

## **Ofgem consultation - Potential requirement for new balancing services by National Grid to support a mid-decade electricity security of supply outlook**

*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**

#### **High level statement**

- ***GDF SUEZ welcomes the opportunity to respond to this Ofgem consultation. For a number of reasons, GDF SUEZ opposes the proposal to introduce Supplemental Balancing Reserve (SBR).***
- ***We believe that Ofgem's assessment of the risk to mid-decade security of supply is overstated: the risk to mid-decade security of supply is not being seen in the wholesale market or the STOR market and is no worse than the proposed reliability standard.***
- ***GDF SUEZ believes that SBR will distort the wholesale market and undermine price signals in the event that the supply-demand balance reduces.***

- ***If despite these views, Ofgem determines that SBR is needed, it will be in consumers' best interests to minimise the cost and size of SBR. With this in mind, the SO should provide a cost benefit analysis alongside the tender results.***

### **Supplemental Balancing Reserve**

- **SBR is a significant and unwarranted market intervention. This type of mechanism was rejected as inadequate by DECC as an enduring solution for the capacity mechanism and many of the theoretical and practical arguments against this mechanism apply equally to a more time-limited version.**
- **We believe that Ofgem's assessment of the risk to mid-decade security of supply is overstated**
  - **the traded market does not indicate that there is an expectation of significant market tightening from 2014;**
  - **the recent rejection of STOR tenders by National Grid does not indicate that there is a problem for winter 14/15;**
  - **the supply outlook assumptions are overly conservative; and**
  - **the expected loss of load is consistent with the recently proposed reliability standard designed to underpin the enduring capacity mechanism from 2018.**
- **GDF SUEZ believes that SBR will distort the market**
  - **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 in the event that the supply-demand balance reduces; and**
  - **it is likely to result in allocation of value to the few companies that have chosen to mothball capacity at the expense of other market participants.**
- **We have concerns with the proposed eligibility criteria:**
  - **Proving and assessing whether capacity is 'additional' is entirely subjective, current status is not a reliable indicator; and**
  - **the participation criteria will create a strong incentive on loss making plant currently available to the system to mothball in anticipation of getting an SBR contract, exacerbating the problem that SBR is seeking to resolve.**
- **Critically, whilst the debate over its introduction continues, market distortion will persist. Early confirmation is needed that this proposal is to be rejected in order to give the market time to adjust to any future expectation of market tightening.**

- **If despite these objections, Ofgem decides to approve this new balancing service then the following rules should apply (further detail in Appendix 1):**
  - **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.**

### **Demand Side Balancing Reserve (DSBR)**

- **Even if there is no risk to mid decade security of supply, we can understand the reasons why Ofgem is supportive of utilising demand side measures as a tool to help balance the system and a number of demand side measures are already used by the System Operator.**
- **We would however like to see an enduring product developed from the start rather than DSBR which could be superseded in two years time with the pilot scheme for the capacity mechanism.**

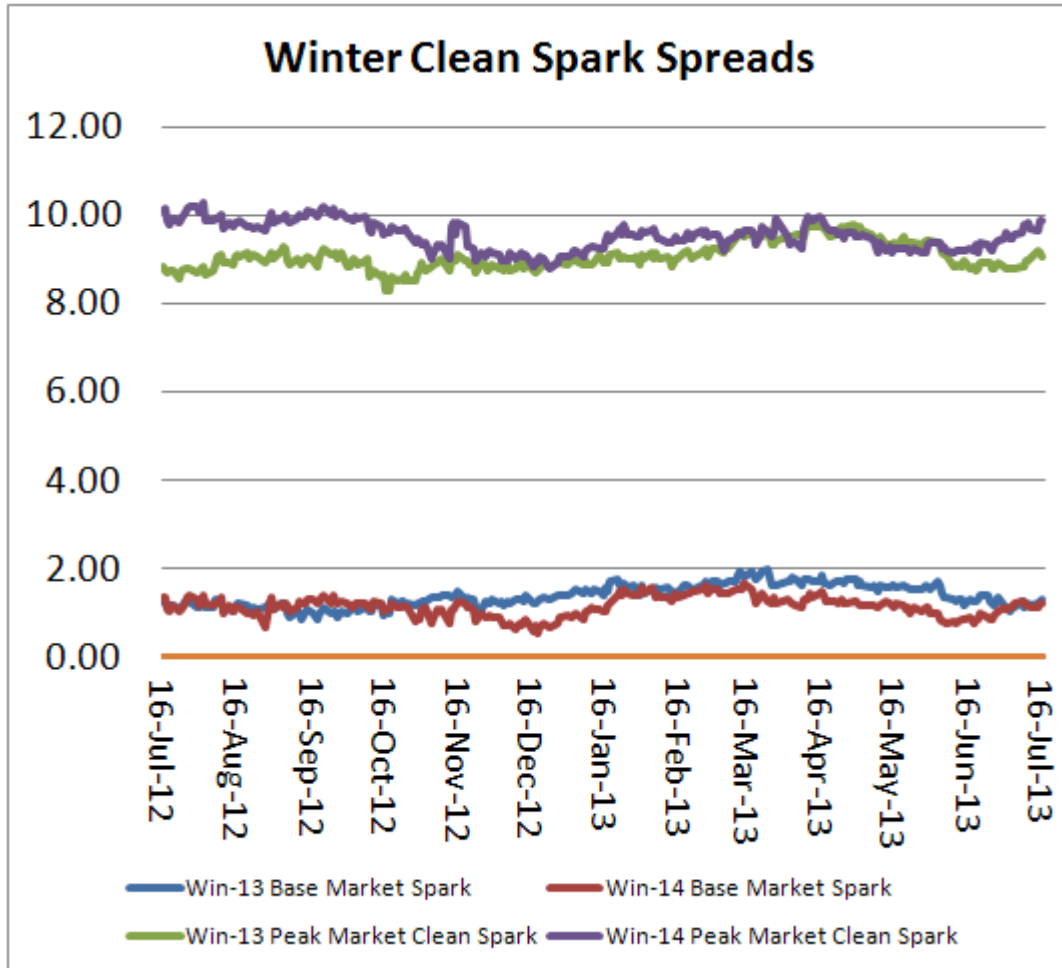
### **(III) Responses to consultation questions**

#### **1. Do you agree with our assessment regarding the risk to mid-decade electricity security of supply?**

1. We do not agree with the assessment for four reasons:
  - the wholesale market is not signalling that there is a problem;
  - the STOR market is not signalling that there is a problem;
  - the extent of the shortfall is overstated; and
  - the LOLE expectation in the reference scenario is the same as the proposed reliability standard

The wholesale market is not signalling that there is a problem

2. If a problem was perceived for 2014/15, it would be seen in the wholesale market and spark spreads would be increasing. The chart below shows this is not the case, daily closing spark spreads for winter 14 have stayed fairly constant for the past year (despite announcements on plant mothballing).



The STOR market is not signalling that there is a problem

3. The results of the latest STOR tenders have recently been published with the highest accepted option fee at £22/kW/yr for energy delivered at £140/MWh with the average accepted at £14/kW/yr. The majority of the tenders were rejected. Whilst STOR is a different service to SBR, it also provides capacity/security to the market and the capacity value should be rewarded on a consistent basis. STOR prices are however at an all time low providing a further indication that the market is not anticipating problems for the 2014/15 period.

The extent of the shortfall is overstated

4. GDF SUEZ believes that the extent of the shortfall in the reference scenario is overstated. One assumption made in the capacity assessment report stands out - that the interconnector will be flat at peak. Ofgem has analysed historic data to inform this decision. We question the future suitability of this historic analysis which does not include the impact of the carbon floor price. With market coupling intended to ensure that power flows are driven by price differentials, then historic analysis is perhaps not that relevant to determining the direction of interconnector flows.
5. One of Ofgem's scenarios examines the impact on margins if the interconnector is importing at half capacity and full capacity. Ofgem estimates that the LOLE at full imports is 0.2 hours in 2015/16, less in 2014/15. At half imports, the LOLE is still under 1 hour in both years. We believe that these scenarios are more relevant in determining whether or not intervention is needed.

The LOLE expectation in the reference scenario is the same as the proposed reliability standard

6. In the Ofgem 2013 capacity assessment, Ofgem forecasts a Loss of Load Expectation of 0.7 hours per year in 2014/15 and 2.9 hours per year in 2015/16 for the Reference Scenario. This is marginally less than the proposed reliability standard in the EMR delivery plan (3 hours). If a decision has been made that 3 hours of lost load is appropriate then we question the need for SBR against this background; it would only be justified to address a LOLE above 3 hours per year. For the LOLE to rise above this level, more extreme assumptions have to be made and could prove very costly to manage.

**2. If so, do you agree with our view that it is prudent to consider the development by NGET of additional balancing services, which NGET would procure and use if there is a need for them?**

7. We have split the answer to this question into two to separately address the DSBR and SBR proposals.

**Demand Side Balancing Reserve (DSBR)**

8. 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. Encouraging greater participation from the demand side is therefore desirable.
9. 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 also 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.

10. It is proposed that DSBR will be superseded by the pilot for the enduring capacity mechanism in 2016/17. It would be more efficient to focus on a single product that could span the first phase of DSR in the capacity mechanism rather than establish tendering procedures, a

metering methodology for the baseline and reduction provided and a notification procedure that only have a 2 year life span. Potential providers would be more likely to sign up to provide such a service if they could see that the rules would be in force for a reasonable period. Suppliers and aggregators would also have a greater incentive to go out a seek signatories to this service if it were to be in place for several years.

### **Supplemental Balancing Reserve (SBR)**

11. GDF SUEZ does not agree that it is prudent to develop the proposed additional balancing service. The reasons for this are:

- it will impact on the wholesale market;
- the difficulty in restricting how SBR will be used;
- we have concerns about who can participate;
- SBR appears an to be expensive solution to manage extreme events
- there is a lack of clarity on how SBR interacts with the enduring capacity mechanism

#### Impact on the wholesale market

12. There is likely to be a widely held belief that SBR will be called when wholesale prices get uncomfortably high for a few days. The decision to withhold plant from the market and not use it could be questioned by politicians, the media and the public and could place pressure on Ofgem and the SO to use this service prematurely. The market is therefore unlikely to have absolute confidence that the SBR plant will not be used except as a last resort.

13. This issue has already been highlighted by DECC in their decision to reject a strategic reserve mechanism for the enduring capacity mechanism<sup>1</sup>:

*"a Strategic Reserve, would require wholesale electricity prices to spike to very high levels. This would mean keeping potentially efficient plants outside the market. It could also lead to concerns from investors that the Government or regulator would intervene to reduce prices. We share concerns expressed by a significant proportion of consultees that this may lead to a*

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<sup>1</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/48253/3884-planning-electric-future-technical-update.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48253/3884-planning-electric-future-technical-update.pdf) para 112

*'slippery slope' where more and more capacity needs to form part of the reserve, particularly if the security of supply problem turns out to be significant."*

14. We question what has now changed such that SBR is now being considered when it was rejected previously.
15. The SBR proposals will therefore prevent prices from rising to their natural levels in the absence of SBR, forestalling market recovery. It is a self re-inforcing intervention; Ofgem/DECC have concerns that the market will not respond to their anticipated supply shortfall. By intervening, they prevent the market working. The market should be providing the signal for this mothballed plant to return to service.

#### The difficulty in restricting when SBR will be used

16. Even with the best intent, we do not believe that y SBR can practically be used as an absolute last resort when all other available offers, interconnector imports and DSBR have been used. Predicting the shortfall will be very difficult and SBR will require warning and will probably need to be dispatched prior to the event happening. It will therefore be used more often than suggested impacting on wholesale and balancing mechanism activity.

#### We have concerns about who can participate

17. 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.
18. If participation is limited to plant that is mothballed, SBR could introduce an incentive on some operational plant to mothball in anticipation of getting an SBR contract. This creates the slippery slope: reserve margins become tighter as there is less available plant and the SO will have to buy an increasingly greater volume of plant under an SBR contract.
19. 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 proposed qualification criteria becoming available would rule out the opportunity of tendering for SBR.
20. To mitigate against this slippery slope, if the 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.

SBR appears to be an expensive solution to manage extreme events

21. 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.
22. 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.
23. 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 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>2</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.

Lack of clarity on how SBR interacts with the enduring capacity mechanism

24. SBR will be procured before a decision is made to go ahead with the capacity mechanism (this is expected in summer 2014). GDF SUEZ has concerns that it could be instead of or in addition to the market wide mechanism. On the first of these, it could be used as a stop gap in case the market wide mechanism is delayed. The fact that the SBR is in place reduces the pressure to introduce the market wide capacity mechanism by 2018. Once SBR is in place and entrenched, it could be very hard to remove and it could end up being the enduring mechanism. On the second, it could continue to be used after 2018 if insufficient capacity has been procured in the market wide mechanism. We would therefore like to see sunset clauses introduced that cover three stages:
- 1) It can only be used to cover 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.
  - 3) It cannot be used after winter 2017/18.

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<sup>2</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.



**3. Do you agree with our assessment of the key factors we should have regard to when considering whether to approve any changes to NGET's Balancing Services Procurement Guidelines and associated documents?**

25. In general, we agree with the proposed factors but do not see how SBR can pass the assessment against these factors. GDF SUEZ believes that SBR will cause unintended consequences in the market because it is aimed at a subset of plant that cannot be used as a last resort. It is also unclear how SBR will provide value for money for consumers given it is based on an extreme, low probability set of circumstances.

26. GDF SUEZ agrees that demand side measures should be used as a tool to help balance the system but would like to see an enduring product developed from the start rather than one that is superseded in two years time.

## **Appendix 1 - Proposed Improvements to the design of Supplemental Balancing Reserve**

If Ofgem decides to allow this new service then the following rules should be applied to limit the impact of SBR 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 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-minimus 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 £13 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.
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- 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

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<sup>3</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.

**For further information please contact:**

Dr. Chris Anastasi  
Head of Government Affairs Policy and Regulation  
GDF SUEZ UK-Europe  
Senator House  
85 Queen Victoria Street  
London, EC4V 4DP  
Telephone: 0207 320 8995  
Email address: [chris.anastasi@gdfsuez.com](mailto:chris.anastasi@gdfsuez.com)

or:

Libby Glazebrook  
Policy Advisor, Electricity Markets  
GDF SUEZ UK-Europe  
Senator House  
85 Queen Victoria Street  
London, EC4V 4DP  
Telephone: 01244 504658  
Email address: [libby.glazebrook@gdfsuez.com](mailto:libby.glazebrook@gdfsuez.com)