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Open Letter to the UK Electricity Market Participants, Industry Stakeholders and Large Energy Consumers seeking views on proposals to include SBR and DSBR into cash-out

15th June 2015

Dear Colleague

This letter seeks industry views on our proposals to incorporate Supplementary Balancing Reserve (SBR) and Demand Side Balancing Reserve (DSBR) actions into the imbalance price from November 2015.

These follow the workshop on this issue held in February 2015 and subsequent discussions that have taken place with our Information Services (IS) team and ELEXON.

We are consulting on these draft proposals and would like to hear stakeholder views in relation to the issues set out in this document. Further details and supporting rationale are contained in the appendices to this letter.

These are set out as follows:

Appendix A: Background and summary of proposals

Appendix B: DSBR and SBR dispatch (overview)

Appendix C: Summary of meeting Held on 10th Feb 2015

Summary of Proposals

Treatment within the cash-out price calculation:		
	SBR Actions	**DSBR Actions**
Energy Balancing Actions	Priced at VoLL[1]	Priced at VoLL
Test Instructions	Volume continues to feed into cash-out with an SO-flag (the price applied into cash-out will not be higher than the most expensive unflagged balancing action for that Settlement Period)	No price or volume feeds into cash-out
Ramping Periods	Pricing options for volumes equal to or less than SEL – views requested (e.g. SO-flag, RSP price, utilisation price or VoLL)	No price or volume feeds into cash-out (assumes no ramping)

[1] Based on the administrative Value of Lost Load (VoLL) introduced under BSC Modification P305 which will start at £3000/MWh on 5 November 2015

Actions will be incorporated into imbalance prices for the Interim Information (II) Settlement Run (5 working days after the date).

The volumes associated with these balancing services actions will be based on the volume instructed and will not be adjusted for estimated volume delivered.

Once we have considered the responses to this letter, we will look to raise a BSC modification to enable the correct treatment of SBR in the BSC imbalance price calculation without affecting BM Cash-flow. Note that this mod will be designed so as to as flexible as possible in order to cater for any differing treatments of SBR ramping and running at SEL as mentioned above (e.g. priced at RSP or remain SO-flagged). Also, for the avoidance of doubt, the BSC mod will be limited to ensuring that the solution in relation to SBR is technically feasible rather than considering the wider approach (which will fall under the C16 process).

In addition (again, once we have considered responses to this letter), we will publish a consultation proposing to implement the necessary changes by modification(s) to the relevant Transmission Licence Condition 16 (C16)[2] methodology statements. The C16 consultation will also contain EBSCR proposed changes to the statements but we intend to write it in such a way that these EBSCR changes can be accepted / approved independently of the DSBR and SBR changes if required.

It would be appreciated if any responses could be sent to BalancingServices@nationalgrid.com by 3rd July. This will enable the formal C16 consultation to be prepared and sent out in good time to ensure that any revisions can be reflected and sent to Ofgem in order that they can be approved and implemented prior to November 5th.

However please note that, if you have any specific comments regarding the detail associated with the treatment of SBR in the BSC Imbalance Calculation that you would like to highlight prior to the mod being raised, these will need to be with us by no later than 12:00 noon on 24th June to align with BSC Governance timescales (i.e. we hope to be able to raise the SBR mod at Panel on 9th July).

If you have any questions on the content of this letter, please contact Alex Haffner in the first instance at alex.haffner@nationalgrid.com or by calling 01926 65 5838.

Yours sincerely

Ian Pashley

Markets & Balancing Development Manager, National Grid

[2] Amendments to the C16 statements requires consultation with BSC parties allowing at least 28 days to respond and submission to the Authority containing proposed revisions and any representations received through the consultation process.

Appendix A: Background and Summary of Proposals

1. Background

In December 2013 Ofgem published its decision[3] to approve the application by National Grid Electricity Transmission (NGET) to introduce two new balancing services: Supplementary Balancing Reserve (SBR) and Demand Side Balancing Reserve (DSBR).

Currently, if either of these balancing services is used then the accepted action will not feed into the cash-out price. DSBR prices and volumes are excluded (as set out in the Balancing Services Adjustment Data (BSAD)[4] Methodology). SBR actions are SO-flagged, meaning the price applied into the cash-out calculation will not be higher than the most expensive unflagged action for that Settlement Period. The System Management Action Flagging (SMAF)[5] Methodology sets out which actions will be SO-flagged, this currently includes SBR actions.

Since these services will only be called upon at times of severe system scarcity, factoring SBR and DSBR accepted actions into imbalance prices is necessary in order to ensure accurate signalling to the market. This is consistent with the intent of the EBSCR reforms.

Engagement with the industry took place in 2014 through the BSC Issue 56[6] workgroup and NGET's Open Letter to industry consulting on potential changes. The majority of views indicated the following[7]:

> (1) In principle as DSBR and SBR are seen as emergency actions to avoid demand control then they should be considered a proxy for demand control and priced at VoLL;
>
> (2) This principle should only apply if BSC Modification P305 (EBSCR Developments) is implemented.
>
> In addition to this several parties expressed concerns regarding potential distortion of the BM due to the timings of dispatch instructions (which may be initiated ahead of Gate Closure).

In February NGET held a workshop[8] to revisit this issue with market parties with respect to winter 2015/16. The consensus of the views expressed by attendees was largely consistent with the above, with the following distinctions:

- For DSBR, opinion was split between whether actions should be priced at VoLL or at the utilisation price capped at VoLL
- For SBR, treatment of actions for ramping periods up to and down from the Stable Export Limit (SEL) should not be priced at VoLL. Whilst not unanimous, the suggestion that gained most support was to price these periods using the Reserve Scarcity Pricing (RSP) that is due to be delivered with P305[9]

On 2 April 2015 Ofgem published its decision letter[10] approving P305 for implementation on 5 November 2015. Amongst other changes to the cash-out pricing methodology, this will introduce the administrative VoLL price for demand control actions and the RSP methodology for pricing STOR actions (in both instances where those actions are taken for energy reasons).

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3 Ofgem decision letter on new balancing services: https://www.ofgem.gov.uk/ofgem-publications/85278/decisiontoacceptngetapplicationtointroducetwonewbalancingservicesandsubsequentconsultationonfundingarrangements.pdf

4 http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=40415

5 http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=32869

6 http://www.elexon.co.uk/smg-issue/issue-56/

7 For the full update published following this consultation: http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=35169

8 A more detailed summary of what had been discussed in that meeting can be found in Appendix B of this document.

9 This methodology is due to be applied to Short Term Operating Reserve (STOR) actions and takes the greater of the utilisation price or the prevailing RSP price for that Settlement Period (calculated as Loss of Load Probability at Gate Closure multiplied by VoLL)

10 https://www.elexon.co.uk/wp-content/uploads/2014/05/P305D-v2.0.pdf

2. Timescales for Publication – the mechanism for feeding the price into cash-out

Due to the complexity and cost associated with delivering these changes by November 2015, an automated solution is unfortunately not feasible at this time. However we are able to apply a price signal into imbalance prices using a manual solution that takes advantage of existing processes for amending balancing actions (e.g. the BSCP18 for BOAs and submission of data corrections by email to the SAA for BSAD). The benefit of a manual approach is that it offers more flexibility to treat various parts of an SBR generation profile differently (e.g. apply a different price signal for ramping to/from the Stable Export Limit (SEL) or for generating above it). We also consider the manual solution to be pragmatic given the temporary nature of the services.

Whilst we believe that the existing design of SBR and DSBR will provide sufficient notice that the services have been instructed (e.g. including volume and timing information), we recognise that the time delay of the price component entering the indicative system prices, published within 15 minutes of the end of the relevant Settlement Period, will cause an inconvenience to parties[11]. The next publication of the system prices (the Interim Information (II) run which takes place 5 working days after the Settlement Period) will include any imbalance price impacts of SBR and DSBR actions. We are currently exploring whether there is any possibility to provide an informal view of system prices in impacted settlement periods on a reasonable endeavours basis in order to mitigate this issue

At time of writing, these balancing products are being procured for winter 2015/16 only and it would require a licence direction to extend the products to subsequent years (NB – we intend to consult on future options in the next month or so). Therefore, should this situation change at all we will review the suitability of a manual solution.

Neither SBR nor DSBR actions will be taken for the reasons currently defined under system flagging (e.g. to resolve transmission constraints), therefore all SBR and DSBR actions will be identified as being taken for energy reasons unless explicitly stated otherwise (e.g. SBR testing).

3. Our Proposed Changes

3.1 Pricing of actions for energy balancing

Principles for dispatch

SBR and DSBR actions are dispatched as 'last resort' services to balance the system in the event that there is insufficient generating capacity to meet demand.

All other feasible generating capacity should dispatched, or forecast to be, before the services are dispatched.

DSBR should be called upon ahead of SBR.

Existing notifications (e.g. Notification of Insufficient System Margin (NISM), High Risk of Demand Reduction (HRDR) etc.) will continue to be issued to the market at the appropriate times to give notification of insufficient margin and the potential that the services will be dispatched. In addition, notifications will also be issued to the market via the BM Reports website whenever either service is instructed.[12]

Proposed treatment in cash-out

As last resort options to avoid the System Operator having to instruct demand control, these services can be considered as proxy actions for demand control.

Therefore, we propose to price these actions in the same manner as demand control actions, at the VoLL to be introduced with P305 (in line with our discussions with industry last year and earlier this year). If there are strong views in support of pricing DSBR at the utilisation price capped at VoLL we would be grateful to hear the rationale for such an approach (compared to pricing at VoLL) in any responses to this letter.

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11 For instance, there will not be certainty around the extent of NIV or PAR tagging etc.

12 See Appendix B for further details.

3.2 Associated volumes

SBR: the volume attached to SBR accepted actions will be based on the volume instructed in the initial dispatch and will not be revised to reflect any post-event estimates of volume delivered. This is consistent with the approach currently applied to balancing actions submitted and applied into the cash-out calculation.

DSBR: the volume attached to DSBR accepted actions will also be based on the volume instructed in the initial dispatch instruction multiplied by a de-rating factor of 83%.

N.B. This is a change from the 2014 proposals that put forward a de-rating factor of 75%. This reflects results of DSBR testing that have taken place in the intervening period.

3.3 Action flagging in the case of 'real' dispatch

SBR and DSBR actions will only be taken to resolve energy imbalance on the transmission system and will therefore be classed as 'energy' (and not SO-flagged)

3.4 Treatment of actions taken for test purposes

SBR: SBR actions taken for testing will be SO-flagged.

As such the price applied into cash-out for that action will not exceed that of the most expensive unflagged action for that Settlement Period. The volume of the action will be used in the calculation of the Net Imbalance Volume (NIV).

DSBR: DSBR tests are not currently notified to the market and we do not propose to feed any priced or unpriced volumes into the cash-out calculation.

In the case of DSBR testing, National Grid ensures that the volumes tested at any one time are sufficiently small such that they do not impact the electricity market (i.e. less than 10MW at any one time or a maximum of 1 DSBR unit if it is greater than 10MW capacity).

3.5 Treatment of ramping / volumes below SEL

SBR:

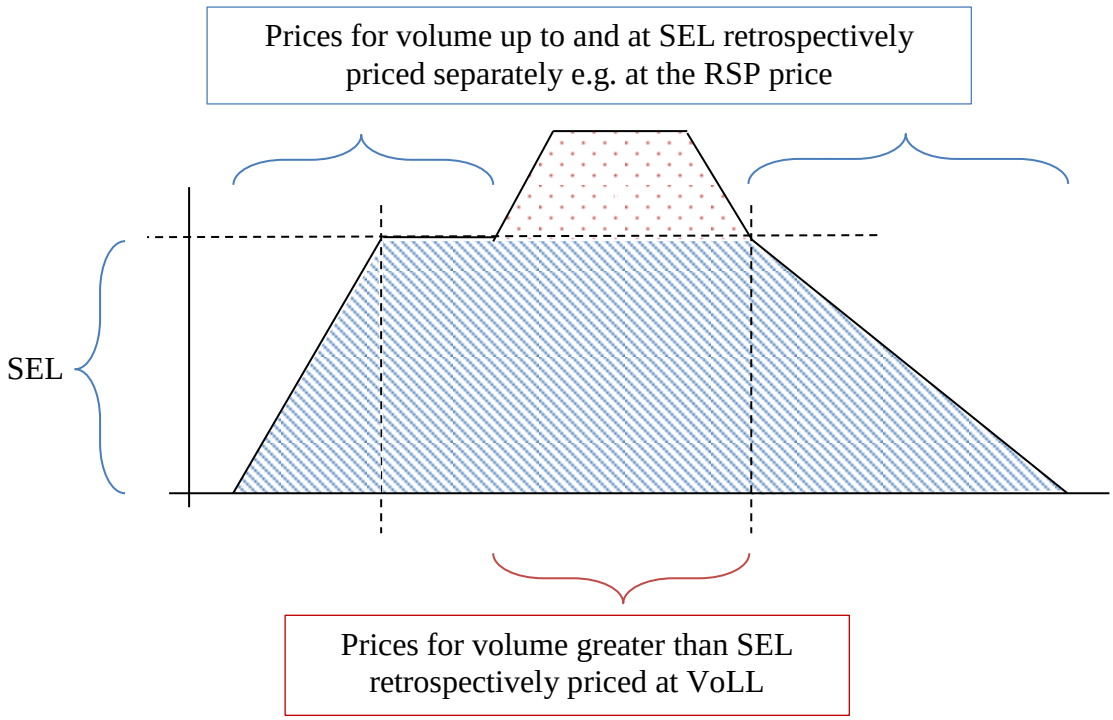
As the physical constraints of an SBR unit may require a ramping period up to and down from their minimum generation level (Stable Export Limit – SEL) there may be a requirement for it to be dispatched some hours ahead of the delivery period for which it is required. It does not seem appropriate for a VoLL price to be applied unless it is for a Settlement Period when the SBR unit's generation is actually required.

We propose treating the ramping periods (where generation volume is greater than 0 and less than SEL) in a different manner in the cash-out price (that is, not priced at VoLL). There are several options for treatment, including: pricing using the RSP methodology, using the utilisation price or applying an SO-flag. **We would particularly like to hear views on how respondents think these periods should be treated and the rationale to support that.**

DSBR:

The process for instructing DSBR requires dispatching instruction(s) to provider(s) to reduce their demand, to meet the required volume. Instructions will be for delivery between specified times that fall in line with the boundaries of the half-hour Settlement Periods. Unlike SBR (or any other BOAs) ramping instructions will not be issued, neither is a payment made for any 'ramping'.

Since no ramping is instructed or procured we do not propose to include any priced or unpriced volume feed into the cash-out calculation. Such an input would be based on a crude volume estimate and would not be verifiable.



The above diagram illustrates an example of how the actions relating to dispatch of an SBR unit might be segmented for the purposes of applying the changes into cash-out. We would welcome views on how these might be appropriately priced.

Appendix B: DSBR & SBR Dispatch

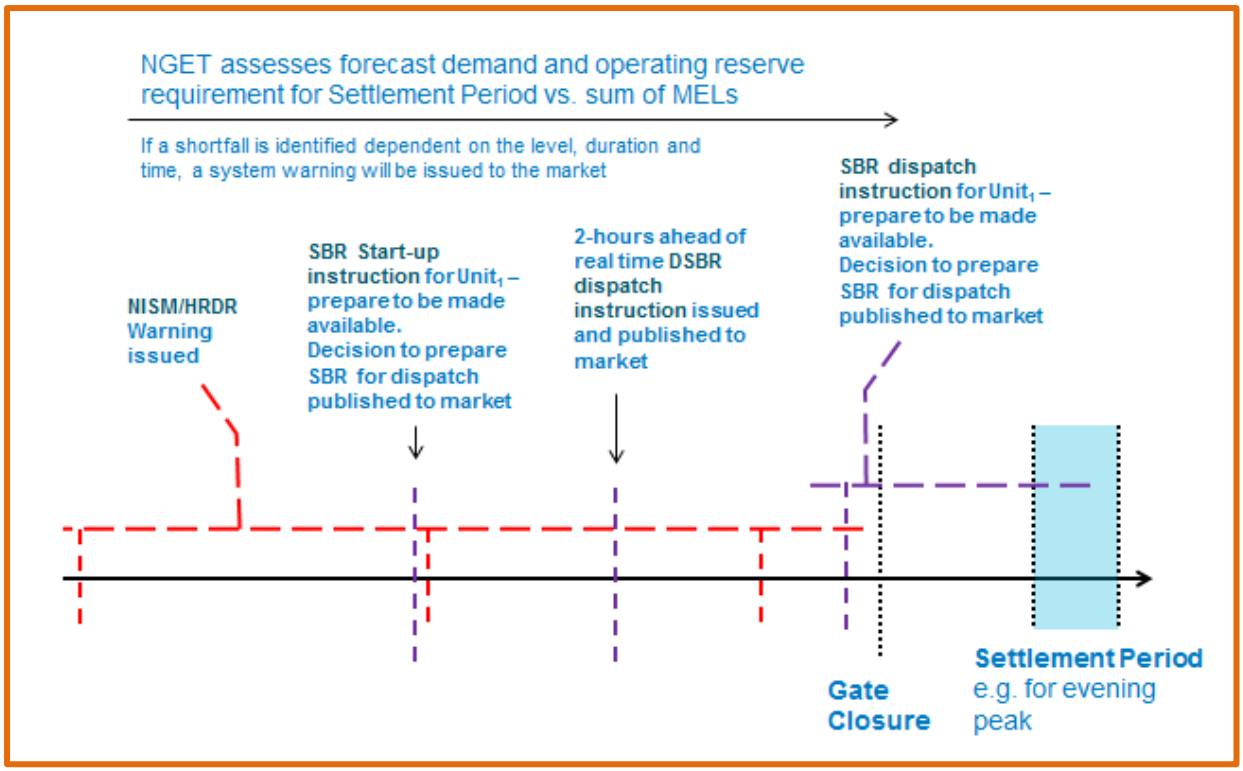
Demand Side Balancing Reserve Overview

- Available over non-holiday weekdays 16:00-20:00 from November – February
- In principle would be dispatched with at least 2 hours' notice (dispatched ahead of SBR), only if it is anticipated that there will be insufficient capacity in the market to meet demand and operating reserve requirements
- System warnings (e.g. NISM) will be issued in advance of DSBR dispatch
- Any DSBR dispatch instructions (including volumes and utilisation rates) will be published to the market
- System warnings will be withdrawn if sufficient plant becomes available, once dispatched, DSBR will not be withdrawn for the required delivery period
- Reliability factor(s) will be taken into account when considering the volume of DSBR available, a reliability factor of 83% of available volume will be taken into account for dispatch instructions issued with a 2 hour notice period. The reliability factor(s) may be revised based on our experience of

Supplementary Balancing Reserve Overview

- Available over non-holiday weekdays 6:00-20:00 from November – February
- Dispatched after DSBR is utilised, a system warning should already be in place at this stage
- Ideally SBR start-up actions that are issued to prepare a unit for dispatch will be published to the market
- Ideally SBR will be dispatched (above its SEL) within Gate Closure to allow industry the opportunity

Example timeline of events leading to dispatch of services (in this example the SBR instruction is issued to warm up the plant ahead of DSBR dispatch, in practice this ordering would depend on the plant's dynamic parameters and, in any case, all available DSBR should be utilised ahead of SBR)



Appendix C: Summary of Meeting Held on 10th Feb 2015

Treatment of Supplementary Balancing Reserve (SBR) and Demand-Side Balancing Reserve (DSBR) into the Calculation of the Cash-out Price

The meeting opened with a brief presentation on the background and key features of the new balancing services, the timeline of events leading to dispatch and considerations to be taken into account when incorporating a signal into cash-out.

National Grid indicated that in considering next steps we should take into account (1) what solution(s) would be desirable in principle; and (2) what is achievable in practice

What price should be applied to the balancing services in cash-out?

Options discussed:

- Value of Lost Load (VoLL) as per EBSCR Final Policy Decision (i.e. £3k/MWh (Nov-15) increasing to £6k/MWh (Nov-18))
- Utilisation Price
- Utilisation Price capped at VoLL
- PAR1 + £1
- Reserve Scarcity Pricing (RSP) function (as per BSC modification P305)

The initial views of the majority of attendees were as follows:

- SBR should be priced at VoLL
- DSBR should be priced at VoLL or Utilisation Price capped at VoLL
- The periods over which SBR is ramping up to or down from its SEL should be priced at RSP (or SO-flagged)
- DSBR ramping should be accounted for in the cash-out price (at RSP or SO-flagged) if possible N.B. Given the nature of the DSBR product, in which providers are instructed to reduce demand and are paid based on the reduction they achieve as opposed to BOA instructions where there is an expectation that instructed volume will be delivered, any ramping volume estimates would be crude approximations
- Timing of price signal – ideally should be in time to enter the calculation of the indicative system prices (~15 mins after the end of the relevant Settlement Period) however if this is not possible then it should be entered in time for the Interim Information (II) Settlement Run (5 working days).

Other concerns noted:

(For the purpose of the meeting, National Grid considered some of these to be out-of-scope to the direct issue. However these concerns will be communicated to the relevant team for consideration.)

- Treatment of plant which has been displaced by the dispatch of SBR or DSBR either to resolve the system shortfall or for testing. Taking in merit order any generation that had been available in the BM and not dispatched, attendees suggested that this displaced volume should be compensated up to the volume of DSBR and SBR that had been instructed. N.B. National Grid responded that testing is now taking place over off-peak periods (e.g. overnight) in order to mitigate this issue with regards to testing.
- Credit implications to market participants of adjusting the imbalance price risk.
- The longevity of the products is a key consideration to the recommendation for the solution (i.e. if the products will only be procured for availability in winter 2015/16 then a less sophisticated solution would be required than if the products are enduring)

- The industry would benefit from the inclusion of more specific information in system warning notifications, in particular the Settlement Period(s) for which insufficient margin is deemed to be available.