NGET Consultation

Demand Side Balancing Reserve and Supplemental Balancing Reserve

Mainstream Renewable Power Response

July 2013

Mr Peter Bingham
National Grid
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Dear Mr Bingham,

Introduction

Mainstream Renewable Power is a leading renewable energy company developing renewable energy projects across several continents. The Company expects to be a major provider of renewable capacity for the UK and has 4500MW in its development pipeline.

We are developing onshore wind projects in North America, South America, and South Africa. In the German North Sea, we are developing the 1500 MW Horizont project.

In the UK, we are developing two large offshore wind projects. In Scottish territorial waters we are developing the 450 MW Neart Na Gaoithe project. Additionally, through the SMart Wind consortium, we are developing the 4000MW Hornsea Round 3 zone. The first phase of 2 GW within the zone is being developed with our partners, Siemens Project Ventures and Dong Energy.

We are also developing the 5GW Energy Bridge project which will initially connect renewable energy generated in Ireland into the UK transmission network. Both the Hornsea and Energy Bridge projects are based on the effective coordination and integration of offshore transmission assets. Hornsea is currently the subject of a National Grid preconstruction funding request to Ofgem, as noted in your consultation, whilst Energy Bridge has been submitted as a Project of Common Interest. This project will be facilitated by the integrated framework envisaged by the recently signed Memorandum of Understanding between the British and Irish governments.

The effective and efficient provision of balancing services, over all relevant timescales, is a key issue for us.

We welcome the recognition by both Ofgem and National Grid that the prospective narrowing of plant margins mid-decade requires consideration of novel or additional measures in order to ensure adequate security of supply is maintained.

The informal Consultation by National Grid is a useful contribution to developing the body of information regarding what challenges may lie ahead and consideration of appropriate ways in which to meet them.

However, we have significant concerns regarding both of the proposed new balancing services, their impact on the overall electricity sector and (particularly in the case of the proposed Supplemental Balancing Reserve) their actual effectiveness.

We set our concerns below and also provide answers to the questions set out in the Consultation.

- Despite the proven potential of the demand side to contribute more to the overall efficiency of the electricity sector, it has not been given the attention it deserves. There are potentially great benefits to be secured. Demand side measures need to be closely aligned with a strategic view of "smartness" as applied to the whole electricity system – not just piecemeal measures applied as standalone initiatives.

- Initiatives need to be open and accessible and allow for innovation in the market – there is a risk that "short term interventions" carried out for specific needs unintentionally restrict the eventual opportunities in the wider market.

- There is a need to clearly set out the place of these short term measures against the objectives and operation of the capacity and energy markets under EMR or risk unintended consequences and uncertainty for investors and service providers. Coherence with the developing proposals for the EMR Capacity Market is essential. Consideration needs to be given to an "exit strategy" such that these short term arrangements are removed at the earliest opportunity consistent with resolution of the particular issues and the market allowed to operate to provide capacity and reserve in line with underlying drivers.

- More information is required for stakeholders regarding the interaction with Ofgem's Electricity Balancing Strategic Code Review and how any decisions made on these potential tools will affect cashout.

Demand Side Balancing Reserve (DSBR)

We believe that the demand side has the potential to make a significantly greater contribution to not only balancing the system, but also providing a range of system services and contributing to overall energy efficiency. There are many "demand side" initiatives under way and these need to be considered on a holistic basis, incorporating the opportunity that "smarter" devices, systems and

operational techniques will bring. Consideration of the demand side should start with strategic, longer term demand side objectives. This will allow policy and specific initiatives to be developed on a consistent and compatible basis.

National Grid state that "We believe that DSBR will offer a substantial new opportunity for the demand side to participate in providing balancing services and we hope that it will enable the participation of a much broader scope of demand side service providers than is currently the case. As such, we believe that this service may also be a valuable precursor to demand-side participation in the EMR Capacity Market."

The scope and scale implied by this statement appear to be incompatible with the stated aim of addressing a short term issue arising from potential narrow margins mid-decade, by temporary intervention. There are already a suite of opportunities for the demand side to participate in the market and the degree of effectiveness and level of incentives available for these should be examined first, prior to any significant interventions of this nature. The interaction of any new arrangements with the established "Triad" pricing signals is also a critical area which needs to be examined. We are particularly concerned that a key component of EMR, the Capacity Market, should in any way be pre-empted or affected adversely by an initiative of this sort. There is still work to be done on the detail and implementation arrangements for the Capacity Market and this needs to be completed before any other mechanisms which may interact with its operation are designed.

The document is largely silent on the roles, responsibilities and impacts on suppliers of the proposed DSBR. Suppliers have primary responsibilities to balance their portfolio and are able to assess demand side offerings across a more comprehensive timeframe than merely short term peak reserve requirements. It is unclear how suppliers who had put in place balancing actions pre-gate closure would be affected by the use of DSBR by National Grid post gate closure. The role of the supplier both as an enabler and key stakeholder in the process needs to be considered further.

It is unclear how National Grid would effectively deal with a "substantial" increase in providers and scope, given that the obligations on these parties to provide the required services - at times of extreme system stress – are necessarily limited. It suggests that the reliance that might be placed on such services needs to be thought through very carefully.

National Grid propose that the Demand Side Balancing Reserve balancing service is procured from demand side resources, which may include both reductions in demand and increases in 'behind the meter' or smaller embedded generation. It is unclear what the definition of this generation is, or how it would change its role from that currently carried out under existing market arrangements.

Supplemental Balancing Reserve (SBR)

National Grid state that the second proposed service, Supplemental Balancing Reserve, is aimed primarily at generators and, potentially, larger demand reducers. They conclude that this service is likely to be of interest primarily to existing stakeholders. It would be useful to further understand where the generation capacity to provide these services will come from. It will be existing plant, not currently active in the main energy market. This suggests that it is currently mothballed. Depending on the individual commercial outlook of the owners of the mothballed plant, its degree of "preservation", capability to return to full or partial service and capabilities on return to service will cover a very wide spectrum. It is also unclear what status the plant would have in the years leading up to 2015/16 and what its treatment would be post the intervention period that this service is intended to cover.

The supplemental balancing reserve proposal faces very similar issues to that which confronted the "Strategic Reserve" option for the Capacity Market, which after wide consultation and consideration, was rejected by DECC.

National Grid notes that an important aspect of its balancing services activity is anticipating the imbalances that could arise over various timescales, including potential failures of a large power station or interconnector, or as a result of unexpected variations in demand or wind generation. It ensures that there will be sufficient providers of balancing services to correct imbalances that could arise in these circumstances.

One of these is Short Term Operating Reserve ("STOR"), which has been continuously developed by National Grid and Industry stakeholders. We understand that in its current form, the STOR process is not entirely consistent with the issues that National Grid has identified in its Consultation. However, this is not due to any fundamental problem with STOR, merely the fact this it has not yet been asked to address these evolving requirements. We strongly recommend that this existing process for making additional balancing/reserve capacity available is investigated thoroughly, to test its suitability for appropriate expansion, before an intervention such as the proposed SBR is made.

We also believe that investigating the services that may be available from interconnected, neighbouring system operators should be pursued in order to develop a more structured product that can be integrated into National Grid's suite of operational tools. Reliance on "emergency assistance", whereby neighbouring system operators are requested to provide additional support over and above that which has already been scheduled on the various interconnectors by market participants should not be the only avenue by which neighbouring systems support each other.

Consultation Questions

Demand Side Balancing Reserve

DSBR1 Do you agree with our proposed participation criteria?

A: No. We agree that demand should be encouraged to participate as fully as possible but the type, volume, reliability and integration of resources "with a utilisation price of £500/MWh or greater" needs to be established prior to further consideration.

DSBR2 Do you agree with our proposed product definition?

A: We understand that National Grid has defined the product in order to meet its perceived needs.

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

N/A

DSBR4 Do you agree with our measurement and baseline proposals?

A: No, a more sophisticated baseline will be required. There is an in-built assumption that there is a very strong correlation of demand taken by participants with "peak days in this and previous winters". This is not necessarily the case and may lead to erroneous payments and/or undesired operational outcomes.

DSBR5 Do you agree with the proposed arrangements for despatch?

A: This is a matter for National Grid to ensure appropriate management. We question whether "grouping" in 250 MW blocks will add any specific value.

DSBR6 Do you agree with our proposals on procurement?

A: No. We believe further work is required before the introduction of this product.

DSBR7 Do you agree with our proposals on verification?
DSBR8 Do you agree with that there should be a de-minimis dispute threshold?
DSBR9 Do you agree with our proposed approach to contracting?

N/A

DSBR10 Do you agree with our proposals on imbalance pricing?

A: We agree that any changes to imbalance pricing need to be fully aligned with the conclusions of the Ofgem EBSCR.

DSBR11 Do you agree with our proposals on how the service should interact with triad demand reducers?

A: The area of interaction with Triads needs careful consideration. Reduction of demand at potential triad points is well understood, incentivised and has a history of effective operation. Any proposals which make the prediction of potential Triads more uncertain for participants are likely to have adverse consequences. The ability to act in response to a potential triad is limited for many participants and thus accuracy of prediction is important. These proposals may result in greater uncertainty, which in turn will lead to less demand reduction being available at times of true system stress and/or Triads being "moved" unpredictably from legitimate expectations.

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

A: We believe that the STOR scheme should be reviewed in order to encompass the requirements that National Grid are seeking to meet, rather than setting up another potentially conflicting system.

DSBR13 Do you have any comments on our procurement options?

N/A

Supplemental Balancing Reserve

SBR1 Do you agree with our basic product proposals?

A: No. We understand the desire of National Grid to achieve "additionality" but the target plant is stated to be "mothballed". Plant procures its revenues from a number of sources in the energy market and the requirement that any plant which provides an SBR service should be completely excluded from any other source of revenue appears counter-productive. The SBR is intended to be a short term intervention to deal with potentially narrow margins. As such the "target plant pool" to which it may apply is likely to be very limited. This plant will not be capable of sustaining itself in the "general" energy market. It will not be able to participate in the new Capacity Market. It will require all of its return to service costs and other variable costs to be covered by any proposal, with

very limited ability to accept penalties. These costs will need to be recovered over very short (or perhaps no) periods of operation. The proposal appears to be a rudimentary attempt to "solve" the "missing money" problem that the Capacity Market work is actually being designed to do over the long term. Moreover, the Capacity Market is being developed in a manner consistent with the underlying energy market, not "outside" it. If the addition of revenues from this service triggers the return to service of plant which would otherwise have been unavailable, then it WILL meet the additionality criteria. It should not then be artificially prevented from competing in other market segments in order to secure revenues and in so doing, adding to the competitive dynamic to the benefit of consumers.

The supplemental balancing reserve proposal faces very similar issues to that which confronted the "Strategic Reserve" option for the Capacity Market, which after wide consultation and consideration, was rejected by DECC.

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

A: See answer above.

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.

A: *In theory*, the statements made by National Grid regarding outage rates, de-rated capacity and availability of resource may have some validity if there were to be a significant number of providers of this service, across the spectrum of "reliability". In practice, the actual capacity that may be suitable for this product is likely to be very specific. It is unlikely to comprise "many small units" and as such the actual reliability of the particular resource will be fundamentally important, especially as the system operator will be relying on real MW which is likely either to be fully there or not, rather than "de-rated" capacity.

It is of little value to seek some form of non-delivery charge, post undesired event. More thought needs to be put into ensuring confidence in delivery before the event.

SBR4 Do you agree with our verification proposals?

A: Verification is fundamentally important. It should be based on incentives which align with the objective of maximising the reliability of delivery when called, rather than "testing" whether plant is in a certain state or not.

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

A: Agreed. It should be despatched after other non-emergency balancing services

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

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

A: Yes

Yours sincerely,

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