

Demand Side Balancing Reserve and Supplemental Balancing Reserve: Informal consultation on the development and procurement of two new balancing services

SSE response

26 July 2013

Section 1 – Introduction

SSE is a leading energy company involved in the generation, transmission, distribution and supply of electricity and the storage, distribution and supply of gas. SSE currently owns or has an ownership interest in over 13,000MW of generation capacity, 8,720MW of which is thermal plant in Great Britain (GB). SSE also has nearly 5 million domestic and 0.43 million business electricity customers who may be impacted by the Demand Side Balancing Reserve.

SSE has consistently highlighted the emerging security of supply concern in GB, which is driven by an impending shortage of generation capacity. SSE concurs with the conclusions in Ofgem's latest Electricity Capacity Assessment and welcomes the recognition from DECC, Ofgem and National Grid that there could well be capacity shortages as early as 2014.

While the bilateral energy market has, in the past, been able to ensure security of supply, current conditions do not provide the necessary investment signals to maintain an economically efficient level of generation. The risks inherent in investing in generation in today's energy market mean that generators are likely to build less capacity than customers need. This is primarily due to the social nature of electricity reliability, which does not allow an individual consumer to contract for a differentiated level of reliability. The other principle market condition hindering investment in adequate generation capacity is the worsening "missing money" concern facing investors in firm capacity. With more zero/low short run marginal cost, inflexible and intermittent generation on the system, plant providing firm capacity will run fewer hours at lower average prices and more unpredictably, thus eroding their business case.

Even if capacity margins tighten, these market conditions are unlikely to improve without a shift in the way firm capacity is remunerated. As such, SSE has been supportive of the introduction of a capacity market as soon as practicable to enable investment into both existing and new forms of capacity. SSE has welcomed the Government's decision to introduce the first auctions in the Capacity Market in 2014/15. Although starting payments in 2018/19 is appropriate for new investments it does nothing in the shorter term to prevent further closure or mothballing of existing plant, let alone to encourage mothballed plant back. SSE has therefore been calling for the first capacity payments to be available from 2014/15, and maintains this is the optimal means of tackling the capacity challenge in an equitable and sustainable way.

Section 2 – Role of the capacity market in addressing generation adequacy

Ofgem's Electricity Capacity Assessment (2013) concludes that risks to security of supply are likely as early as 2014/15 driven by further reductions in electricity supplies from the

withdrawal of installed generation capacity. It also highlights that future policy and price uncertainty are continuing to limit investment in thermal generation. This assessment is in line with SSE's view and bolsters the case for bringing forward a mechanism to deal with the underlying issues contributing to generation inadequacy, namely the "missing money" and the uncertain economic viability of conventional generation going forward.

While the proposals under consultation for the procurement of additional services could, in theory, provide additional **balancing** reserve for the 2014-2018 period, they will not improve the fundamental market conditions (if plant is no longer on the system, it can't be used to balance).

What the GB electricity market needs is not a temporary sticking plaster but rather an enduring mechanism that will enable not only investment decisions for new plant but also improve the economic viability of existing plant. These proposals do not encourage any investment in new plant so only address part of the challenge. This can only be solved through a market-based (and market wide) capacity mechanism like the forward capacity market for which DECC is currently legislating. Early introduction of payments under this enduring capacity market would address both issues with the one mechanism.

The consultation document acknowledges that "security of supply is a function of the market which is underpinned by the energy policies under which the industry operates" and that it is not National Grid's role "to ensure there is sufficient generation capacity available to meet demand." However, the proposals aim to ask National Grid to do precisely this by procuring capacity through the Supplemental Balancing Reserve (SBR) and Demand Side Balancing Reserve (DSBR). This would be a fundamental change to National Grid's role as residual system balancer of the energy market arrangements founded at NETA and raises new potential for conflicts of interest.

The SBR is essentially a form of strategic reserve with last resort dispatch. The strategic reserve was rejected by DECC, acknowledging that such a mechanism does not address the "missing money" in the energy market and could even exacerbate this problem should investors fear the strategic reserve would be deployed before intended, i.e. when other capacity is available albeit at very high prices. This would dampen the investment signal for players outside of the strategic reserve, leading to the "slippery slope" effect whereby no new investment is viable without a SBR contract and more and more capacity must be procured within the strategic reserve.

DECC's concerns about the premature deployment of a strategic reserve go to the heart of the problem with the SBR. Although on paper the SBR will come with conditions that prevent reserve plant interfering with the energy-only market, in practice it will be difficult for National Grid to strictly adhere to these conditions, due to factors related to plant dynamics and cost as well as regulatory and Government pressure. Indeed, in his response¹ to a question from Dan Byles MP, Ed Davey stated "**whether it is in the short term, as Ofgem and National Grid are doing, or in the medium term, as we are doing with the capacity market, is that by the fact that you have that capacity, prices will not peak as high as**

¹ Oral evidence from Energy and Climate Change Committee "Review of DECC Policy", 2 July 2013: <http://www.publications.parliament.uk/pa/cm201314/cmselect/cmenergy/uc554-i/uc554.pdf>

they otherwise would have done". The clear implication of this is that the reserve plant is expected to interfere with the energy market.

The consultation document also recognises this and points out that there are instances where National Grid will have to "begin ramping up SBR plant before other balancing services had been fully exhausted."

The security of supply problem facing GB, as identified by Ofgem and DECC, is about capacity (system adequacy) and not balancing. As such it must be tackled using a mechanism that can both bring forward investments in new and maintain investment in existing capacity in the most efficient way. The SBR does not achieve this aim and could crowd out commercial investment.

If the Government believes it is not feasible to finalise and implement the enduring capacity market to deliver payments to providers for winter 2014/15 then a tender for one year only of SBR might be appropriate to provide a comfort blanket to Government, provided it is carefully designed so as to limit distortion of the energy-only market. The focus, however, should thereafter be on implementing the capacity market for delivery in 2015/16 and it is hard to see how working on two mechanisms will not deflect resource from the main objective and impose additional cost for all participants. In any event, it must be shown that such a short term intervention does not damage medium and long term investment.

Section 3 - Demand Side Balancing Reserve

SSE supports efforts by government to improve the commercial opportunities for demand side response (DSR) measures.

However, DSR is still a long way from being able to reliably contribute to addressing the projected capacity shortfall. DECC's own research gives inconclusive evidence on the potential for and reliability of DSR in the domestic sector², while many non-domestic customers already participate in DSR through, for example, interruptible contracts. The DSR product would need to be delivering in 2014/15, and it is unlikely that significant volumes will come forward before this time beyond what is already participating in the market through STOR. The pilots planned for DSR under the capacity market will provide a useful entry point for DSR into the market. Attempting to fast-track this process by introducing a new DSR product would be premature and unlikely to deliver the desired results.

The focus should instead remain on the participation of DSR in the enduring capacity market through the planned DSR trial. The first auction for the DSR/storage trial under the capacity market should be run in 2014 with first delivery in 2015/16, not delayed until 2015 as has been proposed in the July capacity market update from DECC. The consultation document states that learnings from the DSR will help inform the DSR trial. However, the two schemes will operate separately and do not appear to have many similarities in terms of qualification, participation and value of providing demand response. To realise its potential in the market, DSR needs a stable, supportive commercial framework to be developed as soon as possible. Creating two products will hinder this by introducing a

² https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48552/5756-demand-side-response-in-the-domestic-sector-a-lit.pdf

time-limited product (DSBR) instead of giving the enduring product (DSR in the capacity market) a longer lead time to develop.

Section 3A – General response to DSBR consultation

- It is unacceptable for DSBR providers not to face a penalty for non-delivery. If DSBR providers are receiving a capability payment then there must be consequences for failure to deliver and cannot simply be based only on using reasonable endeavours. Without a penalty, customers are paying for a false sense of security of supply that is not being guaranteed by DSBR providers.
- It should be recognised that using historic Triad avoidance will reduce a participant's ability to provide services under DSBR – i.e. southern demand will be disadvantaged.
- We agree that the reduction of costs through DSBR service should not be included in the System Operator Incentive scheme
- It has been proposed that DSBR is despatched in order of economic precedence with other balancing services but that having done so, its cost would not be factored into the imbalance price. This would result in a depression of the market price, which is wholly unacceptable when DSBR is being despatched within the stack of all market actions. If despatch is to be done in this way then the cost must be included in calculating the imbalance price.
- The proposed baselining methodology is overly simplistic and does not account for temperature effects

Section 4 - Supplemental Balancing Reserve

The SBR is being proposed as a time-limited, narrowly-focused contract for capacity that will exist in isolation from the energy and balancing services markets. Should the SBR be introduced as a short term measure, the following elements are critical to its acceptance:

- (1) The SBR must have a firm sunset date and must not interfere with the introduction of the capacity market;
 - The SBR should only be used as a stop gap measure before the capacity market can practically be introduced. The SBR must cease before the first capacity market delivery year, which will therefore be in 2015/16.
 - In approving changes to National Grid's licence conditions, Ofgem must stipulate that the powers to procure the proposed new balancing services expire before 2015/16. Only including a review clause would not provide sufficient confidence to the market that the SBR will be time limited in nature.

(2) Strict conditions preventing SBR plant from interfering with the energy-only market must be imposed and adhered to.

- The presence of SBR plant must not be allowed to interfere with the potential profitability of plant that has remained online in the regular market. This can only be achieved by restricting despatch of SBR to after all other offers have been taken in the balancing mechanism.
- If used, the SBR must be priced into the imbalance price in some way (see below).

National Grid and Ofgem must act quickly to finalise the detail of the SBR, as plant must make decisions today (eg fuel contracts, staff, outage planning) if they are to participate in the SBR for 2014. The consultation document mentions earlier tenders could be run for an SBR trial in 2013/14, in which case there is already very little time to prepare stations before this winter. Realistically, it will be difficult to implement this solution quickly, especially if a decision from GEMA is not forthcoming until the end of this year or into 2014.

Moreover, the introduction of the SBR creates another layer of uncertainty for operators and investors in a market already facing an investment hiatus due to the lack of clarity around the implementation of the Electricity Market Reform package, particularly when these measures may need to receive State Aid and other clearances from the European Commission.

Section 4A - Response to SBR consultation questions

Q SBR1: Do you agree with our basic product proposals?

SSE agrees with the availability time window of 6am to 8pm on non-holiday weekdays between November and February.

The tender process as proposed contains too many variable parameters to run a simple and fair tender. Since the SBR is effectively a tender for capacity, the utilisation price should be fixed and providers should compete on capacity fee only. The utilisation price should be fixed and the capacity price would then be the sole element on which all plant would compete, simplifying the tender process.

It is important that SBR volumes are not included in surplus margin data. Margin data influences risk and in turn price. SBR volumes can not be traded in the market and hence should not be included in this data.

Q SBR2: Do you agree with our proposals on participation and our proposals to seek reasonably satisfactory evidence regarding additionality?

SSE recognises National Grid might wish to put in place eligibility criteria to prevent all forms of generation coming forward to tender for an SBR contract. However, there appears to be a fundamental conflict between the Government's desire to use this mechanism to keep existing plant open and for there to be additionality. Any criteria imposed (eg date mothballed) would have to be carefully chosen not to create a perverse incentive for plant to mothball early nor to disadvantage those plant that have stayed open in anticipation of a capacity market being introduced for 2014/15. Injudicious imposition of eligibility criteria could result in National Grid turning down plant that will in fact be forced to close or

mothball without a contract based on administrative eligibility criteria instead of on its relative cost effectiveness.

It would be complicated and unnecessary to require plant to provide hard *ex ante* evidence that it will close or mothball if it fails to receive an SBR contract. In the absence of some form of support in addition to anticipated market revenues there is no market signal to keep many of SSE's existing plant open. Any plant that puts itself forward for a tender will do so knowing that if it is successful it cannot sell forward or run in the energy market for the period under which it is under the SBR contract.

If National Grid requires assurances, they could ask generators participating in the tender to sign a declaration that if they are successful in getting an SBR contract they will not turn it down. If a generator then violated this declaration it would forfeit an administration fee or pay a penalty. A more onerous condition would be that any plant that entered the SBR tender would make itself ineligible to run (outside of the SBR) regardless of whether or not it was successful in the tender.

Plant must be allowed to return to the regular market (which at this time should be a combination of the capacity market and energy market) once their SBR contract has elapsed. Plant that are unsuccessful in the SBR tender and mothball should also be eligible to participate in any future SBR tenders or capacity market auctions.

For the SBR to be feasible, plant must not be required to hold their own Transmission Entry Capacity (TEC). Plant that are closed or mothballed may have already released their TEC. It would be unreasonable to require SBR plant to incur the cost of retaining TEC or procuring short-term TEC since it is likely to run rarely and all despatch will be at National Grid's instructions. National Grid should facilitate the process by guaranteeing TEC with a successful SBR tender where such TEC can only be used when the plant is called under the SBR contract by National Grid. This could be provided to SBR contracted parties through a TEC transfer from National Grid or by National Grid refunding the cost of TNUoS to SBR plant that already hold sufficient TEC.

SSE disagrees that SBR tenders should be evaluated on the basis of location in transmission constrained zones. If National Grid wish to attempt to assess tenders based on location and potential for plant to be behind constraints, then the Ofgem capacity margin numbers on which the rationale for the SBR is based must similarly recognise the potential for these constraints. As it stands Ofgem's Electricity Capacity Assessment (2013) does not take into account transmission constraints when estimating future capacity margins. If it did, this would highlight the current situation as being even worse than anticipated.

Plant with limited running hours must be able to demonstrate they have sufficient remaining hours to be available to meet any testing regime and operate over a defined requirement for the SBR contract period, from November through February. Plant that have exhausted their permitted running hours under the LCPD and remain mothballed must not be awarded SBR contracts in the tender process over any other plant without such barriers to operation.

Q SBR3: Do you have comments on the proposals to infer outage rates by allowing service providers to choose their non-delivery charge? Views are also invited on the approach to creating the appropriate trade-off between non-delivery charges and de-rating factors.

Penalties - A consistent approach should be taken to imposing any penalty for non-availability on both supply and demand side solutions. This must be enough to encourage sensible behaviour and discourage non-serious participants, but not be so punitive as to discourage participants from coming forward at all. Especially recognising that much of the plant the SBR would be designed to contract will require relatively long term signals and significant investment. This would be particularly true of mothballed plant where new staff may have to be recruited and trained as well as significant technical overhaul required to make and keep the plant ready to run.

Testing - Any testing regime could make SBR payments contingent on achieving successful tests, which could be set twice over the period November through February. There should be provisions to allow SBR plant a proving run of their own accord, which would be a prudent undertaking for plant that otherwise has no option to self despatch. The tests could be split across the testing period, ie an SBR plant would be paid two instalments of its SBR payment after completing successful tests in say November and December. It would be important that any tests are staggered and took place away from the demand peaks so as to have as little impact on the market as possible.

The details of this testing regime could be modelled on something similar that already exists in the current market, for example, the National Grid/Generator black start testing regime. The testing parameters would have to be adjusted for the circumstances of individual plant, eg plant dynamics. The reliability of potential SBR plant should also be considered in designing the testing regime. Plant that will be eligible for SBR are those that were planning to close or mothball, thus operators may not have made the same investments into plant reliability as plant with longer anticipated lifetimes. Using a strategic reserve which reduces the running opportunities and imposes irregular running for plant rather than a capacity market which still allows it to run may exacerbate reliability problems further.

Q SBR4: Do you agree with our verification proposals?

See above for proposed testing regime.

Q SBR5: Do you agree with our proposals to despatch SBR only after other non-emergency balancing services have been exhausted and do have any views on whether SBR should be despatched through the Balancing Mechanism or outside it?

If the SBR is intended to be outside of the energy-only market then it must only be despatched as a last resort. SBR should not be used in place of reserve as suggested in paragraph 5 (page 17/18) of the draft Balancing Principles Statement. If priced reserve is available it should be used for energy (and its Offer price would feed into cash-out) before the SBR. The SBR can substitute for the reserve, i.e. it becomes the reserve, but it should not be used for energy before the priced reserve is used. This means a change is needed to the draft Balancing Principles Statement. To ensure all other priced generation is despatched before SBR, SBR plant should be valued at VoLL and factored into the

imbalance price at this level. If dispatched, SBR plant would not receive VoLL but rather its agreed utilisation price (as well of course as its capacity fee).

It is understood that it is not possible to fully insulate the market from SBR plant as these units will invariably be dispatched prior to actual system need in order to give the units time to synchronise. In order to minimise this distortion to the market, SSE considers that the start time of the units and the MWh displaced during start up must be taken into account when evaluating tender submissions.

The SBR should only be open to Balancing Mechanism Units and a record of SBR despatch (time, price, load and duration) must be made available in the public domain.

Q SBR6: Do you agree with our proposals for Settlement, and in particular, regarding the payment of 20% of the capacity payment up front?

Operators are likely to incur considerable up-front costs to bring aging plant back to operational status to participate in the SBR. A settlement process that can allocate cash up front will be helpful. It is also important that financial penalties for non-delivery be kept to a minimum as large liability exposure will result in operators having to increase the price they offer into the tender, which would in turn unnecessarily increase costs for consumers.

It is not reasonable to settle the vast majority of the charges following the end of the winter availability period. As already highlighted, operators are likely to incur considerable up front cost, therefore it seems unreasonable to delay payment throughout the duration of the availability period. For example a requirement to utilise the plant in November could result in a payment delay of 4 months. Monthly settlement of the balance of capacity payments, utilisation payment and warming fees, offset by any non-delivery penalties would be more appropriate. Since SBR would be only an interim arrangement settlement processes should be simplified as much as possible in order to avoid unnecessary costs of building systems which would have a relatively limited lifespan.

Section 4B - Further considerations

SSE notes that the Government's decision to ask National Grid to introduce interim measures to address security of supply instead of bringing forward the first capacity market payments to 2014/15 is based on DECC's view that using existing powers to create the SBR is "a much more cost-effective solution, much more reliable, [and] much more certain."

DECC sees the SBR as an extension of current payments for balancing services and thus the quickest and cheapest way of managing short term capacity shortfalls. DECC also expect there to be savings to the consumer as the extra capacity procured through the SBR will prevent prices from peaking as high as they otherwise would have, giving rise to our reservations expressed above.

SSE is concerned that no impact assessments quantifying the costs and benefits of the SBR and DSBR have been carried out to support the above mentioned statements about cost reductions and that there is no intention to bring forward impact assessments until after the consultation is complete. Government must demonstrate that the impact from the National Grid proposals on the magnitude and volatility of prices represent better value for money to customers than bringing forward the capacity market.

The charging of SBR and DSBR costs to consumers must be carried out through a transparent and predictable process. Given this is an interim measure until the Capacity Mechanism is in place, in the interests of simplicity both the capability fee and the utilisation fee should be passed through as a flat charge through BSUoS.

Section 5 – Responses to Tender Evaluation and Call-Off

Q TAC1: Do you agree with the way in which we propose to assess Demand Side Balancing Reserve?

It needs to be recognised that with no penalty regime currently proposed for DSBR, all DSBR has to be considered non-firm. That being the case DSBR should not be taken account of when assessing the SBR contracts - which it is proposed will have a penalty regime imposed

Q TAC2: Do you have any particular comments on the way we propose to use Disappearance Ratios (DRs) for Demand Side Balancing Reserve in the assessment process?

The use of Disappearance Ratios is helpful in evaluating the level of DSBR that might be available when called on. However, again, without a penalty regime for DSBR it can only be considered non-firm, and should certainly not be taken account of when assessing the SBR tenders.

Q TAC3: Do you agree that we should enter into a contract with all Demand Side Balancing Reserve with a utilisation price of less than the Value of Lost Load (VoLL) that has no set-up fee?

There seems little to be lost in entering into contracts with all DSBR that has no set-up fee. However, this should not be mistaken for firm demand side response. Importantly, this should not be taken account of when assessing the SBR tenders.

Q TAC4: Do you have any comments on our proposed assessment of Supplemental Balancing Reserve?

It is proposed that the value of SBR tenders is assessed after taking account of the impact of any DSBR tender. However, with no proposed penalty regime on DSBR, the DSBR tenders must be viewed as non-firm and therefore should not be taken account of in valuing the SBR tenders. Only if a penalty regime is put in place for DSBR would it be appropriate to include DSBR tenders in the evaluation of SBR tenders.

Q TAC5: Do you agree with our proposed call-off arrangements?

We agree that SBR should only be dispatched as a last resort irrespective of utilisation price. It must only be despatched as a last resort. SBR should not be used in place of reserve as suggested in paragraph 5 (page 17/18) of the draft Balancing Principles Statement. If priced reserve is available it should be used for energy (and its Offer price would feed into cash-out) before the SBR. The SBR can substitute for the reserve, i.e. it becomes the reserve, but it should not be used for energy before the priced reserve is used. This means a change is needed to the draft Balancing Principles Statement. The

latitude that is proposed, National Grid will have to e.g. warm SBR plant, along with the Minister's statements on how this SBR service will be dispatched, continue to cause concern that the service will indeed interfere with the functioning of the energy market. To minimise this interference, SSE considers that plant start times / MWh that will be displaced from the market must be part of the evaluation criteria when assessing SBR tender submissions.