

Public

**Issue 83 'Ensuring
that the Buy Price
Price Adjustment
reflects all additional
balancing costs'**

Meeting 1

7 August 2019

ELEXON

Health & Safety

In case of an emergency

An alarm will sound to alert you. The alarm is tested for fifteen seconds every Wednesday at 9.20am

Evacuating 350 Euston Road

- If you discover a fire, operate one of the fire alarms next to the four emergency exits.
- Please do not tackle a fire yourself.
- If you hear the alarm, please leave the building immediately.
- Evacuate by the nearest signposted fire exit and walk to the assembly point.
- Please remain with a member of ELEXON staff and await further instructions from a Fire Warden.
- For visitors unable to use stairs, a Fire Warden will guide you to a refuge point and let the fire brigade know where you are.

When evacuating please remember

- Do not use the lifts.
- Do not re-enter the building until the all clear has been given by the Fire Warden or ground floor security.

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Agenda

- Welcome and Housekeeping
- Proposer's overview of the defect and rationale
- What is the Buy Price Price Adjustment?
- Potential constraints of the EB GL
- Considering a principles based approach to cash out
- Next steps and A.O.B.



Overview of the defect

Background to the issue

- Issue 83 seeks to ensure that the Imbalance Price is truly reflective of all actions taken by NETSO in balancing the Transmission System.
- If the ISH proposal is accepted in its current form, then the BPA, which forms part of the Imbalance Price calculation, would cease to be acceptable.
- The Issue Group should assess how the components of the BPA can continue to be used in the Imbalance Price calculation to ensure that it continues to be reflective of the actions taken by NETSO.
- The Issue Group should consider what other reserve actions and costs should be added to the Imbalance Price and how to include them.
 - This includes the cost of option fees, paid by NGESO to providers which are not currently taken into account for the calculation of the Imbalance Price.
- The Issue Group should consider the impact on the Imbalance Price of including new cost items.

Assumptions for discussions

- Due to the fact that there are currently some uncertainties stemming from the gradual implementation of the EB GL and the Authorities' decision on the ISH.

Assumptions

- NETSO will be granted exemption (as per Art 16.6 EB GL) by Ofgem and as such will still be paying option fees
- Ofgem is still assessing whether the BPA could be treated as an additional component of the imbalance price.
- Even in case of removal of availability fees as legitimate Imbalance Price components, there are still on average ~£5m/month of availability fees paid to Spin-Gen providers that could be captured. These are bilateral contracts, which to date, industry has not received any update on the future of. We therefore have to assume that they will not be terminated and that availability fees will continue to be a considerable part of the revenues.



What is the BPA?

What is the BPA?

Defined as The amount (in £/MWh) sent by the NETSO as the 'Buy Price Price Adjustment' in accordance with Section Q6.3.

Q6.3.2

The Balancing Services Adjustment Data shall comprise the following data in respect of each Settlement Period

- the unique sequential number for each Balancing Services Adjustment Action;
- for each such Balancing Services Adjustment Action:
 - the Balancing Services Adjustment Volume;
 - the Balancing Services Adjustment Cost;
 - whether the NETSO has classified such Balancing Services Adjustment Action as "SO-Flagged"; and
 - whether the NETSO has classified such Balancing Services Adjustment Action as "STOR Flagged";
- Buy Price Price Adjustment; and
- Sell Price Price Adjustment.

Definition in the Methodology Statement

- The formula below illustrates how the costs associated with such option fees are converted into a £/MWh figure.

$$BPA_j = \frac{(\sum RC_j + \sum FC_j)}{(cR_j + cF_j)} + \sum \frac{BC}{cB}$$

- RC_j = cost of purchases of firm regulating reserve option fees (£)
- FC_j = cost of purchases of Forward Contract option fees (£)
- cR_j = capability of firm regulating reserve contracts for the relevant settlement period (MWh)
- cF_j = capability of Forward contracts for the relevant settlement period (MWh)
- BC = cost of BM StartUp instructions to minute t (£)
- cB = volume capability of BM StartUp instructions over the defined BPA period to minute t (MWh)
- $BMStartUp$ Time = all minutes associated with BM StartUp instruction

BPA components

- The BPA may include, but is not limited to, the following balancing services:
 - BM StartUp – allocated into the periods where the requirement exists
 - Regulating Reserve - calculated by dividing the total option fee in any settlement period by the total contracted capability

BPA example

- No firm Regulating Reserve contracts have been purchased:

- $RC_j = \text{£}0$
- $cR_j = 0\text{MWh}$

- Forward contract option fees purchased:

- $FC_j = \text{£}100$
- $cF_j = 20\text{MWh}$

- BM Start-Up:

- BM Start-Up cost = $\text{£}2000 / \text{hr}$
- Period unit is warmed = 8hrs
 - $BC = \text{£}2000 * 8\text{hrs} = \text{£}16000$
- Generator capacity = 250MW
- Requirement period = 4hrs
 - $cB = 250\text{MW} * 4\text{hrs} = 1000\text{MWh}$

$$BPA_j = \frac{(\sum RC_j + \sum FC_j)}{(cR_j + cF_j)} + \sum \frac{BC}{cB}$$

$$BPA_j = \frac{(\text{£}0 + \text{£}100)}{(0\text{MWh} + 20\text{MWh})} + \sum \frac{\text{£}16000}{1000\text{MWh}}$$

$$BPA_j = \text{£}5/\text{MW} + \text{£}16/\text{MW}$$

$$BPA_j = \text{£}21/\text{MW}$$



Implications of EB GL

Assumptions of the Terms and Conditions for balancing

- The alterations to the imbalance price are a result of some key requirements:
- **Energy only imbalance prices.** The proposal requires that the imbalance price calculation uses prices (and volumes) only for balancing energy used in the settlement period for which it applies.
- **Replacement Reserve (RR) and Frequency Restoration Reserve (FRR) only prices.** The ISH proposal requires that prices (and volumes) used in the imbalance price calculation come only from RR and FRR products.
- **Balancing energy derived replacement prices.** The proposal requires that the Value of Avoided Activation of balancing energy is derived from available bids and offers for balancing energy.
- **Components for scarcity, financial neutrality and incentivising must be additive.** These components cannot be incorporated in the single price calculation, and must be added to (or subtracted from) the calculated price.

Implications for the BPA

- The BPA is composed of option and availability fees for firm regulating reserve, Forward Contracts and BM StartUp. These components are not prices for utilisation of balancing energy within a settlement period, and therefore cannot be included in the main imbalance price calculation.
- The removal of availability fees as legitimate imbalance price components follows a push from the regulations to remove availability payments from balancing service contracts.
- If these components are to continue being charged, there are three potential routes for achieving this;
 - Making the BPA an additive component for scarcity, financial neutrality or 'incentivising'
 - Making the BPA the output of a separate settlement mechanism.
 - Including them in a separate existing recovery mechanism, for example BSUoS

Option 1 – Additive component

- The proposal allows the TSO to include in the NRA agreed Terms and Conditions for balancing an additive component to the imbalance price. There are specified cases in which these component can be added:
 - **Scarcity**. As the availability fees are not a function of scarcity, and instead reflect economic dispatch decisions of the ESO control room, this route would seem not to be appropriate.
 - **Incentivising component** to fulfil nationally defined boundary conditions. As the addition of BPA is to enhance cost reflectivity of imbalance prices, and not to meet a specific boundary condition, this route would not seem appropriate.
 - Ensuring **financial neutrality** of the TSO. As we do not fund NGESO or ELEXON from imbalance charges, this route would not seem appropriate.

Option 2 – Separate settlement mechanism

- EBGL contains provisions for a separate mechanism to imbalance settlement being established to settle the procurement costs of balancing capacity and other costs related to balancing. This needs approval from the national regulatory authority.
- BPA could constitute a separate mechanism, which is charged at the same time, and levied on the same volumes, as the imbalance price.
- Provided Ofgem and NETSO find this arrangement acceptable, this would seem to be the easier and most effective option. Particularly as BPA may become less relevant if NETSO chooses to move away from availability fees for balancing services contracts.
- This option could be enhanced by defining the new mechanism in the BSC, moving the contents of the BPA into industry governance. This may further legitimise the mechanism and reduce risk to NETSO by enshrining NRA approval in the process of updating the mechanism. Alternatively, this could just be additional work for a relatively short-lived mechanism.

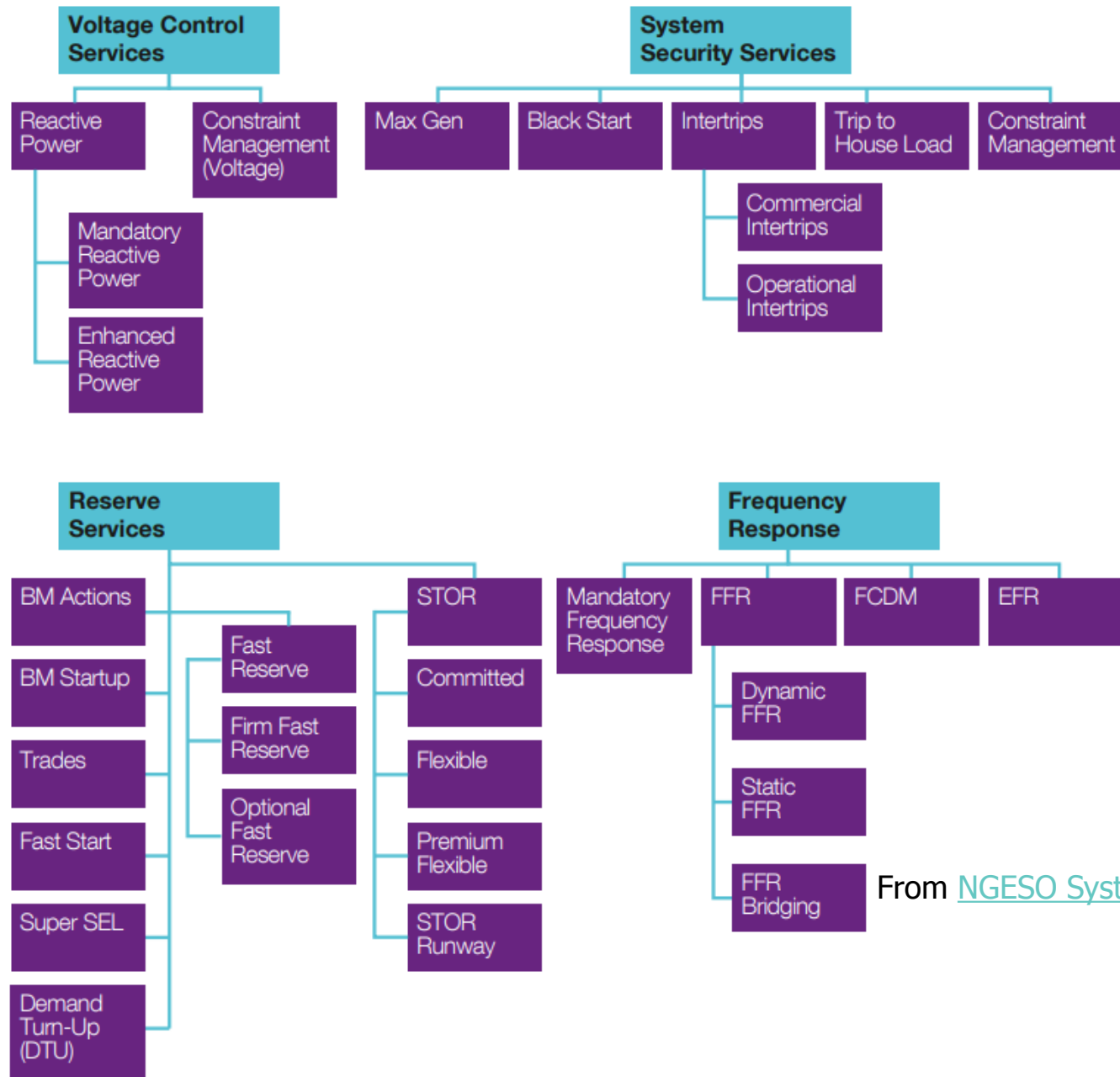
Option 3 – Separate existing mechanism, such as BSUoS

- There exist other mechanisms for recovering the costs of balancing which could be used to recover BPA costs. However, BSUoS is not currently charged on a 'polluter pays' principle and does not serve as a signal to Parties to reduce imbalance.
- BSUoS could be reviewed to make it more consistent with 'polluter pays'. For example, it could be split into 'system balancing' costs charged on a per-unit basis, and 'energy balancing' costs charged on total imbalance over a defined period.
- This option would require a significant overhaul of BSUoS charging, and may not be proportionate to the needs of addressing the BPA issue.



Principles based approach to cash out

NETSO Product Suite



From [NGESO System Needs and Product Strategy](#)

From June 2017



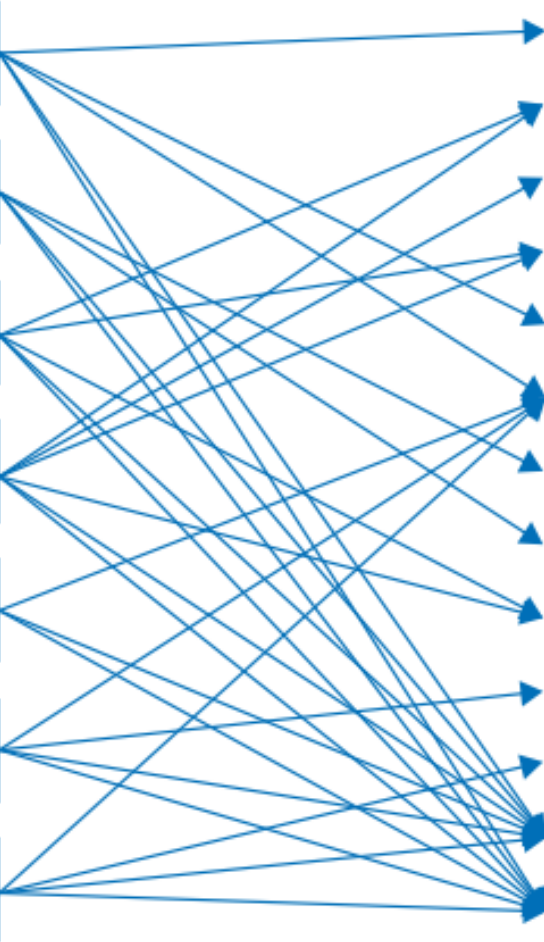
Mapping products to needs

System needs

- Upward reserve
- Downward reserve
- High frequency response
- Low frequency response
- System inertia and RoCoF
- Voltage control
- Black Start

Products/Markets

- STOR
- FFR
- FCDM
- EFR
- Fast Reserve
- BM Startup
- DTU
- Super SEL
- MFR
- Mandatory reactive power
- Black Start contracts
- BM Actions
- Trades



From [NGESO System Needs and Product Strategy](#)

From June 2017



What happens next?

- The BPA lies within the BSAD C16 statements.
 - Any changes to this statement follow their consultation process.
 - Limited action BSC can undertake when these statements lie outside the code.
- Could create new additive within the BSC.

Review of Proposer Objectives for Issue Group

- Assess what components should be reflected in the BPA.
- Determine whether the BPA needs to be adjusted/reviewed as a result of ISH, assess what components of the BPA can continue to be used in the Imbalance Price calculation to ensure that it continues to be reflective of the actions taken by NGENSO.
- Assess how the components of the BPA can continue to be used in the calculation of the Imbalance Price: e.g. as additive components; through a separate Settlement mechanism; through a separate existing mechanism such as Balancing Services Use of System (BSUoS charges).

