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Response to National Grid's DSBR and SBR Consultation

The UK Demand Response Association welcomes the opportunity to provide our views on the revised DSBR and SBR consultation.

Our responses below are specific to this consultation. Our comments are predicated on the following DSBR and SBR tenets: (1) implementation of SBR without a successful DR opportunity alongside to address near-term security of supply would substantially disadvantage demand response; (2) the DSBR as proposed is not a viable opportunity for DSBR and will therefore not meet the expectations of National Grid; (3) we have recommendations for the DSBR which we believe would make it a viable program and which are essential to its success in addressing the security of supply issue in the near term; and (4) we urge National Grid to improve DSBR in the ways suggested and implement both DSBR and DSB schemes, rather than either moving forward with SBR alone or moving forward with a weak version of DSBR.

Additionally, it is the UKDRA's position that implementation of the DSR Transitional Arrangements coincident with the enduring Capacity Market is the preferred approach to provide DSR a viable opportunity to address security of supply (and could be run in parallel with the DSBR and/or SBR), but we understand this consideration is outside the scope of this consultation.

DSBR Questions

- . Q1. Do you consider that the proposed amendments to the DSBR product sufficiently address the issues raised in the consultation?

We do not believe that the amendments made so far are sufficient to make DSBR a success, although they do represent a step forward. We urge National Grid to take seriously the comments of experienced providers of demand response in settling the details of DSBR. We believe that a number of further amendments are essential to the viability of DSBR. These primarily include the payment structure, eligibility, and baseline methodology, and are as follows:

- We do not believe that this product strikes the appropriate balance between set-up



payment and utilisation fee required to encourage the greatest participation from the demand side.¹ Given the expected short duration of DSBR as a product, we do not believe that the £10/kW annual set-up fee is sufficiently high to encourage new market participants. Our experience suggests that an annual set-up fee in the region of £20-£25/kW would be effective. Indeed, a payment of £20 - £25/kW in lieu of high utilisation rates, coupled with a commitment to run for up to a maximum number of hours (e.g., up to 4 hours) would be a much more suitable proposition than as the product design currently stands. These “maximum run hours” could be pre-agreed, so as to facilitate the 250 MW tranches that National Grid intends to use.

Although National Grid has stated that it is possible that DSBR could endure beyond 2015/16, and although utilisation payments are part of DSBR, neither of those is a bankable commitment, and so neither will support investment. The re-introduction of a lower band of utilisation payment would be a welcome improvement that would partially offset the higher set-up fee.

- The proposed payment scheme does not provide participants with sufficient information on which to submit tenders. The utilisation payment tranches are priced at levels outside the experience of all current demand response providers. We recommend that National Grid issue an estimation of the amount of utilisation (including the number of separate events and duration for same) which may be expected at each price point, and that National Grid provide an explanation of how tenders that include both a setup fee and a utilization price point will be evaluated. This is particularly important if National Grid intends to assess the value of tenders as compared to VoLL with the assumption that DSBR will only be utilised between one and three hours per season. In this range, it appears there are few tranches available to providers that would be less than VoLL when including the setup fee in their tenders. We recognise that assumptions on volumes of DSBR and other services will be required to make such predictions, and such assumptions must be stated alongside suitable caveats. We consider that this information is a vital part of ensuring that participants have realistic expectations of utilisation revenues when considering whether or not to tender a set-up fee.
- The requirement that 12 months of half-hourly data be available excludes new-build sites (for example, no supermarkets built during 2013 may participate in 2014), any standby generation which may exceed the load of the site (as the export meter may show little or no data for a generator which has not run in demand response mode before), and any site which has invested in new process equipment (whose consumption would not be shown in historical data). Our alternative baseline method, proposed below, would reduce this requirement to less than one month, which would thereby include most or all of these categories.
- We do not support the baseline method proposed, as it excludes new sites, sites which have invested in new processes, and potentially some generation. It will also tend to exclude sites which have previously offered flexible STOR, as STOR calls tend to fall on high demand periods, giving a zero baseline. Furthermore, National Grid has cited no precedent in selecting this baseline method. On the other hand, the “X of Y” with a day-

¹ NERA paper cite [need reference]. This paper describes that availability payments, and not utilization payments, are required to incent DSR (DR) to participate in markets. It is fundamental, stemming from behavioral science, and evidenced by looking at program and market results in the US over the past 10 years



of adjustment methodology employed in Low Carbon London and various US demand response markets, and selected for DECC's Capacity Mechanism, have a long history and substantial historical analysis to support their validity and guide their application. In this instance, the previous Y similar days (for example, weekdays excluding public holidays) are examined to determine the site's consumption on those days, and the highest X of those days are averaged to create the unadjusted baseline, on a settlement-period basis, and further adjusted to reflect what is happening at the facility in real time. Various enhancements are possible; Low Carbon London, for example, uses a "5 of 10" method with "asymmetric day-of adjustment", which is well documented. We argue strongly for the implementation of such a method in DSBR. In this case, we would suggest that the method consider export to be the equivalent of negative import, thus allowing generation to participate. We would also argue for the exclusion from the baseline of days in which either DSBR or flexible STOR had been called, because flexible STOR is to be permitted to co-exist alongside DSBR.

- The arrangements exclude sites practicing triad management from DSBR. While we understand National Grid's stated philosophy on this point in preferring "new resources" for DSBR, we are genuinely stunned by National Grid's expectation that any new resource would prefer DSBR over triad management. The universal experience of the demand response industry has been that new resources emerge because of the total value of the basket of opportunities open to them. Exclusive arrangements simply lower the value driver, causing some resources to withdraw and causing others to choose the best value option at any time. Universally during winter evening weekdays (the key periods for DSBR), this option is triad management. Any resource which is not presently being developed in pursuit of triad benefit has virtually no chance of being developed for DSBR. Absent a payment structure that incentivises providers to choose DSBR over Triad, there will simply be no addressable load for the DSBR program, whether by individual end-use customers or by aggregators. We therefore urge National Grid to select methods which enable triad management and DSBR to co-exist, so that the combined basket of benefits is sufficient to attract genuinely new resources. The baseline method which we have proposed above would achieve this. An alternative would be to create the baseline from the average consumption during the 4pm to 8pm period, rather than creating a different average for each settlement period. However, this would not be as effective in respect of the other baseline considerations noted above.
- The current design of DSBR vs. SBR seems to heavily favour SBR, since SBR resources are able to tender in their own availability and utilisation prices, while SBR is restricted to pre-decided prescribed levels of utilisation payment, and a static set-up payment. There is no justification for this wide gap in approach that we can see. DSR (non-BM participants) can indeed tender their required availability and utilisation price for a sizable portfolio (i.e. 50 MW), have a single point of dispatch and a single set of parameters. Aggregators are already in a position to this, and already have portfolios of such customers available.

• Q2. Do you support us taking forward the DSBR product with these amendments?

Above we have proposed further amendments to the DSBR product which we think are essential to make this a viable program for DSR, and we support National Grid taking forward DSBR



with these further amendments in place. Without these amendments, the DSBR becomes a program opportunity for DSR in name only, with the result that DSBR will fall significantly short of National Grid's expectations during the crucial mid-decade period when there will be a security of supply risk. This will push more cost onto SBR, STOR and the energy markets, and will potentially lead to lost load. Further, without these amendments, this proposed DSBR poses a risk to the continued development of DSR in the UK - including future participation in the Capacity Market - as the wider potential for and ability to rely on DSR to support the system in the future could be challenged, when this is actually due to the shortcomings and lack of appeal of the DSBR product design.

SBR Questions

- Q3. Do you consider that the proposed amendments to the SBR product sufficiently address the issues raised in the consultation? Do you consider that the additionality provisions discussed in Section 5 are sufficiently robust, or whether these should be reinforced?

National Grid is attempting to isolate the capacity which would have closed or been mothballed in the absence of an SBR contract. This is fraught with difficulty, as it is a slave to other factors such as STOR tender rounds. For example, an unsuccessful STOR result for an OCGT plant will place that asset in a position of non-participation in any market. That will remain true until some future STOR tender round in more propitious circumstances, at which time it may once again consider participating in a market. Is such plant considered additional during that hiatus? Would a board of directors submit the declaration suggested in para 154 in such circumstances? The position is ambiguous. In the end, the choice for the potential provider remains an economic one between different market opportunities, and it is not clear that any isolation is genuinely achieved.

We suggest a simpler approach, namely, that it should be sufficient that plant owners undertake not to participate in any energy market or balancing service for the duration of the SBR contract. The "last resort" provisions for SBR despatch, to the extent that these are effective, withdraw most utilisation payments from such plant, so the energy market and the STOR market remain undistorted.

The STOR market is at present extremely long – National Grid's latest STOR market report suggests a margin in excess of the proposed procurement of SBR. Similarly, the energy market offers poor or negative returns to many power stations at present. If SBR contracts are procured on the basis of best economics, it is clear that some capacity will move from both STOR and the energy market to SBR. We do not believe that this can be prevented by an additionality provision.

- Q4. Do you agree that procuring large volumes of extra STOR would be less economic and cause more distortion to the energy and balancing markets compared to SBR?

We are not convinced that National Grid has made the case for SBR instead of additional STOR volumes. We understand the "buy through" argument, but we suggest that the capacity which National Grid fears having to "buy through" is in fact the very same capacity which would prove most economic in a tender for SBR contracts.

The total value of STOR contracts was of the order of £80m to £100m at peak. An increase of 50% in STOR costs at the peak of the market would barely have reached the projected spend



which National Grid expects to incur in SBR. However, the STOR market is presently so long that much capacity is offered for zero availability fees.

We question the use of an additionality ratio regarding STOR, which suggests that 1.75GW of procurement would lead to 700MW of additional reserves. Extrapolating from this figure, National Grid suggests that 5GW of extra STOR would be required to secure 2GW of additional reserves, on the basis that 3GW of that total would have participated in the energy market anyway. However, capacity which is uneconomic in the current energy market receives no revenue even if it is notionally a participant in it, and we ask whether it has been considered how much of the 3GW of “non-additional” capacity would fall into this category. All such capacity must surely be considered to be under threat of closure. Any such capacity could quite easily justify SBR participation, and so more STOR procurement would simply procure the same capacity which would be procured in SBR.

Flexible STOR (which includes all triad managing capacity) incurs no fixed cost to National Grid, and is (as it is non-BM) excluded from the energy market. Thus flexible STOR is always additional.

This must be considered in the context of our earlier comments concerning the total incentive package available to demand response resources. We argue strongly that, far from there being a conflict between STOR and triad management, the combination of flexible STOR and triads has formed a combined incentive package that has successfully brought hundreds of megawatts of entirely new capacity into the market. When such capacity is not directly reducing peak demand (for triad management, at zero cost to consumers) it is available as a reserve service (on no-fixed-cost terms), and vice-versa.

Therefore, an expansion of procurement of flexible STOR would surely provide a more economic resource than SBR. We therefore recommend that National Grid should procure SBR only for seasons for which it has accepted all flexible STOR tendered at the immediately preceding STOR tender round. Otherwise, the volume of SBR procured, and the cost, will be unnecessarily high.

Q5. Do you support us taking forward the SBR product? If not, what would be your recommended course of action if margin outlook deteriorates over the next 12 months?

Although it is not theoretically impossible that demand response participants could offer SBR, in practice it is unlikely that any would succeed in doing so. There are two reasons for this. First, SBR must possess certain facilities such as EDL which is not available to demand response. Second, there is no obvious way to translate the additionality provisions from power stations to demand response. Therefore, if the SBR product is taken forward it is essential for market fairness and consumer value that measures be taken to ensure that demand response can contribute new capacity to the mid-decade shortfall and thereby reduce the amount of SBR that consumers must purchase.

We have raised important issues about DSBR, and we believe that if these are addressed then DSBR may be a viable route for demand response. If SBR is taken forward, we believe that DSBR must be amended in the manner we have suggested and launched alongside SBR. On the other hand, greater procurement of STOR would create a superior opportunity for both demand response and large power stations, in which case neither DSBR nor SBR would be necessary.



Costs & Funding Questions

- . Q6. Do you agree that our cost estimates, and the underlying assumptions, are reasonable?

Cost estimates matter in terms of efficiency and value to the consumer. They are equally important to potential service providers, as they are equivalently estimates of service revenue. Confidence in revenue forecasts is vital to participation. We therefore consider this point to be crucial.

The cost estimate made for DSBR is based on an assumption about utilisation which we believe to be both simplistic and unrealistic. This is important, because National Grid estimates that 60% of the cost (and the revenue for participants) will come from utilisation.

In our view National Grid is very able to forecast (or hindcast) the amount of utilisation which would be expected at different utilisation price points, and is able to adjust for expected capacity margins and/or weather severity. Such analysis would give a far more robust view of the likely DSBR utilisation payments, which would improve the cost models and furthermore allow market participants to consider which price points might best suit them.

Clearly such analysis must contain an assumption about DSBR uptake at different price points, and National Grid should be explicit about this sensitivity. However, the accuracy of such a model would probably be high at the bottom end of the DSBR price range, and this information alone would be very useful in calibrating any other assumptions that might be made in cost or revenue forecasting.

Without such analysis presented to the market, we do not see how the cost of DSBR can be estimated. Further, as we indicated in our response to Q1 above, absent such analysis DSBR participants will be disadvantaged in their tendering given that the tenders will be evaluated against the criteria of representing a cost that is less than VOLL on a cost/MWhr basis.

We have no specific comments on the cost estimates made for SBR.

- . Q7. Do you agree that it would be inappropriate to include these costs in the Balancing Services Incentive Scheme until such time prices and volumes for these products are better understood?

We have no specific comments on the inclusion of these costs within BSIS.

- . Q8. Do you agree with the proposed approach to the recovery incremental internal costs we would incur if we were to procure these additional balancing tools?

We have no specific comments on the recovery of incremental internal costs.

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For UK Demand Response Association