# Supplemental Balancing Reserve

Supporting Report to Authority
18th November 2013

This report is provided to the Authority in support of a formal report submitted by National Grid Electricity Transmission in accordance with Standard Condition C16 (C16 Para 8 (a)(iii)) of its Electricity Transmission Licence, seeking approval from the Authority to modify the Procurement Guidelines, the Balancing Principles Statement, the Balancing Services Adjustment Data methodology statement and the System Management Action Flagging methodology statement to incorporate the proposed new Supplemental Balancing Reserve Balancing Service

# Section 1 - Introduction

1. This report is provided for Ofgem in support our formal report seeking GEMA approval to make changes to the statements under Condition C16 of our transmission licence that govern the procurement and use of Balancing Services. These changes seek to incorporate the proposed Supplemental Balancing Reserve (SBR) as a new Balancing Service.

2. Balancing Services are used by National Grid in its role as the National Electricity Transmission System Operator to balance supply and demand in real time and operate a secure electricity transmission system across Great Britain in accordance with our transmission licence obligations. Historically, the margin of supply over demand in the market, together a range of contracted balancing services, has provided sufficient resources to support us undertaking this activity in an effective, economic and efficient manner.

3. However, given concerns over tightening margins in the mid-decade period, National Grid has agreed to develop two new Balancing Services that would provide additional tools to support us in balancing the electricity transmission system against this background. One of these tools, Supplemental Balancing Reserve (SBR) has been developed with the intention of being able to contract with generation that would otherwise be unavailable in the market, to be held in reserve and only to be used in the unlikely event that there is insufficient generation capacity available in the market to meet demand.

4. While this service may never be required, we consider it prudent to develop and have this service available as part of our toolbox of balancing services available to us, such that it could be called upon if the need arises.

5. We consulted the industry on our initial proposals for this product in June 2013, and, following feedback received, made a number of amendments to the product and published a Final Proposals Consultation in October 2013. We hosted two industry workshops to discuss these proposals and had numerous bilateral meetings with interested parties from across the industry.

6. We have now finalised our proposals for the SBR product, drawing on the feedback received from the industry through the consultation process. This document describes the final product design, including how we would determine the requirement for this service, and, assuming a requirement is identified, how we would procure and use this product.

7. Section 2 describes the Supplemental Balance Reserve product. Section 3 summaries the views put forward by the industry in response to our Final Proposals Consultation, Section 4 details how we have addressed the key issues raised by the industry though the consultation process and Section 5 provides our conclusions.

8. If you have any questions on these proposals or require further information please contact Peter Bingham on 01926 655568 or via email at peter.bingham@nationalgrid.com.

# Section 2 - Final Product Description

## Overview

9. Supplemental Balancing Reserve (SBR) is proposed as a new Balancing Service that would support us in balancing the transmission system if capacity margins become tight during the mid-decade period. In effect, SBR would provide additional reserves that could be called upon by the System Operator to help balance the system in the unlikely event that there is insufficient generation capability in the market to meet demand.

10. SBR is targeted at power stations that would otherwise not be available to the market or the System Operator. This may include plant that has or is intending to close or mothball during the mid-decade period. This plant would be held in reserve outside the market, ready to respond in the unlikely event that it is needed. SBR would fall under the direct control of the System Operator, and be despatched only as a last resort to avoid taking emergency actions such as involuntary demand reductions to secure the transmission system.

## Participation

11. SBR is targeted at power stations that would not otherwise be available in the electricity or balancing markets – i.e. plant that could provide 'additional' reserves to support us in balancing the transmission system. However, there would be no explicit requirement to demonstrate that the plant would otherwise be unavailable, although we propose to review this in light of experience operating the scheme.

12. SBR plant would be prohibited from participating in the markets for energy and other balancing services for the entire duration of the contract (not just the winter availability period within the term of the contract). SBR providers would not, by virtue of the terms of the SBR contract, be able to exit the contract and re-enter the market during this period, even if market conditions where to become more favourable.

13. SBR plant would be required to be available on weekdays between 6am and 8pm from the beginning of November to the end of February.

14. SBR plant would need to be a party to either a Bilateral Connection Agreement or Bilateral Embedded Generation Agreement with National Grid; to have registered a dedicated Balancing Mechanism Unit (BMU) and have the necessary control and monitoring facilities installed to enable it to be despatch directly by the System Operator. In certain circumstances, part BMUs may be able to participate in the provision of SBR (e.g. the steam unit of a CCGT, or additional capacity from a Unit that is not available in the market).

15. SBR providers would not be required to hold Transmission Entry Capacity (TEC) in order to deliver SBR capability to the transmission system but would be granted, to the extent necessary, sufficient transmission access rights under the SBR contract whenever the SBR plant is despatched.

16. While we have not ruled out demand-side providers of SBR, it is not clear how demand reduction could be held outside the market. We would address this issue should any such SBR providers emerge.

17. SBR would be technology neutral, regardless of plant dynamics, and non-locational, thus ensuring that a wide range of potential plant could participate in the provision of SBR. Any generating plant could tender for an SBR contract, consistent with our obligation to procure Balancing Services in a non-discriminatory manner.

### Establishing the requirement for SBR

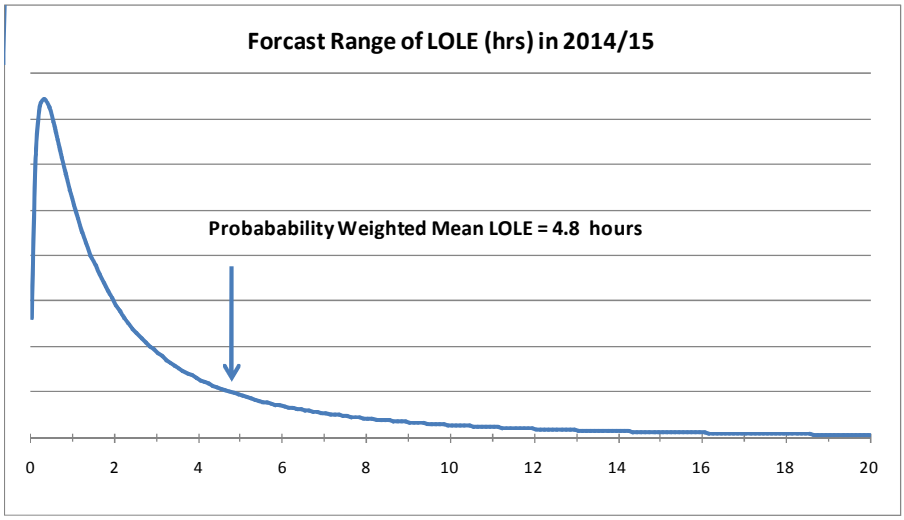
18. Before tendering for SBR, we would need to determine the quantity, if any, we would require for each winter period. We propose to establish a methodology which takes account of the prevailing supply and demand outlook, the associated uncertainties, and the Government's draft reliability standard, drawing on published information in Ofgem's Capacity Assessment Reports, our Winter Outlook Report and Future Energy Scenarios, together with any other relevant information relating to generation availability and trends in demand.

19. Recent capacity assessments suggest a Loss of Load Expectation (LOLE) that is within the draft reliability standard of 3 hours (corresponding to a de-rated plant margin of 3.8%) over the mid-decade winters, implying that there is no requirement for additional reserves during this period. However, the forecast de-rated margin, and therefore forecast for LOLE, is inherently uncertain. There is a risk of more plant than expected withdrawing from the market or economic recovery driving an increase in demand. We therefore propose to take account of this uncertainty by constructing a distribution of LOLE from the range of possible outcomes.

20. Under this approach we propose to develop a number of equally likely supply and demand scenarios for each upcoming winter period, from which we would derive a distribution of LOLE that reflects the range of uncertainty.

21. To illustrate this approach, the distribution below has been derived from a set of scenarios with a mean de-rated margin of 4.5% for 2014/15, and a standard deviation of 2.5%. Since LOLE increases exponentially as margins fall, the distribution of LOLE is characterised by a long tail, giving a mean LOLE of 4.8 hours in this example.

22. We propose that the requirement for additional reserves be based on the equivalent level of additional capacity that would be required in the market to reduce the mean LOLE to 3 hours (i.e. the Government's draft reliability standard). In this example, an additional 500MW of de-rated capacity in the market, corresponding to increasing the de-rated plant margin from 4.5% to 5.3%, would reduce the mean LOLE from 4.8 hours to 3 hours. Accordingly, the de-rated reserve requirement would be set to 500MW.




23. Using the same methodology for 2015/16 and assuming a mean de-rated margin of 3% for that winter, the de-rated reserve requirement would be 1,300MW (which would increase de-rated margins from 3% to 5.3% if this were additional capacity in the market).

24. Both examples illustrate how an objective methodology could be adopted to identify a requirement for reserves that could usefully support us in balancing the transmission system if required, but protects consumers against any over procurement. Both examples provide a de-rated margin 1.5% above that which the three hour reliability standard would imply (i.e. 3.8%), which would proved 1GW of additional reserves to guard against the uncertain outlook, providing protection of up to 1GW of plant withdrawing from the market (or demand increasing).

25. The requirement for SBR would take account of the quantity of any DSBR that has been procured (or is expected to be procured) in meeting this additional reserve requirement. The more DSBR that is procured, the less the quantity of SBR that would be required in order to meet the reserve requirement. In the example above, if we were confident in an abundance of DSBR coming forward for 2014/15, the requirement for SBR would be minimal.

26. We propose to publish the required quantity of SBR and how this was derived ahead of any tender to provide transparency to the market on the quantity of SBR we would be looking to procure.

27. We recognise that there are concerns over the quantity of SBR we might procure and therefore propose that a cap is introduced as part of the funding arrangements. We recommend that this cap limits the total quantity of de-rated DSBR and SBR we could procure to 5% of Average Cold Spell (ACS) peak demand (i.e. ~ 2.8GW). We are in effect reflecting concerns that current market arrangements may not be capable of supporting a de-rated plant margin much above 0% (hence the need for a Capacity Market and cash-out reform), which might reflect an emerging equilibrium in the current market . DSBR and SBR would provide the ability to provide an additional 5% of reserves above this ‘market equilibrium’, to support us in balancing the transmission system if plant margins in the market do drop to these levels. If margins deteriorate below these levels, we believe there should be

sufficient value available in the market for plant to restore margins to this equilibrium, rather than seek an SBR contract, and therefore believe it appropriate to limit our requirements to this level.

## Tendering Process

28. If we identify a requirement for SBR in the winters of 2014/15 and/or 2015/16, we propose to tender for this requirement early in 2014. The tendering process would be similar to that used for certain other balancing services. It would be an open and transparent tender process, open to all parties that meet the participation criteria, with information provided to potential bidders ahead of the tender process.

29. Tenderers would be invited to offer a quantity of SBR, declare their availability, and submit capability, warming and utilisation prices. They would also be required to submit a range of dynamic parameters relevant to their plant as per the Grid Code.

30. SBR contracts would be for one or two years. These contacts may be longer if a requirement is identified for subsequent years. It is not expected that any such contracts would be required beyond 2018/19, as capacity margins are expected to improve with the introduction of the Capacity Market.

## Tender Assessment

31. Tenders would be accepted in economic cost order to achieve the required quantity of SBR at least cost, taking into account the tendered quantity and capability price, the declared reliability, expected costs of testing, warming and utilisation, together with the cost of administering each SBR contract.

**SBR Cost = Capability Price + Warming Costs + Testing Costs + Administration Costs**

32. Tenders would not be accepted if they were considered uneconomic, i.e. the costs of the contract are likely to exceed the expected reduction of energy unserved ($\Delta$EEU), costed at the value of lost load (VoLL).

33. We do not propose to take account of plant dynamics in the assessment. We believe that, in general, any shortfall in the market requiring SBR to be used would emerge in advance, allowing time for SBR plant to be warmed and despatched. Operating reserves, capable of responding quickly, will continue to be used to deal with shortages that emerge in operational timescales. The requirement for SBR would therefore be technology neutral, allowing a range of plant to bid for an SBR contract.

34. We would publish our assumptions around warming, testing and utilisation, the costs associated with administering each SBR contract and details of the tender assessment process in advance of the tender to ensure that participants have a clear understanding of how SBR tenderers would be assessed. Administration costs would include our costs for establishing and managing each contract, undertaking validation and proving tests, the costs

of any additional control or monitoring equipment we need to install and any incremental despatch and settlement costs.

35. Our overriding obligation to procure Balancing Services in an economic and efficient manner and delivering value for money to consumers would be provided by operating an open and competitive tender process for these services, accepting the most economic and efficient tenders to meet the identified reserve requirement and rejecting tenders that are deemed uneconomic.

36. Results of the tender process would be published after the tender event, including details of the plant that is awarded a contract, that which is rejected, together with the quantities and total cost of any SBR procured. These details would also be published in the annual Procurement Guideline Report. These would provide market participants with complete transparency over the procurement of SBR.

37. If an insufficient quantity of SBR was procured as part of the tender, or our requirements subsequently increase as a result of further plant exiting the market, we would consider whether it is appropriate to tender for further quantities at some later date. Ideally this would be 6-12 months after the first tender, thus allowing time for the market to re-adjust for any plant that has exited the market.

### Testing and Despatch

38. SBR would be despatched by the System Operator and not otherwise permitted to run, thus holding it outside the market. It would either be despatched post Gate Closure through the acceptance of Bids Offers in the Balancing Mechanism at the tendered utilisation price, or pre Gate Closure by instructing SBR to submit a profile of Physical Notifications and then operating to that profile.

39. In principle, SBR would only be despatched as a last resort after all other relevant balancing services have been exhausted, or are expected to be exhausted, and Emergency Instructions (such as involuntary demand reductions) would otherwise be required to secure the system. In practice, due to plant dynamics, it may be necessary to warm and despatch SBR ahead of need in anticipation of a shortfall event. However, the intention is to minimise any such effects so as not to deprive marginal plant of scarcity rents.

40. Unlike operating reserves which are required to deal with unexpected events in short timescales, the requirement for SBR is likely to emerge in advance of need, as forecasts for plant availability, wind speeds, interconnector flows and demand become clearer. In such circumstances, SBR would be warmed (if required) such that it is in a position to be despatched if needed (i.e. there insufficient Offers available in the Balancing Mechanism to make up the shortfall). For clarity, it is not expected that we would deplete our operating reserves and frequency response holdings before despatching SBR, as this would make the system insecure. These alternative balancing services would continue to be required to deal with any short-term operational issues that might arise.

41. SBR plant would be subject to monthly proving tests. These tests, together with 'last resort' despatch instructions would be used to measure the actual reliability of the plant, which would be compared to the declared reliability in calculating any non-delivery charges. Given that SBR is likely to be provided by older, less reliable plant, which may not have run for some time or have been regularly maintained, monthly testing would be an important feature in ensuring the plant is available when needed.

42. Some plant may be required to undertake additional non-proving tests to ensure its availability (e.g. when re-commissioning after a period if inactivity, testing following maintenance etc). Any such tests would be agreed with the System Operator and scheduled in advance; they would be kept to a minimum and undertaken so as not to disadvantage other plant operating in the market. We do not propose to make payments for such tests – we would expect the SBR provider to fund these non-proving tests out of their capability payment.

43. To promote transparency, we propose to notify the industry of any warming and potential despatch of SBR in advance, including any scheduled testing. If SBR is despatched to provide additional support in balancing the transmission system during a scarcity event, information would be published on what SBR plant was despatched, the reasons for this, it's running profile and the costs involved. We would also publish information about the use of SBR in the Monthly Balancing Services Summary Report and our annual report (which is accompanied by an auditor's statement) on our compliance with the Balancing Principles Statement.

### Payments

44. SBR providers would be paid monthly in arrears from November through to February for the provision of SBR.

45. Capability payments would be paid at the tendered price net of any non-delivery charges. These non-delivery charges would only apply if the actual availability falls below that declared in the tender, thus providing an incentive to maintain reliability to at least this level. This has been designed to encourage an accurate declaration of plant reliability, which would be used to assess the relative value of SBR contracts when tenders are evaluated, and to incentivise SBR providers to ensure their plant is available when needed. These non-delivery charges would be capped at the capability payment such that payments would reduce to zero if the plant fails to deliver when called. This approach should also ensure that consumers get value for money (i.e. not overpaying for an unreliable resource).

46. SBR providers would receive payment at their tendered rates for any proving tests, warming and utilisation instructed by the System Operator. If instructed as an BM Bid Offer acceptance after Gate Closure (the SBR provider would be required to submit BM prices consistent with utilisation prices in the contract), SBR plant would receive payment through the Balancing Mechanism settlement arrangements. If instructed ahead of Gate Closure outside the Balancing Mechanism by requiring the submission of a non-zero Final Plant

Notification (FPN), an Energy Contract Volume Notification (ECVN) would be submitted to remove any payment through the imbalance settlement arrangements, and utilisation would be paid at the tendered rate under the SBR contract.

### Cost Recovery

47. As a Balancing Service, the external costs of SBR, including capability payments, costs associated with warming and proving tests, and administration costs would be recovered though BSUoS charges. These costs would initially sit outside the Balancing Services Incentive Scheme (BSIS). We also propose that the incremental internal costs associated with SBR are recovered via BSUoS charges.

### Market Imbalance Prices

48. To sharpen the incentive on market participants to balance their positions ahead of Gate Closure, the cost of SBR should be reflected in the calculation of imbalance prices. This could be achieved by setting System Buy Price (SBP) to the Value of Lost Load (VoLL), or the cost of demand reduction, or some other figure above the market price if and when SBR is despatched. Alternatively, the Reserve Scarcity Pricing function proposed in Ofgem's Electricity Balancing Significant Code Review (EBSCR) could be used to set the price at which SBR is included.

49. However, rather than make proposals on how SBR should be factored into Imbalance Prices at this stage, we suggest that the pricing of SBR into imbalance prices should, like other reserves, be addressed as part of the wider review of setting imbalance prices under the EBSCR. Ideally these arrangements would be in place for the winter of 2014/15 (assuming we need to procure SBR for that winter), but we recognise that these may not be established until 2015.

50. If the SBR proposals are approved, we propose to work with Ofgem's EBSCR team and the industry to consider how best to price SBR into imbalance prices ahead of any enduring EBSCR changes being implemented. This may require an interim measure to be established, potentially via a BSC modification proposal.

51. SBR does not feed into imbalance prices under the proposed C16 modifications; hence the use of SBR would neither weaken nor sharpen price signals in the market in 2014/15 if an interim measure were not established.

### Reviewing the ongoing need for SBR

52. Given the uncertainty in the prevailing supply and demand outlook, we propose that the ongoing need for SBR is reviewed in 2016. This review would also assess the structure and application of SBR, what amendments might be required to the product, and whether any additionality provisions should be introduced.

53. The provisions within the statements under condition C16 of the transmission licence that provide for the procurement and use of SBR could be removed following that review if no longer needed, or modified if necessary and allowed to continue until such time as the requirement for SBR falls away, which may coincide with the introduction of the Capacity Market.

## Changes in response to consultation

54. Following the initial consultation in June 2013, we made a number of changes to our original SBR product design in response to comments received. Our final proposals reflecting these changes were set out in our Final Proposals Consultation published in October 2013.

55. We removed the 50 MW threshold and clarified the requirement for SBR to be under the direct control of the system operator. We proposed that tenderers for SBR contracts must submit a declaration signed by their Board of Directors that their plant would not otherwise be available in the electricity market or for the provision of balancing services, regardless of whether it is successful in the tender. We clarified how we would determine the requirement for SBR, and that where economic and efficient to do so, we would aim to procure a sufficient quantity of SBR to meet this requirement at least cost.

56. We proposed that SBR contracts would initially be for one or two years during 2014/15 and 2015/16, and SBR plant would be held outside the energy and balancing markets for the duration of these contracts, thus minimising any market distortion they might otherwise cause. We clarified that SBR would only be despatched as a last resort, where we believe that we would otherwise need to invoke emergency actions to maintain a secure balance of supply and demand in real time. This would be enshrined in our Balancing Principles Statement, which we are obliged to follow under our transmission licence.

57. Following the Final Proposals Consultation which closed on 11th November 2013, we have made some further amendments to the SBR product:

- we have removed the requirement for a declaration signed by the Board of Directors that their plant bidding for an SBR contract would not otherwise be available in the electricity market or for the provision of Balancing Services;
- we have suggested that a subset of a BMU may be able to participate in the provision of SBR;
- we have suggested a methodology for assessing the requirement for SBR, and suggested that the total quantity of any SBR and DSBR we could procure is capped at 5% of ACS peak demand;
- we have proposed that any non-proving tests required by plant owners should be agreed in advance and funded by them;

- we have proposed to publish information relating to both plant that is successful and that which is unsuccessful in any SBR tender, together with the quantities procured and the costs incurred;
- if these proposals are approved, we propose to work with Ofgem's EBSCR team and the industry to determine how best SBR should feed into imbalance prices ahead of any EBSCR changes being implemented; and
- we have suggested that the ongoing need for SBR is reviewed in 2016, and the provisions for SBR removed from the C16 documents if it is no longer required. This review would also assess the structure and application of SBR, what amendments might be required to the product, and whether any additionality provisions should be introduced.

# Section 3 - Consultation Feedback

58. This section of the report provides a summary of the key views and issues raised as part of our Final Consultation Proposals which closed on 11th November 2013. We received 17 non-confidential responses to the consultation and these have been published on our website.

59. There was widespread recognition that there are credible scenarios where additional capacity could be required with some thirteen respondents supporting National Grid taking forward the SBR product. Several of these respondents noted that any such service could lead to increased costs to consumers and as such, careful consideration was required prior to contracting any volumes under the SBR. One respondent suggested that protection to consumers should be further designed into the product via the inclusion of a mechanism to release plant from the contract.

60. While continued development of the SBR product was widely supported, a market wide mechanism was described as being the optimal solution to resolve any potential gap in capacity margins, with five parties calling for the enduring CM design to be brought forward. One of these respondents suggested that an SBR option should only be progressed once it proved impossible to implement a market wide mechanism. One respondent noted that SBR was in a fact a strategic reserve which had been discounted by DECC in preference of a market wide mechanism.

## Sunset Clause

61. Responses consistently noted the importance of implementing the enduring capacity market and highlighted that the introduction of SBR must not be allowed to prevent the delivery of the CM in any way. To ensure this, a condition of SBR was that it be time-limited with eight respondents suggesting a sunset clause be included; end dates ranged from 2015/16 to April 2018 but all aimed to ensure that SBR could not continue past the first expected delivery year of the CM.

## Short Term Operating Reserves (STOR)

62. Nine respondents agreed that contracting for more STOR could have a more distorting impact on the market than the introduction of SBR. Three respondents noted that procuring a separate product to provide additional capacity separately from reserve requirement for operational purposes would provide consumers with greater clarity on overall costs. Two respondents also noted that although procurement of additional volumes of STOR could have a more distorting impact than that of SBR, the service was well understood by market participants and could be used to provide the majority of the volume.

63. Two respondents expressed the view that National Grid had not yet made the case that using STOR to fill a potential gap was not appropriate. A third party noted that while the STOR service was sufficiently flexible to bring volumes of capacity to market, this was not a practical commercial option for some power plants. A further party suggested that while large volume of STOR would not be required, the reserve requirement should be reviewed in light of Ofgem's Energy Balancing SCR and the potential increased risks to security of supply.

64. The dynamic parameters of STOR providers and the ability to instruct a provider a short notice was noted as having the effect of minimising distortion to the market. It was suggested that dynamic parameters should be considered as an assessment criteria, with price remaining as the primary factor.

## Additionality

65. All respondents were clear that additionality conditions were required. There were diverging views on how long the additional conditions should apply; while most respondents supported plant being held back from the market for the duration of the contract following a submission of a tender, three respondents held the view that the plant must exit the market permanently with one respondent suggesting participation in the tender should be limited to those parties who had already exited the market

66. There were mixed views on how to enforce the additionality clauses. Some six respondents supported the provision of a Director's declaration, noting that a board should be free to alter their position in response to changes in market conditions. Four respondents felt this ability and need to respond to market conditions had the impact of making such a declaration an inefficient method to determine additionality. One respondent highlighted that for SBR to be additional, the plant should not be of the type capable of responding to short term swings in prices and as such, a change in market conditions should not impact the decisions taken regarding the plant which SBR should be looking to reward.

67. The Final Proposals Consultation proposed that service providers do not need to have TEC to offer SBR. Two respondents considered this to be a potential distortion as the cost of the TEC used by the service provider when dispatched must be picked up by the rest of the market, changing the cost base faced by wholesale market participants and providers of existing balancing services. However the majority of respondents supported the proposal that SBR providers do not require TEC. One respondent noted that the contract should require the participant to have access to a reliable fuel supply.

68. Three respondents suggested that the surrender of TEC for the duration of the contract would serve as a test of additionality. There were differing views as to whether TEC should be surrendered at the both of submitting a tender or only upon award of contract; one respondent commented that TEC should be surrendered permanently upon entering a tender.

## Market Distortion

69. All respondents noted the potential distorting impacts on the energy market, highlighting that it was vital steps were taken to minimise such distortions. Four participants did not support the introduction of SBR, citing the impacts on the energy market and that the introduction of the product undermined investment decisions recently taken. It was noted that the increase in prices due to tightening margins would incentive mothballed plant to return to service and that the market should be allowed to response to these price signals.

70. Two respondents also noted that the SBR product would encourage inefficient plant to remain open or return to service, interacting with the capacity market once implemented. The capacity retained by the SBR was noted as distorting the signals on the requirements for new capacity and impacting the value of capacity discovered in the market wide auction.

### Last Resort Despatch

71. There was consensus among respondents that the use of SBR must be a last resort, held back from the market until all other options had been exhausted. However, concerns were raised as to how to implement this.

72. Two respondents suggested that all non-emergency services must be used ahead of the SBR, and that SBR should be used to provide operational reserves rather than holding back plant in the BM to provide frequency response or other operational reserves. A further respondent highlighted the need for clarity on the interaction with the existing Max Gen service, noting that if SBR were to be utilised ahead of Maxgen this could undermine existing contractual arrangements.

73. The arrangements to compensate plant prevented from delivering to allow SBR plant to warm and ramp up were supported. However, one respondent highlighted that this would not compensate plant available in the BM which would then not be called off/offers accepted by the System Operator and that as such the compensation arrangements did not cover all affected participants. Another respondent noted that considering plant dynamics within the tender assessment would help minimise market distortions.

74. Four respondents suggested that transparency of any intention to use the SBR was key to minimise the impact on market when the service was dispatched, calling for ex-ante information on expected use of the service and real time reporting on dispatch of any SBR resources.

### Market Imbalance Prices

75. Respondents agreed that it was very important that costs of SBR be included in the calculation of imbalance prices to ensure price signals within the market are distorted as little as possible. However three respondents expressed concern that National Grid and Ofgem intended to develop the mechanism to include SBR in imbalance calculation as part of the implement of the Electricity Balancing Significant Code review, noting that SBR could be required in advance of implementation of Ofgem's proposals. It was suggested that National Grid and Ofgem should do further work to ensure price signals are preserved.

### Contract Length

76. A limited number of participants expressed a view on the optimal contract duration. One respondent considered it a practical solution to allow both a one and two year contracts to be offered. A further respondent suggested that tenders for SBR should be capable of being

cancelled in any year where capacity analysis showed the reliability standard could delivered without intervention; this would suggest a preference for limiting the volume of longer contracts offered in the first year of SBR.

### Testing

77. Regular delivery of the contracted capacity was supported by several respondents, noting that regular running was likely to be important for the plant targeted by SBR to increase reliability. There were differing views as to the frequency of tests, ability to request additional tests and who should bear associated costs. The need to minimise the impact of tests on the functioning on the energy market was noted by four participants, suggesting that advance notice of tests should be provided to market participants.

78. There were suggestions that testing should be kept to minimum, with one respondent commenting that providers should not be allowed to request further tests. Another respondent suggested that tests should only be carried out during the winter period rather than the duration of the contract. A further respondent suggested the frequency of tests should be bilaterally agreed for each SBR plant.

79. One respondent did not agree that monthly testing should significantly impact expected income of SBR plants, suggesting such plant should run on a monthly basis. Another respondent commented that where a provider requested additional tests, the associated costs should be borne by the provider rather than National Grid.

### Penalties

80. There was limited discussion on application of penalties with regard to the SBR product with one respondent agreeing that penalties for non-delivery should apply against a self declared level of reliability.

# Section 4 - Addressing Key Consultation Issues

81. This section of the report describes how we have addressed the key issues raised through the consultation process, including those raised in the Final Proposals Consultation which closed on 11th November 2013.

## Allowing the market to respond

82. A number of respondents throughout the consultation process have suggested that the procurement of SBR would represent a distortion to the market and dilute incentives for the market to respond. Tightening margins should improve market conditions such that mothballed plant returns and marginal plant ceases to withdraw. It has also been suggested that the very fact that we are considering the procurement of this product is suppressing the market response that would otherwise already be happening.

83. Our view is that the need for a Capacity Market and the EBSCR are borne out of concerns that price signals in the current market are not strong enough to deliver an adequate capacity margin. Despite clear indicators on tightening margins, wholesale prices for the mid-decade period appear relatively benign. There is little evidence that the market will respond, and difficult market conditions for gas fired plant suggest that more plant could actually close.

84. Ultimately, if the market does not respond to tightening margins to the extent required, balancing the system in operational timescales will become more challenging. Accordingly, we believe it prudent to have available additional reserves to support us in this respect.

85. However, we recognise that this should be done in a way that minimises any impact on the efficient operation of the market and that the market is afforded every opportunity to respond. We have designed SBR with this in mind. SBR plant would be held outside the market and would only be used as a last resort once all commercial options in the market have been exhausted. SBR should not therefore impact on the market response to tightening margins (and the opportunities this would then create for marginal plant), but would provide us with additional reserves to balance the system if the market does not respond.

86. We have therefore designed SBR to minimise market distortion, but suggested it is prudent to have SBR available to support us in balance the system if the market does not respond sufficiently to tightening margins.

## Bring forward the Capacity Market

87. A number of respondents have suggested that the Capacity Market should be brought forward, such that payments for capacity would begin before 2018/19. However, this is a matter for the Government, and our proposals have been developed on the assumption that this will not happen.

## Buy more Short Term Operating Reserves or STOR

88. A common theme through many of the original consultation responses is that we should simply buy more Short Term Operating Reserves (STOR) rather than create two new

products that would only be required for an interim period. STOR is an existing reserve product with an established tendering process that is well understood by the market, with spare capacity available in the STOR market at low prices. STOR would by definition be responsive, and therefore cause less distortion if used as a last resort compared to traditional thermal plant. This approach would also be consistent with the longer-term need for more responsive plant to manage increased intermittency.

89. We acknowledge all these points and have given careful consideration to the procurement of more STOR as an alternative to SBR. A detailed analysis was included in our Final Proposals Consultation that set out the arguments as to why we believe that this would be less efficient and cause more market distortion. However, despite these points, in response to the Final Proposals Consultation some respondents continue to advocate the merits of simply buying more STOR, while others specifically acknowledged that this would not be appropriate.

90. Our view remains that while the procurement of extra volumes of STOR could provide the additional reserves we require, there are a number of disadvantages to this approach. First, we believe that extra STOR would be heavily oversubscribed and we would need to 'buy through' significant volumes of marginal plant to achieve the 'additional' reserves we require. STOR contracts would be much more attractive to market participants compared to SBR - they would only be held outside the market for the winter availability periods, they could be despatched regularly in preference to other plant in the BM, and they would be free to re-enter the market if conditions improved. Hence this option is much more likely to fuel the 'slippery slope' effect relative to SBR.

91. With the increased volume requirement, prices are likely to be much higher than those in the current STOR market. Accordingly, we believe that the costs of procuring extra STOR compared to SBR to achieve the same quantity of genuinely 'additional' reserves would be much higher, and therefore not in consumer interests.

92. Furthermore, we believe that procuring large volumes of extra STOR would distort the energy and balancing markets, and the existing STOR market given that:

(a) it would be better placed to compete in the wholesale electricity market outside the winter STOR availability windows, therefore impacting on marginal plant operating in these markets;

(b) it could be used in preference to more costly Offers in the Balancing Mechanism, therefore depriving BM participants of scarcity rents; and

(c) it could be used in preference to existing STOR providers if utilisation prices are lower, supported by availability payments.

93. Added to this, STOR is used to manage unexpected events close to real time – this requirement is not expected to increase over the next few years, and we have sufficient quantities of STOR to meet these requirements. To procure extra STOR to deal with a

shortfall in the market would be no more appropriate than procuring extra frequency response – it is a different product for a different purpose.

94. Many of the issues identified above could be addressed by amending the STOR product for the extra volumes required. Longer contracts could be established, and the extra volumes of STOR held outside the market for the duration of these contracts rather than just the availability periods. The current STOR requirement to respond to instructions within 20 minutes could be relaxed to ensure we can access reserves from a wider range of technologies. A last resort provision could be introduced so as to minimise distortion on the existing STOR and balancing markets, thus ensuring it is not used as a short term operating reserve. Such fundamental amendments to the STOR product would amount to creating a new product, which is precisely what we have done by creating SBR.

### Participation

95. In our initial proposals we suggested that there should be a minimum threshold of 50MW for SBR plant, to avoid the operational complexity of despatching large numbers of small providers during periods of system stress. Having recognised that this could exclude useful resources, we have relaxed this requirement. However, when assessing which SBR contracts to accept, we would include an estimate of the cost of administering each individual contract. This would include the costs associated with verification, contracting, testing, despatch, monitoring and settlement of each SBR resource.

96. Responses to the recent consultation and discussions with industry participants have highlighted that there may be opportunities to provide SBR from part of a BMU. For example, steam units of a CCGT may have been withdrawn from the market, or additional capacity may be available in a generating Unit that does not have the TEC to operate in the market. In considering these examples, we agree that it should be possible for such configurations to offer SBR, although there may be some added contractual complexities with these arrangements.

97. Other responses have suggested that participation should be limited to flexible plant, thus ensuring SBR would only ever be despatched as a last resort. However, this would limit the range of technologies that could participate. Given that we generally expect the need for SBR to emerge ahead of real time, it is not necessary for SBR to be highly flexible. Hence to ensure consistency with our obligation to procure Balancing Services on a non-discriminatory basis, participation would not be limited to flexible plant, nor would plant dynamics be used directly in the tender assessment process.

98. One respondent raised concerns that we would take account of network constraints in assessing SBR tenders, as suggested in the proposed changes to the Balancing Principles Statement. It was suggested this should be removed, since constraints are not taken into account in capacity assessments, and this was not covered in the consultation documents. We have considered this view and revised the wording to confirm that network constraints would not be considered in assessing SBR contracts.

# Section 4 - Addressing Key Consultation Issues

## Additionality

99. SBR is intended to be procured from resources that would not otherwise be available in the wholesale electricity market or the balancing mechanism – i.e. it would provide the System Operator with genuinely 'additional' reserves to support system balancing if margins were tight. However, a robust method of identifying which plant is genuinely 'additional' in a fair and objective manner has proven elusive.

100. In our Final Proposal Consultation, we recognised that explicit additionality rules on participation (e.g. must be closed or planning to close) could be counterproductive. We also recognised that subjective judgements over what plant is additional could be challenged. We therefore suggested in our Final Proposals Consultation that SBR tenders should include a signed declaration from the Board of Directors of the company that owns the plant, confirming their plant would not otherwise be available in the electricity market or for the provision of Balancing Services, regardless of whether it is successful in the tender. Such declarations would be made public. The intent was to use formal governance and reputational incentives to ensure that only plant that had or was intending to withdraw from the market would be put forward for an SBR contract.

101. Comments receive through the Final Consultation suggested that this could not be legally enforced, and the declaration would have no value if market conditions were to change. Directors have a duty to their shareholders, and would not be acting in their interests if they had signed a declaration that prevented their plant from re-entering the market if market conditions improved. While a number of other respondents supported the idea of a declaration, we accept that the value of a declaration may be limited, and could be counterproductive. We have therefore dropped the requirement for a Board level declaration.

102. In the Final Proposals Consultation, we sought views on alternative methods of ensuring additionality, and used the example of a market re-entry fee to dissuade speculative applications. Given the feedback received we have considered the following options:

**Option 1 – Economics Prevail**

103. This option allows all plant to participate in the SBR tender and the most economic tenders are accepted to meet the SBR requirement. This approach would promote a more competitive tender process to help minimise the costs of SBR, thus delivering value for money to consumers.

104. Our hypothesis is that only the most marginal plant, that which has just exited or is likely to exit the market, is likely to bid and be successful in the tender, therefore indirectly ensuring that the majority of SBR plant is genuinely 'additional'.

105. Plant long-since closed is likely to be more expensive than marginal plant to reflect the costs of re-establishing the plant to an operational state. More efficient plant currently operating in the market, that would otherwise expect to benefit from tightening margins, is likely to factor in its lost profit opportunity and therefore also be more expensive in the tender relative to

more marginal plant. Plant that expects to re-enter the market is likely to hold onto its TEC, and factor these costs into its price, making it more expensive relative to similar plant that gives up its TEC because it does nto expect to reenter. Hence the plant that is likely to be most competitive for SBR is likely to be the plant that is either closed/mothballed, or that which is at the bottom of the market and least likely to re-enter. Accordingly, much of the plant that is likely to be successful in the tender is likely to be genuinely 'additional': it would have either closed/mothballed or be looking to do so.

106. However, it is possible that marginal plant that would have otherwise stayed in the market tenders for and is awarded an SBR contract, and therefore exits the market. If this happens, the market would tighten, potentially improving opportunities for other marginal plant either to stay in the market or to come back into the market if currently in a mothballed state. Security of supply would be protected, and potentially enhanced by the improved opportunities for marginal plant in the market. We do not consider this a distortion to the market, but more a stimulus, since all plant remaining in the market would benefit equally.

107. One respondent suggested that SBR contracts should be capable of being cancelled via a termination clause to enable plant to re-enter the market if conditions improve. However, we propose that there is no such clause, thus ensuring that only plant that cannot envisage wanting to return to the market during the contract would wish to apply.

108. Concerns have been expressed that plant that would otherwise have closed, could secure an SBR contract, and subsequently re-enter the market at the end of the contract, displacing other marginal plant that has stayed in the market. In our view, plant that is successful in getting an SBR contract is unlikely to re-enter the market – it is unlikely to fare better in the market when margins recover compared to when margins are tight. If it does return, it is likely to be at the bottom of the market, and therefore have limited impact on the market prices, and be unlikely to displace less marginal plant that stayed in the market.

109. This option has the most economic rigour, and in theory should be effective in supporting only the most marginal plants to remain available until margins improve.

**Option 2 – Re-Entry Fee**

110. There are concerns that the economic rational set out above is not enough to dissuade more economic (less marginal) plant from successfully bidding for an SBR contract to "tide them over" and then re-enter the market at the end of the contact when conditions improve. Consumers would be funding plant that, had it not been for SBR, would have remained available, and security of supply would not be improved. We raised the concept of a market re-entry fee in the Final Proposal Consultation to reduce the incentives to do this.

111. This would be enacted by having SBR contracts that endure to 2018/19, even if the requirement for SBR provision is limited to one or two years. The SBR plant would be held outside the market for the duration of the contract, unless a termination fee was paid, effectively allowing the plant to return to the market. To be effective, the termination fee would need to be a material proportion of the value of the SBR contract.

112. Having considered this option, we believe it to be inappropriate. Holding plant out of the market may not be desirable in future years, particularly if margins remain tight such that additional capacity is needed in the market. Preventing plant from re-entering the market could also present significant legal risk as a result of such actions being regarded as restricting rather than facilitating competition in generation.

**Option 3 – TEC**

113. A number of respondents have suggested that plant tendering for an SBR contract should be required to either give up its TEC or suspended/forgo its TEC for the period of the contact for which it is tendering. Their view is that only plant that is planning to exit the market would do so and therefore only genuinely 'additional' plant would bid for an SBR contract.

114. Whilst in principle this option could work, there are a number of issues. There is currently no mechanism in the CUCS to suspend/forgo TEC. A CUSC mod could be raised to enable this, but the industry process for such modifications can take time, and would not be in place if SBR is required to be tendered early in 2014. Also, creating a mechanism that could enable participants to effectively hold access rights in reserve (often referred to as hoarding), is unlikely to be accepted.

115. We accept that plant could be required to give up its TEC in order to be able to apply for an SBR contract, but this would not address the concerns over non-additional plant applying. Plant that gives up its TEC, and is either unsuccessful in the SBR tender or is successful but wishes to re-enter the market at the end of the SBR contract, could apply to re-establish its TEC (or one of the short-term variants) and re-enter the market. Only plant behind a transmission constraint may be concerned about giving up its TEC and not being able to get it back.

116. Another issue with this option is that smaller generation that does not require TEC could not be bound by this requirement, potentially giving it an unfair advantage over plant that requires TEC to participate in the market.

**Conclusions on Additionality**

117. This issue has perhaps been the most difficult issue to resolve in the design of the SBR product. However, we propose that Option 1 is taken forward. This allows the economics to prevail; such that only the most marginal plant is likely to secure an SBR contract; and that other plant should benefit from tightening margins if plant exits the market to provide SBR. Overall, the total amount of plant available to provide security of supply should be enhanced.

118. The need for any specific additional provisions would be reassessed as part of the proposed review of SBR in 2016.

# Section 4 - Addressing Key Consultation Issues

## Inclusion of a sunset clause

119. A number of respondents to the Final Proposals consultation suggested that the SBR contracting arrangements should be time limited, only allowing procurement of SBR up to 2015/16 after which margins are expected to improve, or April 2018 when the Capacity Market is fully established. This would give the market confidence that SBR would not endure in favour of the introduction of the capacity market.

120. Rather than have an explicit sunset clause in the Procurement Guidelines, the requirement for SBR procurement would simply fall away as the market delivers sufficient capacity to meet demand. However, given the uncertain supply and demand outlook, we propose that the ongoing need for the SBR arrangements and their effectiveness is reviewed by National Grid and Ofgem in 2016. This review would also assess the structure and application of SBR, what amendments might be required to the product, and whether any additionality provisions should be introduced.

121. The SBR related provisions would be removed from the C16 documents if the procurement and use of SBR was deemed to be no longer required, or, alternatively, allowed to continue until such time as such requirement falls away, which may coincide with the introduction of the Capacity Market.

## Market Distortion

122. The overriding concern over our SBR proposals is that they could distort the efficient operation of the market. SBR has been designed to minimise any such distortions or other unintended consequences, although we recognise that any market intervention, no matter how well designed, may create some residual issues that cannot be fully addressed.

123. SBR is designed to be held outside the electricity market during the term of the contract such that other plant in the market is not disadvantaged (by the SBR plant receiving capability payments). SBR plant would not be able to generate without an explicit instruction from the System Operator and the contract would prevent any of their output being sold in the market meaning that the SBR contract would hold SBR plant out of the market for the duration of the contract. Hence, wholesale market distortion is avoided.

124. To the extent that plant withdraws from the market to provide SBR, we do not regard this as a market distortion. The market would tighten as a result, and the opportunities for plant remaining in the market would improve, but these opportunities would apply equally to all plant remaining in the market.

125. In principle, SBR would only be used as a last resort after all feasible Bids and Offers in the Balancing Mechanism have been used, so as not to distort the efficient operation of the balancing market and ensure marginal plant that depends on the BM for revenue is not disadvantaged, particularly during periods of scarcity.

126. While these design features should deal with the majority of concerns over distortion, a number of residual issues around market distortion have been identified through the consultation process. These issues are identified and discussed separately below:

**SBR plant returns to the market**

127. This concern can be articulated as follows. Plant that would have otherwise closed secures a SBR contract to enable it to stay open; it then re-enters the market to compete with other marginal plant that did not get the benefit of an SBR contract.

128. In general, marginal plant planning to close because it would not be profitable in the next few years despite the anticipated narrowing of margins is unlikely to be profitable beyond this period when margins improve. Hence if it does return the market, it is unlikely to be more competitive than plant that stayed in the market, and therefore unlikely to create a distortion in the market.

**SBR plant gains a competitive advantage**

129. This concern can be articulated as follows. Plant that would have otherwise closed secures a SBR contract and uses the funding to improve or refurbish its plant; it then re-enters the market better able to compete with other marginal plant both for market share and a capacity contract.

130. We acknowledge this concern. However, competition for an SBR contract from plant at the margin should see prices that reflect the marginal costs of keeping the plant open rather than factoring in the cost of major refurbishment programmes.

**SBR plant covers its maintenance**

131. One respondent has highlighted a concern that plant due for a major maintenance outage could bid for SBR, thus covering its fixed costs during that period, and subsequently re-enter the market. In contrast, plant without an SBR contract would need to shutdown and would be unable to cover its fixed costs, and therefore be disadvantaged.

132. Again we acknowledge the concern and recognise that this is a feasible scenario. However, this is more about one plant gaining a competitive advantage over another, and less about market distortion and the impact on consumers. We do not propose to introduce provisions that would explicitly prevent this scenario.

## Market Imbalance Prices

133. Some respondents have been concerned that SBR would cap price signals, and therefore dilute the incentives for suppliers to cover their positions in the market. However, it is widely accepted that price signals are not sharp enough during scarcity events, in part because reserves and non-costed actions are not priced into imbalance prices. SBR by itself would not sharpen these signals, but neither would it dilute them.

134. We are of the view that SBR should be included in the calculation of Imbalance Prices as part of the EBSCR, such that very sharp signals are provided to the market to balance their positions is SBR is ever used. If, for example, imbalance prices were to reach VoLL whenever SBR is despatched, the mere prospect that SBR might be despatched would provide a very strong incentives for suppliers to cover their positions.

135. However, a number of respondents have expressed concerns that the EBSCR proposals might not be established until 2015, but SBR should feed into imbalance prices for the winter of 2014/15. If the SBR proposals are approved, we propose to work with Ofgem's Electricity Balancing SCR team and the industry to consider how best to price SBR into imbalance prices ahead of any enduring EBSCR changes being implemented. This may require an interim measure to be established, potentially via a BSC modification proposal.

### Last Resort Despatch

136. Throughout the consultation process, concerns have been raised that the 'last resort' rule for despatching SBR might not be sufficiently robust – specifically that we might despatch SBR ahead of actions in the Balancing Mechanism, thus denying BM participants of scarcity rents.

137. Respondents have suggested that despite the 'last resort' principle of SBR, in practice plant with slow dynamics cannot be despatched as a last resort as it needs an instruction well in advance of need. Such plant may take time to run up to full output, be required to operate at that level for several hours after the period for which it is needed, and then take time to ramp down.

138. In addressing concerns we have ensured that the 'last resort' rules are made explicit in the Balancing Principles Statement, which we are obliged to follow under our transmission licence. SBR would only be used in extreme circumstances where we believe that there would be insufficient plant available in the market and the BM to secure the system and meet demand.

139. We have also suggested that marginal plant would be constrained down (and therefore compensated) when SBR plant is running outside the shortage periods for which it is despatched.

140. One respondent highlighted the scenario where the additional output of SBR plant during these periods could displace flexible plant in the BM that might otherwise be called. This is an unlikely but plausible scenario. However, given that we would have notified the market in advance that SBR is required, there should be ample opportunity for such plant to sell its output in the market to parties wishing to avoid high imbalance prices if it is concerned it about not being called in the BM.

### Max Gen

141. Two respondents to the Final Proposals consultation raised the concern that SBR would be despatched ahead of MaxGen instructions.

142. SBR has been designed as an additional tool that could be deployed in a planned way to avoid the need to call for emergency actions in operational timescales. It is not intended to replace emergency actions such as MaxGen instructions. These will continue to be used for the purpose they are designed; to deal with emergency situations which occur in operational timescales (e.g. plant failure). We therefore propose to retain the principle that SBR should be despatched ahead of Emergency Instructions such as MaxGen.

### Need for Transmission Entry Capacity (TEC)

143. Two respondents to the Final Proposals Consultation suggested that SBR plant should have TEC before they can be despatched for SBR, or procure short-term TEC for the contract period. However, the majority agreed with our approach where SBR plant would be given deemed access rights to the system via the SBR contract if despatched in order to deliver SBR capability only.

144. We decided to take this approach for a number of reasons. First, it would be impractical for plant to tender for SBR not knowing if TEC would be available. Secondly, SBR would not be able to access the market generally, and would therefore not gain an unfair advantage as a result of having deemed access rights to the system via the SBR contract in order to deliver SBR capability only. Thirdly, tenderers would simply price the costs of TEC into their bid prices, adding to the cost of the SBR service.

### Testing

145. In responses received around testing, we agree that testing should be kept to the minimum necessary to ensure the availability of the plant when required, hence our proposal for monthly proving tests. These would be scheduled outside times of system stress so as not to disadvantage other plant operating in the market.

146. Feedback received also suggested that some plant may be required to undertake additional non-proving tests to ensure its availability (e.g. when re-commissioning after a period if inactivity, testing following maintenance etc). In response, we have included a provision to allow this. Any such tests would be agreed with the System Operator and scheduled in advance. As suggested by one respondent, we do not propose to make payments for such tests – we would expect the SBR provider to fund these non-proving tests out of their capability payment.

# Section 5 - Conclusions

147. The SBR product has been designed to secure additional reserves from generation that would not otherwise be available to the market, such that this could be despatched by the system operator as a last resort in the unlikely event that there is insufficient generation available in the market to meet demand. The product has been developed with extensive industry consultation.

148. SBR would only be procured if we establish a requirement for additional reserves to support us in balancing the transmission system in the mid-decade period, and this requirement were not satisfied by the procurement of the Demand Side Balancing Reserve (DSBR) product.

149. We will establish this requirement by reference to the prevailing outlook of supply and demand, taking account of the uncertainty of that outlook, with the reserve requirement based on the equivalent quantity of additional capacity that would be required in the market to achieve the Governments draft reliability standard. Our intention is that any procurement be the minimum quantity necessary to support security of supply, thus minimising the cost of this service to consumers. We propose that the quantity of additional reserves we could procure be capped at 5% of peak demand, providing an additional safeguard to the industry and consumers over the extent of these activities and the costs we might incur.

150. SBR would be procured via an open and transparent tender process, similar to that for other Balancing Services. SBR would be technology neutral and not subject to locational constraints, thus ensuring non-discriminatory participation from a wide spectrum of potential providers. The required quantity of SBR would be published ahead of any tender. While we have not ruled out demand-side participation in SBR, it is not clear how demand reduction could be held outside the market. We would address this issue should any such SBR providers emerge.

151. Having explored a range of options, we have concluded that it would not be appropriate to include explicit ‘additionality’ requirements around participation to ensure that only plant that would otherwise be unavailable can tender for an SBR contract. Instead, we propose to allow all eligible plant to participate regardless of its current operational state, thus allowing for a more competitive process and better value to consumers.

152. In general, we believe that only the most marginal plant will come forward and be successful in the tender assessment process – i.e. plant that may be closed/mothballed or be expecting to close. However, if plant that would have otherwise been in the market comes forward and secures a SBR contract, and therefore exits the market, the market will tighten as a result. This should improve the opportunities for other plant that remains in the market, thus helping avert further closures and drawing plant that has closed or mothballed back into the market. Rather than distort the market, procurement of SBR that is not additional would help stimulate the market and improve security of supply.

153. The tender assessment process would be transparent and objective, with valid tenders accepted in strict economic cost order until the reserve requirement is satisfied. No contracts will be accepted where the cost is expected to exceed the Value of Lost Load (VoLL). As such, procurement would be in a manner that is economic and efficient in order to deliver

value for money to consumers. To promote transparency, we propose to publish the results of any such tender, including the plants that applied, that which was successful, and the cost of any SBR contracts established.

154. SBR would be held outside the market, and to the maximum extent possible, only ever used as last resort by the System Operator to avoid the need for Emergency Instructions to secure the system. These arrangements have been specifically designed to minimise any distortion to the energy and balancing markets and to avoid any unintended consequences. To ensure transparency, the industry would be notified in advance of any DSBR despatch instructions issued, and information would be published after the event on why SBR was despatched, it's running profile and the costs involved.

155. As an alternative to SBR, we have given careful consideration to simply buying more STOR as many respondents have suggested. We have concluded that this option would be more likely to fuel the 'slippery slope' effect, requiring a much larger volume of reserve to be procured, and therefore be uneconomic compared to SBR. This would also distort the energy, balancing and STOR markets, while SBR has been specifically designed to minimise these effects.

156. The ability to procure and use SBR, should the need arise, would provide us with an additional tool to balance the system against a background of tightening margins during the mid-decade period, and would provide an important consumer safeguard against further generation plant closures.