

System operators, transmission system owners, generators, suppliers, traders, consumers, aggregators and other interested parties

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Date: 01/05/2015

Dear Colleagues

Decision to approve the revised volume requirement, procurement and operational methodologies proposed by National Grid Electricity Transmission plc associated with the procurement and use of the Supplemental Balancing Reserve and Demand Side Balancing Reserve

The Gas and Electricity Markets Authority (the Authority) has considered the five revised methodologies submitted by National Grid Electricity Transmission Plc (NGET) under Special Licence Condition (SpC) 4K.12 on 31 March 2015 and has decided to approve them.¹

Background

In December 2013, the Authority approved NGET's application to introduce two new balancing services, the Supplemental Balancing Reserve (SBR) and Demand Side Balancing Reserve (DSBR). These services provide NGET with additional tools to help balance the system in the rare event that there is insufficient capacity in the market to meet demand in the mid-decade period.

Subsequently, we issued a direction to modify NGET's transmission licence to include arrangements for NGET to be able to recover the economic and efficient costs relating to the procurement and use of SBR and DSBR. The relevant licence condition (SpC 4K) came into effect on 6 June 2014.

Under SpC 4K, NGET is required to have in place certain approved methodologies which provide detail on how it will procure, including how much to procure, and use SBR and DSBR in an economic and efficient way.

If NGET wishes to recover costs relating to the procurement and use of SBR or DSBR, it has to demonstrate how those payments were incurred in accordance with the approved methodologies. Ofgem is then able to assess NGET's compliance with the methodologies and depending on the outcome of that review direct NGET to recover these costs or to adjust the costs it has already recovered, as appropriate.

To allow NGET to apply lessons learned from using these services, the licence includes a mechanism (SpC 4K.12) that allowed it to submit revised methodologies to Ofgem for approval by 31 March 2015.

¹ The revised methodologies can be found in National Grid's website at <http://www2.nationalgrid.com/UK/Services/Balancing-services/System-security/Contingency-balancing-reserve/Methodologies/>

On 31 March 2015, NGET submitted revised volume requirement, procurement and operational methodologies for the Authority's approval.

Our Determination

We have assessed these revised methodologies against the baseline of the current methodologies, and against the three key factors we consulted on in June 2013:²

- a) NGET's procurement must be economic and efficient and the products must represent value for money to electricity consumers.
- b) NGET's product design and proposed use of the new products must minimise unintended consequences to market participants and the operation of the market.
- c) NGET's procurement process must be objective and transparent.

Below, we summarise and give our views on the key proposed changes to these methodologies.

Volume requirement methodology

NGET's volume requirement methodology describes how NGET determines the economic and efficient volume of SBR and DSBR to procure ahead of the winter. Even over this relatively short time horizon there is significant uncertainty over the electricity market outlook. NGET assess this uncertainty by using a range of sensitivities around key scenarios. A 'least worst regret' approach is then applied to the sensitivities: it identifies areas where a relatively small increase in cost could eliminate significant risk, whilst attempting to avoid incurring significant costs while leaving overall risk to the system largely unchanged.

As the volume that can be procured through SBR and DSBR is capped, the current methodology automatically disregards sensitivities that show requirements above the cap from being considered in the 'least worst regret' analysis. NGET was concerned that this could result in credible sensitivities not being considered. It has therefore proposed that the automatic exclusion of sensitivities should be removed. NGET would instead assess whether each proposed sensitivity could be considered a credible outcome within a reasonable range of uncertainty.³ NGET would then provide the sensitivities deemed appropriate and their justifications to the Authority for approval. To be clear: the volume cap itself would still remain in place.

We agree that NGET's proposal to analyse sensitivities on a case-by-case basis is an improvement over the current methodology. We believe this improves the quality of decisions as sensitivities are included or excluded based on their own merit rather than mechanically.

We consider it is appropriate to introduce the mechanism where the Authority approves NGET's submission of credible sensitivities. However, we note that:

- The onus is on NGET to demonstrate that the sensitivities it proposes to include are economic and efficient and meet the sensitivity criteria as defined in the methodology.

² Our consultation can be found at <https://www.ofgem.gov.uk/publications-and-updates/consultation-potential-requirement-new-balancing-services-national-grid-electricity-transmission-plc-nget-support-uncertain-mid-decade-electricity-security-supply-outlook>

³ NGET defines in the volume requirement methodology that the sensitivities cover "a credible and reasonable range of uncertainties for elements that may vary independently of the demand and generation mix without affecting the internal consistency of the scenario."

Procurement methodologies

The procurement methodologies set out the process and criteria NGET uses to award SBR and DSBR contracts. It defines how the different cost components of SBR and DSBR tender responses are combined into a single number so that NGET can procure the most economic and efficient options, known as the economic assessment. NGET has proposed the following amendments to be made to the procurement methodologies.

For DSBR, NGET has proposed to increase the assumed reliability factor of DSBR, i.e. how much of the energy they said they would provide NGET expects them actually to provide. Last year, the first year that DSBR was contracted, NGET settled on 75% based on historic data and assumptions. After a year of experience, pleasingly, they have discovered that DSBR was more reliable than assumed at that time. Hence, they have proposed to change it to 83% this year.

Also, NGET has proposed to change the value it assigns to DSBR services for the different settlement periods within the service window (4pm-8pm). Settlements periods have different value as some are more likely than others to experience peak demand. Hence, DSBR has a different value to NGET and consumers depending on which period it has tendered for. To take account of this variation, NGET uses a demand profile in the economic assessment. Currently, the demand profile is broadly flat and hence the value of the different settlement periods is mostly similar. NGET has proposed to increase the variation in the demand profile to make it a better reflection of DSBR value.

For SBR, NGET has maintained the methodology leaving it mostly intact. However, it has proposed alterations to some of the technical parameters service providers need to meet to be able to participate in SBR⁴ and the introduction of a weighting to the economic assessment aimed at better valuing generators that would otherwise be unavailable to the market (described in the next section).

We support and approve the steps NGET has taken to apply learning from the procurement of SBR and DSBR in 2014.

We are encouraged by the higher reliability of DSBR. We agree that it is appropriate for NGET to incorporate it in the economic assessment.

We support NGET's proposed change to the demand profile. This appropriately reflects the value of those DSBR providers which are able to deliver services at the settlement periods more likely to be at peak demand.

We also agree that NGET's proposed change to the technical requirements of service providers will be an improvement over the current methodology and will minimise the potential impact on the market of ensuring that generators are ready to provide this service.

Procurement methodologies – Historic Load Factor in SBR procurement methodology

As part of the consultation process relating to the initial design of SBR, NGET recognised "additionality", ie service providers that would otherwise be unavailable to the market, as a key issue for SBR. The key change in the SBR procurement methodology is the proposed introduction of a weighting in the economic assessment to better value generators that would otherwise be unavailable to the market.

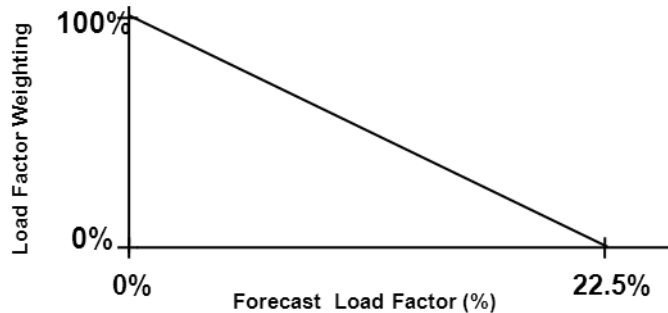
The current methodology uses the economic assessment in each tender as the main lever for targeting additional generation. NGET has proposed to introduce a weighting factor to

⁴ Mainly the requirement that participants be able to deliver BM Start Up Services or be dispatched in operational timescales. Further information on BM Start up can be found at <http://www2.nationalgrid.com/uk/services/balancing-services/reserve-services/bm-start-up/>

the economic assessment. This factor would weigh the likelihood that a service provider would be unavailable to the market and hence provide additional reserves to NGET to balance the system when the market is unable to do so.

Under its proposal, plants that do not hold Transmission Entry Capacity (TEC) would have a weighting of 100% as they are unable to access the transmission system. However, for plants that do hold TEC, NGET has proposed using load factor as a measure of likely unavailability to the market. This starts with a weighting of 100% for plants with 0% load factor, and 0% for plants with 22.5% or higher load factor.⁵ Figure 1 below illustrates NGET's proposal.

Figure 1: NGET proposed load factor weighting



We support NGET's proposal to refine the methodology to ensure that the services procured provide value for money to consumers. We note that there is no perfect measure of additionality, and hence there will always be limitations with any proxy used.

Following NGET's submission, we have been contacted by a few generators both opposing and supporting NGET's selection of historic load factor as a proxy for unavailability to the market. Those opposing it noted that closure decisions can be based on a variety of factors, for example investment and maintenance decisions. In addition, since this uses historic data, they note that it does not capture the potential changes to plant profitability due to changes to fuel and carbon prices.

Following our analysis, we agree with NGET that that despite its limitations, using historic load factor is a reasonable, transparent, and objective proxy for market unavailability. It is **reasonable** because it is representative of decisions we have seen in the market. Since 2012, NGET analysis indicates that the weighted average load factor of the CCGTs that have closed or mothballed was 9.2%.⁶ This is well within the range NGET proposes to capture in its weighting. It is **transparent**, as the information is accessible to all market participants. As such, parties are able to calculate their load factor as well as its competitors. It is **objective** as it does not depend on NGET's judgement and expectation on the future outlook. In addition, parties cannot amend their historic load factor, preventing gaming.

Hence, while we recognise the limitations of using load factor as a proxy of power station unavailability, we are confident that this would be an improvement from the current methodology as it would help ensure consumers only pay for services that add value to them, and we think it is a proportionate way to better value additionality.

Operational methodologies

The operational methodologies determine how NGET will use SBR and DSBR to balance the system and test service providers. In the revised methodologies, NGET has proposed changes to capture the greater operational knowledge it has of these services.

⁵ NGET calculated the mid-point of 22.5% to provide a balance between accessing additional reserves and maintaining competition in the tender.

⁶ This excludes power stations that have closed due to environmental or other legislation and fires.

For DSBR, NGET has not proposed to make changes to how it calculates the DSBR testing budget. However, it has proposed to remove the formula that prescribes how it selects which service provider to test from the methodology. NGET would have discretion on how it selects the DSBR sample to test. This change would give NGET greater flexibility to innovate on how it optimises testing of DSBR service providers without increasing the cost consumers' face.

In addition, similarly to the procurement methodology, NGET has proposed to increase the reliability it assigns to DSBR service providers operationally. Under its proposal NGET would assume a reliability factor of 83% when using DSBR (the reliability observed during tests) up from the 75% assumed last winter.

For SBR, NGET has proposed to remove the requirement to issue a system warning (Notice of Insufficient Margin, NISM, or High Risk of Demand Reduction, HRDR) in order to get service providers ready to dispatch, known as warming. This is because there is a risk that for some service providers NGET would need to warm them before it decides whether to issue a NISM or HRDR.

NGET has also proposed to introduce greater flexibility on testing. These changes would allow NGET to test service providers outside the availability window (weekdays from 6am to 8pm) or to not test them if this is not needed. Currently NGET is required to test all service providers monthly and during the availability window when it is likely to have a greater impact on market participants.

We are confident that the proposed changes to these methodologies are an improvement on the current baseline. We also believe these changes would reduce the impact these services have in the market and provide better value for money to consumers.

On DSBR, we are supportive of giving NGET greater flexibility to innovate on how it tests these services as long as it does not increase the cost paid by consumers. In addition, we are supportive of NGET increasing the reliability of DSBR to take into account test performance.

On SBR, we agree that NGET having access to SBR should not depend on issuing a system warning. However, this change does not affect the requirement that NGET submit for the Authority's approval evidence supporting its decision to warm a service provider to recover those costs. We also support the greater flexibility on testing of SBR to minimise the impact it has on the market.

Hence, the Authority is satisfied, having reviewed the information submitted in accordance with SpC 4K.12 that if applied correctly these methodologies meet our criteria set out above and in the interests of consumers. Accordingly, the Authority has written to NGET to state that it has approved these revised methodologies.

Yours sincerely,

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