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Dear Ms. Barker

**Stag Energy response to the Gas Security of Supply Significant Code Review (SCR) (a) Draft Policy Decision and (b) Draft Impact Assessment**

***a) Background to Stag Energy***

Stag Energy is a private company based in Edinburgh. We are developing the Gateway 1 Gas Storage project, which is a 1.5BCM salt cavern facility located offshore in the East Irish Sea.

Gateway 1 has received all necessary planning and consents and has completed the Front End Engineering and Design (“FEED”).

A second storage project, Gateway 2 has yet to apply for any consents but would add a further 1.5 BCM of storage. Taken together these projects comprise a significant part of the Government’s recent public statements that up to 18 BCM of gas storage projects are under development in the UK.

Gateway 1 is the largest storage facility being developed by an independent; “independent” being defined as owned by a company with no other related GB gas market interests.

Stag Energy is a member of the Gas Storage Operator's Group ("GSOG"). GSOG is a trade association which was formed in May 2006 within the Society of British Gas Industries (SBGI). The group has seventeen members comprising almost all the active participants in the GB Gas Storage Market, and as such represents a wide range of interests. The group includes both established operators and developers of new storage projects, large multinational companies and smaller private ventures.

GSOG aims to speak with one voice in areas of common interest, ranging from taxation issues to regulations affecting data disclosure and access.

However it should be clearly understood by OFGEM and its advisors that there are significant differences in view between GSOG members when it comes to major policy questions. These differences depend on whether the relevant storage company is;

1. An existing storage incumbent or a new entrant which may potentially challenge an incumbent. Understandably storage incumbents tend not to favour options which support new entrants, particularly options which may strengthen the case for potential additional regulation of storage revenues.
2. Part of a wider integrated gas group with other interests in the gas chain as opposed to an "independent". Understandably integrated companies wish to avoid the risk of additional costs being placed on their gas supply operations which may be unable to fully pass on these costs to their final customers.

Stag Energy approaches this consultation from the viewpoint of a new entrant independent storage company.

### ***b) Need for new gas storage; policy overview***

It may be helpful if we summarise our high level policy view on the need for new gas storage before turning to OFGEM's specific consultation questions.

We think OFGEM needs to consider whether one of the objectives of the SCR is to specifically promote more GB gas storage, or whether it has no view on the need for more storage per se. We note that the Minister, as the competent policy authority, stated on December 10<sup>th</sup> 2010 <sup>(1)</sup>;

The Government believes that, by increasing shippers' exposure to the cost of gas supply interruption, such changes will help underpin commercial demand from shippers for gas supply infrastructure, including gas storage facilities. In addition, of course, individual gas storage projects are keen to gain "first mover advantage". Together, these two drivers are helping to push a number of projects towards Final Investment Decisions.

In the event, the failure of any facilities to proceed to “FID” in 2011 has led to it now being generally accepted within the SCR debate that changes to the balancing mechanism are unlikely in themselves to promote significant investment in new storage.

The House of Commons Energy Select Committee recognised this in their conclusions to their Security Report published in October 2011 <sup>(2)</sup>. They said;

87. The Government needs to explain and justify why it believes a strategic reserve is needed to ensure a secure supply of electricity—as suggested in its Electricity Market Reform White Paper 2011—but does not consider it necessary to intervene in the gas market to ensure more gas storage is delivered.

88. The UK needs to significantly increase its gas storage capacity. The Government must develop a strategy for achieving this. Doing nothing—or continuing to give inconsistent signals to the market about which approach it will choose—could result in no storage being built. This would diminish energy security.

We understand the view that balancing changes are unlikely in themselves to promote new storage projects is now generally accepted by parties such as the AEP and the Gas Forum which currently argue against market interventionist measures to promote storage. We understand their argument is simply that there is already an acceptable level of gas supply security in Great Britain, so there is no need for new storage promotion measures, which would merely impose an unnecessary cost on the consumer.

In our view it is a political decision as to what degree of security of gas supply is necessary for GB, in particular to protect against very rare but potentially catastrophically damaging “black swan” events.

No options can provide absolute security, but it is also unarguable that the highest quality of security is achieved by gas storage located within GB jurisdiction and directly connected to the NTS.

To be meaningful, we also think the value of security needs to capture the whole energy consumer market – i.e. society as a whole, for example, a “low margin” gas consuming activity may well be performing a vital public service.

Multiple and geographically distributed storage enhances the gas distribution systems (NTS and LAN) resilience. Most major historic supply interruptions in GB have arisen from domestic infrastructure failure rather than physical availability of gas. It is difficult to see how balancing changes address this point, or how the consequent penalties can be fairly allocated to those ultimately responsible.

We conclude that if the SCR is to place a sole emphasis on balancing reform rather than options specifically designed to promote more gas storage, then it follows that balancing reform should be safely judged to deliver both the same level of security as options designed to promote more storage, and at a lower cost. Balancing changes should not be prioritized as a sole measure if the level of security they deliver is uncertain and/or their associated costs are unclear.

We therefore focus on the pros and cons of the options which are most likely to produce such new storage investment. These views are based on our current active discussions with major potential British and overseas investors in GB gas storage.

We also seek to explain why we think the net costs to the consumer of new GB storage have been significantly over estimated in the Redpoint studies.

*(c) Draft Policy Decision Questions*

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?**

We think the security standard should be defined more clearly in policy target terms, and then also expressed numerically (see Question 2). The Draft Policy Decision November 2011 states;

3.13. Our draft policy decision is to use the VoLL which corresponds with the gas security of supply standard to set the level of cash-out or a further intervention (or a combination of the two). That is, we will choose the VoLL which corresponds to the duration and frequency of outages referred to in the gas security of supply standard. In the Regulation, part a) refers to seven days of exceptional demand occurring once every 20 years.

But this policy applies to “protected customers” only. Section 3 Box 1 states;

Protected customers include all households and can include small and medium enterprises, essential social services and district heating services, as determined by the Member State by 3 December 2011.

We believe this definition is taken from EU Gas Security Regulation 994/2010, which contains the following standards;

### **Infrastructure standard**

Paragraph 1 of Article 6 of the Regulation requires that if the single largest gas infrastructure is interrupted, the capacity of the remaining infrastructure must satisfy total gas demand during a day of exceptionally high gas demand (occurring with a statistical probability of once in 20 years).

### **Commodity standard**

Paragraph 1 of Article 8 states that:

The Competent Authority shall require the natural gas undertakings, that it identifies, to take measures to ensure gas supply to the protected customers of the Member State in the following cases:

- (a) extreme temperatures during a 7-day peak period occurring with a statistical probability of once in 20 years;
- (b) any period of at least 30 days of exceptionally high gas demand, occurring with a statistical probability of once in 20 years; and
- (c) for a period of at least 30 days in case of the disruption of the single largest gas infrastructure under average winter conditions.

Protected customers include all households and can include small and medium enterprises, essential social services and district heating services, as determined by the Member State by 3 December 2011.

Note it is the member state which defines “protected customers”. Given the probability of increased system instability from renewables, we think DECC’s logic in excluding large customers from protection as stated below from their 2010 Policy Statement <sup>(3)</sup> should be revisited if the primary concern is to protect the whole economy against “Black Swans”;

**5.64** Supply security obligations for industrial suppliers would not be appropriate. Larger industrial consumers and gas-fired power stations, are able to select the level of supply security they require through their contractual arrangements and responses to wholesale price changes.<sup>79</sup> Many select lower levels of security in preference to higher prices. The system relies on the flexibility of power stations and large industrial consumers to maintain security of supply across the system.

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

We believe OFGEM should be more explicit as to what the EU security standards actually mean in quantitative terms for GB, but do not see such analysis anywhere in the documents.

We calculate the commodity and infrastructure standards to be equivalent 13.4 BCM, 9.1 BCM and 3.5 BCM respectively, assuming they are supported 50% from new build incremental storage. These volumes rise to 16.4 BCM, 15.7 BCM and 3.5 BCM respectively if wholly supported from incremental storage. (We assume average storage facility 40 day withdrawal and 85% availability)

These volumes are consistent with the evidence given to the ECC House of Commons Select Committee on June 7<sup>th</sup> 2011 where both Centrica and Stag Energy argued for an incremental 3 BCM to 5 BCM of new storage.<sup>(2)</sup>

We conclude that an appropriate security policy target consistent with the EU standard would be an additional ~5 BCM of storage and a further ~5 BCM of “looser” security based around firm flexible contracts.

#### 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.

Yes

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?

We agree with the arguments for the use of VoLL and setting it at £20/Therm.

This is because we favour a single value for VoLL, and £20 is a good compromise number across all markets given we have seen estimates for industrials ranging from £3 to £80.

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

Yes. See answer to Question 2.

A balance needs to be struck between designing realistic market signals and undue administrative complexity, which could have the effect of undermining the objectives of the mechanism.

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

Yes

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?

We think it is probably insufficient.

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

Yes because of our answer to Question 5.

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

We doubt there are a significant number of industrial customers who would wish to enter into such contracts to make a material difference. This view is primarily based on comments we have heard in the workshops.

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?

Yes

## 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?

Yes, for the reasons we already have set out above in *b) Need for new gas storage; policy overview*

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

No, a wider range of possible interventions were considered by DECC and Poyry in the two Reports they published in 2010 <sup>(3)</sup>

The table below shows the full twenty options identified by Poyry. The first eight in the list are contained in this OFGEM consultation. Note, some of these options, e.g. Strategic Storage were explicitly rejected by DECC in 2010.

1	Sharpen Balancing Rules
2	Information Requirements
3	Secure reliable supply contracts
4	Standard interruptible contracts
5	DSR auctions
6	<b>New LNG storage owned by Govt.</b>
7	<b>Supplier Stocking PSO</b>
8	Strategic storage
9	<b>NGG Top Up Contracts</b>
10	Capacity Buyer of Last resort
11	<b>Capacity Payments</b>
12	Gas oil stocking obligation
13	<b>Power reserve and capacity contracts</b>
14	<b>Security Obligation Certificates (SOCs)</b>
15	Fiscal and tax incentives
16	Gas demand reduction measures
17	Planning rules easement
18	More Interconnectors
19	TPA regime easement
20	Gas quality regime easement

We have highlighted in red the six possible options we think need further detailed consideration by OFGEM as part of this exercise. We do not intend to give detailed commentary on each one but our criteria for prioritising an option, in order of importance, are:

- a. Certainty in delivering new storage.
- b. Incremental *net* cost.
- c. Ease of Implementation
- d. Consistent with the current market, both EU and GB

Based on the above criteria, we assess the two “front runners” in the above list of options to be first, a Supplier Stocking form of PSO and second Capacity Payments *for new storage projects only* on the Electricity Market Reform (EMR) model, (as already noted by the Select Committee).

We explain this view in more detail in our answer to Appendix 3, Question 1 below.



## CHAPTER 6: Assessment of options

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

No.

A strong version of a supplier stocking PSO (or other options with known security outcomes such as Top Up or Strategic Storage) surely removes the logic for significant changes to the balancing mechanism, but it appears the SCR decision process does not allow this option.

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

See answer to Question 3 below.

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

We agree with OFGEM's preferred option intuitively, but are not in a position to fully understand the calculations without a detailed dialogue with Redpoint.

## APPENDIX 3: Further interventions

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

Yes. We favour a supplier stocking obligation (PSO) for the following reasons based on the criteria we have already set out above;

### ***1. Guaranteed to deliver security through certain new storage***

No measure can be guaranteed to deliver 100 per cent supply security.

However, by its very nature, a supplier stocking PSO is ***guaranteed*** to produce a level of storage, depending on how it is set.

Stag Energy considers itself to have expert knowledge as to why new storage investment is not taking place in the GB market. This is because we have recently been in detailed dialogue with a wide number of potential investors in new storage.

Balancing market changes and a PSO are both options designed to address a perceived market failure; despite known future rapid import growth and more volatile gas consumption patterns resulting from the growth of renewables, there is no storage investment signal in the current GB gas market forward price curve.

We believe a summer/Q1 price differential above approximately 17.5 pence/Therm signal is needed to provide such an incentive, based on the latest public domain information on the costs of new storage construction.

Clearly multiple storage projects within local GB jurisdiction deliver a better quality of security than, for example, flexible supply contracts subject to force majeure or commercial non performance, or the vagaries of international spot LNG markets.

In our view the paramount problem remains the absence of a price signal for the bulk of the potential new projects. This is demonstrably the case in that most of the projects were initiated during the period 2005 to 2008 when the forward price signal was present, and all appear to have stalled now that this signal has disappeared.

Opinions differ as to why the GB market forward price curve differential has weakened, albeit the absolute annual average gas price has remained unchanged and comparatively high. Some consider it to be a fundamental structural change signaling a lower need for storage, others that it is a temporary feature driven by the marketing practices of a limited number of large importers. We would urge OFGEM to develop an informed independent view on this market behavior question to assist its considerations.

Moreover the fact that storage investment signals have proved to be ephemeral in the GB gas market means that even should they reappear this will not now necessarily give new storage investors confidence.

Storage projects are high risk (technically and commercially) and entail major expenditure and commitment of resources on the part of developers over a number of years. Financing is exclusively from the private sector and the projects must compete for funds with other potential investments (often in other jurisdictions) where risks and rewards may be more attractive.

Therefore there needs to be consistent and strong price signals over a number of years to incentivize a significant number of new storage projects.

We find it difficult to understand how balancing market changes on their own will produce such a prolonged and significant signal because, until there is an actual supply failure. Gas traders will find it impossible to price in such failure risk – a good parallel is perhaps the banking crisis of 2008. Nor do the forward gas markets have the degree of time granularity necessary to capture such short term volatility.

This is why we now conclude there has to be a form of market structure that enforces the use of storage, set at levels that require the incremental build of new storage if and when this is judged necessary by policy makers to provide added security.

The other two options which have a similar guaranteed security effect to supplier stocking are strategic storage and top up. All other options have uncertain outcomes. We believe Table 19 in Appendix II of the Draft Impact Assessment confirms the attractiveness of the supplier stocking PSO option.

However the latter options work less with the grain of a competitive market.

**2. *The most cost effective solution, as recommended by advisors and favoured by customers***

DECC, and its predecessor department DBERR, have already considered the respective merits of balancing changes and enhanced PSOs in papers they published in 2007 and 2010. DECC/DBERR also commissioned OXERA and Poyry to perform financial evaluations.

Both these consultants concluded a supplier stocking PSO to be more cost effective than balancing changes or strategic storage and these reports remain available on the DECC website.

The Engineers Employers Federation (EEF) and the Energy Intensive Users Group (EIUG) stated in September 2011 <sup>(4)</sup>;

The UK Government must set a timetable for new gas storage capacity to commit to construction and ensure the country can maintain its energy security during gas supply shocks and volatility associated with intermittent wind power generation. This is the main conclusion from an independent survey of some of the UK's largest users of gas, commissioned by a cross-section of interested parties involved in the UK gas industry, including EEF The Manufacturers' Organisation, the Energy Intensive Users Group and the Chemical Industries Association.

The majority of the companies surveyed, representing 12.5% of UK manufacturing industry's annual gas demand and including INEOS, Tata Steel, Outokumpu and GrowHow, also said that the UK Government should establish an enhanced storage Public Service Obligation, which requires utilities to hold in store a set proportion of their gas sales and is common throughout mainland Europe.

The survey also indicated that companies do not believe that OFGEM's complex new gas balancing plan, designed to deliver more gas storage, will work. On the contrary, it may result in intensive process manufacturing companies prioritising mainland Europe over the UK for future investment because companies require a high security of gas supplies. The Government's current plans still envisage the possibility of future gas supply interruption, accompanied by uncertain levels of compensation.

The Commons Select Committee <sup>(2)</sup> stated in October 2011;

84. National Grid and the Energy Networks Association concluded that their favoured option to support the development of gas storage was an amalgamation of the current "market based" approach with "suitable obligations".....Professor Stern (Oxford Energy) agreed that the best way to incentivise investment in the fast response gas storage that the UK needed would be a contractual obligation on suppliers....

We offer further cost analyses in our answer to Draft Impact Assessment, Questions 1 and 3, below.

We recognise that OFGEM and consultant analyses conclude that obligations could lead to market distortive investments. However we think this is a somewhat academic point because security cannot be guaranteed under a theoretical perfect market allocation model. This is the nub of the problem and we simply have to ask the question – “is there a minimum level of storage needed?” as advocated by the Select Committee report.

If so, then the question is what is the most effective and efficient route to deliver this storage target, not whether it is market distortive or not.

### ***3. Ease of implementation via Licence modifications and flexibility and adaptability in implementation***

Designing a supplier stocking PSO may prove more difficult than implementation. The latter should be possible via the license changes, particularly if it is simple and universal – i.e. based on previous year’s actual final sales to be released from storage in a set profile. We believe the Minister confirmed this view during the Clause 79 Energy Bill debates in the Commons in June 2011.

Poyry has already considered this point in their Report for DECC <sup>(3)</sup>

Legality	It is expected that primary legislation would probably be needed, although there is a possibility to utilise regulations under Section 2(2) of the European Communities Act, based on the requirements of 2004/67/EC (security of gas supply directive).
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Timeframe for implementation	<p>As this option puts an obligation on shippers to utilise existing storage facilities there is no physical construction, so this option could be implemented reasonably quickly. However, fast implementation might sterilise existing storage capacity causing a price impact. The time to develop the associated replacement storage capacity would be at least 5 years or so.</p> <p>It might therefore be more appropriate to assume a relatively long lead time for this option, so that shippers/developers can factor in the reduced availability of commercial storage in their investment decisions.</p>
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#### Complexity

Establishing the minimum levels for number days and volume and how this varies according to risk may become complex. If this were simplified by fixing the levels for a number of years, there could be more or less available than desired.

Establishing the mechanism for enabling the use of stocks might be complex, although European precedence would indicate that complexities would not be insurmountable.

Stag Energy advocates that, as a minimum, decisions should be made about a GB PSO design framework (or rather modifications to our current existing PSO) now as part of this SCR exercise. Agreeing the framework gives OFGEM the ability to put an enhanced PSO in place more rapidly in the future if it is believed that security has not been achieved through balancing changes. This has the advantage of;

- Saving time in the event it is decided an enhanced PSO is needed. Storage projects have lead times typically >5 years.
- Contributing to a coherent balancing design.
- Informing market participants of the potential direction of regulatory travel, so reducing regulatory uncertainty regarding storage commercial decisions.

A PSO does not preclude the implementation of other security options such as balancing changes, and need not be increased from current levels, in the unlikely event these other security options prove effective in providing greater security.

#### ***4. Supplier stocking PSOs are already in place in most major European countries including our near neighbours***

Supplier stocking PSOs are already in place in the majority of European countries and therefore this is the market norm in mainland Europe.

It would be useful for OFGEM to exchange views with their other regulatory colleagues regarding some of these implementation points. We think the countries most relevant to GB are the Irish Republic, France and Spain, all of which have a supplier PSO in place along the lines we envisage.

Both DECC and OFGEM have raised concerns over the European trade impact of supplier stocking PSOs.

DECC has a concern that a GB geographic specific PSO would be against EU law. However we think this is matter of interpretation. Country specificity is clearly allowed in the cases of Ireland and Poland, and we believe that GB country specificity can be agreed with the EU Commission. This is because the GB interconnector links with Europe are not only subject to a gas quality risk but are also connections to gas markets which already have PSOs in place.

These continental PSOs are not subject to any change and therefore there will always be a difficulty over market price response from the Continent.

The OFGEM SCR Draft Impact Assessment paragraph 2.90 also raises this question. However the concern it raises over “nationalistic” supply arrangements is only relevant were the PSOs on the Continent to be removed and we believe there is absolutely no prospect of this happening.

Moreover it should be noted that EU Gas Security Regulation 994/2010, Appendix IV “Regional Co-operation” lists the UK and Ireland and Holland, Belgium, France and Germany *in two separate groups* in terms of mutual gas supply support.

**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?**

Possibly, but we doubt there is a significant scope – see our answer to Chapter 4, Question 7.

**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.**

What happens if the auction fails to provide sufficient security?

**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 think the obligation should be on all suppliers to final consumers. This will primarily be licensed suppliers but also those licensed shippers who supply final customers directly from the NTS. Stag Energy considers that the PSO should be;

- Based on previous years (ex post) sales, so it is not unduly market distortive
- Applied to all gas shipped from the notional NBP to NTS exit points, i.e. all gas which has an exit nomination. This approach would apply to all suppliers and some shipper sales.
- Removed from the transporter license where the existing PSO currently resides and set at the current level through individual shipper and supplier licenses and only progressively increased if OFGEM considers security targets are not being met.

OFGEM should also consider whether a transparent target is set for a minimum increase in the level of gas storage capacity within UK jurisdiction, akin to the December 2010 DECC electricity capacity margin proposals.

We think a supplier stocking PSO achieves the same security as strategic storage but without the same degree of market distortion.

*(d) Draft Impact Assessment Questions*

CHAPTER: 1. Background and Objectives

[Question 1: Do you agree with our modeling approach and the assumptions we have made?](#)

No. This is because we think wider cost issues have not been taken into account

We think costs should, inter alia, always be expressed in terms of impact on the annual average customer bill. This is the most effective way of communicating with politicians and the media. It also enables comparisons to be made as this is a commonly used benchmark.

None of the analysis we have seen attempts to present the information in this way. Nor is there a transparent cost of new storage.

We offer our own attempted transparent cost analysis below.

We conclude our costs appear seem to be lower than the Redpoint analysis but they are higher than those stated by Poyry.

None of these costs include net benefits arising from three major storage “externalities” which we have identified;

- Eliminating the round tripping costs of continental storage (which we attempt to quantify in our answer to Question 3 below)
- Network re-inforcement
- Lower forward curve prices because pressure to over buy the curve to manage risk has been removed. Some analysts argue that heavy forward buying has the effect of pushing up wholesale gas prices in general. Strangely DECC argue exactly the opposite in their April 2010 paper which is contrary to what has been said by the major suppliers when justifying recent price increases.

First order cost effects are simply the costs of new storage facilities divided by gas consumed.

However these first order effects are complicated by the fact that not all costs necessarily can or will be passed on. We note the strongest opposition to a supplier stocking PSO in consultations has come from the gas supplier community, which suggests that suppliers are at least concerned they will not be able to pass all costs through. Costs (and benefits) could also be passed onto energy consumers in other second order indirect ways, principally via electricity prices.

There are three types of gas customer large industrial, commercial and domestic. We interpret consumer in the context of the question to mean domestic customers, who consume approximately 50% of total GB gas demand.

Assuming all the costs of new storage are 100% passed through on an even basis, then domestics will pay 50% of the costs of new storage.

Gateway has advocated a minimum of an extra 5BCM of storage be built, so GB reaches at least half the European coverage norm as is consistent with EU Gas Security Regulation 994/2010 as set out above in our answer to Draft Policy Decision Chapter 3, Question 1.

We estimate the total cost of 5 BCM new storage will be ~ £4billion, so domestic customers will “pay” 50% or £2Billion for this new storage.

This equates to £67 million pa over a conventional assumed 30 year lifetime of the new storage facilities (the reality is likely to be longer).

There are ~ 20 million domestic gas customers in GB. This equates to £3.33 p.a. for each household before taking into account round tripping, curve and re-inforcement benefits.

£3.33 is equivalent to half the estimated maximum cost arrived at by Redpoint in the IA, even though Redpoint don't actually assume any new storage is built in their Obligations IA.

By comparison, taking the Poyry “benefit” mid point from their GB Gas Security of Supply Report for DECC, July 2010 and using the 30 year 20 million household assumptions this equates to a cost of about £0.50 p.a per household.

[Question 2: Are there any other limitations to our modeling approach that have not been accounted for?](#)

See below Question 3.

[Question 3: Are there additional sensitivities that we should consider for our final Impact Assessment?](#)

We believe the round tripping aspect of gas storage needs detailed study and is indicative of a current flaw in the trading arrangements and interaction between the GB and continental gas markets.

Currently ~ 5-10 BCM of gas is exported from GB to the Continent in the summer and then a similar quantity is imported into GB during the winter. The latest TBE foresees these volumes of export/import round tripping continuing. Storage is the marginal continental supply source during the winter, therefore it follows that GB is using continental storage rather than GB storage to provide winter supply.

However we assess the net additional cost of this round trip is between ~10p and ~15p / Therm (made up ~2p GB additional transportation/capacity charges, ~5p IC round trip charge depending on LF and ~ 4p round trip Continental transportation/capacity charges). These round trip transportation charges alone are close to the price spreads needed to justify new investment in GB reservoir storage.

John Hemming MP, in his capacity of Chairman of the All Party Group on Peak Oil and Energy, has already raised this round tripping issue with the DGES in October 2011 and asked for the SCR process to address the causes behind this seeming market failure. <sup>(5)</sup>



## CHAPTER: 2. Impact of Reform Options

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

The sheer complexity of balancing charges will always mean that aspects will not have been considered fully, but this process is subject to diminishing returns.

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,

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

Over estimates

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?

No.

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

No. However in general changes to the Network Code are always going to prove to be more expensive than the License changes we envisage.

Question 6: Have we effectively modeled interactions with other markets?

We believe there needs to be more consideration of the impact on electricity markets, particularly as wind generation grows in share.

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?

Yes, within the confines of the analysis.

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

Yes, within the confines of the analysis.

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We hope that you have found these comments useful and please do not hesitate in contacting us if you wish to discuss the response further.

Yours faithfully,

Mark Rigby

Commercial Director

## References

- 1) Letter from Charles Hendry MP to John Pearson, MD AMEC Group, Europe and North Africa December 10<sup>th</sup> 2010.
- 2) House of Commons Energy and Climate Change Select Committee. The UK's Energy Supply: Security or Independence? Eight Report of Session Volume 1 October 2011.
- 3) DECC conducted a consultation in from October 2006 to May 2007 on gas security of supply where they identified a number of options which could enhance security, including changes to the balancing mechanism and a supplier stocking PSO. Most major suppliers and shippers made written public contributions to this consultation. DECC also commissioned OXERA to evaluate the impacts of each of these same options and the OXERA report dated May 2007 is available on the DECC website [www.berr.gov.uk/files/file38980.pdf](http://www.berr.gov.uk/files/file38980.pdf). DECC then published a policy statement in April 2010 revisiting the very same options again which had been considered in the OXERA report. [www.decc.gov.uk/.../decc/.../uk%20energy%20supply/.../gas.../1\\_20100512151109\\_e\\_@@\\_gassecuritysupply.pdf](http://www.decc.gov.uk/.../decc/.../uk%20energy%20supply/.../gas.../1_20100512151109_e_@@_gassecuritysupply.pdf) DECC did not put their April 2010 policy statement out to consultation because of the imminent election. However the industry used the subsequent July 2010 DECC consultation on the Implementation of the EU Third Internal Energy package to comment extensively on the DECC April 2010 gas security policy statement. As part of this same exercise DECC also commissioned Poyry to evaluate the impacts of each of these same options, (i.e. repeating the study already performed by OXERA in 2007) and this was published by DECC in July 2010. [www.decc.gov.uk/assets/.../uk%20energy%20supply/.../gas.../114-poyry-gb.pdf](http://www.decc.gov.uk/assets/.../uk%20energy%20supply/.../gas.../114-poyry-gb.pdf)
- 4) PRESS RELEASE Date of issue: 13th September 2011. STRENGTHENING THE UK'S ENERGY SECURITY: MAJOR ENERGY USERS URGE GOVERNMENT & OFGEM TO SET TARGET FOR GAS STORAGE. For further information/interviews: EEF The Manufacturer's Organization. Mark Swift or Roger Salomone (Head of Energy Policy) British Ceramic Confederation Laura Cohen, Chief Executive. Energy Intensive Users Group .Jeremy Nicholson, Director
- 5) "Gas Security of Supply SCR" Letter from John Hemming MP to Alistair Buchanan 4<sup>th</sup> October 2011 and acknowledgement from Charles Gallacher dated 28<sup>th</sup> October 2011.