

## **National Grid consultation- Demand Side Balancing Reserve and Supplemental Balancing Reserve**

*Submission by GDF SUEZ Energy International*

### **(I) About GDF Suez Energy International**

GDF SUEZ Energy International (formerly known as International Power) is responsible for GDF SUEZ's energy activities in 30 countries across five regions worldwide (Latin America; North America; South Asia, Middle East & Africa; UK-Europe, Asia-Pacific). Together with power generation, we also active in closely linked businesses including downstream LNG, gas distribution, desalination and retail. GDF SUEZ Energy International has a strong presence in its markets with 77 GW gross capacity in operation and a significant programme of 8 GW gross capacity of projects under construction as at 31 December 2012.

The UK-Europe region (GDF SUEZ Energy UK-Europe) has 8.6 GW net ownership capacity in operation, which includes over 5.8 GW of plant in the UK market made up of a mixed portfolio of assets – coal, gas, CHP, wind, a large OCGT diesel plant, and the UK's foremost pumped storage facility. Several of these assets are owned and operated in partnership with Mitsui & Co. The generation assets represent just under 9% of the UK's installed capacity, making GDF SUEZ Energy UK-Europe the country's largest independent power producer. The company also has a retail supply business and a significant gas supply business in the UK, both serving the Industrial and Commercial sector.

### **(II) Summary of response**

- **GDF SUEZ welcomes the opportunity to respond to this National Grid consultation.**
- **For Demand Side Balancing Reserve (DSBR)m, we believe that at sufficiently high prices, further reductions in connected load can be achieved during the peak hours when the instances of high stress are most likely to occur. This is provided participating customers have a reasonable level of guaranteed income from participation, and can prepare for and remain in a state of readiness to deliver on the few occasions that they will be required.**
- **For a number of reasons, GDF SUEZ opposes the proposal to introduce Supplemental Balancing Reserve (SBR)**
  - **it could prove very difficult for the SO to only using this capacity as a last resort;**

- **if used before it is needed, it will create distortions to the wholesale market that will undermine price signals; the market should instead be providing the signal for mothballed plant to return to service.;**
- **given the proposed reliability standard of 3 hours, under the reference scenario, SBR would not be needed.;** and
- **beyond this 3 hours of acceptable loss of load, SBR would appear to be an expensive solution to manage extreme events compared to demand disconnection at VOLL.**

**If despite these objections, Ofgem decides to approve this new balancing service then the following rules should apply**

- **it is in consumers' best interests to minimise the cost of SBR, with this in mind, the SO should provide a cost benefit analysis alongside the tender results;**
- **market participants should be allowed to participate if they can demonstrate that in the absence of a tender they would not be taking part in the market for winter 2014/15 regardless of current operational/mothballed status;**
- **SBR plant must hold or procure sufficient TEC;**
- **clearly defined rules for the circumstances under which SBR is utilised must be developed and enforced;**
- **the availability fees and utilisation (at a replacement offer price) are factored into imbalance cashout prices; and**
- **there are sunset clauses to limit the duration of this new service.**

### **(III) Responses to consultation questions**

#### **Responses to Demand Side Balancing Reserve Questions**

##### **DSBR1. Do you agree with our proposed participation criteria?**

1. We believe that at sufficiently high prices, further reductions in connected load can be achieved during the peak hours when the instances of high stress are most likely to occur. Since TRIAD providers can currently earn on average £28k/MW/yr, any further reductions from these providers will need to be at a higher price. There may be scope to increase demand side provision on a smaller scale outside of the TRIAD environment provided participating customers have a reasonable level of guaranteed income from participation, and can prepare for and remain in a state of readiness to deliver on the few occasions that they will really be required.

2. The participation criteria allows for reserve which would not normally be available through existing channels to be procured using a simple and low cost process.
  - We agree that embedded generation should be able to participate alongside demand reduction.
  - With regards to the data used to settle DSBR, we would recommend that BSC Settlement data should be the only data source used. This in itself will prove that the customer is half hourly metered as is required for the service and will meet the requirement to include an MPAN in the tender documents.
  - We agree that suppliers/ agents might act on behalf of a customer.
  - We would agree that the despatch methodology needs to be cost effective for National Grid and also for any supplier/agent participating. To minimise the impact on our resources we would want National Grid to despatch directly to our customers and provide us with a duplicate instruction at the same time. This will allow us to better manage their participation.

**DSBR2. Do you agree with our proposed product definition?**

3. GDF SUEZ agrees but believes that the uptake of the set-up fee option will be considerably higher than the option of waiving the set-up fee. This is based on our belief that the participating customers will want to have a reasonable level of guaranteed income from participation, to prepare for and remain in a state of readiness to deliver on the few occasions that it will really be required.
4. We would also like to establish the relationship between the client provider and National Grid's System Operator, and the involvement of a third party such as supplier or aggregator. The involvement and responsibilities of suppliers/ agents should be clearly stated and should be no more onerous than a directly contracted customer. Furthermore, National Grid must ensure that all operating costs for the service are kept as low as possible for all parties involved (including supplier/ agents and participants).

**DSBR3. Do you agree with our proposed payment arrangements? Do you have any views on the proposed level of set-up payment?**

5. We are in general agreement with the proposed utilisation payments. Whilst waiving the set-up fee would guarantee acceptance for DSBR providers, it should be recognised that there may be limited motivation to respond beyond the incentive to receive the cash payment for load reduction, if it suits the DSBR provider.

6. The section on payments talks about a “stepped” mechanism in relation to declared capacity, however it is unclear how and when the level of declaration can be set and changed. With the tendering process taking place perhaps 8 months in advance of delivery, the capacity it could provide may be subject to change. Providers will have a much better idea of their forecast consumption one or two months before the start of the November delivery period. To improve the product design, DSBR tenders could allow for an indicative capacity which would be firmed up with National Grid much closer to the month of delivery.

**DSBR4. Do you agree with our measurement and baseline proposals?**

7. Prior to entering the delivery season, it would be beneficial to have agreed the baseline of each participant with rolling updates as the season progresses. This will help them to optimise delivery and will reduce the chance of payment disputes.
8. As baseline is calculated on a rolling average, the customer will only be able to determine how much load/ which processes are to be stopped, if they have a real-time view of total site consumption. Without this, participants will have no fixed reference to know what load reduction they need to achieve. The proposal above to allow the DSBR providers to submit volumes much closer to the start of the delivery period would help to ameliorate this issue. Without this, there would need to be real time metering, which contradicts the low costs approach for this service and adds complexity.
9. Clarity is needed around the handling of embedded generation, particularly if the site is capable of a swing from import to export. Would the delivery simply be measured using data from both meters?

**DSBR5. Do you agree with the proposed arrangements for despatch?**

10. We agree that as the service will be utilised relatively infrequently, the despatch process should be low cost. Historically low cost despatch of demand side balancing services has always been via telephone from National Grid. Has there been an investigation into whether the proposed smart phone app or web-based application will be more cost effective, more efficient, and acceptable to participants? We would also support direct despatch to all participants whether managed by a supplier/ agent or not, with a duplicate instruction being sent at the same time to the supplier/ agent.
11. We do not support the idea of using Standing Reserve Despatch for the purpose of despatching DSBR as this may lead to confusion as to which service was actually being despatched. For the same reason, participants may require the ability to state, in advance, that they would want to restrict participation in DSBR in the stated 16:00 – 20:00 window or for a maximum number of events per season.

**DSBR6. Do you agree with our proposals on procurement?**

12. We agree that the service should be procured by National Grid and broadly agree with the approach.
13. The timetable between Ofgem approving the framework changes needs to have sufficient room to allow suppliers and aggregators to be able to sell this new service to providers. From our experience with new customers it can be a lengthy process requiring a combination of multiple site visits, telephone conversations and detailed presentations to explain a new demand side product. Even now, with established clients, it can take up to a month to arrange and meet with them to discuss tender round results and propose future tendering strategies. On top of this there is further time required to agree pricing strategies and prepare for the tender. This could potentially take a further two weeks.
14. For a new product such as DSBR, GDF SUEZ believes that a minimum of three months would be needed; two months to write to and then meet with potential providers to explain the product and a further month to agree terms before submitting the tender. This should be borne in mind in the timetabling if a decision is made to go ahead with DSBR. We do not envisage a problem with delaying the tender submission date so long as this three month window is maintained – a delay could in fact be beneficial as it would provide greater confidence in the level of baseline demand.
15. We would encourage National Grid to provide a tender submission template with guidance to ensure that the correct data is collected and submitted, for example, the tender requirements as stated in the consultation do not contain a notice period and a minimum size (kW) of contract.

**DSBR7. Do you agree with our proposals on verification?**

16. We believe the checks are necessary.

**DSBR8. Do you agree that there should be a de-minimis dispute threshold?**

17. We support a mutually agreed de-minimis dispute threshold, and would recommend a clearly documented calculation methodology to allow simple validation of payments by participants, suppliers or agents to keep the number of disputes to a minimum.

**DSBR9. Do you agree with our proposed approach to contracting?**

18. Yes.

**DSBR10. Do you agree with our proposals on imbalance pricing?**

19. No, we do not agree with the proposal to exclude the contract costs of DSBR from imbalance pricing. Regardless of the outcome of the Ofgem Significant Code Review (SCR) into electricity cashout, we believe the set up costs should feed into the Buy Price Adjuster as the BPA is designed to reflect the cost of reserve holding in cashout and DSBR is providing reserve. If Ofgem decides in the SCR decision to modify how the BPA is calculated, then DSBR treatment should adopt this new treatment.

**DSBR11. Do you agree without our proposals on how the service should interact with triad demand reducers?**

20. Yes.

**DSBR12. Do you agree with our proposals in respect of Committed and Flexible STOR providers?**

21. Yes.

**DSBR13. Do you have any comments on our procurement options?**

22. We would support a combination of the stated procurement options.

23. We would prefer that STOR despatch is not used for call-offs. DSBR should be called off using its own communication arrangements.

24. Neither direct procurement, nor the involvement of suppliers/ agents can be discouraged (however de-minimis requirements should be set by provider and not by supplier/ agent). We would support National Grid taking responsibility for despatch directly to participants and support/ financial compensation for marketing and promotional activity carried out in the market place.

**Response to Supplemental Balancing Reserve Questions****SBR1 Do you agree with our basic product proposals?**

25. There are practical limitations on SBR being used as a last resort when all other actions bar emergency actions have been exhausted. SBR plant will probably have to warmed and then dispatched in advance of need. The outcome will be that wholesale prices will effectively be capped at the point where the SBR plant synchronises. This is a practical distortion to the market not highlighted in the consultation.

26. We do not agree with the proposals to limit the procurement of this service to generation that would otherwise be unavailable. We provide further information in our response to QSBR2.
27. In terms of non delivery charges, the proposals will incentivise SBR providers to accurately state their de-rating factor. Because providers are taking on this risk, they will seek a higher availability fee which will push up the cost of tenders.
28. If Ofgem decides to allow this new service then the following rules should be applied to limit the impact of SBR on the functioning of the wholesale market. To be clear, even if all these modifications were in place, we do not support the SBR proposal as we still believe that they will have wider impact on the wholesale market.
- National Grid should publish in advance of the tender the requirements for demonstrating 'additionality'.
  - The tender for SBR should happen as soon as possible so the market has maximum foresight of its impact and the wholesale price can reflect accordingly
  - All market participants should be allowed to participate regardless of their operational status provided they can demonstrate that in the absence of a tender they would not participate in the market. There should also be no de-minimis limit on participation.
  - SBR providers have the potential to use the transmission system and so must hold or procure sufficient TEC.
  - Details of accepted tenders in terms of warming payments, utilisation fees, de-rating factors must be published on a plant by plant basis to ensure maximum transparency.
  - Alongside the tender results, the SO should publish a cost benefit analysis that demonstrates how SBR provides value for money compared to the alternative of demand disconnection. In this, the assumptions on EEU and LOLE that led to the SBR volume being procured should be stated.
  - Clearly defined rules should be created that define the circumstances under which SBR is used which Ofgem/DECC and SO sign up to. As far as possible, these need to make explicit that SBR plant can only be synchronised to prevent demand shedding. This means that SBR is called last - after all valid offers have been accepted (including where the SO has to warm plant that is not part of the SBR), all interconnectors are importing at their maximum levels regardless of cost, all balancing services utilised and all DSBR instructed.

- SBR is priced at the highest accepted offer price plus £1<sup>1</sup> and is placed in the offer stack to provide the correct short term price signals. It should however be paid at its utilisation price. The cost of the availability fees should also feed into cashout via the Buy Price Adjuster smeared over the weekday periods when it could be called. With both of these, price signals would be less undermined due to SBR.
- The testing regime needs to be very robust. In addition, SBR plant must be able to run occasionally even in the SBR windows in order to ensure ongoing availability. The rules therefore need to accommodate SBR plant submitting FPNs during the SBR service period.
- Any in-merit generators that lose out on running because SBR is being tested or because SBR is called by the SO should be compensated (taking into account their dynamic parameters) at their offer price for loss of earnings.
- There should be sunset clauses in the powers granted by Ofgem such that
  1. SBR can only be tendered for winter 2014 /15 and winter 2015/16;
  2. if it is viewed as needed for winter 2016/17 or 2017/18, Ofgem/DECC/National Grid should reconsult on the need and retender; and
  3. it cannot be used after winter 2017/18 as it will be superseded by the enduring market wide capacity mechanism

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

29. We have concerns that participation in SBR will be limited to plant that is already mothballed at the time of tendering. Some operational generators are struggling to recover their cash costs but have remained open in the expectation of improved spreads. Not only will this plant miss out on the opportunity to return to profit under tighter market conditions due to the market distortion effects, they will suffer additional costs relative to SBR plant via increased BSUoS payments.

30. If SBR is introduced, it could create an incentive on some loss making plant to mothball in anticipation of getting an SBR contract. This creates a slippery slope effect as the SO will have to buy an increasingly greater volume of plant under an SBR contract.

31. Instead the market should be providing the signal for this mothballed plant to return to service. The SBR does the opposite: it provides a strong signal to remain closed as under the

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<sup>1</sup> An alternative would be to price at close to VOLL (VOLL less £1?) as SBR should in theory be the last action taken before demand reduction. With VOLL proposed to be set at £17,000MWh, a plant that trips when SBR is called could quickly become bankrupt and for this reason we would not advocate this extreme pricing.



proposed qualification criteria becoming available would rule out the opportunity of tendering for SBR.

32. To mitigate against this slippery slope, if SBR is to be implemented, tendering eligibility needs to be widened. It should be open to plant that can demonstrate that in the absence of a tender it would not be taking part in the market regardless of their current operational/mothballed status.

33. The points highlighted above demonstrate the real impact and unintended consequences of strategic reserve initiatives and provide strong justification for dismissing the idea.

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

34. We support the proposals but believe that the penalty regime will incentivise tenderers to increase their tender price to ensure that they can cover their fixed costs at their expected failure rate.

**SBR4 Do you agree with our verification proposals?**

35. It is essential that plant is tested to prove its capability with clearly defined rules for what happens if plant fails a test. In our view, the payment period would be shortened by the time taken to prove full availability.

36. It is not clear how testing will impact on the market. We have concerns that it could deprive generators in merit from revenue as they are switched off to accommodate plant that is being tested. It is also unclear who will pay for the testing.

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

37. We strongly agree with the proposals to use SBR as a last resort but question just how practical this is given that most plant cannot be delivering useful MW instantaneously. We also have concerns about whether SBR will actually be used as a last resort – National Grid at the July workshop seemed to suggest that it could be called before DSBR if it was economic to do so. This raises the questions as the point at which SBR is economic – is it for example when market prices rise above the SBR utilisation fee? In GDF SUEZ's view, if the intention is to use

SBR as a last resort, this should be adhered to or else the market will rapidly lose confidence and trust in this new service.

38. If implemented, our preference is for SBR to be dispatched in the BM. A replacement offer price should be created (the highest accepted offer plus £1 is appropriate if it is to be the last action taken before emergency instructions) with this replacement offer price incorporated into cashout. This is essential as it will allow short term prices to rise to reflect system scarcity. It will also provide recompense as RCRC payments will partially offset the higher BSUoS charge.
39. Given that this service is intended to be used extremely infrequently, issues as to how SBR is treated in cashout, what the SBR provider gets paid when utilised and how the SO manages the use through its dispatch systems can be addressed through a pre-determined manual workaround. A complex solution should not be developed to address this. This could mean that cashout prices cannot be published immediately after the settlement period. So long as it is clear to the market that if SBR is called, the cashout price will go to a very high level, then a publication delay should not be seen as a problem.

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

40. Yes, upfront payments should be kept as low as possible – in the wholesale market, participants get paid when they have generated. The same should apply as much as possible to these new services.

**SBR7 Do you agree that imbalance prices should not be affected by any SBR procurement ahead of Ofgem's Energy Balancing Significant Code Review?**

41. Regardless of the outcome of the SCR, we believe that the availability fees should be incorporated into the Buy Price Adjuster over the period of the contract (6am -8pm for SBR and 4pm – 8pm for DSBR). For the utilisation cost, again the SCR outcome is again irrelevant. We believe that a replacement offer price should be created whenever SBR is utilised. This should be set to the highest accepted offer plus £1 being used in cashout<sup>2</sup>. A manual workaround can be used to ensure that the SBR provider receives the correct utilisation fee.

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<sup>2</sup> An alternative would be to price at close to VOLL (VOLL less £1?) as SBR should in theory be the last action taken before demand reduction. With VOLL proposed to be set at £17,000MWh, a plant that trips when SBR is called could quickly become bankrupt and for this reason we would not advocate this extreme pricing.

**Response to Tender Evaluation and Call-Off Questions****TAC1 Do you agree with the way in which we propose to assess Demand Side Balancing Reserve?**

42. Yes although it isn't clear what can be done to prevent all DSBR tenders pricing at the maximum tranche price.

43. We would like clarification that so long as it is assessed at less than VOLL, to all extent possible DSBR will be called off before SBR is used.

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

44. For the first year of DSBR, assuming a 25% disappearance ratios seems sensible. In subsequent tender rounds, disappearance ratios should be based on observed provision.

45. National Grid does not seem to have much confidence in DSBR provision. It is proposing to assume a DR of 25% in procurement and 75% in delivery. This would suggest it will under procure against the actual need.

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

46. Yes this seems a sensible approach.

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

47. We support SBR procurement being assessed against the alternative of load disconnection valued at VOLL. With a proposed reliability standard of 3 hours, under the reference scenario, SBR would not be needed. To justify procurement of SBR, the SO would have to believe that the risk was greater than this; the cost benefit analysis will therefore be very sensitive to the assumptions made about the expected energy unserved and loss of load expectation.

48. In the Supplemental note following the workshop on 17th July, National Grid highlights that "the risks are highly asymmetric, such that small increases in plant closures or demand can lead to a significant increase in LOLE and hence we regard it as important to be prepared for

such eventualities". Ofgem, for example, presents a high demand scenario (where demand remains flat rather than declines) which has a LOLE of 9hrs and EEU of 11GWh.

49. In this scenario, it won't be certain when in the 9 hours the EEU will occur, it could all occur largely in one hour. To manage this scenario and deal with the possibility of SBR plant failure, the SO might need to procure 3-4GW of SBR type plant. If it is assumed that SBR plant will tender at around £30/kW/yr<sup>3</sup> then under this scenario, the cost would be £90-120m per year. This would not appear to be of benefit given the unlikely probability of this scenario occurring.

Account must be taken of the likelihood of a particular scenario occurring in making the value assessment. Otherwise SBR will be an expensive solution to manage extreme events.

### **TAC5 Do you agree with our proposed call-off arrangements?**

50. Yes in theory, in practice, in most cases it will not be possible to call SBR as a last resort for the reasons given in Question SBR5.

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<sup>3</sup> This figure appeared in one of the DECC Capacity Mechanism Expert Group papers as a potential cap on the bid price for existing plant in the capacity mechanism to reflect the fixed costs of operation.