



Response to Ofgem Gas Security of Supply Significant Code Review (SCR) initial consultation

ESB EI response: Gas Security of Supply Significant Code Review (SCR)

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Executive Summary

ESB EI welcomes the start of Ofgem's consultation to assess whether reforms to the current gas market arrangements are required to improve Security of Supply.

ESB EI understands that Ofgem will be given greater powers to direct change by DECC, however, we believe that proceeding through a full industry process will provide a more sustainable and competitive solution that will provide value and allow effective management of exposure for consumers, shippers and suppliers.

The current arrangements, although not perfect, have been managed through code modifications processes where Ofgem has the deciding call. This has led the industry to provide innovative solutions that have led to improvements that have been introduced at a manageable rate. However, the reasons behind Ofgem's concerns around this process, other than the time taken to implement them, have not been outlined.

ESB EI is both a generator in the UK and a shipper across the Moffat interconnector and therefore we have a significant interest in ensuring that any change undertaken is commensurate to the risk that is being remedied. ESB EI is also keen that any modifications are considered especially in the context of unintended consequences in the SEM across the interconnector.

ESB EI has commented on the questions (without prejudice) that Ofgem has raised but we still believe that:

- The need for change should be reassessed and qualified with real events and evidence since:
 - GB has not been subject to a gas supply emergency although some gas alerts have been called since January 2010 after a significant period without alerts (excluding the Rough event).
 - risks from geopolitical events cannot always be mitigated through incentives delivered through higher price signals
 - any winter events that caused security concerns need to be systemic rather than the 1/50 occurrence that is planned for in the Uniform Network Code (UNC).

- If changes are required, the technical parameters that failed need to be amended rather than the market rules.

- If prices are to be higher, then the impact on consumers is to be fully reflected in the decision and higher prices are to be understood as the natural consequence.
- The interaction between the electricity and gas market (and the cause and effect of any shortage) need to be correctly reflected when looking at who pays for the added security requirements given greater reliance on imported gas
- The potential mis-alignment and bias arising from the interaction between a dynamic and functional gas market with a less liquid electricity and carbon markets must not impose regulatory costs and risk unfairly on shippers & suppliers in the dynamic gas market.

ESB EI does recognise that Ofgem has been tasked by Government as part of the December Energy Bill (2010) and part of the Coalition Agreement to ensure that GB markets deliver security of supply. ESB EI believes that with small changes and without increased administrative intervention, the liquid market can continue to secure the required supplies.

ESB EI proposes:

1. An alternative to VOLL be found that provides the same incentive but is not administered or a capped price:
 - for example a glide path uplift of 1.25/ 1.5 for the degree of tightness on the system multiplied out against the cashout price at the time:
 - This retains the market dynamics and provides the market the scope of meeting the requirement.
 - the role of the network emergency coordinator is heightened.
2. An administered artificial and administered VOLL can potentially provide perverse signals to players which may lead to the number of emergency events increasing.
3. Given the market interactions between the UK and ROI there will need to be well timed implementation of any changes so as not to undermine the financial working of the SEM market.
4. That geopolitical events cannot always be addressed through incentivisation programmes such as increased penalties and therefore any technical parameters such as the likelihood of an event arising against which one should plan against is reviewed.
5. That the SO has no role in the traded market which will cause perverse market dynamics.

6. That no obligations are placed on participants in the market since market dynamics will deliver the desired solution.
7. There is also the potential for a demand side response participation to be built into the market mechanism rather than solely being dependent on a supply side solution.
8. Compensation during an emergency event for firm customers should be considered in the context of why the emergency arose. Emergencies arising from technical system faults should not be compensated for by the supplier, however, where purchase was short of a given tolerance – given the severity of any event occurring, then these could be compensated for at the price in the market at the time of the said event.
9. That due regard be given to the interaction between the gas, electricity and carbon markets and this should be considered so that any events driven by policy decisions in one market effectively compensate the costs imposed on another market or that administered procedures are delivered jointly that resolve both security.

Given the programme of work, with the added implication of greater risks and costs to the participants in the liquid gas market, ESB EI believes that any solutions should be sustainable and should not be introduced to address a temporary or unnecessary concern. ESB EI looks forward to continuing to engage with Ofgem on the improvement of the gas market in the UK.

ESB EI is a registered shipper and generator in the UK and is keen to ensure that if any change is made it is effective and commensurate to the risk that it is trying to address and is imposing on market participants. ESB EI both as a participant in the UK generation market and as a shipper through to the island of Ireland is keen to ensure that sufficient security does exist. However, we welcome this consultation to assess whether change is necessary.

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1 Background to the proposed changes to the market rules & roles

This response provides: an introduction to ESB Energy International and a summary of our views on the principles within the consultation. Finally, we provide responses to the detailed questions posed in the consultation.

1.1 ESB Energy International

ESB Energy International brings together the worldwide business of ESB International with our generation, engineering and related businesses within the Irish marketplace.

In Great Britain, ESB International has been a developer and operator of independent Combined Cycle Gas Turbine (CCGT) generation projects for over fifteen years. We currently have equity interests in Corby power station and in the 850MW development at Marchwood, which commissioned late last year. We are highly advanced with our latest 860MW development at Carrington which is intended to become commercially operational in 2014. We are also developing further large-scale CCGT developments at other locations across GB.

In addition to increasing our conventional generation fleet, we continue to grow our position in the UK wind market. We operate the 24MW West Durham Wind Farm in Northern England, as well as the 20MW Hunters Hill and 15MW Crockagarron projects in Northern Ireland. We are currently also constructing what will be England's largest onshore wind farm, at 66MW, at Fullabrook in Devon. Further, we expect to start construction of our 38MW Mynydd y Betws Wind Farm in South Wales later this year. We are also active in the tidal energy sector.

As a shipper, ESB EI procures significant quantities of gas to export through the Moffat Interconnector to support our Irish generation and supply activities.

Thus, as both a generator in the UK and a shipper across the Moffat interconnector ESB EI has a significant interest in continuing security of gas supply both within the UK in respect of any consequences for security of gas and electricity supply within Ireland.. ESB EI is keen that any modifications are considered especially in the context of unintended consequences in the Single Electricity Market given the major role which gas fired generation plays in Ireland. We are concerned to ensure that any change undertaken is commensurate with the risk that is being remedied.

1.2 Background to the Significant Code Review.

1.2.1 Ofgem's Rational

Ofgem believe that the key drivers of the Gas SCR are the shortcomings that exist in the current arrangements :

- Insufficient individualised incentives to avoid an emergency (caused by the frozen cash out price and socialised cost of an emergency)

- Insufficient incentives to import gas in the event of an emergency (or alternatively the lack of incentive to export freely to the UK at these times)
- Absence of arrangements to compensate firm load disconnections.

Ofgem believes that these drivers are necessary because:

- There is an increased reliance on **imported** gas :
- Peak prices are too low and are not sending the correct signals for:
 - Effective import flows
 - LNG landings and stocks
 - Investment in Storage is not forthcoming.
 - Some customers are being curtailed when they would be willing to pay more to prevent this.
 - Greater Reliance on Gas:
- Potential impact on electricity generation (as the UK transitions to a low carbon economy any shortfall is most economically met through current CCGT type assets)
- Increased security role as more intermittent generation is introduced in the electricity fuel mix.
 - Shortage of supply in recent winter periods
 - Ineffective and timely development of a harmonised EU gas market (the UK relies on market signals rather than administered procurement or prices as exist in some EU markets).

1.2.2 Ofgem's evidence

These concerns were demonstrated by:

- The ease with which LNG can be redirected thus providing little certainty about the level of security for the UK
- The geopolitics between the Ukraine and Russia – although undertakings were given by Russia that the West will not be affected.
- The impact of the Bacton Outage.

1.2.3 Ofgem's objectives

Ofgem has set out three objectives that any code modification should deliver:

1. minimise the likelihood of an emergency occurring , by encouraging gas shippers/ suppliers to take sufficient insurance (in the form of long-term contracts and storage capacity)
2. minimise the severity and duration of gas emergency if one were ever declared, by sharpening incentives to attract and purchase imported gas
3. appropriately compensate firm consumers if they were ever interrupted.

1.2.4 Ofgem's package of solutions

Ofgem have proposed a suite of solutions that can be summarised as:

1. Introduce penal cash out prices (VOLL) to increase the cost of not balancing whilst providing the incentive to invest in storage facilities or to export to the UK at these times.
2. Have dynamic cash out prices to re-introduce market signals at later stages of the emergency protocol.
3. Give the SO (National Grid Gas) additional roles to balance the market
4. Impose further obligations on suppliers to contract for excess gas to act as a buffer.
5. Provide compensation at VOLL to those customers contracted as firm – to incentivise greater stocks and insurance to be held by shippers/suppliers.

ESB EI appreciates that Ofgem recognises the complexity in designing and implementing these solutions and the impact that these will have on the natural signals of the market. It is important that these dynamic signals are not distorted either by administered purchases (through an SO obligation) or through administered prices such as VOLL.

To ensure that this does not occur ESB EI believes that although Ofgem will be given greater powers to direct change by DECC it would be efficient to proceed through a full industry process that will provide a more sustainable and competitive solution and will provide value or allow effective management of exposure for consumers, shippers and suppliers.

ESB EI is also interested in the proposed extension to the role of the NGG as they currently **do** have a role in the balancing of daily trades which will continue even in the case of an emergency, this is counter to the description of the impact of the proposals in table 3.

1.2.5 Current Security and technical parameters

The current limits for security, that exist in the EU regulations and as part of the Uniform Network Code include:

- To ensure capacity to deliver total gas demand for levels of demand which are statistically exceeded no more than once in 20 years (1 in 20 year) in the event of disruption of the largest gas infrastructure
- To require natural gas undertakings to ensure supply to protected customers for levels of demand occurring one in 20 year in the following conditions:
 - Extreme temperature during a seven day peak day period
 - A period of at least 30 days of exceptional high gas demand
 - A period of at least 30 days of the disruption of the largest infrastructure under average winter conditions require storage to allow supplies to non daily metered consumers to be maintained and to safely disconnect daily metered consumers in a 1 in 50 winter.

These conditions have only recently been tested with the alerts post January 2010. This was after a significant period where no alerts were raised (excluding the Rough event).

2 ESB EI's comments on the current consultation

ESB EI has provided comments on the questions raised in some cases on a hypothetical basis as the need for change has yet to be determined.

Where possible ESB believes that the market should continue to be the key means by which to deliver security and if any administrative changes are proposed that these are commensurate to the benefit and risks that they deliver.

2.1.1 Chapter 3 – Reforming the emergency arrangements

With an emergency there will be a point where markets and their signals cannot address the required action to repair and control any damage. At this time markets are outside the sphere of their influence and can no longer be relied upon. However, this does not mean that markets have failed but that random events that have an extraordinary impact (beyond the technical planned parameters) have occurred.

Markets can however, provide the right signal to invest and to provide the incentive to purchase insurance to attempt to minimise the duration of any emergency, but even these cannot be a solution for high impact low probability events.

Given these limitations of the market does not mean they are not best placed to deliver the 'most appropriate' solution compared to administrative arrangements.

Ofgem has presented 3 options each with their own pros and cons as outlined in the document. However, ESB EI believes that any solution should:

- Address a real problem
- Be lead by market dynamics and signals and not distort them
- Have some means to offset any increased risk.

Ofgem has presented the options as a package of distinct changes as such ESB EI will comment on the changes rather than as an option in its own right.

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?

ESB EI proposes that an alternative to the VOLL administered price be considered that may be based on some weighted penalty. This would allow an increased timeframe for signals to be displayed sending the correct signals needed for a long-term investment decision. However, the increased cost will be reflected in the consumer overall customer tariffs.

An additional proposal for change could be the adoption of a demand side response that would allow users to reduce their gas demand to help support balancing.

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

As the options are presented as packages of distinct roles and changes to the market ESB EI is not able to select, at this point, a preferred whole solution.

ESB does not support the use of VOLL as an administered VOLL can provide perverse incentives to import flows, with flows restricted outside of any long-term contract to levels which will trigger the VOLL payouts.

An administered VOLL will also set a target price that traders may push the marginal contract prices to. This would also be the case if there were obligations on suppliers to have excess volume with these excesses volumes exposing the player to a significant risk in the market.

Higher price signals in the market have also failed to provide effective signals for entry of capacity in the electricity generating market, this has led to the potential Electricity Market Reform consultation with specific concerns about the entry of large capital intensive investments or for security of supply. Lessons from this experience should be used to develop an effective market in gas.

VOLL in any one of its capacities (penal cash out/ export signal to the European mainland/ compensation scheme) is difficult to calculate and may inject false signals and incentives in the market.

Any extreme prices that cannot be 'safeguarded' against will impose higher costs and risks on to both shippers and suppliers that will lead to greater financial distress as the companies need to have a higher credit valuation to cover any exposure.

With any option there will need to be a role for an administered solution as High Impact Low Probability events will need to be addressed. This requirement is not removed if dynamic cash out with VOLL exists or not. A centralised 'return to full capacity' will need to be planned and actioned.

The role of NEC remains and it will be easier to determine a technical level that defines an emergency rather than trying to apply a value to the same. This role will still need cash out arrangements around a force majeure clause but given our response to question 1 this may be a marginal amount.

Compensation during an emergency event for firm customers should be considered in the context of why the emergency arose. Emergencies arising from technical system faults should not be compensated for by the supplier, however, where purchase was short of a given tolerance – given the severity of any event occurring, then these could be compensated for at the price in the market at the time of the said event.

Any compensation schemes are also questionable given the definition of an emergency. If an emergency was declared (Gas Deficit Emergency) then all events would be superseded by a force majeure clause to establish a safe return to the equilibrium state. Any compensation scheme for firm customers would depend on: the type of emergency either physical or contractual; which supplier

caused the emergency event and how long it lasted. Each of these would require significant administrative powers and it would seem difficult to move away from a post emergency claim (PEC) type of settlement process. This would further raise risk and increase credit security costs for the retailers curtailing any further entry in this space.

Any compensation scheme would need to identify the guilty party would also be required to compensate those customers that belonged to other suppliers for the outage event and any scheme must not create perverse incentives to generate 'technical emergency events' rather than traded events.

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

NGG should manage the grid and the safety of the same. It should not enter the trading market as this will distort competitive prices unless 'effective' incentives can be built in to its revenue control mechanism. However, these regulated solutions are not as effective as the market continuing to deliver the correct market signals nor is the grid the better placed to trade.

ESB EI seeks clarification about the role NGG has in the current market when there is a trading supply and demand imbalance.

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

The impact on other European markets should be considered. There are plans to make changes to the intraday trading in the ROI so that any change in the gas clearing market can be reflected in the power clearing market as already exists in the power markets in the UK. In the UK the VOLL at any point in time in the gas market can be reflected as higher prices in the power BM – this capability is not currently available in the SEM.

Question 5 Are there any safety case implications associated with each option?

With a gradual (response in question 1) rather than a (one/zero) penal price at the time an event is called, the safety issues can be addressed as they arise.

Question 6 What benefits, if any would dynamic cash-out bring relative to the post emergency claim arrangements?

Dynamic cash out allows the continuous trading between shippers at all levels before a technical emergency is called. This therefore gives the participant the opportunity to resolve their own exposure.

Compared to the PEC this does not lessen exposure to risk but it does lessen the administrative uncertainty about what is an 'appropriate price' and when that payment will be forthcoming.

2.1.2 Chapter 4 – The potential case for enhanced obligations

ESB EI believes that obligations will create an artificial demand in the market that will impact on the prices that contracts can be purchased at. It will also be an additional cost which is mandatory and which will not provide any additional value. This would go against the market design and principles and will employ resources (CASH) in areas where there is no payment for the value it provides.

If the SO was to become a single buyer of these resources at competitive prices from all shippers then this cost can be passed through as a security of supply payment and socialised.

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

Ofgem has already come to the decision that the prices reflected in the market are sub-standard as they are not providing the signals to draw in entry or excess insurance contracts. ESB EI believes that the market does not share the same risk averse sentiment as Ofgem at this current point.

If there is a potential shortage and risk premiums can be extracted from the delivery of storage assets or by being long in contracts then the market signals will evolve therefore the time value of change needs to be taken into account.

ESB EI does not believe that the market is operating sub –optimally. ESB EI can also not comment on what the emergency price should be as very few events have arisen.

Question 2 What are the likely barriers to attracting gas imports during a Gas Deficit Emergency (GDE)? Could these barriers be overcome?

There are currently no barriers that prevent gas imports – as in any market the price signal and the value that can be extracted acts as the incentive to realise that economic rent.

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

NO – if this route was followed then it would be necessary for a comprehensive compensation scheme to be developed that compensates all who are affected by the event and the failing party would be exposed to extreme risk. This type of extreme risk although low in probability will deter market participation.

If a GDE was to occur for network failure the principle of compensation and recovery would extend to the network provider who would be required to compensate all parties for the impact of an emergency event arising even though this was caused by an extreme low probability event.

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

If an obligation for compensation is introduced in the market then it should be applied to all market participants along the value chain so as to ensure that the party that was unable or refused to

manage their position is held responsible for the full cost of the event.

This extreme approach is the fair application of cause and effect but would make participation in the market limited.

Question 5 How could obligations be designed and enforced?

Obligation design can be undertaken however, the settlement of dispute would need to be detailed and will be time consuming to administer.

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

As any compensatory scheme must be equitable the obligation must be faced by all and the failing party held responsible for it all.

This extreme risk and additional cost can only be covered by having a universal cost smeared across all customers.

ESB EI believes that no obligations should be placed on participants in the market.

2.1.3 Chapter 5 – criteria for assessing options and next steps

ESB EI believes that the impact assessment captures most points except the need to look at cross industry impacts.

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

The interaction between the gas , electricity and carbon markets should be considered so that any events driven by policy decisions in one market effectively compensate the costs imposed on another market or that administered procedures are delivered jointly that resolve both security matters.

ESB EI understands that Ofgem will be given greater powers to direct change by DECC, however, we believe that proceeding through a full industry process will provide a more sustainable and competitive solution that will provide value or allow effective management of exposure for consumers, shippers and suppliers.

2.1.4 Technical Annex – the value of lost load (VOLL)

VOLL is a difficult value to calculate and as such should be left to the market to determine. Changes to technical parameters can identify an emergency and have the same impact as the price signal. This removes the need to cap prices and complements the proposal to have dynamic pricing.

Compensation during emergency stages will continue to be administered with a different focus on those who trigger an emergency through being short and those events triggered by physical effects to networks and supplies.

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?

If VOLL is determined per customer group then given the risks discussed above there may be some customers whose value is too high and therefore there may not be a product supplier forthcoming unless the price the customer is willing to pay (and actually does pay) has taken this high cost into account.

This very high cost will cross subsidise those who will get a facility for security of further storage etc has been incentivised and thus create a free rider problem.

Question 2 For a customer group, how should we determine where in the range of estimates (ie VOLLmax, VoLLaverage or VOLL min) we should apply a single administrative VOLL setting?

Ofgem has recognised the difficulty of setting the VOLL and also the potential unintended ramifications it may have on a liquid market, these we believe are best solved by market discovery processes rather than through an administrated calculation.

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

The value of a scarce resource rises unless an alternative is found – therefore the time and season (when gas has the highest demand) would need to be reflected in a theoretical VOLL.

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

To determine whether compensating variation or equivalent variation is appropriate and selecting the best method to ascertain it would require multiple experiments from which to create an effective representative value.

The greater the granularity of VoLL as proposed above by customer type the greater the complexity.

The experimental nature of VoLL discovery is complex with each method having its own limits.

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

Any method of allocation must identify the polluter and the compensation costs be attributed to that polluter where it is based on short gas supplies rather than network or geopolitical constraints. This would impose costs and incentives on the polluter and also have the desired reputational effect.

The financial risk that such an apportionment method will carry is high as firm customers will likely move to alternative suppliers if disconnection occurred.

Where network issues are the driving force behind a GDE no compensation would be required.

Any compensation schemes are also questionable given the definition of an emergency. If an emergency was declared (Gas Deficit Emergency) then all events would be superseded by a force majeure clause to establish a safe return to the equilibrium state. An administered solution would be required and the potential to require this to be apportioned equitably will be paramount.

3 Conclusion

ESB EI welcomes Ofgem's initial consultation and looks forward to responding to further consultations on the matter.

In brief ESB EI believes that further evidence based concerns need to be presented before significant changes are made to the market.

Where concerns do arise the cause of the security issue, such as policies of decarbonisation, should be considered and the costs and risks effectively allocated.

ESB EI believes that there should be little change made other than the current modifications that are proposed for the UNC.

In short if change is to be considered per se then the following points should be considered:

1. An alternative to VOLL that provides the same incentive
2. The role of the network emergency coordinator is heightened.
3. Technical parameters rather than prices should be used to address emergency issues
4. That the SO has no role in the traded market which will cause perverse market dynamics.
5. That no obligations are placed on participants in the market unless these are side payments.
6. A role for demand side participation be developed in the market.
7. Compensation during an emergency event for firm customers should be considered in the context of why the emergency arose
8. The apportionment of compensation costs is difficult and requires further investigation.
9. That due regard be given to the interaction between the electricity and gas markets and any spillover events on gas security arising from policy decisions in one market effectively compensate the costs imposed on another market.