



**Ofgem Consultation  
Gas Security of Supply Significant Code Review – Draft Policy Decision  
AEP<sup>1</sup> Comments**

The Association welcomes the opportunity to respond to this consultation and we anticipate participating in future discussions.

The Association has an active interest in gas security of supply as gas-fired generation makes up a significant fraction of the generating capacity in GB and will have an increasingly import role in the generation mix in the future once Large Combustion Plant and Industrial Emissions Directives related closures take place. We note the DECC risk assessment<sup>2</sup> reports that the UK currently meets the infrastructure and supply standards required by the EU Regulation 994/2010 by some margin, particularly as the undiversified rather than diversified peak day demand has been used. We recognise that the supply / demand situation will not remain static and that a medium term view is required, particularly where investment or long term contracting, which might be backed by investment, is anticipated. However beyond that there is considerable uncertainty in many parameters, such as; the impact of EMR, technical innovation, shale gas development, and the impact of smart metering, that could drive decisions. So we would recommend more caution is needed before considering changes or interventions to address all possible long term security of supply concerns.

In recent years there has been considerable market-led investment in import infrastructure which now means that our import capacity now exceeds annual demand by some margin<sup>3</sup>. We appreciate that the availability of capacity does not equate to gas actually flowing, but having the capability in place itself provides some comfort, particularly as the sources of gas to these points is diverse and the relevant entry points are geographically dispersed across GB. Indeed it is possible that further importation capability may be developed in the future, providing more options for delivery of gas to the UK.

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<sup>1</sup>The Association of Electricity Producers (AEP) represents large, medium and small companies accounting for more than 95 per cent of the UK generating capacity, together with a number of businesses that provide equipment and services to the generating industry. Between them, the members embrace all of the generating technologies used commercially in the UK, from coal, gas and nuclear power, to a wide range of renewable energies.

<sup>2</sup> [http://www.decc.gov.uk/en/content/cms/meeting\\_energy/en\\_security/eu\\_sec\\_reg/eu\\_sec\\_reg.aspx](http://www.decc.gov.uk/en/content/cms/meeting_energy/en_security/eu_sec_reg/eu_sec_reg.aspx)

<sup>3</sup> <http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/energy-security/3425-statutory-security-of-supply-report-2011.pdf>

The Association recognises that growing import dependence brings with it concerns over price volatility, but we consider that some volatility is inevitable and actually desirable to support traded markets and to encourage competition. The NBP is the most actively traded gas hub in Europe and we consider maintaining this is important not only to deliver competitively priced gas into the market but also in supporting security of supply, through price transparency and providing a well traded market in which to sell gas. We would have serious concerns with any proposals which may encourage trade to move away from the NBP and we believe this is a risk with Ofgem's proposals.

The Association understands that Ofgem is currently running parallel workstrands considering its draft policy decision and separately further interventions. Given these parallel processes we would seek assurances from Ofgem that the full range of options remain on the table for consideration. It would not seem sensible to rush ahead with implementation of one set of reforms, potentially before winter 2012, for there to be further interventions introduced some short time later. We believe that taking a more holistic view that contemplates slightly longer implementation timescales, could deliver a more measured solution and improved management of the cost burdens on consumers.

### **CHAPTER 3: Level of security of supply**

**Question 1:** *Are there any options for determining the level of gas supply security to be delivered by the market that we have not considered?*

The Association considers it is appropriate to determine the level of gas supply security in relation to the standards set out in the EU Regulation 994/2010. NG's licence requirements to develop the system to meet the 1 in 20 standard seem consistent with this.

**Question 2:** *Do you agree with our approach to setting the level of security of supply?*

We can find no reference in the draft decision to the level of security of supply that Ofgem considers to be desirable. As a defined level of security of supply is not being set it makes it difficult for the market to respond appropriately and it will not be possible to know when the desired level has been achieved.

### **CHAPTER 4: Cash-out reform**

**Question 1:** *Do you agree that it is appropriate to retain the Post Emergency Claims (PEC) arrangements? If not please explain why.*

We consider this question is linked to whether there is any change to the cashout for long positions; if more symmetrical cashout were to apply in an emergency the PEC may not be necessary.

**Question 2:** *Do you agree with how we have estimated Value of Lost Load (VoLL) and the level of VoLL that we have used? Is there a case for using a higher VoLL to incentivise more discovery of the demand side?*

The work undertaken by London Economics seems a reasonable means to determine **domestic** VOLL in the absence of any market information on how domestic customers would value secure supplies, but we are unclear as to how its conclusions led to Ofgem selecting the seven day value, particularly when an emergency including network isolation is likely to persist for longer than a week.

A number of estimates of VOLL for Industrial customers are included in the London Economics report but these are not used to determine cashout or compensation levels at stage 2 of a GDE. It would be preferable for these values to be determined by the market itself, an option we consider warrants further consideration.

We are not convinced that a higher VOLL would incentivise more demand side discovery. The £20/therm value is so very far removed from market prices that have been seen even under strained market conditions, so we think there would be little or no effect from setting a higher value, although it might further erode incentives on customers to contract for voluntary demand side response.

**Question 3:** *Is one day domestic VoLL an appropriate administrative price for any firm load interruptions?*

No, to apply domestic VOLL to any firm load interruption does not recognise the different characteristics of industrial and domestic customers, and the differences within the industrial sector. This approach seems somewhat heavy handed and this kind of intervention may also be inconsistent with the EU Regulation 994/2010 at article 5 that requires preventative actions plans to *be based primarily on market measures....and not put an undue burden on natural gas undertakings nor negatively impact on the functioning of the internal gas market.* We consider that imposing domestic VOLL when no domestic isolation has occurred is likely to be contrary to both these provisions.

The London Economics study reported a wide range of VOLL for different types of industrial customers, arrangements should be considered that enable these values to be revealed and demand reduction services secured.

**Question 4:** *Do you agree that it is appropriate to retain the Emergency Curtailment Quantity (ECQ) arrangements? If not please explain why.*

There is an issue with the ECQ arrangements only applying to DM load and not NDM load. This means that in the event of network isolation shippers that were previously balanced or short might go long once NDM load is taken out of their balance position, which seems rather perverse. Shippers with NDM portfolios would then face diminished incentives to secure additional gas as further network isolation would make them less short.

We consider this may be addressed by ensuring that DM and NDM load is treated consistently such that an ECQ type mechanism applies to both or neither, this would avoid different and potentially discriminatory approaches to shippers with DM only, DM and NDM and NDM only portfolios. The establishment of an NDM ECQ methodology or something which provides for similar principles would also establish a means to determine the level of compensation that should be paid to each customer in the event of network isolation.

**Question 5:** *To what extent do our proposals alleviate shippers' concerns about credit implications of targeting the full cost of multiple days of interruption on shippers that were short on day one of a stage 3 (network isolation) interruption?*

Limiting payments to one day's VOLL in the event of network isolation goes some small way towards limiting the credit impact. It also seems reasonable since the shipper / supplier cannot influence the duration of the network isolation which could be weeks or months and will be determined by factors, beyond its control.

In any event the proposed cashout and compensation arrangements will create significant credit issues for short shippers which could lead to shipper insolvency with the risk that this creates a domino effect on other parties. To mitigate this there may be a trend to setting up separate shipper companies which will simply be allowed to fail in the event of an emergency and high cashout or compensation payments being due.

**Question 6:** *Should extended payment terms be applied to emergency cash-out (possibly to align with payments through the PEC payment process)?*

No, we believe this would add complexity to the arrangements and may delay any shipper insolvencies that might result from an emergency occurring. This would lead to prolonged uncertainties in the financial exposure of other parties as compensation payments to those parties that have been involuntarily interrupted is re-distributed to other shippers than remain solvent.

**Question 7:** *Will enhanced incentives to avoid an interruption occurring increase the number of interruptible contracts entered into by industrial consumers? Please explain why.*

The Association is not convinced that the enhanced incentives will lead to a material increase in the number or volume of 'traditional' interruptible contracts between shipper / suppliers and large daily metered customers. It may even curtail the relatively small segment of the market where such contracts persist. Even if such contracts were attractive the volume available would not be significant. There are a number of reasons for this:

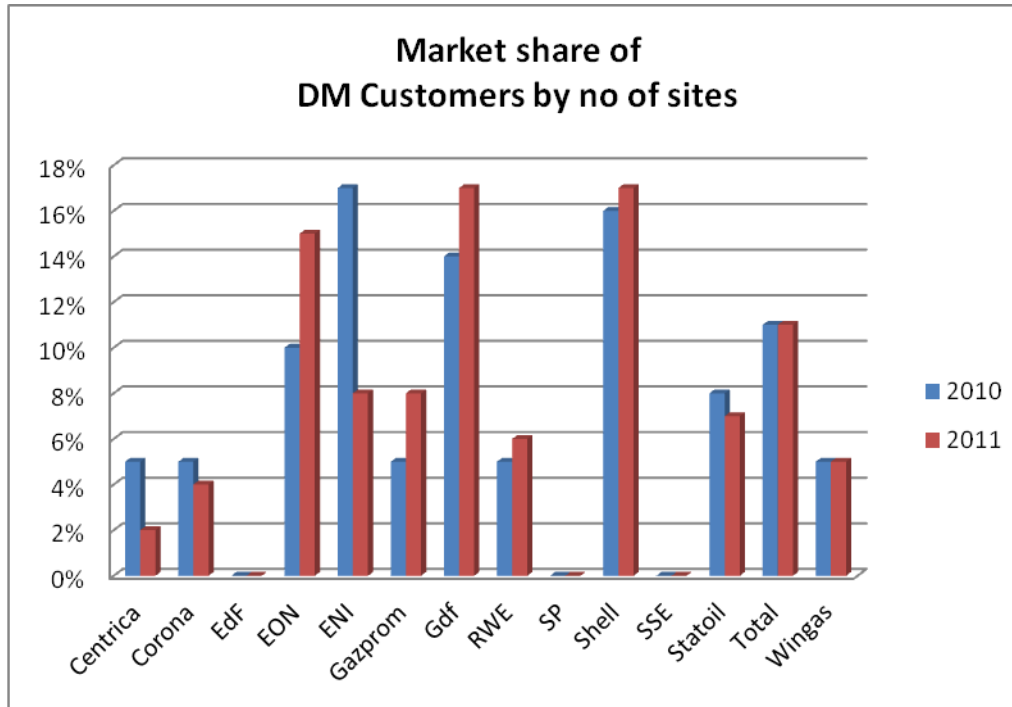
- We estimate that around 62% of DM load on the peak day in 2012 is gas-fired generation, 6% is Moffatt which is protected load and 32% is other DM load.

- The contracting arrangements for gas-fired generation usually means that the shipper/supplier is the same party as the power station operator and the electricity offtaker. Which means decisions to generate will be made on the prevailing market conditions on the day and explicit interruption contracts will not be put in place.
- The discount that suppliers are able to offer industrial customers is unlikely to be sufficiently attractive, particularly where £20 /therm sets a target level, especially for the largest DM customers who would anticipate being the first to be called off in the event of firm load shedding. .
- Industrial customers have given a strong indication that there would be limited interest in 'traditional' shipper led interruption contracts but there might be more interest in interruption triggered only once an alert had been issued.
- There may also be issues with where the strongest incentives lie to enter into such contracts. If this is perceived to be with domestic suppliers, then there is a mismatch between companies that have DM portfolios and those that have domestic customers, with EdF, Scottish Power and SSE having no DM customers beyond their gas-fired generation assets. See below, (data from<sup>4, 5</sup>) this shows that the largest share of the DM sector (we assume this excludes generation) sits with companies with upstream production assets.

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<sup>4</sup> [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/NATIONAL\\_REPORTS/National%20Reporting%202010/NR\\_En/E10\\_NR\\_UK-EN.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/NATIONAL_REPORTS/National%20Reporting%202010/NR_En/E10_NR_UK-EN.pdf)

<sup>5</sup> [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/NATIONAL\\_REPORTS/National%20Reporting%202011/NR\\_En/C11\\_NR\\_UK-EN.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/NATIONAL_REPORTS/National%20Reporting%202011/NR_En/C11_NR_UK-EN.pdf)



**Question 8:** *Do you agree with our broad proposal for collecting monies from shippers and passing this through to customers? If not so you have an alternative proposal?*

If such mechanisms are introduced then modifying the existing UNC arrangements and contractual paths with customers is likely to be the most practical and least cost option.

However we have substantial concerns with setting compensation to customers that face involuntary interruption at the domestic VOLL level of £20 / therm when domestic customers are not interrupted and where such money will be sourced from, in the event that payments from short shippers are insufficient.

The £ 20/therm value relates to domestic VOLL rather than that of DM customers that would be the first to be called for involuntary interruption by the NEC in the event of a gas deficit emergency. This arbitrary intervention in the market creates a strong incentive to avoid an emergency, or perhaps to seek structures that might avoid payments being made, but perhaps at this level it is more of a penalty than an incentive. There may also be other unintended consequences of knowing the penalty in advance. When the supply / demand situation tightens and shippers face uncertainties over deliveries, trading at the NBP may dry up as they choose to avoid the risk of being short and having to pay £20 / therm over the certainty of attracting a good price for their gas. Trading may also retreat to the beach, where force majeure may be claimed more readily although this will bring with it additional issues over entry capacity, counterparty risk etc and may provide additional uncertainty for the NEC as flows and nominations may fluctuate. This value would also set a target price for DM customers with many

preferring to continue to consume gas until called off by the NEC, especially the smaller sites, as they would expect the larger sites to be called off first.

The other key concern we have is when the money collected from short shippers is insufficient to meet the compensation payments, this scenario would be further compounded if short shipper became insolvent. There are a number of scenarios where this may occur: additional supplies may have been made available, additional demand side response may occur or perhaps more load shedding was called than actually required on the day. Where such a shortfall is socialised across all shippers, parties will be penalised and potentially face financial distress for a scenario that they did not cause. This would very much reduce the incentive on market players to take steps to avoid an emergency in the first place as they could face the costs of the measures to avoid an emergency yet still potentially face the costs of the emergency if one were to occur.

### **CHAPTER 5: Possible further interventions**

**Question 1:** *Do you agree with our assessment that a gap in the emergency arrangements would remain following the introduction of capped cash-out? If so, to what extent do you believe that this gap can be overcome through further interventions?*

As no security of supply standard is being defined it is not really possible to express a view on this, there can be no absolute guarantee of supply security in all possible circumstances that might arise and this needs to be understood when dealing with physical commodities.

It seems that Ofgem assumes that cashout / compensation reform will be implemented (option 2) which would give the probability of interruption as, 1 in 63 for DM and 1 in 182 for NDM but considers that these levels of security are not adequate. This is despite these being way beyond the requirements of the EU Security of Supply Regulation 994/2010.

Furthermore the Association is not convinced that actions taken by market participants would vary significantly if option 1 rather than option 2 were to be pursued. The issue of responsibility for prolonged periods of network isolation would remain an issue to be addressed since shippers would have limited influence over this.

**Question 2:** *Have we captured the full set of potential further interventions? If not what other further interventions should be considered?*

Ofgem has outlined a number of areas where further changes could be considered but there is limited detail on these.

### **CHAPTER 6: Assessment of options**

**Question 1:** *Do you believe we have captured all the appropriate options?*

No, Ofgem appears to be considering the options 1-4 in isolation from the potential further interventions so is not considering a full set of options nor does it contemplate different arrangements for rapid or slowly developing emergencies. We believe that considering all types of GDE in the same way whatever the cause or rate of descent into an emergency could lead to some very severe penalties on shippers who may find themselves short through no fault of their own. In our view this simply creates unmanageable and unquantifiable risks that are unlikely to deliver an appropriate response from the market. There would also be the risk that initial interventions lead to more and more intervention over time.

We note that DECC's National Emergency Plan<sup>6</sup> recognises that emergencies are likely to fall into two categories 'smouldering' or 'sudden'.

**Question 2:** *Do you agree with our assessment of the costs and benefits of the various options?*

Analysis of this type is extremely complex and heavily dependent on the input assumptions, it is not possible for us to provide a critique of the modelling approach and output. However we would like to make a few observations.

- Concerns over the modelling producing a scenario where NDM customers would be cut off whilst CCGTs continue to consume gas<sup>7</sup>, given the safety consequences this seems an odd outcome particularly as CCGTs individually consume less than 20mcm/d which seems to be used to explain this.
- The amount of interruptible contracts seems over stated by assuming tranches 1 and 2 all become interruptible<sup>8</sup>. However the sensitivity described in section 8 of the Redpoint report where there are no I&C interruptible contracts shows that for firm DM gas the probability of involuntary interruption stays the same as it is under the current arrangements such that the proposals do not deliver any additional security for DM customers overall and the enhanced security reported in the impact assessment is only achieved by such customers agreeing to be interrupted rather than load shed.
- Table 7 in the impact assessment, reports very low levels of DM load shedding but higher levels of NDM interruption which seems counter intuitive. We would expect to see all or virtually all DMs off before any NDM isolation, 1.2 or 1.5 Mths would not seem to represent all DM load on the system in the event of a GDE even if any interruptibles were assumed to be off. We consider this to be misleading.

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<sup>6</sup>[http://www.decc.gov.uk/assets/decc/what%20we%20do/uk%20energy%20supply/resilience/gas\\_electric/1\\_20100430123757\\_e\\_@@\\_nationalemergencyplangaselec.pdf](http://www.decc.gov.uk/assets/decc/what%20we%20do/uk%20energy%20supply/resilience/gas_electric/1_20100430123757_e_@@_nationalemergencyplangaselec.pdf)

<sup>7</sup> Redpoint report paragraph 7.1.2

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

<sup>8</sup> Redpoint report section 6



- The modelling of a storage obligation seems to lock significant volumes of storage out of the market since it appears to be based on all firm demand in a 1 in 50 winter<sup>9</sup>, the firm monitor rather than the safety monitor, yet it can only be used to prevent network isolation.

Given the points made above and Ofgem's note issued on 20<sup>th</sup> January 2012 detailing responses to stakeholders questions which seems to have made some extreme assumptions in relation to European price differentials, the probability of price shocks, gas quality issues, import and other infrastructure outages etc we find it difficult to have confidence in the results of the analysis and any conclusions that may be reached based on the results it provides.

**Question 3:** *Do you agree with our assessment on a preferred option?*

The Association agrees that more dynamic cashout prices in an emergency should attract more gas to the UK. However Ofgem's proposals do not seem to be proposing the introduction of dynamic cashout prices rather a regime that flips to a penalty price once firm load shedding occurs. Whether this is deemed to occur at the start of stage 2 or when firm load shedding is actually instructed is unclear.

As the cashout price for long shippers will be frozen at some level, which could be low for a rapidly developing emergency, it is not clear that this will provide appropriate incentives to deliver further gas into the system given the uncertainties and extended timescales for payment under the PEC arrangements.

Prior to an emergency there will be considerable uncertainty over the price at which this will be set. Any shipper that anticipates being long will want to have confidence in securing a good price. It may place the gas on the OCM where it may be purchased or if not this would then allow it to enter the PEC process. Alternatively it may prefer to sell the gas at the entry point as this would provide more rapid payment terms but brings with it counterparty risk, but beach deliveries would then allow for FM claims if the gas could not actually be delivered through unforeseen circumstances. If the supplier has a number of delivery options it may even choose to route the gas to an alternative market if it had sufficient concerns over receiving payment for its gas.

**APPENDIX 3: Further interventions**

**Question 1:** *Do you have a preference for specific interventions that you think might be most effective for ensuring security of supply while minimising the risks and unintended consequences?*

The Association has reservations over the possible 'interventions' proposed, but we consider additional market based balancing services secured by a competitive tender, (like OM), which could be called on just prior to a GDE being declared, could have some

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<sup>9</sup> Redpoint Report paragraph 4.4

merits. Such services could then be priced into cashout when called and support the principle of dynamic cashout better reflecting the value of gas as supply and demand tightens.

**Question 2:** *Do you think that standard contracts combined with cash-out reform provide the necessary incentives for suppliers to increase penetration of contracts for interruption?*

It is not entirely clear whether Ofgem is looking to define standard supply contracts or provide an additional 'bolt-on' contract that could provide for voluntary interruption in certain pre-emergency conditions. If the former we would have particular concerns as to how this would affect competition in supply particularly if prices were prescribed. If the latter there may be some merit in this but for reasons described above we consider the impact would be limited. Although if domestic VOLL were only to be imposed at stage 3, with different arrangements for compensating customers that are involuntarily interrupted at stage 2, then this might prompt some interest in such contracts.

**Question 3:** *A number of stakeholders have suggested an auction for interruption. We outline several challenges with such an approach and are keen to hear proposals on how to overcome these challenges.*

We consider there could be merits in a tender for special balancing services that could be called just prior to an emergency and may be sufficient to prevent an emergency from occurring or minimise its duration. We consider that this may not only be limited to demand side response but could potentially include certain physical supplies, this would provide NG with more tools to manage the system balance just prior to or during stage one of a GDE. The advantage of holding a tender in advance rather than relying on locational offers for turn down / up on the OCM is that there would be greater confidence in the volumes being available and the prices could feed into cashout. We would envisage NG only being able to call these contracts once a balancing alert had been issued.

The administrative costs of NG undertaking such an auction would be minimal since the mechanics would be similar to the OM tender, with the same parties being able to participate.

We recognise Ofgem has reservations with this approach but we consider it could provide a relatively low cost way to enhance security of supply. We do not consider the issues raised to be insurmountable and would be happy to discuss this further, although we consider the industry would be best placed to develop the detail of the arrangements.

**Question 4:** *If some kind of storage obligation was to be implemented, do you favour an obligation on suppliers or shippers? Alternatively, do you think the system operator or government should invest in strategic storage or build storage facilities for the industry to use?*

We do not favour government intervention in the storage market due to the potential impact on existing and planned storage projects. However if such an option were to proceed we think the whole storage market should be eligible to participate.

## **Impact Assessment**

### **CHAPTER: 1. Background and Objectives**

**Question 1:** *Do you agree with our modelling approach and the assumptions we have made?*

See above for comments to questions in chapter 6

**Question 2:** *Are there any other limitations to our modelling approach that have not been accounted for?*

See above for comments to questions in chapter 6

**Question 3:** *Are there additional sensitivities that we should consider for our final Impact Assessment?*

The impact of back-up fuel capability on CCGTs could be considered

We also note the sensitivity called ‘frozen cashout’ that freezes cashout at a much lower level than £20/therm yet appears to deliver a lower probability of NDM interruption than option 2 does whilst maintaining the probability of firm DM interruption at the current level. This would seem to suggest that most of the benefits of reform could be delivered in a different way.

### **CHAPTER: 2. Impact of Reform Options**

**Question 1:** *Have we fully captured the key impacts arising from our reform options?*

We believe that Ofgem has considered a broad range of impacts, but has not considered in much detail:

- The possibility of perverse impacts such that buyers may only wish to buy at the NBP and may be reluctant to consider alternative delivery points because of the risk of force majeure being called by the seller.
- The cash flows through neutrality or other route having adverse impacts on shippers that did not ‘cause’ the emergency
- The possibility of a ‘domino’ effect of shipper / supplier insolvency.
- The consequences for the electricity market both physical and commercial
- Interactions with European markets in the event of a regional emergency starting outside GB.
- That £20/therm may actually erode incentives to contract for voluntary interruption by setting a target price.

**Question 2:** *Do you agree that capping cash-out as proposed under options 2 and 4 will significantly reduce the risk of adverse consequences for competition?*

No, there will still be consequences of capping emergency cashout at £20 therm, not least the impacts on longer term competition within the market due to increased and unmanageable credit requirements creating a barrier to entry.

**Question 3:** *Do you believe that our modelling under or over estimates consumer price increases?*

We note that there are currently many pressures on customers' bills from various initiatives so any further increases are not likely to be well received but where suppliers incur costs these will be passed onto consumers.

**Question 4:** *Can you provide further evidence on the impact of our reform options on competition, in particular in relation to financial distress, credit requirements and barriers to entry?*

Experience from financial markets demonstrates that at times of crisis liquidity dries up and contagion occurs. There is no reason to believe that energy markets would react differently in such circumstances and so it is unrealistic to assume market based incentives will necessarily lead to market participants reacting logically or efficiently to such incentives and taking steps which may help to prevent or mitigate an emergency.

**Question 5:** *Can you provide information on the costs of implementing the proposed reforms, such as system changes and staff training?*

As a trade association we would not face any costs.

**Question 6:** *Have we effectively modelled interactions with other markets?*

There is little detail on how the electricity market has been modelled so it's difficult to comment on this. The impact of reduced availability of CCGTs could be minimal if sufficient other generation is available or far more extreme where it isn't. In any event it is possible that the electricity market will be impacted sooner than a simple supply / demand match implies because of constraints that may arise and the need for ancillary services to maintain the stability of the network. In such circumstances we would expect the fuel security code to be activated and directions to generate issued. Overall we believe insufficient consideration has been given to gas and electricity market interactions.

**Question 7:** *Do you agree that the use of interruptible contracts will be encouraged through a reform of the cash-out arrangements?*

No.

**CHAPTER: 3. Conclusion**

**Question 1:** *Do you agree that option 4 is the best option?*

No, it is difficult to agree with this position given the concerns expressed in this response and the fact that the storage intervention option 4 assumes has not been fully scoped out at any level of detail. To conclude that option 4 was the best option would be a leap of faith.

We consider that more clarity over the level of supply security that is required is needed and that it is not in the interests of any party in the energy sector for there to be a national gas deficit emergency, such that the market will deliver the security needed.

**Question 2:** *Do you think that table 12 provides an appropriate assessment of the reform options?*

The pictorial representation of these complex issues is challenging and highly subjective. For example the current arrangements are shown as red for duration and severity of outages, but we have never had a GDE and DECC's risk assessment shows the short to medium outlook to be secure. Similarly payment for DSR is red which might be negative for consumers but positive for shippers and competition.

We would be happy to discuss these issues further, to do so please call Julie Cox on 01782 615397.

31 January 2012

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