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Gas Security of Supply Significant Code Review (SCR) Initial Consultation National Grid Gas Transmission Consultation Response

Dear Peter

Thank you for the opportunity to respond to Ofgem's Initial Consultation on Gas Security of Supply Significant Code Review (SCR). This response is made on behalf of National Grid Gas's Transmission business (NGG).

National Grid owns and operates the gas transmission system throughout Great Britain and through our low pressure gas distribution business we distribute gas to approximately 11 million businesses, schools and homes across the heart of England.

Our role as the owner and operator of the gas transmission network is the safe, economic and efficient development, operation and maintenance of the system.

As described in our Gas Transportation Ten Year Statement 2010, there is a significant amount of change being experienced in the supply of gas to Great Britain, in as much as UKCS supplies are declining and being replaced by a greater proportion of imported gas. This is creating a much greater variability in where gas will be sourced over the next 2 – 10 years and whilst this diversification of supply is in many ways beneficial, it does create more uncertainty as to where gas will come from which may in itself make the management of an emergency more difficult. This coupled with the recent introduction of European security of supply standards (and the requirement to show how each Member State is meeting such standards) means that it is timely to undertake a review of the current arrangements for gas security of supply to see if they are fit for purpose within this changing environment.

Ofgem's SCR on gas security of supply is therefore important and the initial part of the process has allowed for the industry to contribute to the development of improved arrangements via the three workshops. These workshops have allowed attendees to discuss the benefits and drawbacks of potential changes, but as outlined in Ofgem's closing seminar, the workshops did not provide a consensus view on what changes would lead to incremental improvements over the current arrangements.

In broad terms, this review is considering how best to minimise the risk of an emergency occurring as well as the management of an emergency once it has occurred. Once in an emergency, the focus of NGG is to develop a strategy for approval by the NEC to physically

manage supplies and demand to achieve a safe system balance as quickly as possible, and it is imperative that any changes to arrangements do not dilute our ability to develop and communicate such a strategy in a timely fashion or the ability of the NEC to direct a physical response from supplies and demand.

We therefore have concerns with the options proposed in the initial consultation, in particular with the possible change in role for NGG and NEC. In respect of NGG, we can see no benefits in the role of NGG being changed as described in the options. However, we do see drawbacks in as much as NGG's focus during the immediate period prior to, and during, an emergency is on the safe operation of the system, and there should not be a commercial role for NGG to play at this time. Furthermore, NGG is not currently resourced to undertake a central buyer role and it is not clear why NGG would be as effective in this capacity as market participants who trade gas on a day to day basis.

A further concern in this area would be the introduction different responses for different types of emergency. Whilst we agree that the actions leading up to an emergency may vary depending on the situation, once an emergency is declared the steps taken must be clear and understandable to minimise the risk of confusion on what actions are required of individual parties in the different situations.

We therefore strongly agree that the main aim of the SCR should be the development of arrangements that will minimise the risk of an emergency occurring, and an important step in achieving this is to have clear roles and responsibilities for all parties.

For example, we believe that shippers should put arrangements in place to ensure sufficient gas is available for an extended period of high demand, and that consideration should be given to an explicit obligation that can be effectively monitored. Such an obligation could be met through a range of tools, such as supplies, storage or demand side reduction based on an agreement of the value of lost load, but shippers, with their risk management expertise are best placed to make such decisions.

In respect of any changes, a careful evaluation should be undertaken to ensure that they provide tangible benefits over the existing arrangement. This may mean that some changes cannot be implemented for the coming winter. However, NGG is of the view that two of the changes discussed in the workshops are capable of early implementation; namely a review of system warnings that provide the market with signals that there may be an issue with the supply/demand balance and the development of more demand side response to such a situation. As such, we will look to work with both Ofgem and the wider industry to implement such changes for winter 2011/12 if it is clear that they will improve the level of security experienced by consumers.

Our specific answers to the consultation questions are outlined below. If you would like to discuss any of the points raised in this response, please contact Malcolm Arthur on malcolm.arthur@uk.ngrid.com (01926 654909).

Yours sincerely
Mark Ripley (by email)

Chapter 3

Question 1 – Have we captured the appropriate range of options for reform of the gas emergency arrangements? Are there other options that should be considered?

The SCR rightly looks at some major changes that could be implemented. However, there may be incremental changes to the current regime that should be considered, such as improved information on how supply obligations are met, progressive warnings on the state of the system and an improved Post Event Claims process that may meet the overall SCR aims, but have not been considered in the development of the options outlined in the consultation.

In addition, the reform options outline potential changes in the role of NGG and NEC, but do not explicitly outline any potential changes to the role or responsibilities of suppliers or shippers in avoiding an emergency by maintaining supplies to their contracted customers. Consideration needs to be given to the role given to shippers and suppliers in avoiding an emergency.

Chapter 3

Question 2 – Of the three options presented, which do you prefer? Why?

When assessing the impact of the options on NGG, we need to consider the impact of the various proposed changes on how we would operate the system and our role as the residual system balancer, ensuring system safety and facilitating the market.

These things considered, we do not believe that any of the three options outlined would provide a step change improvement on the current arrangements.

To determine the effectiveness of any security of supply arrangements, there needs to be a clear security of supply standard, along with clear obligations on the parties that are best able to meet the relevant part of the standard. This would allow the current market arrangements to be assessed to determine whether they meet this standard and also the European Regulation on gas security of supply that came into force in December 2010. If the assessment, as required by the European Regulation, shows that they do not, this strongly indicates that improvements in the current regime are needed to meet these standards.

The three options outlined in the consultation provide a limited scope for development of the arrangements; for example, all three options include the introduction of VoLL and a compensation mechanism. As we are not convinced that the introduction of VoLL and the premise that this caps the imbalance price will improve the avoidance of an emergency over and above the current uncapped arrangements, we do not believe that we can show a preference for any of the three options over and above the current arrangements.

As outlined in the three workshops, there was no consensus on which of the three options best meet the overall SCR objectives. We have some concerns with the three options. Our main concerns with each of the options are:

- **Option 1** has a reduction in NEC options for physically managing an emergency and hence a reduction in the options available to NGG when developing an

emergency strategy. To facilitate such a change, there would need to be clear evidence to demonstrate, through rigorous risk assessment that such a change in NEC emergency management options would maintain or improve on its current Safety Case. Careful consideration of the proposed arrangements in conjunction with the HSE needs to be undertaken; and

- **Options 2 & 3** fundamentally change the current market set up with the suspension of the current multi-party market to be replaced with a “Flexibility Mechanism” type trading arrangement with NGG as the central buyer. We do not believe that NGG is best placed to source additional gas when compared with the current market participants who operate extensive and multi-contracted trading arrangements on a day to day basis.

When considering what changes may improve on the current arrangements, we believe that there are a number of incremental improvements that would demonstrably meet the objectives outlined in the SCR. For example, clearly defined obligations on who is responsible for providing what aspect of security of supply, with greater transparency of where and how gas is sourced would provide the system operator with information to enable the improved system management during times of system stress, for example, where and when alternative gas would be sourced post a significant supply failure. Such obligations, along with sharper incentive signals should ensure appropriate investment in physical delivery or alternative options such as contracted demand management.

Another option would be to introduce additional staged system warnings that indicate increasing levels of uncertainty about the ability of the market to provide a supply/demand balance, providing the market with a strong signal that indicates the requirement for an improved supply / demand balance. Recent experience of the good market response to GBAs indicates that this could provide additional information that allows the market to respond in a timely manner during times of system stress.

It is notable that in recent system events, response has been from supplies rather than demand. Enabling flexible demand side to participate in the market is a key objective of an effective market and as such, it is important to understand any existing blockers that prevent this from happening. Open and transparent market mechanisms do exist at the moment that facilitate demand side participation. Any new proposal would need to remove any perceived blockers without distorting market mechanisms.

There are a number of options for accessing demand side flexibility. These include:

- shippers/suppliers having an obligation to agree with every daily metered consumer a mechanism whereby a price will be made visible to the market in the event of a certain balancing alert being issued;
- allowing compensation payments to be paid pre-emergency but no payments if the load is curtailed post emergency; and
- ratcheting up the cashout price pre-emergency subject to alerts issued by NGG to encourage the market to complete its primary balancing role.

NGG does not have a preferred solution at this stage and believes further discussion must be entered into with shippers, suppliers and demand side groups to understand why existing commercial mechanisms do not appear to work, and what blockers can be removed to enable the market to work with the maximum participation from demand side players.

NGG also notes that if significant volumes of gas fired power stations have their gas supplies curtailed, there will be a knock on impact on the electricity network and this impact is likely to grow in the coming years as existing LCPD legislation takes effect and existing coal fired

plant is replaced with new gas fired CCGTs. Currently NGG cannot take into account impact on the electricity network in determining its market balancing actions; the only scenario where NGG can acknowledge the impact on electricity is during a Network Gas Supply Emergency (NGSE), and then only minor adjustments to a strategy are likely to be made. If Ofgem wishes NGG to take electricity into account during a non emergency situation or to facilitate greater adjustments during an emergency, significant changes to licences and possibly primary legislation would be required.

To assist the debate about an appropriate way forward, NGG has constructed an alternative option based on the discussions above.

The option (“Option 4”) considers the categories set out in the options in the consultation document and adds a number of others which have been raised during the workshops.

Element	Option 4	Notes
Shipper to Shipper trading	Continues	Shippers are best placed to source gas supplies and demand turn-down due to their existing contractual relationships
Emergency Cashout price	Dynamic	NGG ceases trading on OCM as in current arrangements. Cashout determined by shipper to shipper trades (perhaps over a number of markets)
Post emergency claims	Not required	
Role of VoLL	Potentially used to indicate demand side flexibility prior to an emergency	To be debated further
Role of NGG	No change	See “alert mechanisms” below
Role of NEC	No change	Defined under the Health and Safety at Work Act 1974
Compensation for firm customers	TBC	To be debated further – possibly linked to demand side participation in pre-emergency market
Alert mechanisms	Review existing alerts and determine if further alerts required	Provide improved market information
Obligations	Establish clarity of obligations across respective licences.	
Information provision	Ofgem to determine information required to give it confidence re obligations	

Some of these changes do not of themselves increase security of supply (e.g. market information) but aim to facilitate a market response to tight supply situations that may have the indirect effect of improving supply security.

Chapter 3

Question 3 – What is the appropriate role for NGG in an emergency?

NGG is responsible for the safe, economic and efficient design, maintenance and operation of the gas transmission network. NGG invests and operates the transmission network to ensure that the agreed level of network transportation capability is maintained.

The role of NGG in avoiding an emergency occurring is to ensure that all supply and demand resources available to it, via the established market mechanisms, can be used to avoid an emergency occurring, have been utilised. NGG has access to a limited number of balancing tools (when compared to the general market); as residual balancer it uses the OCM, with potential use of OTC trades during a GBA related Gas Day.

In addition, all transporters have a role under Licence Special Condition A11 (1e) to provide reasonable economic incentives for relevant suppliers to secure that the domestic customer supply security standards are satisfied as respects the availability of gas to their domestic customers. To this end, NGG has raised a number of Network Code and Uniform Network Code Modification Proposals to incentivise the improved economic signals on shippers and through them on suppliers to meet their domestic supply standard.

When NGG applies to the NEC to declare an emergency, NGG is acknowledging that there are no further supplies or demand side response available in a timely manner to the system operator through normal market mechanisms to achieve a safe balance on the network and that the additional actions available to the transporters under an emergency are required to maintain the integrity of the whole gas system and to prevent danger to the public.

The actions currently available in a Stage 1 emergency may give sufficient time for additional actions to be taken that deliver more physical gas into the UK. Once in Stage 2 and beyond, NGG comes out of the market as the actions needed to manage a safe supply / demand balance requires the system operator to focus on the physical operation of the network, whilst co-ordinating and communicating the emergency strategy for the system. During this phase of an emergency, the timeliness of actions and the response to these actions is paramount. The uncertainty of both supply and demand profiles during end consumer disconnection is such that all of the existing roles in the control room along with significant resources from support teams across the whole of National Grid, other Transporters and many shippers, suppliers and other industry participants would be focussed on managing this situation.

Changing the role of NGG so that it continues to actively in this situation creates the risk of diversion from NGG's primary responsibility at this time of extreme stress, i.e. safety. In addition, a central buyer role may be seen as engaging in wholesale supply activities that may not be compliant with the 3rd Package of EU energy legislation. Therefore it is our view that NGG's role as System Operator in an emergency should remain as is; focussed on managing a potentially dangerous situation in the safest manner possible.

To extend the role of residual balancer to a more central procurement role at times of a supply deficit emergency, additional tools, processes and capabilities would need to be developed. In addition, to enable NGG to access supplies from outside of the GB market, NGG would need to build contractual and financial relationships with external sources that can respond to the emergency requirements. There would be an ongoing cost of setting up and maintaining such a capability that would be expected to be fully utilised only once every

50 years. How the SO enacted this role and the potential impact on the market of such a change in role would also need to be considered. For instance if the SO ensured long term supply contracts, the impact of this option contract on market liquidity would need to be considered. Previous arrangements where NGG acted in a similar manner (e.g. Top Up) were removed due to the belief that there was too much interaction with the market.

Our view is that the incentive on shippers to balance during an emergency would be reduced if NGG took on the central buyer role. This would depend on how these central costs were allocated; socialising these costs would reduce the incentive on shippers to balance in the lead up to and during an emergency or to make their own arrangements prior to the emergency. The impact on imbalance prices and the respective market signals they provide could be severely dampened.

The NEC can currently request DECC to direct UKCS, storage and gas stored at LNG sites to maximise output. Failure to adhere to this request can result in criminal sanction.

Under a commercial regime, NGG as System Operator does not have the ability to instruct market participants to post bids and therefore cannot directly increase the quantity of gas supplied into the market. As a central buyer, NGG would not be able to attract additional gas supplies over and above those provided by the current market participants.

Although there are obligations on shippers to ensure that they do not by their actions jeopardise system operation, the financial consequences of a commercial regime can not be directly compared to the criminal liability of not complying with an NEC instruction. Therefore, it will be difficult to assess the relative merits of NGG taking a more commercial role when compared with the criminal legal liabilities of not complying with instructions from the NEC.

Chapter 3

Question 4 – Do you have any comments on our initial assessment of the pros and cons associated with each option?

The consultation provides a good balance of the pros and cons for each of the options, and a high level overview of the potential impact. We would anticipate that the final proposals would have a detailed impact assessment, with the potential unintended consequences of the proposal being explored. Below, we have outlined some of our thoughts on the main components of the options:

Dynamic cash out

We agree that there are a number of benefits with the implementation of dynamic cash out in an emergency. We would have concerns on how such a dynamic price could be derived when the market is no longer operating effectively and therefore there will be relatively small volumes traded with a limited number of industry parties being able to influence the imbalance and market prices. This is the case irrespective of whether NGG is still in the market or whether the market consists of shipper to shipper trades only. With the potential for wide spread disconnections for a severe emergency, it would also be very difficult for shippers to accurately forecast their expected load, and therefore to calculate the quantity of gas required to balance their portfolio.

There are a number of benefits in introducing a more dynamic cash out regime, with the sharper price signals incentivising appropriate investment. However, one of the benefits of the current emergency cash out arrangements is the three months settlement period for post emergency claims management and subsequent imbalance payments. This provides an

opportunity for parties to arrange suitable finances to cover their imbalance, limiting the potential for shipper default. The pros and cons of adopting a dynamic cash out price need to be fully explored prior to implementation.

The ability of a day on day dynamic cash out price in attracting external gas imports needs to be further explored. A daily imbalance price may be volatile and as such may not attract external gas with price certainty else where. For example, if the gas emergency extends over more than a gas day, there may be no actions available to NGG on the next gas day. In this instance, the dynamic cash out price would move to the default cash out price, which may be significantly lower than that able to attract gas into GB. This may be an unlikely scenario, but it indicates the potential volatility in a daily dynamic cash out price in attracting gas that has greater than one day lead times.

In addition, when returning from an emergency, to enable safe restoration of supplies, the market needs to be appropriately incentivised to over-deliver to enable flexibility in the quantity of gas supplied and rebuild system wide pressures and depleted storage stocks. Therefore any cash out regime needs to ensure that the right incentives are provided throughout the emergency and during restoration of the system and subsequent market.

VoLL

We agree with the general pros and cons identified with the introduction of VoLL.

There are currently a number of UNC arrangements that allow demand side participants to be interrupted by transporters. These arrangements will be removed when DN (Mod 90) and Transmission Modification 195AV reform is introduced. As outlined in the workshops, there may be some benefit in developing the market and contractual framework to enhance the ability of demand side parties that can be interrupted to participate in the market.

However, we have some fundamental concerns with the introduction of an administered VoLL;

- a true reflection of VoLL should be represented in individual shipper / user supply contract negotiations. An administered VoLL reduces the incentive on end users and shippers to determine a meaningful VoLL price. However, we do believe that shippers and end users should be incentivised or potentially obliged to develop contracts that inherently include a VoLL or expressly exclude it;
- any single administered VoLL can not be reflective for the majority of parties' requirement when compared with individually agreed values;
- system operator actions during the management of an emergency should not be influenced by the level of VoLL. For instance, if there was a quantity of gas available to the system operator, and in procuring this gas, an emergency could be avoided or its anticipated duration reduced, then the system operator should procure this gas at prices above VoLL. Generally the cost of procuring this gas would be significantly less than the cost of an emergency with the inherent risk of demand disconnections. For this reason, we do not believe that imbalance prices should be capped by VoLL; and
- use of a pre-determined VoLL holds the risk that it distorts the operation of the market by setting a "target price" for both supply and demand side. This could lead to an increase in the likelihood of an emergency occurring due to parties 'holding out' for the target price and not providing an improved demand / supply balance.

The ability of the market parties to develop, agree and contract to an individual VoLL and subsequently submit these prices into the market currently exists. Indeed the introduction of the Gas Balancing Alert was predicated on it being the trigger for enacting agreed contract terms of the above nature. However, there appears to have been limited participation in

these arrangements by demand side parties. An alternative to providing an administered VoLL may be to oblige all parties that are not protected by the current domestic security standard or the agreed European Directive to enter into contracts that explicitly provide a specific VoLL.

Compensation

The main aim in implementing compensation arrangements is to incentivise investment in avoiding circumstances when compensation would be paid. Determining who caused the supply deficit and the impact this has had on the whole system and ultimately on consumers is very difficult. Therefore, it is essential that the parties that have correctly invested and have not contributed to the development of the emergency are not inadvertently penalised for the impact a supply deficit has had on their customers as this would clearly run the risk of 'free riding' and provide a disincentive to invest.

Such is the complexity of determining how an emergency has developed and the impact of the subsequent measures used to manage the emergency, it is likely that customers of a prudent shipper that appropriately managed its gas balance will be interrupted as much as the customers of a less prudent shipper. Arrangements would need to ensure that prudent shippers are not penalised at the expense of less prudent shippers.

The financial impact of any new compensation arrangements on those parties with the liabilities needs detailed consideration. Such a level of financial liability will increase overall operating costs, with these increases being passed onto consumers. The impact of an ongoing increase in costs needs to be weighed up against the perceived benefit of post event compensation.

Chapter 3

Question 5 – Are there any Safety Case implications associated with each option?

Any change in arrangements and roles and responsibilities of transporters, the system operator or the NEC surrounding an emergency may have potential implications on individual network's and the NEC's Safety Cases.

As outlined in Option 1, changes to the role of the NEC would clearly impact on the NEC Safety Case. This would have a knock on impact on the Primary Gas Transporter Safety Case, downstream Gas Transporter Safety Cases and all associated emergency procedures.

Changing the role of NGG in an emergency would also have an impact on the Primary Gas Transporter Safety Case, as outlined in Options 2 & 3. Changes to any Safety Case must be demonstrably as safe as, or safer than, existing arrangements and it is imperative that sufficient weight is put on this during the impact assessment phase of any proposals taken forward from this review. NGG will need to demonstrate that the proposed change is as safe as or safer than the existing arrangements. If this cannot be done, then a Safety Case change will not be submitted to, or granted by, the HSE. It would be untenable for changes to be included in the UNC that could not be reflected in the relevant Safety Cases.

Chapter 3

Question 6 – What benefits would dynamic cash-out bring relative to the post emergency claims arrangements?

As highlighted in the consultation, there are a number of potential benefits with a dynamic cash out price and a number of concerns.

The main benefit over the current arrangement is the certainty that parties that are long will receive at least the imbalance price prevailing at the end of the gas day. Under the current arrangements, there is some uncertainty that the incremental cost submitted via the post event claims process will not be settled if the claim is deemed to be uneconomic / not cost reflective. Never-the-less the claimant will receive an amount agreed by the Authority.

In addition, gas providers may see a benefit in the increased speed of settlement when compared to current arrangements, with an improved transparency of price within day also being a partial benefit.

Whether these perceived benefits improve on the current arrangements would need further investigation. The impact of dynamic cash out on cash flows and therefore industry credit provisions during an emergency needs careful consideration. In addition, further investigation into the sources of gas that can and will respond to a daily imbalance price during an emergency which are not obliged by criminal law to do so is required. For example, LNG cargos may not be able to respond to daily price signals but would do to a sustained price.

Chapter 4

Question 1 – Are there any reasons why industry might not respond adequately to sharper price signals, thus delivering sub-optimal security of supply? How could these be overcome?

The market responds to imbalance price signals on a day to day basis. It is anticipated that moving towards an emergency gas prices will increase in line with the scarcity in gas, with corresponding change in imbalance prices and tend towards a high or very high price.

There are a large number of uncertainties around the timing and circumstance of the development of an emergency. The exposure of each individual party in the build up to an emergency and the exposure post emergency depends on the circumstances leading up to the event. Due to the large number of potential causes, planning for such an unlikely event becomes very complex.

How companies plan for such an event has recently been highlighted by the impact of BP's Deep Water Horizon incident on the company and industry in general. Such incidents can have an impact far beyond the financial assessment, but impact on reputation and future contracts (not withstanding the human cost). To take out insurance for such an incident was not seen as being viable and the potential impact on new "deep water" projects could not be foreseen.

Developing more certainty on the potential consequences of not providing gas in a time of system stress would enable companies to better factor in such consequences in making investment decisions. These decisions could be investment in infrastructure (such as storage), demand side contracts (with associated customer infrastructure) or insurance. For example, a licence obligation to provide sufficient gas to meet their contracted customers'

demand during a 1 in 50 winter demand curve could provide a signal on the investment needed to meet such an obligation.

One method of indicating the potential impact of an emergency would be to develop a number of scenarios that resulted in an emergency, and looking at the potential cost of such incidents. For example, the costs of an emergency where 20% of the nation's domestic consumers were isolated, with the subsequent restoration capabilities and timeframes may highlight the potential costs of such an emergency occurring. The avoidance of such costs may provide an incentive to invest in avoidance.

Chapter 4

Question 2 – What are the likely barriers to attracting gas imports during a GDE? Could these barriers be overcome?

The timely delivery of gas into GB to avoid an emergency depends on the speed of the development of an emergency. The two main gas import routes are LNG cargos and the interconnectors. Attracting additional gas via the interconnectors relies on shippers and suppliers being able to attract gas from Europe and this gas being able to be transported to the interconnectors in a timely manner.

The other main route for gas imports is via LNG cargos. The time for LNG cargos to respond depends on the location of the terminal. The minimum time for a LNG cargo to travel from its source to GB is approximately 3 – 7 days.

For an emergency that arises gradually, there may be time to attract additional imports. However, for an emergency that arises suddenly, there may not be time for the market to respond.

With short term market signals such as imbalance prices, the time to respond is minimal due to the time to deliver.

With longer term signals, such as forward prices, there may be additional gas that can be attracted in the right timescales. However, as outlined in the consultation, arrangements in Europe may hinder access to this gas that could be transported cross the interconnectors. In addition, LNG cargos may be tied to long term contracts outside of GB.

Gas Quality has been raised as an issue that may have an affect on the UK's ability to attract gas either pre-emergency or during an emergency. Although this issue on its own is unlikely to cause an emergency, it is currently credible that a stretched situation in Europe could lead to gas available for transportation through the IUK failing to meet the GS(M)R specification. Whilst we acknowledge the work being undertaken by CEN on gas quality harmonisation, consideration needs to be given on whether this situation warrants resolution in the near term.

Chapter 4

Question 3 – Do you think that the risks associated with sharpening price signals make it necessary to apply additional obligations on relevant parties?

The introduction of VoLL and dynamic cash out price does not in itself sharpen the price signals from the current regime. However, the introduction of a dynamic cash out price may result in quicker post event settlement timescales than current arrangements.

The credit risk of the quicker settlement timescales during an emergency could result in one or more parties exceeding their credit arrangements faster than the current arrangements and as such, this could lead to an increased risk of financial default during an emergency or to a lack of market participants due to these participants reaching their credit / trading limits. The potential knock on effects of this on other participants, and the potential for consequential defaults may cause significant distress to the industry and result in market viability and depth issues.

Introducing obligations on relevant parties such as shippers and / or suppliers may reduce this impact. However, any obligations need to be quantifiable. The success of the implementation of an obligation can only be ensured with adequate compliance monitoring.

Chapter 4

Question 4 – If enhanced obligations were applied, to whom should they be applied and why?

There are currently a number of obligations with various responsible parties. It is probably worth setting out some existing obligations and outline how these are currently met.

Shippers have a number of obligations in their licences to secure gas supplies. The shipper licence also states that a shipper is deemed to have met these obligations if they are signatories to the Uniform Network Code (UNC). To all intents and purposes accession to the UNC is a compulsory requirement for a GB Shipper. The obligation to secure the supply of enough gas for domestic consumers therefore manifests itself through the financial incentive on shippers to balance as governed by the UNC. The UNC puts market mechanisms in place that provide financial incentives for shippers to balance their supply and demand portfolios over a 24 hour gas day. Whether such financial incentives can be shown to meet the obligations is subjective and as such we believe it is very difficult to demonstrate how this obligation is currently being met and also it will be very difficult to determine how any revised arrangements will meet this obligation.

To ensure that the market provides sufficient gas, a clear understanding of the security of supply standard, and how this standard is met by those parties best placed to meet it, needs to be determined. If enhanced obligations are deemed necessary, those best placed to meet the security standards should have the obligations placed on them.

Historic arrangements have seen NGG have a number of obligations such as the “Top Up” arrangements introduced at the initiation of the Network Code. However, these arrangements were seen to adversely interact and distort the market and so changes were made that removed these obligations and implemented a more market based approach.

There are relatively clear roles and responsibilities defined with transporters having an obligation to ensure that there is sufficient transportation capability (capacity) for gas to be transported as already set out in the UNC and licences through capacity auctions, exit arrangements, buy back liabilities and incentives.

Using market based mechanisms to incentivise investment can result in secure supplies. What is lacking in the current arrangements is transparency in how these obligations are being met; for example, when there is a supply shock situation it is unclear to NGG as system operator whether the market will be able to respond with physical gas or over what time period such a response will be delivered.

Chapter 4

Question 5 – How could obligations be designed and enforced?

We believe that the first step in developing appropriate obligations is to develop a clear and measurable security standard. This standard would outline the security of supply standard the market is aiming to meet. Those parties best placed to meet the supply standard should have the obligation.

The obligation should be designed to enable those obligated to meet the required security standard, such as the supply standards outlined in the European Regulation but not prescriptive in the way that this obligation is met.

Enforcement of the obligation should be undertaken by a central body that has the suitable independence, authority and expertise. How these obligations are being met could be reported to the relevant interested parties.

Any proposed changes should be coordinated with the work DECC are undertaking on the steps needed to meet the EU security of supply standard.

Chapter 4

Question 6 – What are the risks and potential unintended consequences associated with placing enhanced obligations on parties to ensure security of supply? Can these be overcome?

We agree with Ofgem that one potential unintended consequence of obligations is the potential reduction in current market liquidity. This to some extent depends on how those parties with obligations meet such obligations. The increase in longer term contracts may have the potential for reducing short term market liquidity. However, if the obligations are met using demand side turn down contracts, there may be limited impact on market liquidity.

There are a number of potential unintended consequences associated with the implementation of obligations:

- reduced ability of non-physical players to participate in the market (this depends on whether the obligations extend to non-physical market participants – however, if obligations did not extend to all market participants it may be seen as discriminatory)
- barrier to entry for new shippers / suppliers (if obligations are on shippers / suppliers)
- dampen gas prices during 'normal' high demand days
- enhanced response over and above the obligation leading to inefficient investment

Chapter 5

Question 1 – Have we captured the feasible range of costs and benefits for inclusion in the impact assessment?

The consultation provides a comprehensive list of potential costs and benefits that any changes in arrangements will need to be assessed against.

We believe that there are two additional key issues that need to be considered in the impact analysis:

- impact of any changes on the operation of the distribution and iGT networks; and
- how long it will take to implement the proposed changes.

Any proposed change could have a significant impact on the operation and development of the distribution and iGT networks and so any proposed changes need to consider the impact on such networks.

The impact of any proposed changes needs to also consider how quickly the changes can be implemented. There may be changes that would have an impact on avoiding an emergency but may take a significant amount of time to implement. However, a smaller incremental change may be able to be implemented relatively quickly and therefore have an impact much sooner.

One of the difficulties in assessing the impact of a change that aims at avoiding a supply deficit emergency, is finding an objective measure to define whether the change has improved on the existing arrangements. We believe that it is vital that the impact assessment provides some indication on how Ofgem is going to measure the success of any new measures that are proposed to be adopted. For example, we believe that it may involve some subjectivity in assessing the success of the implementation of dynamic cash out when compared to the current cash out arrangements. However, we believe that there may be a number of changes that can be shown to potentially improve on the current arrangements; for instance, a review and refinement of existing pre-emergency alert mechanisms.

Technical Annex

Question 1 – Would it be appropriate to have multiple administrative VoLL settings for different customer groups? Why / why not? How are VoLL estimates likely to vary between customer groups?

We believe that the introduction of VoLL is aiming to influence behaviours of shippers and end customers. To help determine the level of VoLL and whether multiple VoLLs are required, what behaviours VoLL is trying to influence, and who VoLL is trying to influence needs to be clarified.

If VoLL is looking to influence the development of price based reduction in demand, we believe that the contracts between demand and supply need to reflect their relative value of VoLL, and where deemed appropriate, the level of compensation. The facility to provide volumes and prices for demand side turn down into the market exists within the current arrangements and provides a greater degree of flexibility in the pricing, quantity and timing of turn down than any of the proposed options under the SCR. However, at present there appears to be limited market participation. The introduction of administered VoLL price may increase the level of participation. However, this depends on the level VoLL is set at. If VoLL is set too low or the arrangements are too rigid in regards to the price, the quantity and or the timing, this may decrease the level of demand side participation.

Therefore, we believe that those best placed to determine relative VoLL are those agreeing the supply contract with this volume and pricing being available to the system operator in times of system energy stress to help in the avoidance of an emergency. To increase participation within these arrangements there are a number of options. These include:

- shippers/suppliers having a obligation to agree with every daily metered consumer a mechanism whereby a price will be made visible to the market in the event of a certain balancing alert being issued;
- allowing compensation payments to be paid pre-emergency but no payments if the load is curtailed post emergency declaration; and
- ratcheting up the cashout price pre-emergency subject to alerts issued by NGG to encourage self balancing.

If VoLL is aiming to incentivise investment in alternative solutions that limit a party's exposure to the cost imposed by VoLL during an emergency or the run up to an emergency, then the value of VoLL needs to reflect the alternative investment costs.

Whether VoLL is aiming to increase demand side participation, improve investment in the avoidance of exposure to VoLL or both of these, we believe that if an administered VoLL is implemented, a relatively limited number of values should be set that best represents the relative cross section of different consumer types. The more VoLL levels are set, the increase in complexity.

Technical Annex

Question 2 – For a customer group, how should we determine where in the range of estimates (i.e. VoLLmax, VoLLaverage or VoLLmin) we should apply a single administrative VoLL setting?

If VoLL is trying to represent the actual value of lost load and cap imbalance prices, then it should be set at VoLLmax to improve the market incentivisation of strategies to reduce their risk of imbalance exposure. If VoLL is focused on compensation, then it should be at VoLLaverage to represent the average cost consumers are willing to receive for an interruption.

For the avoidance of doubt, we do not believe that imbalance prices should be capped by VoLL as this may discourage the delivery of supplies at costs above VoLL that could be used to avoid an emergency or resolve the emergency more quickly.

Technical Annex

Question 3 – Should the compensation payments to disconnected firm customers (based on VoLL) change with the duration of the interruption and the season in which the interruption occurs?

The level of compensation needs to be dependant on the length of time of interruption to fully reflect the value consumers place on gas supply. However, we believe that there should be a cap on the level of compensation paid to consumers.

Technical Annex

Question 4 – What are the advantages and disadvantages of various methods for estimating VoLL?

Calculating an administered VoLL will result in the value being only applicable for a small cross section of consumers. A quantitative and qualitative analysis would provide a more considered approach to the development of a price. However, calculating the cost of alternatives to having gas supplied is dependant on each individual's circumstance, a

businesses strategy (e.g. just in time delivery or stock pile of product) and so any calculation will provide a subjective result.

For the stated preference approach, the results can depend to some extent on the way in which the questions are asked.

Technical Annex

Question 5 – What sort of compensation arrangements should be used to apportion the costs of compensation between shippers?

The development of appropriate compensation arrangements needs to take into account the incentive they impose on those exposed to the payments. Any socialisation of costs would reduce the incentive on shippers to balance their portfolio as they would be exposed to some part of compensation regardless of whether they are able to supply sufficient gas. Any mechanism that reduces a shipper's incentive to balance during an emergency must have the potential to prolong the emergency and exacerbate the supply / demand balance.

However, targeting costs on shippers that are short may not be wholly appropriate. For example, as an emergency develops, a prudent shipper may be long, helping to improve the emergency situation. However, post emergency where firm customers have been interrupted, for reasons outside of its control, this same prudent shipper may become short, resulting in it being required to pay compensation. This may not be appropriate.

Post emergency, the coordinated restoration of supply to consumers is required to be done safely. This could result in some consumers being off for some time prior to the relevant transporter being able to secure safe operation of its network and then to restore their supply. The speed of restoration may not be based on a continued gas supply deficit, but on an orderly managed process with safety as its priority rather than financial compensation. We do not believe that compensation should be paid by transporters for a gas supply deficit that results in consumers being interrupted. Network operators are licenced and incentivised to economically and efficiently provide network transportation capability not the provision of molecules. To improve restoration times, additional levels of asset expenditure over and above the current levels could be considered (such as additional remotely operated isolation valves). Unless suitable network investment focusing on reducing reconnection times is prioritised, transporters should not be exposed to such risks.