

Settling non-BM Response and Reserve Services at a price that reflects the real-time value of energy (P412)

1. Executive Summary

The recast Electricity Regulation articles 5.1 and 6.5 require that all market participants be financially responsible for any system imbalance they cause through under or over delivery of a balancing service and that the settlement of this position should be at a price that reflects the real time value of energy.

National Grid ESO (NGESO) raised BSC modification proposal P412¹ “Ensuring non-BM Balancing Services providers pay for non-delivery imbalance at a price that reflects the real-time value of energy”, to address the concern that although services settled through the Balancing Mechanism are compliant with this requirement, non-Balancing Mechanism services are arguably not.

Through the development of P412 several options to correct this were identified by the P412 Working Group. Due to the potential scale and effects of these changes on market participants NGESO agreed to launch a wider consultation to seek the views of all interested parties on how best to approach this issue. Not all the options below are necessarily supported by NGESO at this stage.

As such NGESO invites all interested parties to respond to this consultation setting out their views on the options identified and any other areas that they consider to be relevant. The conclusions from this consultation will feed into the P412 development process and allow all participants, NGESO and Ofgem to make an informed decision on how to progress an appropriate solution to this issue.

2. Context – The Clean Energy Package and recast Electricity Regulation

The Clean Energy Package (CEP) created a set of rules aimed to update the European energy policy framework to aid the decarbonisation of energy; to facilitate better customer outcomes and to deliver on the EU’s Paris Agreement commitment for reducing greenhouse gas emissions. The CEP which came into force in 2018/19 consisted of 8 legislative acts, one of these being the recast Electricity Regulation on the Internal Market for Electricity (RIME)². This has been retained in UK law (as amended by Statutory Instrument 2020 No. 1006 The Electricity and Gas (Internal Markets and Network Codes) (Amendment etc.) (EU Exit) Regulations 2020). The key RIME articles for consideration in this consultation are Articles 5.1 and 6.5. These articles state (emphasis added).

“[5] 1. All market participants shall be responsible for the imbalances they cause in the system (‘balance responsibility’). To that end, market participants shall either be balance responsible parties or shall contractually delegate their responsibility to a balance responsible party of their choice. Each balance responsible party shall be financially responsible for its imbalances and shall strive to be balanced or shall help the electricity system to be balanced.”

“[6] 5. The imbalances shall be settled at a price that reflects the real-time value of energy.”

For the purposes of this consultation, the following definitions apply:

- Market Participant³ – means a person who buys, sells or generates electricity, who is engaged in aggregation or who is an operator of demand response or energy storage services, including through the placing of orders to trade, in one or more electricity markets, including in balancing energy markets.

¹ P412 webpage - <https://www.elexon.co.uk/mod-proposal/p412/>

² The full document can be found here - <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019R0943&rid=8>

³ Recast Electricity Regulation - REGULATION (EU) 2019/943

- Imbalance⁴ - an energy volume calculated for a balance responsible party and representing the difference between the allocated volume attributed to that balance responsible party and the final position of that balance responsible party, including any imbalance adjustment applied to that balance responsible party, within a given imbalance settlement period.

3. Context – Balancing Services

The Balancing Mechanism (BM) is the main mechanism used by NGENSO to balance electricity supply and demand close to real time in which the suppliers and generators can offer flexible output to help balance the system. NGENSO procures services to balance demand and supply and to ensure the security and quality of electricity supply across Britain's transmission system. There are four categories of services (with multiple service lines per category) that we procure and two routes to market for these services, these are summarised in the below table⁵. To make this balancing act work and help NGENSO to provide electricity at just the right time, Balancing Mechanism Units (BMUs) are used. Parties registering these units means that NGENSO can use them to make changes within the timescales set out in the Balancing Mechanism process. If NGENSO anticipate that there is going to be higher or lower demand than expected at a certain time, they can accept an offer or a bid from a BMU to increase or reduce the amount of electricity it makes or uses at that time. If a company supplies a balancing service to NGENSO but isn't registered as a BMU, these are Non-Balancing Mechanism (non-BM) units.

Service Categories	Service Description	Route to Market
Frequency Response	The increase or decrease of (active) power to maintain system frequency at 50 hertz	Balancing Mechanism (BM) – an instruction issued via the Balancing Mechanism system
Reserve	The increase or decrease in (active) power to manage generation-demand imbalances	Non-Balancing Mechanism (non-BM) – an instruction that is not issued via the Balancing Mechanism system
Reactive Power	The increase or decrease of (reactive) power to maintain system voltage	
System Security	System services is a wider area and includes Black Start	

Some services can be instructed and delivered by either route to market, for example Short Term Operating Reserve (STOR) whilst some are limited to a single route to market, for example Optional Downward Flexibility Management (ODFM) which is limited to the non-BM route.

There are BM and non-BM routes to market. Some of these services will be instructed by the BM and some will not as they are automatic. The Frequency Response services are not instructed and are automatically dispatched whereas reserve services are instructed.

4. Context – The Challenge

Balancing Services that are instructed via the Balancing Mechanism are already fully compliant with RIME Articles 5.1 and 6.5 as any under/over delivery is subject to Imbalance Pricing (colloquially known as 'Cash-out')⁶.

This is arguably not the case for under-delivery (over-delivery was dealt with by BSC Modification P354⁷) for Balancing Services from non-BM units. For Balancing Services that are not instructed via the Balancing Mechanism, any under/over delivery is managed as per the relevant clauses associated with the performance and delivery of the service in the balancing service contract. This may be provided for differently in contracts

⁴ EBR - REGULATION (EU) 2017/2195

⁵ More detail on Balancing Services is available here - <https://www.nationalgrideso.com/industry-information/balancing-services>

⁶ Imbalance Pricing guide - <https://www.elexon.co.uk/documents/training-guidance/bsc-guidance-notes/imbalance-pricing/>

⁷ P354 - <https://www.elexon.co.uk/mod-proposal/p354/>

for different services (e.g. events of default/service delivery) – i.e. there is no common provision used across all balancing services to demonstrate a party is “financially responsible for its imbalances”. This varies from service to service, however typically this involves withholding a proportion of availability payments that are made to provide the service should there be any under-delivery of the service. The services that this affects are listed below:

Existing Frequency Response Services	Existing Reserve Services
Dynamic Containment (DC)	Fast Reserve (FR)
High Frequency Dynamic (HFD)	Optional Downward Flexibility Management (ODFM)*
Low Frequency Static (LFS)	Short Term Operating Reserve (STOR)

* ODFM⁸ was a temporary service to manage Summer 2020 and Summer 2021 low demand periods.

This issue is also likely to affect potential new products such as Dynamic Moderation / Regulation, and Quick and Slow Reserve when not instructed via the Balancing Mechanism.

As a result of this compliance uncertainty, NGENSO raised BSC (Balancing and Settlement Code) modification P412. After several workgroup meetings, a variety of short-term options were identified however each of these raised various concerns. A long-term strategy was also identified but this would result in a complex piece of industry work that is likely to take significant time to resolve. Given this, NGENSO agreed to launch a wider consultation to seek the views of all interested parties on how to progress an appropriate solution to this issue.

Question 1: Do you agree with NGENSO’s assessment of the issue and the services impacted? Please provide the rationale for your answer.

5. Options developed by the P412 workgroup

As part of developing P412, the workgroup identified several short-term options (3 years or less to implement) to manage the compliance uncertainty, some of which would require modification whilst others would not. This section provides a summary of each of those options, identified points to consider as well as specific questions related to each option. Section 7 details the expected consumer benefit of the proposed changes across all options.

Option A – Do nothing

Under this option, no changes are made, and the status quo is maintained.

Opportunities	Risks
No impact on GB consumers compared to today (i.e. no positive or negative impact)	
No changes to non BMU Balancing Services contracts required and so greater certainty for providers	Compliance uncertainty remains
	There is a risk to the level playing field – as BM and non-BM providers are currently treated differently in terms of how imbalance is addressed

Question 2: What impacts to your organisation and/or wider industry (qualitative and quantitative) are associated with the progression of Option A? Please explain your rationale if possible.

⁸ Link to ODFM section on NGENSO website: <https://data.nationalgrideso.com/ancillary-services/optional-downward-flexibility-management-odfm1>

Question 3: What potential opportunities are missed and what potential risks avoided with Option A?

Option B – Manage within NGENSO

This option would require NGENSO to update the non-BMU Balancing Services contracts so that the Imbalance Price is used to calculate any financial consequences of under-delivery. Once the contracts are updated, any under-delivery would be processed as follows:

- a) The Balancing Service Provider is instructed to provide a service which is subsequently under-delivered.
- b) NGENSO calculate the volume of energy under-delivered.
- c) NGENSO obtain the Imbalance Price for the relevant settlement periods from Elexon.
- d) NGENSO calculate a non-delivery charge using data from steps b and c.
- e) This non-delivery charge is applied as per the terms and conditions of the Balancing Services contract.

As this solution is managed entirely between NGENSO and Balancing Service Providers, there is no need to undertake changes to the BSC, Elexon’s systems or Supplier systems.

NGENSO’s estimated cost to implement this option is £2-4m. The range will depend on how much extra manual effort and/or automation is introduced into the settlements processes – the higher end of the range assumes automation. This is further complicated by the fact that NGENSO are currently building a new settlements system and so aligning timing of the new system with this change is a challenge that should be considered.

Opportunities	Risks
'More' compliant with the RIME requirements than status quo	Arguably not 'fully' compliant with the RIME as the Imbalance Price will not include the volume of under-delivered energy as this is not directly included in its calculation (i.e. doesn't directly flow into cash-out)
Implementable (via some manual processes) in 18 months with minimal system changes for industry	Additional/more system changes within NGENSO required to implement a more robust longer-term solution
Opportunity to create a more long-term automated process	In the short-term costs to implement greater than expected benefits as detailed in section 7
	Doesn't correct a 'spill' payment to Suppliers; Supplier's positions would still not be corrected for the undelivered volume of energy at a metering level as meter volumes would not be adjusted, similar to ABSVD
	Would require revisions to Balancing Services contract terms to allow charges between (to and from) NGENSO and Balancing Service Providers, which may need financial security to be placed to cover any non-delivery charge
	The solution changes, rather than removes, differences between treatment of BM and non-BM Balancing Services
	Potentially pollutes Balancing Services Use of System (BSUoS) charges, especially for periods where the imbalance price is negative and NGENSO needs to pay a provider for under-delivery
	Requires NGENSO to obtain credit cover from each Non-BMU – something that we do not currently do because providers don't pay NGENSO, but Elexon does for all Balancing Service Provider (BSPs)
	Potentially results in the same volume of energy being double counted. The market participants would have to pay extra to cover BM actions which address the under-delivery of the Balancing

	Service whilst NGENSO would charge the non-BM BSP for the under-delivery too; so the same under-delivered volume is being charged inside as well as outside the BM
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Question 4: What impacts to your organisation and/or wider industry (qualitative and quantitative) are associated with the progression of Option B? Please explain your rationale if possible.

Question 5: What other potential opportunities or potential risks does Option B present?

Option C – Use the current ABSVD process

Currently NGENSO provide Applicable Balancing Services Volume Data (ABSVD) data to Elexon on the volume of some Balancing Services (not all) delivered; this option would change the ABSVD data flow to replace the volume delivered with the volume instructed (an amendment to the P354 solution). Elexon would then use existing processes to collect meter data for the site. As stated in RIME Article 6.5, market participants (in this case, Balancing Service Providers) shall also be classed as the ‘Balancing Responsible Party’ unless they contractually delegate this to someone to manage on their behalf - this option would require that this is delegated to a Supplier.

Balancing Services contracts would need to be updated to reflect this new arrangement and any under-delivery would be processed as follows:

- a) The Balancing Service Provider is instructed to provide a service which is subsequently under-delivered.
- b) NGENSO provide data to Elexon on the volume of energy instructed.
- c) Elexon calculate the relevant combined Imbalance volume and the non-delivery volume to be applied to the metering system. These will not be separately identifiable and the non-delivery volume will be a new element in this calculation.
- d) The Supplier of the metering system would be the ‘Balancing Responsible Party’ and Elexon levy the combined imbalance and non-delivery charge to the Supplier of the metering system.
- e) Depending on the data available, the Supplier can potentially pass through the charge (via supply contracts) to the customer of the metering system (if they get visibility of metering level data) or smear this charge across their customer portfolio. This will be affected by Ofgem’s stance on P354 which currently wouldn’t allow the Supplier to obtain metering system level data.

This solution is expected to require moderate changes to NGENSO systems/processes and minor changes to Elexon systems/processes however it is expected to have a significant impact on Supplier contracts and processes.

NGESO’s estimated cost to implement this option is £ 2.1m with no additional option-specific benefits than those identified in section 7.

Opportunities	Risks
As non-delivery is included this is arguably ‘more’ compliant with the RIME requirements than the status quo as these non-delivery volumes are included in the calculation of the imbalance	Although imbalance is addressed arguably ‘less’ compliant with the RIME than the status quo as the Supplier will be receiving the combined imbalance and non-delivery charge (not the Balancing Service Provider)
Uses existing industry processes to create a fully systemised solution	Arguably ‘less’ compliant with the RIME than status quo as the Balancing Services Provider loses the optionality of choosing to delegate/who to delegate the Balancing Responsible Provider role to
Implementable in 18 months	Uncertainty as to whether Suppliers can recover this charge from specific customers or whether it will be smeared across a portfolio
	The data required to target the charge to specific customers would require a change to Ofgem’s decision on BSC modification P354 to implement

	Costs to implement greater than expected benefits referenced in section 7 and so expected to negatively impact consumers
	Does not allow separation of non-delivery charges from imbalance charges for the Supplier (i.e. they are treated together)

Question 6: What impacts to your organisation and/or wider industry (qualitative and quantitative) are associated with the progression of Option C? Please explain your rationale if possible.

Question 7: What other potential opportunities or potential risks does Option C present?

Option D – NGESO take on ‘Balancing Responsible Party’ (BRP) obligations

As mentioned in Option C above, in the RIME Article 6.5, market participants (in this case, Balancing Service Providers) shall be classed as the ‘Balancing Responsible Party’ unless they contractually delegate this to someone to manage on their behalf; in this option, this would be delegated to NGESO.

Balancing Services contracts would need to be updated to reflect this new arrangement and any under-delivery would be processed as follows:

- a) The Balancing Service Provider (BSP) is instructed to provide a service which is subsequently under-delivered.
- b) NGESO provide data to Elexon on the volume of energy instructed and delivered.
- c) Elexon calculate the relevant Imbalance and non-delivery to be applied to each metering system providing balancing services.
- d) NGESO is deemed to be the ‘Balancing Responsible Party’ for the metering system and Elexon levy the non-delivery charge to NGESO.
- e) NGESO then pass through the non-delivery charge (via Balancing Services contracts) to the Balancing Services Provider.

NGESO’s estimated cost to implement this option is £3-5m. The range will depend on how much extra manual effort is introduced into settlements processes – the lower end of the range assumes higher manual effort with the higher end being automated. Given the muddling of roles this would involve NGESO in, being the TSO instructing the service and then managing the providers imbalance it is unclear if NGESO becoming a Balancing Responsible Party is envisaged and this option would require further assessment to confirm if this is a genuinely viable option to progress.

Opportunities	Risks
As non-delivery is specifically calculated and included, this is arguably ‘more’ compliant with the RIME requirements than the status quo as these non-delivery volumes are included in the calculation of the imbalance. This is a more precise calculation than presented under Option C as imbalance and non-delivery are processed separately	Arguably ‘less’ compliant with the RIME than the status quo as the Balancing Services Provider loses the optionality of choosing to delegate/who to delegate the Balancing Responsible Provider role to
From the point where legislation and regulatory codes are clarified, implementable in 24-36 months	This would create a myriad of unintended regulatory consequences. According to legislation, Electricity Balancing Regulation (EBR), each balance responsible party shall be financially responsible for the imbalances to be settled with the connecting Transmission System Operator (TSO). If NGESO were to become a BSP, NGESO would need to sign up to contracts with itself to be compliant with EBR. In order to become a BSP for each type of product, providers must meet the requirements set out in System Operations Guideline (SOGL). It is unclear if NGESO would meet the criteria set out in SOGL

	and if so, it would introduce strong conflicts of interest (e.g. NGENSO contracting with itself to provide Balancing Services)
Calculating imbalance and non-delivery separately for each MSID allows the correct volumes, priced at the imbalance price, to be attributed to responsible parties (though indirect)	Would require fundamental changes to the BSC to place additional obligations on NGENSO (e.g. credit cover, creation, and management of Balancing Mechanism Units to capture energy volumes). This would also result in significant changes to Central Systems as need to calculate both imbalance and non-delivery separately for each individual MSID Pair involved in providing balancing services.
	Costs to implement greater than expected benefits (referenced in section 7) and so expected to negatively impact consumers

Question 8: What impacts to your organisation and/or wider industry (qualitative and quantitative) are associated with the progression of Option D? Please explain your rationale if possible.

Question 9: What other potential opportunities or potential risks does Option D present?

6. Longer term strategies

The P412 workgroup also identified some broad strategies that could be developed to resolve this issue in the longer-term (assumption minimum of 5 years); all of which would require significant work to develop further and result in significant change as service providers are expected to be smaller and more decentralised in the future. Issues/risks related to the difference between BM and non-BM providers will therefore become more important. This emphasises the need to find a “clean” solution that will ensure a level playing field for providers in the future, avoid market distortions and incorrect imbalance price calculations (and therefore price signals).

1. Create a new role for non-BM Balancing Service Providers within the BSC. This will involve creating a new, defined role for non-BM Balancing Service Providers to accede to the BSC with minimal obligations so that Elexon and the BSC have a direct, contractual relationship with these Balancing Service Providers. This is so that Elexon can then levy non-delivery charges directly on Balancing Service Providers rather than passing these on to Suppliers (Option C) or NGENSO (Option D). The P412 workgroup’s view is that whilst this would resolve the issue, the effort required to implement this would not provide benefit to consumers without larger scale reform.

Question 10: Do you agree with the P412 workgroup’s view that this strategy (creating a new role within the BSC) in isolation, would not be a practical or beneficial solution?

2. Amalgamate and remove the distinction between non-BM and BM Balancing Services in the Balancing and Settlement Code (BSC). This strategy would involve harmonising how BM and non-BM Balancing Service Providers are treated within the BSC arrangements so there is no difference in practice. There are numerous ways this could be achieved with varying complexity and timescales however due to the scope of this proposal it would have a significant impact on the current BSC arrangements.

Question 11: Do you support harmonising how BM and non-BM Balancing Service Providers are treated within the BSC?

Question 12: Do you agree with the working group view, that achieving this would have a significant impact on the current BSC arrangements? Please identify what aspects you believe are impacted and should be considered as part of this work.

Question 13: Are you aware of (i) any other options that should be considered or (ii) additional comments to make on the options and strategies listed in this consultation?

7. Volume/Value of affected services

As the issue revolves around under-delivery of non-BM Balancing Services, there is no direct interaction between the amount of under-delivery and the possible solutions (i.e. the volume of under-delivery is independent of and agnostic to the solution options). This also means that the volume of Balancing Services instructed via the BM and volume of fully delivered non-BM Balancing Services are not included in this analysis. In order to calculate the value of under-delivered non-BM Balancing Services, there are two methods;

- a) Use Imbalance/Cash-Out prices as the real time cost of energy – as expected under the RIME
- b) Use the value of availability fees which are currently withheld under the Balancing Services agreements – the approach in use.

For analysing both these methods, actual performance data from Reserve services delivered between 1st April 2020 to 31st March 2021 was used to determine a consistent undelivered volume for comparison of 25,102MWh across Reserve services – data on Response services is described later. A summary of this data is shown in the below table.

Service*	No. Instructions	Average Instruction Duration	Total Instructed Energy (MWh)	Total Undelivered Energy (MWh)	Average Undelivered Energy per Instruction (MWh)
FR	9435	00:28:39	256,952.82	23,519.47	2.49
Non-BM STOR	620	01:21:13	74,84.78	1,582.45	2.55
Grand Total	10055	00:31:54	264,437.6	25,101.92	2.50

*ODFM has not being included in this analysis due to being a temporary service that was only used on one day (5th July - [Link to instruction data on NGENSO data portal](#)) between March and October 2020.

For method A, the actual Imbalance (‘Cash-out’) Price during each instruction is used to determine an approximate aggregate undelivered value of £1.375m. For instructions that span multiple settlement period, this analysis assumes the under-delivery is consistent across all settlement periods within the instruction rather than focused within a portion of the instruction. Extrapolating this with a 20% margin (to account for higher Imbalance Prices and/or higher volumes of non-delivery should this occur) would provide an estimate of £1.65m per year of undelivered value that would be impacted.

Under method B, the actual withheld availability fees for the same volume of energy (25,102MWh) equates to a value of £2.013m. Extrapolating this with a 20% margin (to account only for higher volumes of non-delivery should this occur) would provide an estimate of £2.416m per year of undelivered value that would be impacted.

From this information, method B values energy more than method A and this is summarised in the table below:

	Method A	Method B	Difference
Energy Volume	25,102 MWh	25,102 MWh	0
Lower Valuation Estimate	£1.375m (£54.78/MWh)	£2.013m (£80.19/MWh)	£0.638m (£25.42/MWh)
Higher Valuation Estimate	£1.65m (£65.73/MWh)	£2.416m (£96.25/MWh)	£0.766m (£30.52/MWh)

For Response services, the amount of data available for these services is lower as they are automatically dispatched based on system frequency and so NGENSO does not issue an instruction to provide the service. The performance monitoring of these services is also significantly different as it based on a monthly sample rather than delivery per event. Despite this, NGENSO can provide the following information about Firm Frequency Response (FFR) – this data includes both low and high frequency as well as dynamic and static services. The below data is based on actuals from 1st June 2020 until 29th May 2021;

Total	Tender Count	454
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	Average Performance	98.91%
Tenders with <100% performance	Tender Count	211 (46.48%)
	Average Performance	87.47%
	Average value withheld	£657 per tender £1,414 per under-performed tender
	Total value withheld	£298,423

Whilst the above data cannot be used to calculate a defined volume of energy under-delivered (i.e. a MWh figure to combine with the previous information on Reserve services) it does demonstrate that under-delivery in Response services is low. With the proportional difference between method A and method B for Reserve services, we have applied this to Response services to estimate an annual consumer benefit of Response services of £0.1m. NGENSO are developing new Response services that will provide more granular data to enhance this analysis in future. This data is not currently available as the first of these new services, Dynamic Containment, started in October 2020 with the remaining services (Dynamic Moderation (DM) and Dynamic Regulation (DR)) due to start soon.

In summary, we believe the estimated consumer benefit of this change is up to £0.738m per annum based upon £0.638m from the Reserve services and £0.1m from Response. We would also note that these values are highly variable and subject to outside influences such as BSP behaviour, Cash-Out prices and system need for these services.

Question 14: Do you believe this analysis fairly reflects the performance of non-BM Balancing Service providers and accurately calculates the value of undelivered non-BM Balancing Services?

Question 15: - Do you agree with this analysis? How would you suggest improving this analysis?

Question 16: Do you believe changing the approach to non-delivery (for example, from Method B to Method A) would result in any noticeable differences in other industry prices (e.g. balancing service prices or wholesale prices)?

Question 17: Do you believe changing the approach to non-delivery (for example, from Method B to Method A) would result in any changes in behaviour resulting in more or less non-delivery of balancing services?

8. Wider Market Impacts

We asked Elexon to input and provide clarity on what (if any) impact this proposal would have on the calculation of Imbalance Prices. Currently all BM instructed, non-BM STOR and all Fast Reserve services are included in the calculation of the Imbalance Price. NGENSO also provide ABSVD⁹ to Elexon so that parties who provide (or use the same metering system as some who provide) some non-BM Balancing Services are not adversely affected, however ABSVD is not directly included in the energy imbalance price as these are post event actions and it is not possible to calculate the volume adjustments within the timescales for reporting the energy imbalance price. Only some services are subject to ABSVD and these are listed in the ABSVD Methodology Statement¹⁰.

The volumes of non-BM STOR feed into the imbalance price calculation, but not the prices as the prices are distorted by availability payments (and so aren't solely utilisation payments). This means non-BM STOR actions are repriced using the Reserve Scarcity Price.

Fast Reserve is slightly different in that the volumes don't contribute to the imbalance price calculation, but the prices do. NGENSO calculate a price adjusted (the Buy Price Adjustment or the Sell Price Adjustment, depending on whether the system is long or short) which adjusts the imbalance price to account for the cost of reserve actions and BM Start-up.

⁹ ABSVD (Applicable Balancing Services Volume Data)

¹⁰ ABSVD Methodology Statement is available here - <https://www.nationalgrideso.com/c16-statements-and-consultations>

Based on current understanding of P412 and the options currently available, Elexon do not foresee a need to update the Imbalance Price calculation methodology.

Question 18: Do you agree that P412 will have no impact upon Imbalance Prices and so no changes to the methodology are required?

Additionally, based upon the analysis in Section 7 NGESO do not expect changing the basis of calculating non-delivery charges (from withholding availability fees to a charge based on the Imbalance Price) will have a material effect on Balancing Service Providers generally, including their behaviour. Whilst individual providers may gain or lose from this change, broadly we do not expect the number of BSPs to significantly change as a result of P412 as there will be no material change in the risks associated with providing Balancing Services.

Question 19: Do you agree that P412 does not fundamentally change the risk profile associated with providing Balancing Services to NGESO?

9. Consultation Questions and Next Steps

Annexed to this consultation is a proforma which can be used to respond to this consultation. Please complete this proforma and return by 5pm, 26th November 2021 to box.europeancodes.electricity@nationalgrideso.com. We intend to publish these consultation responses and so any confidential data should be clearly marked so it can be redacted before publishing. Should you wish to discuss anything in this consultation separately, please also get in touch.