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Dear Andrew,

Centrica Storage Ltd's (CSL) Response to Ofgem's Gas Security of Supply Significant Code Review – Draft Policy Decision

CSL welcomes the opportunity to comment on the above consultation.

We fully support the aim of Ofgem's Gas Security of Supply Significant Code Review to establish whether changes to the current market arrangements are required to enhance security of supply.

We broadly welcome the proposal to sharpen emergency cash-out incentives and the removal of the freezing of cash-out prices upon entering a gas deficit emergency (GDE); this should incentivise Shippers to take appropriate action to avoid a GDE occurring and may help attract additional gas into GB during an emergency.

CSL believes that the reduction in GB's gas supply security, which has resulted from the continuing decline in indigenous UKCS gas and the increased reliance on imported gas, will require the delivery of new physical infrastructure. However, we do not believe that changes to the cash-out regime are sufficient to deliver this additional investment: ensuring that a GDE does not occur in the first place should be the primary focus of this review.

We believe that the degree of uncertainty surrounding the economic modelling, coupled with the degree of uncertainty surrounding Shipper behaviour post the introduction of the proposed changes to the cash-out arrangements, does not provide enough certainty that the security of supply concerns will be addressed. We therefore support Ofgem's decision to examine the need for Further Interventions.

CSL is of the firm belief that a gap in the emergency arrangements will remain post the introduction of the proposed changes to the cash-out arrangements and that this

gap is best bridged by increasing the amount of long range storage (LRS) available to the market at times of stress. LRS is uniquely suited to supporting security of supply as it is:

- Price responsive – and working within the existing market framework
- Embedded within the UK, and so not divertible or subject to global commodity prices
- Controllable by the UK network operator in the case of an emergency.

However, current market signals (primarily the summer / winter spread) do not support the investment in storage. Given the close relationship between wholesale power and gas markets, we believe that some of the interventions in the power market are causing distortions in the gas market. For example, the introduction of the carbon floor has the effect of raising gas prices in the summer and thus narrowing the summer / winter spread.

We believe that Ofgem's work on Further Interventions should include considering ways in which new storage build might be better incentivised in a manner consistent with a well functioning wholesale gas market.

CSL's response is structured in two parts; first we offer some general observations on Ofgem's proposals; second we respond to the further interventions questions raised in the document. CSL's response is non confidential and therefore can be placed in the public domain.

1.0 General observations

1.1 Process

We believe that a holistic review of all possible reform options, including Further Interventions, would make more sense rather than to press ahead with piecemeal reforms starting with cash-out. Once all policy options have been examined, those that in combination, provide least cost way of ensuring the requisite level of supply security should then be selected.

There is a sense that the draft policy decision is a 'done deal' which is unfortunate. We hope that Ofgem keep an open mind with regard to its further interventions work.

1.2 Proposals

We agree with Ofgem that despite the gas market showing resilience to date, the current arrangements mean that price signals for ensuring gas security of supply are weakened in an emergency and do not reflect the value of secure gas supplies to consumers. We agree that unfreezing the cash-out price in a GDE will help attract additional gas into the GB and is therefore a sensible proposal. However, we are not convinced that this measure alone will increase Shippers incentives to take appropriate actions to prevent a GDE occurring. The extent to which increasing Shippers' financial exposure to a low probability high impact event will result in a behavioural change is uncertain at best, especially given the competitive nature of the gas market. Based on experience of other utilities¹, CSL believes that that until an event actually occurs individual players are unlikely to adopt preventative measures that impact their competitiveness, whereas ex post an emergency behaviours would be expected to change.

¹ Yorkshire Water drought of 1995 and water companies storage reservoir filling strategies pre and post event

We also agree with the need to encourage greater demand side reduction (DSR) through forward contracting although we have doubts that this will result from Ofgem's proposals. As Ofgem is aware, in the past, it has proven difficult for shippers and customers to agree interruptible supply contracts; the proposed reforms do nothing to address this and by introducing a target price of £20/therm is likely to make this more difficult.

Whilst agreeing the need to unfreeze the cash-out price, we do have significant concerns regarding Ofgem's proposals that daily metered (DM) customers would be paid £20/therm for each day they are without gas. This £20/therm is an estimate made by London Economics of the domestic customers' average daily value of lost load (VoLL); the VoLL for DM customers would appear to be much lower based on the evidence presented on LE's report². Setting the VoLL too high will "over-penalise" short shippers and risks undue financial distress relative to any supply security benefit, it also risks having a detrimental impact on DSR contracting (see above point).

1.3 Further Interventions

Ofgem has identified the key objectives of the review as being:

- To minimise the likelihood of a gas emergency occurring,
- To minimise the duration and severity of a gas emergency if one was ever declared, and
- To appropriately compensate firm consumers if they were to be interrupted.

Whilst CSL agrees that these are reasonable objectives for the review, we are concerned that the process has focused to a large extent on what happens to the cash-out price once a gas supply emergency has occurred and does not appear to give sufficient weight to preventing one from happening. We firmly believe that prevention should be the primary focus of this review.

CSL agrees with Ofgem that the draft policy on cash-out reform, on its own, is unlikely to deliver more investment to improve supply security. CSL believes that new physical infrastructure is required to offset the reduction in GB's gas supply security resulting from the continuing decline in indigenous UKCS gas and the increased reliance in imported gas. Investment, including that of new gas storage, will be made on economic grounds and the current market signals do not support the investment case. For storage, this is in part due to market failings introduced by some of the interventions in the power market which are causing distortions in the gas market. For example, the introduction of the carbon floor has the effect of raising gas prices in the summer and thus narrowing the summer / winter spread.

We therefore welcome Ofgem's decision to broaden the scope of this review and consider the merits of further interventions alongside reforms to cash-out and compensation.

² Estimating Value of Lost Load (VoLL) Final report to OFGEM Table 2: VoLL estimates for I&C customers (range p/therm)

CSL has considerable experience in this field and has contributed to various studies and reports in recent years³. Our view remains that the ability to call upon physical gas, located within the UK borders must form the cornerstone of any policy aimed at reducing the risk of a gas emergency occurring. There are also obvious benefits to minimising the duration and severity of an emergency if secure supplies can be called upon when needed. CSL believes that the most reliable and efficient way of delivering this is through increased storage capacity and, if new storage is to be built, then it would be sensible to move away from oblique interventions and concentrate on ways to best deliver what is needed in a timely and cost effective way.

Technology non-specific interventions including information obligations, enhanced licence conditions and reliability contracts have been looked at before and have not been introduced primarily due to reasons of reliability, complexity and enforceability⁴. Whilst demand side interventions may have a greater part to play in the further interventions mix, the above issues apply here together with the practical problem of physically disconnecting consumers when an emergency occurs.

In its work on Further Interventions Ofgem needs to consider what are the key threats to the UK, in terms of both supply security and price security, as we move from gas self sufficiency to import reliance. In particular, Ofgem needs to consider the impact on the GB economy of a major infrastructure outage in a time of extremely high global prices and how best to protect GB against such geopolitical events.

CSL has a number of concerns regarding the storage obligation which has been modelled to hold gas in existing stores only. We have looked at actual GB gas in store over the last 6 winters and the proposed obligation would have had limited effect, as storage stocks have only once (in Jan 11) been below the minimum prescribed for 2030. Thus the significant supply security benefit claimed by Ofgem/Redpoint (reducing the NDM risk of interruption from 1 in 122 to 1 in 2000) looks highly questionable. CSL believes that the reduction in GB's gas supply security, which has resulted from the continuing decline in indigenous UKCS gas and the increased reliance in imported gas, will require the delivery of new physical storage capacity.

We provide further comments on the modelling of a storage obligation in the next section.

1.4 Redpoint modelling

We acknowledge that accurately modelling supply security and the impact that policy options have on this, is extremely challenging and, for the reasons given below, we would urge significant caution in placing any degree of confidence on the modelled outputs of both current security of supply levels and the benefits of further interventions.

From discussions with Redpoint, we understand that the model used was based on a model originally commissioned by CSL. During the development of the model there

³ Energy and Climate Change Committee: The UK's Energy Supply: security or independence? June 2011

⁴ DECC's Gas Security of Supply: A policy statement, April 2010

was significant concern that the storage dispatch mechanisms were not sufficiently able to reflect the observed dynamics of spot and forward prices in the real market and the flows from storage that result due these dynamics.

The modelling of supply sources and the response of supply to changes in prices has been greatly simplified from actual market dynamics. Without accurately modelling these dynamics it seems erroneous to draw quantified conclusions about the benefit to security of supply of specific interventions to the market.

The modelling outcomes are primarily driven by input infrastructure outage parameters. These parameters are not based on researched analysis of actual infrastructure failure rates and the kind of macro economic and geopolitical exposures which are most likely to cause a material disruption to UK gas supply may not be subject to accurate quantification.

As such the use of the model to make specific conclusions about how an intervention in storage dispatch rights would benefit security of supply needs to be treated with a significant degree of caution.

CSL believes that there is a compelling argument that statistical modelling is not effective at quantifying the risk of supply failures and that the exposure is more price risk than volume risk. As such new storage would supply a reserve of controllable gas which cannot be diverted to other markets. In this case the UK would be cushioned from the effect of global shocks to gas prices by the load-duration provided by additional seasonal storage acting to protect the economic competitiveness of UK plc through controllable supply.

A single new seasonal facility would be far more effective at enhancing security of supply in these “Black Swan” scenarios than the storage obligation modelled (where Shippers are obligated to hold existing capacity), which could perversely increase gas price (by reducing liquidity) for most of the time whilst delivering no real overall benefit.

Finally, Redpoint has indicated that the Monte Carlo price tracks have not been assessed in detail to determine whether prices have appropriately responded to the modelled supply failures. Price response is the primary mechanism of any market to a shortfall in supply and if it cannot be verified that the Redpoint model price outputs show a strong price response then the dynamics are clearly suspect. We believe that it would be beneficial for interested parties to be able to analyse the daily price tracks and daily volume dispatch by supply source for the “seeds” where a failure to meet NDM demand has occurred. We understand that Redpoint require Ofgem, as their client, to agree to release this data; we urge Ofgem to do so as soon as is practicable.

2.0 CSL’s response to Ofgem’s Questions

In the following section we provide answers to Ofgem’s questions relating to further interventions.

2.1 CHAPTER 5 Questions

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 stated earlier, we believe that a gap will remain in the emergency arrangements following the introduction of a capped cash-out as we do not believe that the proposed changes will be sufficient to deliver this additional investment. Ensuring that a GDE does not occur in the first place should be the primary focus of this review and that this can be achieved through further interventions. The challenge will be to correctly identify the required level of supply (and price) security and how this differs from current and future levels.

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

No, further interventions can come in many different forms. CSL does not believe that technology non-specific interventions will play a particularly useful part in bridging the supply security gap; we believe that interventions that deliver physical capacity in a timely, cost efficient and market orientated way should be favoured. In addition to those included in Ofgem's Draft Policy Decision, the following could also be considered:

- Increased tax relief to improve project economics (e.g. enhanced capital allowance and cushion gas relief)
- A capacity payment (top-up) mechanism for new TPA storage, based on competitive bidding by project developers to meet a stated target for new capacity. Payment could be conditional on seasonal spreads and thus tantamount to a socialised "price floor"
- An financial obligation on suppliers to book storage equivalent to a % of retail market akin to the ROC scheme
- Reserve capacity purchased by central buyer or suppliers where capacity is set aside from market, and
- Strategic Storage options which range from Cfd, 'cap and floor', to strategic assets built with set rates of return.

CSL's view of these mechanisms is set out below.

2.2 Appendix 3: Further Interventions Questions

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. CSL has reviewed a number of possible interventions including those listed above. We have assessed the pros and cons of each of the measures considering; inter alia, the following:

- effectiveness of improving supply security,
- attractiveness to policy makers,
- cost,
- speed to implement,
- impact on the wholesale traded market, and
- risk of unintended consequences.

CSL has reached a preliminary conclusion that a capacity payment in the form of a storage revenue top-up, providing direct financial support to storage capacity

providers by (in effect) putting a floor under the level of return, would be the most effective way of ensuring security of supply while minimising the risks of unintended consequences. CSL's reasons for this, together with a review of financial and physical storage obligations are discussed further in Annex 1: A paper by CSL on potential support mechanisms for seasonal storage.

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?

No, CSL see a number of drawbacks:

- Standard contracts should use as a trigger for interruption a standard market signal (say the Gas Balancing Alert); but the alert mechanism is currently under review because shippers do not believe this is a good indicator of security of supply. Before shaping standard contracts for interruption, the market would need further certainty around the trigger mechanism;
- A too simplistic framework may create a perverse incentive to increase "interruptible" supply and, therefore, incentivise shippers to commit to even lower firm upstream supply, increasing the current challenge of SoS;
- Increasing the traded volume of interruptible supply would increase the complexity of understanding what level of total firm demand is expected and what percentage of it may be interrupted.
- Our understanding of past experience of interruptible supply contracts is that difficulties have occurred when customers have been asked to self interrupt and have been unwilling to do so due to operational issues. This reliability issue would need to be addressed when shaping the standard contract.
- We also understand that there have issues regarding the use of back-up contracts where consumers enter into parallel contracts alongside commercial interruption contracts which can be called upon if the interruption contract is triggered resulting in no demonstrable demand reduction.

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 understand that Ofgem envisages that a central authority i.e. NGG could run an auction for the benefit of non-priority DM customers, once per year (before winter), whose resulting bids would be exercised at early stages of an emergency, in order of price.

DM customers who bid in the auction at a higher price than the standard compensation set by Ofgem for involuntary DSR (because their VoLL is higher than the standard), will be interrupted in order of bids and before all the non-bidders who may be efficiently interrupted first because lower VoLL (as recognised by Ofgem in §1.28 annex).

Question 4: If some kind of storage intervention was to be implemented, do you favour a direct intervention aimed at developing storage capacity or an indirect intervention through an obligation on suppliers or shippers?

CSL has considered a number of interventions against criteria of:

- effectiveness of improving supply security
- attractiveness to policy makers
- cost,
- speed to implement,
- impact on the wholesale traded market, and
- risk of unintended consequences.

CSL's analysis has found that a direct intervention in the form of a capacity payment (top-up) mechanism, where SSOs can tender to deliver new storage capacity on the basis of being guaranteed a minimum agreed price is the most effective way to deliver new storage capacity. This mechanism would entail SSOs receiving the difference between the agreed price floor and the annually determined price. The SSO would only receive payments in those years when the market price (measured based on agreed metrics) is below the agreed price. See Annex 1: A paper by CSL on potential support mechanisms for seasonal storage.

We also agree with Ofgem's stated view that such a mechanism would deliver with least distortion to the prevailing market arrangements.

A capacity payment (top-up) mechanism is likely to be the most economically efficient/cost-effective means of obtaining new storage capacity for a number of reasons:

1. It removes the tail-end risk associated with prices (spreads) falling and remaining below current levels, and thereby underpins the ongoing economics of the selected projects.
2. It provides investors with certainty that their project will be economically viable over the agreed period which contrasts to supplier obligations which could vary year to year as the supply demand balance alters and would not necessarily flow to one particular project and are therefore likely to vary.
3. The costs of this mechanism should be relatively low as payments would only be required in those years when the market price falls below the agreed price. Further, the tender process should ensure that only the most economically efficient projects are selected in the first place.
4. It is relatively straight forward to administer this mechanism once Government/Ofgem determines the relevant amount of storage capacity required and the appropriate mechanism for assessing the market price. This contrasts with both supplier obligations or strategic storage/regulated rate of return mechanisms which would require constant monitoring and review to ensure the arrangements are delivering security of supply and, given the lumpy nature of storage investment, are likely to lead to a 'binary' market being either in a state of over or under supply.
5. Such a mechanism is least likely to impact existing market arrangements for storage and other flexible sources of supply as it will not limit how flexible sources of supply can be used.
6. The arrangements could deliver new storage build relatively quickly as there are a number of projects that would be in a position to bid to provide new storage capacity.

I hope Ofgem finds CSL's comments helpful and if you would like to discuss any of the points raised in more detail, please do not hesitate to get in contact.

Yours sincerely,

A handwritten signature in black ink that reads "Roddy Monroe". The signature is written in a cursive, slightly slanted style.

Head of Regulatory Affairs
CSL

Annex 1. A paper by CSL on potential support mechanisms for seasonal storage

1.0 Background

Ofgem's Gas Security of Supply Significant Code Review draft policy decision includes a recommendation for more consideration of possible further interventions alongside cash-out reform. This paper provides further details, advantages and disadvantages on two potential mechanisms which could potentially provide support for seasonal storage: a storage obligation on Suppliers and a capacity payment in the form of a storage revenue top up payment.

1.1 A storage obligation on Suppliers

A storage obligation on Suppliers provides indirect financial support to storage capacity providers. It is a subset of a more general security of supply obligation where Suppliers would be required to demonstrate that they had access to sufficient levels of gas (or interruptible demand) to meet peak demands.

In principle, there are 4 variants of a storage obligation on Suppliers:

- a physical obligation applicable to all storage facilities;
- a physical obligation relating to new storage facilities only;
- a financial obligation i.e. storage obligation certificate (SOC) applicable to all third party access (TPA) storage; and
- a financial obligation applicable to new storage only.

This paper considers two of these models, viz:

1. a physical obligation applicable to all storage facilities where there is an obligation on Suppliers to hold sufficient gas in store to meet peak demand (e.g. a 1 in 20 winter). This option would have a direct benefit to security of supply by ensuring gas is held in store for the sole purpose of supplying UK consumers and is akin to the option modelled by Redpoint.
2. a financial (SOC) obligation applicable to new storage only where there is a market based storage obligation designed to facilitate new investment similar to that of ROC scheme.

1.2 A capacity payment in the form of a storage revenue top up

A capacity payment in the form of a storage revenue top-up provides direct financial support to storage capacity providers by (in effect) putting a floor under the level of return and hence de-risking the investment.

A revenue top-up mechanism could be designed to act as a floor if the revenue top-up payments are only provided when the market price falls below an agreed reference level e.g. in relation to the seasonal spread (Q1-Summer) or economic profit. In this version, storage developers would bid the floor price they could accept and policy makers would give preference to those projects offering the lowest floor price.

2.0 A storage obligation on Suppliers to hold sufficient gas in store to meet peak demand

2.1 Key features

An obligation comprised of both working gas volume and deliverability on Suppliers to meet a defined level of peak demand (e.g. a 1 in 20 winter). A benchmark date would be set at the start of winter; at which point compliance would be assessed. The obligation would include controls on stock depletion to ensure that supplies remain in store for the winter.

TPA exempt capacity would count towards the obligation.

2.2 Advantages

Depending on the level of the obligation, the increased demand for storage capacity would have a positive impact on existing gas storage facilities. However, this benefit would be dependent on the price paid for capacity remaining market based and not being set at a regulated rate of return.

It would have a direct benefit to security of supply by ensuring gas is held in store over the winter period.

2.3 Disadvantages

In general terms, enforced holding of gas in storage effectively removes storage from the liquid traded market and could undermine the competitive wholesale gas market.

Suppliers would be required to procure a proportion of their peak requirements in advance and would not be able to procure their supplies using the short term spot market. This would increase overall costs for Suppliers by forcing prices higher ahead of the winter when Suppliers were obliged to contract for additional storage capacity and reducing the value of that capacity at the end of the winter when Supplies would be selling back into a falling market.

A storage obligation on Suppliers to hold sufficient gas in store to meet peak demand would include existing TPA facilities and in time may lead to a regulated or quasi-regulated price for storage which would have a negative impact on the value of existing storage facilities.

For new storage capacity being developed a ramping up of the obligation to create a capacity shortage would be required. This would need to be appropriately phased in over a period of years to allow new storage facilities to come on stream. It would also increase the likelihood on a regulated price being imposed.

A consequence of the 'lumpiness' of developing storage capacity is that a ramping up of the obligation has the danger of creating a binary storage market; either in under or over supply. When the market is in under supply, prices would rise to the price of the penalty for non compliance; when the market is in over supply, prices would fall to the SRMC.

When designing, implementing and enforcing storage obligations, several complex design issues would need to be taken into account, including the timing of the obligation and the type and location of storage to be included. For example would virtual storage count towards the obligation and if so how would this be tracked?

Introducing a new Public Service Obligation runs against the grain of EU energy policy and may be challenged. It is also likely to be seen as protectionist and counter to EU energy market liberalisation.

3.0 A market based storage obligation designed to facilitate new storage capacity investment

3.1 Key features

A market based storage obligation designed to facilitate new storage capacity investment could be designed in a similar way to the Renewable Obligation Certificate (ROC) mechanism which was introduced to provide renewable energy developers with the appropriate level of support necessary to make investments.

A similar obligation on Suppliers to buy Storage Obligation Certificates (SOCs) equivalent to a percentage of their domestic (and potentially SME) gas sales would increase the incentives for new storage build by underwriting investment and helping to manage the impact of forward price volatility. SOCs would be allocated to new and life extended facilities. As an alternative this could apply to all facilities but would then risk windfall gains to existing storage. Unlike a physical storage obligation, described above, access to TPA storage would remain open and market-based.

The total SOC target (given to Suppliers) would be set higher than the number of SOCs issued (say 10%) which would underwrite demand and ensure adequate investment.

SSOs could sell their SOCs as part of a SBU or on an unbundled basis and Suppliers could buy SOCs from SSOs or through a traded market.

If Suppliers did not hold enough SOCs they would have to pay a penalty via a buy-out fine. SOC penalties would be redistributed to suppliers who hold certificates, thus incentivising participation in the primary market.

Suppliers would be free to use the storage commercially and would not be required to hold a minimum stock; the primary purpose of SOCs would be to deliver capacity and through this an improvement to security of supply would be delivered.

Over time the SOC volume of storage that suppliers are required to buy may be increased if higher levels of security of supply are required.

It would have an impact on costs to customers but would apply across all suppliers.

See Annex 1 for a SOCs flow diagram.

3.2 Advantages

SOCs would increase the incentives for new storage build by underwriting investment and by helping manage the impact of forward price volatility.

The measure would act with the grain of the market; SSOs would be allowed to operate their facilities on a commercial basis, offering storage services to the market based on market rates and with no restrictions on who can bid for capacity (i.e. suppliers, traders, producers).

3.3 Disadvantages

As with the previous obligation, a consequence of the ‘lumpiness’ of developing storage capacity, is that a SOC obligation has the danger of creating a binary storage market; either in under or over supply. When the market is in under supply, prices would rise to the buy-out price; when the market is in over supply, prices would fall to the short run marginal price (SRMC).

If existing storage facilities are excluded from the SOC mechanism this will have negative impact on the value of their capacity, potentially falling to SRMC.

ROCs are effectively re-priced annually and therefore a project developer (once committed) knows how many ROCs they are entitled to but not the exact price for future years. There is a kind of policy assurance that the price of ROCs will be sufficient to meet a given renewable generation target, which gives developers the confidence to go ahead, but no absolute guarantee.

The developer’s goal is clearly to get to FID with a reasonable expectation of returns, but government has another objective which is ongoing value for money (for the consumer or the public purse).

The EMR has swung away from ROCs and towards a CfD approach. One of the problems for HMG is that the ROC is a kind of premium FIT, paid on top of the wholesale power price. Given the increase in wholesale power prices, historic ROC commitments to relatively low cost projects (e.g. onshore wind) now look over-generous and Ministers may be concerned about criticism from the NAO, select committees etc.

Notwithstanding this, the ROC regime has worked reasonably effectively to date because wind capacity is added in reasonably small increments (relative to the 2020 target, for example) and the price of a ROC can be adjusted annually if we are either getting ahead of the target or (more likely) slipping behind.

If this approach were applied to storage, it would be far more difficult in the sense that storage investment is much more “lumpy” relative to any likely target. As it is likely that only a few large new seasonal storage projects will be required between now and 2020, (perhaps only one). It is therefore much trickier for the policymaker to strike the right price for a SOC, since storage capacity can move much more quickly from (expected) undershoot to overshoot, vs. targets, or vice versa. It is a bit like having a NOC and capacity target for new nuclear power stations, which HMG has clearly shied away from.

From a policymaker’s viewpoint, there is thus an even greater risk that an agreed SOC price, paid on top of seasonal spreads actually achievable in the market, may turn out to be “too generous” in a world where future spreads move back up into the higher range again. Policymakers may therefore be reluctant to commit to a SOC price which would be sufficient to protect storage developers in a world where spreads remain at their current depressed level.

One could imagine some kind of “clawback” mechanism if the SOC (premium FIT) turns out to be over-generous – but in that case the SOC starts to look like a “cap and floor” mechanism in different clothes.

4.0 A capacity payment in the form of a storage revenue top-up

4.1 Key features

A capacity payment in the form of a storage revenue top-up provides direct financial support to storage capacity providers by (in effect) putting a floor under the level of return and hence de-risking the investment.

A revenue top-up mechanism could be designed to act as a floor if the revenue top-up payments are only provided when the market price falls below an agreed reference level e.g. in relation to the seasonal spread (Q1-Summer) or economic profit.

Storage developers would bid in the minimum spread (or total revenue) that was required to make the investment commitment.

Ofgem would select the most economic bid/bids that will deliver the policy requirements and long term contracts would be agreed including penalty clauses for late delivery.

Costs would be passed through to end consumers through a levy on transmission charges of final bills.

See Annex 2. Capacity Payment in the form of a storage revenue top-up payment flow chart.

4.2 Advantages

A top-up mechanism designed as a floor would increase the appeal of such a measure to policy makers as support would only be paid out when market conditions fails to meet the reference level. This also reduces the risk of perceived windfall gains and the potential for “clawback” if spreads rise to high levels and appear to be delivering super-normal returns.

It could also be designed to benefit most economic projects i.e. providers of capacity could bid in minimum floor level required to support their projects.

The costs of providing top-up could be linked to market conditions so overall cost should be low assuming spreads return to expected levels i.e. payments only required in ‘tail-end’ event years.

A storage revenue top-up payment would be a relatively straightforward arrangement to administer and would provide certainty to capacity providers if structured on a long term contract. However, there are still significant implementation issues such as: how to facilitate genuinely competitive bidding among few developers, who pays the top-up and how the cost of that payment is recovered.

As with Supplier obligation to buy SOCs, this measure would act with the grain of the market; SSOs would be allowed to operate their facilities on a commercial basis, offering storage services to the market based on market rates and with no restrictions on who can bid for capacity (i.e. suppliers, traders, producers).

4.3 Disadvantages

A revenue top-up payment mechanism is to make the provision of new capacity more financially attractive and de-risk the investment; therefore it is unlikely that it will be available to existing facilities.

For EMR, DECC have required a number of bidders to participate to help price discovery and deliver best value for consumers; there would be question as to how many storage developers would be in a position to participate in a storage revenue top-up tender process.

Once a bid has been accepted the prospect of further, non revenue topped-up storage development would be negligible; there could be security of supply issues if the winning bid does not deliver.

5.0 Conclusions

A capacity payment in the form of a storage revenue top-up mechanism would appear to be the preferred option

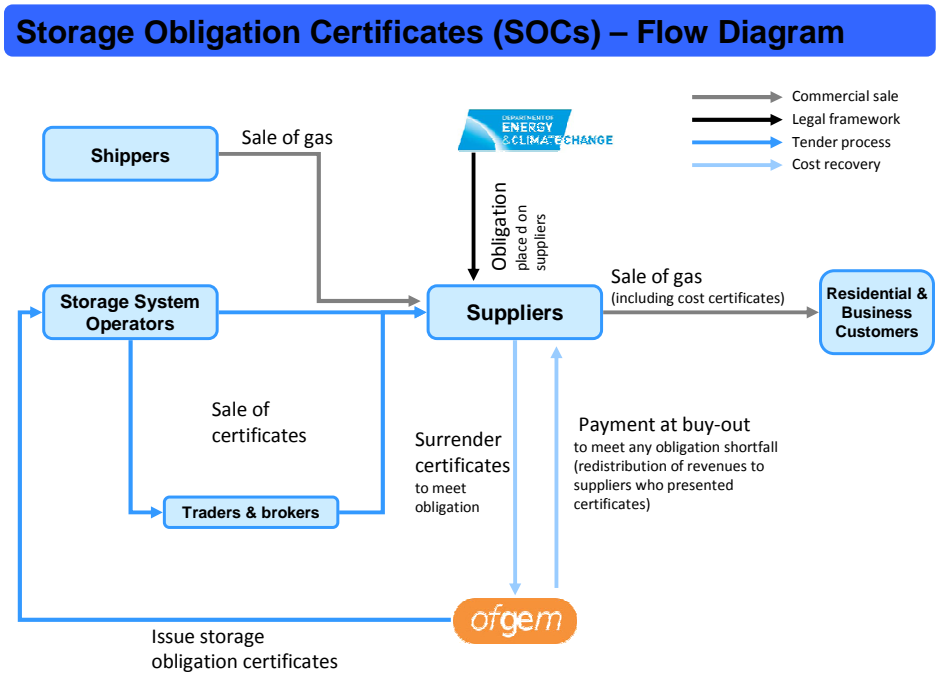
If correctly structured, it provides a floor on spreads/revenues which addresses the tail end risk.

It provides a guaranteed minimum level of returns/annual revenue that can be received from the investment.

It works with the grain of the market and is less likely to distort competition on the supply side.

It is likely to be the minimum cost solution to ensuring new storage capacity is delivered in a timely fashion.

Annex 1 Storage Obligation Certificates (SOCs) flow diagram



Annex 2. Capacity Payment in the form of a storage revenue top-up payment flow chart.

