms (for instance around two-thirds of DM customers held interruptible contracts with distribution networks prior to the introduction of UNC modification 90). This evidence is examined in more detail in the impact assessment that accompanies this proposed final decision.¹⁸ We consider that it is highly likely that a market for commercially interruptible contracts will emerge as a cash-out price set at VoLL of £20/therm provides the incentive to offer commercially interruptible contracts to customers whose VoLL is likely to be below this level.

3.24. We note the low probability of a GDE could limit the level of discount shippers are willing to offer to commercially interruptible I&C customers. However, we think that efficiently priced commercially interruptible contracts would reflect both the consumer’s cost of interruption and expectations of the likelihood of an emergency occurring. A small discount could be an efficient outcome if an emergency is very unlikely, and may still be attractive for customers.

3.25. Our proposed final decision is based on an assumption that a market for commercially interruptible contracts will develop in the I&C sector. We see no reason why it would not emerge. We think it is important to provide an opportunity for the interruptible market to develop and our proposed emergency cash-out price of £20 per therm provides a strong incentive for this to occur. However if these arrangements have been in place for some time and there is evidence that there are

¹⁸ Gas Security of Supply Significant Code Review – Impact Assessment for the Proposed Final Decision, July 2012 (112/12)
http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_IA.pdf

clear obstacles to a market for commercially interruptible contracts developing which are outside of the control of industry, then we would consider carefully any proposal for the level of the emergency cash-out price to be modified.

3.26. We do not think that the potential mismatch between shippers who focus on DM customers and shippers with the largest NDM portfolios is a substantial problem. Even if a shipper is already long or balanced, they would still benefit from having commercially interruptible contracts in an emergency. This is because they will be able to exercise their contracts and sell the excess gas at a higher than normal price or be cashed-out at the long cash-out price (which is likely to be high).

3.27. We do not believe that £20/therm would act as a target price for the market. The market price in the approach to a potential emergency would depend on market participants' views of the likelihood that firm load shedding would occur on any given day. We have noted that the price available for additional gas on the approach to a potential emergency would probably be very high and there would be no guarantee of achieving a higher price than the prevailing market price. There would more than likely be competition from imports given that prices prior to an emergency are likely to be high.

Accounting for emergency curtailment

Accounting for daily read (DR) customers

Draft policy decision

3.28. As explained in our draft policy decision, it is unlikely that only the customers of those shippers who are short of gas would have their supplies curtailed in an emergency. The existing Emergency Curtailment Quantity (ECQ) arrangements apply for DM load curtailed in an emergency. This process adjusts imbalances such that a shipper's imbalance position does not benefit from the emergency curtailment of demand (the "DR ECQ quantity"), and to pay those shippers who cannot recover the cost of gas they have delivered from the system because their customers have been curtailed. In these situations, the shipper is paid at the average price of the past 30 days for the DR ECQ quantity. This is a proxy for the revenue a shipper could have earned had they been able to deliver this gas to their customer. Our draft policy decision was for the DR ECQ arrangements to remain in place for this reason.

3.29. Our draft policy decision also proposed to limit the liabilities faced by shippers in network isolation, by ensuring that isolated demand is not included in a shipper's imbalance calculation following the first day in which it is isolated.

Stakeholder responses

3.30. Many respondents agreed that the DR ECQ process should remain in place, to ensure that shipper imbalances do not benefit from emergency curtailment and that shippers are paid for any gas they are required to deliver but are unable to bill for because their customer has been curtailed. One respondent thought that the DR ECQ

process would penalise short shippers twice and should be removed. NGG have noted that they may consider a review of the existing process outside of the Gas SCR, to ensure that it remains fit for purpose in the context of the proposed cash-out reforms.

Proposed final decision

3.31. Our proposed final decision is to maintain the DR ECQ process for DM sites. This process would apply for all sites which are required to register meter reads for each day on each day (and as a result would include DM-elective and DM-voluntary sites). Retaining the DM ECQ process would allow shipper imbalances to be adjusted such that they do not benefit from the emergency curtailment of their firm customers and also provides an incentive for shippers to commercially interrupt their customers ahead of an emergency. Amending imbalances ensures that shippers do not gain when firm customers are curtailed.

3.32. Our proposed final decision is to limit shipper liability in stage 3 network isolation to the first day of isolation only. As such, sites will only be included in the ECQ methodology on the first day in which they are subject to *network isolation* (in stage 3 of a GDE). We do not propose to limit liability in the event of firm load shedding, and so DM sites will continue to be incorporated into the ECQ methodology for each day in which they are subject to *firm load shedding* but not physically isolated (whether this occurs in stage 2 or stage 3).

Accounting for non-daily read (NDR) customers

Draft policy decision

3.33. We noted in our draft policy decision that we may need to develop a process similar to ECQ for NDM consumers. This is because under current arrangements curtailment of NDM customers leads to a reduction in allocations for all shippers across the affected Local Distribution Zone (LDZ), and so the emergency curtailment of NDM customers is not accurately allocated and shipper imbalance positions benefit from this curtailment (ie get longer or less short).

Stakeholder responses

3.34. Stakeholder responses and feedback in our workshops noted this issue, and many agreed that a process equivalent to ECQ should be developed. Several stakeholders thought that it was important to ensure that DM and NDM demand are treated consistently, and that a situation where all shippers ended the day long due to network isolation should be avoided.

Proposed final decision

3.35. We propose to introduce a process which would function based on similar principles to the DR ECQ methodology, but adapted to suit the characteristics of NDM demand (an "NDR ECQ"). Appendix 3 has more detail on how this methodology

would work. As with the DR ECQ process, this will ensure that shipper imbalances do not benefit from the emergency curtailment of customers. Shippers will be informed of the “uplifted” level of demand they are expected to deliver to. The NDR ECQ will be applied for each day in which NDM curtailment has taken place.

3.36. As mentioned above, we propose to limit shipper liability in stage 3 network isolation to the first day of isolation only. As such, sites will only be incorporated into the NDR ECQ calculation on the first day in which they are subject to network isolation (in stage 3 of a GDE). We do not propose to limit liability in the event of firm load shedding unless sites are physically isolated, and so sites will continue to be incorporated into the NDR ECQ calculation for each day unless they are subject to network isolation.

3.37. Any firm load shedding of NDM customers would trigger the application of the NDR ECQ methodology.

Accounting for commercial interruptions

3.38. Under the current arrangements, if a shipper interrupts a DM site and notifies NGG, then that customer is excluded from the DR ECQ process. We propose to maintain this arrangement, and extend it such that commercially interruptible DM sites who are instructed off by the NEC are also excluded from the DR ECQ process. This will require shippers to notify NGG of any commercially interruptible contracts suppliers sign with customers. If these sites are subject to firm load shedding or network isolation then NGG will exclude the commercially interruptible volume from the DR ECQ process. These arrangements should strengthen incentives for shippers to agree commercially interruptible contracts as their imbalances will benefit if these customers are interrupted (either by their shipper or transporter).

3.39. In stage 3 of a GDE the DR ECQ process will apply to a site subject to network isolation for the first day of isolation only. As a result, the process to exclude commercially interruptible sites from the DR ECQ process will also only be required for each day in which the site is subject to firm load shedding and the first day in which the site is subject to network isolation. After this point, all sites subject to network isolation will be excluded from the DR ECQ process regardless of whether they are interruptible or firm.

Payments to customers

Firm customers

Draft policy decision

3.40. Our draft policy decision proposed that firm customers would be paid for providing involuntary DSR services in an emergency. The rationale was that these services should be treated as any other balancing action and paid accordingly. As noted above, our draft policy decision set out our preferred option for payments to be made to firm customers for each day that they are curtailed during firm load

shedding up to and including the first day of a curtailment in stage 3. This was to reduce the financial exposure of short shippers and in recognition that firm customers will be able to reinstate their own supplies quickly in stage 2 (once sufficient gas is available), but restoration will take much longer if networks are isolated in stage 3¹⁹.

Stakeholder responses

3.41. Some respondents disagreed with the proposal to pay firm customers for involuntary DSR services in any circumstances, and were concerned that this would mean customers would not be willing to sign commercially interruptible contracts as in doing so they would forgo this payment. Other respondents welcomed the proposals that would ensure that customers are paid for the involuntary DSR services they provide.

Proposed final decision

3.42. Our proposed final decision is to maintain the arrangements set out in our draft policy decision. After further work, we have identified that the distinction between payment for multiple days and payment for the first day should not be made between stages of emergency. Instead the distinction should be based on how the customer has been curtailed. Our proposed final decision is that customers should be paid for each day they are curtailed due to firm load shedding. Customers would continue to be paid for multiple days of involuntary DSR (even if the GDE has entered stage 3) if they have been curtailed as a result of firm load shedding and have not been isolated. This is because they will still be able to reinstate their supplies quickly once sufficient gas is available. Customers should only be paid for the first day which they are curtailed due to network isolation, as once physical network isolation has occurred it may take a long time for supplies to be restored and shippers are unable to influence the duration of this process.

3.43. Customers who have been curtailed due to firm load shedding will be identified through information provided directly by NGG or by the Distribution Networks (DNs).

3.44. In order to pay customers for the provision of involuntary DSR services, it will be necessary to estimate how much gas they would have consumed had they not been curtailed. Details of how we propose this could be calculated are included in appendix 3.

¹⁹ In many cases, large daily gas users will be able to cease consuming gas relatively quickly if instructed during firm load shedding, without the need to be physically disconnected from the gas network. However, if supplies are very tight network isolation may be required to maintain the safety of the system. While network isolation may be relatively fast, the reconnection of users on these networks will require engineers to visit each offtake to ensure gas supply can safely be restored in the network. Given the number of offtakes that would be involved, it is likely that this would take some time.

3.45. We note concerns that DSR payments may discourage customers from signing commercially interruptible contracts. However, our view is that consumers will be likely to prefer a guaranteed discount on their bill rather than the chance to receive a DSR payment in the unlikely event that they are curtailed in a GDE. In addition, shippers will have very strong incentives to offer efficient and mutually beneficial commercially interruptible contracts to consumers. For this reason we believe that an efficient market for commercially interruptible contracts will emerge. This is discussed further in the IA.

Commercially interruptible customers

3.46. If commercially interruptible customers are interrupted then they will be paid under the terms of their interruptible contract. This will happen regardless of whether customers are interrupted by their shipper/supplier or curtailed by the transporter in firm load shedding or network isolation. To facilitate this, suppliers will need to notify NGG of any commercially interruptible contracts they sign with customers (as outlined above). NGG will not provide a DSR payment for shippers to pass on to these customers, but (as outlined above) these customers will be excluded from shippers' imbalance calculations. Suppliers will be required (via a licence condition) to set out in any commercially interruptible contract they arrange, the payments customers will receive if they are interrupted by their supplier/shipper and if they are curtailed by NGG.

3.47. In order for customers with commercially interruptible contracts to be excluded from the ECQ process, it will be necessary for commercially interruptible customers to be managed as DM. This is so that NGG are able to verify that customers have ceased consumption.

Force majeure

Draft policy decision

3.48. In our draft policy decision we noted that there is currently no exclusion of FM events from cash-out liabilities and we did not propose to change this.

Stakeholder responses

3.49. Some respondents expressed concern that our draft policy decision did not propose to incorporate arrangements to limit liability in a FM event. Respondents suggested that, even if an FM exemption clause wasn't applied to cash-out, FM should be considered for DSR payments. Respondents also commented that we should consider different arrangements to apply in "rapid" and "slow" emergencies.

Proposed final decision

3.50. Our proposed final decision proposes no changes to FM exemption arrangements, neither for cash-out nor DSR payments. We have several concerns

about the impact introducing an exemption for FM would have on our proposed reforms.

3.51. An FM exemption clause would place a proportion of risks associated with GDE on consumers. A factor we have considered is who should bear responsibility for managing FM events. We do not consider it appropriate that individual customers bear these risks as generally they have the most limited means to manage their exposure. We think that shippers are better placed than consumers to manage these risks, as they have a variety of mitigation options that could reduce their exposure even in an FM-type event. For example, a shipper could seek to diversify their supply portfolios, invest in storage and/or enter into commercially interruptible contracts.

3.52. In addition, we consider that the impact of FM-type events is already lessened by the steps we have taken to limit the financial exposure of shippers, for instance through limiting liabilities in network isolation. Measures taken by shippers in response to our reforms to the cash-out arrangements would also reduce shippers' exposure in FM events.

3.53. An FM exemption clause does not exist in the current cash-out arrangements. We think that applying an FM exemption clause would undermine incentives to invest in security of supply by limiting shipper's exposure, and placing that exposure instead on consumers. Applying an FM exemption to cash-out would also create significant uncertainty during a GDE. We are concerned that any confusion or uncertainty around the level of the cash-out price could undermine incentives for the efficient delivery of additional gas imports during an emergency. To reduce uncertainty, it would have to be quickly determined whether a GDE was caused by an FM event so that the cash-out price could be determined, allowing the market to respond accordingly. We do not consider that this could be achieved practically, and have concerns that the uncertainty created would undermine the immediate responsiveness of market participants to a GDE.

3.54. We note the potential interactions between the proposed Gas SCR reforms and other possible additional measures being considered in our report to government on gas security of supply. Some potential further measures could alter the balance of risk borne by different parties. For instance, some of these measures could reduce the chance of a FM event leading to a GDE. We note that the purpose of any further measures would be to enhance security of supply, but that the further transfer of risks could be a possible consequence of some measures.

3.55. We do not think that separate arrangements for "rapid" and "slow" emergencies are viable. There would be difficulty in clearly defining the two types of emergency. There would also be significant uncertainty as to whether an emergency was going to be declared "rapid" or "slow", which would affect the market's response to a developing emergency.

Cash flows

Charges in an emergency

Draft policy decision

3.56. Our draft policy decision outlined our view that cash-out or a similar emergency fund would be the most appropriate mechanism for recovering the funds required to pay customers for the involuntary DSR services they provide in an emergency. We also noted that arrangements would need to be made to pass revenues collected on to suppliers whose customers had been curtailed (this could be via shippers). An alternative discussed in our draft policy decision was for a third party to act as a central agent to administer these arrangements. We highlighted that these arrangements could change the net balance of funds after an emergency and that arrangements would have to be developed to deal with these funds.

Stakeholder responses

3.57. Some respondents agreed that the existing cash-out mechanism seemed the most appropriate way to deal with these payments. Respondents expressed concern about how a potential shortfall in funds would be dealt with, and about the impact of insolvency. Some respondents were concerned that shippers could be exposed to significant costs even if they are long on the day of an emergency, as they could have to pick up a portion of the liabilities of insolvent shippers and a portion of any shortfall in the DSR fund. Some stakeholders suggested that payments could instead be limited to the amount recovered from short shippers.

Proposed final decision

3.58. Our proposed final decision aligns with our draft policy decision. We propose that our reforms are incorporated into the existing cash-out and balancing neutrality mechanisms. We propose that a potential shortfall in funds for involuntary DSR payments would be targeted at short shippers to the extent that their contribution to the need to curtail firm customers can be identified. A shortfall would only be targeted at neutrality where it is not possible to determine that short shippers are the only contributors to an emergency. We do not propose to make any changes to the current arrangements for non-payment of energy balancing charges or to credit arrangements. Appendix 3 contains detailed proposals on how these proposals could be implemented.

Timescales for payments

Draft policy decision

3.59. As part of our draft policy decision, we outlined that extended payment timescales could be applied to give shippers more time to raise funds to pay emergency cash-out charges. The alternative was that charges would be invoiced

(and payment required) under the normal monthly Energy Balancing Invoice (EBI) process.

Stakeholder responses

3.60. Although there was some support, most respondents were against extended payment timescales. This was because of the increased risks of allowing a potentially insolvent shipper to continue trading and building up liabilities, which would ultimately increase the exposure of the industry as a whole should that shipper default. There was a general preference for a clear view of shippers' exposure as soon as it could possibly be provided. Some respondents also commented that they would not support extended payment timescales if this caused delays in payments to consumers for the involuntary DSR services they provide.

3.61. A few respondents questioned whether anything could be done to speed up payments to consumers, even if payment timescales were not extended. Respondents generally expressed a preference for a "near-term" process, as there was concern that a delay in levying the full emergency cash-out charges would obscure the full exposure faced by shippers. Several respondents thought it was important that shippers and suppliers were not required to pass on DSR payments until they have first received these payments.

Proposed final decision

3.62. Whilst we think extended payment timescales for emergency charges could lessen any credit burden on shippers, we accept the view that the increase in risks caused by insolvent shippers continuing to trade should be avoided. We have developed our business rules on the basis that the invoicing and payment process could fit within the existing monthly EBI process, with full emergency cash-out charges levied in the first EBI following a GDE. We agree that no shipper (or supplier) should be required to pass on any payments to suppliers (or customers) until they have received these funds via an EBI credit. We note the concerns about speed of any payments to consumers, but are also aware of the trade-off between this and the sizable credit facility which would be required to manage any EBI payment defaults. Appendix 3 explains our proposals for the invoicing and collection of payments in more detail.

Credit arrangements and financial impacts

Draft Policy Decision

3.63. Our draft policy decision outlined concerns raised in response to our Initial Consultation that short shippers could potentially face a greater financial liability and thus have difficulty raising sufficient credit. In response, our draft policy decision acknowledged that shippers had no control over the duration of interruptions due to network isolation. As a result, our preferred option was to limit cash-out payments to the first day of network isolation (shippers would still be liable to pay cash-out for each day of firm load shedding) to mitigate some of the risks of financial distress.

Stakeholder responses

3.64. Many respondents acknowledged that capping cash-out liabilities in network isolation would go some way to further mitigate the risk of financial distress, but they maintained that a very significant financial risk would remain. Some respondents thought that the SCR proposals could lead to the creation of “shell” shipping companies who are designed to fail in an emergency. Some stakeholders considered that Ofgem should review credit arrangements as part of the SCR process.

Proposed Final Decision

3.65. Our proposed final decision does not incorporate any changes to non-payment or credit arrangements. As the risk of default or insolvency is borne by the shipper community, we believe that shippers are best placed to review these arrangements to ensure they are fit for purpose following the proposed decision on cash-out reform. We note the concern regarding “shell” shipper companies, but do not think that it is a realistic risk provided robust credit requirements are in place. If industry does not think credit requirements are sufficiently robust to prevent this, then it is within their gift to raise a modification proposal to change the credit arrangements. Our IA, published alongside this document, contains more information on our assessment of the financial impact on shippers of our proposed final decision.

4. Assessment of options

Chapter Summary

This chapter presents the options we considered in reaching this final proposed decision. We summarise our assessment in the draft policy decision, key stakeholder feedback and our current view of the options.

Reform options

4.1. As noted above, we have considered two main options against the current arrangements in this proposed final decision and its IA. Option 1 was for shippers to pay cash-out for affected volumes for all days of firm load shedding and all days of network isolation. Option 2 was for shippers to pay cash-out for affected volumes for all days of firm load shedding, but only the first day of network isolation (in this way the cash-out liability is “capped”). We also considered a number of variations to these two options, in particular (and as outlined in chapter 3) we have considered the merits of introducing a FM exemption clause and two-step VoLL.

4.2. As noted above, we also considered whether further security of supply measures should be considered alongside these options in our draft policy decision and draft IA. We have agreed with government that we will submit the final report on gas security of supply this autumn outlining potential further measures. Therefore, the proposed final decision and associated IA focuses on and responds to stakeholder feedback on the two cash-out reform options outlined in the draft policy decision.

Summary of assessment for draft policy decision

Our approach

4.3. Our draft policy decision outlined the key impacts of cash-out reform and our initial investigation of potential further measures as an alternative and in addition to cash-out reform. Our assessment included a qualitative assessment of the likely impacts of each of the options as well as a quantitative assessment of the likely affects on the likelihood of an emergency, the duration and severity of an emergency, the costs and benefits of each of the options and the impact on consumers’ bills.

4.4. The quantitative assessment drew on modelling work we commissioned Redpoint Energy to conduct. We also noted that there were a number of potential limitations to this modelling and that the quantitative results should be considered alongside the qualitative findings drawn out in our draft impact assessment.

Assessment of the impacts of the options

4.5. We noted that cash-out reform incentivises shippers to purchase gas up to the price of VoLL — thus attracting sources of gas that are below this price into Great Britain (GB). We considered our reforms would provide an incentive to shippers to enhance security of supply. The modelling suggested that the probability of firm customers being curtailed as well as the impact of those curtailments should they occur, is reduced with cash-out reform in place.

4.6. In our draft decision we were minded to implement option 2 as we had some concerns that option 1 could adversely affect competition (eg as a result of the risk of financial distress) to an extent that it outweighs the benefits due to shippers' limited ability to influence the restoration process once parts of the network are physically isolated. While we were minded to implement option 2, we also recognised that capping liability means that the cash-out price will not reflect the full costs of disconnection to firm consumers (in particular domestic as well as small and medium enterprises). For this reason, we concluded that further measures should be investigated as a possible supplement to cash-out reform.

Stakeholder feedback

4.7. Stakeholders held mixed views on our assessment of each of the options in the draft policy decision. We have published an IA alongside this proposed final decision which outlines this feedback in detail. Several stakeholders commented on the modelling conducted by Redpoint Energy. This included general concerns around placing too much weight on probabilistic modelling of low probability, high impact events as well as specific concerns with some of the modelling assumptions.

4.8. Stakeholders held a range of views on our conclusions regarding the need for cash-out reform and investigating the need for further measures. Some stakeholders argued that more information was needed on further measures to allow for an adequate assessment of the impacts of each measure so as to come to a conclusion. Stakeholders generally acknowledged that capping cash-out as proposed further reduces the risk of financial distress and the risk of, and need for, any increased credit requirements compared to uncapped cash-out. However, shippers generally felt that even with cash-out capped, the risks would be substantial for industry and that our analysis might underestimate these risks. As discussed in chapter 3, many stakeholders questioned whether cash-out reform would lead to the development of a market for commercially interruptible contracts.

Summary of assessment for proposed final decision

4.9. The following is a summary of our assessment of each of the options. Further detail on our approach to this assessment and the factors we have considered is set out in our IA.

Our approach

4.10. We have considered the likely implications of our reform options on (among other things) consumers and competition. Our IA includes both a qualitative and quantitative assessment of these impacts. Our quantitative assessment draws on revised modelling work by Redpoint Energy. This revised modelling includes several changes to the assumptions following stakeholder feedback and further analysis.

4.11. While we have commissioned this modelling to inform our assessment, we maintain our view that there are a number of difficulties associated with modelling low probability, high impact events. It is also difficult to capture all of the potential impacts/effects associated with the cash-out reform options in a simplified probabilistic model. In addition some impacts could not be assessed quantitatively, for example the costs incurred by government in managing an emergency, wider knock on effects in the economy and greater barriers to entry. For these reasons we consider that the modelling should only be seen as one source of information and that the qualitative assessment and the economic rationale for the reforms are key.

Assessment of the impacts of the options

4.12. We considered the impacts on consumers of each of the options, including the likely impacts of the options on security of supply and on consumers' bills. As discussed earlier we consider cash-out reform reduces the likelihood as well as the duration and severity of firm customer curtailment. It provides strong incentives for shippers to take measures to enhance security of supply, such as diversifying supplies, procuring additional storage or arranging commercially interruptible contracts. If an emergency becomes imminent, cash-out reform could also act to attract more gas from outside GB. Further, a greater use of commercially interruptible contracts can lead to a more economically efficient order of interruptions in case of system tightness. Thereby reducing the impact of an emergency in particular for firm customers who are unable or unwilling to sign commercially interruptible contracts.

4.13. The modelling supports our assessment. It suggests that cash-out reform is effective at reducing unserved energy for firm customers, in particular for firm DM customers as well as electricity customers (table 1). The modelling also indicates that expected unserved energy for NDM customers decreases with cash-out reform in place. The base case results suggest that the Gas SCR has no impact on the actual probability of NDM interruptions; but reduces the extent of such interruptions (ie reduces energy unserved).

4.14. In reality, we expect cash-out reform to be more effective at reducing the likelihood and impact of emergencies than predicted by the modelling, as the model does not account for expectations of rising cash-out prices. Additional sensitivity analysis also suggests that the higher the risk of an emergency, the more effective the cash-out reforms are in reducing the probability of NDM customer having their supplies curtailed. This is explained in more detail in the IA.

Table 1: Key modelling results under the Gas SCR base case (based the average on the spot years 2012, 2016, 2020, 2030)

		Current arrangements	Option 1 Uncapped cash-out	Option 2 Capped cash-out
Interruption of electricity customers due to interruption of gas-fired power generators	Likelihood of interruption (in years)	1 in 34	1 in 74	1 in 75
	Expected annual unserved energy (gas therms/year)	101,000	30,000	30,000
Interruption of firm DM Customers (non power-generation)	Likelihood of interruption (in years)	1 in 55	1 in 128	1 in 128
	Expected annual unserved energy (therms/year)	254,000	26,000	26,000
Interruption of NDM Customers	Likelihood of interruption (in years)	1 in 167	1 in 167	1 in 167
	Expected annual unserved energy (therms/year)	722,000	642,000	618,000
Annual expected cost of firm interruptions (real £2012)		£22M	£15M	£15M
Net benefit compared to current arrangements (real £2012)		-	+£41M	+£65M
Impact on annual consumer bill (absolute £2012; % domestic bill)		-	£0.46	£0.11

4.15. We expect the reforms to have minimal impacts on consumers' bills given the low probability of a GDE occurring. The modelling indicates that the impact on an annual domestic consumer bills is expected to be £0.46 for option 1 and £0.11 for option 2. In reality, this might be higher or lower depending on the measures industry puts in place to enhance security of supply in response to the implementation of the Gas SCR. Both options have a positive net benefit compared to current arrangements.

4.16. We note some stakeholders concerns that the cash-out reform options may not facilitate the development of a market for commercially interruptible contracts. However, as discussed in chapter 3 and our IA we consider that cash-out reform provides a strong incentive for a market for commercially interruptible contracts to emerge and we believe there is sufficient indication to support this.

4.17. We note some stakeholders' concerns around credit implications and risk of financial distress and the potential implications for competition in the gas market. Throughout the consultation process we have sought evidence from industry to support these concerns. Unfortunately, little evidence was submitted. Overall, we note that the financial risks of an emergency are not new risk: these risks exist

already, but they are currently mainly with consumers who are generally less able to manage such risks. As discussed earlier we believe that these risks should be transferred to shippers who can better manage these through a range of measures.

4.18. Our modelling indicates that capping cash-out significantly decreases the industry's liability in severe emergencies when parts of the network have to be physically isolated. The modelling suggests that industry's average exposure to cash-out at £20 per therm to pay firm consumers in the event that a GDE occurs is reduced from £1,120m for option 1 to £267m for option 2. While it is difficult to quantify all potential risks, this indicates that capping cash-out can address some of industry's concerns. In general we acknowledge that there might be an impact on the risk of financial distress if industry does not sufficiently insure against a GDE occurring. However, we believe that industry is in a better position to manage this risk than consumers. Therefore, we judge that these potential risks do not outweigh the benefits of cash-out reform.

Our proposed final decision

4.19. We consider that cash-out reform is an effective instrument to reduce the likelihood as well as duration and severity of interruptions. It improves market efficiency by reallocating risks from consumers to those that are better able to manage those risks, that is the industry. It also provides incentives for more efficient interruptions with interruptible customers being interrupted before firm customers. Further, it ensures that firm consumers are paid for the involuntary DSR services they provide in an emergency.

4.20. We still conclude that introducing option 2 (capped cash-out) will bring about the most significant net improvements compared to the current arrangements.

5. Process and timings

Chapter Summary

This chapter outlines our intended next steps for seeking to implement our policy.

Process for modifying the UNC and relevant licence conditions

5.1. Following our consultation on the proposed framework for implementation, the Authority intends to implement the necessary code and licence changes by directing changes to the UNC pursuant to section 36C Gas Act 1986 and by making modifications to shipper and supply standard licence conditions. Any decision to modify licence conditions would be preceded by a statutory consultation pursuant to section 23 of the Gas Act 1986.

5.2. Pursuant to section 36C the Authority may direct the operator of the gas National Transmission system (National Grid Gas plc) to make a modification to the UNC as specified in the direction. The modification must relate to the arrangements contained in the code in respect of a Gas Supply Emergency²⁰ and must be considered by the Authority to be a market-based²¹ modification.

5.3. The Authority intends to make a direction pursuant to section 36C as it believes that the modification will do either or both of 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. Depending on the outcome of our further consultation, we would expect to issue directions to modify the UNC and publish the licence modifications to give effect to our final decision in early-2013 and anticipate that our reforms should be implemented ahead of winter 2013-14. However we will keep this intended timing under review as our process continues.

Next steps and stakeholder consultation

5.5. The publication of this document marks the start of a 12 week consultation on our proposed method of implementing our proposed final decision on the Gas SCR. We are consulting on the business rules, code and licence changes (which are published alongside this document) and are interested in stakeholders' views on these. Our proposals can only come into effect following consultation on the detailed implementation. Whilst we remain open to representations on our proposed final

²⁰ As defined in the UNC

²¹ Ie it relates to the creation of financial incentives for gas shippers or gas transporters

decision more generally, we would not expect to change our high level policy decisions unless material new information comes to light. Responses should be sent to Ofgem no later than 24 October 2012. Details of how to respond can be found in appendix 4.

5.6. We intend to hold a seminar and workshops to discuss the draft legal text during the 12 week consultation period. Further details on these events will be provided by email. If you are interested in attending these events and do not currently receive email notifications from Ofgem regarding Gas SCR events, please register your interest by emailing gb.markets@ofgem.gov.uk.

5.7. Prior to making any licence amendments we would also be required to conduct a minimum 28 day statutory consultation. Depending on the outcome of our consultation on the arrangements for implementation, we would expect to make our final decision and issue directions to give effect to this in early-2013. Xoserve will commence the relevant system changes to implement our proposals. We are aiming for our reforms to be implemented ahead of winter 2013-14, but will keep this under review as our process continues.

Appendices

Index

Appendix	Name of Appendix	Page Number
1	Summary of consultation and responses	42
2	Current arrangements	46
3	Implementing our proposals for emergency cash-out reform	52
4	Consultation response	60
5	Glossary	61
6	Feedback questionnaire	70

Appendix 1 - Summary of consultation and responses

Responses to our draft policy decision

1.1. In November 2011, we published our draft policy decision on the Gas SCR. We received 33 non-confidential responses to the draft policy decision, including from gas suppliers, shippers, storage operators, consumer representatives and the system operator. These responses are all published on the Ofgem website²². This appendix summarises stakeholder responses.

Stakeholder views

1.2. Generally, many stakeholders agreed that there is merit in addressing the risk of a gas supply emergency and the current arrangements may not be ideal, particularly in the context of increased import dependency and the need to provide appropriate price signals. However, several stakeholders were concerned about the impact on the market of our proposals and the potential for unintended consequences. Some respondents consider that our proposals may result in undue risk being placed upon shippers. Some stakeholders had the view that our proposals would not necessarily lead to responses from shippers that would increase security of supply. For instance, a few respondents thought that cash-out would not provide sufficient incentive to invest in new infrastructure. Some respondents highlighted that the market has performed well to date, and noted they did not see a need for cash-out reform.

Interactions and timing

1.3. Many respondents commented that Ofgem should take a more holistic view of its work on gas security of supply, and consider the SCR's proposals for cash-out reform alongside possible further measures. Respondents also commented on other interactions which they felt should be more fully considered, including those with the electricity market (particularly Electricity Market Reform) and European developments.

Force majeure

1.4. Some respondents were concerned about the lack of force majeure provisions in the SCR proposals. They thought that this could expose shippers to unmanageable risks and potentially lead to a disincentive to contract for physical gas. Respondents

²² Published responses can be found at the following link:
<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=46&refer=Markets/WhIMkts/CompandEff/GasSCR>

argued that a force majeure exemption clause should be introduced as part of the SCR reforms.

Level of security of supply

1.5. Several respondents considered that the market is best placed to determine the correct level of security of supply and have concerns that any measures may deter investment in the UK supply market. These respondents also consider that the level of security of supply currently provided by the market is sufficient.

1.6. Many respondents stated their view that it was appropriate to determine the level of security of supply in line with the EU Gas Security of Supply Regulation (Regulation (EU) No 994/2010) ("the Regulation"). Some respondents agreed with our approach to set cash-out at a level of VoLL consistent with the Regulation. Other respondents thought that this may not readily demonstrate whether or not GB meets the Regulation, and that the security of supply standard should be more clearly defined as part of the Gas SCR. Some respondents thought that our proposals could be seen as extending the security standard to daily metered (DM) customers (who are not "protected demand"), and that measures above the security of supply standard would need to be justified.

Cash-out reform

1.7. The majority of respondents considered that the Post-Emergency Claims (PEC) process should be retained, though several suggested that changes to the process to improve certainty would be welcomed. A few respondents queried whether the PEC process would be necessary if a more symmetrical cash-out price was adopted.

1.8. Respondents had several comments on our proposals for incorporating the Value of Lost Load (VoLL) into our proposals for cash-out reform. Some respondents thought that London Economics had made a reasonable estimate of domestic customers' VoLL. However, many respondents highlighted the different characteristics of Industrial and Commercial (I&C) customers and questioned whether it was appropriate to apply domestic VoLL to all consumers. Several respondents were of the view that domestic VoLL would significantly overpay most I&C customers, although some thought it would not be high enough to compensate some I&C customers for whom emergency curtailment could be very costly due to damage to equipment. Some respondents did not support the concept of incorporating an administered price of VoLL into the market arrangements, and considered that it was better for the cash-out price to be determined by market activities.

1.9. Many respondents thought that Emergency Curtailment Quantity (ECQ) process should remain in place (with some review to ensure it remains fit for purpose), and several commented that an equivalent process should be developed for non-daily metered (NDM) customers. Few respondents thought that the ECQ process should be removed, as it could lead to short shippers being penalised twice.

1.10. Whilst many respondents acknowledged that our proposals to limit liabilities in the case of network isolation would mitigate some of the risks of financial distress for shippers, they still considered that the impact will be substantial both on individual shippers and the industry as a whole. On the issue of extended payment timescales, many respondents were against such a measure as it would increase uncertainty and potentially allow insolvent shippers to continue trading when they are unable to meet their liabilities. A few respondents noted the trade-off between payment timescales and the time taken to pay customers and long shippers. A minority of respondents were in favour of extended payment timescales.

1.11. Whilst some respondents argued that the SCR proposals could increase the potential for commercially interruptible contracts, many thought that it would not lead to a material increase in such contracts. Some respondents thought that VoLL would act as a target for firm customers and act as a disincentive for customers to sign commercially interruptible contracts. Some also argued that the low probability of a GDE and short-term contracting periods would make it difficult for shippers/suppliers to offer a meaningful permanent discount. A few respondents highlighted the mismatch between shippers who typically supply DM customers (and so have the opportunity to offer commercially interruptible contracts) and shippers who typically supply smaller NDM customers (who have the most variable demand) and so would be most likely to be short in a peak day.

1.12. Some respondents raised concerns with how a shortfall in DSR funds would be dealt with. Some respondents thought the potential socialisation of costs could undermine incentives. Some respondents were also concerned about the potential impact of insolvency on the rest of industry. Several respondents were keen to highlight that shippers and suppliers should not be obliged to pass DSR payments to customers until they have received these funds. One respondent highlighted their view that the transporter should be responsible for proving if a customer has not ceased consuming gas following instruction.

Further interventions

1.13. Most respondents consider that they cannot fully determine whether further measures are necessary as our decision document does not provide sufficient detail on the proposed measures. However, some respondents agreed with our assessment that capping cash-out liabilities could leave a potential gap in the arrangements. Other respondents disagreed, and thought there was no case for further measures.

1.14. Several respondents have suggested a demand and supply side tender as a simple and achievable solution in lieu of other measures. There was also some backing for measures to support investment in storage. Most of the proposals put forward by respondents advocate a greater role for National Grid Gas in managing the emergency and the processes that sit alongside it.

Assessment of options

1.15. Some respondents remarked that it was difficult to comment on our assessment of options without more detail on the potential further measures. Some

respondents considered that it would be appropriate to have different arrangements for rapid- and slow-developing emergencies. Some stakeholders were concerned that the Gas SCR proposals could have significant unintended consequences and risks, and that these had not been adequately accounted for in the draft policy decision. One respondent argued that implementation costs had not been fully considered.

1.16. Several respondents expressed support for our draft policy decision to pursue option 4 (capped cash-out reform and investigate the need for further measures). Some respondents expressed a preference for alternative options that did not include cash-out reform, and instead incorporated some form of alternative measure.

Impact assessment

1.17. Several stakeholders commented on the modelling approach and assumptions. For instance, respondents commented that the assumptions around infrastructure outages were too pessimistic, and highlighted the difficulty in accurately modelling such low probability, high impact events. These responses (and our reaction to them) are discussed in more detail in the Impact Assessment published alongside this proposed final decision.

Appendix 2 – Current arrangements

1.1. Below is a brief overview of the current cash-out arrangements and the gas emergency arrangements. Further detail is set out in the draft policy decision and the initial consultation document.

1.2. In GB, gas shippers are provided with an incentive to balance their gas supplies and demands on a daily basis through imbalance or 'cash-out' charges:

- 'Short' shippers—those that have not secured as much gas supply as their customers are taking off—are required to pay the System Marginal Buy price (SMP_{buy}) for the volume of gas for which they are short.
- 'Long' shippers—those that have secured more gas supply than their customers are taking off—are paid the System Marginal Sell price (SMP_{sell})²³ for any gas they flow onto the system above the level consumed by their customers.

1.3. The level of cash-out will generally reflect supply and demand conditions and the cost of balancing the system, such that cash-out will rise when supplies are scarce relative to demand. In most circumstances long shippers would be paid less than they would likely have received from selling their excess gas in the market. Similarly, short shippers would usually be charged more than they would have likely paid to buy the gas in the market. Hence, there is an incentive for shippers to keep their supply and demand in balance.

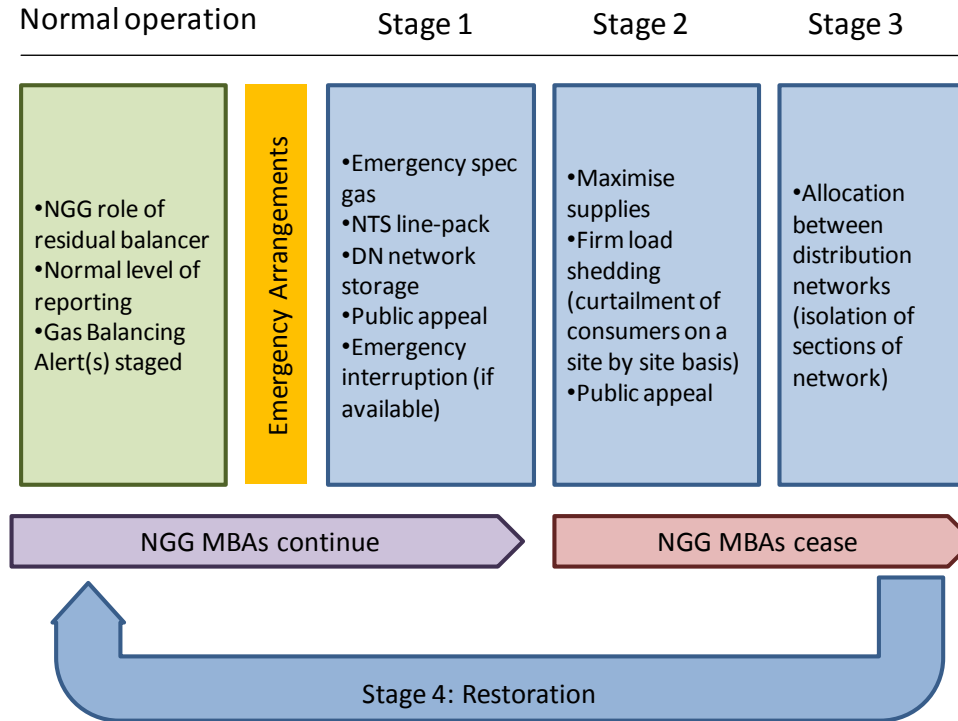
1.4. At present there are five stages of an emergency. These were outlined in our draft policy decision. At stage 2, National Grid Gas (NGG) ceases to take balancing actions on the On-the-day Commodity Market (OCM), although shippers can continue to trade out their imbalances. The cash-out price is frozen at its current level and remains frozen for the duration of the emergency. At this stage the emergency is managed predominately by the Network Emergency Coordinator (NEC) directing physical delivery of supply. When non-daily metered (NDM) customers have to be curtailed (during firm load shedding including network isolation), the affected volumes are effectively taken out of shippers' imbalances, so that the imbalance position of some shippers becomes more positive (they become "longer" or less "short"). Customers are not paid for the involuntary demand side response (DSR) services they provide.

1.5. Ahead of the implementation of Exit Reform, National Grid has reviewed the NEC safety case and made changes to reduce the number of stages of an emergency from five to four to reflect changes to the options available to the NEC following the implementation of Exit Reform. The new stages are outlined in (figure 1). The Health and Safety Executive has approved these changes to the NEC safety case The

²³ Although in an emergency long shippers are paid the System Average Price (SAP).

changes will come into effect in October 2012. The changes following Exit Reform are explained further in our draft policy decision and initial consultation document.

Figure 1: Proposed stages of a Gas Deficit Emergency



Acronyms: NGG – National Grid Gas; NTS – National Transmission System (Gas); DN – Distribution Network; MBAs – Market Balancing Actions

1.6. In developing our proposed final decision we have sought to ensure that our proposed reforms of the gas emergency arrangements are consistent with the changes to the NEC safety case as a result of Exit Reform. These changes are due to take effect 1 October 2012. As a result, throughout this document we refer to the stages of emergency as they will appear in the NEC safety case from 1 October 2012. The business rules and draft code and licence changes also refer to stages of a GDE in this manner. For the avoidance of doubt, this does not fetter the Authority’s discretion with respect to UNC modification proposal 412 (UNC 412), which proposes to make changes to align the UNC with the changes to the NEC safety case. Were the Authority to decide to reject UNC 412, this would necessitate minor changes to the business rules and draft code and licence changes to ensure consistency with the stages of a GDE as described in the UNC.

Cash-out prices

Cash-out in normal circumstances

1.7. When shippers take more off the system than they put on, they face charges (cash-out) which are designed to reflect the costs to the system operator of

balancing the system. Imbalances are calculated based on the difference between inputs to the system and offtakes from the system, including any trades. Under the current cash-out arrangements, the prices faced by short and long shippers differ. This is to incentivise shippers to balance their positions. Generally, short shippers will pay more in cash-out than if they had procured gas on the market, and long shippers will receive less than if they had sold gas on the market.

1.8. Short shippers are required to pay the System Marginal Buy Price (SMP_{buy}) for the volume of gas for which they are short. SMP_{buy} is the greater of:

- the System Average Price (SAP)²⁴ plus the default system marginal price²⁵ and
- the price in pence/kWh which is equal to the highest Balancing Action Offer Price in relation to a Market Balancing Action (MBA)²⁶ taken for that Day.

1.9. Long shippers are paid the System Marginal Sell Price (SMP_{sell}) for any additional gas they flow onto the system. SMP_{sell} is the lesser of:

- SAP less the default system marginal price; and
- the price in pence/kWh which is equal to the lowest Balancing Action Offer Price in relation to a MBA taken for that Day.

Emergency cash-out

1.10. At stage 1 of an emergency, cash-out prices will continue to be set by the relevant SMP_{buy} and SMP_{sell} for the relevant day as would be the case outside of an emergency. Under current arrangements, upon declaration of stage 2 of an emergency, cash-out prices will be frozen at the level at which they were at entry to stage 2. In this event, those shippers with a positive system imbalance would receive the frozen SAP of the day in which stage 2 is declared. Long shippers receive SAP (rather than SAP minus the default price) in order to provide a greater incentive to bring gas onto the system in an emergency. Shippers with a negative system imbalance would pay the frozen SMP_{buy} . Under current arrangements cash-out prices remain frozen at these levels until the market is restored, at which point calculation of cash-out prices reverts to the 'normal' daily-calculated SMP_{buy} and SMP_{sell} .

²⁴ SAP is calculated as the average price of all trades on the day in question.

²⁵ The current default system marginal price is 0.0263p/kWh. This price is updated each year in October. For more on how the default system marginal price is determined, see: Joint Office, *Modification Report Update of the default System Marginal Buy Price and System Marginal Sell Price Modification Reference Number 0333/0333A*, Version 3.0, 16 March 2011

²⁶ A Market Balancing Action is a marginal trade taken by National Grid Gas to incentivise shippers to trade out their own imbalances.

Post-Emergency Claim (PEC) arrangements

1.11. Upon declaration of stage 2 of an emergency, the NEC will take responsibility for physically balancing the gas system. This will involve directing flows from domestic sources and storage (that may otherwise not be flowed) in order to ensure that the safety requirements of the network are met.

1.12. Parties who are directed to flow additional gas onto the system (in excess of their contracted positions) can claim for any financial costs incurred by doing so through the PEC process.

1.13. In order for a party to submit a claim, they must first have a long imbalance position and secondly have posted an OCM Market Offer to effect a Physical Market Transaction following announcement of stage 2 of an emergency but prior to stage 4 being declared. In addition, they can only claim for an amount of gas which is the lesser of their OCM bid amount or their imbalance quantity for the relevant gas day. A party that wishes to make a claim must submit a PEC to National Grid NTS within six days of posting the Market Offer to which the claim refers. The party must submit information regarding the claim such as the claimed quantity, the Market Offer Price and reasonable justification for the level of that Market Offer Price.

1.14. All claims that meet the necessary criteria (as set out in full in section Q of the UNC) will be subject to a mechanistic validation process. That is, the lowest priced 80% of claims will be 'recommended for payment' while the remaining 20% will be required to undergo a further economic assessment under the direction of the Authority.

1.15. Subject to the validation process and, if applicable, the economic assessment, shippers will receive payment for their claims less the SAP for the relevant day.

1.16. In considering the validity of the claims undergoing further economic assessment, the Authority will consider the Guidelines for Economic Assessment of PECs²⁷. These guidelines are based on the principle that shippers should be able to claim up to the opportunity cost of gas they deliver to the system, less the relevant SAP.

Recovery of PEC costs

1.17. The costs incurred through the PEC process will be recovered from shippers. The costs will initially be apportioned to those shippers that hold a deficit daily imbalance during the relevant day (ie short shippers) and will be proportionate to the size of their imbalance.

²⁷ The Guidelines can be found here:

<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=8&refer=Markets/WhIMkts/CompandEff/GaSEmerg>

1.18. In the event that the full amount of costs is not recovered through these shippers then the remaining costs will be shared amongst all shippers as a proportion of total throughput on the relevant gas day through the Balancing Neutrality adjustment process.

Emergency Curtailment Quantity (ECQ) arrangements²⁸

1.19. In the event of a GDE, to ensure that there is a supply/demand balance, the NEC may need to curtail off-take of gas at a Daily Metered (DM) site without providing an interruption notice to the relevant shipper. The ECQ is the volume of gas associated with such actions. This is the quantity of gas calculated as the sum of the aggregate quantities of gas reasonably estimated by each Transporter (based on the information provided by the shipper) that the shipper would have off-taken at the relevant sites had it not been for the emergency curtailment.

1.20. There is a methodology, published by the relevant gas transporters, that is used to calculate the ECQ (the 'ECQ methodology') in such an event. This methodology uses Offtake Profile Notices (OPNs)²⁹, historical consumption (beginning with D-7) or Supply-point Offtake Quantity (SOQ)³⁰ to calculate the ECQ. Once determined, the ECQ is then the subject of a title trade between the residual balancer and the shipper.

1.21. The ECQ arrangements apply where a shipper has been instructed to take a site off during a Gas Deficit Emergency where this occurs under stage 2 (firm load shedding). Where this is the case, the shipper will receive an ECQ for the day of curtailment so that the quantity curtailed maintains that user's imbalance position.

1.22. For those occurrences of Emergency Curtailment in a GDE, shippers would receive payment based on the ECQ multiplied by an Emergency Curtailment Trade Price determined as the 30 day average SAP prevailing at the commencement of the GDE.

1.23. ECQ payments to shippers are funded through Balancing Neutrality³¹ with the costs spread amongst shippers proportional to their energy throughput.

1.24. NGG will not pay Balancing Charges, Balancing Neutrality Charges, Scheduling Charges or Daily Imbalance Charges as a result of ECQ related Trade Nominations. Any amounts payable by NGG will not be included in the SMP_{buy} , SMP_{sell} or SAP.

²⁸ See <http://www.ofgem.gov.uk/Licensing/GasCodes/UNC/Mods/Documents1/16229-98-98aD.pdf>

²⁹ OPNs are nominations provided by shippers to NGG which detail their customers' expected rates of consumption throughout the day.

³⁰ SOQ is a supply point's peak capacity.

³¹ See <http://www.gasgovernance.co.uk/UNC>

Shipper curtailment

1.25. P70 forms are used to inform the relevant transporter where a shipper has made a commercial decision to interrupt its own end consumers and allow the relevant shipper to be relieved of its cash-out liability for the relevant interruption. For example, they may be used where a shipper has offered to reduce demand via a physical or locational action on the OCM. A P70 may also be used following a day in which the shipper has been instructed to discontinue off-take of gas, i.e. for day 2+ of the relevant interruption. This would mean that these sites would be excluded from the ECQ process.

1.26. The P70 is submitted by the shipper to indicate to the relevant transporter that the shipper has commercially interrupted the relevant consumer(s). Post submission of the form, the relevant transporter excludes the consumer's quantity from their ECQ calculation. The shipper will therefore avoid the imbalance position that would have resulted if the quantity had been included in the ECQ calculation.

1.27. When the shipper wants to reinstate the interruptible consumer's supply they should indicate this intention to NGG in good time so as to allow NGG to take any necessary action. For example, in a GDE, the NEC may want to instruct firm load disconnection of the relevant consumers upon their reinstatement.

Appendix 3 – Implementing our proposals for emergency cash-out reform

1.1. We have set out above our proposed final decision on emergency cash-out reform under the Gas SCR. We have also developed proposals for implementing this. We have worked with NGG to develop a set of business rules which represent our proposed method of implementing cash-out reform in line with our proposals. We have also developed draft legal text in line with these business rules for the code and licence changes necessary to implement our proposals. The business rules and legal text are published alongside this document. We recognise that these business rules and associated legal text represent one possible method of implementing our proposed final decision, and we are open to alternatives should industry wish to propose them during this consultation period.

1.2. This appendix sets out the detailed implementation considerations which we have developed as part of our proposed final decision. The business rules and draft legal text are published alongside this document.³²

Emergency cash-out price

1.3. As outlined in chapter 3, our proposed final decision seeks to make cash-out more dynamic throughout an emergency for long shippers, and in the early stages of an emergency for short shippers (ie prior to firm load shedding). This would mean that the cash-out price is effectively no longer frozen at any stage of an emergency.

1.4. Before firm demand curtailment, the short cash-out price will be set at SMP_{buy} , which in the absence of NGG's market balancing actions will be set at SAP + the default system marginal price. Once firm load shedding begins, the cash-out price for short shippers will go to VoLL and remain there until the market is restored at the end of the GDE. The long cash-out price would be set at the daily SAP throughout an emergency from the point at which NGG ceases to take market balancing actions.

1.5. To prevent small volumes of shipper-to-shipper trades from setting a very high cash-out price, the cash-out price will be capped at VoLL once NGG has ceased to take actions on the OCM. For the avoidance of doubt there would be no cap on the

³² They can be found at the following links: proposed business rules http://www.ofgem.gov.uk/Markets/WhIMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_br.pdf; proposed UNC drafting http://www.ofgem.gov.uk/Markets/WhIMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_unc.pdf; proposed shipper licence drafting http://www.ofgem.gov.uk/Markets/WhIMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_shipper.pdf; proposed supply licence drafting http://www.ofgem.gov.uk/Markets/WhIMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_supplier.pdf.

price of market balancing actions taken by NGG. NGG would be able to take balancing actions at prices above VoLL if they thought it necessary, and this would feed into the cash-out price (meaning the cash-out price before firm load shedding could be set at a level above VoLL if this reflected the cost of the actions taken by NGG to balance the system).

1.6. The table 2 outlines our proposals for cash-out at different stages of an emergency.

Table 2: Cash-out price at different stages of an emergency

Stage	Short cash-out price	Long cash-out price
Stage 1	SMP _{buy}	SMP _{sell}
Day 1 of Stage 2	SMP _{buy} (no cap)	SAP (no cap)
From day 2 of Stage 2 until firm load shedding begins	SMP _{buy} (capped at VoLL)	SAP (capped at VoLL)
Stage 2 (firm load shedding) & Stage 3	VoLL	SAP (capped at VoLL)
Stage 4 (from market restoration onwards)	SMP _{buy}	SMP _{sell}

Accounting for emergency curtailment

1.7. For the purposes of imbalance calculations, it will be assumed that customers stop consuming gas as requested by the NEC during firm load shedding. If a customer has not interrupted as requested, the onus will be on the shipper to prove this, and NGG will amend imbalances accordingly. Shippers will be able to provide this proof and request that NGG amend the DR ECQ calculation. These arrangements will not apply in the case of physical network isolation, as transporters will be able to verify which sites were isolated and so it will not be necessary for this proof to be provided by shippers.

Accounting for non-daily metered customers

1.8. As discussed in chapter 3, we propose to introduce an NDR ECQ process which would function based on similar principles to the ECQ methodology, but adapted to suit the characteristics of NDM demand. Under current day-to-day arrangements, NDM sites within a given LDZ are allocated gas based on the LDZ meter reading, which is allocated across all NDM sites within that LDZ. Any change in flows at an LDZ meter not associated with changes in DM demand is assumed to be a change in NDM demand due to weather. This demand change is allocated across all NDM sites based on their respective weather sensitivity (eg, NDM sites that have are highly sensitive to changes in weather will be allocated a higher proportion of the change in LDZ demand). Hence, if NDMs are curtailed in an emergency, the system used to

allocate NDM demand (Gemini) recognises this reduction in demand as weather-related and thus smears this reduction across all NDMs within the LDZ (the degree to which an individual NDM's allocation reduces depends on how weather-sensitive that site is). An NDM customer curtailed in an emergency would not have a demand allocation of zero.

1.9. As a result, it is not possible for a direct extension of the DR ECQ methodology to be applied as this would require an allocation process that could accurately allocate demand reduction to the sites which have been curtailed. Instead, the NDR ECQ will amend imbalance calculations (by 'uplifting' their user daily quantity output (UDQO)³³) for all NDM shippers within an affected LDZ. This will be based on the prevailing forecast at the time curtailment occurs, and will adjust imbalances such that they reflect each shipper's likely level of demand had no emergency curtailment occurred. This methodology will be applied to aggregate allocations for an LDZ on any day in which an NDM site is curtailed due to firm load shedding. With network isolation, curtailed sites will only be factored into the NDR ECQ calculation on the first day which they are subject to network isolation. This is consistent with our proposals to limit liability in circumstances of network isolation.

1.10. As with DR ECQ, the effect of this methodology will be that shippers will continue to be contracted to deliver gas which the shipper will be unable to bill for (as some of their customers will have been interrupted). The changes to UDQO (and hence imbalances) will be carried out via a deemed trade with the SO which will be paid for at 30-day average SAP, as a proxy for the revenue that a shipper would have received from the interrupted customer had they been able to deliver gas to them. The NDM 'uplift' will account for demand above the volume of allocated energy associated with each site³⁴.

Accounting for commercial interruptibles

1.11. In order to exclude commercially interruptible contracts from the DR ECQ process it will be necessary for shippers to notify NGG of all such contracts held by suppliers. We propose this could be implemented by requiring shippers to submit information on the commercially interruptible contracts suppliers have agreed ahead of each winter. This information would be limited to customer details (such as meter point reference numbers) and the volume of gas which is considered interruptible under the contracts. It would not need to include commercial details of the contracts. The P70 process would be retained for shippers to notify NGG of any commercial interruptions which they make ahead of firm load shedding.

³³ A shipper's UDQO is equal to their total outputs from the system

³⁴ In accordance with existing arrangements, each NDM site is allocated a volume of energy regardless as to whether, or not, the site has been curtailed. Where the NDM site is individually meter read, the reconciliation process is undertaken, in due course. The reconciliation will recompense the shipper for any energy volume that was allocated, but not offtaken by the site.

Payments to consumers

1.12. As explained in chapter 3, in order to pay customers for the provision of involuntary DSR services, it will be necessary to estimate how much gas they would have consumed had they not been curtailed. For DM customers, the DR ECQ process will calculate a quantity of curtailment for the purposes of amending imbalances, and so we plan to use this same estimated volume for the purposes of calculating involuntary DSR payments.

1.13. For NDM shippers, it will not be possible to use the same method as the NDR ECQ will be calculated on an LDZ-wide basis and not for each specific site. We propose to use a formula based on the Supply Oftake Quantity (SOQ)³⁵ of each affected site. This quantity will be scaled by the ratio of total volume curtailed to the sum of SOQs of all interrupted sites.

1.14. This approach will mean that the quantity for which consumers are paid will be scaled according to how severe demand is relative to a 1-in-20 peak. Payments to consumers will be reflective of the prevailing conditions on the day of a GDE. We note this approach could favour more variable loads over flatter, process-based, loads. The intention of this approach is not to accurately calculate exactly what each individual NDM customer would have consumed, but to provide an estimate of the appropriate level of involuntary DSR payment due to each consumer. An alternative approach would be to adopt more fixed payments – perhaps set for different types of customers.

1.15. NDM sites curtailed due to firm load shedding or network isolation will be identified by information provided by DNs. Sites instructed to stop consuming gas during firm load shedding will be identified by the DNs providing direct information on the sites they have requested cease consuming gas. Sites curtailed due to network isolation will be identified by DNs providing a list of all sites that (according to their databases) are connected to the isolated part(s) of the network. Should errors be identified in this process, then DSR payments will be corrected accordingly, and funded from (or paid to) neutrality.

1.16. For the purposes of receiving DSR payments, we propose that, during firm load shedding (except where physical network isolation occurs), these payments will only be provided to customers if they are able to prove that they have ceased consuming gas on instruction from the NEC. Consumers would provide this proof to their supplier, and suppliers and shippers would be obliged via their respective licences to pass this proof on to NGG. This may mean that payments due to firm load shedding are limited to DM customers (except in the case of network isolation). It will not be necessary for customers curtailed due to network isolation to prove they have ceased consuming gas as the network is physically isolated at this point and they will have been unable to consume gas. One respondent commented that the burden of proof should be on the transporter to prove that sites had not stopped consuming gas

³⁵ Each supply point has an associated SOQ which is calculated as the maximum peak day consumption of that supply point. In the UNC, this is referred to as Supply Point Capacity.

when instructed to do so (as it is the transporter who makes this instruction the customer to stop consuming gas). We do not agree with this view as we think it is important that the requirement is on the party who stands to benefit by providing the proof, in order to ensure that incentives are appropriately aligned.

Cash flows

Charges in an emergency

1.17. We set out in chapter 3 our proposed final decision to incorporate our proposed reforms into the existing emergency cash-out and balancing neutrality arrangements. We propose that the cash-out arrangements would be modified such that SMP_{buy} goes to the administered VoLL if firm demand is curtailed. Short shippers would pay this price, and this revenue would be used to pay long shippers at the relevant SAP. Payments due to customers for involuntary DSR (the initial DSR fund) will be treated as an additional market balancing action and included as Balancing Neutrality Charge payment. Charges for market balancing actions would continue to be recovered from neutrality as normal.

1.18. The monies comprising the initial DSR fund will be held in the neutrality account. The total funds necessary to pay all affected customers for their involuntary DSR payments will be calculated. If there are more than sufficient funds in the initial DSR fund, then this surplus would be smeared to all shippers via neutrality. If there are insufficient funds in the initial DSR fund, then additional charges will be levied. A unit DSR fund imbalance charge will be calculated based on the fund's shortfall and the total volume of demand side curtailment or the sum of all short shipper imbalance positions (whichever is greater in absolute terms). This charge will be levied on short shippers' imbalance volumes. If a shortfall remains following this calculation, then the remaining DSR fund shortfall will be recovered from neutrality (based on throughput). A surplus following the DSR imbalance charge will be returned to neutrality. DSR payments will be made from this DSR fund. We think consumers should be paid in full for the involuntary DSR services they provide and so do not propose to limit DSR payments to the amount collected from short shippers.

Timescales for payments

1.19. Our proposed final decision is for our proposals to be incorporated into the existing EBI process. Based on stakeholder feedback, we have developed a 'near-term' process whereby cash-out charges for short shippers in the first EBI following an emergency incorporate the full level of VoLL. This will provide clarity on shippers' exposure at the earliest possible opportunity.

1.20. The invoicing and payment process will fit within the existing monthly EBI process. The first EBI following a GDE will contain the relevant Balancing Neutrality Charges (i.e. 'inputs' to Neutrality)³⁶. If a GDE spans two months, then these charges

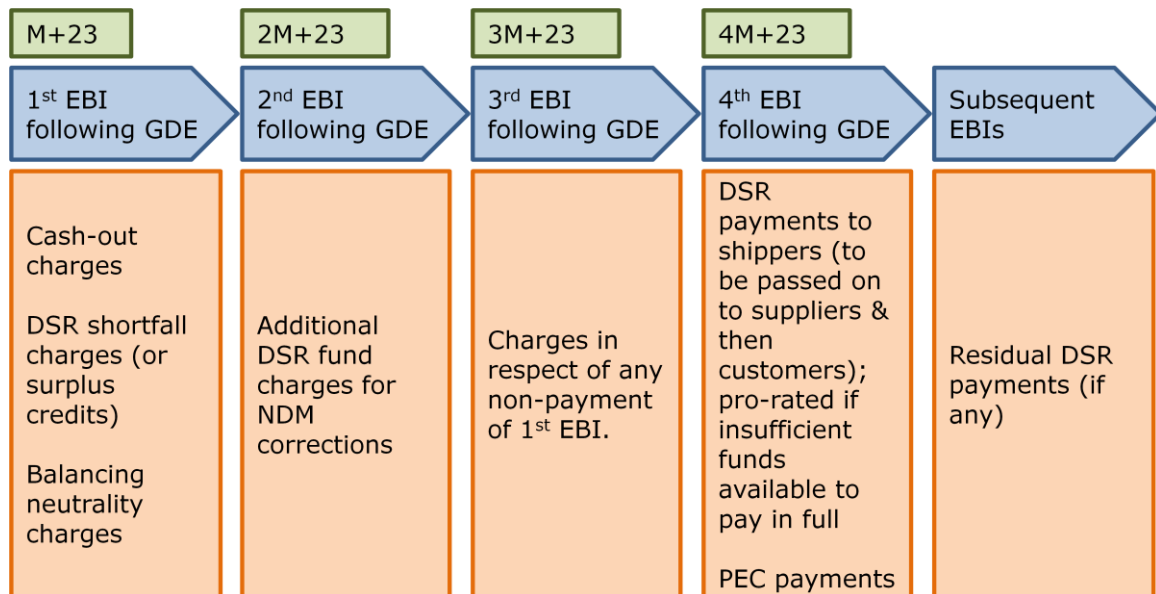
³⁶ This will include imbalance charges and credits, charges/credits associated with a shortfall/surplus in the

will be spread over two EBIs accordingly. Any non-payment of EBI charges will follow the current non-payment process, which means that any charges to neutrality in respect of these will be picked up in the third or fourth EBI following a GDE.

1.21. DSR payments (to be passed on to consumers) will not be released until the 4th EBI following a GDE. We note the concerns about the speed of payment to consumers, but are mindful of the trade-off between faster payments to consumers and the increased risk that neutrality will need a substantial credit line to manage any defaults. Ultimately, any increased credit cost for neutrality would be passed on to the industry and would likely result in higher bills for consumers. If funds are insufficient to pay the full £20/therm in the 4th EBI, then these payments would be pro-rated and any residual payments would be made via subsequent EBI(s).

1.22. In respect of emergency curtailment, if more information becomes available after the first EBI is issued, then any charges or credits will be settled in a subsequent EBI. If additional customers who are due to receive DSR payments are identified then their payments will be passed through subsequent EBIs, and the monies to fund these recovered from neutrality. Any material impact, caused by additional DSR curtailment quantities or information, on a shipper's imbalance position on the day will be addressed through existing UNC provisions. We propose the emergency cash-out process will close-out 18 months after the first EBI post the GDE. After this point, no further amendments to imbalance charges or DSR payments will be made. The expected invoicing and payment process is set out in the figure 2.

Figure 2: Expected invoicing and payment process



Passing through payments for involuntary DSR

Requirements on shippers

1.23. We propose that an additional licence condition be inserted into shipper licences. This will require that shippers pass on to the relevant supplier(s) as soon as reasonably practicable any monies they receive in respect of DSR payments due to consumers. For avoidance of doubt, shippers will not be required to pass on payments before they have received these funds.

1.24. Shippers will also be obliged to pass through any information they receive from suppliers with respect to proof of compliance with firm load shedding or details of commercially interruptible contracts.

Requirements on suppliers

1.25. We propose that an additional licence condition be inserted into supplier licences. This will require suppliers to include a term in all their contracts with customers that sets out the payments customers will receive in consideration of their provision of involuntary DSR services. Suppliers will be required to credit customer accounts as soon as reasonably practicable following the receipt of funds for DSR payments from the relevant shipper. Suppliers will be provided with details of which customers are due to receive payments.

1.26. Commercially firm customers will be paid VoLL at £20/therm if their gas supplies are curtailed by the transporter in a GDE. Commercially interruptible customers will be paid as under the terms of their contract. Suppliers will be

required (via a licence condition) to set out in any commercially interruptible contract the payments customers will receive if they are interrupted by their supplier/shipper and if they are curtailed by NGG.

1.27. Suppliers will also be required to pass to the relevant shipper information on their commercially interruptible contracts, and proof of customer) compliance with firm load shedding (should they receive this proof from a customer).

Pass-through of payments

1.28. Should a shipper or supplier become insolvent whilst in the process of passing through payments, then the supplier or customer who is due to receive these payments will become an unsecured creditor of the insolvent party. This is the same as the arrangements which apply if a shipper/supplier becomes insolvent and a customer has a direct debit account which is in credit. We note that liabilities do not pass on to a Supplier of Last Resort.

Proposed legal drafting

1.29. The proposed business rules, UNC drafting, shipper licence drafting and supply licence drafting are all published as associated documents to this proposed final decision.³⁷

³⁷They can be found at the following links: proposed business rules
http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_br.pdf;
proposed UNC drafting
http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_unc.pdf;
proposed shipper licence drafting
http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_shipper.pdf;
proposed supply licence drafting
http://www.ofgem.gov.uk/Markets/WhlMkts/CompanEff/GasSCR/Documents1/120731_GasSCR_supplier.pdf.

Appendix 4 – Consultation response

1.1. Further work on the Gas SCR will now focus on the business rules (which set out the framework for the proposed changes), code and licence changes required to implement this proposed final decision. Our proposals can only come into effect following consultation on the detailed implementation.

1.2. Through this proposed final decision and accompanying IA, we are seeking comments on the implementation of our proposals, including on the business rules, code and licence changes (published alongside this document). Whilst we remain open to representations on our proposed final decision more generally, we would not expect to change our high level policy decisions unless material new information comes to light.

1.3. Responses should be received by 24 October 2012 and should be sent to: gb.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. We will also be looking to run a number of stakeholder workshops and seminars during the consultation process. Although these are intended to inform our thinking on the Gas SCR process these workshops should not be seen as a substitute for providing a full written response. Having considered the responses to this consultation, Ofgem intends to undertake a statutory consultation on the licence changes.

1.7. Any questions on this document should, in the first instance, be directed to:

Thomas Farmer, Economist or Anjali Mehta, Senior Economist
Ofgem, 9 Millbank, London, SW1P 3GE
Tel: 020 7901 7000
E-mail: gb.markets@ofgem.gov.uk

Appendix 5 - Glossary

A

Agency for the Cooperation of Energy Regulators (ACER)

The Agency for the Cooperation of Energy Regulators is a body of the European Union designed to help co-ordinate and support the actions of national regulatory authorities. Its over-arching objective is to help achieve a single energy market in Europe.

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 taking out balancing actions on behalf of the market. 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 continues to change in response to circumstances upon declaration of stage 2 of an emergency (pre exit reform). This approach was proposed in the initial consultation.

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) customer

This is a gas customer 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 compensation to be provided 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. As such, shippers will not be 'cashed out' on these curtailed quantities.

Emergency Curtailment Trade Price

This is the price at which a shipper's emergency curtailment quantity is compensated. This is determined as the 30 day average System Average Price prevailing at the commencement of a gas deficit emergency.

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 customer

This is a customer with a non-interruptible gas supply contract. These customers 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 that consumers stop using gas. This is known as firm load shedding.

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).

Clause 3 of Section 3 of the Uniform Network Code General Terms defines force majeure as: "Any event or circumstance, or any combination of events and/or

circumstances the occurrence of which is beyond the reasonable control of, and could not have been avoided by steps which might reasonably be expected to have been taken by, a Party (the Affected Party) and which causes or results in the failure of the Affected Party to perform or its delay in performing any of its obligations owed to any other Party or Parties under the code.”

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 customers). 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 license 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, CH₄) 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](#)

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 customer \(NDM\)](#)

This is a gas customer who does not have a meter which can be read on a daily basis.

[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 compensate 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.

Public Service Obligations

A public service obligation is an obligation on suppliers to meet the needs of certain categories of customers. The details of the obligation placed on each supplier will differ.

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-ordinating 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 any body which introduces, conveys and takes out gas from the gas pipeline.

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.

Stage 2 Emergency

Upon entrance into a Gas Supply Emergency, a number of stages may be declared. Under the current arrangements the cash-out price is frozen upon declaration of stage 2 of an emergency.

System Average Price

This is the 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.

List of Acronyms

ACER	Agency for Cooperation of National Energy Regulators
DECC	Department of Energy and Climate Change
DM	Daily Metered (gas customer)
DN	Distribution Networks
DR	Daily Read
DSR	Demand Side Response
EBI	Energy Balancing Invoice
ECQ	Emergency Curtailment Quantity
EMR	Electricity Market Reform
FM	force majeure
GBA	Gas Balancing Alert
GDE	Gas Deficit Emergency
GS(M)R	Gas Safety (Management) Regulations 1996
HSE	Health and Safety Executive
I&C	Industrial and Commercial
IA	Impact Assessment
LDZ	Local Distribution Zone
LNG	Liquefied Natural Gas
MBA	Market Balancing Action
NDM	Non-Daily Metered (gas customer)
NDR	Non-Daily Read
NEC	Network Emergency Coordinator
NGG	National Grid Gas
NGSE	Network Gas Supply Emergency
NTS	National Transmission System
OCM	On-the-day Commodity Market
OPN	Offtake Profile Notices
PEC	Post Emergency Claims
PSOs	Public Service Obligations
SAP	System Average Price
SCR	Significant Code Review
SO	System Operator
SMP	System Marginal Price
SOQ	Supply-point Offtake Quantity
SWCQ	Storage Withdrawal Curtailment Quantity Arrangements
UDQO	User Daily Quantity Output
UNC	Uniform Network Code
VoLL	Value of Lost Load

Appendix 6 - 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:

Andrew MacFaul

Consultation Co-ordinator

Ofgem

9 Millbank

London

SW1P 3GE

andrew.macfaul@ofgem.gov.uk